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DOCKET			
08-AFC-8			
DATE	APR 26 2012		
RECD.	APR 27 2012		

# STATE OF CALIFORNIA ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

IN THE MATTER OF:	)	DOCKET NO. 08-AFC-8
APPLICATION FOR CERTIFICATION FOR THE HYDROGEN ENERGY CALIFORNIA PROJECT BY HYDROGEN ENERGY CALIFORNIA LLC	) ) ) )	RESPONSES TO DATA REQUESTS BY THE ASSOCIATION OF IRRITATED RESIDENTS
	,	

On March 23, 2012, Intervenor Association of Irritated Residents ("AIR") filed data requests in connection with the above-referenced matter (Docket No. 64367). This submittal provides the Applicant's responses to the AIR data requests. As indicated below, additional information responsive to the data requests will be contained in the AFC Amendment, which Applicant expects to file on or around April 30, 2012. To avoid presenting responsive information out of context, it has not been repeated here. Instead, references to the appropriate sections of the AFC Amendment have been provided where appropriate.

**AIR Data Request 1** – On Page two under the general heading "...several basic project components remain unchanged..." there is the following bullet point: "90 percent carbon capture is achieved via CO2 EOR and sequestration..."

This does not seem to be an accurate statement supported by evidence. AIR assumes the project will capture CO2 from coal and use it for EOR. AIR has seen no evidence concerning the amount of this CO2 that will ultimately be sequestered. Has it been determined definitively that the EOR process results in sequestration of 90 percent of the CO2 produced in relation to the project? We have not seen any facts or detailed description of the EOR process that shows the lifecycle of the CO2 after its initial capture in the IGCC process. Will there be leakage as the CO2 comes back to the surface with the oil and is recaptured, cleaned, pressurized, and reinjected? Please provide a realistic projection of the total CO2 released by this project including that from all related and peripheral activities such as total operation activities, transportation of fuel and waste, pumping of water, pressurizing of CO2, injection of CO2, etc.

**Response to AIR Data Request 1:** The requested information can be found in the following sections, tables and appendices of the AFC Amendment:

- Section 5.1.2.4
- Table 5.1-22
- Section 5.1.3
- Appendix A OEHI SEI.
- Appendix E-6
- Appendix E-12.

AIR Data Request 2 - "NOx emissions from the CTG/HRSG will be lower...." What was the earlier figure? How much lower? Will there be NOx emissions from the fertilizer plant? Will total NOx emissions be lower when the fertilizer plant and related operations are included? Will the use of coal as 75% of the fuel for the life of the project instead of the first two years only, increase or decrease criteria air pollutants such as NOx in Kern County over the life of the project. Any changes in transportation of the fuel should be included in the analysis. How much transportation will be needed for the fertilizer plant including deliveries of the finished product? How do emissions change if the rail spur to the project is not built?

**Response to AIR Data Request 2**: The requested information is contained in the AFC Amendment. Total Project emissions can be found in Table 5.1-14. Emissions associated with transportation under Alternative 1 (rail) are presented in Sections 5.1.2.3 and 5.1.2.4, and Appendix E-5. Emissions associated with transportation under Alternative 2 (trucks) are presented in Section 5.1.3 and Appendix E-12.

**AIR Data Request 3** – Please justify why coal is the choice as the majority fuel for the life of the project. Kern County does not produce coal but we have plenty of oil and natural gas. Is there a reason why the project does not attempt carbon capture with natural gas as the main fuel?

Response to AIR Data Request 3: The actual fuel for the Project is hydrogen. The power block and integrated low-carbon nitrogen-based product manufacturing complex use hydrogen as their fuel and feedstock, respectively. The Project is designed to create hydrogen from a feedstock blend consisting of 75 percent western sub-bituminous coal and 25 percent California petcoke by a chemical process that involves almost no atmospheric emissions.

Despite the presence of the local gas and oil industry, California currently imports approximately 50% of its oil and 90% of its natural gas needs each year. Coal is a plentiful, domestic feedstock exhibiting stable supply. Historically, coal has been less expensive per unit of energy produced than oil or natural gas. In spite of recent environmental regulation and advances in technology favoring natural gas use, coal is still priced lower than natural gas in California. In addition, coal

prices are more stable historically, and therefore more predictable for investors and lenders. Securing a domestically-available long-term, stable, feedstock will enable the Project to provide dependable low-carbon hydrogen-generated electricity to help meet future electrical power needs and to support a reliable power grid that is an essential component to meeting California's GHG reduction goals for 2020 and beyond.

