HECA's Comments on Sierra Club's May 30, 2013 Comments on the Preliminary Determination of Compliance
Hydrogen Energy California Facility # S-7616, Project #S-1121903
[June 28, 2013]

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
			I Project Description	
1	Project Description			
			II The PDOC Is Not Adequately Supported, Internally Inconsistent, and Inconsistent with Information Provided by the Applicant	
2	II.A Failure to Provide Supporting Documentation	3	These materials should be provided in both English and Spanish.	HECA has provided most, if not all, of the information available on its website in both English and Spanish – see http://hydrogenenergycalifornia.com/factsheets-spanish They have also made those documents targeted to the general public available in both English and Spanish. There is a direct link to the Spanish language fact sheets on HECA's website's main page by clicking on the "Espanol" link next to a Spanish flag in the upper right corner. SJVAPCD has provided a summary of the PDOC in Spanish, plus public meeting notices.
3	II.B Inconsistencies in Emission Estimates	4		General comment: See the Updated Emissions and Modeling Report, May 2013 for the most updated emissions estimates.
4	II.C Inappropriate Authorization for Future Installation of Liquid Ammonia Loading Facility	5		The Ammonia Loading Facility is no longer part of project.
			III The PDOC Does Not Adequately Address Alternatives	
5	III.A The PDOC Fails	6		The applicant provided an alternatives analysis in the

[1] Printed page number from the PDF of the Sierra Club's May 30, 2013 Comments on the PDOC.
[2] Text from Sierra Club's comments that is the subject of the applicant's comment.
[3] Applicant's comment.

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
	to Analyze Alternatives Under Clean Air Act Section 173(a)(5) and SJVAPCD Rule 2201, Section 4.15.1			Amended AFC, May 2012. CEC will provide a subsequent alternatives analysis in the PSA.
6	III.A The PDOC Fails to Analyze Alternatives Under Clean Air Act Section 173(a)(5) and SJVAPCD Rule 2201, Section 4.15.1	7	To adequately evaluate "environmental and social costs," the District must analyze public health and economic impacts from locating a new major source of air pollution in the dirtiest air basin in the country, impacts on sensitive populations including the nearby Elk Hills School, impacts on environmental justice communities, as well as impacts from the rail and truck emissions.	Impacts at the Elk Hills School and nearby communities were analyzed in the AQIA, HRA, and conformity analyses from all Project related emissions sources including, stationary sources, rail and trucks.
7	III.A.1 The Alternatives Analysis Must Consider Public Health and Economic Impacts from Increased Air Pollution in the Dirtiest Air Basin in the Country	8	The HECA Project would further increase levels of pollution in this already overburdened region and have direct and serious public health and economic impacts.	HECA will have emission reduction credits to offset its emissions for nonattainment pollutants, and goes beyond air quality requirements with additional mitigation to fund a variety of emission reduction projects in the San Joaquin Air Basin, which will result in a net air quality benefit to the region.
8	III.A.2 The Alternatives Analysis Must Evaluate Impacts on Sensitive Populations, Including Children at Nearby Elk Hills School	9		See III.A above
9	III.A.3 The Alternatives Analysis Must Evaluate Impacts on Environmental Justice Communities	9		See III.A above
10	III.B The Applicant's BACT Analysis for	11		See the response to Sierra Club Data Request Set 1, DR47-48 and Association of Irritated Residents (AIR) Data

