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Title 20. Public Utilities and Energy
Division 2. State Energy Resources Conservation and Development Commission
Chapter 5. Power Plant Site Certification
Article 5. Small Power Plant Exemptions
and
Appendix B
and
Appendix F

The proposed new language appears as underline (example) and proposed deletions appear as strikeout (~~example~~). Existing language appears as plain text.

**§ 1934. Statement of Purpose [Repealed]**

~~It is the policy of the State Energy Resources Conservation and Development Commission to promote the development of electric energy supply technologies that prudently conserve and economically use energy resources. A major purpose of these regulations is to encourage the use of those technologies by expediting the procedures necessary for the approval and development of alternate sources of electric generation.~~

Note: Authority cited: Section 25218(e), Public Resources Code. Reference: Section 25541, Public Resources Code.

**§ 1936. Scope, Filing, Review and Distribution of Applications for Exemption.**

(a) Any person who proposes to construct a thermal power plant with a generating capacity not exceeding 100 megawatts, or proposes a modification to an existing thermal power plant which will add generating capacity not exceeding 100 megawatts may apply for an exemption from the provisions of Chapter 6 of Division 15 of the Public Resources Code.

(b) Applications for exemption shall be filed as set forth in sections 1208, 1208.1, 1706 and 1707.

(c) The review of the application for exemption shall follow the requirements of the California Environmental Quality Act (Public Resources Code section 21000 et seq.) and the state CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3).

(d) ~~Applications for exemption shall be distributed and comments requested from public agencies and tribal governments as set forth in sections 1713 and 1714.~~

~~(e)~~ An applicant may withdraw an application for exemption ~~as set forth in section 1709.8~~by providing written notice of withdrawal to the executive director. The notice of withdrawal must be authorized and verified in the same manner as the original application, as provided in section 1707. Upon receipt of a properly executed

withdrawal, the executive director shall immediately terminate consideration of the application and close the docket.

Note: Authority cited: Section 25218(e), Public Resources Code. Reference: Section 25541, Public Resources Code.

**§ 1937. Staff as an Independent Party. [Repealed]**

~~In carrying out its duties pursuant to this article, staff shall be an independent party and is not required to petition to intervene.~~

Note: Authority cited: Section 25213, Public Resources Code. Reference: Section 25217(b), Public Resources Code.

**§ 1940. Information Requirements for Applications for Exemption.**

The application for an exemption shall contain all the information specified by Appendix ~~F~~B and meet the general requirements set forth in section 1704(a).

Note: Authority cited: Section 25218(e), Public Resources Code. Reference: Section 25541, Public Resources Code.

**§ 1941. Obtaining Information.**

The executive director or designee may request information from the applicant ~~Information~~ necessary to complete an analysis of the application for an exemption ~~may be obtained by following the requirements of section 1716, except that all requests for information shall be submitted no later than 60 days from the application for exemption's filing date or a later date as approved by the presiding member~~.

Note: Authority cited: Sections 25218(e) and 25541.5, Public Resources Code. Reference: Sections 25210, 25502, 25519(b) and 25541, Public Resources Code; and Section 11181, Government Code.

**§ 1942. ~~Termination of an Application for Exemption.~~ Decision on Application.**

The executive director or designee shall recommend findings to the commission on whether the application meets the requirements of Public Resources Code section 25541.

~~The application for exemption proceeding may be terminated by following the procedures set forth in section 1720.2.~~

Note: Authority cited: Sections 25213 and 25218(e) ~~and 25541.5~~, Public Resources Code. Reference: Sections 25210, 25216.5, ~~25519(b)~~ and 25541, Public Resources Code.

**§ 1943. Presentation of Evidence. [Repealed]**

~~All testimony together with any other relevant documentary evidence, such as any environmental impact documentation or other environmental document prepared by the lead agency, may be offered by any party and shall be filed with the Docket Unit no later than 7 days prior to the hearing at which such testimony is to be offered, or at such other time as ordered by the presiding member.~~

Note: Authority cited: Section 25218(e), Public Resources Code. Reference: Section 25541, Public Resources Code.

### § 1944. Application for Exemption Proceedings and Hearings. [Repealed]

~~(a) A committee shall be appointed pursuant to Section 1204(a) to oversee the proceedings. The presiding member shall set the time and place for hearings.~~

~~(b) Unless otherwise directed by the presiding member, evidentiary hearings on the application shall commence no later than 100 days after the filing of the application.~~

Note: Authority cited: Section 25218(e), Public Resources Code. Reference: Section 25541, Public Resources Code.

### § 1945. Proposed and Final Decision. [Repealed]

~~(a) After the hearings conducted pursuant to Section 1944 of these regulations, the committee shall prepare and file a proposed decision on the application.~~

~~(b) After publication of the proposed decision, a hearing shall be held before the commission. The final decision shall be issued by the commission within 135 days after the filing of the application or at such later time as deemed necessary to permit full and fair examination of the issues.~~

Note: Authority cited: Section 25218(e), Public Resources Code. Reference: Section 25541, Public Resources Code.

