

CALIFORNIA
ENERGY
COMMISSION

ENERGY FACILITY LICENSING PROCESS

Developers Guide of
Practices & Procedures

STAFF REPORT / DRAFT

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PREFACE

This report summarizes the California Energy Commission's energy facility licensing process and provides guidance on how a potential power plant developer can file an application for an energy facility and proceed expeditiously through that process. It is intended as a general guide and introduction to the California Energy Commission's licensing process, as well as a summary of some of the potential environmental effects of energy facilities. Much of this information will also be helpful to developers of projects that do not require a permit from the California Energy Commission but instead file applications with local agencies.

The California Energy Commission staff encourages all potential applicants to request a pre-filing meeting with staff to discuss their specific proposal. Staff will then be able to focus this general information to the individual needs of the developer and provide more customized assistance, since this guide cannot anticipate all the different issues posed by the almost limitless combination of energy facility technologies, locations, and participants.

This guide has been prepared to help implement the intent of AB 970. AB 970 requires the Governor's Clean Energy Green Team to compile and make available guidance documents related to construction of energy facilities proposed to be built in California. Therefore, this report is being coordinated with the Governor's Clean Energy Green Team and with the participating federal, state, and local agencies. Questions about energy facilities can be directed to the Green Team or any of its participating members. The Green Team can be contacted at:

Green Energy Team
770 L Street, Suite 1250
Sacramento, CA 95814
(916) 324-1440
(916) 322-8593
www.greenteam.ca.gov

CHAPTER 1 INTRODUCTION

This report provides a discussion of the California Energy Commission's energy facility licensing process. It is intended to help potential applicants understand the process and its legal requirements, prepare an acceptable application, and proceed expeditiously through the licensing process. Our goal is to use all our resources efficiently, thereby saving both the state and energy facility developers time and money.

This report is organized into sections providing the following summaries:

- Introduction which contains background information
- Licensing process, including its various steps
- Information about public involvement
- Data adequacy requirements
- Technical areas addressed by the staff
- Typical conditions of certification with which a certified project must comply
- Laws, ordinances, regulations, and standards of other governmental agencies that typically apply to a project
- Legal authority

Where possible, we have provided references to additional information that may be found on the Governor's Clean Energy Green Team or the Energy Commission's website.

This report has not been reviewed and approved by the Commission and does not represent Commission policy. It is strictly a staff document.

When an application has been accepted by the Commission, a Commission Committee is assigned to preside over the licensing process and then make a recommendation to the full Commission for consideration at a public hearing. All Committee and Commission hearings and decisions on a licensing case are publicly noticed and conducted during open, public meetings. During the licensing process, the Energy Commission **staff** acts as an independent party in each case and has the responsibility to perform an independent assessment of each energy facility application filed with the Commission. The staff conducts a technical assessment of each proposed facility, covering many environmental and engineering areas. The staff also shares the results of its analysis with all interested parties in open, publicly noticed workshops. The staff works to ensure that any application for a proposed energy facility is reviewed thoroughly, consistently, and as expeditiously as possible.

The Warren-Alquist Act — Public Resources Code section 25000 and the following, particularly sections 25500 through 25542 — defines the Commission's exclusive authority to certify sites and related facilities. In general, the Commission has exclusive jurisdiction over thermal power plants with a net generating capacity of 50 MW or more, modifications that result in a 50 MW or more increase in generating capacity, and transmission lines that carry the electricity from a power plant with a generating capacity of 50 MW or more to the interconnected grid.

The staff relies on the Commission's regulations, Title 20, California Code of Regulations, section 1701 and the following, for direction on staff's particular responsibilities in a siting case. The Commission's siting process has been determined to be a certified regulatory program under the California Environmental Quality Act (CEQA) and the functional equivalent of preparing environmental impact reports. Consequently, while the Commission is the lead agency for all projects it approves and meets the intent of CEQA, it is not required to prepare environmental impacts reports but instead prepares staff assessments. Thus, the staff often turns to CEQA and the CEQA Guidelines for additional guidance on assessing environmental impacts and their significance.

In every siting case, the staff also consults with other agencies and reviews the various federal, state, and local laws, regulations, adopted policies, standards, ordinances, plans, etc. that may apply to the subject areas under analysis.

The standard licensing process is normally conducted in 12 months, starting from the day the application is deemed adequate by the Commission. In certain circumstances, an application may qualify for an expedited 6 month review process, as described in Chapter 3, Application for Certification Process .

Please note that this document will be updated periodically, but not necessarily every time new laws, ordinances, regulations and standards become effective in the future, which may result in changes to this report. Therefore, energy facility developers should consult with staff and other appropriate agencies before beginning preparation of an application in order to determine the status of current regulatory requirements and to solicit staff's current advice on the licensing process.

CHAPTER 2 APPLICATION FOR CERTIFICATION PROCESS

The California Energy Commission reviews and approves permit applications for the construction, operation, and eventual closure of large, thermal power plants 50 MW and larger and related facilities in California. This section provides a summary of the **application process**. Applicants for other types of power projects, such as wind, hydroelectric, solar-electric, and thermal projects smaller than 50 MW do not need a permit from the California Energy Commission, but will likely need permits from other state, local, or federal agencies.

Who Needs an Application For Certification?

Developers of most electric power plants and/or electric transmission lines that fall within the Energy Commission's jurisdiction need to prepare an Application For Certification (AFC). The Commission has jurisdiction over:

- Thermal electric power plants with a net generating capacity of 50 megawatts or larger.
- An electric transmission line from a thermal power plant under the Energy Commission's jurisdiction, to the first point of interconnection with the existing transmission system.
- Facilities related to a proposed thermal power plant including fuel supply lines, access roads, and water and waste facilities.

Prefiling Meeting

The staff of the California Energy Commission encourage potential applicants to contact them and set up a **prefiling** meeting to discuss the application process, identify the information the staff will need to process the application and identify issues specific to their particular project.

Where Should the Developer-Applicant Apply?

