

Memorandum

Date: June 25, 2009
 Telephone: (916) 654-4996

To: Karen Douglas, Chairman
 James D. Boyd, Vice Chairman
 Arthur H. Rosenfeld, Ph.D., Commissioner
 Jeffrey D. Byron, Commissioner
 Julia Levin, Commissioner

DOCKET	
08-AFC-8	
DATE	<u>06/25/09</u>
RECD.	<u>06/26/09</u>

From: **California Energy Commission – Melissa Jones**
 1516 Ninth Street
 Sacramento, CA 95814-5512
Executive Director

Subject: **HYDROGEN ENERGY CALIFORNIA, DATA ADEQUACY RECOMMENDATION (08-AFC-8)**

On May 28, 2009, Hydrogen Energy International (HEI) submitted a revised Application for Certification (AFC) to the California Energy Commission to construct and operate an Integrated Gasification Combined Cycle (IGCC) power generating facility called Hydrogen Energy California (HECA). HEI is jointly owned by BP Alternative Energy North America Incorporated and Rio Tinto Hydrogen Energy, LLC. Previously HEI submitted an AFC to the Energy Commission, which proposed the project on a different site. HEI subsequently decided to move the project when it discovered the existence of previously undisclosed sensitive biological resources at the prior site. This revised AFC supersedes and replaces the July 31, 2008 AFC in its entirety.

The proposed HECA project would gasify petroleum coke (or blends of petroleum coke and coal, as needed) to produce hydrogen to fuel a combustion turbine operating in combined cycle mode. The hydrogen produced by the gasification block would fuel a 390 megawatt (MW) gross/250 MW net combined cycle power plant providing California with baseload power to the grid. The gasification block would also capture approximately 90 percent of the carbon from the raw syngas (the direct end of the gasification process) at steady-state operation, which will be transported to a custody transfer point within the Elk Hills oil field for CO₂ (carbon dioxide) enhanced oil recovery (EOR) and sequestration. Due to the complex gasification and sequestration (storage) process, there is a larger than usual parasitic load.

In addition, the project would include a 100 MW net output peaking natural gas-fired combustion generator that would provide power for plant startup, power the gasifier when the plant does not generate and provide peaking power to the grid. Essentially 350 MW (250 MW net baseload capacity plus 100 MW of simple cycle peaking power) would be available to the grid during high demand periods (e.g., summer months, etc.).

The proposed project would be located on a 473-acre site (currently used for agricultural production of alfalfa, cotton, and onions), and is comprised of two parcels (Part of Assessor's Parcel # 159-040-16 and 159-040-18, respectively). The project site would be located in western unincorporated Kern County, approximately 7 miles west of the city of Bakersfield. It is 1.5 miles northwest of the unincorporated community of Tupman, and approximately 4 miles southeast of the unincorporated community of Buttonwillow. It is bounded by Adohr Road on the north, Tupman Road to the east, and the California State

Water Project aqueduct to the south, and Dairy Road to the west. The Elk Hills oil field is located approximately 1 mile south of the project site.

If approved, construction of the project would begin in May 2011 with commissioning and initial startup occurring October 2014 through August 15, 2015, with full scale operation by September of 2015.

Staff has completed its data adequacy review of the AFC and has determined that it does not currently meet all the requirements listed in Title 20, section 1704, and Division 2, Chapter 5, Appendix B of the California Code of Regulation for the 12-month process. Therefore, we recommend that the Energy Commission find the AFC inadequate and adopt the attached list of deficiencies. Of the following 23 technical disciplines reviewed, we believe the information contained in the AFC is deficient in four areas: Air Quality, Biological Resources, Cultural Resources, and Transmission System Design.

Attached is a summary table and the data adequacy worksheets for all technical disciplines. The worksheets for the aforementioned sections identify the additional information that we believe is necessary to fulfill the AFC data adequacy requirements. At the Energy Commission Business Meeting on July 15, 2009, I will recommend that the Commission adopt the list of deficiencies and not accept the AFC until the additional information specified in the data adequacy worksheets is supplied. If you have any questions, please call Rod Jones, staff's Project Manager, at (916) 654-5191.

Attachments

**Attachment A
 Overview of Energy Commission Staff's
 Data Adequacy Determination
 Hydrogen Energy California
 08-AFC-8**

Technical Area	Attachment B Page No.	Adequate ?
AIR QUALITY	5	NO
ALTERNATIVES	12	YES
BIOLOGICAL RESOURCES.....	13	NO
CULTURAL RESOURCES.....	25	NO
EFFICIENCY.....	33	YES
FACILITY DESIGN	36	YES
GEOLOGICAL HAZARDS	39	YES
HAZARDOUS MATERIALS HANDLING	42	YES
LAND USE.....	45	YES
NOISE.....	49	YES
PALEONTOLOGICAL RESOURCES	53	YES
PROJECT OVERVIEW.....	56	YES
PUBLIC HEALTH	62	YES
RELIABILITY.....	65	YES
SOCIOECONOMICS	68	YES
SOILS	73	YES
TRAFFIC AND TRANSPORTATION	76	YES
TRANS LINE SAFETY AND NUISANCE.....	81	YES
TRANSMISSION SYSTEM DESIGN	83	NO
VISUAL RESOURCES	89	YES
WASTE MANAGEMENT.....	96	YES
WATER RESOURCES	100	YES
WORKER SAFETY	110	YES

ATTACHMENT B

**ENERGY COMMISSION STAFF'S
List of Data Inadequacies**

**HYDROGEN ENERGY CALIFORNIA
08-AFC-8**

June 25, 2009

Adequacy Issue: Adequate _____ Inadequate X
 Technical Area: Air Quality
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET
 Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 17, 2009
 Technical Staff: Will Walters
 Technical Senior: Matthew Layton

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Section 5.1, p. 5.1-1	No	Please provide the mitigation measures proposed to mitigate adverse environmental impacts from project construction.
Appendix B (g) (8) (A)	The information necessary for the air pollution control district where the project is located to complete a Determination of Compliance.	Section 5.1, p.5.1-1	No	Please submit an application for authority to construction and permit to operate to the San Joaquin Valley Air Pollution Control District and provide a completeness letter for the application from the District.
Appendix B (g) (8) (B)	The heating value and chemical characteristics of the proposed fuels, the stack height and diameter, the exhaust velocity and temperature, the heat rate and the expected capacity factor of the proposed facility.	Tables 2-4, p. 2-12 Tables 2-5, p. 2-13 Tables 2-6, p. 2-13 Tables 2-7, p. 2-15 Tables 2-9, p. 2-18 Appendix D	No	Please provide the heating value and chemical characteristics of the hydrogen rich fuel. Please provide the heat rate for the 7FB gas turbine using all applicable fuels/combinations of fuel and with and without duct firing. Please provide the heat rate for the LMS100 gas turbine.
Appendix B (g) (8) (C)	A description of the control technologies proposed to limit the emission of criteria pollutants.	Appendix D Tables 5.1-45, pp. 5.1-84 to -86	No	Please provide a description of the proposed control technologies to limit the fuel delivery (truck and train) emissions.
Appendix B (g) (8) (D)	A description of the cooling system, the estimated cooling tower drift rate, the rate of water flow through the cooling tower, and the maximum concentrations of total dissolved solids	Section 2.4.7 pp. 2-43,44	Yes	

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Appendix B (g) (8) (E)	The emission rates of criteria pollutants and greenhouse gases (CO ₂ , CH ₄ , N ₂ O, and SF ₆) from the stack, cooling towers, fuels and materials handling processes, delivery and storage systems, and from all on-site secondary emission sources.	Tables 5.1-20, p. 5.1-32 Section 5.1.2.2.2 pp. 5.1-43 to -52 Appendix D.1.2	No	Please provide an SF ₆ emissions estimate for the project.
Appendix B (g) (8) (F)(i)	A description of typical operational modes, and start-up and shutdown modes for the proposed project, including the estimated frequency of occurrence and duration of each mode, and estimated emission rate for each criteria pollutant during each mode.	Tables 5.1-11, p. 5.1-19 Tables 5.1-12, p. 5.1-20 Tables 5.1-13, p. 5.1-21 Tables 5.1-14, p. 5.1-23 Tables 5.1-15, p. 5.1-24 Tables 5.1-17, p. 5.1-26 Tables 5.1-18, p. 5.1-27 Tables 5.1-19, p. 5.1-28	Yes	
Appendix B (g) (8) (F)(ii)	A description of the project's planned initial commissioning phase, which is the phase between the first firing of emissions sources and the commercial operations date, including the types and durations of equipment tests, criteria pollutant emissions, and monitoring techniques to be used during such tests.	Section 2.5.4 pp. 2-66 to -68 Section 5.1.2.2.1 pp. 5.1-35 to -43 Tables 5.1-21, pp. 5.1-37,38 Tables 5.1-22, pp. 5.1-40,41 Tables 5.1-23, p. 5.1-42	No	Please provide a description of the planned initial commissioning phase for the gasification block, including the air separation unit and the balance of plant. This description needs to include the types and durations of equipment tests, criteria pollutant emissions, and monitoring techniques to be used during such tests.

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Appendix B (g) (8) (G)	The ambient concentrations of all criteria pollutants for the previous three years as measured at the three Air Resources Board certified monitoring stations located closest to the project site, and an analysis of whether this data is representative of conditions at the project site. The applicant may substitute an explanation as to why information from one, two, or all stations is either not available or unnecessary.	Section 5.1.1.2 pp. 5.1-7 to -13 Tables 5.1-3, p. 5.1-9 Tables 5.1-4, p. 5.1-10 Tables 5.1-5, p. 5.1-10 Tables 5.1-6, p. 5.1-11 Tables 5.1-7, p. 5.1-12 Tables 5.1-8, p. 5.1-12	Yes	
Appendix B (g) (8) (H)	One year of meteorological data collected from either the Federal Aviation Administration Class 1 station nearest to the project or from the project site, or meteorological data approved by the California Air Resources Board or the local air pollution control district.	Included on DVD	Yes	
Appendix B (g) (8) (H) (i)	If the data is collected from the project site, the applicant shall demonstrate compliance with the requirements of the U.S. Environmental Protection Agency document entitled "On-Site Meteorological Program Guidance for Regulatory Modeling Applications" (EPA - 450/4-87-013 (August 1995)), which is incorporated by reference in its entirety.		N/A	
Appendix B (g) (8) (H) (ii)	The data shall include quarterly wind tables and wind roses, ambient temperatures, relative humidity, stability and mixing heights, upper atmospheric air data, and an analysis of whether this data is representative of conditions at the project site.	Section 5.1.2.3, pp. 5.1-54,55 Included on DVD	Yes	

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Appendix B (g) (8) (I)	An evaluation of the project's direct and cumulative air quality impacts, consisting of the following:			
Appendix B (g) (8) (I) (i)	A screening level air quality modeling analysis, or a more detailed modeling analysis if so desired by the applicant, of the direct criteria pollutant impacts of project construction activities on ambient air quality conditions, including fugitive dust (PM ₁₀) emissions from grading, excavation and site disturbance, as well as the combustion emissions [nitrogen oxides (NO _x), sulfur dioxide (SO ₂), carbon monoxide (CO), and particulate matter less than 10 microns in diameter (PM ₁₀) and particulate matter less than 2.5 microns in diameter (PM _{2.5})] from construction-related equipment;	Section 5.1.2.4 pp. 5.1-61 to -63 Included on DVD	Yes	
Appendix B (g) (8) (I) (ii)	A screening level air quality modeling analysis, or a more detailed modeling analysis if so desired by the applicant, of the direct criteria pollutant (NO _x , SO ₂ , CO, PM ₁₀ , and PM _{2.5}) impacts on ambient air quality conditions of the project during typical (normal) operation, and during shutdown and startup modes of operation. Identify and include in the modeling of each operating mode the estimated maximum emissions rates and the assumed meteorological conditions;	Sections 5.1.2.3 and 5.1.2.4 pp. 5.1-52 to -70 Appendix D Included on DVD	Yes	

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Appendix B (g) (8) (I) (iii)	A protocol for a cumulative air quality modeling impacts analysis of the project's typical operating mode in combination with other stationary emissions sources within a six mile radius which have received construction permits but are not yet operational, or are in the permitting process. The cumulative inert pollutant impact analysis should assess whether estimated emissions concentrations will cause or contribute to a violation of any ambient air quality standard; and	Section 5.1.3 p. 5.1-70 Appendix J	Yes	
Appendix B (g) (8) (I) (iv)	An air dispersion modeling analysis of the impacts of the initial commissioning phase emissions on state and federal ambient air quality standards for NO _x , SO ₂ , CO, PM ₁₀ , and PM _{2.5} .	Section 5.1.2.4 pp. 5.1-66,67 Appendix D Included on DVD	Yes	
Appendix B (g) (8) (J)	If an emission offset strategy is proposed to mitigate the project's impacts under subsection (g)(1), provide the following information:			
Appendix B (g) (8) (J) (i)	The quantity of offsets or emission reductions that are needed to satisfy air permitting requirements of local permitting agencies (such as the air district), state and federal oversight air agencies, and the California Energy Commission. Identify by criteria air pollutant, and if appropriate, greenhouse gas; and	Section 5.1.4 p. 5.1-70 Appendix T	Yes	
Appendix B (g) (8) (J) (ii)	Potential offset sources, including location, and quantity of emission reductions;	Appendix T	Yes	

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Appendix B (g) (8) (K)	A detailed description of the mitigation, if any, which an applicant may propose, for all projects impacts from criteria pollutants that currently exceed state or federal ambient air quality standards, but are not subject to offset requirements under the district's new source review rule.		N/A	
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Table 5.1.40 pp. 5.1-72 to -76	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Section 5.1.6, p. 5.1-89 Table 5.1-46, p. 5.1-90	Yes	

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Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Table 5.1-46 p. 5.1-90	Yes	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Section 5.1-7, p. 5.1-90	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Alternatives
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

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 Technical Senior: Robert Worl

