

## DOCKETED

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# HECA

## NEWS & UPDATE



hydrogen energy  
california

Fall 2013

A New Solution for Low-Carbon Power

## Hydrogen Energy California Achieves Air Quality Approval in State's Licensing Process

Hydrogen Energy California (HECA) recently received a final determination from the San Joaquin Valley Air Pollution Control District that its proposed integrated gasification combined cycle plant in Kern County is in compliance with all air quality standards and regulations.

The "Final Determination of Compliance" (FDOC) by the District is a major step forward in the California Energy Commission's (CEC) multi-agency review process for the construction of the HECA power plant in Kern County. This approval is a significant part of the overall licensing procedure and is necessary for HECA to receive the final go-ahead from the CEC, the lead agency on the project.

HECA is a state-of-the-art power generation facility that uses Integrated Gasification Combined Cycle technology to convert fossil fuels into clean-burning hydrogen fuel. This hydrogen-rich fuel will be used to generate 300 MW of low-carbon electricity for powering as many as 160,000 homes, and to manufacture low-carbon fertilizer. HECA will also capture more than 90 percent of its carbon dioxide (CO<sub>2</sub>) emissions, preventing approximately three million tons per year of greenhouse gases from entering the atmosphere. Most of the CO<sub>2</sub> will be transported to nearby oil fields, where it will be safely and permanently stored underground for use in enhanced oil recovery.

The Air District's decision means that HECA has submitted sufficient information and mitigation proposals to demonstrate that it can operate in full compliance with all applicable air pollution rules and regulations.

Further, in an agreement with the Air District, HECA has voluntarily agreed to exceed the required minimum mitigation measures by committing additional financial resources the Air District will reinvest back into the community. The Air District will use these funds to help with a number of air pollution reduction measures, such as investing in clean school buses, traffic light synchronization, energy efficient agricultural pumps and other infrastructure improvements. As a result, HECA will offset more emissions overall than it will create.

According to the Air District's executive director, Seyed Sadredin, "based on the mitigations that we have required and the applicant has agreed to do, this project built will actually result in a net benefit in air quality in the San Joaquin Valley and in the region."

HECA is funded in part by a \$408 million grant from the U.S. Department of Energy (DOE), in recognition of the project's importance as a safe and cost-effective way to produce clean energy. The project is managed by the DOE's Office of Fossil Energy's National Energy Technology Laboratory.

### Business Focus

## Voices from the Business Community

People are talking – and the Kern County business community is recognizing the value and many benefits that HECA will bring to the region. Here are a few excerpts from letters written by local business leaders to John Heiser at the California Energy Commission:

*July 8, 2013 / From Richard D. Chapman, President, Kern Economic Development Corporation:* On behalf of the Kern County Economic Development Corporation, I am pleased to provide this letter of support to Hydrogen Energy California's (HECA) project in Kern County, California ... The \$4 billion HECA project is a major initiative that will lay the groundwork for a larger low-carbon industry

... continued on page 3

Economic Development  
and Jobs for Kern County  
Clean Energy for California

For more information, visit:  
[heca.com](http://heca.com)  
or call the Information Line at:  
(661) 764-6442

You can also visit:  
The HECA Information Center  
189 E. Front Street  
Buttonwillow, CA 93206

### Inside . . .

Questions & Answers	pg. 2
Community Focus	pg. 2
Business Focus	continued pg. 3
HECA Speaks	pg. 3
Message from HECA	pg. 4
HECA Information Center	pg. 4

# Questions & Answers: More about Fertilizer

Fertilizer production is one of the most intriguing, forward-looking and unique characteristics of the HECA project. To provide a big-picture overview of the fertilizer production process, its value and benefits, we compiled questions from people interested in the project, into a wide-ranging Q&A. Following are selected excerpts of the most popular questions. Visit [heca.com](http://heca.com) for more.

*If HECA will be a low-carbon energy power plant, why is it also going to produce fertilizers?*

The Hydrogen Energy California (HECA) project was originally designed for a single purpose — to provide low-carbon reliable electricity generated from clean-burning hydrogen. When SCS Energy, LLC, acquired HECA in 2011, the company's management recognized that the project had the potential to be of even more value to Kern County and California. By incorporating a few design changes, including the addition of an Integrated Manufacturing Complex, the plant can now utilize its by-products to produce high quality, low-carbon fertilizers for use in agriculture when not producing electricity.

