A Revitalized Project is Moving Forward

Last year, SCS Energy — one of the nation’s leading independent developers of clean power — acquired the Hydrogen Energy California Project (HECA) from its former owners. Since then, SCS has modified the project, improving HECA's design and economic viability, bringing additional economic benefits to the community and the state.

As with the previous design, the HECA plant will produce a new major clean source of electricity using hydrogen, which will result in lower air emissions than any conventional power plant of its size, including natural gas. HECA’s unique process creates hydrogen by recycling petroleum coke (a low value by-product that comes from oil refining) and coal. More than 90% of the resulting carbon dioxide (CO₂) will be captured and transported to Elk Hills Oil Field for permanent storage. Injecting the CO₂ underground will enable the production of millions of additional barrels of in-state domestic oil. The improved project design will allow increased electricity production to meet higher seasonal demand and will also be used to create low-carbon nitrogen-based products, including about one million tons of fertilizer a year — providing a much needed local source to support our agricultural economy, and reducing the need for foreign imports of a critical farming necessity. Other low-carbon nitrogen products from the plant will help reduce transportation industry emissions and benefit other industries.

HECA’s state-of-the-art design brings together several proven technologies into one project. Michael Pevey, President of the California Public Utilities Commission, recently applauded the change as “an innovative business model that improves the economic viability of the project,” stating that it is “an example of the kind of creative thinking we will need to solve the climate crisis.”

The HECA project is co-funded by the U.S. Department of Energy’s Office of Fossil Energy, and administered by the National Energy Technology Laboratory. The project development is supported in part by a $408 million grant that was competitively awarded to HECA in recognition of the project’s importance as a safe and cost-effective way to produce clean energy.

Community Focus

HECA Sponsors Kern County Economic Summit

HECA continued its strong commitment to economic development and jobs creation in Kern County, participating as a Gold Sponsor at the 12th Annual Kern County Economic Summit that took place on March 21 in Bakersfield and attracted over 400 business leaders, government officials and community leaders. Each year, economists and business leaders deliver presentations that educate and broaden perspectives on the international, national, regional, and, most importantly, local economy. This year’s program featured the potential economic development and jobs benefits that new projects such as HECA could bring to Kern County and California.

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Project Milestones

HECA Project Labor Agreement Signed

The regional economy, California’s environment, energy consumers and local construction workers all emerged as winners in a new Project Labor Agreement (PLA) announced May 31.

Fluor Constructors International, Inc., the construction manager for HECA, entered into a PLA with the State Building and Construction Trades Council of California (SBCTC), and the Kern, Inyo, Mono Counties Building and Construction Trades Council.

SBCTC is the umbrella organization for 160 unions that collectively represent 350,000 skilled construction workers. In California, the Building Trades unions and their management partners spend more than $100 million a year on training and apprenticeship programs to ensure that their workers have the latest and best skills available for jobs in the new green economy.

“A PLA with the Building Trades is important for a project as complex and vital as this one,” said Paul Mannion, President of Fluor Constructors. “The PLA will help ensure the project will maintain the superior productivity, cost-effectiveness and quality workmanship that SCS Energy expects and that Fluor Constructors along with the Building Trades can deliver.”

“The men and women of the building trades are eager to get to work,” said SBCTC President Bob Balgenorth. “This is an important project not just for Kern County and California, but it is a model for the rest of the country and the world. It shows that we can provide a reliable source of energy, lower our carbon footprint, grow our economy and create good jobs.”

HECA believes that the PLA is essential to ensuring the highest possible quality of craftsmanship during the project’s construction phase, and that the project will offer quality job opportunities to local workers, as well as returning military veterans.

At the signing event, Jim Croyle, Chairman and CEO of SCS Energy, expressed his strong belief that the agreement will benefit thousands of union workers over the course of construction and strengthen the regional economy. “Everyone at HECA is pleased that Fluor Constructors and the Building Trades could work out this agreement.”

Amended Application for Project Certification

On May 3, HECA’s clean hydrogen energy project moved one step closer to reality when SCS Energy California LLC (SCS) filed an Amended Application for Certification to the California Energy Commission (CEC). The amendments reflect the plant’s modified design, expanded economic benefits to Kern County and the state, increased environmental benefits, and other additional improvements.

The filing resumes a comprehensive regulatory review process which, upon approval, would grant permission for construction and operation of this state-of-the-art hydrogen power plant that permanently and safely captures more than 90% of its carbon dioxide. The May 3rd submission highlights the comprehensive work performed by the HECA team since the U.S. Department of Energy approved SCS to take over the development of this important project for converting fossil fuels into clean power and the production of low-carbon products. Project construction is anticipated to begin in 2013, and the plant is expected to be operational in 2017.

CEC & DOE Hearings and Workshops

On July 12th, the California Energy Commission (CEC) and U.S. Department of Energy (DOE) will conduct a Site Visit, Informational Hearing and Scoping Session to provide an opportunity for members of the community to obtain information, offer comments, and view the project site. Anyone may present oral comments at the Informational Hearing and no advance notice is required. The activities will take place at Elk Hills Elementary School at 501 Kern Street in Tupman, CA, beginning at 5:00 pm with a bus tour of the site, followed by presentations from DOE, CEC, and HECA representatives at 6:00 pm. The public comment session will begin at 7:00 pm.