**AIR Data Request 4** – . Will the urea (fertilizer) produced be expected to raise or lower the price of this type of fertilizer for local farmers? Does HECA expect to receive carbon credits in some form from the production of this fertilizer?

Response to AIR Data Request 4: The Project will contain an integrated manufacturing complex that will produce approximately 1 million tons per year of low-carbon nitrogen-based products, including urea, urea ammonium nitrate (UAN), and anhydrous ammonia, to be used in agricultural, transportation, and industrial applications. Currently, the vast majority of all California nitrogen-based fertilizer feedstocks are imported into the state. Due to these transportation costs, California nitrogen-based fertilizers are priced 20-30% higher than those in other regions in the country. The Project is currently negotiating with several fertilizer wholesalers who will distribute to the southern California region. As the Project is not directly negotiating with retail suppliers, end-user consumer prices are unknown at this time. However, the local presence of a nitrogen-based fertilizer producer is likely to benefit area consumers through increased competition and the lowering of transportation costs.

The Project is monitoring the regulatory process regarding the implementation of AB32, the Global Warming Solutions Act of 2006. Although it is evident that the products and power produced by the Project have a lower carbon footprint than similar products traditionally produced from the combustion of fossil fuels, it is unclear at the present time whether carbon credits or other incentives for GHG reductions will be available to the Project. The Project will continue to monitor the implementation of AB32 and related programs, but as of this time, the Project has no expectation of receiving carbon credits from the production of fertilizer.

AIR Data Request 6 [no #5 was provided] — Under Meteorological and Background Data it is stated that NO2 data will be from the Shafter, Walker Street station. Please justify why this is the correct station to use and not the Arvin, Bear Mtn station. Please include the hills and mountains around HECA and around Arvin in the justification. Please note clearly how Shafter has the lowest levels of NO2 emissions and Arvin has the highest levels in Kern County. Explain why it is ok to choose the Kern County monitoring station with the lowest levels instead of the highest levels of NO2 for background levels when the requirement is to be conservative in all assumptions in order to present the worst probable case instead of the best?

**Response to AIR Data Request 6:** The information requested can be found in the description of the background monitor selection provided in Section 5.1.1.2 of the AFC Amendment. Further justification is provided in Appendix E-7 of the

#### AFC Amendment.

**AIR Data Request 7** – AIR notes that the plan is to continue the proposal to use a brackish water supply for process water needs. What is HECA's definition of brackish water in mg/L of dissolved salts. What is the level of salts in the proposed brackish water? Is there a guarantee that water below a certain level of salts will not be used by HECA for process water?

**Response to AIR Data Request 7:** The information requested can be found in Section 5.14.1.6 of the AFC Amendment.

DATED: April 26, 2012 Respectfully submitted,

/s/ Marc Campopiano

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Marc Campopiano
LATHAM & WATKINS LLP
Counsel to Applicant

# STATE OF CALIFORNIA ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

In the Matter of:	)	Docket No. 08-AFC-08
	)	
APPLICATION FOR CERTIFICATION	)	PROOF OF SERVICE
FOR THE HYDROGEN ENERGY	)	
CALIFORNIA PROJECT BY HYDROGEN	)	(March 20, 2012)
ENERGY CALIFORNIA LLC	)	
	)	

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## HYDROGEN ENERGY CALIFORNIA PROJECT CEC Docket No. 08-AFC-08

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# HYDROGEN ENERGY CALIFORNIA PROJECT CEC Docket No. 08-AFC-08

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# HYDROGEN ENERGY CALIFORNIA PROJECT CEC Docket No. 08-AFC-08

# **DECLARATION OF SERVICE**

I, Paul Kihm, declare that on April 26, 2012, I served and filed copies of the attached:

# RESPONSES TO DATA REQUESTS BY THE ASSOCIATION OF IRRITATED RESIDENTS

to all parties identified on the Proof of Service List above in the following manner:

# **California Energy Commission Docket Unit**

Transmission via electronic mail to:

## **CALIFORNIA ENERGY COMMISSION**

Attn: DOCKET NO. 08-AFC-08 1516 Ninth Street, MS-4 Sacramento, California 95814-5512 docket@energy.state.ca.us

# **For Service to All Other Parties**

Transmission via electronic mail to all email addresses on the Proof of Service list.

I declare under penalty of perjury that the foregoing is true and correct. Executed on April 26, 2012, at Costa Mesa, California.

/S/ Paul Kihm
Paul Kihm