**Did You Know?** As wind and solar energy are increasingly used in California, HECA will be able to supply local low-carbon energy to the grid 24 hours a day — essential for when the wind does not blow and the sun does not shine.

*What are the environmental benefits or impacts associated with fertilizers from HECA?*

Overall, HECA will be among the cleanest commercial-scale fertilizer facilities not only in California but in the world, because the plant's carbon emissions will be significantly lower than emission levels of traditional fossil-fueled facilities — including those powered by natural gas.

By reducing dependence on foreign sources, HECA's fertilizer production will also generate other types of environmental benefits. For example, in 2010 about 32 percent of the state's nitrogen-based fertilizer supply came from outside the U.S., typically from facilities powered by traditional, emission-generating fossil fuels. In addition, HECA's locally-produced fertilizers will lessen transportation-related emissions resulting from shipping the fertilizers thousands of miles by cargo ships, rail cars and trucks.

HECA's local fertilizer production will serve as a model for many locations in the U.S. that want to cut transportation costs and reduce emissions associated with this product that is so vital to California's agriculture.

*What are the economic benefits or impacts of HECA's fertilizer production?*

HECA's fertilizer production will have a two-fold benefit to the local and state economy. First, the integration of fertilizer production into HECA's operations will make the facility economically viable by allowing it to function around the clock to produce both high quality fertilizers for agriculture and clean energy for homes and businesses.

In addition, HECA's consistent and competitively-priced supply of low-carbon fertilizers will be worth more than \$1 billion a year to the state and local economies, and the facility's proximity to existing truck and rail infrastructure will allow for timely product delivery throughout the region and the lowering of transportation costs from foreign imports.

HECA has the support of the U.S. Department of Energy as a safe and cost-effective way to produce clean energy.

**Did You Know?** Visit [heca.com](http://heca.com) to learn more about HECA's benefits for the community, business and the environment.

## Community Focus

In keeping with its commitment to support local communities, HECA has been actively participating in a number of activities in the area. On May 24, HECA sponsored a fundraiser for the Buttonwillow Little League, providing funds and t-shirts for the event.

In June, HECA donated funds to the Buttonwillow Pioneer Senior Center to purchase a television as the grand raffle prize at their July 19 fundraiser and ice cream social.

In August, HECA participated in Buttonwillow Community Clean Up Day, hosted by 4th District Supervisor David Couch and the Buttonwillow Chamber of Commerce.

Coming up, HECA will sponsor Buttonwillow's annual Fall Farm Festival, to take place on September 14. This year, HECA's participation will include funding to provide helicopter rides for attendees, a popular activity for the last two years.

**BUTTONWILLOW LITTLE LEAGUE**  
Thank You for sponsoring our  
2013 Season



Buttonwillow Little League fundraiser: (Right) Little Leaguers say thanks. (Bottom, left to right) Players kick off the season on the field. HECA representative Darlena Alvidrez with players and friends at the HECA sponsorship booth. Volunteers help distribute HECA-sponsored t-shirts.



## Business Focus

### Taft Chamber of Commerce

In July, HECA spokesperson Tiffany Rau visited the Taft District Chamber of Commerce to talk about the many environmental and economic benefits of the HECA plant — including two thousand jobs during construction, clean energy for the grid, minimized greenhouse gas emissions, tax revenues, enhanced oil recovery and fertilizer production. While addressing concerns that have been raised by neighbors and landowners, she assured the group that Kern County has a voice in the final permitting process that is led by the California Energy Commission (CEC).



HECA spokesperson Tiffany Rau talks with members of the Taft District Chamber of Commerce.

### Voices from the Business Community ... continued from page 1

serving the needs of California consumers ... The HECA project represents the cornerstone of a new industry of decarbonized energy production plants in Central California while reducing greenhouse emissions well below current levels. The HECA project will be a major step forward to making the California Climate Change Plan (CCCP) successful in reaching its goals of reducing greenhouse emissions to 1990 levels by 2020.