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
	Alternative Generating Technologies Is Deficient Because It Does Not Adequately Consider Clean Fuel Alternatives			Request Set 1, DR 9.
11	III.B The Applicant's BACT Analysis for Alternative Generating Technologies Is Deficient Because It Does Not Adequately Consider Clean Fuel Alternatives	11	This analysis is deficient because it failed to consider cleaner fuels such as natural gas, biomass, and alternative blends	This statement fails to mention that Hydrogen is a low emission alternative fuel that can be produced from diverse domestic energy sources. This is recognized by numerous agencies and programs. The HECA project is combusting clean hydrogen to generate electricity. Hydrogen rich gas is recognized as a clean alternative fuel.
12	III.B.1 Use of Cleaner Fuels Would Not Redefine the Source	12		See III.B above
13	III.B.2 Natural Gas as Alternative Fuel	13		See III.B above
14	III.B.2 Natural Gas as Alternative Fuel	14	Natural gas is a technically feasible and obvious option at HECA because the facility is designed to operate on natural gas both at startup and as a secondary fuel.	The statement here suggests that HECA operate the gas turbine on natural gas instead of clean low hydrogen. The project has accepted a restriction on natural gas to lower emissions.
15	III.B.3 Alternative Fossil Fuel Blends	15		See III.B above
16	III.B.3 Alternative Fossil Fuel Blends	15	Burning 100% petcoke	No petcoke or coal will be burned at HECA. The feedstock is gasified into a clean hydrogen gas that is burned in the turbine and duct burners.
17	III.B.4 Biomass or Biomass Fuel Blend Alternative	15		See III.B above

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
IV The District May Not Use Banked Offsets for the HECA Project and HECA's Emission Reduction Credits Are Not Valid				
18	IV.A Nonattainment State Implementation Plan Requirements for Offsetting Emissions with Banked Emission Reduction Credits			
19	IV.B Air Quality in the San Joaquin Valley			
20	IV.C Lack of EPA Approval for Ozone and PM2.5 Attainment Plans for the San Joaquin Valley Prohibits Use of Banked Offsets			
21	IV.D Transaction History of HECA's Emission Reduction Credits			
22	IV.E HECA'S 30-Year Old Proposed Offsets Conflict With the Clean Air Act			
23	IV.F HECA's VOC ERCS Are Not Valid			
24	IV.F.1 VOC Certificate History			
25	IV.F.2 VOC ERCs Were Not Generated in Conformance with			

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
	Applicable Federal Clean Air Act Provisions for Emission Reductions from Facility Shutdown			
26	IV.F.3 Frito-Lay's ERCs Were Unlawfully Sold			
27	IV.F.4 Emission Reduction Credits for S-41-1 Were Incorrectly Quantified and Are Therefore Not "Quantifiable" as Required by District Rules 2201 and 2301			
28	IV.F.5 VOC ERCs Were Not Reduced to Account for Emissions from Frito-Lay Facility and Expansion			
29	IV.G Proposed PM10 Offsets Are Not Adequate			
30	IV.H Proposed PM2.5 Offsets Are Not Adequate to Mitigate the Project's PM2.5 Emissions			
31	IV.H.1 Emission Reduction Credit Certificate #C-1058-5 (SOx) Is Not Valid			

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
	Because It Is Not Accounted for in an EPA-Approved PM2.5 Attainment Plan			
32	IV.H.2 The District Must Demonstrate that Project Emissions Would Not Cause or Contribute to a Violation of Ambient Air Quality Standards			
V The PDOC'S Potential to Emit Estimates Are Not Adequately Supported, Underestimate the Project's Impacts on Air Quality, and the Proposed Compliance Conditions Do Not Ensure Compliance with Emission Limits				
33	V.A The PDOC's Potential to Emit Estimates Are Based on Unsupported Assumptions and the Applicant Admits that Project Design Is Not Finalized	37		The emission estimates bases are presented in the ATC Application, May 2012; the Updated Emissions and Modeling Report, May 2013; and numerous data responses, of particular note is the response to Sierra Club Data Request Set 1 DR 38.
34	V.A The PDOC's Potential to Emit Estimates Are Based on Unsupported Assumptions and the Applicant Admits that Project Design Is Not Finalized	40	Applicant estimates that "[n]et output may range from 267–300 MW and gross output may range from 405–431 MW	The maximum and net power output are affected by ambient temperatures and the demand for power. This does not affect the emissions calculations since they were calculated under a maximum potential to emit basis.
35	V.B The Facility's Potential to Emit Is			