### § 1946. Content of Decision. [Repealed]

~~The decision on the application shall either approve or disapprove the application and shall include a statement of reasons supporting the decision. The decision shall include, in the affirmative or negative, the findings required by Public Resources Code Section 25541.~~

Note: Authority cited: Section 25218(e), Public Resources Code. Reference: Section 25541, Public Resources Code.

### § 1947. Modifications of Deadlines. [Repealed]

~~The applicant may at any time stipulate to a more lengthy time schedule than is provided in these regulations in order to permit full and fair exploration. Such stipulation shall be made in writing to the committee.~~

Note: Authority cited: Section 25218(e), Public Resources Code. Reference: Section 25541, Public Resources Code.

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## Appendix B

## Information Requirements for an Application for Certification (AFC) or Small Power Plant Exemption (SPPE)

### (a) Executive Summary

### (1) Project Overview

(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.

(B) Identification of the location of the proposed site and related facilities by section, township, range, county, and assessor's parcel numbers.

(C) A description of and maps depicting the region, the vicinity, and the site and its immediate surroundings.

(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.

(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. Provide the direct mailing addresses for the owners and occupants of properties contiguous to the proposed power plant, related facilities, transmission lines, or other linear facilities as shown on the latest equalized assessment roll. Provide a map showing the parcels in the notice area.

**(2) Project Schedule:** Proposed dates of initiation and completion of construction, initial start-up, and full-scale operation of the proposed facilities.

### (3) Project Ownership

(A) A list of all owners and operators of the site(s), the power plant facilities, and, if applicable, the 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.

(B) A list of all owners and operators of the proposed electric transmission facilities.

(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).

**(b) Project Description**

(1) In a section entitled, "Generation Facility Description, Design, and Operation" provide the following information:

(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;

(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);

(C) A detailed description of the design, methods of construction (include depth of excavations and other ground disturbances) 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

(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.

(2) In a section entitled, "Transmission Lines Description, Design, and Operation" provide the following information:

(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);

(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;

(C) A detailed description of the design, construction and operation of any electric transmission facilities, such as powerlines, 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.

(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

(E) 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.

If the interconnection and operation of the proposed project will likely impact a 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.

(3) Applications for geothermal facilities shall contain the following additional information:

(A) Maps at a scale of 1:24,000 (or appropriate map scale agreed to by staff) showing the location of the geothermal leaseholds, along with a description by section, township, range, county, and assessor's parcel numbers of the leaseholds;

(B) Full-page color photographic reproductions of the geothermal leaseholds;

(C) A description of the process by which the geothermal leasehold was selected and the consideration given to engineering constraints, site geology, environmental impacts, water, steam, waste and fuel constraints, electric transmission constraints, and any other factors considered by the applicant. Include references to any environmental documents which address steam field development;

(D) A detailed description of the type, quality, and characteristics of the geothermal resource, including pressure and temperature flow rates, constituents and concentrations of non-condensable gases, and constituent concentrations of dissolved solids, and descriptions and concentrations of any substances potentially harmful to public health and safety or to the environment;

(E) Proposed locations of production and re-injection wells for the project. Include the applicant's assessment of geothermal resource adequacy, including the production history of those wells within the leaseholds dedicated to the project, including pressure decline curves as available; and

(F) A discussion of the potential impacts on the temperature, mineral content, and rate of flow of thermal springs affected by the project.

**(c) Reserved**

**(d) Information for Projects Which Completed the NOI Process**

(1) A copy of any study or analysis required by the terms of the Commission's Final Decision on the NOI, and a brief summary of the results of the study or analysis.

(2) Updates of any significant information which has changed since the Commission's Final Decision on the NOI.

**(e) Facility Closure**

(1) A discussion of how facility closure will be accomplished in the event of premature or unexpected cessation of operations.

**(f) Alternatives**

(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.

(2) An evaluation of the comparative engineering, economic, and environmental merits of the alternatives discussed in subsection (f)(1).

**(g) Environmental Information**

(1) General Information: For each technical area listed below, 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. Describe the approach, list or projection or a combination, used to develop the cumulative setting for the proposed project. Include any reference materials used such as general plan or other adopted local, regional, or statewide plan. Additional requirements specific to each technical area are listed below.

**(2) Cultural Resources and Tribal Cultural Resources**

Cultural resources and tribal cultural resources together comprise objects, buildings, structures, sites, features, areas, places, records, sacred places, cultural landscapes, or manuscripts, all of which may have significance according to criteria outlined in sections 21074 and 21084.2 of the Public Resources Code.

(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. This regional

summary must address the potential for buried cultural resources and tribal cultural resources to occur in the project area. The summary, together with literature search results, must inform the field methods employed for identifying cultural resources and tribal cultural resources in the project area.

(B) The results of a literature search to identify cultural resources and tribal cultural resources within an area not less than a 1-mile radius around the project site and not less that than one-quarter (0.25) mile on each side of the linear facilities. Identify any cultural resources or tribal 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 and tribal 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.

Copies of California Department of Parks and Recreation (DPR) 523 forms (Title 14 CCR §4853) shall be provided for all cultural resources and tribal 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' 5-minute quadrangle map of the literature search area delineating the areas of all past surveys and noting the California Historical Resources Information System (CHRIS) identifying number shall be provided. Copies also shall be provided of all technical reports whose survey coverage is wholly or partly within 0.25 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.