The developer-applicant should contact the Energy Commission's Siting Office by calling or writing to:

Roger E. Johnson
Siting Office Manager
California Energy Commission
1516 Ninth St., M.S. 15
Sacramento, CA 95814
(916) 653-0385
rejohnso@energy.state.ca.us

What Information Should the Developer-Applicant Provide Upon Application?

Developer-applicants need to prepare an AFC that includes the following information required by the Energy Commission's Siting Regulations:

- a. Project description
- b. Site description
- c. Engineering description of proposed facilities
- d. Electric transmission lines and any other linear facilities related to the project
- e. Project, site, and linear alternatives
- f. Environmental description and expected impacts including biological surveys conducted at the appropriate time of year
- g. Mitigation measures to reduce potentially significant environmental impacts
- h. Information necessary for the local/regional air pollution control district to make a determination of compliance with local rules and regulations
- i. Information necessary for the regional water quality control board to issue waste discharge requirements or a national pollution discharge elimination system permit
- j. Compliance with applicable laws, ordinances, regulations, and standards
- k. Financial impacts and estimated cost of the project
- l. Project schedule

Note that the above list is not comprehensive. Developer-applicants should refer to Appendix B of the Commission's Power Plant Siting Regulations (Title 20, California Code of Regulations). The complete text of these regulations can be found on the Energy Commission's website at www.energy.ca.gov/sitingcases/index.html. The staff strongly encourages applicants to provide a full and complete description of all aspects of their project in the initial application. It is the staff's experience that complete project information will help avoid subsequent processing delays caused by data requests for additional project information.

What Application Fee Must the Developer-Applicant Submit?

The Energy Commission does not charge fees for processing an Application for Certification.

How Does the California Energy Commission Evaluate and Process the Application?

Through the Application for Certification process, the Energy Commission staff determines if a project complies with applicable laws, if potentially significant adverse impacts are mitigated, and if the project will impact electrical system reliability and efficiency, and then makes recommendations to the Commission. It also establishes the conditions of certification required for the project to be constructed, operated and decommissioned.

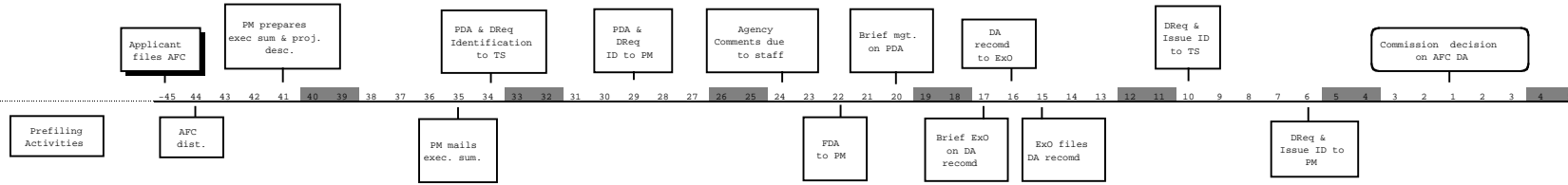
The Energy Commission has a Certified Regulatory Program and is the lead agency under the California Environmental Quality Act. The Commission does not prepare Environmental Impact Reports but prepares functionally equivalent documents including Staff Assessments and Committee reports. Public involvement is a critical part of the Commission's permitting process. For more general information on the CEQA process, go to WWW.opr.ca.gov/clearinghouse/environmental.shtml

The AFC process entails a series of information gathering and analytical phases leading to the final decision to approve/certify or deny a proposed project. Following certification, the Commission monitors the project for compliance with the conditions of certification. The phases of the AFC process are summarized below and illustrated in the CEC Power Plant Permitting Timeline (Figure 1):

1. **Prefiling** - The informal portion of the siting process is called prefiling and is the period before an applicant submits or files a formal application to develop an energy facility. Prefiling consists of meetings between the applicant, Energy Commission staff, and agencies to discuss the project, siting process, filing requirements, and specific issues. Workshops, site visits, public meetings and the optional preliminary review of the applicant's filing document may also be part of the prefiling phase. All prefiling activities are at the applicant's option, although the staff strongly encourages early prefiling consultation.
2. **Filing** - Filing is not an actual phase, but an event. It occurs when 125 copies of the Application for Certification are delivered to the Energy Commission's Docket Unit. These copies are distributed to the Commission staff, the numerous responsible agencies taking part in Application for Certification review, local libraries, and to interested parties who become intervenors (i.e. active participants in the case). A filing however, is not *accepted* until the applicant completes the data adequacy phase, which is discussed below.
3. **Data Adequacy** - The Energy Commission staff reviews the filed Application for Certification for completeness, using the requirements

CALIFORNIA ENERGY COMMISSION POWER PLANT PERMITTING TIMELINE

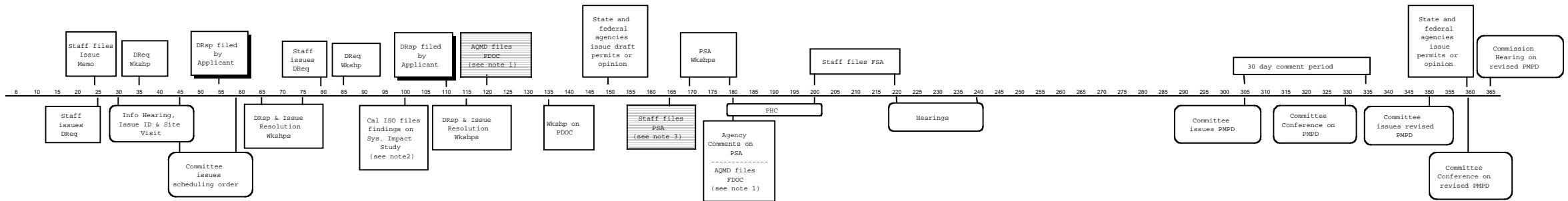
AFC DATA ADEQUACY



Key to abbreviations

- AFC - Application for Certification
- AQMD - Air Quality Management District
- Cal ISO - California Independent System Operator
- DA - Data Adequacy
- DPSA - Draft Final Staff Assessment
- DPSA - Draft Preliminary Staff Assessment
- DRap - Data Responses
- ExO - Executive Office
- FDA - Final Data Adequacy
- FDOC - Final Determination of Compliance
- FDRReq - Final Data Requests
- FSA - Final Staff Assessment
- ID - Issue Identification
- IS - Interconnection Study
- PDA - Preliminary Data Adequacy
- PDOC - Preliminary Determination of Compliance
- PDRReq - Preliminary Data Requests
- PHC - Prehearing Conference
- PM - Project Manager
- PMPD - Presiding Member's Proposed Decision
- PSA - Preliminary Staff Assessment
- TS - Technical Senior