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
	Underestimated and Emission Limits Are Not Adequately Enforced			
36	V.B.1 Flare Emissions during Unplanned Startup, Shutdown, and Malfunction Events Are Not Accounted For	41	accounting for two planned startup events per year	HECA is planning only 1 annual plant wide shutdown per year but has accommodated a second unplanned shutdown in the emissions calculations.
37	V.B.1 Flare Emissions during Unplanned Startup, Shutdown, and Malfunction Events Are Not Accounted For	41	Similarly, emissions from the HRSG when firing on natural gas during unplanned equipment outages are estimated based on a maximum of 336 hours per year and restricted by a corresponding condition of compliance.	Natural gas is a backup fuel for the turbine that could be used during planned maintenance or unplanned gasifier outages to meet power sales agreements for up to 336 hours per year.
38	V.B.1 Flare Emissions during Unplanned Startup, Shutdown, and Malfunction Events Are Not Accounted For	43	In fact, by including a limit on natural gas firing for the HRSG for unplanned events of 336 hours/year, the PDOC makes clear that substantial periods of malfunction of the gasification unit and/or other equipment involved in producing clean syngas are expected during which the HRSG would not receive and operate on clean syngas	Inclusion of 336 hours per year of natural gas usage for the turbine does not indicate that HECA expects substantial periods of malfunction of the gasifier, this natural gas usage allows for power generation while the gasifier is offline for routine maintenance.
39	V.B.2 Combustion Turbine Generator/Heat Recovery Steam Generator and Coal Dryer Emissions Are Underestimated and Emission Limits Are Not Enforceable	46		See Updated Emissions and Modeling Report, May 2013, Section 3.2.1 for HRSG and Feedstock Dryer emission calculation basis. ; SJVAPCD should respond to topics regarding lack of hour-based operations conditions and enforceability
40	V.B.2 Combustion Turbine Generator/Heat Recovery Steam Generator and Coal Dryer Emissions Are Underestimated and Emission Limits Are	47	the PDOC does not contain d) a restriction on the total number of hours under normal operating conditions for the HRSG and the feedstock dryer, e) a requirement that the units not operate for 397 hours per year	The PDOC should not contain hours of operation limitations, it should only contain emission limitations.

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
	Not Enforceable			
41	V.B.3 VOC Emissions from the CO2 Vent Are Underestimated	49		See Updated Emissions and Modeling Report, May 2013, Section 3.2.6 for CO2 vent emissions.
42	V.B.4 Emission Estimates for the Auxiliary Boiler Improperly Exclude Startup and Shutdown Emissions	50		See Updated Emissions and Modeling Report, May 2013, Appendix A; and Sierra Club Data Request Response 106, Nov. 2012.
43	V.B.5 Fugitive Emissions from Methanol Storage Tank Are Not Accounted For	51		See Updated Emissions and Modeling Report, May 2013, Section 3.2.7, 5.1.2, and Appendices A and B.
44	V.B.6 Fugitive Emissions from Diesel Stored with Emergency Generator and Diesel Fire Pump Are Not Accounted For	53		Fugitive emissions from the diesel storage associated with the emergency generators and fire pump are provided in the Updated Emissions and Modeling Report, May 2013, Appendices A and B.
45	V.B.7 Fugitive Equipment Leaks Are Not Adequately Supported and Are Underestimated	53		The basis for the fugitive emission calculations were provided in response to the same question in Sierra Club Data Request Set 1 DR 79. Also see Updated Emissions and Modeling Report, May 2013.
46	V.B.7 Fugitive Equipment Leaks Are Not Adequately Supported and Are Underestimated	54	*SOCMI Emission Factors Are Not Applicable*	See response to Sierra Club Data Request Set 1 DR 79.
47	V.B.8 Emissions Associated with Fluxant Delivery, Storage, and Handling Are Not Accounted For	57		See Updated Emissions and Modeling Report, May 2013.