(C) The results of new cultural resource and tribal cultural resource 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 and tribal 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.

New pedestrian archaeological surveys shall be conducted inclusive of the project site and project linear facility routes, extending to no less than 200' feet around the project site, substations and staging areas, and to no less than 50' feet 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 0.5 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.

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 in its entirety, shall be separately provided and submitted (under confidential cover if archaeological ~~site~~ resource or other sensitive resource locations are included). Information included in the technical report shall also be provided in the ~~Application for Certification~~ application, except that confidential information (archaeological sites, other sensitive resources, 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:

(i) The summary from Appendix B (g)(2)(A) and the literature search results from Appendix B (g)(2)(B).

(ii) The survey procedures and methodology used to identify cultural and tribal cultural resources and a discussion of the cultural and tribal cultural resources identified by the survey.

(iii) Copies of all new and updated DPR 523(A) forms. If a cultural resource or tribal cultural resource may be impacted by the project, also include the appropriate DPR 523 detail form for each such resource.

(iv) A map at a scale of 1:24,000 (U.S. Geological Survey topographic quadrangle) depicting the locations of all previously known and newly identified cultural and tribal cultural resources compiled through the research required by Appendix B (g)(2)(B) and Appendix B (g)(2)(C) (ii).

(v) The names and qualifications of the cultural resources specialists who contributed to and were responsible for literature searches, surveys, and preparation of the technical report.

(D)(1)~~Provide a~~ A copy of ~~your~~ the applicant's 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.~~ (2) ~~Provide a~~ A copy of all correspondence sent to Native American individuals and groups listed by the NAHC and copies of all responses. Notification to Native Americans shall include a project description and map. ~~Provide a~~ (3) A written summary of any oral responses.

(E) Include in the discussion of proposed mitigation measures required by subdivision (g)(1):

(i) A discussion of measures proposed to mitigate project impacts to known cultural and tribal cultural resources;

(ii) A set of contingency measures proposed to mitigate potential impacts to previously unknown cultural and tribal cultural resources and any unanticipated impacts to known cultural or tribal cultural resources;

(iii) Educational programs to enhance employee awareness during construction and operation to protect cultural and tribal cultural resources.

**(3) Land Use**

(A) A discussion of existing land uses, general plan land use designations, and current zoning districts (including any overlay districts) 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:

(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;

(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.

(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

(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.

(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 and policies 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.

(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.

(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:

(i) Land classifications as shown on the Farmland Mapping and Monitoring Program's Important Farmland maps, ~~C~~ crop types, irrigation systems, and any special cultivation practices; and

(ii) Whether ~~farmland~~ agricultural land affected by the project was ~~is~~ historically classified Farmland ~~prime, of statewide importance, or unique~~ as defined by the California Department of Conservation (Prime Farmland, Farmland of Statewide Importance, or Unique Farmland).

(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.

**(4) Noise**

(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.

(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).

(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.

(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.

(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.

(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.

**(5) Traffic and Transportation**

(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.

(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),~~ four miles of an airport, a planned or proposed airport runway, or an airport runway under construction, discuss the project's compliance with the applicable sections of the current Federal Aviation Regulation Part 77 - ~~Objects Affecting Navigable Airspace~~ Safe, Efficient Use, and Preservation of the Navigable Airspace, specifically any potential to obstruct or impede air navigation generated by the project ~~at~~ during construction or operation; such as, a thermal plume, a visible water vapor plume, glare, electrical interference, or surface structure height. The discussion should include:

(i) A~~a~~ map at a scale of 1:24,000 that displays the airport or airstrip runway configuration, the airport influence area including all safety zones, and the proposed power plant site and related facilities;~~.~~

(ii) A thermal plume analysis that describes the plume's velocity;

(iii) A discussion of the project's conformance with applicable Airport Land Use Compatibility Plan policies; and

(iv) Copies of FAA Form 7460-1, Notice of Proposed Construction or Alteration, that were submitted or approved for any project component requiring notice.

(C) An evaluation of the project's potential impacts related to vehicle miles traveled (VMT) that may include:

(i) The local jurisdiction's thresholds of significance;

(ii) Methodologies (such as local VMT Evaluation Tool);

(iii) VMT heat maps; and

(iv) Transportation demand management plans and any documents supporting the project applicant's CEQA determination.

(DC) 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:

(i) Road classification and design capacity;

(ii) Current daily average and peak traffic counts;

(iii) Current and projected levels of service before project development, during construction, and during project operation;

(iv) Weight and load limitations;

(v) Estimated percentage of current traffic flows for passenger vehicles and trucks; and

(vi) An identification of any road features affecting public safety.

(ED) An assessment of the construction and operation impacts of the proposed project on the transportation facilities identified in subsection (g)(5)(DC). 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)(DC). Include:

(i) Estimated one-way trip lengths for workers, deliveries, and truck haul trips generated by the construction of the project.

(ii) Description of public roadways and intersections temporarily or permanently altered by construction and operation including the duration of activities.

(FE) 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.

**(6) Visual Resources**

~~(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:~~

~~(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~~

(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.

(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.

(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.

(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.

(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).