AFC TIMELINE



Notes:
 1 The timing of the PDOC and FDOC will depend on the cooperation of the AQMD. In past practice, the districts have typically filed the PDOC 180 days, and the FDOC 240 days, after the AFC is accepted.
 2 Timing of the Cal ISO comments will depend on when the Transmission Interconnection Study is initiated by the applicant.
 3 The time required to file the PSA will be shortened if issues are resolved early and easily.

ACTIVITY KEY

- Flexible activity (hatched box)
- Applicant activity (solid box)
- Staff or Agency activity (dotted box)
- Committee activity (rounded box)

Shaded dates show weekends

listed in the Siting Regulations. Responsible agencies dealing with resources affected by the project, such as the State Water Resources Control Board, the Department of Fish and Game, and local air pollution control district, participate in the review. Energy Commission staff must make a data adequacy recommendation to the full Commission within 30 days of the filing of the Application for Certification, and the Commission must act on the recommendation at a public meeting within 45 days of the filing. If the Energy Commission finds that the Application for Certification is incomplete, it must provide the applicant a written list of deficiencies that must be addressed in a supplemental filing by the applicant, should the applicant choose to continue (125 copies). The Commission must make any subsequent data adequacy determinations within 30 days of receipt of the supplemental filing.

4. **Discovery/Data Requests** - The Energy Commission staff collects additional data required for impact analysis from the project applicant, other agencies, and any other relevant sources. Public workshops on technical and procedural matters and issues, and informational hearings for the public are held during this phase.
5. **Analysis** - The Energy Commission staff conducts an independent analysis, focusing on a thorough examination of environmental impacts, mitigation measures, and development of a compliance plan. As a result of the analysis, the staff prepares a Preliminary Staff Assessment. Public workshops on the Preliminary Staff Assessment are held during this phase. The analysis phase is completed by preparation of a Final Staff Assessment that is the staff's testimony for the hearing phase.
6. **Public Hearings** - The applicant, Commission staff and responsible agencies present testimony reflecting the Step 5 analysis to the Energy Commission Committee (i.e. two Energy Commissioners) assigned to the proposed project. Other interested parties and the public can also testify or provide comments at these hearings.
7. **Decision** - The Energy Commission Committee prepares the Presiding Member's Proposed Decision that is released for public review and comment after the close of hearings. The Presiding Member's Proposed Decision is circulated for public review and comment and then revised before it is heard by the full Commission (i.e. five Commissioners) and either adopted, modified, or rejected. Depending on the Decision, the Application for Certification is either approved/certified by the full Commission with conditions, or denied. The applicant may begin construction soon after the permit is granted.

When must the Commission provide a decision on an application?

The law allows the Commission to conduct the standard AFC process, complete the analysis, hold public workshops and hearings, and provide its decision within 12 months after the application is found data adequate. Since the Commission's decision is coordinated with other agencies, the developer can often initiate construction soon after receiving approval. Some applications have been reviewed in a shorter amount of time when fewer public workshops are needed to resolve issues. Some applications have taken longer when the developer initiated changes to the project design during the review process.

Can the Commission provide its decision in a shorter amount of time for exceptionally clean, non-controversial projects?

Recent changes in the law now allow the Commission to provide its final decision within 6 months if the project meets specified criteria. Projects that qualify for this expedited process include those that would otherwise qualify for a negative declaration as defined by the California Environmental Quality Act (CEQA). This expedited AFC process is initiated in the same manner as the standard AFC, but can follow an abbreviated path if the project:

1. Meets or exceeds all local, state, and federal air quality rules, including Best Available Control Technology requirements, and have contracts for all required air emission offsets;
2. Does not cause adverse water impacts or does not require new appropriations of water;
3. Is in full compliance with all land use requirements, including General Plans and zoning requirements;
4. Avoids significant natural resources, including rare, threatened, and endangered species;
5. Avoids significant adverse impacts and electricity system reliability problems.

A developer seeking the 6 month expedited process must provide all the information normally required for the standard 12 month AFC process as well as all the information normally required by other local and state agencies in a form they are familiar with.

What are the Developer-Applicant's Rights and Responsibilities after the Permit is Granted?

After the Energy Commission has certified a project, the applicant-developer can begin construction. The applicant-developer is responsible for complying with the Commission's adopted conditions of certification, and working with the Commission's Compliance staff for the lifetime of the project. The Commission's Compliance Monitoring program is discussed below.

What are the California Energy Commission s Responsibilities after the Permit is Granted?

During the Application for Certification process, the Energy Commission establishes a monitoring system to assure that the facility is built and operated in compliance with the environmental, public health and safety, and other conditions adopted by the Commission. Through monitoring, the Commission enforces the conditions of certification from the start of construction through the unexpected closure or planned decommissioning of a facility at the end of its useful life.

What Other Agencies Should the Developer-Applicant Contact Before Filing an Application?

The developer-applicant should contact the local or regional air pollution control district and the appropriate regional water quality control board. The developer-applicant should also contact the appropriate city or county planning/community development department to understand the local applicable laws, ordinances, regulations, standards, plans and policies that need to be addressed in the Application for Certification. The city or county government staff can give the applicant a general sense of likely community response to the project. These local government contacts should be made before the Application for Certification is filed, preferably in coordination with the California Energy Commission staff s pre-filing meeting.

