CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov

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TO: AGENCY DISTRIBUTION LIST (STATE AND FEDERAL)

REQUEST FOR AGENCY PARTICIPATION IN THE REVIEW OF THE HYDROGEN ENERGY CALIFORNIA, AMENDED APPLICATION FOR CERTIFICATION (08-AFC-8A)

Project History

On July 31, 2008, Hydrogen Energy California, LLC (HECA) submitted an Application for Certification (08-AFC-8) to the California Energy Commission. A Revised AFC was submitted, to reflect a change of the project site to an alternative location. In 2011, Hydrogen Energy California LLC, was acquired by SCS Energy California, LLC. On May 2, 2012, SCS Energy, LLC, submitted an Amended Application for Certification (08-AFC-8A) reflecting several changes to the original project design.

The new Amended Application for Certification (AFC) has been assigned a separate distinguishing docket number, 08-AFC-8A. The Amended AFC for the project supersedes and replaces all previous submissions, and incorporates all relevant information from the previous versions of the HECA proceedings. All previous applicant documents can be disposed and replaced with the Amended AFC.

The applicant intends to construct and operate an Integrated Gasification Combined Cycle (IGCC) power generating facility called Hydrogen Energy California (HECA).

The proposed HECA project would gasify blends of 75 percent western coal and 25 percent petroleum coke from California refineries to produce hydrogen to fuel a combustion turbine operating in combined cycle mode. The amended project incorporates a proposed manufacturing complex that would produce urea in both liquid and pellet form, and other byproducts for agricultural and manufacturing uses. For power generation a Mitsubishi Heavy Industries MHI 501GAC® CT combustion turbine has been selected. The combined cycle power block would generate approximately 405 MW of gross power and would provide a nominal 300-megawatts of electricity to the grid. The gasification block would also capture approximately 90 percent of the carbon from the raw syngas (the direct end of the gasification process) at steady-state operation, which will be transported to a custody transfer point at Elk Hills Oil Field for CO_2 enhanced oil recovery (EOR) and sequestration. Due to the complex gasification and sequestration (storage) process, there is a larger than usual parasitic load.

Project Location

The proposed project would be located on a 453-acre site (currently used for agricultural production of alfalfa, cotton, and onions), and is comprised of two parcels (Part of Assessor's Parcel # 159-040-16 and 159-040-18, respectively). HECA, LLC

also has an option on 653 acres adjacent to the project site, a controlled area, allowing for controlled access and land use. The project site would be located in western unincorporated Kern County, Section 10 of Township 30 South, Range 24 East, approximately 7 miles west of the outermost edge of the city of Bakersfield. It is 1.5 miles northwest of the unincorporated community of Tupman, and approximately 4 miles southeast of the unincorporated community of Buttonwillow, is bounded by Adohr Road on the north, Tupman Road to the east, an irrigation canal (California State Water Project, aqueduct) to the south, and Dairy Road to the west. Elk Hills Oil Field is located approximately 1 mile south of the project site.

The project site is currently subject to a Williamson Act agricultural land preservation contract. The applicant is currently pursuing a contract cancellation process with Kern County. The project site represents approximately 0.03 percent of the 1,649,780 acres of Williamson Act contracted lands in Kern County (Kern County, 2007b). The western border of the Tule Elk State Natural Reserve (California state park) is located approximately 1,700 feet to the east of the project site. The nearest single-family dwellings are located approximately 370 feet to the northwest, 1,400 feet to the east, 3,300 feet to the southeast of the proposed project site, and 4,000 feet to the north.

Project Description
Highlights of the project are as follows:

- The Amended HECA facility proposes to operate with 25 percent petroleum coke from California refineries blended with 75 percent western bituminous coal. Transportation of petcoke and coal to the project would be by either a truck route, or via an alternative rail spur to be built and owned by the applicant.

- The feedstock (coal and petroleum coke) would be gasified to produce a synthesis gas (syngas) that would be processed and purified to produce a hydrogen-rich gas, which would be used to fuel the combustion turbine for electric power generation and burners that provide supplemental fire to the heat recovery steam generator (HRSG) that produces steam from the combustion turbine exhaust heat.

- At least 90 percent of the carbon in the raw syngas would be captured in a high-purity carbon dioxide stream during steady-state operation, which would be compressed and transported by pipeline off-site to the adjacent Elk Hills Oil Field for injection into deep underground oil reservoirs for enhanced oil recovery (EOR) and sequestration.

- Project greenhouse gas emissions (e.g., carbon dioxide) are proposed to be reduced through the use of the EOR CO_2 sequestration process.

- Brackish groundwater will be supplied by the Buena Vista Water Storage District and treated on site for process use. Potable water would be supplied by West Kern Water District for drinking and sanitary purposes.

Several basic project components remain unchanged, including the following:

- The project continues to use IGCC technology.
- State-of-the-art emission controls are included in the design.
- Zero Liquid Discharge technology is used in the project design for process and waste water.
- Liquid oxygen and nitrogen are produced in the Air Separation Unit, and supplied to the Gasification Unit, the combustion turbine, Sulfur Recovery Unit and other process components of HECA.