~~(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.~~

~~(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.~~

~~(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.~~

(A) Provide a description of the existing landscape (built or natural) where the proposed project is to be sited and the vicinity, and along the proposed routes for any above-ground project-related linear facilities. Include:

(i) Show on a map(s) (pinpoint) any designated or recognized scenic vista and scenic resource within a five-mile radius of the project and one-mile radius of a project-related linear facility. Include:

a. Any designated scenic vista and scenic resource in an adopted federal, state, county, or city government planning document, plan, or regulation.

b. A natural feature or object that is a part of the land, such as a geologic distinguishing characteristic (e.g., laccolith), geomorphologic feature (e.g., gorge), or other terrain feature (e.g., a water body, open space, or tree recognized for its aesthetic, botanical and ecological value, or age, rarity, and size).

c. A man-made feature or object that embodies elements of architecture or engineering design, detail, materials or craftsmanship that represent a significant innovation or is unique, such as the California State Capitol, Golden Gate Bridge, or Hollywood Sign.

d. Explain does the project eliminate or obstruct the public view (the visible area from a location where the public has a legal and physical right of access to real property) of a scenic vista and scenic resource? Is the project situated so that it changes the visual aspect of a scenic resource by being different or in sharp contrast?

(ii) Describe the existing nighttime lighting on the project site and in the vicinity.

(B) In accordance with CEQA Guidelines Appendix G Environmental Checklist Form, I. Aesthetics c), if the project is to be constructed within an “urbanized area” as defined in Public Resources Code section 21071, explain the project’s conformance with the city/county General Plan, and city municipal code or county government code (e.g., zoning) governing scenic quality.

(C) In accordance with CEQA Guidelines Appendix G Environmental Checklist Form, I. Aesthetics c), if the project is to be constructed within a non-urbanized area provide the following:

(i) Show on a map the pinpoint location of the key observation point(s) (KOP) for the project. A KOP is a fixed position in a publicly accessible location where a public view of the project is analyzed and/or evaluated in the landscape. Objects of aesthetic significance are the primary focus in the KOP selection. A California court has said you may look to local government planning thresholds for guidance when defining the visual impact standard for the purpose of CEQA (e.g., city/county General Plan, zoning)

(ii) If an object of aesthetic significance is not in the vicinity of the project, a KOP is to be selected based on importance to stakeholders, visibility, direct public selection, worst-case scenario, or other reason. Explain the reason the KOP was chosen. At a minimum two KOPs are to be selected.

(iii) Provide a color photograph(s) showing an actual line of sight at eye level during daytime and clear weather from the KOP to the project site prior to any alteration (existing condition). The photographer at the KOP is to use a “normal" lens. For each photograph provide the following information: camera type, lens focal length, viewing angle; date and time the photograph was taken, and the distance to the project site.

(iv) Using the photograph from the KOP provide a spatially accurate and realistically photo manipulated computer simulated image of the project (photo-realistic simulation) one-year after completion of construction (existing condition plus proposed project).

(v) The KOP photograph and the photo-realistic simulation are to be capable of 11” x 17” color print by a printer capable at a minimum 600 dots per inch output resolution.

(vi) Provide a copy of the KOP photograph(s) and photo-realistic simulation(s) in an electronic file.

(D) Show and describe the project in the landscape. Include:

(i) Provide an 8.5” x 11” sized scaled elevation(s) of project buildings, structures, and major equipment; a table listing their dimensions (height, length, width, diameter).

(ii) Provide a table and description of the exterior surface treatments and finishes for the buildings, structures, major equipment (e.g., colors, flat and/or textured finishes), and structural materials.

(iii) Describe project specific architectural treatment or design technique mitigation unique to the project's siting at the location (e.g., camouflage, disguise, screen), if any.

(iv) Provide a project specific conceptual landscape design plan that conforms with the city municipal code or county government code. Include:

a. Provide the type of plant and/or tree species, location, quantity, size, spacing at installation/planting, expected growth rates, and expected heights at one-year, five years, and maturity. Specify irrigation system components and show their locations.

b. Provide the calculated total pervious surface amount for the project site include surface to be replaced, new surface, and the total area to be landscaped.

(v) Provide a project specific conceptual outdoor lighting control and management plan (lighting plan) and explain the control of reflectance from exterior surfaces offsite that conform with the city municipal code or county government code. Include:

a. Provide a list of the project-specific luminaires, identify the design (e.g., full cutoff, semi cutoff, noncut off) and indicate if the luminaires have the International Dark-Sky Association Fixture Seal of Approval to the extent feasible consistent with safety and security considerations. Show the project-specific luminaires locations on a diagram or elevation.

b. Describe reflectance, the intensity of the specular reflectance from the exterior surface of the project's large buildings, structures, and major equipment offsite to the surrounding area (e.g., the light reflected from the shiny surface). The reflectance of the object–how bright it shines–depends on the intensity of the light striking it and the materials from which it is made (e.g., glass, reinforced concrete, structural steel).

(E) If the project is to use a cooling tower emitting a publicly visible water vapor plume (visible plume) in the atmosphere provide the following information:

(i) Provide the cooling tower's number of fan cells, the fan cell stack height and diameter, the exhaust mass flow rate, heat rejection rate, and exhaust temperature.