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (b) (1) (D)	A description of how the site and related facilities were selected and the consideration given to engineering constraints, site geology, environmental impacts, water, waste and fuel constraints, electric transmission constraints, and any other factors considered by the applicant.	Section 6.1 pgs. 6-1 Through 6-2 Section 6.3.1 pg. 6-4	Yes	
Appendix B (f) (1)	A discussion of the range of reasonable alternatives to the project, or to the location of the project, including the no project alternative, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and an evaluation of the comparative merits of the alternatives. In accordance with Public Resources Code section 25540.6(b), a discussion of the applicant's site selection criteria, any alternative sites considered for the project, and the reasons why the applicant chose the proposed site.	Section 6.2 pg. 6-2 Section 6.3 pgs. 6-3 Section 6.3 pgs. 6-3 Through 6-5	Yes	
Appendix B (f) (2)	An evaluation of the comparative engineering, economic, and environmental merits of the alternatives discussed in subsection (f)(1).	Section 6.3.1 pgs. 6-4 Through 6-17	Yes	

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Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect, and cumulative impacts due to the construction, operation, and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	<p>Existing site conditions: Section 5.2.1, p. 5.2-8</p> <p>Direct, indirect, and cumulative impacts: Section 5.2.2, p. 5.2-43 Section 5.2.3, p. 5.2-56</p> <p>Mitigation measures: Section 5.2.4, p. 5.2-57</p> <p>Monitoring plans: Section 5.2.4.2 p. 5.2-67</p>	<p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>	Please provide a discussion of biological resources at the project site and related facilities, including a description of vegetation communities and habitat features important to sensitive species potentially occurring within the study area.
Appendix B (g) (13) (A)	A regional overview and discussion of terrestrial and aquatic biological resources, with particular attention to sensitive biological resources within ten (10) miles of the project. Include a map at a scale of 1:100,000 (or other suitable scale) showing sensitive biological resource location(s) in relation to the project site and related facilities and any boundaries of a local Habitat Conservation Plan or similar open space land use plan or designation. Sensitive biological resources include the following:	<p>Regional overview: Section 5.2.1, p. 5.2-8 Table 5.2-4, p. 5.2-9</p> <p>Map of sensitive resources: Figure 5.2-3 Figure 5.2-4</p> <p>Map of regional HCP boundaries or designated open space: Table 5.2-4, Figure 5.2-1</p>	<p>No</p> <p>Yes</p> <p>Yes</p>	Please provide a regional overview of terrestrial and aquatic biological resources within 10 miles of the project area. A description of common and sensitive plant communities and wildlife within the region is also needed.

Adequacy Issue: Adequate _____ Inadequate X
 Technical Area: Biological Resources
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SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (13) (A) (i)	species listed under state or federal Endangered Species Acts;	Federal and state Endangered Species: Section 5.2.1.4, p. 5.2-13 Table 5.2-6, p. 5.2-15 Table 5.2-7, p. 5.2-21	Yes	
Appendix B (g) (13) (A) (ii)	resources defined in sections 1702(q) and (v) of Title 20 of the California Code of Regulations;	Areas of critical concern and species of special concern: Section 5.2.1.4, p. 5.2-13 Table 5.2-6, p. 5.2-15 Table 5.2-7, p. 5.2-21	Yes	
Appendix B (g) (13) (A) (iii)	species identified as state Fully Protected;	State Fully Protected species: Section 5.2.1.4, p. 5.2-13 Table 5.2-6, p. 5.2-15 Table 5.2-7, p. 5.2-21	Yes	
Appendix B (g) (13) (A) (iv)	species covered by Migratory Bird Treaty Act;	Migratory Bird Act species: Section 5.2.1.4, p. 5.2-13 Table 5.2-7, p. 5.2-21	Yes	

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Appendix B (g) (13) (A) (v)	species and habitats identified by local, state, and federal agencies as needing protection, including but not limited to those identified by the California Natural Diversity Database, or where applicable, in Local Coastal Programs or in relevant decisions of the California Coastal Commission; and	Species and habitats identified in the California Natural Diversity Database: Section 5.2.1.4, p. 5.2-13 Table 5.2-6, p. 5.2-15 Table 5.2-7, p. 5.2-21 Figure 5.2-3 Figure 5.2-4	Yes	
Appendix B (g) (13) (A) (vi)	fish and wildlife species that have commercial and/or recreational value.	Fish and wildlife of commercial or recreational value: None expected to be present	Yes	.
Appendix B (g) (13) (B)	Include a list of the species actually observed and those with a potential to occur within 1 mile of the project site and 1,000 feet from the outer edge of linear facility corridors. Maps or aerial photographs shall include the following:	List of species observed: Table 5.2-2, p. 5.2-4 Table 5.2-3, p. 5.2-6 Table 5.2-6, p. 5.2-15 Table 5.2-7, p. 5.2-21	Yes	

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Appendix B (g) (13) (D)	A description and results of all field studies and seasonal surveys used to provide biological baseline information about the project site and associated facilities. Include copies of the California Natural Diversity Database records and field survey forms completed by the applicant's biologist(s). Identify the date(s) the surveys were completed, methods used to complete the surveys, and the name(s) and qualifications of the biologists conducting the surveys. Include:	Description and results of field studies: Section 5.2.2, p. 5.2-43 Field survey forms: Appendix G Qualifications of biologists: Appendix G	No No No	Please provide results of blunt-nosed leopard lizard surveys conducted Aug 1 – Sept 15 2008 and results or an interim status report on Apr 15 – Jul 15, 2009 blunt-nosed leopard lizard surveys. Please provide CNDDDB field survey forms for all sensitive species observed during the field surveys, including those listed in Tables 5.2-6 and 5.2-7. Please provide resumes for biologists Jessica Birnbaum, Alex Brown, David Compton, Ronald Cummings, Kate Eldredge, and Julian Valenzuela.
Appendix B (g) (13) (D) (i)	Current biological resources surveys conducted using appropriate field survey protocols during the appropriate season(s). State and federal agencies with jurisdiction shall be consulted for field survey protocol guidance prior to surveys if a protocol exists;	Current biological surveys: Table 5.2-1, p. 5.2-3 Appendix G	No	Please provide results of blunt-nosed leopard lizard surveys conducted from Aug 1 – Sept 15 2008 (p. 5.2-46) and results or an interim status report on blunt-nosed leopard lizard surveys conducted from Apr 15 – Jul 15, 2009.

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Appendix B (g) (13) (D) (ii)	If cooling water is proposed to be taken directly from or discharged to a surface water feature source, seasonal aquatic resource studies and surveys shall be conducted. Aquatic resource survey data shall include, but is not limited to, fish trawls, ichthyoplankton and benthic sampling, and related temperature and water quality samples. For new projects or repower projects anticipating a change in cooling water flows, sampling protocols shall be provided to the Energy Commission staff for review and concurrence prior to the start of sampling. For repower projects not anticipating a change in cooling water flows, this information shall be provided in the form of the most recent federal Clean Water Act 316(b) impingement and entrainment impact study completed within five (5) years of the AFC filing date; and	Aquatic resource studies and surveys: Not applicable Aquatic resource survey data or impingement and entrainment impact study: Not applicable	N/A N/A	
Appendix B (g) (13) (D) (iii)		Impacts to jurisdictional or non-jurisdictional wetlands: Section 5.2.1.3, p. 5.2-10	Yes	
Appendix B (g) (13) (E)	Impacts discussion of the following:	-		

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Appendix B (g) (13) (E) (i)	all impacts (direct, indirect, and cumulative) to biological resources from project site preparation, construction activities, plant operation, maintenance, and closure. Discussion shall also address sensitive species habitat impacts from cooling tower drift and air emissions;	Project site impacts: Section 5.2.2, p. 5.2-43 Air emission impacts on sensitive species: Section 5.2.2.-9, p. 5.2-55	Yes Yes	
Appendix B (g) (13) (E) (ii)	facilities that propose to take water directly from, and/or discharge water to surface water features, daytime and nighttime impacts from the intake and discharge of water during operation, water velocity at the intake screen, the intake field of influence, impingement, entrainment, and thermal discharge. Provide a discussion of the extent of the thermal plume, effluent chemicals, oxygen saturation, intake pump operations, and the volume and rate of cooling water flow at the intake and discharge location; and	Intake impacts: Not applicable Thermal plume impacts: Not applicable	N/A N/A	
Appendix B (g) (13) (E) (iii)	Methods to control biofouling and chemical concentrations, and temperatures that are currently being discharged or will be discharged to receiving waters.	Biofouling and chemical concentration controls: Not applicable Discharge temperatures: Not applicable	N/A N/A	
Appendix B (g) (13) (F)	A discussion of all feasible mitigation measures including, but not limited to the following:	-		

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 Technical Area: Biological Resources
 Project Manager: Rod Jones

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 Technical Senior: Rick York

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Appendix B (g) (13) (F) (i)	All measures proposed to avoid and/or reduce adverse impacts to biological resources;	Avoidance and minimization: Section 5.2.4, p. 5.2-57 Table 5.2-7, p. 5.2-57	Yes	
Appendix B (g) (13) (F) (ii)	All off-site habitat mitigation and habitat improvement or compensation, and an identification of contacts for compensation habitat and management;	Compensatory mitigation: Section 5.2.4.3 p. 5.2-68	No	Please provide a list of contacts indicating efforts to identify and secure lands for habitat compensation.
Appendix B (g) (13) (F) (iii)	Design features to better disperse or eliminate a thermal discharge;	Design features to eliminate thermal discharge: Not applicable	N/A	
Appendix B (g) (13) (F) (iv)	All measures proposed to avoid or minimize adverse impacts of cooling water intake. This shall include a Best Technology Available (BTA) discussion. If BTA is not being proposed, the rationale for not selecting BTA must be provided; and	Measures to minimize impacts of cooling water intake: Not applicable	N/A	
Appendix B (g) (13) (F) (v)	Educational programs to enhance employee awareness during construction and operation to protect biological resources.	Employee biological resource awareness training: Section 5.2.4.2, p. 5.2-57	Yes	
Appendix B (g) (13) (G)	A discussion of compliance and monitoring programs to ensure the effectiveness of impact avoidance and mitigation measures incorporated into the project.	Monitoring compliance effectiveness: Section 5.2.4.2, p. 5.2-67	Yes	

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 Technical Area: Biological Resources
 Project Manager: Rod Jones

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Appendix B (g) (13) (H)	Submit copies of any preliminary correspondence between the project applicant and state and federal resource agencies regarding whether federal or state permits from other agencies such as the U. S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Game (CDFG), and the Regional Water Quality Control Board (RWCB) will be required for the proposed project.	Contact with state and federal agencies regarding permits: Section 5.2.6 pg 5.2-62 to 5.2-63 Table 5.2-9 pg 5.2-63	Yes	
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	LORS Table: Section 5.2.5, p. 5.2-69 and Table 5.2-8, p. 5.2-69	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	LORS Table: Section 5.2.6, P. 5.2-75	Yes	

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 Technical Area: Biological Resources
 Project Manager: Rod Jones

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Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Agency contacts and contact information: Section 5.2.6, p. 5.2-75		
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Permit schedule: Section 5.2.7, p. 5.2-75	Yes	

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 Technical Area: Cultural Resources
 Project Manager: _____

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 Technical Senior: Rick York

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Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	existing site conditions: Vol. 1, pp. 5.3-3—5.3-4 impacts due to project: Vol. 1, pp. 5.3-47—5.3-49 mitigation measures to known impacts: Vol. 1, pp. 5.3-50—5.3-54 effectiveness of the proposed measures any monitoring plans proposed to verify the effectiveness of the mitigation	Yes Yes Yes N/A N/A	
Appendix B (g) (2) (A)	A summary of the ethnology, prehistory, and history of the region with emphasis on the area within no more than a 5-mile radius of the project location.	Summary of the ethnology, prehistory, and history: Vol. 1, pp. 5.3-4—5.3-18	Yes	
Appendix B (g) (2) (B) Appendix B (g) (2) (B) (cont.)	The results of a literature search to identify cultural resources within an area not less than a 1-mile radius around the project site and not less than one-quarter (0.25) mile on each side of the linear facilities. Identify any cultural resources listed pursuant to ordinance by a city or county, or recognized by any local historical or archaeological society or museum. Literature searches to identify the above cultural resources must be completed by, or under the direction of, individuals who meet the Secretary	Literature searches: Vol. 1, pp. 5.3-18—5.3-25 Cultural resources listed under a city and county ordinance:	Yes Yes	

Adequacy Issue: Adequate _____ Inadequate X
 Technical Area: Cultural Resources
 Project Manager: _____

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	<p>of the Interior's Professional Standards for the technical area addressed.</p> <p>Copies of California Department of Parks and Recreation (DPR) 523 forms (Title 14 CCR §4853) shall be provided for all cultural resources (ethnographic, architectural, historical, and archaeological) identified in the literature search as being 45 years or older or of exceptional importance as defined in the National Register Bulletin Guidelines, (36CFR60.4(g)). A copy of the USGS 7.5' quadrangle map of the literature search area delineating the areas of all past surveys and noting the California Historical Resources Information System (CHRIS) identifying numbers shall be provided. Copies also shall be provided of all technical reports whose survey coverage is wholly or partly within .25 mile of the area surveyed for the project under Section (g)(2)(C), or which report on any archaeological excavations or architectural surveys within the literature search area.</p>	<p>Cultural resources recognized by local societies:</p> <p>Names/quals for lit searchers/directors:</p> <p>DPR523s for known resources: Vol. 2, App. H4, App. B, Vol. 2, App H3, App. C.</p> <p>Map of lit search area with past surveys and CHRIS #s: Vol. 2, App. H3, Figure 1-7</p> <p>CHRIS reports: Vol. 2, App. H3</p>	<p>Yes</p> <p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>	<p>The applicant states the searchers/directors meet the qualifications but need to provide resumes for each searcher/director to demonstrate they meet the qualifications.</p>

Adequacy Issue: Adequate _____ Inadequate X
 Technical Area: Cultural Resources
 Project Manager: _____