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
48	V.B.9 On Site Fugitive Dust Emissions from Paved Roads and Wind Erosion Are Not Accounted For	57		On site fugitive dust emissions from paved road travel are included in the Updated Emissions and Modeling Report, May 2013. Wind erosion emission factors were developed to determine dust from storage piles, not roads, it is completely inappropriate to use these emission factors to double count fugitive dust from paved roads. The parameters used to determine the fugitive dust from the onsite paved roads are outlined in the Amended ATC, May 2012. As noted in response to Sierra Club Data Request Set 2 DR 113-114 and Sierra Club Data Request Set 3 DR 138 onsite road dust was included in all PM modeling and emissions inventories.
49	V.C Lack of Enforceable Compliance Conditions			
50	V.C.1 Lack of Fuel/Feedstock Specifications			
51	V.C.2 Lack of Operating Conditions for CO2 Vent during Mature Operation			
52	V.C.3 Compliance Conditions for Cooling Tower Are Not Enforceable			
53	V.C.4 Lack of Enforceable Permit Condition for Nitric Acid Unit			
54	V.C.5 Lack of Enforceable PM2.5 Emission Limits			

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
55	V.C.6 Inadequate Reporting Conditions			
VI The PDOC Fails to Require Best Available Control Technology and Lowest Achievable Emission Rate				
56	VI.A BACT and LAER Require a Thorough and Well-Documented Analysis			
57	VI.B BACT is Typically Evaluated Through a 5-Step, Top-Down Process			
58	VI.C The PDOC's BACT Determinations Do Not Address All Pollutants Subject to Rule 2201 BACT Requirements	77	**Table 3: Daily potential to emit from HECA Project emissions units exceeding the 2.0 lbs/day BACT applicability threshold established in SJVAPCD Rule 2201 and BACT analyses performed by District**	Emissions presented in this table do not accurately reflect HECA project emissions.
59	VI.D The PDOC's BACT Determinations Pursuant to Rule 2201 BACT Requirements Are Inadequate			
60	VI.E Common Problems with the PDOC's Approach to BACT Determinations			
61	VI.F BACT Determination for Cooling Towers Is Deficient	82	IGCC plant manufacturers also offer air cooling as a standard option for the entire plant. For example, for the last decade ConocoPhillips has advertised in public forums an air-cooled option to its standard IGCC plant design.	It should be noted that no IGCC plants with carbon capture and sequestration (CCS) have been built with air cooling, thus it is not a technology that is achieved in practice.
62	VI.F.1 Cost of Cooling Towers and Associated	82		The costs and assumptions outlined in the Sierra Club analysis have no relevance to the HECA project. There is

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
	Infrastructure at HECA			no basis for applying this speculative cost analysis to HECA. In response to the Sierra Club Data Request Set 1 DR 71 and Set 2 DRs 127 and 128, HECA provided project appropriate dry cooling capital costs.
63	VI.F.2 Capital Cost of Air-Cooled Condenser(s) to Substitute for Cooling Towers at HECA			See VI.F.1 above
64	VI.F.3 Air Cooling Should Be PM10/PM2.5 BACT for Cooling Processes at HECA			See VI.F.1 above
65	VI.F.1 Cooling Water with Lower TDS Content			
66	VI.G BACT Determination for Flares Is Deficient	88		Information regarding the flares at the HECA project was provided to SJVAPCD in the form of a letter by Robert Middlemore on December 17, 2012. In addition information about the flares was provided in response to Sierra Club Data Request Set 1 DR 55-58, Oct 2012 and Sierra Club Data Request Set 2 DR 119, Nov 2012. It should be noted that refinery flares operate differently than IGCC flares, the gas composition of the streams is extremely different and the flares at HECA are only used for startup and shutdown activities, not routine operations. It is not appropriate to compare refinery flares to IGCC flares.
67	VI.G.1 BACT Is the Use of Enclosed Ground Flares	89		See VI.G above
68	VI.G.1 BACT Is the	89	VOC destruction efficiency of ≥98.5% to an enclosed ground	The emphasis on VOC destruction is based on refineries