Some notable project changes are proposed in this Amended AFC, including the following:

- Mitsubishi Heavy Industries (MHI) oxygen-blown dry feed gasification technology has been selected.
- A MHI 501GAC® Combustion Turbine and Steam Turbine has been selected.
- A new, integrated manufacturing complex (IMC) will produce approximately 1 million tons per year of low-carbon nitrogen-based products, including urea ammonium nitrate and anhydrous ammonia, to be used in agricultural and industrial applications.
- Coal transportation. HECA proposes to use two alternatives for transferring coal to the project site:

— Alternative 1, rail transportation. An approximately 5-mile new industrial railroad spur that would connect the project site to the existing San Joaquin Valley Railroad Buttonwillow railroad line, north of the project site. This railroad spur would also be used to transport some IMC products to customers.

— Alternative 2, truck transportation. Truck transport would be via existing roads from an existing coal transloading facility northeast of the project site. The truck route distance is approximately 27 miles.

- The routes of the natural gas pipeline, potable water pipeline, and electrical transmission have been refined as follows:

— An approximately 13-mile new natural gas pipeline will interconnect with an existing Pacific Gas and Electric Company (PG&E) natural gas pipeline located north of the project site.

- Potable water will be delivered via an approximately 1-mile pipeline from a new West Kern Water District potable water production site east of the project site.

- An approximately 2-mile electrical transmission linear will interconnect with a future PG&E switching station east of the project site.

If approved, construction of the project is proposed to begin in June of 2013, with completion of construction in February of 2017, and commencement of commercial operation by September of 2017.

Energy Commission's Facility Certification Process

The Energy Commission is responsible for reviewing and ultimately approving or denying all applications to construct and operate thermal electric power plants, 50 MW and greater, in California. The Energy Commission's facility certification process carefully examines public health and safety, environmental impacts, and engineering aspects of proposed power plants and all related facilities, such as electric transmission lines and natural gas and water pipelines. The Energy Commission's permit is in lieu of any local, state or federal permit (to the extent permitted by federal law). The Energy Commission is the Lead Agency under the California Environmental Quality Act (CEQA), but through its certified regulatory program produces several environmental and decision documents rather than an environmental impact report.

The Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) has the permitting authority for the Elk Hills Oil Field, and will be providing all permits associated with the water and CO_2 injection wells and the oil and gas production wells to be used for the enhanced oil recovery (EOR) process. The Energy Commission will be working closely with DOGGR to analyze this critical area of the HECA project.

The U.S. Department of Energy (DOE) has committed development funds to HECA based upon the Department's interest in the integrated gasification and combined cycle (IGCC) technology proposed, and the potential for the capture and storage of CO_2 from the gasification and power production process proposed by HECA. DOE will be preparing an environmental analysis under provisions of the National Environmental Policy Act (NEPA), and will be working closely with the Energy Commission and DOGGR to understand and analyze the project.

HECA is under the Energy Commission's siting authority. Over the coming months, the Energy Commission will conduct a number of public workshops and hearings to determine whether the proposed project should be approved for construction and operation and, if so, under what set of conditions. The workshops will provide the public as well as local, state and federal agencies the opportunity to participate in reviewing the proposed project. The Energy Commission will issue notices for these workshops and hearings at least ten days prior to the meeting.

The Energy Commission's siting process is open to the public and incorporates the input of the public as well as local, state, and federal agencies. To facilitate public participation in our review process, the Energy Commission has sent copies of the Amended AFC to libraries in the project area, and to libraries in Eureka, San Francisco, Sacramento, Fresno, Los Angeles, and San Diego.

Public Participation
Over the coming months, the Energy Commission will conduct a number of public workshops and hearings to determine whether the proposed project should be approved for construction and operation and, if so, under what set of conditions. The workshops will provide the public as well as local, state and federal agencies the opportunity to participate in reviewing the proposed project. The Energy Commission will issue notices for these workshops and hearings at least ten days prior to the meeting.

Agency Participation
We request that you provide any written comments you may have regarding potential issues of concern by **June 15, 2012.** Please address your comments to Robert Worl, Project Manager, 1516 9th Street, MS-15, Sacramento, CA 95814, or by email to robert.worl@energy.ca.gov. Your agency may also present its comments and recommendations in person at the Energy Commission's Site Visit and Informational Hearing for the Amended HECA project which will be scheduled in the near future and noticed separately by the Committee appointed to oversee the HECA project.

Your participation in the proceeding will continue to be valuable and encouraged and will allow you to identify and try to resolve issues of concern to your agency. There may be specific requests for agency review and comment during the proceedings.
Your agency's preliminary and final determinations and opinions (such as those contained in a Determination of Compliance, wastewater discharge requirements, biological opinions, and land use decisions) would be due by **August 31, 2012** (120 days) and **October 30, 2012** (180 days), respectively.

Enclosed is a copy of the Amended AFC in electronic format (2 CDs). If you would like to have a hard copy of the Amended AFC sent to you, if you have questions, or if you would like additional information about reimbursement or how to participate in the Energy Commission's review of the proposed project, please contact Robert Worl, Energy Commission Project Manager, at (916) 651-8853, or by email at robert.worl@energy.ca.gov.

The status of the proposed project, copies of notices, an electronic version of the AFC, and other relevant documents are also available on the Energy Commission internet website at http://www.energy.ca.gov/sitingcases/hydrogenenergy/index.html.

By being on the mailing list, you will receive notices of all project related activities and documents related to the proposed project's evaluation and review. You can also

subscribe to receive email notification of all notices at http://www.energy.ca.gov/listservers.

Sincerely,

Original signed by

Chris Davis, Manager
Siting Office

Date: _____

Enclosure