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Appendix B (g) (2) (C)	<p>The results of new surveys or surveys less than 5 years old shall be provided if survey records of the area potentially affected by the project are more than five (5) years old. Surveys to identify new cultural resources must be completed by (or under the direction of) individuals who meet the Secretary of the Interior's Professional Standards for the technical area addressed.</p> <p>New pedestrian archaeological surveys shall be conducted inclusive of the project site and project linear facility routes, extending to no less than 200' around the project site, substations and staging areas, and to no less than 50' to either side of the right-of-way of project linear facility routes. New historic architecture field surveys in rural areas shall be conducted inclusive of the project site and the project linear facility routes, extending no less than .5 mile out from the proposed plant site and from the routes of all above-ground linear facilities. New historic architecture field surveys in urban and suburban areas shall be conducted inclusive of the project site, extending no less than one parcel's distance from all proposed plant site boundaries. New historic architecture field reconnaissance ("windshield survey") in urban and suburban areas shall be conducted along the routes of all linear facilities to identify, inventory, and characterize structures and districts that appear to be older than 45 years or that are exceptionally significant, whatever their age.</p>	<p>Names/quals for archaeological surveyors or directors:</p> <p>Names/quals for historical architecture surveyors or directors:</p> <p>Survey coverage, archaeology: Vol. 2, App. H3, Fig. 1</p> <p>Survey coverage, architecture: Vol. 2, App. H4, App. A, Fig. 1</p>	<p>No</p> <p>No</p> <p>Yes</p> <p>Yes</p>	<p>The qualifications for the principal investigators and directors are stated to meet the <i>Secretary of the Interior's Standards</i> but resumes are not provided. Please provide resumes for each of the archaeological surveyors and directors.</p> <p>See above.</p>

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 Technical Area: Cultural Resources
 Project Manager: _____

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Appendix B (g) (2) (C) (cont.)	A technical report of the results of the new surveys, conforming to the Archaeological Resource Management Report format (CA Office of Historic Preservation Feb 1990), which is incorporated by reference, shall be separately provided and submitted (under confidential cover if archaeological site locations are included).	Tech report for new archaeological survey: Vol. 2, Appendix H3. Technical report for new architectural survey: Vol. 2, App. H4	Yes	
Appendix B (g) (2) (C) cont.	Information included in the technical report shall also be provided in the Application for Certification, except that confidential information (archaeological sites or areas of religious significance) shall be submitted under a request for confidentiality pursuant to Title 20, California Code of Regulations, § 2501 et seq. At a minimum, the technical report shall include the following:	[Vol. 15.3-i-5.364]	Yes Yes	
Appendix B (g) (2) (C) (i)	The summary from Appendix B (g)(2)(A) and the literature search results from Appendix B (g)(2)(B);	Summary: Vol. 2, App. H3, pp. H3-12-H3- Literature search results: Vol. 2, App. H3, pp. 2-8—2-22	Yes Yes	
Appendix B (g) (2) (C) (ii)	The survey procedures and methodology used to identify cultural resources and a discussion of the cultural resources identified by the survey;	Archaeological methodology: Vol. 2, p. 5.3-H34-H37 Historical architecture methodology: Vol. 2, p. H4-4	Yes Yes	

Adequacy Issue: Adequate _____ Inadequate X
 Technical Area: Cultural Resources
 Project Manager: _____

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 Technical Senior: Rick York

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Appendix B (g) (2) (D)	Provide a copy of your request to the Native American Heritage Commission (NAHC) for information on Native American sacred sites and lists of Native Americans interested in the project vicinity, and copies of any correspondence received from the NAHC. Notify the Native Americans on the NAHC list about the project, including a project description and map. Provide a copy of all correspondence sent to Native American individuals and groups listed by the NAHC and copies of all responses. Provide a written summary of any oral responses.	NAHC request: Vol. 2, App. B. NAHC response: Vol. 2, App. B Letters sent to Native Americans: Vol. 2. App B Native American consultation: Vol. 2, App B Summary of oral responses from Native Americans: Vol. 1, Table 5.3-3		
Appendix B (g) (2) (E)	Include in the discussion of proposed mitigation measures required by subdivision (g)(1):		Yes	-
Appendix B (g) (2) (E) (i)	A discussion of measures proposed to mitigate project impacts to known cultural resources;	Mitigation measures for known impacts:	Yes	
Appendix B (g) (2) (E) (ii)	A set of contingency measures proposed to mitigate potential impacts to previously unknown cultural resources and any unanticipated impacts to known cultural resources; and	Contingency mitigation measures: Vol. 1, pp. 5.3-50—5.3-54	Yes	

Adequacy Issue: Adequate _____ Inadequate X
 Technical Area: Cultural Resources
 Project Manager: _____

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 Technical Senior: Rick York

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Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Official within each agency who will serve as a contact person for the agency: Vol. 1, Table 5.3-6.	Yes	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Schedule indicating when outside permits will be obtained: Vol. 1, p. 5.3-58	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Efficiency
 Project Manager: Rod Jones

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Project: Hydrogen Energy California
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 Technical Staff: Erin Bright
 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	§§ 1.1, 1.3, 1.4, 1.5, 1.8, 2.1, 2.1.1, 2.1.2, 2.1.3, 2.1.6, 2.1.8, 2.1.8.1, 2.1.8.2, 2.1.8.3, 2.1.8.4, 2.1.8.5, 2.1.9, 2.1.9.1, 2.1.9.2, 2.1.9.3, 2.1.9.4, 2.2.1, 2.2.2, 2.3.1, 2.3.2.1, 2.3.2.2, 2.3.2.4, 2.3.2.5, 2.3.3, 2.3.4, 2.4.1.2, 2.4.1.3, 2.4.2, 2.4.3, 2.4.5, 2.4.6, 2.4.7, 2.4.7.1, 2.4.7.2, 2.4.7.3, 2.4.8, 2.4.9, 2.4.10.1, 2.5.1, 2.5.2, 2.5.3, 2.5.6, 2.6.1.10, 6.1.1, 6.4.1, 6.4.2, 6.4.3; Chapter 8; Tables 2-11, 2-12, 2-15, 2-16, 2-22, 2-27, 7-2; Figures 2-3, 2-18; Appendices R, V	Yes	
Appendix B (h) (4) (A)	Heat and mass balance diagrams for design conditions for each mode of operation.	Tables 2-11, 2-12, 2-15, 2-16; Figures 2-3, 2-18	Yes	
Appendix B (h) (4) (B)	Annual fuel consumption in BTUs for each mode of operation, including hot restarts and cold starts.	Table 2-11	Yes	
Appendix B (h) (4) (C)	Annual net electrical energy produced in MWh for each mode of operation including starts and shutdowns.	Tables 2-11, 2-15, 2-16	Yes	
Appendix B (h) (4) (D)	Number of hours the plant will be operated in each design condition in each year.	§§ 1.1, 1.4, 2.1, 2.5.1; Table 2-27	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Efficiency
 Project Manager: Rod Jones

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 Technical Senior: Steve Baker

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Appendix B (h) (4) (E)	If the project will be a cogeneration facility, calculations showing compliance with applicable efficiency and operating standards.	N/A	N/A	
Appendix B (h) (4) (F)	A discussion of alternative generating technologies available for the project, including the projected efficiency of each, and an explanation why the chosen equipment was selected over these alternatives.	§§ 6.1.1, 6.4.1, 6.4.2, 6.4.3	Yes	
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	N/A	N/A	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	N/A	N/A	

Adequacy Issue: Adequate Inadequate
 Technical Area: Efficiency
 Project Manager: Rod Jones

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Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	N/A	N/A	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	N/A	N/A	

Adequacy Issue: Adequate X Inadequate _____
 Technical Area: Facility Design
 Project Manager: Rod Jones

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 Technical Senior: Steve Baker

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Appendix B (h) (1) (A)	A description of the site conditions and investigations or studies conducted to determine the site conditions used as the basis for developing design criteria. The descriptions shall include, but not be limited to, seismic and other geologic hazards, adverse conditions that could affect the project's foundation, adverse meteorological and climatic conditions, and flooding hazards, if applicable.	§§ 1.4, 5.15, 7.0 Appendices B, P	Yes	
Appendix B (h) (1) (B)	A discussion of any measures proposed to improve adverse site conditions.	§ 2.6.1 Appendices B, P	Yes	
Appendix B (h) (1) (C)	A description of the proposed foundation types, design criteria (including derivation), analytical techniques, assumptions, loading conditions, and loading combinations to be used in the design of facility structures and major mechanical and electrical equipment	Appendix B	Yes	
Appendix B (h) (1) (D)	For each of the following facilities and/or systems, provide a description including drawings, dimensions, surface-area requirements, typical operating data, and performance and design criteria for protection from impacts due to adverse site conditions:	See below	—	
Appendix B (h) (1) (D) (i)	The power generation system;	§ 2.3 Appendix B Figures 2-5, 2-6	Yes	
Appendix B (h) (1) (D) (ii)	The heat dissipation system;	§§ 2.3.1, 2.3.2.5, 2.4.7	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Facility Design
 Project Manager: Rod Jones

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Appendix B (h) (1) (D) (iii)	The cooling water supply system, and, where applicable, pre-plant treatment procedures;	§§ 1.1, 2.1, 2.1.8.4, 2.4.5, 5.14	Yes	
Appendix B (h) (1) (D) (iv)	The atmospheric emission control system;	§§ 1.6, 2.3.2.3, 2.4.13, 5.1	Yes	
Appendix B (h) (1) (D) (v)	The waste disposal system and on-site disposal sites;	§§ 2.1.9, 2.4.15, 5.13	Yes	
Appendix B (h) (1) (D) (vi)	The noise emission abatement system;	§§ 1.9.5, 5.5 Appendix K	Yes	
Appendix B (h) (1) (D) (vii)	The geothermal resource conveyance and re-injection lines (if applicable);	N/A	N/A	
Appendix B (h) (1) (D) (viii)	Switchyards/transformer systems; and	§§ 2.3.4, 2.1.6, 4.0 Figures 2-3, 2-19, 2-20, 2-21, 2-22	Yes	
Appendix B (h) (1) (D) (ix)	Other significant facilities, structures, or system components proposed by the applicant.	§§ 1.1, 1.4, 2.1, 2.2, 2.4 Figures 1-4, 2-2, 2-3, 2-5, 2-6, 2-14, 2-15, 2-16, 2-17	N/A	
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Table 7-1 §§ 7.0, 7.2	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Facility Design
 Project Manager: Rod Jones

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Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 7-2 § 7.3	N/A	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Table 7-2	N/A	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Table 7-1	N/A	

Adequacy Issue: Adequate Inadequate
 Technical Area: Geological Hazards
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

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 Technical Staff: Dal Hunter Ph.D., C.E.G.
 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Section 5.15, Page 5.15-1; Section 5.15.2, Pages 5.15-8 and 5.15-9; Section 5.15.3, Page 5.15-9; Section 5.15.4, Pages 5.15-9 and 5.15-10; and Appendix P.	Yes	
Appendix B (g) (17) (A)	A summary of the geology, seismicity, and geologic resources of the project site and related facilities, including linear facilities.	Section 5.15.1, Pages 5.15-3 through 5.15-6; Section 5.15.1.6, Page 5.15-8; Table 5.15-1, Page 5.15-4; Figures 5.15-1 through 5.15-4; and Appendix P.	Yes	
Appendix B (g) (17) (B)	A map at a scale of 1:24,000 and description of all recognized stratigraphic units, geologic structures, and geomorphic features within two (2) miles of the project site and along proposed facilities. Include an analysis of the likelihood of ground rupture, seismic shaking, mass wasting and slope stability, liquefaction, subsidence, tsunami runup, and expansion or collapse of soil structures at the plant site. Describe known geologic hazards along or crossing linear facilities.	Section 5.15.1, Pages 5.15-3 through 5.15-8; Section 5.15.5, Pages 5.15-9 and 5.15-10; Table 5.15-1, Page 5.15-4; Figures 5.15-1 through 5.15-4; and Appendix P.	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Geological Hazards
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 15, 2009
 Technical Staff: Dal Hunter Ph.D., C.E.G.
 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (17) (C)	A map and description of geologic resources of recreational, commercial, or scientific value which may be affected by the project. Include a discussion of the techniques used to identify and evaluate these resources.	Section 5.15.1, Page 5.15-8; and Section 5.15.4.9, Page 5.15-10.	Yes	
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Table 5.15-2; Page 5.15-11; Section 5.15.5, Pages 5.15-10 through 5.15-12; and Section 5.15.7, Page 5.15-13.	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 5.15-3, Page 5.15-12; Section 5.15.6, Page 5.15-12; and Section 5.15.7, Page 5.15-13.	Yes	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Table 5.15-3, Page 5.15-12.	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Geological Hazards
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 15, 2009
 Technical Staff: Dal Hunter Ph.D., C.E.G.
 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	N/A	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: **Hazardous Materials Handling**
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 16, 2009
 Technical Staff: Rick Tyler
 Technical Senior: Rick Tyler

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (e) (1)	A discussion of how facility closure will be accomplished in the event of premature or unexpected cessation of operations.	Section 5.12.2.5	Yes	
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Section 5.12	Yes	
Appendix B (g) (10) (A)	A list of all materials used or stored on-site which are hazardous or acutely hazardous, as defined in Title 22, California Code of Regulations, § 66261.20 et seq., and a discussion of the toxicity of each material.	Tables 5.12-1, 5.12-2, 5.12-3, 5.12-4	Yes	
Appendix B (g) (10) (B)	A map at a scale of 1:24,000 depicting the location of schools, hospitals, day-care facilities, emergency response facilities and long-term health care facilities, within the area potentially affected by any release of hazardous materials.	Figure L1, Appendix L	Yes	
Appendix B (g) (10) (C)	A discussion of the storage and handling system for each hazardous material used or stored at the site.	Section 5.12	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Hazardous Materials Handling
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 16, 2009
 Technical Staff: Rick Tyler
 Technical Senior: Rick Tyler