What Other Sources of Information are Available to the Developer-Applicant?

The developer-applicant can access www.energy.ca.gov/sitingcases to obtain general and specific siting case information. This website contains information and links to various resources, including the following:

- Overview of the Energy Commission Energy Facilities Siting/Licensing Process
- Governor s Clean Energy Green Team at <http://www.greenteam.ca.gov>
- Energy Facilities Siting Regulations (Title 20 California Code of Regulations (CCR))
- Map of Power Facility Licensing Cases in California
- California Energy System Maps
- List of Power Facility Licensing Cases Currently Before the Energy Commission
- List of Anticipated Power Facility Licensing Cases
- Energy Facilities Licensing Process — A Guide to Public Participation.
- California Permit Handbook, published by the Trade and Commerce Agency (916) 322-4245 <http://commerce.ca.gov>

- California Environmental Protection Agency
<http://www.CalGOLD.ca.gov>

The Governor's Clean Energy Green Team is developing a website that will direct visitors to other governmental agencies responsible for their type of project if the California Energy Commission is not the appropriate agency.

CHAPTER 3 SITING PERMIT AUTHORITY AND JURISDICTION

The Energy Commission has exclusive jurisdiction to certify sites and related thermal power plants of 50 MW or more in capacity and all related facilities that are dedicated to or essential to the operation of a proposed power plant. Such related facilities include natural gas pipelines, transmission lines from the plant to the first point of junction with the transmission grid, water lines, and access roads. Projects smaller than 50 MW and non-thermal projects fall outside of the Energy Commission's jurisdiction and are often referred to as non-jurisdictional projects.

Consultation with other Agencies

Due to the exclusive grant of jurisdiction, certification by the Commission is in lieu of all local, regional, and state licenses or permits. To the extent allowed by federal law, federal permits are included or coordinated with this process, although the applicant must pursue these federal permits independently. Nevertheless, the Commission and Commission staff consult with all interested agencies regarding all applicable laws, ordinances, and standards. Even though the Commission has exclusive jurisdiction, the Commission is required by statute to make findings as to whether a proposed power plant complies with all applicable laws, ordinances, and standards that would be enforced by other agencies. The Commission is also directed by statute to consult with the responsible local, regional, state, or federal agency to try to eliminate any non-compliance issues. Moreover, the Commission cannot certify a project that fails to comply with an applicable law, ordinance, or standard unless the Commission makes two findings that the project is needed for public convenience and necessity and that there are no more prudent, and feasible means of achieving such public convenience and necessity. In making these findings, the Commission must consider the facility's impact on the environment, consumer benefits, and the electric system reliability.

The most likely area where non-conformity may occur deals with local land use determinations. These are most easily corrected by the local agency amending its general and/or specific plan or a zoning ordinance.¹ Notably,

¹ Other land-use decisions going to the terms and conditions placed on a project are subsumed in the Energy Commission's permit. Examples of such decisions include variances, conditional use permits, and specific site development plans that specify terms and conditions for permitting the project. Although the latter are replaced by the Energy Commission's permit, the criteria that a local government would apply to decide whether to grant a variance, for example, would be used for guidance in the Energy Commission's proceeding.

applicants seeking such amendments have tended to work closely with local governments even before filing an AFC. If they reach agreement before or during the AFC proceeding, mitigation measures and project modifications that allay local concerns are likely to become part of the proposed project.

Local Land Use Overrides

The Commission's override authority, as usually applied to local land use requirements, is clear but rarely used. The subject of land use typically concerns questions about whether a proposed project conforms with all applicable local land use plans, ordinances, and standards. By statute, the Energy Commission cannot approve a nonconforming project unless one of two events occurs. Either the local government amends whatever document or local ordinance that is the basis for the nonconformity, or the Energy Commission finds that the proposed project is needed for public convenience and necessity and that there are not more prudent and feasible means of achieving such public convenience and necessity. (Pub. Resources Code/25525.) Either event adds procedural steps to the siting process with scheduling implications that make completion in 12 months a genuine challenge. Further, statutes direct the Energy Commission to consult and meet with a local or state agency to try to eliminate nonconformity issues. Consequently, the Energy Commission's priority is to work with the local or state agency to address its concerns, to coordinate efforts leading to whatever agency decision is needed, and to do so in time for the Energy Commission to make findings in its final decision.

Appeals

Once granted, the Energy Commission's certification to build and operate a proposed power plant is subject to a 30-day appeal period. Any party to the certification proceeding has 30 days after the effective date of the final decision to petition the Commission to reconsider its decision. If the Commission decides to reject the petition or otherwise decides against the petitioner, the petitioner may then file suit in the court of appeal or with the State Supreme Court. To date, there have been few lawsuits filed against the Commission and in each case the Commission has been successful in having its decision upheld.

Based on regulation, an applicant has five years from the effective date of certification in which to begin construction. This period may be extended in some instances by the Commission for good cause.

CHAPTER 4 PUBLIC INVOLVEMENT

The public plays an important role in the process of power plant siting. The Warren-Alquist Act, which resulted in the creation of the Energy Commission in 1974, also laid out a method to ensure meaningful public participation in the governmental decisions about locating thermal electric power plants. As a developer-applicant, you will be a party in an open, public process to evaluate the Application for Certification. Below are the answers to some commonly asked questions about public involvement and the Commission's public adviser.

Who is the Public Adviser?

The Public Adviser is an attorney available to any member of the public who has an interest in participating in the Commission's proceedings. In this regard, the Public Adviser has a unique role in state government. The California Public Utilities Commission is the only other state agency with a statutory public adviser.

The Public Adviser serves as the adviser to the public and to the Energy Commission to ensure that full and adequate participation by members of the public is secured in the Commission's proceedings. The adviser serves the public and the Commission by:

1. Advising the public how to participate fully in the Commission's proceedings, thereby providing the Commission with the most comprehensive record possible.
2. Advising the Commission on the measures it should employ to assure open consideration and public participation in its proceedings.