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
	Use of Enclosed Ground Flares		refinery flare	that flare nearly 100% hydrocarbons, HECA flares handle primarily syngas that has very low VOCs.
69	VI.G.1 BACT Is the Use of Enclosed Ground Flares	90	The capital cost of an enclosed ground flare capable of handling 100 tons per hour of VOCs is approximately $4 to $5 million. An elevated flare capable of handling ten times this heat input under force majeure emergency conditions costs approximately $1.5 to $2 million.	The cost information is a wild guess / speculation. We are flaring medium BTU gas which has three or four times the volumetric flow on a BTU basis compared to refinery gas.
70	VI.G.1 BACT Is the Use of Enclosed Ground Flares	90	integral component of the SJVAPCD definition of BACT for refinery flares	HECA is not a petroleum refinery. At a refinery virtually every relief flow to the flares is hydrocarbon. These streams can be readily recycled to low pressure fuel gas systems. In an IGCC plant, almost all streams, including planned and unplanned flows to the flares, have only trace or no hydrocarbons and therefore are much more difficult to recycle. Additional discussion of the unsuitability of flare gas recovery was submitted in a letter by Robert Middlemore on December 17, 2012 to the District.
71	VI.G.1 BACT Is the Use of Enclosed Ground Flares	91	The advantages of enclosed ground flares are: reduced flame visibility, minimal heat and noise, ease of emissions sampling, smokeless combustion	HECA is flaring syngas, thus smoke is not an issue and the flame is barely visible during daylight hours and a dim bluish grey at night. As previously mentioned, the higher elevation is a safety advantage.
72	VI.G.2 BACT Is the Use of a Flare Gas Recovery System	93		See VI.G above and the letter by Robert Middlemore on December 17, 2012 to SJVAPCD.
73	VI.H BACT Determination for Fugitive Equipment Leaks Is Deficient	94		See the response to Sierra Club Data Requests Set 1 DR 81.
74	VI.I The PDOC's BACT Determination for Greenhouse Gas Emissions for the Combined Cycle Power Generating System Is Deficient	96	evaluate 100% capture of pre-combustion CO2 and sequestration	100% capture and sequestration is not possible so it doesn't make sense to analyze some that is infeasible.

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
VII The PDOC Does Not Adequately Limit the Facility's Potential to Emit Hazardous Air Pollutants to Less than the Major Source Thresholds				
75	VII.A Background on the Regulation of Hazardous Air Pollutants	96	Emission points include the HRSG stack, coal dryer stack, cooling towers, auxiliary boiler, ammonia plant startup heater, emergency generators and fire water pump, three flares, thermal oxidizer for the sulfur recovery unit, CO2 vent, manufacturing complex, and fugitive and AGR unit vent in the gasification block; the exhaust stack serving the combined cycle combustion turbines ("CCCTs") and heat recovery steam generator ("HRSG") in the power block; the natural gas-fired burners in the coal milling and drying system; the gasifier coal bunker vents; the natural gas-fired auxiliary boiler and startup heater; the diesel-fueled fire pump and emergency generator engines; and fugitive equipment leaks.	The equipment list that Sierra Club has provided is wrong. There is only 1 turbine at HECA, there are no natural gas burners in the "coal milling and drying system", only 1 auxiliary boiler, 1 ammonia plant startup heater, 1 diesel-fueled fire pump and 2 emergency generator engines.
76	VII.B The PDOC Does Not Adequately Restrict Emissions of Hazardous Air Pollutants to Ensure Synthetic Minor Source Status	99		See Updated Emissions and Modeling Report, May 2013, for HAPS emissions estimates. HECA is not a major source of HAPs.
77	VII.C Assumptions Are Not Adequately Supported	100		The emission estimates bases are presented in the ATC Application, May 2012; the Updated Emissions and Modeling Report, May 2013; and numerous data responses, of particular note is the response to Sierra Club Data Request Set 1 DR 38.
78	VII.D The PDOC Underestimates the Facility's Potential to Emit for HAPs and Compliance Conditions Are Inadequate to Enforce the Synthetic	102	the Project as a major source of HAP emissions because the emission limit for COS, a HAP, exceeds the 10 ton/year threshold triggering major source status for individual HAPs.	See Updated Emissions and Modeling Report, May 2013. Emissions of COS do not exceed 10 tons/year, and HECA is not a major source of HAPs.