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (10) (D)	The protocol that will be used in modeling potential consequences of accidental releases that could result in off site impacts. Identify the model(s) to be used, a description of all input assumptions, including meteorological conditions. The results of the modeling analysis can be submitted after the AFC is complete.	5.12.2.3	Yes	
Appendix B (g) (10) (E)	A discussion of whether a risk management plan (Health and Safety Code § 25531 et seq.) will be required, and if so, the requirements that will likely be incorporated into the plan.	Section 5.12.2.3	Yes	
Appendix B (g) (10) (F)	A discussion of measures proposed to reduce the risk of any release of hazardous materials.	Section 5.12	Yes	
Appendix B (g) (10) (G)	A discussion of the fire and explosion risks associated with the project.	Section 5.12.2.2	Yes	
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Table 5.15-6	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Hazardous Materials Handling
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 16, 2009
 Technical Staff: Rick Tyler
 Technical Senior: Rick Tyler

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 5.12-7	Yes	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Table 5.12-7	Yes	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Table 5.12-8	Yes	

Adequacy Issue: Adequate Inadequate

DATA ADEQUACY WORKSHEET

Revision No. 0 Date June 2, 2009

Technical Area: Land Use

Project: Hydrogen Energy California

Technical Staff: Amanda Stennick

Project Manager: Rod Jones

Docket: 08-AFC-8

Amanda Stennick/David

Technical Senior: Flores

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Section 5.4	Yes	
Appendix B (g) (3) (A)	A discussion of existing land uses and current zoning at the site, land uses and land use patterns within one mile of the proposed site and within one-quarter mile of any project-related linear facilities. Include:	Sections 5.4.1.2 and .3 Figures 5.4-1 through-5 Table 5.4-1 through-4	Yes	
Appendix B (g) (3) (A) (i)	An identification of residential, commercial, industrial, recreational, scenic, agricultural, natural resource protection, natural resource extraction, educational, religious, cultural, and historic areas, and any other area of unique land uses;	Section 5.4.1.3 Figure 5.4-3	Yes	
Appendix B (g) (3) (A) (ii)	A discussion of any recent or proposed zone changes and/or general plan amendments; noticed by an elected or appointed board, commission, or similar entity at the state or local level;	Section 5.4.1.7	Yes	

Adequacy Issue: Adequate Inadequate

DATA ADEQUACY WORKSHEET

Revision No. 0 Date June 2, 2009

Technical Area: Land Use

Project: Hydrogen Energy California

Technical Staff: Amanda Stennick

Project Manager: Rod Jones

Docket: 08-AFC-8

Amanda Stennick/David

Technical Senior: Flores

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (3) (A) (iii)	Identification of all discretionary reviews by public agencies initiated or completed within 18 months prior to filing the application for those changes or developments identified in subsection (g)(3)(A)(ii); and	Section 5.4.1.7 Table 5.4-9	Yes	
Appendix B (g) (3) (A) (iv)	Legible maps of the areas identified in subsection (g)(3)(A) potentially affected by the project, on which existing land uses, jurisdictional boundaries, general plan designations, specific plan designations, and zoning have been clearly delineated.	Figures 5.4-1 through -5	Yes	
Appendix B (g) (3) (B)	A discussion of the compatibility of the proposed project with present and expected land uses, and conformity with any long-range land use plans adopted by any federal, state, regional, or local planning agencies. The discussion shall identify the need, if any, for land use decisions by another public agency or as part of the commission's decision that would be necessary to make the project conform to adopted federal, state, regional, or local coastal plans, land use plans, or zoning ordinances. Examples of land use decisions include: general plan amendments, zoning changes, lot line adjustments, parcel mergers, subdivision maps, Agricultural Land Conservation Act contracts cancellation, and Airport Land Use Plan consistency determinations.	Sections 5.4.1.3; 5.4.2.3; 5.4.2.4; 5.4.5.2; 5.4.5.3	Yes	

Adequacy Issue: Adequate Inadequate

DATA ADEQUACY WORKSHEET

Revision No. 0 Date June 2, 2009

Technical Area: Land Use

Project: Hydrogen Energy California

Technical Staff: Amanda Stennick

Project Manager: Rod Jones

Docket: 08-AFC-8

Amanda Stennick/David

Technical Senior: Flores

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (3) (C)	A discussion of the legal status of the parcel(s) on which the project is proposed. If the proposed site consists of more than one legal parcel, describe the method and timetable for merging or otherwise combining those parcels so that the proposed project, excluding linears and temporary laydown or staging area, will be located on a single legal parcel. The merger need not occur prior to a decision on the Application but must be completed prior to the start of construction.	Section 5.4.1.6	Yes	
Appendix B (g) (3) (D)	A map at a scale of 1:24,000 and written description of agricultural land uses found within all areas affected by the proposed project. The description shall include:	Figures 5.4-1 through -5	Yes	
Appendix B (g) (3) (D) (i)	Crop types, irrigation systems, and any special cultivation practices;	Table 5.4-3 Figure 5.4-3	Yes	
Appendix B (g) (3) (D) (ii)	Whether farmland affected by the project is prime, of statewide importance, or unique as defined by the California Department of Conservation; and	Section 5.4.1.3 Table 5.4-4	Yes	
Appendix B (g) (3) (D) (iii)	Direct, indirect, and cumulative effects on agricultural land uses. If the proposed site or related facilities are subject to an Agricultural Land Conservation contract, provide a written copy and a discussion of the status of the expiration or canceling of such contract.	Sections 5.4.1.3 Figure 5.4-3 Table 5.4-5	Yes	

Adequacy Issue: Adequate Inadequate

DATA ADEQUACY WORKSHEET

Revision No. 0 Date June 2, 2009

Technical Area: Land Use

Project: Hydrogen Energy California

Technical Staff: Amanda Stennick

Project Manager: Rod Jones

Docket: 08-AFC-8

Amanda Stennick/David

Technical Senior: Flores

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Table 5.4-10	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 5.4-10	Yes	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Table 5.4-11	Yes	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Section 5.4.1.3 Table 5.4-12	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Noise
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 10, 2009
 Technical Staff: Erin Bright
 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	§§ 4.0, 5.5.1.2, 5.5.1.4, 5.5.2.1, 5.5.2.2, 5.5.2.3, 5.5.3, 5.5.4; Tables 5.5-2 through 5.5-10, 5.5-15	Yes	
Appendix B (g) (4) (A)	A land use map which identifies residences, hospitals, libraries, schools, places of worship, or other facilities where quiet is an important attribute of the environment within the area impacted by the proposed project. The area potentially impacted by the proposed project is that area where, during either construction or operation, there is a potential increase of 5 dB(A) or more, over existing background levels.	Figure 5.5-1; Figure 5.4-2(1-8)	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Noise
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 10, 2009
 Technical Staff: Erin Bright
 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (4) (B)	A description of the ambient noise levels at those sites identified under subsection (g)(4)(A) which the applicant believes provide a representative characterization of the ambient noise levels in the project vicinity, and a discussion of the general atmospheric conditions, including temperature, humidity, and the presence of wind and rain at the time of the measurements. The existing noise levels shall be determined by taking noise measurements for a minimum of 25 consecutive hours at a minimum of one site. Other sites may be monitored for a lesser duration at the applicant's discretion, preferably during the same 25-hour period. The results of the noise level measurements shall be reported as hourly averages in Leq (equivalent sound or noise level), Ldn (day-night sound or noise level) or CNEL (Community Noise Equivalent Level) in units of dB(A). The L10, L50, and L90 values (noise levels exceeded 10 percent, 50 percent, and 90 percent of the time, respectively) shall also be reported in units of dB(A).	§§5.5.1.3, 5.5.1.4; Tables 5.5-2 through 5.5-10; Appendix K	Yes	
Appendix B (g) (4) (C)	A description of the major noise sources of the project, including the range of noise levels and the tonal and frequency characteristics of the noise emitted.	§§ 5.5.2.2, 5.5.2.3; Appendix K	Yes	

Adequacy Issue: Adequate X Inadequate _____
 Technical Area: Noise
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 10, 2009
 Technical Staff: Erin Bright
 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (4) (D)	An estimate of the project noise levels, during both construction and operation, at residences, hospitals, libraries, schools, places of worship or other facilities where quiet is an important attribute of the environment, within the area impacted by the proposed project.	§§ 5.5.2.1, 5.5.2.2, 5.5.2.3; Tables 5.5-13, 5.5-17 through 5.5-19; Figure 5.5-2; Appendix K	Yes	
Appendix B (g) (4) (E)	An estimate of the project noise levels within the project site boundary during both construction and operation and the impact to the workers at the site due to the estimated noise levels.	§§ 5.5.2.1, 5.5.2.2, 5.5.2.3, 5.5.2.5; Tables 5.5-13, 5.5-17 through 5.5-19; Figure 5.5-2	Yes	
Appendix B (g) (4) (F)	The audible noise from existing switchyards and overhead transmission lines that would be affected by the project and estimates of the future audible noise levels that would result from existing and proposed switchyards and transmission lines. Noise levels shall be calculated at the property boundary for switchyards and at the edge of the rights-of-way for transmission lines.	§§ 4.9.1, 4.9.3; Table 4-8;	Yes	
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	§5.5.5; Table 5.5-21	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Noise
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 10, 2009
 Technical Staff: Erin Bright
 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	§5.5.5; Table 5.5-21	Yes	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	§5.5.6.1; Table 5.4-11	Yes	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	§5.5.7	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Paleontological Resources
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 15, 2009
 Technical Staff: Dal Hunter, Ph.D., C.E.G.
 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Section 5.16, Page 5.16-1; Section 5.16.2, Page 5.16-14; Section 5.16.3, Page 5.16-15; Section 5.16.4, Pages 5.16-15 and 5.16-16; and Appendix Q.	Yes	
Appendix B (g) (16) (A)	Identification of the physiographic province and a brief summary of the geologic setting, formations, and stratigraphy of the project area. The size of the paleontological study area may vary depending on the depositional history of the region.	Section 5.6.1, Pages 5.16-4 and 5.16-5; Section 5.16.1.5, Pages 5.6-10 and 5.16-11; and Appendix Q.	Yes	
Appendix B (g) (16) (B)	A discussion of the sensitivity of the project area described in subsection (g)(16)(A) and the presence and significance of any known paleontologic localities or other paleontologic resources within or adjacent to the project. Include a discussion of sensitivity for each geologic unit identified on the most recent geologic map at a scale of 1:24,000. Provide rationale as to why the sensitivity was assigned.	Section 5.16.1.4, Pages 5.16-8 through 5.16-10; and Section 5.16.1.5, Pages 5.16-11 through 5.16-13.	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Paleontological Resources
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 15, 2009
 Technical Staff: Dal Hunter, Ph.D., C.E.G.
 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (16) (C)	A summary of all local museums, literature searches and field surveys used to provide information about paleontologic resources in the project area described in subsection (g)(16)(A). Identify the dates of the surveys, methods used in completing the surveys, and the names and qualifications of the individuals conducting the surveys.	Section 5.16.3, Pages 5.16-5 and 5.16-6; and Section 5.16.1.5, Pages 5.16-11 through 5.16-13.	Yes	
Appendix B (g) (16) (D)	Information on the specific location of known paleontologic resources, survey reports, locality records, and maps at a scale of 1:24,000, showing occurrences of fossil finds, if known, within a one-mile radius of the project and related facilities shall be included in a separate appendix to the Application and submitted to the Commission under a request for confidentiality, pursuant to Title 20, California Code of Regulations, s 2501 et seq.	Appendix Q.	Yes	
Appendix B (g) (16) (E)	A discussion of any educational programs proposed to enhance awareness of potential impacts to paleontological resources by employees, measures proposed for mitigation of impacts to known paleontologic resources, and a set of contingency measures for mitigation of potential impacts to currently unknown paleontologic resources.	Section 5.16.4, Pages 5.16-15 and 5.16-16; and Appendix Q.	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Paleontological Resources
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 15, 2009
 Technical Staff: Dal Hunter, Ph.D., C.E.G.
 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Table 5.16-1, Page 5.16-17; Section 5.16.5, Pages 5.16-16 through 5.16-18; Section 5.16.7, Page 5.16-18; and Appendix Q.	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 5.16-1, Page 5.16-17; Section 5.16.5, Pages 5.16-16 through 5.16-18; Section 5.16.6, Page 5.16-18; and Appendix Q.	Yes	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Table 5.16-1, Page 5.16-17; Section 5.16.6, Page 5.16-18; and Appendix Q.	Yes	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Section 5.16.7, Page 5.16-18; and Appendix Q.	Yes	

Adequacy Issue: Adequate X Inadequate _____
 Technical Area: Project Overview
 Rod Jones

DATA ADEQUACY WORKSHEET
 Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 3, 2009
 Technical Staff: Rod Jones
 Technical Senior: Robert Worl

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Cal. Code Regs., tit. 20, § 1704, (a) (3) (A)	Descriptions of all significant assumptions, methodologies, and computational methods used in arriving at conclusions in the document.	Please see the individual technical areas for a determination regarding this item	N/A	
Cal. Code Regs., tit. 20, § 1704, (a) (3) (B)	Descriptions, including methodologies and findings, of all major studies or research efforts undertaken and relied upon to provide information for the document; and a description of ongoing research of significance to the project (including expected completion dates; and	Please see the individual technical areas for a determination regarding this item.	N/A	
Cal. Code Regs., tit. 20, § 1704, (a) (3) (C)	A list of all literature relied upon or referenced in the documents, along with brief discussions of the relevance of each such reference	Please see the individual technical areas for a determination regarding this item.	N/A	
Cal. Code Regs., tit. 20, § 1704, (a) (4)	Each principal subject area covered in a notice or application shall be set forth in a separate chapter or section, each of which shall identify the person or persons responsible for its preparation.	Sections: 5.1 through 5.16 Appendix 1C (pg. 1C-1)	Yes	
Appendix B (a) (1) (A)	A general description of the proposed site and related facilities, including the location of the site or transmission routes, the type, size and capacity of the generating or transmission facilities, fuel characteristics, fuel supply routes and facilities, water supply routes and facilities, pollution control systems, and other general characteristics.	Executive Summary Section 1.1 pg. 1-1 Project Description Section 2.0 pg. 2-1 Figures 1.1-1 through 1.1-3 Figures 2.1-1 through 2.1-3 Figures 2.1-4, 2.1-4B, 2.1-5A	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Project Overview
 Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
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Revision No. 0 Date June 3, 2009
 Technical Staff: Rod Jones
 Technical Senior: Robert Worl