(ii) Provide fogging curves specific to the cooling tower's exhaust discharge for at least three ambient air temperature conditions (a low, average, and high temperature condition).

(iii) Explain if the project's forecasted visible plume emitted in the atmosphere by the cooling tower would eliminate or obstruct an existing public view of a designate or recognized scenic vista, scenic resource, and the existing visual character or quality of public views of the site and its surroundings.

**(7) Socioeconomics**

(A) A description of the socioeconomic circumstances of the vicinity and region affected by construction and operation of the project. Include:

(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;

(ii) The social characteristics, including population and demographic and community trends;

(iii) Existing and projected unemployment rates;

(iv) Availability of skilled workers by ~~craft~~ occupation required for construction and operation of the project;

(v) Availability of temporary and permanent housing and current vacancy rate; and

(vi) Capacities, service standards, 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, parks and recreation facilities, libraries, and other public facilities. 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 construction schedule.

(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:

(i) An estimate of the number of workers to be employed each month by ~~craft~~ occupation during construction, and for operations, an estimate of the number of permanent operations workers during a year;

(ii) An estimate of the percentage of non-local workers who will relocate to the project area to work ~~on~~ during the project construction and operation;

(iii) An estimate of the potential population increase caused directly and indirectly by the project;

(iv) The potential impact of population increase on housing during the construction and operations phases;

(v) The potential impacts, including additional costs and ability to meet local service standards, 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 protection, fire protection, ~~and~~ emergency services, parks and recreation facilities, libraries, and other public facilities. 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;

(vi) An estimate of applicable school impact fees;

(vii) An estimate of the total construction payroll and separate estimates of the total operation payroll for permanent and short-term (contract) operations employees;

(viii) An estimate of the expenditures for locally purchased materials for the construction and operation phases of the project; ~~and~~

(ix) An estimate of the capital cost (plant and equipment) of the project~~.~~;

(x) An estimate of sales taxes generated during construction and separately during an operational year of the project;~~.~~

(xi) An estimate of property taxes generated during an operational year of the project~~.~~;

(xii) The expected direct, indirect, and induced income and employment effects due to construction and~~,~~ operation~~, and maintenance~~ of the project; and~~.~~

(xiii) A discussion of impacts to environmental justice populations by technical areas and whether any impacts would disproportionately affect the environmental justice populations.

**(8) Air Quality**

(A) The information necessary for the air pollution control district where the project is located to complete a Determination of Compliance.

(B) The heating value and chemical characteristics of the proposed fuels, the stack height and diameter, the ~~exhause~~ exhaust velocity and temperature, the heat rate and the expected capacity factor of the proposed facility.

(C) A description of the control technologies proposed to limit the emission of criteria pollutants.

(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.

(E) The emission rates of criteria pollutants and greenhouse gases (CO2, CH4, N2O, and SF6) from the stack, cooling towers, fuels and materials handling processes, delivery and storage systems, and from all on-site secondary emission sources.

(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.

(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,

(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.

(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 district.

(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.

(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.

(I) An evaluation of the project's direct and cumulative air quality impacts, consisting of the following:

(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 (PM10) emissions from grading, excavation and site disturbance, as well as the combustion emissions [nitrogen oxides (NOx), sulfur dioxide (SO2), carbon monoxide (CO), and particulate matter less than 10 microns in diameter (PM10) and particulate matter less than 2.5 microns in diameter (PM2.5)] from construction-related equipment;

(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 (NOx, SO2, CO and PM10 and PM2.5) 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; and

(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.

(iv) an air dispersion modeling analyses of the impacts of the initial commissioning phase emissions on state and federal ambient air quality standards for NOx, SO2, CO, PM10 and PM2.5.

(J) If an emission offset strategy is proposed to mitigate the project's impacts under subsection (g)(1), provide the following information:

(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

(ii) Potential offset sources, including location, and quantity of emission reductions.

(K) a detailed description of the mitigation, if any, which an applicant may propose, for all project 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.

**(9) Public Health**

(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) (Health and Safety Code §§ 44360-44366) or its successor and Approved Risk Assessment Health Values. These values shall include the cancer potency values and noncancer reference exposure levels approved by the Office of Environmental Health Hazard Assessment (OEHHA Guidelines, Cal-EPA 2005).

(B) A listing of the input data and output results, in both electronic and print formats, used to prepare the HARP health risk assessment.

(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.

(D) A map showing sensitive receptors within the area exposed to the substances identified in subsection (g)(9)(A).

(E) For purposes of this section, the following definitions apply:

(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.

(ii) An acute exposure is one which occurs over a time period of less than or equal to one (1) hour.

(iii) A chronic exposure is one which is greater than twelve (12) percent of a lifetime of seventy (70) years.

**(10) Hazardous Materials Handling**

(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.

(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.

(C) A discussion of the storage and handling system for each hazardous material used or stored at the site.

(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 substituted after the ~~AFC~~ application is complete.

(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.

(F) A discussion of measures proposed to reduce the risk of any release of hazardous materials.

(G) A discussion of the fire and explosion risks associated with the project.

**(11) Worker Safety**

(A) A description of the safety training programs which will be required for construction and operation personnel.

(B) A complete description of the fuel handling system and the fire suppression system.