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
	Minor Source Status			
79	VII.D.1 Emissions from Flares Do Not Account for Unplanned Events and Rely on Inappropriate Emission Factors	102	The Applicant did not discuss the use of HAP emission factors for flaring shifted and unshifted syngas,	See the response to Sierra Club Data Request Set 1 DR 59.
80	VII.D.2 Emissions from the CO2 Vent Are Underestimated, Emission Limits Are Incorrect, Establish the Project as a Major Source, and Are Not Adequately Enforced	103	Further, the CO2 vent stream may contain other HAPs including SO2 which converts to SO3 and sulfuric acid mist ("SAM"), a hazardous air pollutant.	See Updated Emissions and Modeling Report, May 2013, Section 3.2.6, and Appendix A and Sierra Club Data Request Responses Set 2, Nov 2012, DRs 107-110. All of the emissions presented by Sierra Club in this section are incorrect.
81	VII.D.2 Emissions from the CO2 Vent Are Underestimated, Emission Limits Are Incorrect, Establish the Project as a Major Source, and Are Not Adequately Enforced	103	Further, the CO2 vent stream may contain other HAPs including SO2 which converts to SO3 and sulfuric acid mist ("SAM"), a hazardous air pollutant.	None of these pollutants are contained in the gas sent to the CO2 vent.
82	VII.D.3 Fugitive Equipment Leaks Are Not Adequately Supported and Are Underestimated	105		See Updated Emissions and Modeling Report, May 2013, Section 3.2.7, 3.2.8, Appendices A & B
83	VII.D.4 Emissions from the HRSG and Coal Dryer Are Not Supported and Potential to Emit for	105		See Updated Emissions and Modeling Report, May 2013, Section 3.2.1 and Appendix B for HRSG and Feedstock Dryer emissions. The calculation basis was provided in ATC Application, Section 5, Public Health, May 2012. As noted the emission factors for all pollutants except ammonia and mercury are from 2 sources either the

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
	HAPs Is Underestimated			DOE/NETL 2002 Report or Wabash River test data. The emission for most HAPs are based on the Wabash River test data except the following are based on the DOE/NETL 2002 Report: acetaldehyde, benz(a)anthracene, carbon disulfide, cyanides, formaldehyde, hydrogen fluoride, and toluene.
84	VII.D.1 Compliance Conditions Are Not Enforceable	107		
85	VII.E The PDOC Fails to Demonstrate Compliance with the National Emission Standards for Hazardous Air Pollutants for Electric Generating Units	108		The current compliance demonstration is provided in the Updated Emissions and Modeling Report, May 2013.
86	VII.E The PDOC Fails to Demonstrate Compliance with the National Emission Standards for Hazardous Air Pollutants for Electric Generating Units	109	…depending on which area of the mine is extracted, the coal feedstock for the HECA Project could have a considerably higher mercury content than the typical mercury content of 0.13 ppmw assumed by the Applicant.	The El Segundo mine publishes a typical Hg value of 0.13 ppm on a dry whole coal basis. Based on El Segundo monthly coal shipment samples between 2011 and 2013, the average Hg in the coal shipped was 0.12 ppm. This is less than the typical Hg content used in the MATS calculations. Historically the range of mercury content measured in the El Segundo coal is 0.05 ppm to 0.19 ppm. Variability of mercury content in the coal is expected in each shipment. Although there will be fluctuations in the mercury content of the coal, the MATS compliance is based on a 30-day rolling average, with the average mercury content expected to be 0.13 ppm or less, thus these fluctuations will average out. It should also be noted that 25% of the feedstock will be petcoke which has negligible mercury content. MATS emissions calculations were based on 100% coal which conservatively estimates the mercury emissions higher than with the actual feedstock blend.

