

Mr. David Warner
Director of Permit Services
San Joaquin Valley Air Pollution Control District
34946 Flyover Court
Bakersfield, CA 93308



30th May, 2013

Comments of the Natural Resources Defense Council on the Preliminary Determination of Compliance for Hydrogen Energy California, Facility # S-7616, Project # S-1121903

Dear Mr. Warner,

Thank you for the opportunity to provide comments on the Preliminary Determination of Compliance (PDOC) for Hydrogen Energy California (HECA), Facility # S-7616, Project # S-1121903. The Natural Resources Defense Council (NRDC) is a national, nonprofit organization of scientists, lawyers and environmental specialists dedicated to protecting public health and the environment. Founded in 1970, NRDC has 1.4 million members and online activists nationwide, served from offices in New York, Washington D.C., San Francisco, Los Angeles, Chicago and Beijing.

Introduction

NRDC believes that carbon capture and geologic sequestration of carbon dioxide (CCS), correctly implemented, is an important component of the international and U.S. portfolio in order to reduce harmful carbon pollution from fossil fuel use in a timely manner that is consistent with climate stabilization. While we believe that renewable energy and increasing energy efficiency should be utilized first, CCS can also make significant contributions to reducing emissions. We have supported deployment of CCS technologies and have been active in advocating for the establishment of environmental safeguards and economic incentives for the technology. We also believe that the technology could help California achieve its greenhouse gas reduction goals by reducing power sector and refinery emissions, among others. However, any specific project proposal must be evaluated thoroughly and on an individual basis, not just for its potential climate benefits but for a far broader suite of issues that include air quality, water use and pollution, local impacts and environmental justice.

In these comments we address alternative fossil fuel blends for the plant's feedstock, air quality and carbon emissions in the PDOC.

Alternative fossil fuel blends

The current HECA proposal has moved away from the originally proposed use of petroleum coke (petcoke), a waste product from oil refining, as its predominant feedstock.¹ In place of petcoke, HECA currently proposes to use a mix of 75% western subbituminous coal that originates in New Mexico and 25% petcoke.² Petcoke from the West Coast of the U.S. is commonly shipped to Asia, where it is burned, resulting in the release of high concentrations of toxic pollutants. Gasification of the petcoke is an environmentally preferable alternative since it practically eliminates those emissions and binds the pollutants in an inert form. The Applicant's BACT analysis does not consider whether the project can use petcoke as the main or only feedstock for plant operation. It is our understanding that one of the reasons for introducing coal as a feedstock is the availability of a manufacturer performance guarantee for the gasifier, and the current unattainability of one for petcoke. However, it is plausible and even expected that using higher portions or 100% petcoke in the gasifier would prove feasible after plant operations begin in a manner that makes a commercial guarantee obtainable. We urge the San Joaquin Valley Air Pollution Control District (District) to analyze the use of alternative fossil blends that exclude coal, which would not redefine the source, and the Applicant to discuss conditions and timelines for reducing or eliminating the use of coal in the future, including the immediate term, the period after the Department of Energy demonstration phase and associated coal use requirements expire, and the longer term.

Air quality and the use of offsets

The proposed HECA facility would be situated in the San Joaquin Valley air basin, which is currently designated as nonattainment with the state and national ambient air quality standards for small particulate matter ("PM2.5"); nonattainment with the state standard for coarse particulate matter ("PM10" or "respirable particulates"); nonattainment with the 3 hour state standard for ozone, severe nonattainment with the 1-hour state standard for ozone, and extreme nonattainment with the 3 hour national standard for ozone.³

However, the District proposes in the PDOC to offset the HECA Project's emissions with banked emission reduction credits (ERCs) for emission reduction that occurred at other facilities decades ago. In particular, the PDOC proposes to offset NOx emissions with NOx ERCs, VOC emissions with VOC ERCs, and particulate matter emissions with SOx ERCs. Both the Clean Air Act and local rules prohibit new sources from using banked offsets if an attainment plan has not been approved for the area in question. The District does not have an approved attainment plan for either the federal 1-hour ozone standard or the 2006 federal PM2.5 standard. As such, the District cannot claim "reasonable further progress" towards attainment.

¹ Hydrogen Energy International LLC, Application for Certification, Hydrogen Energy California, July 2008 (hereafter "08-AFC-08"), p. 1-1; http://www.energy.ca.gov/sitingcases/hydrogen_energy/documents/08-AFC-8/applicant/original_afc/Volume_01/Master_Section_1.0.pdf.

² PDOC, p. 1, and Application, p. 2-23.

³ PDOC, Appendix K, p. 7.