**July 9, 2013 / From Dennis Schertz, President, Chamber Board, and Kathy Orrin, Chamber Executive Director, Taft District Chamber of Commerce:** The Taft District Chamber of Commerce and Visitors Bureau would like to go on record in support of the Hydrogen Energy of California (HECA) project. It will capture at least 90 percent of its carbon emissions,

demonstrating how groundbreaking environmental progress goes hand-in-hand with job creation and economic growth. After review of the reports of various County departments, the Taft District Chamber of Commerce and Visitors Bureau has every confidence in the ability of the County and the HECA project owners/applicants to satisfactorily resolve the issues to the satisfaction of all parties concerned.

**July 16, 2013 / From Cynthia D. Pollard, President/CEO, the Greater Bakersfield Chamber of Commerce:** The Greater Bakersfield Chamber of Commerce, representing local businesses, taxpayers and consumers, is writing to express our support for the Hydrogen Energy California (HECA) project for its potential to create new jobs and make significant contributions to the local tax base. [It] will help California remain on the forefront of clean energy

technology, while providing essential, reliable, low-carbon electricity and fertilizer to local markets. ... Because of its positive economic impact, the Greater Bakersfield Chamber of Commerce, representing 1,300 member businesses, supports the HECA project. In times of economic challenge this project will help business development and economic growth not just in Kern County but throughout California.

**Did You Know?** HECA will exceed all required air emissions regulations. With its additional mitigation measures, HECA will ultimately offset more emissions overall than it creates.

## HECA SPEAKS: Topics Vital to the Kern County Business Community

During the last six months, HECA has presented information about its project to the Kern County business community through a series of sponsored announcements in the bi-monthly Kern Business Journal. These announcements, which were tied to the publication's editorial themes, highlighted the project's importance to different sectors of the local economy, from logistics and transportation to healthcare and agriculture. The final installment (right) ran in the August/September issue on oil and natural gas. It illustrates how HECA's ability to capture carbon dioxide (CO<sub>2</sub>) and store it permanently and safely underground will have a direct impact on increased oil production — providing direct benefits to the economy.

**Did You Know?** HECA's water use will be minimized by a Zero Liquid Discharge process, which allows the project to recycle and reuse water and also eliminate surface wastewater discharge.

### HECA's Clean Energy Boosts Oil Production

Alternative energy plants that capture and utilize CO<sub>2</sub> emissions offer more than just a solution for mitigating climate change. They are also a proven way to increase oil production.

Injecting CO<sub>2</sub> deep underground to extract hard-to-reach oil is a technique that has been used successfully in the U.S. for almost 40 years. However, much more needs to be done. According to the National Energy Technology Laboratory, nearly two-thirds of this important natural resource still remains untapped in U.S. oil fields.

Hydrogen Energy California (HECA) will help. HECA's unique process for creating clean burning hydrogen will capture and prevent 90% of its CO<sub>2</sub> from going into the atmosphere. The CO<sub>2</sub> will then be compressed and transported via a secure pipeline to nearby oil fields, where it will be put to good use to enhance oil recovery.

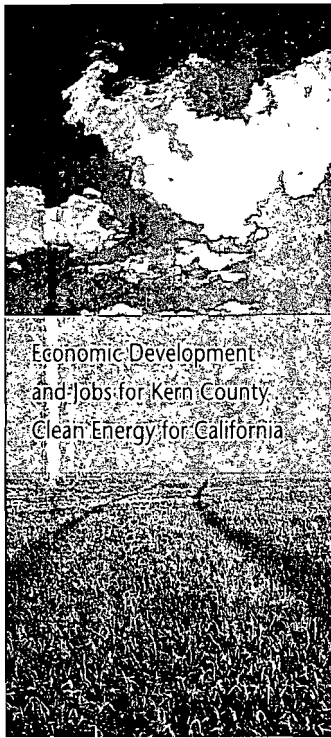
In this way, HECA will enable the extraction of up to five million barrels of additional oil each year — while also strengthening U.S. energy security, generating new revenues for California and stimulating the local economy.