What are the duties of the Public Adviser?

The duties of the Public Adviser in a siting case are to advise the public how to participate fully in the Energy Commission's proceedings. The duties of the public adviser are outlined in the California Code of Regulations (CCR) Title 20 //1203, 1208, 1710, 1718, 2504, and //2551 through 2557. Frequent duties of the Public Adviser include:

1. Be available to any member of the public who has an interest in participating in the Energy Commission's proceedings. Respond to all inquiries from the public for information or advice on how to participate.
2. Render independent advice to a member of the public that, in the adviser's view, will provide the most specific participation of that member.
3. Ensure that all persons are provided with a reasonable opportunity to participate in discussions at each public meeting.
4. Assist the public in requesting records.
5. Establish rosters of members of the public who have an interest.

6. Advise members of the public when the use of an attorney, expert witness or other professional would be necessary or helpful to their participation.
7. Upon request, neutrally present the views of public participants who are unable to attend a proceeding.
8. If a meeting is cancelled, with cooperation of staff, inform known participants expeditiously to the extent feasible.
9. With cooperation of staff, ensure all parties are informed by the best means available if a meeting is cancelled in less than 10 days of a proceeding.
10. The Public Adviser may advocate points of procedure that will improve public participation in the Energy Commission proceedings.
11. Refer members of the public to Energy Commission staff who can assist them.
12. Organize appearance of public participants in public meetings and hearings and introduce them to the Energy Commission.
13. Suggest consolidation and coordination between members of the public with similar views or interests.
14. Guide public participants in their oral presentations to assist them to emphasize their main points.
15. Examine all notices of the Energy Commission Proceedings and make recommendations to the Executive Director to improve timeliness and accuracy.
16. It is not the duty of the Public Adviser to represent any member of the public or to advocate any substantive position on issues before the Energy Commission.

How can the public participate?

The public can participate by attending Energy Commission public meetings, making public comment at meetings, or submitting written comments about a specific siting application. This type of participation can be described as informal participation. The Energy Commission also has a statutory mechanism to allow members of the public to become formal participants to a specific siting case through the intervention process. Public members whose petitions to intervene are granted become formal parties to the siting case.

Who participates in power plant siting cases?

Public participation in a siting case may range from very few people to several hundred people at public meetings. Although there is no way to accurately predict the level of public participation, observations indicate that proposals with potential environmental impacts located close to communities and neighborhoods tend to have more public participation. Issues often drive the level of public participation. Members of the public with specific concerns about air quality or water use follow those issues in the siting case.

The number of intervenors also varies from project to project. Intervenor participation ranges from none, or a low of one individual or group, to a high of 15

individuals or groups. One intervening group has a petition with more than a thousand signatures in support of the group.

Sometimes members of the public agree in their opinions on the same issues, but sometimes they don't agree. For example, one group-intervenor submitted a petition with more than 300 names gathered in a low-income neighborhood at a local super market. The people signing the petition indicated opposition to the proposal. On the other hand, in the same community, one local representative from a community-based minority organization said there is no basis for the opposition. From the Public Adviser's perspective, they are both right!

For more information, please review *The Siting Process Practice and Procedure Guide*, available on the Commission's website and contact the Public Adviser at:

(800) 822-6228, or

(916) 654-4489, or

PAO@energy.state.ca.us

CHAPTER 5 APPLICATION CONTENT AND DATA ADEQUACY

A potential applicant needs to prepare a document entitled an Application for Certification . The requirements for an adequate submittal are contained in the Commission s Rules of Practice and Procedure and Power Plant Site Certification Regulations , Appendix B, Information Requirements for an Application. This information is available on-line at the Commission s webpage under Power Facility Licensing at www.energy.ca.gov/sitingcases/index.html. The staff also encourage potential applicants to review the staff s data adequacy recommendations for recent AFCs filed with the Commission. These are also available on the Commission s webpage at Power Facility Licensing under the individual licensing cases. Most staff and applicant documents filed in the case are available in this manner. Potential applicants can gain considerable insight into how the regulations are applied by examining recent AFC filings and the staff s review and recommendations on data adequacy.

The staff s data adequacy recommendations include not only a comparison of the information filed in the AFC to the regulation requirements, but also to the needs of the various other governmental agencies involved in the California Energy Commission s processes who depend upon the AFC filing for their informational needs. Consequently, the informational requirements will vary depending upon the location of the proposed project, the type of issues involved, and the governmental agencies affected. Staff are available to consult with developers in advance of their filing to provide suggestions on other appropriate agencies to contact.

CHAPTER 6 TECHNICAL AREA OVERVIEW

The California Energy Commission staff's independent analysis is presented in technical staff reports known as Staff Assessments. These assessments are prepared pursuant to sections 1742, 1742.5, 1743, and 1744 of Title 20, California Code of Regulations. These assessments are staff documents; they are not Commission documents nor are they draft decisions or proposed decisions. These assessments describe the following:

1. the existing environment;
2. the proposed project;
3. whether the facilities can be constructed and operated safely and reliably in accordance with applicable laws, ordinances, regulations and standards (LORS);
4. the environmental consequences of the project including potential public health and safety impacts;
5. mitigation measures proposed by the applicant, staff, and interested agencies and intervenors which may lessen or eliminate potential impacts;
6. the proposed conditions under which the project should be constructed and operated if it is certified; and
7. project alternatives.

The analyses contained in these assessments are based upon information from: 1) the AFC; 2) subsequent amendments; 3) responses to data requests; 4) supplementary information from local and state agencies; 5) existing documents and publications; and 6) independent field studies and research. The reports present conclusions and proposed conditions that apply to the design, construction, operation, and closure of the proposed facility. Each proposed condition of certification is followed by a proposed means of "verification." The verification is not part of the proposed condition, but is the Energy Commission Compliance Unit's method of ensuring post-certification compliance with adopted requirements.