(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);

* Fire Prevention Plan (8 Cal. Code Regs., § 3221);

* Emergency Action Plan (8 Cal. Code Regs., § 3220);

* Personal Protective Equipment Program (8 Cal. Code Regs., §§ 3401-3411).

**(12) Waste Management**

(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~~ application.

(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.

(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.

(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.

**(13) Biological Resources**

(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. In the discussion include a list of the USGS topographic quadrangle(s) utilized to search records from the California Natural Diversity Database (CNDDB), and a citation which includes the date the CNDDB was accessed. Include a map at a scale of 1:~~100~~6,000 (~~or other suitable scale~~ under confidential cover) and at 1:350,000 (for public) 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. Label the biological resources and survey areas as well as the project facilities. Sensitive biological resources include the following:

(i) species listed under state or federal Endangered Species Acts;

~~(ii) resources defined in sections 1201(d) and (u) of Title 20 of the California Code of Regulations;~~

(ii) species receiving consideration during environmental review under CEQA Guidelines Section 15380;

(iii) species identified as state Fully Protected;

(iv) species covered by Migratory Bird Treaty Act;

(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~~ CNDDB, California Fish and Game Code, Title 14 of the California Code of Regulations, or where applicable, in Local Coastal Programs or in relevant decisions of the California Coastal Commission or other responsible agency; ~~and~~

(vi) locally significant species that are rare or uncommon in a local context such as county or region or is so designated in local or regional plans, policies, or ordinances;

(vii) plant species listed as rare under the California Native Plant Protection Act;

(viii) ~~fish and wildlife species that have commercial and/or recreational value~~ established native resident or migratory wildlife corridors or wildlife nursery sites.

(B) Include a list of the species and habitat(s) 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:

(i) Detailed maps at a scale of 1:6,000 or color aerial photographs taken at a recommended scale of ~~1 inch~~1-inch equals 500 feet (1:6,000) with a 30 percent overlap (provided under confidential cover) and 1:350,000 (for public viewing) that show the proposed project site and related facilities, biological resources including, but not limited to, those found during project-related field surveys and in records from the ~~California Natural Diversity Database~~ CNDDB, and the associated areas where biological surveys were conducted. Label the biological resources and survey areas as well as the project facilities.

(ii) ~~A depiction of the extent of the thermal plume at the surface of the water if cooling water is proposed to be discharged to a water source. Provide the location for the intake and discharge structures on an aerial photograph(s) or detailed maps. Water sources~~

~~include, but are not limited to, waterways, lakes, impoundments, oceans, bays, rivers, and estuaries.~~ Provide an aerial map of the isopleth graphic depicting modeled nitrogen deposition rates. The geographical extent of the nitrogen deposition map(s) should include the entire plume and a radius of 6 (six) miles from the source, specifically identifying acres of sensitive habitat(s) within each isopleth Modeling parameters and files shall be provided.

(iii) An aerial photo map depicting ~~or~~ state and federal jurisdictional features including state waters and wetlands ~~delineation~~ delineated on maps at a scale of (1:2,400) showing any potential jurisdictional ~~and non-jurisdictional wetlands~~ features delineated out to 250 feet from the edge of disturbance if jurisdictional features ~~wetlands~~ occur within 250 feet of the project site and/or related facilities that would be included with ~~the~~ a US Army Corps of Engineers Section 404 Permit application, Regional Water Quality Control Board (RWQCB) application, or California Department of Fish and Wildlife Section 1600 et seq. permit requirements. For projects proposed to be located within the coastal zone, also provide aerial photographs or maps as described above that identify wetlands as defined by the Coastal Act and under the jurisdiction of the California Coastal Commission.

(iv) Provide Geographic Information System (GIS) data (shape and/or geodatabase files) for all data mapped for biological resources.

(C) A discussion of the biological resources at the proposed project site and related facilities. Related facilities include, but are not limited to, laydown and parking areas, gas and water supply pipelines, transmission lines, and roads. The discussion shall address the distribution of vegetation community types, denning or nesting sites, population concentrations, migration corridors, breeding habitats, and other appropriate biological resources including the following:

~~(i) A list of all the species actually observed.~~

(~~i~~i) A list of sensitive species and habitats with a potential to occur (as defined in (A) above) and include status (state, federal, California Native Plant Society, global rank, state rank, etc.).

(iii) ~~If cooling water is taken directly from or discharged to a surface water feature source, include a description of the intake structure, screens, water volume, intake velocity hydraulic zone field of influence, and the thermal plume dispersion area as depicted in response to B(ii) above. Describe the thermal plume size and dispersion under high and low tides, and in response to local currents and seasonal changes. Provide a discussion of the aquatic habitats, biological resources, and critical life stages found in these affected waters. For repower projects that anticipate no change in cooling water flow, this information shall be provided in the form of the most recent federal Clean Water Act 316(a) and (b) studies of entrainment and impingement impacts that has been completed within the last five (5) years. For new projects or repower projects proposing to use once-through cooling and anticipating an increase in~~

~~cooling water flow, provide a complete impingement and entrainment analysis per guidance in (D)(ii), below.~~ Perform nitrogen deposition modeling including the complete citation for references used in determining deposition rates and location. Specify the amount of total annual nitrogen deposition in kilograms of nitrogen per hectare per year (kg N/ha/yr) in special status species habitats and vegetation types for wet and dry deposition. Describe habitat and species potentially affected.