Expanding the  
benefits of clean  
energy generation



hydrogen energy  
california

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Buttonwillow, CA 93206

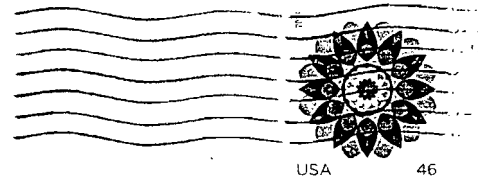
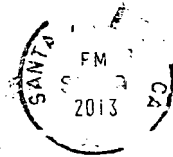


Economic Development  
and Jobs for Kern County  
Clean Energy for California

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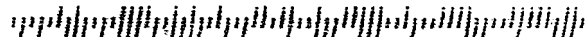
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## MESSAGE FROM HECA

Hydrogen Energy California (HECA) continues its progress toward achieving regulatory approval and recently reached two milestones, each one the result of a long, complex and thorough process of detailed agency evaluation and extensive public comment. First, the San Joaquin Valley Air Pollution Control District issued its Final Determination of Compliance (FDOC), which states that HECA is in compliance with all local air quality standards and regulations (see lead story on P.1). In addition, the California Energy Commission (CEC), which is the lead agency on the project, and the Department of Energy (DOE) issued the Preliminary Staff Assessment/Draft Environmental Impact Study (PSA/DEIS).

As the next step in the process, the DOE's National Energy Technology Laboratory (NETL) and the CEC will host joint public hearings/workshops on the PSA/DEIS. These workshops will ensure transparency, answer questions and allow members of the community to provide oral and written comments that will become part of the official record. **Following is the schedule of public hearings. A Spanish translator will be available at each session.**

### Tuesday, September 17, 2013

Buttonwillow Recreation and Park District Multi-Purpose Facility  
556 Milo Avenue, Buttonwillow, California 93206  
10:00 a.m. - CEC Workshop  
6:00 p.m. - 8:00 p.m. - Formal Public Comments

### Wednesday, September 18, 2013 (Same location)

9:00 a.m. - 8:00 p.m. - CEC Workshop  
6:00 p.m. - 8:00 p.m. - Formal Public Comments

### Thursday, September 19, 2013 (Same location)

9:00 a.m. - 1:00 p.m. - CEC Workshop

**CEC:** For information on participating in the CEC's review of the project and/or to reserve a Spanish translation headset, please contact the California Energy Commission Public Adviser's Office at **(916) 654-4489** or toll free in California at **(800) 822-6228**. The Public Adviser's Office can also be contacted via email at: [publicadviser@energy.ca.gov](mailto:publicadviser@energy.ca.gov).

**DOE-NETL:** To sign up to present comments to DOE-NETL at the hearing or to submit written comments to DOE-NETL, please contact: **Mr. Fred Pozzuto**, NEPA Compliance Officer, DOE-NETL, 3610 Collins Ferry Road, P.O. Box 880, M/S:107, Morgantown, West Virginia 26507-0880  
Email: [fred.pozzuto@netl.doe.gov](mailto:fred.pozzuto@netl.doe.gov) Ph: (304) 285-5219, Toll-free (800) 432-8330 (Ext. 5219)  
Fax: (304) 285-4403. (All envelopes, subject lines of emails and faxes should be labeled "HECA Project.")

The PSA/DEIS is available on the Internet at: [www.energy.gov/nepa/downloads/eis-0431-draft-environmental-impact-statement](http://www.energy.gov/nepa/downloads/eis-0431-draft-environmental-impact-statement) or on the CEC electronic docket site at: [www.energy.ca.gov/2013publications/CEC-700-2013-001/CEC-700-2013-001-PSA.pdf](http://www.energy.ca.gov/2013publications/CEC-700-2013-001/CEC-700-2013-001-PSA.pdf).

## Visit the HECA Information Center

The HECA Information Center in Buttonwillow is a resource for everyone to learn more about the project and its progress. Our representatives are available to answer your questions and visit with your organizations upon request.

Also visit the website at: [heca.com](http://heca.com)



Location: 189 E. Front St.

Hours: Monday - Friday  
10:00 am to 2:00 pm

Phone: (661) 764-6442