


Hydrogen Energy California
- new directions for a low carbon
power project

Fall 2011

Hydrogen Energy California LLC



- SCS Energy acquired the HECA Project from BP and Rio Tinto in September, 2011
- Unchanged Features
 - Creating hydrogen from fossil fuels, 90% carbon capture and sequestration
 - Preserve fresh water for agriculture, community, economic and jobs benefits
 - Site, water supply, interconnection location
 - Permitting process
- Enhancements
 - Low carbon footprint agricultural fertilizer manufacturing
 - Lower truck traffic

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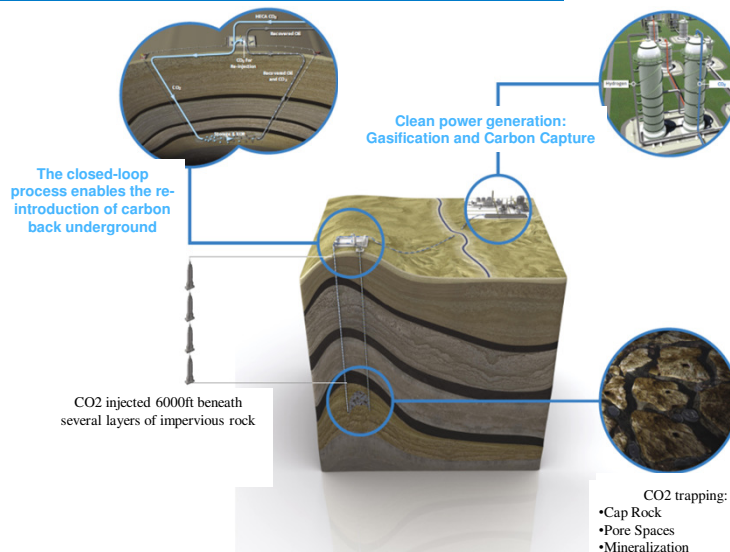
Hydrogen Energy California LLC



- Working to permit and build an alternative energy power plant that supplies low carbon electricity to 150,000 homes
- Complementary with other forms of alternative energy, the transformation of fossil fuels into hydrogen provides clean and reliable electricity
- Enabling production of more Domestic Oil via Enhanced Oil Recovery (EOR) with Carbon Capture & Storage
- Enabling California to meet its regulatory target to reduce Green House Gas emissions from the power sector and to build new in-state power generation

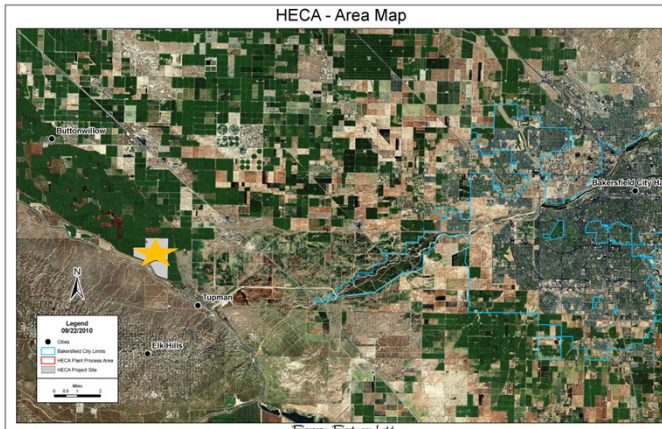
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Putting Carbon back underground



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Land Use



Site selection based on:

- Excellent Storage Geology
- EOR opportunity
- Non-potable water supply
- Transmission lines nearby
- Rural and industrial area

Economic Benefits



- World Class clean energy investment for Kern County
- New direct jobs and millions in tax revenues for Kern County
 - 2000 jobs during construction & 140 during operations
- Indirect economic benefit: CO2 injection will extend life of Elk Hills
- Preserves fresh water for agriculture by using 100% brackish water
- Reduces electricity imports from out of State
- Smart land use: 470 acres process area surrounded by 500 acre farmland buffer
- Voluntary Community Benefits investments: projects that improve quality of life above and beyond project benefits.

Environmental Benefits



- CCS removes over 2 million tons per year of GHGs
 - Equivalent to taking >400,000 cars off the road
- Facility meets or exceeds SJV Air District requirements:
 - Best Available Control Technology air quality standards
 - Emission Reduction Credits
 - Investing >\$700K into Valley air improvement projects
- Eliminates traditional emissions related to fossil fuel use
- Produces low carbon domestic urea
- Enables Buena Vista Water Storage District brackish water remediation plan
- Discharges no waste water or storm water (Zero Liquid Discharge)

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Project Schedule



Permitting and Engineering: Through 1st Quarter 2013

Construction & Startup: Spring 2013 to Fall 2017

Next Step Milestones:

- Completion of State and Federal permitting
- Power Purchase Arrangements with California regulated utilities

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Conclusion



- World Class high-tech investment for Kern County
- Extensive Economic & Environmental Benefits
 - Locally: New jobs, taxes, oil sector growth, water and air impacts minimized
 - State: Reduce imports, increase investment, improve energy mix, meet GHG regulatory targets

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