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
87	VII.F Summary			
VIII The PDOC'S Ambient Air Quality Impact Modeling and Health Risk Assessment Report Is Flawed				
88	VIII.A Lack of Support	112	As discussed in Comments V & VII, the PDOC did not account for worst-case, or maximum, emissions from the HECA Project because, for example, it did not account for malfunction emissions and underestimated criteria pollutant and HAP emissions from a number of sources, including the CO2 vent, fugitive equipment leaks. These errors were likely carried over into the modeling for the AAQI/HRA Report. Therefore, the results of the PDOC's AAQI/HRA Report with respect to the HECA Project's air quality and health impacts cannot be relied upon.	See Updated Emissions and Modeling Report, May 2013 which includes CO2 vent and fugitive equipment leak emissions. EPA 40 CFR Part 51 Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions (Appendix W) explicitly excludes emissions due to malfunction from modeling analyses to demonstrate compliance with the NAAQS.
89	VIII.B NO2/NOx In-stack Ratio for Heat Recovery Steam Generator	112	The PDOC states that "HECA proposes to use the conservative NO_2/NOx in-stack ratio of 0.3 for all turbine and dryer operating conditions" based on "professional engineering estimate" from the turbine and oxidation catalyst vendors.[447] Yet for purposes of modeling NO_2 concentrations, the PDOC specifies an even lower NO_2/NOx in-stack ratio of 0.2 for the HRSG.	While PDOC Appendix K does state that an in-stack ratio of 0.2 was used for the turbine/dryer NO2/NOx ratio, this is a misstatement by SJVAPCD. An in-stack ratio of 0.3 was used for this equipment in modeling. See Amendment to the ATC, May 2012, Appendix I.
90	VIII.C Startup Emissions Are Not Modeled	113	EPA presently provides no exemption from complying with NAAQS during periods of (1) testing/maintenance or actual emergency operation, and (2) startup. From our review of the modeling files, it appears that the Applicant did not model peak one-hour startup, shutdown, and emergency related NO_2 and SO_2 emissions from all the sources	The maximum impact modeling scenarios for NO2 and SO2 are provided in the Updated Emissions and Modeling Report, May 2013. Startups/shutdowns were included in the modeling if 1: These scenarios caused the highest ground-level impacts, and 2: If the startup/shutdown would contribute to the form of the standard. Per the EPA March 2011 NO2 1-hour modeling guidance memo, page 11, which also applies to the 1-hour SO2 NAAQS, emergency and malfunctions needn't comply with the NAAQS. Although, testing/maintenance scenarios are also included in the 1-hour NO2 and SO2 modeling analyses, such as for emergency generators and firewater pump testing.