Moreover, several of the proposed ERCs appear to be invalid and not meeting the requirements of the District's rules and the Clean Air Act. As is outlined in the comments to the PDOC by the Sierra Club, "[...] about 92% of the ERCs for NOx offsets were generated by the shutdown of a catalytic cracker, fluid coker, and CO boiler on November 30, 1983 and about 8% by the installation of a selective catalytic reduction system ("SCR") and scrubber and the conversion of the source from fuel oil to natural gas in 2008. Thus, the majority of NOx offsets proposed for HECA were generated close to three decades ago.

About 63% of the ERCs for SOx used for PM10 offsets were generated by the shutdown of a tail gas incinerator on March 1, 1992, more than two decades ago, and about 37% from the installation of an SCR and scrubber and conversion from fuel oil to natural gas in 2008.

All VOC ERCs originate from the shutdown of an entire stationary source in December 1981, i.e., more than three decades ago."

The Sierra Club also asserts that certain types of offsets are not valid or were issued or sold unlawfully. We therefore urge the District to comment on the above assessment and either provide evidence to the contrary or clearly outline different options for offsetting these emissions. The Applicant should further discuss mitigation measures and expenditures in light of the above.

Carbon dioxide emission limits and enforceability

We commend the Applicant for proposing to incorporate a limit on the majority of carbon dioxide emissions from the facility in the permit, as well as the District for looking into ways in which they could enforce this. This goes beyond the vast majority of permitted facilities in the U.S. right now, but enforceability of such a limit is critically important for HECA to be able to claim credibly that it generates low-carbon output and for compliance with the emissions performance standard under SB1368.

In the Record of Teleconference Regarding SB 1368 Compliance and Applicant's Response to USEPA Comments on the SJVAPCD's PDOC⁴, the District asserts that "they have reconsidered their [i.e. the District's] approach to reviewing GHG BACT requirements and concluded that the 400 lb/MWh limit in the PDOC was outside their scope of authority and would be removed from the Final DOC". Given the importance of such a limit, we urge the District to justify clearly why it believes it lacks authority and why such a course of action is preferred. We also urge the District to explain how it will deal with the issues raised in the US EPA comment letter of April 11, 2013.

If a limit in annual, monthly (or otherwise) emissions is not specified explicitly, then the District and Applicant should demonstrate that the proposed alternative formulation (expressed as a capture percentage along with assurances of underground injection and retention) is indeed tantamount to the same thing, both quantitatively, and in terms of enforceability. This should take into account auxiliary equipment, process and other relevant emissions and not just the amount of carbon dioxide captured at the gasifier. The means of monitoring performance and enforcing it should also be clearly discussed.

⁴ http://www.energy.ca.gov/sitingcases/hydrogen_energy/documents/2013-05-10_ROC_re_SB_1368_Compliance_and_Applicant_Response_to_USEPA_Comments_on_the_SJVAPCD_PDOC_TN-70829.pdf

We further urge the District and Applicant to present options for enforcing an increasing level of carbon dioxide performance as the plant's operations mature. While we consider it acceptable to permit carbon dioxide emissions at a higher level in the first few months that takes into account upsets during early operations and allows flexibility to gain needed experience, we do not consider it necessary for this period or highly specific conditions and circumstances to dictate the plant's permitted performance level for the rest of its lifetime. We propose a discussion of decreasing levels of plant carbon dioxide emissions according to specific milestones or timelines, or equivalent. Finally, we urge the District to discuss the level and mode of disclosure and enforceability of the plant's ongoing carbon emissions, and ensure that members of the public can obtain this information during operations as well and that the public has recourse should limits be exceeded.

Conclusion

In light of the issues raised above, we believe that the District should make revisions to the PDOC, and that the District and Applicant need to supply additional information on the issues raised. We request that sufficient time be allowed for public comment and remain at your disposal if you have further questions.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "G. Peridas", with a horizontal line underneath it.

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**AMENDED APPLICATION FOR CERTIFICATION
FOR THE HYDROGEN ENERGY
CALIFORNIA PROJECT**

**Docket No. 08-AFC-08A
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(Revised 05/10/2013)**

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DECLARATION OF SERVICE

I, Lucian Go, declare that on May 30th, 2013, I served and filed copies of the attached **Comments of the Natural Resources Defense Council on the Preliminary Determination of Compliance for Hydrogen Energy California, Facility # S-7616, Project # S-1121903**, dated May 30th, 2013. This document is accompanied by the most recent Proof of Service, which I copied from the web page for this project at: http://www.energy.ca.gov/sitingcases/hydrogen_energy/.

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I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that I am over the age of 18 years.

Dated: May 30th, 2013