(D) A description and results of all field studies and ~~seasonal~~ specialized surveys (e.g., focused and protocol) used to provide biological baseline information about the project site and associated facilities. Include copies of the ~~California Natural Diversity Database~~ CNDDB 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:

(i) Current biological resources surveys conducted using appropriate field survey protocols (include references) 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.

~~(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.~~

(~~ii~~iii) If the project or any related facilities could impact ~~a~~ federal or state jurisdictional ~~or non-jurisdictional~~ wetland, provide completed Army Corps of Engineers wetland delineation forms and/or determination of wetland status pursuant to Coastal Act or CDFW requirements, as applicable to the location, name(s) and qualifications of biologist(s) completing the delineation, the results of the delineation and a table showing jurisdictional features including state waters and wetland acreage amounts to be impacted.

(E) Impacts discussion ~~of the following:~~

~~(i)~~ all impacts (direct, indirect, and cumulative) to biological resources from project site preparation, construction activities, plant operation, maintenance, ~~and~~ closure, and decommissioning. Discussion shall also address sensitive species habitat impacts from ~~cooling tower drift and~~ air emissions ~~.~~ (i.e. nitrogen deposition).

~~(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.~~

~~(iii) Methods to control biofouling and chemical concentrations, and temperatures that are currently being discharged or will be discharged to receiving waters.~~

(F) A discussion of all feasible mitigation measures and an evaluation of their anticipated efficacy in reducing the level of impacts, including, but not limited to the following:

(i) All measures proposed to avoid and/or reduce adverse impacts to biological resources.

(ii) All off-site habitat mitigation ~~and~~ such as habitat improvement or compensation including management, and an identification of appropriate agency contacts for coordination and verification of proposed ~~compensation~~ habitat ~~and~~ mitigation measures. ~~management~~

(iii) ~~Design features to better disperse or eliminate a thermal discharge.~~

~~(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.~~

~~(v)~~ Educational programs to enhance employee awareness during construction and operation to protect biological resources.

(G) A discussion of compliance and monitoring programs to ensure the effectiveness of impact avoidance and mitigation measures incorporated into the project.

(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, the National Marine Fisheries Service, the U.S. Army Corps of Engineers, the ~~California Department of Fish and Game~~ CDFW, and the ~~Regional Water Quality Control Board~~ RWQCB will be required for the proposed project.

**(14) Water Resources**

(A) All the information required to apply for the following permits, if applicable, including:

(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);

(ii) Construction and Industrial Waste Discharge and/or Industrial Pretreatment permits from wastewater treatment agencies;

(iii) Nationwide Permits and/or Section 404 Permits from the U.S. Army Corps of Engineers; and

(iv) Underground Injection Control Permit(s) from the U.S. Environmental Protection Agency, California Division of Oil and Gas, and RWQCB.

(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:

(i) Ground water bodies and related geologic structures;

(ii) Surface water bodies;

(iii) Water inundation zones, such as the 100-year flood plain and tsunami run-up zones;

(iv) Flood control facilities (existing and proposed); and

(v) Groundwater wells within 1/2 mile if the project will include pumping.

(C) A description of the water to be used and discharged by the project. This information shall include:

(i) Source(s) of the primary and back-up water supplies and the rationale for their selection;

(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);

(iii) Average and maximum daily and annual water demand and waste water discharge for both the construction and operation phases of the project;

(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;

(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 cannot be provided, identify the most likely water purveyor and discuss the necessary assurances from the water purveyor to serve the project.

(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);

(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.

(viii) 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.

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.

(D) Identify all project elements associated with stormwater drainage, including a description of the following:

(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.

(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;

(iii) All assumptions and calculations used to calculate runoff and to estimate changes in flow rates between pre- and post- construction; and

(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.

(E) An impacts analysis of the proposed project on water resources and a discussion of conformance with water-related Laws, Ordinances, Regulations, and Standards (LORS) and policy. This discussion shall include:

(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;

(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;

(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;

(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."

(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."

(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.

(vii) All assumptions, evidence, references, and calculations used in the analysis to assess these effects.

**(15) Soils**

(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:

(i) The depth, texture, permeability, drainage, erosion hazard rating, and land capability class of the soil;

(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;

(iii) The location of any proposed fill disposal or fill procurement (borrow) sites; and

(iv) The location of any contaminated soils that could be disturbed by project construction.

(B) An assessment of the effects of the proposed project on soil resources and agricultural land uses. This discussion shall include:

(i) The quantification of accelerated soil loss due to wind and water erosion; and

(ii) The effect of power plant emissions on surrounding soil-vegetation systems.

**(16) Paleontologic Resources**

(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 paleonotological study area may vary depending on the depositional history of the region.

(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.

(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.

(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, § 2501 et seq.

(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.

**(17) Geological Hazards and Resources**

(A) A summary of the geology, seismicity, and geologic resources of the project site and related facilities, including linear facilities.

(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.

(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.