The Energy Commission staff's analyses are prepared in accordance with Public Resources Code, section 25500 et seq. and Title 20, California Code of Regulations, section 1701 et seq., and the California Environmental Quality Act (CEQA) (Pub. Resources Code, 21000 et seq.) and its guidelines (Cal. Code Regs., Title 14, 15000 et seq.).

The following sections describe the individual technical areas addressed by the Energy Commission staff. Many of these technical areas are consistent with CEQA and federal environmental laws, and will need to be addressed by developers whose projects are not under the Commission's jurisdiction.

6.1 AIR QUALITY

Purpose

It is the goal of the California Energy s Staff to protect public health and safety by avoiding or minimizing energy-related facility air quality impacts to communities, ensuring all remaining potentially significant air quality impacts are fully mitigated, and ensuring all applicable federal, state, and local air quality standards are met.

Scope

Staff has two principle objectives in carrying its analysis. First, to evaluate the project s potential air quality impacts and the appropriateness of the proposed mitigation measures; and second, to confirm the project s conformance with applicable local, state, and federal air quality rules and regulations.

Approach

To accomplish these objectives, the staff works closely in a coordinated effort with the local air district, the Air Resources Board, and the US Environmental Protection Agency. The staff assesses the potential emissions from the proposed power plant (including cooling towers) and related equipment, the potential emission control technology applicable to each piece of equipment, the estimated transport and fate of project emissions, and the proposed emission offset package. This information is compared with the current status of ambient air quality, the current status of ambient air quality standards, the air quality management plan that applies to the area, the typical meteorological conditions, and the availability of offsets in the local area and surrounding areas. The assessment examines construction, initial commissioning, operation and closure emissions during all operating profiles (startup and base load).

The staff s analysis starts with a sound foundation of information describing the meteorological setting of the proposed project area. In all cases, staff needs to review recent meteorological data that accurately represents conditions at the proposed site. While a meteorological station located at the proposed site is preferable, nearby information can also be used as long as it is correlated to the project site. Staff have found that developers have had the most difficulty in defining and obtaining the appropriate level of air pollutant emission offsets. While each local air district has well-established rules on offset requirements, the many possible options provided may lead developers to proposed ineligible offset packages. Further, limited offset availability can be a hurdle in many areas of the state. In areas of the state that are nonattainment for ambient air quality standards, staff must ensure that offset packages are fully accounted for so that the proposed project

emissions do not cause any further degradation of the standards. As a result, staff strongly advises that all developers contact the local air district at an early stage of the project development process.

6.2 PUBLIC HEALTH

Purpose

It is the goal of the California Energy Commission's Staff to identify, eliminate where possible or minimize significant public health impacts associated with energy facilities, and to ensure compliance with all applicable laws, ordinances, regulations and standards (LORS).

Scope

Staff prepares an analysis that identifies pollutants that potentially pose a significant risk to public health. This analysis may be related to analyses in other subject areas including: air quality, worker safety, hazardous materials management, soils, and water resources.

Approach

Staff first identifies the fuels, chemicals and pollutants to be used at the facility and their expected concentrations that could pose a significant risk to public health. Staff also evaluates the toxic pollutant emissions by analyzing the chemical composition of the proposed fuels, water treatment chemicals and data obtained from emission tests conducted at operational facilities using similar types of equipment and fuels. In addition, staff identifies toxic chemicals used in plant operation and evaluates the feasibility of using less toxic alternatives. Once all potentially toxic pollutants associated with a proposed facility are identified, staff determines the types of health hazards associated with each pollutant. Exposure to toxic pollutants can produce various types of adverse health effects, such as respiratory irritation, carcinogenic effects, suppression of immune function, teratogenic effects, etc. Staff would evaluate the potential for cumulative effects, and the toxicity to different organ systems associated with a pollutant. The relationship between exposure and adverse health effects for each toxic pollutant that would be emitted from a proposed project is also analyzed. Mitigation measures are then recommended to reduce impacts to a less than significant level, and could include emission controls, alternative fuels, alternative process chemicals, and improvements in facility design.

6.3 TRANSMISSION LINE AND SAFETY

Purpose

It is the goal of the California Energy Commission's Staff to ensure that any transmission line, substation, switchyard, or appurtenant electrical equipment in conjunction with an energy facility project are designed in a manner that protects environmental quality, protects public health and safety, and complies with applicable laws, ordinances, regulations and standards (LORS).

Scope

Staff investigates the safety hazards and nuisance impacts associated with transmission lines and assesses electric and magnetic field reduction criteria and guidelines relative to the proposed project.

Approach

Staff identifies potential negative impacts associated transmission lines and categorizes them as either safety hazards or nuisance impacts, and then compares the hazard/impact to the standards or threshold levels contained in the applicable LORS to determine the level of significance. Any hazard or impact that is considered significant is further evaluated to determine the need for mitigation. Staff then identifies and recommends appropriate mitigation measures to reduce, or eliminate significant impacts. As part of the analysis staff assesses the following hazards or impacts associated with the project: electric and magnetic field (EMF) fire hazards at the base of or adjacent to the transmission line resulting from the accumulation of debris; hazardous shocks resulting from someone coming into contact with an energized conduction while in contact with either a ground connection or the earth; nuisance shocks resulting from an accumulation of static charges on an ungrounded surface in the vicinity of the facility (these shocks are non-hazardous and do not cause physiological harm); audible noise generated by transmission lines; communications interference (e.g. radio, television); and aircraft safety hazards (typically the Federal Aviation Administration would review the project to determine if the project poses a safety hazard to aircraft). Staff may make recommendations when they believe mitigation is necessary to ensure ensure that the project is designed in a manner that would protect the environment and the health and safety of the public.

6.4 HAZARDOUS MATERIALS

Purpose

It is the goal of the California Energy Commission's Staff to ensure that energy facilities do not pose unreasonable risk of adverse impacts to the public as a result of accidents involving hazardous materials.