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (a) (1) (B)	Identification of the location of the proposed site and related facilities by section, township, range, county and assessor's parcel numbers.	Project Objectives Section 1.1 pg. 1-1 Site Arrangement and Layout Section 2.1.1 pg. 2-1	Yes	
Appendix B (a) (1) (C)	A description of and maps depicting the region, the vicinity, and the site and its immediate surroundings.	Affected Environment Section 5.6.1 pg. 5.6-1 Figure 5.6-1, 5.6-2 Figure 1.1-1 through 1.1-3	Yes	
Appendix B (a) (1) (D)	A full-page color photographic reproduction depicting the visual appearance of the site prior to construction, and a full-page color simulation or artist's rendering of the site and all project components at the site, after construction.	Figure 1.1-3 Figure 1.1-1 Figure 2.1-3, and 5.2-4,	Yes	
Appendix B (a) (1) (E)	In an appendix to the application, a list of current assessor's parcel numbers and owners' names and addresses for all parcels within 500 feet of the proposed transmission line and other linear facilities, and within 1000 feet of the proposed powerplant and related facilities.	Appendix 1 B (Volume II of AFC)	Yes	
Appendix B (a) (2)	Project Schedule: Proposed dates of initiation and completion of construction, initial start-up, and full-scale operation of the proposed facilities.	Project Schedule Section 1.3 pg. 1-9	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Project Overview
 Rod Jones

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 Technical Senior: Robert Worl

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (a) (3) (A)	A list of all owners and operators of the site(s), the power plant facilities, and, if applicable, thermal host, the geothermal leasehold, the geothermal resource conveyance lines, and the geothermal re-injection system, and a description of their legal interest in these facilities.	Project Owner Section 1.2 pgs. 1-2, 1-9	Yes	
Appendix B (a) (3) (B)	A list of all owners and operators of the proposed electric transmission facilities.	Project Owner Section 1.2 pgs. 1-2 , 1-9	Yes	
Appendix B (a) (3) (C)	A description of the legal relationship between the applicant and each of the persons or entities specified in subsections (a)(3)(A) and (B).	Project Owner Section 1.2 pgs. 1-2 , 1-9 Introduction (Elec. Trans.) Section 3.1 pg. 3-1	Yes	
Appendix B (b) (1)	In a section entitled, "Generation Facility Description, Design, and Operation" provide the following information:			
Appendix B (b) (1) (A)	Maps at a scale of 1:24,000 (1" = 2000'), (or appropriate map scale agreed to by staff) along with an identification of the dedicated leaseholds by section, township, range, county, and county assessor's parcel number, showing the proposed final locations and layout of the power plant and all related facilities;	Figure 1.1-3 Figure 2.1-1 Project Objectives Section 1.1.1 pg. 1-1	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Project Overview
 Rod Jones

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Revision No. 0 Date June 3, 2009
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 Technical Senior: Robert Worl

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (b) (1) (B)	Scale plan and elevation drawings depicting the relative size and location of the power plant and all related facilities to establish the accuracy of the photo simulations required in Sections (a)(1)(D) and (g)(6)(F);	Figures 2.1-1, 2.1-2 Site Arrangement and Layout Section 2.1.1 pg. 2-1 through 2-2	Yes	
Appendix B (b) (1) (C)	A detailed description of the design, construction and operation of the facilities, specifically including the power generation, cooling, water supply and treatment, waste handling and control, pollution control, fuel handling, and safety, emergency and auxiliary systems, and fuel types and fuel use scenarios; and	Sections 2.0 and 2.4 pgs. 2-1 through 2-34	Yes	
Appendix B (b) (1) (D)	A description of how the site and related facilities were selected and the consideration given to engineering constraints, site geology, environmental impacts, water, waste and fuel constraints, electric transmission constraints, and any other factors considered by the applicant.	Project Objectives Section 1.1.1 pg. 1-1	Yes	
Appendix B (b) (2)	In a section entitled, "Transmission Lines Description, Design, and Operation" provide the following information:			

Adequacy Issue: Adequate Inadequate
 Technical Area: Project Overview
 Rod Jones

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 Technical Staff: Rod Jones
 Technical Senior: Robert Worl

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (b) (2) (A)	Maps at a scale of 1:24,000 (or appropriate map scale agreed to by staff) of each proposed transmission line route, showing the settled areas, parks, recreational areas, scenic areas, and existing transmission lines within one mile of the proposed route(s);	Figure 1.1-3	Yes	
Appendix B (b) (2) (B)	A full-page color photographic reproduction depicting a representative above ground section of the transmission line route prior to construction and a full-page color photographic simulation of that section of the transmission line route after construction.	N/A	N/A	
Appendix B (b) (2) (C)	A detailed description of the design, construction, and operation of any electric transmission facilities, such as power lines, substations, switchyards, or other transmission equipment, which will be constructed or modified to transmit electrical power from the proposed power plant to the load centers to be served by the facility. Such description shall include the width of rights-of-way and the physical and electrical characteristics of electrical transmission facilities such as towers, conductors, and insulators.	Section 2.1.7 pg. 2-17 Section 3.2 pg. 3-1 Figure 3.2-1 Figure 3.2-2	Yes	
Appendix B (b) (2) (D)	A description of how the route and additional transmission facilities were selected, and the consideration given to engineering constraints, environmental impacts, resource conveyance constraints, and electric transmission; constraints; and	Electric Transmission Section 3.0	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Project Overview
 Rod Jones

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 Technical Staff: Rod Jones
 Technical Senior: Robert Worl

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (e) (1)	A discussion of how facility closure will be accomplished in the event of premature or unexpected cessation of operations.	Facility Closure Section 2.7, 2.7.1, 2.7.2 Pgs. 2-42 through 2-43	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Public Health
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 4, 2009
 Technical Staff: Alvin Greenberg
 Technical Senior: Rick Tyler

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Section 5.6.1 Section 5.6.2 Section 5.1.1 Section 5.1.2.1 Appendix D1 Section 5.6.3 Section 5.6.4	Yes	
Appendix B (g) (9) (A)	An assessment of the potential risk to human health from the project's hazardous air emissions using the Air Resources Board Hotspots Analysis and Reporting Program (HARP) (HSC §§44360-44366) or its successor and Approved Risk Assessment Health Values. These values should include the cancer potency values and noncancer reference exposure levels approved by the Office of Environmental Health Hazard Assessment (OEHHA Guidelines, Cal-EPA 2005).	Section 5.6.2	Yes	
Appendix B (g) (9) (B)	A listing of the input data and output results, in both electronic and print formats, used to prepare the HARP health risk assessment.	DVD submitted separately	Yes	
Appendix B (g) (9) (C)	Identification of available health studies through the local public health department concerning the potentially affected population(s) within a six-mile radius of the proposed power plant site related to respiratory illnesses, cancers or related diseases.	Section 5.6.1	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Public Health
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 4, 2009
 Technical Staff: Alvin Greenberg
 Technical Senior: Rick Tyler

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (9) (D)	A map showing sensitive receptors within the area exposed to the substances identified in subsection (g)(9)(A).	Figure 5.6-1	Yes	
Appendix B (g) (9) (E)	For purposes of this section, the following definitions apply:			
Appendix B (g) (9) (E) (i)	A sensitive receptor refers to infants and children, the elderly, and the chronically ill, and any other member of the general population who is more susceptible to the effects of the exposure than the population at large;		Yes	
Appendix B (g) (9) (E) (ii)	An acute exposure is one which occurs over a time period of less than or equal to one (1) hour; and		Yes	
Appendix B (g) (9) (E) (iii)	A chronic exposure is one which is greater than twelve (12) percent of a lifetime of seventy (70) years.		Yes	
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Section 5.6.5 Table 5.6-17	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Public Health
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 4, 2009
 Technical Staff: Alvin Greenberg
 Technical Senior: Rick Tyler

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 5.6-17	Yes	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Table 5.6-18	Yes	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Section 5.6.7	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Reliability
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET
 Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 3, 2009
 Technical Staff: Steve Baker
 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	§§ 1.1, 1.3, 1.4, 1.5, 1.7, 1.8, 2.1, 2.1.1, 2.1.2, 2.1.3, 2.1.6, 2.1.8, 2.1.8.1, 2.1.8.2, 2.1.8.3, 2.1.8.4, 2.1.8.5, 2.1.9, 2.1.9.1, 2.1.9.2, 2.1.9.3, 2.1.9.4, 2.1.9.5, 2.2.1, 2.2.2, 2.3.1, 2.3.2.1, 2.3.2.2, 2.3.2.4, 2.3.2.5, 2.3.3, 2.3.4, 2.4.1.2, 2.4.1.3, 2.4.2, 2.4.3, 2.4.4, 2.4.5, 2.4.5, 2.4.7, 2.4.7.1, 2.4.7.2, 2.4.7.3, 2.4.8, 2.4.9, 2.4.10.1, 2.4.10.2, 2.4.12, 2.4.17, 2.5.1, 2.5.2, 2.5.3, 2.5.6, 2.6.10, 2.7.1, 2.7.2.3, 2.8.1, 2.8.2, 6.1.1, 6.4.1, 6.4.2, 6.4.3; Chapter 8; Tables 2-15, 2-16, 2-22, 2-27, 7-2; Appendices R, V, X	Yes	
Appendix B (h) (3) (A)	A discussion of the sources and availability of the fuel or fuels to be used over the estimated service life of the facilities.	§§ 1.1, 1.4, 2.1, 2.1.8, 2.1.8.1, 2.1.8.2, 2.1.8.3, 2.2.2, 2.5.6, 2.6.1.10; Table 2-22; Appendix R	Yes	
Appendix B (h) (3) (B)	A discussion of the anticipated service life and degree of reliability expected to be achieved by the proposed facilities based on a consideration of:	—	—	
Appendix B (h) (3) (B) (i)	Expected overall availability factor, and annual and lifetime capacity factors;	§ 2.8.2; Table 2-27	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Reliability
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
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 Technical Staff: Steve Baker
 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (h) (3) (B) (ii)	The demonstrated or anticipated feasibility of the technologies, systems, components, and measures proposed to be employed in the facilities, including the power generation system, the heat dissipation system, the water supply system, the reinjection system, the atmospheric emission control system, resource conveyance lines, and the waste disposal system;	§§ 1.1, 1.4, 1.7, 2.1, 2.1.3, 2.1.6, 2.1.8.1, 2.1.8.2, 2.1.8.3, 2.1.8.4, 2.1.9.4, 2.1.9.5, 2.2.1, 2.2.2, 2.3.1, 2.3.2.1, 2.3.2.2, 2.3.2.4, 2.3.2.5, 2.3.3, 2.4.2, 2.4.3, 2.4.4, 2.4.5, 2.4.7, 2.4.8, 2.8.1, 2.8.2; Tables 2-15, 2-16; Appendix V	Yes	
Appendix B (h) (3) (B) (iii)	Geologic and flood hazards, meteorologic conditions and climatic extremes, and cooling water availability;	§§ 1.1, 1.3, 1.4, 1.7, 2.1, 2.1.3, 2.1.6, 2.1.8.4, 2.6.1.10, 2.7.1, 5.15.1, 5.15.4; Table 2-2; Appendix X	Yes	
Appendix B (h) (3) (B) (iv)	Special design features adopted by the applicant or resource supplier to ensure power plant reliability including equipment redundancy; and	§§ 2.1.8.1, 2.3.3, 2.3.4, 2.4.3, 2.4.10.1, 2.4.12, 2.4.17, 2.5.1, 2.5.3, 2.7.2.3, 2.8.2	Yes	
Appendix B (h) (3) (B) (v)	For technologies not previously installed and operated in California, the expected power plant maturation period.	§§ 2.1.4, 2.6.1, 2.8.1, 2.8.2	N/A	

Adequacy Issue: Adequate Inadequate
 Technical Area: Reliability
 Project Manager: Rod Jones

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Project: Hydrogen Energy California
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 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	N/A	N/A	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	N/A	N/A	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	N/A	N/A	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	N/A	N/A	

Adequacy Issue: Adequate Inadequate

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Revision No. 0 Date June 2, 2009

Technical Area: Socioeconomics

Project: Hydrogen Energy California

Technical Staff: Marie McLean

Project Manager: Rod Jones

Docket: 08-AFC-8

Amanda Stennick/David

Technical Senior: Flores

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Section 5.8.1, p. 5.8-2 Section 5.8.2, p. 5.8-18-19 Section 5.8.4, p. 5.8-20-30	Yes	
Appendix B (g) (7) (A)	A description of the socioeconomic circumstances of the vicinity and region affected by construction and operation of the project. Include:		Yes	
Appendix B (g) (7) (A) (i)	The economic characteristics, including the economic base, fiscal resources, and a list of the applicable local agencies with taxing powers and their most recent and projected revenues;	Section 5.8.1.1, p. 5.8-3-5.8-10 Section 5.8.1.4, p. 5.8-17-18	Yes	
Appendix B (g) (7) (A) (ii)	The social characteristics, including population and demographic and community trends;		Yes	
Appendix B (g) (7) (A) (iii)	Existing unemployment rates;	Section 5.8.1.1, p.5.8-3; Table 5.8-1; p.5.8-4, Table 5.8-2.	Yes	
Appendix B (g) (7) (A) (iv)	Availability of skilled workers by craft required for construction and operation of the project;	Section 5.8.1.1, p.5.8-3-5.8-9	Yes	
Appendix B (g) (7) (A) (v)	Availability of temporary and permanent housing and current vacancy rate; and	Section 5.8.2.3, p. 5.8-10-5.8.24	Yes	