**(18) Transmission System Safety and Nuisance**

(A) The locations and a description of the existing switchyards and overhead and underground transmission lines that would be affected by the proposed project.

(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.

(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.

**(19) Wildfire**

(A) A map showing State Responsibility Areas (SRA) relative to the proposed project.

(B) A map showing state Fire Hazard Severity Zones relative to the proposed project.

(C) If the project would be in the vicinity of an SRA or a Very High Fire Hazard Severity Zone, provide:

(i) Local emergency response or evacuation plans and a description of how the proposed project could influence their effectiveness.

(ii) A discussion of how potential project pollutants could be contained onsite during a wildfire event.

(iii) A description of infrastructure that would be built or maintained (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate the risk of wildfire.

(iv) Describe people or structures downslope or downstream of the proposed project that could be impacted by flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

**(h) Engineering**

**(1) Facility Design**

(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 climate conditions, and flooding hazards, if applicable.

(B) A discussion of any measures proposed to improve adverse site conditions.

(C) A description of the proposed foundation types, design criteria (include derivation), analytical techniques, assumptions, loading conditions, and loading combinations to be used in the design of facility structures and major mechanical and electrical equipment.

(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:

(i) The power generation system;

(ii) The heat dissipation system;

(iii) The cooling water supply system, and, where applicable, pre-plant treatment procedures;

(iv) The atmospheric emission control system;

(v) The waste disposal system and on-site disposal sites;

(vi) The noise emission abatement system;

(vii) The geothermal resource conveyance and re-injection lines (if applicable);

(viii) Switchyards/transformer systems; and

(ix) Other significant facilities, structures, or system components proposed by the applicant.

**(2) Transmission System Design**

(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 capability and voltage levels of the proposed lines, along with the basis for selection of the capacity and voltage levels.

(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.

**(3) Reliability**

(A) A discussion of the sources and availability of the fuel or fuels to be used over the estimated service life of the facilities.

(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:

(i) Expected overall availability factor, and annual and lifetime capacity factors;

(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;

(iii) Geologic and flood hazards, meteorologic conditions and climatic extremes, and cooling water availability;

(iv) Special design features adopted by the applicant or resource supplier to ensure power plant reliability including equipment redundancy; and

(v) For technologies not previously installed and operated in California, the expected power plant maturation period.

**(4) Efficiency**

(A) Heat and mass balance diagrams for design conditions for each mode of operation.

(B) Annual fuel consumption in BTUs for each mode of operation, including hot restarts and cold starts.

(C) Annual net electrical energy produced in MWh for each mode of operation, including starts and shutdowns.

(D) Number of hours the plant will be operated in each design condition in each year.

(E) If the project will be a cogeneration facility, calculations showing compliance with applicable efficiency and operating standards.

(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.

(5) Demonstration, if applicable

(A) Justification for the request for demonstration status, based on the criteria contained in the most recently adopted Electricity Report.

(B) A demonstration plan containing the following elements:

(i) A description of the technology to be demonstrated;

(ii) The objectives of the demonstration;

(iii) The plans for acquiring the data necessary to verify the state demonstration objectives;

(iv) The schedule for implementing the demonstration tasks;

(v) The expected date of commencement of commercial operation of the facility, if applicable, and

(vi) A description of contingent actions to be implemented if individual demonstration tasks are technologically unsuccessful.

**(i) Compliance with Laws, Ordinances, Regulations and Standards**

(1) Tables which identify:

(A) 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

(B) 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.

(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.

(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.

Note: Authority cited: Sections 25213, 25216.5(a), 25218(e), Public Resources Code. Reference: Sections 21080.5, 25519(a), 25519(c), 25520, 25522(b), 25523(d)(1), 25540.1, 25540.2, ~~and~~ 25540.6, and 25541, Public Resources Code.

**Appendix F [Repealed]**

~~Informational Requirements for a Small Powerplant Exemption~~

~~The application shall include the following information:~~

~~(a) The location of the power plant on a location map and described by section or sections, range, township, and county.~~

~~(b) Photographic representations adequately depicting proposed transmission corridors or routes and the visual appearance of the power plant site and its immediate surroundings.~~

~~(c) The type(s) of fuel to be used.~~

~~(d) The methods of construction and operation of the power plant.~~

~~(e) A discussion of the environmental and energy resources impacts which may result from the construction or operation of the power plant.~~

~~(f) A discussion of proposed alternatives to the power plant, including the alternative of no power plant, and any mitigation measures proposed to reduce environmental impact.~~

~~(g) The need for the power plant.~~

~~(h) The compatibility of the power plant with the most recent biennial report issued pursuant to Section 25309 of the Public Resources Code.~~

~~(i) A list, including the names and addresses of persons to contact, of federal, state, regional, or local agencies whose standards, ordinances, or laws including long range land use plans or guidelines adopted by the state or any local or regional planning agency are applicable to the proposed project. The list shall include a brief description of the applicability of such standards, ordinances, laws, plans, or guidelines for each agency.~~

~~(j) A discussion of that portion of the gross energy output which will be used for the site and related facility.~~

~~(k) Any other information that the applicant desires to submit.~~

Note: Authority cited: Section 25218(e), Public Resources Code. Reference: Section 25541, Public Resources Code.