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
91	VIII.D The PDOC's Finding that 24-hour PM10 Impacts Are Less than the Significant Impact Level Is Based on Flawed Emission Rate Calculations and Inappropriate Model Inputs	113		See Updated Emissions and Modeling Report, May 2013, and Amended ATC May 2012 for PM10 emissions and modeling. Road dust included in the modeling.
92	VIII.D.1 The PDOC Underestimates 24-hour PM10 Impacts Because It Uses Inappropriate Paved Road Emission Calculations	114		Appropriate paved road dust emissions were calculated as explained in the responses to Sierra Club Data Request Set 1 DR 27 and Sierra Club Data Request Set 3 DR 138. The assumptions made by Sierra Club are not appropriate for the HECA project as explained in the previous responses the data requests.
93	VIII.D.2 The PDOC Underestimates 24-hour PM10 Impacts Because It Uses Inappropriate AERMOD Model Inputs	115	The PDOC also uses flawed modeling methods to predict 24-hour PM10 ambient air concentrations. These model inputs are: The PDOC modeling uses ground-level receptors, rather than a flagpole height of 1.5 meters for human inhalation. The PDOC modeling uses Bakersfield airport meteorological data processed with outdated methods.	Flagpole receptors set at 1.5 meters are not appropriate for CAAQS/NAAQS analyses. Several modeling protocols for the HECA project have been written in the past several years, and include discussion of the receptor grids and meteorological data that would be used in modeling. The modeling techniques outlined in these protocols were approved by SJVAPCD, EPA and CEC, thus are appropriate for the analyses.
94	VIII.D.3 Revised Modeling Results Indicate that HECA's 24-hour PM10 Impact Exceeds Regulatory Design Concentrations	121		Sierra Club model results are based on inappropriate and wrong model parameters and input data. See the Updated Emissions and Modeling Report, May 2013, for the most recent HECA modeling results.
IX The PDOC Fails to Address Nuisance and Potential Injury or Damage to Business or Property				

Comment Number	Comment Section Title	Page Number[1]	Sierra Club Statement[2]	HECA Comment[3]
95		122-123	The PDOC does not address the potential impacts of HECA on nearby businesses and properties...The District must evaluate how increased air pollution from the HECA project and transportation corridors would impact the crops in the area surrounding the plant. The analysis should include direct impacts to the crops as well as indirect impacts to the soil and irrigation water and economic impacts.	Impacts to crops and soils were examined in the ATC Application, May 2012, Section 6.3.
X Other Comments and Recommendations				
96		124-125	The PDOC, Appendix K, p. 48, provides that the refined ambient air quality standard analysis demonstrates "that emissions from HECA will not cause or contribute to exceedance of a NAAQS and/or CAAQS for any affected pollutant." Yet the results of the analysis presented in Table 8-5, provided on the next page, contradict this statement showing that HECA emissions will contribute significantly to existing exceedances of the 24-hour and annual PM10 and PM2.5 NAAQS, 24-hour PM10 CAAQS, annual PM2.5 CAAQS.	HECA did not have any significant AAQS impacts; see the updated Emissions and Modeling Report, May 2013. Table 8-5 in Appendix K of the PDOC does contradict text in the rest of the document. To clarify, HECA will not have a significant PM10 AAQS impact because the modeled impacts are less than the federal SILs, and much less than the CAAQS despite high background monitoring levels. In addition, HECA is offsetting PM10 emissions. HECA also will not have a significant PM2.5 AAQS impact because HECA is obtaining offsets for the PM2.5 non-attainment area, as required by SJVAPCD Tier III PM2.5 modeling procedures.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
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AMENDED APPLICATION FOR CERTIFICATION FOR THE HYDROGEN ENERGY CALIFORNIA PROJECT

Docket No. 08-AFC-08A
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(Revised 06/19/2013)

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DECLARATION OF SERVICE

I, Dale Shileikis, declare that on June 28, 2013, I served and filed copies of the attached HECA comments on Sierra Club PDOC Comments dated June 28, 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/.

The document has been sent to the other persons on the Service List above in the following manner:

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For service to all other parties and filing with the Docket Unit at the Energy Commission:

x I e-mailed the document to all e-mail addresses on the Service List above and personally delivered it or deposited it in the U.S. mail with first class postage to those persons noted above as "hard copy required"; OR

___ Instead of e-mailing the document, I personally delivered it or deposited it in the U.S. mail with first class postage to all of the persons on the Service List for whom a mailing address is given.

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: June 28, 2013