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09-IEP-1G	
DATE	<u>APR 20 2009</u>
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April 20, 2009

California Energy Commission
Dockets Office, MS-4
Re: Docket No. # 09-IEP-1G
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: 2009 Integrated Energy Policy Report – Biopower in California Docket # 09-IEP-1G

To the California Energy Commission:

SRI International (SRI) would like to alert CEC to a relatively new technology to produce electricity from biomass. The Commission may not be aware of this technology, which electrochemically combines carbon and oxygen to generate electricity. The carbon can be in a variety of forms, including biomass or a char produced from biomass. The device is a fuel cell, but it uses carbon—not hydrogen—as the fuel. We refer to the technology as a direct carbon fuel cell. When biomass is used as the fuel, we refer to the unit as a bioelectric system. The system can also use carbon contained in waste plastics, petroleum coke, and other hydrocarbons.

SRI has invested internal and external resources to develop this technology for government applications. We recently won, contingent on sufficient appropriations for fiscal year 2009 and beyond, a \$1.2 M project through the U.S. Department of Energy's Industrial Technology Program to prove the feasibility of a direct carbon fuel cell operating on biomass and industrial process waste fuels to generate electricity for commercial applications.

SRI is in the process of identifying partners to match DOE's cost share requirements and to help bring this technology to market. SRI has an excellent track record of developing innovative technologies that have changed the way world does business, but as a not for profit organization we must have outside support to continue this work.

I would be pleased to familiarize CEC with our direct carbon fuel cell and other energy technologies we are developing. Please contact me directly at 650 859 5717 or Barbara.heydorn@sri.com if you would like additional information.

Sincerely,

A handwritten signature in cursive script that reads 'Barbara Heydorn'.

Barbara Heydorn
Director
Center of Excellence in Energy