Adequacy Issue: Adequate X Inadequate _____

DATA ADEQUACY WORKSHEET

Revision No. 0 Date June 2, 2009

Technical Area: Socioeconomics

Project: Hydrogen Energy California

Technical Staff: Marie McLean

Project Manager: Rod Jones

Docket: 08-AFC-8

Amanda Stennick/David

Technical Senior: Flores

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (7) (A) (vi)	Capacities, existing and expected use levels, and planned expansion of utilities (gas, water and waste) and public services, including fire protection, law enforcement, emergency response, medical facilities, other assessment districts, and school districts. For projects outside metropolitan areas with a population of 500,000 or more, information for each school district shall include current enrollment and yearly expected enrollment by grade level groupings, excluding project-related changes for the duration of the project schedule.	Section 5.8.1.3, p. 5.8-4; Table 5.8-7 and Table 5.8-8 Section 5.8.2, p. 5.8-24-25	Yes	
Appendix B (g) (7) (B)	A discussion of the socioeconomic impacts caused by the construction and operation of the project (note year of estimate, model, if used, and appropriate sources), including:		Yes	
Appendix B (g) (7) (B) (i)	An estimate of the number of workers to be employed each month by craft during construction, and for operations, an estimate of the number of permanent operations workers during a year;	Section 5.8.2, p. 5.9-19-23; Table 5.8-11	Yes	
Appendix B (g) (7) (B) (ii)	An estimate of the percentage of non-local workers who will relocate to the project area to work on the project;	Section 5.8.2, p. 5.8-19	Yes	
Appendix B (g) (7) (B) (iii)	An estimate of the potential population increase caused directly and indirectly by the project;	Section 5.8.2, p. 5.8-23-24	Yes	

Adequacy Issue: Adequate X Inadequate _____

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Revision No. 0 Date June 2, 2009

Technical Area: Socioeconomics

Project: Hydrogen Energy California

Technical Staff: Marie McLean

Project Manager: Rod Jones

Docket: 08-AFC-8

Amanda Stennick/David

Technical Senior: Flores

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (7) (B) (iv)	The potential impact of population increase on housing during the construction and operations phases;	Section 5.8.2, p.5.8.24	Yes	
Appendix B (g) (7) (B) (v)	The potential impacts, including additional costs, on utilities (gas, water, and waste) and public services, including fire, law enforcement, emergency response, medical facilities, other assessment districts, and school districts. Include response times to hospitals and for police, and emergency services. For projects outside metropolitan areas with a population of 500,000 or more, information on schools shall include project-related enrollment changes by grade level groupings and associated facility and staffing impacts by school district during the construction and operating phases;	Section 5.8.2, p. 5.8-24-27	Yes	
Appendix B (g) (7) (B) (vi)	An estimate of applicable school impact fees;	Section 5.8.2, p. 5.8-26	Yes	
Appendix B (g) (7) (B) (vii)	An estimate of the total construction payroll and separate estimates of the total operation payroll for permanent and short-term (contract) operations employees;	Section 5.8.2, p.5.8-26	Yes	
Appendix B (g) (7) (B) (viii)	An estimate of the expenditures for locally purchased materials for the construction and operation phases of the project;	Section 5.8.2, p. 5.8-26-27	Yes	
Appendix B (g) (7) (B) (ix)	An estimate of the capital cost (plant and equipment) of the project;	Section 5.8.2, p. 5.8-21	Yes	

Adequacy Issue: Adequate Inadequate

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Revision No. 0 Date June 2, 2009

Technical Area: Socioeconomics

Project: Hydrogen Energy California

Technical Staff: Marie McLean

Project Manager: Rod Jones

Docket: 08-AFC-8

Amanda Stennick/David

Technical Senior: Flores

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (7) (B) (x)	An estimate of sales taxes generated during construction and separately during an operational year of the project;	Section 5.8.2, p. 5.8-27	Yes	
Appendix B (g) (7) (B) (xi)	An estimate of property taxes generated during an operational year of the project; and	Section 5.8.2, p. 5.8-27	Yes	
Appendix B (g) (7) (B) (xii)	The expected direct, indirect, and induced income and employment effects due to construction, operation, and maintenance of the project.	Section 5.8.2, p. 5.8-22	Yes	
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Section 5.8.5, P. 5.8-23, Table 5.8-13	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Section 5.8.5, P. 5.8-31 Table 5.8-3	Yes	

Adequacy Issue: Adequate Inadequate

DATA ADEQUACY WORKSHEET

Revision No. 0 Date June 2, 2009

Technical Area: Socioeconomics

Project: Hydrogen Energy California

Technical Staff: Marie McLean

Project Manager: Rod Jones

Docket: 08-AFC-8

Technical Senior: Amanda Stennick/David Flores

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Section 5.8.6, P. 5.8-32, Table 5.8-14	Yes	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Section 5.8.7, p. 5.8-32	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Soils
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 22, 2009
 Technical Staff: Cheryl Closson
 Technical Senior: Paul Marshall

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Pages 2-1 – 78, Section 2.0; Pages 5.9-1 – 22, Section 5.9.	Yes	
Appendix B (g) (15) (A)	A map at a scale of 1:24,000 and written description of soil types and all agricultural land uses that will be affected by the proposed project. The description shall include:	Figures 5.9-1(1) - (8) and Pages 5.9-4 -12, Section 5.9; and Figures 5.4-3(1) – (8) and Pages 5.4-8 -10, Section 5.4.1.3.	Yes	
Appendix B (g) (15) (A) (i)	The depth, texture, permeability, drainage, erosion hazard rating, and land capability class of the soil;	Table 5.9-2 and Pages 5.9-4 – 12, Section 5.9.	Yes	
Appendix B (g) (15) (A) (ii)	An identification of other physical and chemical characteristics of the soil necessary to allow an evaluation of soil erodibility, permeability, re-vegetation potential, and cycling of pollutants in the soil-vegetation system;	Table 5.9-2 and Pages 5.9-4 – 12, Section 5.9.	Yes	
Appendix B (g) (15) (A) (iii)	The location of any proposed fill disposal or fill procurement (borrow) sites; and	Page 5.9-14, Section 5.9.2.1; Figure 2-41, Section 2.0.	Yes	
Appendix B (g) (15) (A) (iv)	The location of any contaminated soils that could be disturbed by project construction.	Pages 5.9-13 and 14, Section 5.9.2.1; and AFC Volume II, Appendix M.	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Soils
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
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SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (15) (B)	An assessment of the effects of the proposed project on soil resources and agricultural land uses. This discussion shall include:	Pages 5.9-13 – 17, Section 5.9.2.	Yes	
Appendix B (g) (15) (B) (i)	The quantification of accelerated soil loss due to wind and water erosion; and	Page 5.9-13, Section 5.9.2.	Yes	
Appendix B (g) (15) (B) (ii)	The effect of power plant emissions on surrounding soil-vegetation systems.	Page 5.9-17, Section 5.9.2.6.	Yes	
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Table 5.9-3, Page 5.9-20, Section 5.9.5.	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Soils
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

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SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 5.9-3 and Pages 5.9-19 – 22, Sections 5.9.5 – 5.9.7.3.	Yes	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Table 5.9-4, Page 5.9-21, Section 5.9.6.	Yes	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Table 5.9-5, Page 5.9-21, Section 5.9.7.	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Traffic and Transportation
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 12, 2009
 Technical Staff: David Flores
 Technical Senior: David Flores

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	AFC pg. 5.10-1 & 2 Sec. 5.10 AFC pg. 5.10-22 through 24 Sec. 5.10.3 through 5.10.4.2	Yes	
Appendix B (g) (5) (A)	A regional transportation setting, on topographic maps (scale of 1:250,000), identifying the project location and major transportation facilities. Include a reference to the transportation element of any applicable local or regional plan.	AFC pg. 5.10-3 Sec. 5.10.1 Figure 5.10-1 Figure 5.10-2	Yes	

Adequacy Issue: Adequate X Inadequate _____
 Technical Area: Traffic and Transportation
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 12, 2009
 Technical Staff: David Flores
 Technical Senior: David Flores

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (5) (B)	If the proposed project including any linear facility is to be located within 20,000 feet of an airport runway that is at least 3,200 feet in actual length, or 5,000 feet of a heliport (or planned or proposed airport runway or an airport runway under construction, that is the subject of a notice or proposal on file with the Federal Aviation Administration), discuss the project's compliance with the applicable sections of the current Federal Aviation Regulation Part 77 – Objects Affecting Navigable Airspace, specifically any potential to obstruct or impede air navigation generated by the project at operation; such as, a thermal plume, a visible water vapor plume, glare, electrical interference, or surface structure height. The discussion should include a map at a scale of 1:24,000 that displays the airport or airstrip runway configuration, the proposed power plant site and related facilities.	AFC pg.5.10-24 & 25 Sec. 5.10.5.1 AFC pg.5.10-32 SEC. 5.10.7	Yes	
Appendix B (g) (5) (C)	An identification, on topographic maps at a scale of 1:24,000, and a description of existing and planned roads, rail lines, (including light rail), bike trails, airports, bus routes serving the project vicinity, pipelines, and canals in the project area affected by or serving the proposed facility. For each road identified, include the following information, where applicable:	Figure 5.10-2	Yes	
Appendix B (g) (5) (C) (i)	Road classification and design capacity;	Figure 5.10-2 AFC pg.5.10-5 through 7 Sec. 5.10.1.2	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Traffic and Transportation
 Project Manager: Rod Jones

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 Technical Senior: David Flores

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (5) (C) (ii)	Current daily average and peak traffic counts;	Appendix U AFC pg. 5.10-9 & 10, Sec. 5.10.2, Table 5.10-2	Yes	
Appendix B (g) (5) (C) (iii)	Current and projected levels of service before project development, during construction, and during project operation;	AFC pg. 5.10-10 Table 5.10-2, 6, 7, 8, 9 Figure 5.10-5 through 8	Yes	
Appendix B (g) (5) (C) (iv)	Weight and load limitations;	AFC pg. 5.10-15 Sec. 5.10.2.5	Yes	
Appendix B (g) (5) (C) (v)	Estimated percentage of current traffic flows for passenger vehicles and trucks; and	AFC pg. 5.10-5 & 6 Sec. 5.10.1.2, AFC pg. 5.10-9, Sec. 5.10.1.8, Figure 5.10-3	Yes	
Appendix B (g) (5) (C) (vi)	An identification of any road features affecting public safety.	Figure 5.10-2 AFC pg.5.10-7 Sec. 5.10.1.6	Yes	
Appendix B (g) (5) (D)	An assessment of the construction and operation impacts of the proposed project on the transportation facilities identified in subsection (g)(5)(C). Also include anticipated project-specific traffic, estimated changes to daily average and peak traffic counts, levels of service, and traffic/truck mix, and the impact of construction of any facilities identified in subsection (g)(5)(C).	APPENDIX U AFC pg. 5.10-15 through 21 Table 5.10-6 through 9	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Traffic and Transportation
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 12, 2009
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 Technical Senior: David Flores

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (5) (E)	A discussion of project-related hazardous materials to be transported to or from the project during construction and operation of the project, including the types, estimated quantities, estimated number of trips, anticipated routes, means of transportation, and any transportation hazards associated with such transport.	AFC pg. 5.10-28 Sec. 5.10.5.2 Sec. 5.12 Figure 5.12-12	Yes	
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	AFC pg. 5.10-24 through 31 Sec. 5.10.5 Table 5.10-10	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	AFC pg. 5.10-32 Sec. 5.10.6 Table 5.10-11	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Traffic and Transportation
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 12, 2009
 Technical Staff: David Flores
 Technical Senior: David Flores

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	AFC pg. 5.10-32 Sec. 5.10.6 Table 5.10-11	Yes	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	AFC pg. 5.10-32 & 33 Sec. 5.10.7 Table 5.10-12	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Trans Line Safety & Nuisance
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 19, 2009
 Technical Staff: Obed Odoemelam
 Technical Senior: Matt Layton

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Section 2.0, pages, 2-4 and 2-17. Section 4.0, pages 4-1 through 4-6.	Yes	
Appendix B (g) (18) (A)	The locations and a description of the existing switchyards and overhead and underground transmission lines that would be affected by the proposed project.	Section 4.0, pages 4-1 and 4-2.	Yes	
Appendix B (g) (18) (B)	An estimate of the existing electric and magnetic fields from the facilities listed in (A) above and the future electric and magnetic fields that would be created by the proposed project, calculated at the property boundary of the site and at the edge of the rights of way for any transmission line. Also provide an estimate of the radio and television interference that could result from the project.	Section 4.0, page 4-10 through 4-13.	Yes	
Appendix B (g) (18) (C)	Specific measures proposed to mitigate identified impacts, including a description of measures proposed to eliminate or reduce radio and television interference, and all measures taken to reduce electric and magnetic field levels.	Section 4.0, pages 4-3 through 4-6.	Yes	

Adequacy Issue: Adequate X Inadequate _____
 Technical Area: Trans Line Safety & Nuisance
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 19, 2009
 Technical Staff: Obed Odoemelam
 Technical Senior: Matt Layton

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Section 4.0, pages-4-15 through 4-17.	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Section 4.0, page 4-18.	Yes	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Section 4.0, page 4-18.	Yes	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Section 4, page 4-13.	Yes	

Adequacy Issue: Adequate _____ Inadequate X
 Technical Area: Transmission System Design
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 3, 2009
 Technical Staff: Sudath Arachchige
 Technical Senior: Mark Hesters

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (h) (2) (A)	A discussion of the need for the additional electric transmission lines, substations, or other equipment, the basis for selecting principal points of junction with the existing electric transmission system, and the capacity and voltage levels of the proposed lines, along with the basis for selection of the capacity and voltage levels.	Section 2.1 Project description Pages 2-1 to 2-4 Section 2.1.9.1 Electricity and Transmission Line Section 2.3.4 Major Electrical Equipment and System Figure 2-19 to 2-22 Electrical one line diagram Appendix A- Transmission Network Upgrade Appendix B4- Electrical Engineering Design Criteria	Yes	

Adequacy Issue: Adequate _____ Inadequate X
 Technical Area: Transmission System Design
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 3, 2009
 Technical Staff: Sudath Arachchige
 Technical Senior: Mark Hesters

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (h) (2) (B)	A discussion of the extent to which the proposed electric transmission facilities have been designed, planned, and routed to meet the transmission requirements created by additional generating facilities planned by the applicant or any other entity.	Section 2.1 Project description Pages 2-1 to 2-4 Section 2.1.9.1 Electricity and Transmission line Section 2.3.4 Major Electrical Equipment and System Figure 2-19 to 2-22 Electrical one line diagram Section 4.1 to 4.8 Route, Structure , Conductor and Insulator selection Figure 4.2-1,4.3-1,4.3.2 230kV Transmission Line Routing details and 230kV Transmission Line Structures	Yes	

Adequacy Issue: Adequate _____ Inadequate X
 Technical Area: Transmission System Design
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 3, 2009
 Technical Staff: Sudath Arachchige
 Technical Senior: Mark Hesters

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (b) (2) (C)	A detailed description of the design, construction, and operation of any electric transmission facilities, such as power lines, substations, switchyards, or other transmission equipment, which will be constructed or modified to transmit electrical power from the proposed power plant to the load centers to be served by the facility. Such description shall include the width of rights of way and the physical and electrical characteristics of electrical transmission facilities such as towers, conductors, and insulators.	Section 2.1 Project description Pages 2-1 to 2-4 Section 2.1.9.1 Electricity and Transmission Line Section 2.3.4 Major Electrical Equipment and System Figure 2-19 to 2-22 Electrical One line diagram Appendix B4- Electrical Engineering Design Criteria	No	<ol style="list-style-type: none"> 1. Please provide a one-line diagram for the PG&E Midway Substation after the interconnection of the project. Show proposed bay arrangement of the equipments with ratings such as breakers, disconnect switches and relays, etc. which are required to interconnect the project. 2. Please provide the conductor type and the current carrying capacity of the proposed 230kV N#1 and N#2 transmission lines which will be utilized to interconnect the plant to the PG&E Midway substation.