Scope

Staff assesses the risks associated with the use of hazardous materials at power plants and pipelines relative to any potential public health impacts.

Approach

Staff begins their analysis by comparing all materials that are proposed for use in a facility with those materials classified as hazardous or extremely hazardous in the Health and Safety Code, to identify hazardous materials. Staff's analysis is based on factors that are both project- and site-specific. Some of these factors include proximity of the facility to residences or other sensitive receptors (i.e. hospitals, daycare centers, etc.), the specific hazardous materials to be used, types of equipment, meteorology, external, seismic, and flood hazards. These factors all affect the degree of risk associated with the use of hazardous materials at a specific facility as well as the type and amount of mitigation that may be required. Staff reviews preliminary design information to determine the potential for accidental release of each material, and any resulting public health impacts. Avoidance or mitigation of accidental release potential can be accomplished through a variety of methods. However, some measures are known to provide greater certainty than others in accomplishing risk reduction. Some measures staff recommends to reduce impacts are using non- or less- hazardous materials, engineered safety equipment, administrative control to prevent human error; and/or emergency response procedures. Additional conditions have been recommended when staff believed they were necessary to reduce any remaining potential impacts to public health to a less than significant level.

6.5 WASTE MANAGEMENT

Purpose

It is the goal of the California Energy Commission's Staff to ensure that energy facilities comply with all applicable federal, state, and local waste-related laws, ordinances, regulations, and standards (LORS) and that wastes generated during facility construction and operation do not significantly impact the environment.

Scope

Staff assesses all hazardous and nonhazardous wastes (including waste quantities, classification, generation frequency, management methods, and proposals for disposal) expected to be generated from the start of construction through operation to plant closure.

Approach

Staff assesses both on-site and off-site waste management. On-site management of wastes generated during construction and operation is assessed to determine if it can be accomplished in an environmentally safe manner and in compliance with applicable LORS. Off-site management, treatment, and disposal of project wastes is analyzed to determine if it would result in significant adverse impacts to existing waste disposal facilities. The analysis compares the amount of construction and operational waste generated by the proposed facility to capacities of nearby landfills approved to accept the waste. When project wastes include hazardous contaminants, staff evaluates the need for appropriate measures to ensure safe handling of the hazardous material. Typically, the applicant has investigated a proposed site for existing contamination from previous uses. When contamination is found or suspected, the applicant would need to remediate the site. Staff may propose mitigation that can include providing a waste management plan, describe the waste and its their origin, estimate of the amounts and frequency of waste, and any additional measures needed to ensure that the project is operated in an environmentally safe manner.

6.6 LAND USE

Purpose

It is the goal of the California Energy Commission's Staff to ensure that energy facility projects should not result in significant land use impacts on a community or region.

Scope

Staff's assessment focuses on two main issues associated with land use resources: 1) the conformity of the project with local land use plans, ordinances and policies; and 2) the potential of the proposed project to have direct, indirect and cumulative land use conflicts with existing and planned uses.

Approach

Staff's assessment starts with the identification of the applicable land use laws, ordinances, regulations, and standards, evaluates the project's potential to adversely affect land uses, and describes measures to mitigate and/or avoid such potential impacts. After identification of the applicable laws, staff prepares a consistency analysis including a zoning and plan (general, community and/or specific) compatibility determination to assess whether or not a project is compatible with adjacent and surrounding land uses. Staff may obtain input from the local planning agency to clarify or interpret the applicable code, ordinance or plan, and/or a determination by the Commission if there are significant inconsistencies between the proposed project and the local planning regulations. The applicant may need to obtain a General Plan amendment or zoning change from the local government. Although staff can provide guidance in this area, the applicant must work directly with the local government to obtain these changes.

In making a compatibility determination, staff also considers whether or not the project would create a use that is out of context with existing development, stimulate precedent setting changes to existing land ownership or development patterns, or result in negative changes that cause gentrification or decay of an area. If it is concluded that the project could result in land use impacts, staff may recommend that the project proponent comply with local site development standards, obtain the appropriate leases from other agencies to encroach upon public lands, and obtain appropriate entitlements necessary for property rezones.

6.7 TRAFFIC AND TRANSPORTATION

Purpose

It is the goal of the California Energy Commission's Staff to identify, and where possible, minimize or eliminate significant traffic and transportation impacts associated with a proposed energy facility project and to ensure the compliance with all applicable laws, ordinances, regulations and standards (LORS).

Scope

Staff assesses the extent to which the project complies with all appropriate LORS, and whether or not the project will create impacts that affect the transportation system of a project area.

Approach

Staff prepares an on-site assessment of traffic conditions that generally includes site access, parking, and internal circulation, potential off-site impacts to the roadway system, and impacts to the railway systems. Typically on-site circulation, access and parking are regulated by the local authority. However, staff evaluates the project to ensure it meets the regulations, and requires additional mitigation if necessary. Off-site assessment of traffic conditions discusses the existing level of service (LOS) on the roadways within the study area, and impacts to the LOS on the roadways that would result from the project. Typically peak hour traffic is the most critical factor in determining the level of significant of impacts. However, the LOS levels of threshold can vary from project location to project location because they are set by the local jurisdictions. Roadway safety is also assessed in terms of hazardous materials to be shipped and the size of the vehicle to be used for the shipment. Permits may be required for some freight shipments, construction activities that encroach into a public right of way, and for the transport of hazardous materials. Railway system impacts are also discussed, particularly if an extension of a line is anticipated, or if numerous large shipments of supplies are expected from outside the project area. Mitigation could be required depending on project related impacts, and will sometimes include requirements for transportation system management plans, roadway improvements, roadway maintenance agreements, and encroachment permits.

6.8 NOISE

Purpose

It is the goal of the California Energy Commission's Staff to protect the community and workers against unreasonable noise intrusion resulting from the construction and operation of energy facilities.

