California Energy Commission
DOCKETED
11-RPS-01
TN 74531
FEB 17 2015

Date: February 17, 2015

To: Dockets Unit, California Energy Commission

From: Walker Ranch Energy, LLC

Re: Docket No. 11-RPS-01, Comments to Staff Draft Renewables Portfolio Standard Eligibility Guidebook (RPS Guidebook), Eighth Edition

Dear Staff of Dockets Unit,

Walker Ranch Energy, LLC (Walker Ranch) is providing the following comments to the Dockets Unit for clarification to the proposed revisions to the current RPS Guidebook (Staff Draft RPS Guidebook, Eight Edition). Walker Ranch is specifically providing comments to revised definition of Station Service (section III.A.3).

In particular, Walker Ranch would like to clarify the statement re: "Electricity used for station service is not eligible for California's RPS... includes, but is not limited to, pumps, condensers ..." (Page 27, Section III.A.3). Based on that statement and CEC staff concept paper and presentation from September 2013[1], it seems that the CEC staff is arguing that Geothermal Pumping Loads (moving Geothermal Brine from Earth to Station) should be counted as Station Service.

CEC is making that assertion based on the argument that Geothermal Brine is NOT fuel but rather a heat transfer fluid (page 10 in September 2013 Concept Paper). The key tenants of this argument are based on two assumptions:

- The assumption that Geothermal Brine is not used as the fuel in the binary power plant process thus it must be considered heat transfer fluid (page 30 in September 2013 staff presentation)
- The assumption that it is the heat in the Earth that is the fuel not the Geothermal Brine (page 10 in Concept Paper)

We would like to make the argument that both of these arguments and assumptions are flawed and have already been previously ruled upon by FERC (Federal Energy Regulatory Commission):

- First Geothermal Brine IS used as the fuel in all geothermal plants including the binary power plant. The selection of the cycle & additional working fluids are dependent on efficiency of energy conversion process and the economics of matching the well field to the best plant design. In most cases of lower temperature geothermal operations (<350° F), a secondary working fluid is used to *improve* the overall efficiency and process of the system – NOT because the Geothermal Brine cannot be used as the fuel itself. The staff

1. Staff concept paper: http://www.energy.ca.gov/portfolio/documents/2013-09-10_workshop/2013-09-10_Attachment_A-Station_Service.pdf
2. Staff presentation: http://www.energy.ca.gov/portfolio/documents/2013-09-10_workshop/presentations/CEC_Staff_Presentation_Station_Service.pdf

compares this process to the SEGS plant and concludes that the geothermal Brine is no different than the synthetic oil used to transport solar heat. We argue that that is an invalid comparison in that the synthetic oil cannot be the fuel ever in a SEGS plant. For lower temperature geothermal resources the Brine is the fuel, however the binary cycle with a secondary working fluid (such as Isopentane) may be chosen for economic and efficiency reasons.

- Second, when using the heat of the Earth (geothermal energy) for electricity production, the Geothermal Brine is the Fuel because it is the ONLY way that one can obtain the energy when the temperature of the heat is less than 350° F. While theoretically, geothermal heat do exist without the fluid, the Brine is ONLY way to obtain that energy. Hence in practice, the Brine and the heat are one and the same.

Furthermore, the U.S. Federal Energy Regulatory Commission has already ruled on this exact issue on April 16, 2004 through Docket No. QF86-681-005. The Commission clearly states in section 20 of the ruling (page 6) that it considers the Geothermal Brine to be the fuel and the entirety of the power used for that purpose should not be deducted from the net capacity of the facility and be available for sale.

In conclusion, we believe that all geothermal well field pumping loads from well to station are part of the fuel transportation and should not be included in the plant service load. We request that CEC clearly state this in its future publications.

Thank you for your understanding and allowing us to share our view of this important issue.

Sincerely,

Trent Yang
CEO
Walker Ranch Energy, LLC

1. Staff concept paper: http://www.energy.ca.gov/portfolio/documents/2013-09-10_workshop/2013-09-10_Attachment_A-Station_Service.pdf
2. Staff presentation: http://www.energy.ca.gov/portfolio/documents/2013-09-10_workshop/presentations/CEC_Staff_Presentation_Station_Service.pdf