Adequacy Issue: Adequate _____ Inadequate X
 Technical Area: Transmission System Design
 Project Manager: Rod Jones

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SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (b) (2) (D)	A description of how the route and additional transmission facilities were selected, and the consideration given to engineering constraints, environmental impacts, resource conveyance constraints, and electric transmission constraints.	Figure 2-19 to 2-22 Electrical one line diagram Section 4.1 to 4.8 Route, Structure , Conductor and Insulator selection Figure 4-1,4-2,4-3 230kV Transmission Line routing details and 230kV Transmission Line Structures	Yes	

Adequacy Issue: Adequate _____ Inadequate X
 Technical Area: Transmission System Design
 Project Manager: Rod Jones

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SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (b) (2) (E)	<p>A completed System Impact Study or signed System Impact Study Agreement with the California Independent System Operator and proof of payment. When not connecting to the California Independent System Operator controlled grid, provide the executed System Impact Study agreement and proof of payment to the interconnecting utility.</p> <p>If the interconnection and operation of the proposed project will likely impact an transmission system that is not controlled by the interconnecting utility (or California Independent System Operator), provide evidence of a System Impact Study or agreement and proof of payment (when applicable) with/to the impacted transmission owner or provide evidence that there are no system impacts requiring mitigation.</p>	Appendix A	No	<p>Please provide a System Impact Study. The Study should analyze the system impact with and without the project during peak and off-peak system conditions, which will demonstrate conformance or non-conformance with the utility reliability and planning criteria with the following provisions:</p> <ol style="list-style-type: none"> Identify major assumptions in the base cases including imports to the system, major generation and load changes in the system and queue generation. Analyze system for N-0, important N-1 and critical N-2 contingency conditions and provide a list of criteria violations in a table showing the loadings before and after adding the new generation. <p>Analyze the PG&E system for Short Circuit currents with and without the Hydrogen Energy Plant at strategic buses for three-phase and single line to ground faults. Submit the following along with a summary of the results.</p> <ol style="list-style-type: none"> Analyze system for Transient Stability and Post-transient voltage conditions under critical N-1 and N-2 contingencies, and provide related plots, switching data and a list for voltage violations in the studies .Provide a list of contingencies evaluated for each study. List mitigation measures considered (required) and those selected (optional- Data Requests will follow) for all criteria violations. Provide electronic copies of *.sav and *.drw PSLF files. Provide power flow diagrams (MW, % loading & P. U. voltage) for base cases with and without the project. Power flow diagrams must also be provided for all N-0, N-1 and N-2 studies where overloads or voltage violations appear. <p>Or</p> <p>Please provide a signed System Impact Study Agreement with the California Independent System Operator.</p>

Adequacy Issue: Adequate _____ Inadequate X
 Technical Area: Transmission System Design
 Project Manager: Rod Jones

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SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Section 4.12 Pages 4.14 and 4.17	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 4-12,4-13,4-14,4-15,4-16 and 4-17 Pages 4-14 to 4-17	Yes	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Table 4-18 Page 4-18	Yes	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.		N/A	

Adequacy Issue: Adequate Inadequate
 Technical Area: Visual Resources
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
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 Technical Senior: Amanda Stennick

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Pg. 5.11-4 through 5.11-6, section 5.11.1.1. Pg. 5.11-21 through 39, section 5.11.2.2. Pg. 5.11-38 through 5.11-41, section 5.11.2.2 through 5.11.4.2	Yes	
Appendix B (g) (6) (A)	Descriptions of the existing visual setting of the vicinity of the proposed project site and the proposed routes for any project-related linear facilities. Include:	Pg. 5.11-1 through 5.11-6, section 5.11	Yes	
Appendix B (g) (6) (A) (i)	Topographic maps at a scale of 1:24,000 that depict directions from which the project would be seen, the view areas most sensitive to the potential visual impacts of the project, and the locations where photographs were taken for (g)(6)(C); and	Figure 5.11-1	Yes	
Appendix B (g) (6) (A) (ii)	Description of the existing visual properties of the topography, vegetation, and any modifications to the landscape as a result of human activities, including existing water vapor plumes, above-ground electrical transmission lines, and nighttime lighting levels in the project viewshed.	Pg. 5.11-6 through 5.11-9, section 5.11.1.2	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Visual Resources
 Project Manager: Rod Jones

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SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (6) (B)	An assessment of the visual quality of those areas that would be affected by the proposed project. For projects proposed to be located within the coastal zone, the assessment should also describe how the proposed project would be sited to protect views to and along the ocean and scenic coastal areas, would minimize the alteration of natural land forms, would be visually compatible with the character of surrounding areas.	Pg. 5.11-8 through 5.11-9, section 5.11.1.2. Pg. 5.11-12 through 5.11-13, section 5.11.1.3	Yes	
Appendix B (g) (6) (C)	In consultation with Energy Commission staff, identify: i) any designated scenic roadways or scenic corridors and any visually sensitive areas that would be affected by the proposed project, including recreational and residential areas; and ii) the locations of the key observation points to represent the most critical viewing locations from which to conduct detailed analyses of the visual impacts of the proposed project. Indicate the approximate number of people using each of these sensitive areas and the estimated number of residences with views of the project. Also identify any major public roadways and trails of local importance that would be visually impacted by the project and indicate the types of travelers (e.g., local residents, recreationists, workers, commuters, etc.) and the approximate number of vehicles, bicyclists, and/or hikers per day.	Pg. 5.11-12 through 5.11-13, section 5.11.1.3	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Visual Resources
 Project Manager: Rod Jones

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 Technical Senior: Amanda Stennick

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (6) (D)	A table providing the dimensions (height, length, and width, or diameter) and, proposed color(s), materials, finishes, patterns, and other proposed design characteristics of each major component visible from off the project site, including any project-related electrical transmission line and/or offsite aboveground pipelines and metering stations.	Table 5.11-4, pg. 5.11-23	Yes	

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 Project Manager: Rod Jones

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Revision No. 0 Date June 15, 2009
 Technical Staff: Mark R. Hamblin
 Technical Senior: Amanda Stennick

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (6) (E)	Provide the cooling tower and heat recovery steam generator (HRSG) exhaust design parameters that affect visible plume formation. For the cooling tower, data shall include heat rejection rate, exhaust temperature, exhaust mass flow rate, liquid to gas mass flow ratio, and, if the tower is plume-abated, moisture content (percent by weight) or plume-abated fogging curve(s). The parameters shall account for a range of ambient conditions (temperature and relative humidity) and proposed operating scenarios, such as duct firing and shutting down individual cells. For the heat recovery steam generator exhausts, data shall include moisture content (percent by weight), exhaust mass flow rate, and exhaust temperature. The parameters must correspond to full-load operating conditions at specified ambient conditions, and shall account for proposed operating scenarios, such as power augmentation (i.e., evaporative coolers, inlet foggers, or steam injection) and duct firing, or proposed HRSG visible plume abatement, such as the use of an economizer bypass. For simple-cycle projects, provide analogous data for the exhaust stack(s).	Pg. 5.11-34 through 5.11-38, section 5.11.2.2. Modeling File CD	Yes	

Adequacy Issue: Adequate X Inadequate _____
 Technical Area: Visual Resources
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 15, 2009
 Technical Staff: Mark R. Hamblin
 Technical Senior: Amanda Stennick

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (6) (F)	Provide: i) full-page color photographic reproductions of the existing site, and ii) full-page color simulations of the proposed project at life-size scale when the picture is held 10 inches from the viewer's eyes, including any project-related electrical transmission lines, in the existing setting from each key observation point. If any landscaping is proposed to comply with zoning requirements or to mitigate visual impacts, include the landscaping in simulation(s) representing sensitive area views, depicting the landscaping five years after installation; and estimate the expected time until maturity is reached.	Figures 5.11-15 through 5.11-26	Yes Yes	.
Appendix B (g) (6) (G)	An assessment of the visual impacts of the project, including light, glare, and any modeling of visible plumes. Include a description of the method and identify any computer model used to assess the impacts. Provide an estimate of the expected frequency and dimensions (height, length, and width) of the visible cooling tower and/or exhaust stack plumes. Provide the supporting assumptions, meteorological data, operating parameters, and calculations used.	Pg. 5.11-17 through 5.11-39, sections 5.11.2 and 5.11.2.2	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Visual Resources
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 15, 2009
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SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (6) (H)	If any landscaping is proposed to reduce the visual impacts of the project, provide a conceptual landscaping plan at a 1:40 scale (1"=40'). Include information on the type of plant species proposed, their size, quantity, and spacing at planting, expected heights at 5 years and maturity, and expected growth rates.	Pg. 5.11-38, section 5.11.2.2	Yes	
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Table 5.11-9, pg. 5.11-42 through 5.11-45	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 5.11-10, pg. 5.11-46 through 5.11-47	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Visual Resources
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

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 Technical Staff: Mark R. Hamblin
 Technical Senior: Amanda Stennick

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Table 5.11-10, pg. 5.11-46 through 5.11-47	Yes	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Pg. 5.11-47, section 5.11.7	NA	

Adequacy Issue: Adequate Inadequate
 Technical Area: Waste Management
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 10, 2009
 Technical Staff: Ellie Townsend-Hough
 Technical Senior: Paul Marshall

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (b) (1) (C)	A detailed description of the design, construction and operation of the facilities, specifically including the power generation, cooling, water supply and treatment, waste handling and control, pollution control, fuel handling, and safety, emergency and auxiliary systems, and fuel types and fuel use scenarios; and	Section 1.0 Section 2.0 Section 5.13 page 5.13-1	Yes	
Appendix B (e) (1)	A discussion of how facility closure will be accomplished in the event of premature or unexpected cessation of operations.	Section 3.0 Section 5.13.2.3 page 5.13-15	Yes	
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Page 5.13-3 Section 5.13.1 Page 5.13-4 to 5.13-16 Section 5.13.2 page 5.13-4 Section 5.13.3 page 5.13-16 Section 5.13.4 page 5.13-16	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Waste Management
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 10, 2009
 Technical Staff: Ellie Townsend-Hough
 Technical Senior: Paul Marshall

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (12) (A)	A Phase I Environmental Site Assessment (ESA) for the proposed power plant site using methods prescribed by the American Society for Testing and Materials (ASTM) document entitled "Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process" (Designation: E 1527-93, May 1993), which is incorporated by reference in its entirety; or an equivalent method agreed upon by the applicant and the CEC Staff that provides similar documentation of the potential level and extent of site contamination. The Phase I ESA shall have been completed no earlier than one year prior to the filing of the AFC.	Section 5.13.1.1 page 5.13-3 (plant site only)	Yes	
Appendix B (g) (12) (B)	A description of each waste stream estimated to be generated during project construction and operation, including origin, hazardous or nonhazardous classification pursuant to Title 22, California Code of Regulations, § 66261.20 et seq., chemical composition, estimated annual weight or volume generated, and estimated frequency of generation.	Page 5.13-7 to 5.13-9 Table 5.13-2 Page 5.13-9 to 5.13-15 Table 5.13-3	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Waste Management
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 10, 2009
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 Technical Senior: Paul Marshall

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (12) (C)	A description of all waste disposal sites which may feasibly be used for disposal of project wastes. For each site, include the name, location, classification under Title 23, California Code of Regulations, § 2530 et seq., the daily or annual permitted capacity, daily or annual amounts of waste currently being accepted, the estimated closure date and remaining capacity, and a description of any enforcement action taken by local or state agencies due to waste disposal activities at the site.	Section 5.13.1.2 page 5.13-4 Section 5.13.1.3 page 5.13-4 Table 5.13-1	Yes	
Appendix B (g) (12) (D)	A description of management methods for each waste stream, including methods used to minimize waste generation, length of on- and off-site waste storage, re-use and recycling opportunities, waste treatment methods used, and use of contractors for treatment.	Section 5.13.2.1 page 5.13-7 Table 5.13-2 Section 5.13.2.2 page 5.13-9 Table 5.13-3	Yes	
Appendix B (h) (1) (B)	A discussion of any measures proposed to improve adverse site conditions.	5.13.4 page 5.13-16	Yes	
Appendix B (h) (1) (D) (v)	The waste disposal system and on-site disposal sites;	Section 5.13.2.1 page5.13-7 Section 5.13.2.2 page5.13-9	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Waste Management
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 10, 2009
 Technical Staff: Ellie Townsend-Hough
 Technical Senior: Paul Marshall