How HECA Works: Putting CO₂ to Good Use

Permanently and safely capturing and utilizing carbon dioxide (CO₂) from large sources such as power plants, is a globally recognized approach to mitigating climate change. The HECA project, which will produce a new major clean source of electricity using hydrogen, will permanently and safely capture and utilize 90% of its CO₂.

Rather than emitting the CO₂ into the atmosphere, it will be compressed and transported via pipeline to the nearby Elk Hills Oil Field. At Elk Hills, it will be put to good use, enabling up to five million barrels in additional oil reserves to be produced each year through a process known as enhanced oil recovery (EOR), which has been a commonly used technique in the U.S. for nearly 40 years.

Jan Gillespie, of Cal State Bakersfield’s Department of Physics and Geology, and an expert in identifying fields for enhanced oil recovery, says that Elk Hills is one of the best in the country for this activity, and for putting waste to good use. According to Gillespie, “Kern County is the epicenter of oil production in Southern California,” and for producing and storing gas underground.

At Elk Hills, the CO₂ will be injected deep underground — over 6,000 feet into a sandstone formation, where it will be naturally and permanently trapped under a thick layer of impenetrable cap rock and permanently stored under the oil field. Over time, the CO₂ will mineralize in the pore spaces of the sandstone.

Carbon Capture
CO₂ is captured and then injected beneath the surface where it enhances the recovery of oil.

View heca.com for videos on the carbon capture process and more comments from Jan Gillespie.
HECA’S Many Benefits:
Jobs, the Economy and the Environment

The HECA project is a major investment in the local economy.

During nearly four years of construction, HECA will create thousands of high quality union jobs in Kern County and the region, as well as several hundred full-time jobs when completed. When fully operational, HECA’s operation will create $22 million in annual labor income and $239 million in total annual economic impact to Kern County.

On the product side, HECA will manufacture low-carbon products within California valued at more than $1 billion a year, which will stimulate the state’s overall economy. In addition, the captured CO₂ gas will enable the production of up to five million additional barrels of in-state domestic oil per year, generating new revenues for California.

Les Clark, of the Independent Oil Producers Agency, notes that “HECA will improve and stabilize local oil production” and will “enable Kern County to be more self-sufficient while improving energy security.”

HECA’s environmental benefits are just as impressive.

HECA will produce lower air emissions than any conventional power plant of its size, including those powered by natural gas. By using hydrogen as a clean fuel, HECA will prevent more than three million tons per year of greenhouse gases from going into the atmosphere — that’s the equivalent of eliminating 650,000 cars from the road each year. Another environmental benefit is HECA’s preservation of California’s valuable fresh water resources by using brackish, non-potable water and eliminating waste water discharge. According to Dan Bartel of the Buena Vista Water Storage District, “Western Kern County is the perfect location for the HECA power plant. In addition to providing jobs and other benefits, HECA’s reliance on disposing of brackish water will provide ways to solve our groundwater issues by helping clean up the local water supply.”

Community Focus

HECA Around Town

You may already have met Darlena Alvidrez, HECA’s local representative, at some of the community’s recent events.

On April 20, Darlena participated along with Honorary Mayor Randy Chamblee; Buttonwillow Parks and Recreation District Manager Marie Parsons; Chamber of Commerce representatives; and a number of honored guests in the Buttonwillow Park and Recreation District’s “Babe Ruth Grand Opening Ceremony” for its new baseball field. Darlena handed out stadium cushions to local and visiting fans that day, as well as during the Little League’s official first game at the new field on April 23.

Darlena also attended Buttonwillow School’s monthly “Be Safe” meeting for youth leaders and parent groups; and the Annual Community Fair hosted by the Buttonwillow Community Resource Center along with First5 Kern, a county-wide child development program.

Feel free to contact Darlena at the HECA Information Center if you would like a HECA representative at your upcoming meeting or event.

Visit the New HECA Information Center

You are invited to tour HECA’s Information Center in Buttonwillow to learn more about this exciting project. Visitors will find diagrams, visuals and explanations of how this state-of-the-art hydrogen energy plant will generate clean power for your homes and businesses, produce fertilizer, and benefit Kern County’s economy.

The HECA Information Center is located in the center of Buttonwillow, across the street from the Kern County Sheriff’s substation at 189 E. Front Street.

Hours: Monday – Friday 10:00 am to 2:00 pm
Contact the HECA Information Center at: (661) 764-6442
MESSAGE FROM HECA

Hydrogen Energy California (HECA) welcomes you to the launch of our newly redesigned newsletter, which is now available for your convenience in both print and online versions. Because the HECA project will create thousands of high-quality jobs and bring much-needed revenue to our local and state economy, we want to keep you updated on the project’s accomplishments to date and progress toward completion. We also want to let you know what we’re doing around the community and how we’re working with local business leaders, schools, and organizations. Going forward, we hope you’ll become more familiar with the HECA project and get to know the dedicated and talented people who are working to make it happen. Please look for quarterly updates and feel free to contact us with any story ideas you may have.

Business Focus

Bakersfield Rotary Club Meeting

Jim Croyle, CEO of SCS Energy, the parent company of Hydrogen Energy of California, met with members of Bakersfield’s Rotary Club on April 19 to discuss the HECA project. Jim explained how the project will boost the local economy by manufacturing agricultural and industrial products and also provide solutions to California’s future needs for low-carbon power.

Jim Croyle
CEO of SCS Energy

HECA’s Ed Western discussing HECA project with Bakersfield Rotary Club members.