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Table 5.13-4	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 5.13-4 Table 5.13-5	Yes	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Table 5.13-4 Table 5.13-5 Table 5.13-6	Yes	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Table 5.13-6	Yes	

Adequacy Issue: Adequate X Inadequate _____
 Technical Area: Water Resources
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 22, 2009
 Technical Staff: Cheryl Closson
 Technical Senior: Paul Marshall

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Pages 2-1 – 78, Section 2.0; Pages 5.14-1 – 29, Section 5.14.	Yes	
Appendix B (g) (14) (A)	All the information required to apply for the following permits, if applicable, including:		Yes	
Appendix B (g) (14) (A) (i)	Waste Discharge Requirements; National Pollutant Discharge Elimination System Permit; and/or a Section 401 Certification or Waiver from the appropriate Regional Water Quality Control Board (RWQCB);	Pages 5.14-25 and 26, Section 5.14.2.4; Figures 2-7, 2-36, and 2-41, Section 2.0; AFC Volume II, Appendix O3, Hydrology Study; Pages 5.2-10, 11, and 68-69, Section 5.2., and Pages 5.13-13 - 14, Section 5.13.	Yes	
Appendix B (g) (14) (A) (ii)	Construction and Industrial Waste Discharge and/or Industrial Pretreatment permits from wastewater treatment agencies;	N/A Project would not discharge to a POTW/sewer system.	Yes	
Appendix B (g) (14) (A) (iii)	Nationwide Permits and/or Section 404 Permits from the U.S. Army Corps of Engineers; and	Pages 5.2-10, 11, and 68-69, Section 5.2.	Yes	
Appendix B (g) (14) (A) (iv)	Underground Injection Control Permit(s) from the U.S. Environmental Protection Agency, California Division of Oil and Gas, and RWQCB.	Pages 8-1 – 7, Section 8.0; and AFC Volume II, Appendix F, Carbon Dioxide (CO ₂) Sequestration.	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Water Resources
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 22, 2009
 Technical Staff: Cheryl Closson
 Technical Senior: Paul Marshall

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (14) (B)	A detailed description of the hydrologic setting of the project. The information shall include a narrative discussion and on maps at a scale of 1:24,000 (or appropriate scale approved by staff), describing the chemical and physical characteristics of the following nearby water bodies that may be affected by the proposed project:	Pages 5.14-3 – 13, Section 5.14.1; and Figure 5.14-1.	Yes	
Appendix B (g) (14) (B) (i)	Ground water bodies and related geologic structures;	Pages 5.14-5 – 13, Section 5.1.4.	Yes	
Appendix B (g) (14) (B) (ii)	Surface water bodies;	Pages 5.14-3 – 4, Section 5.14.1.1.	Yes	
Appendix B (g) (14) (B) (iii)	Water inundation zones, such as the 100-year flood plain and tsunami run-up zones;	Page 5.14-5, Section 5.14.1.3.	Yes	
Appendix B (g) (14) (B) (iv)	Flood control facilities (existing and proposed); and	Page 5.14-5, Section 5.14.1.3.	Yes	
Appendix B (g) (14) (B) (v)	Groundwater wells within ½ mile if the project will include pumping.	Page 5.14-12, Section 5.14.1.4; and Figures 5.14-8 and 5.14-9.	Yes	
Appendix B (g) (14) (C)	A description of the water to be used and discharged by the project. This information shall include:	Pages 5.14-15 – 22, Sections 5.14.1.6, 7, and 8.	Yes	
Appendix B (g) (14) (C) (i)	Source(s) of the primary and back-up water supplies and the rationale for their selection;	Pages 5.14-17 – 20, Section 5.14.1.6; and Pages 6.8 – 14, Section 6.0.	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Water Resources
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

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 Technical Senior: Paul Marshall

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (14) (C) (ii)	The expected physical and chemical characteristics of the source and discharge water(s) including identification of both organic and inorganic constituents before and after any project-related treatment. For source waters with seasonal variation, provide seasonal ranges of the expected physical and chemical characteristics. Provide copies of background material used to create this description (e.g., laboratory analysis);	Pages 5.14-17 – 20 and Tables 5.14-5 and 5.14-6, Section 5.14.1.6.	Yes	
Appendix B (g) (14) (C) (iii)	Average and maximum daily and annual water demand and waste water discharge for both the construction and operation phases of the project;	Pages 5.14-15 – 16 and Table 5.14-4.	Yes	
Appendix B (g) (14) (C) (iv)	A detailed description of all facilities to be used in water conveyance (from primary source to the power plant site), water treatment, and wastewater discharge. Include a water mass balance diagram;	Pages 5.14-19 – 22, Sections 5.14.1.6, 5.14.1.7, and 5.14.1.8, and Figures 5.14-12 and 13.	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Water Resources
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
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Revision No. 0 Date June 22, 2009
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 Technical Senior: Paul Marshall

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (14) (C) (v)	For all water supplies intended for industrial uses to be provided from public or private water purveyors, a letter of intent or will-serve letter indicating that the purveyor is willing to serve the project, has adequate supplies available for the life of the project, and any conditions or restrictions under which water will be provided. In the event that a will-serve letter or letter of intent can not be provided, identify the most likely water purveyor and discuss the necessary assurances from the water purveyor to serve the project;	AFC Volume 2, Appendix O1.	Yes	
Appendix B (g) (14) (C) (vi)	For all water supplied which necessitates transfers and/or exchanges at any point, identify all parties and contracts/agreements involved, the primary source for the transfer and/or exchange water (e.g., surface water, groundwater), and provide the status of all appropriate agencies' approvals for the proposed use, environmental impact analysis on the specific transfers and/or exchanges required to obtain the proposed supplies, a copy of any agency regulations that govern the use of the water, and an explanation of how the project complies with the agency regulation(s);	N/A No water transfers or exchanges are proposed for the project.	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: **Water Resources**
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

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 Technical Senior: Paul Marshall

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (14) (C) (vii)	Provide water mass balance and heat balance diagrams for both average and maximum flows that include all process and/or ancillary water supplies and wastewater streams. Highlight any water conservation measures on the diagram and the amount that they reduce water demand; and	Figures 5.14-12 and 5.14-13, Section 5.14; and Tables 2-11 and 2-12, Pages 2-21 and 22, Section 2.	Yes	

Adequacy Issue: Adequate X Inadequate _____
 Technical Area: Water Resources
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

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 Technical Senior: Paul Marshall

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (14) (C) (viii)	<p>For all projects which have a discharge, provide a copy of the will-serve letter, permit or contract with the public or private entity that will be accepting the wastewater and contact storm water from the project. The letter, permit or contract, if possible, shall identify the discharge volumes and the chemical or physical characteristics under which the wastewater and contact storm water will be accepted.</p> <p>In the event that a will-serve letter, permit, or contract cannot be provided, identify the most likely wastewater/storm water entity and discuss why the applicant was unable to secure the necessary assurances to serve the project's wastewater/storm water needs. Also, discuss the term of the wastewater service to the project, whether the wastewater entity has adequate permit capacity for the volume of wastewater from the project and has adequate permit levels for the chemical/physical characteristics of the project's wastewater and storm water for the life of the project, and any issues or conditions/restrictions the wastewater entity may impose on the project.</p>	<p>N/A</p> <p>Project proposes to use a zero liquid discharge system for process wastewater and contact storm water.</p>	Yes	
Appendix B (g) (14) (D)	Identify all project elements associated with stormwater drainage, including a description of the following:	Pages 2-60 – 61 and Figure 2-36, Section 2.0; Pages 5.14-21 – 22, Section 5.14.1.8.	Yes	

Adequacy Issue: Adequate X Inadequate _____
 Technical Area: Water Resources
 Project Manager: Rod Jones

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 Technical Senior: Paul Marshall

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (14) (D) (i)	Monthly and/or seasonal precipitation and stormwater runoff and drainage patterns for the proposed site and surrounding area that may be affected by the project's construction and operation;	Pages 5.14-3 -5 and Tables 5.14-1 and 2, Sections 5.14.1.1, 2, and 3.	Yes	
Appendix B (g) (14) (D) (ii)	Drainage facilities and the design criteria used for the plant site and ancillary facilities, including but not limited to capacity of designed system, design storm, and estimated runoff;	Pages 2-60 – 61 and Figure 2-36, Section 2.0; Pages 5.14-21 – 22, Section 5.14.1.8; and AFC Volume II, Appendix O3, Hydrology Study.	Yes	
Appendix B (g) (14) (D) (iii)	All assumptions and calculations used to calculate runoff and to estimate changes in flow rates between pre- and post construction; and	AFC Volume II, Appendix O3, Hydrology Study.	Yes	
Appendix B (g) (14) (D) (iv)	A copy of applicable regional and local requirements regulating the drainage systems, and a discussion of how the project's drainage design complies with these requirements.	Pages 5.14-21 and 22, Section 5.14.1.8.	Yes	
Appendix B (g) (14) (E)	An impacts analysis of the proposed project on water resources and a discussion of conformance with water-related LORS and policy. This discussion shall include:	Pages 5.14-22 – 36, Sections 5.14.2 – 5, and Table 5.14-7.	Yes	

Adequacy Issue: Adequate X Inadequate _____
 Technical Area: Water Resources
 Project Manager: Rod Jones

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 Technical Senior: Paul Marshall

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Appendix B (g) (14) (E) (i)	The effects of project demand on the water supply and other users of this source, including, but not limited to, water availability for other uses during construction or after the power plant begins operation, consistency of the water use with applicable RWQCB basin plans or other applicable resource management plans, and any changes in the physical or chemical conditions of existing water supplies as a result of water use by the power plant;	Pages 5.14-22 – 28, Sections 5.14.2 and 3.	Yes	
Appendix B (g) (14) (E) (ii)	If the project will pump groundwater, an estimation of aquifer drawdown based on a computer modeling study shall be conducted by a professional geologist and include the estimated drawdown on neighboring wells within 0.5 mile of the proposed well(s), any effects on the migration of groundwater contaminants, and the likelihood of any changes in existing physical or chemical conditions of groundwater resources shall be provided;	Pages 5.14-23 and 24, Section 5.14.2.2; and AFC Volume II, Appendix O2, Groundwater Model Documentation.	Yes	
Appendix B (g) (14) (iii)	The effects of construction activities and plant operation on water quality and to what extent these effects could be mitigated by best management practices;	Pages 5.14-24 – 29, Sections 5.14.2.3, 5.14.2.4, 5.14.3, and 5.14.4.	Yes	

Adequacy Issue: Adequate X Inadequate _____
 Technical Area: Water Resources
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
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 Technical Senior: Paul Marshall

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (14) (iv)	If not using a zero liquid discharge project design for cooling and process waters, include the effects of the proposed wastewater disposal method on receiving waters, the feasibility of using pre-treatment techniques to reduce impacts, and beneficial uses of the receiving waters. Include an explanation why the zero liquid discharge process is “environmentally undesirable,” or “economically unsound;”	N/A Project proposes to use a zero liquid discharge system for process wastewater.	Yes	
Appendix B (g) (14) (v)	If using fresh water, include a discussion of the cumulative impacts, alternative water supply sources and alternative cooling technologies considered as part of the project design. Include an explanation of why alternative water supplies and alternative cooling are “environmentally undesirable,” or “economically unsound;”	N/A Project proposes to use brackish water for plant cooling and process water needs.	Yes	
Appendix B (g) (14) (vi)	The effects of the project on the 100-year flood plain, flooding potential of adjacent lands or water bodies, or other water inundation zones; and	Pages 5.14-26 – 27, Section 5.14.2.5.	Yes	
Appendix B (g) (14) (vii)	All assumptions, evidence, references, and calculations used in the analysis to assess these effects.	Pages 5.14-22 – 40, Section 5.14.	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Water Resources
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
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 Technical Senior: Paul Marshall

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Table 5.14-7, Pages 5.14-30 – 33.	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 5.14-7 and Pages 5.14-30 – 36, Section 5.14.5.	Yes	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Table 5.14-8, Page 5.14-36, Section 5.14.5.5.	Yes	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Page 5.14-37, Section 5.14.6.	Yes	

Adequacy Issue: Adequate X Inadequate _____
 Technical Area: Worker Safety
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 16, 2009
 Technical Staff: Rick Tyler
 Technical Senior: Rick Tyler

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Section 5.7	Yes	
Appendix B (g) (11) (A)	A description of the safety training programs which will be required for construction and operation personnel.	Section 5.7.2	Yes	
Appendix B (g) (11) (B)	A complete description of the fuel handling system and the fire suppression system.	Section 5.7.2	Yes	
Appendix B (g) (11) (C)	Provide draft outlines of the Construction Health and Safety Program and the Operation Health and Safety Program, as follows: Construction Health and Safety Program: * Injury and Illness Prevention Plan (8 Cal. Code Regs., § 1509); * Fire Protection and Prevention Plan (8 Cal. Code Regs., § 1920); * Personal Protective Equipment Program (8 Cal. Code Regs., §§ 1514-1522) Operation Health and Safety Program: * Injury and Illness Prevention Program (8 Cal. Code Regs., § 3203);	Section 5.7.2 Section 5.7.2 Section 5.7.2 Section 5.7.2	Yes Yes Yes Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Worker Safety
 Project Manager: Rod Jones

DATA ADEQUACY WORKSHEET

Project: Hydrogen Energy California
 Docket: 08-AFC-8

Revision No. 0 Date June 16, 2009
 Technical Staff: Rick Tyler
 Technical Senior: Rick Tyler

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
	* Fire Prevention Plan (8 Cal. Code Regs., § 3221);	Section 5.7.2	Yes	
	* Emergency Action Plan (8 Cal. Code Regs., § 3220);	Section 5.7.2	Yes	
	Personal Protective Equipment Program (8 Cal. Code Regs., §§ 3401-3411).	Section 5.7.2	Yes	
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Table 5.7-8	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 5.17-9	Yes	

Adequacy Issue: Adequate Inadequate
 Technical Area: Worker Safety
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Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Table 5.17-9	Yes	
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Table 5.7-10	Yes	