Scope

Staff assesses the noise associated with a power plant project and how it affects workers in the power facility while it is under construction and in operation, and also assesses the short-term (during construction) and long-term (during operation) affects of noise associated with the project on the surrounding community.

Approach

Staff evaluates the proposed facility to determine if it is in compliance with all applicable federal, state, and local noise laws, ordinances, regulations and standards, and also discusses any potentially significant resulting noise impacts. Staff reviews the project to determine compliance with California Occupational Safety and Health Administration (Cal-OSHA) requirements, which establishes employee noise exposure limits. Based on the conclusions of a project's noise analysis, staff could recommend mitigation measures to reduce noise impacts to which workers could potentially be exposed. In evaluating community noise, staff first analyzes existing ambient daytime and nighttime noise. Typically, an individual's subjective reaction to a new noise is compared to the level of the existing ambient noise and its characteristics (tone and frequency), to which one has become accustomed, with the level of the new noise and its characteristics. Minimizing the exposure of the surrounding community to energy facility-induced noise can be accomplished by ensuring compliance with applicable local regulations and mitigation. Mitigation is recommended on a case-by-case basis and the type of mitigation required would depend on the level of noise associated with a given project.

6.9 VISUAL RESOURCES

Purpose

It is goal of the California Energy Commission's Staff to identify and to avoid where possible, or minimize, significant visual impacts associated with an energy facility project and to assure the compliance with all applicable laws, ordinances, regulations and standards (LORS).

Scope

Staff describes the proposed project's visual characteristics to determine their potential impact to the visual setting for adjacent and surrounding land uses.

Approach

Staff's analysis describes the various features of the existing visual setting, and the project's proposed visual characteristics including horizontal and vertical dimensions of structures, structure placement and color, and lighting. Existing visual setting features include the topographic, vegetative, hydrologic, and cultural features of the landscape as it exists prior to construction of the proposed project. Staff then identifies the viewshed, determines the key observation points, and visual susceptibility. Factors considered include viewer exposure, relative project size, season, light conditions, quality, viewer sensitivity, visibility, exposure, contrast and dominance. The project is reviewed to determine if compliant with applicable LORS, and mitigation is recommended depending upon the level of the impact. When cumulative visual impacts are found to be significant, whether in relation to other proposed projects or to the host industry, staff recommends feasible mitigation measures to reduce those impacts. The applicant may also provide mitigation measures, which are then refined, as necessary, based on staff review, other agencies, and the public. If members of the public in the project vicinity have expressed concerns regarding the appearance of the project, staff solicits their input regarding appropriate mitigation. Mitigation can consist of several methods, including relocation, design, color/texture, landscaping, and lighting control, etc. The aim of such mitigation is to reduce the size, mass, bulk, line, and contrast of the proposed facilities in order to achieve closer compatibility with the setting. Mitigation can be proposed by the project applicant, staff, an intervenor, an agency, or the public.

6.10 CULTURAL RESOURCES

Purpose

It is the goal of the California Energy Commission's Staff to preserve California's prehistoric and historic archaeological and ethnographic heritage and to protect and maintain California's diverse cultural resources by avoiding or minimizing significant impacts to cultural resources by energy-related facilities

Scope

The staff's analysis determines which significant cultural resources will be impacted by the project and identifies measures to mitigate any potentially significant impacts.

Approach

Staff analyzes three aspects of cultural resources: prehistoric and historic archaeological resources and ethnographic resources. The extent of impact analysis varies from project to project, depending upon whether the area is known or likely to have cultural resources and the significance of those resources. For a project located in an area where the site has been totally disturbed by previous development or where conditions indicate that previous human occupation or use did not occur, impact analysis may be limited to a map review, a literature and records search, contacts with knowledgeable archaeologists familiar with the site area, and preparation of documentation explaining that no potential exists for adverse impacts to cultural resources. If a project area is located near known sensitive cultural resources and is likely to impact the resources, mitigation would likely be required. Mitigation of potentially significant impacts to cultural resources could range from avoidance of the resource area to full-scale excavation and recovery of materials and information if avoidance is infeasible. Avoidance is usually the preferred mitigation.

6.11 SOCIOECONOMICS

Purpose

It is the goal of the California Energy Commission's Staff to identify, eliminate where possible, or minimize substantial socioeconomic impacts associated with an energy facility project, and to assure the compliance with all applicable laws, ordinances, regulations and standards.

Scope

Staff's analyses consist of an assessment of the socioeconomic setting of a proposed project, and an evaluation of the impacts to the socioeconomic setting that could result from a proposed project.

Approach

Staff analyzes the existing socioeconomic setting of the area and evaluates the project in terms of population and demographic characteristics, economic base and employment data, workforce, commute times, unemployment rates, housing, capacities of law enforcement agencies and medical providers, school district enrollment, and applicable taxing entities. Staff assesses the potential socioeconomic impacts from construction and operation of a project and its appurtenant facilities, as well as cumulative impacts from the proposed project. The type of mitigation recommended is dependent on the project's resulting impacts and the level of those impacts. However, staff could recommend mitigation that the project proponent hire (to the extent possible) local workers for both the construction and operations phases of a project, negotiate an agreement with affected school districts to reimburse the districts for any costs to the districts that are not reimbursed by the State of California, purchase materials from local companies, and other mitigation as appropriate.

Staff also analyzes potential issues involving disproportionate impacts on minority and low-income populations resulting from exposure to direct and cumulative impacts associated with the proposed facility. Staff follows established guidelines defining these populations. If potentially significant impacts are identified, then staff from other appropriate technical areas are involved to provide a comprehensive analysis.

6.12 BIOLOGICAL RESOURCES

Purpose

It is the goal of the California Energy Commission's Staff to preserve biological resources and maintain California's biological diversity by avoiding or minimizing impacts of energy-related facilities to state and federally listed species and other sensitive biological resources and their habitats.

Scope

The staff assesses the potential effects of a project on the biological resources and ecological characteristics of a project area, including species identified as rare, threatened, and endangered by the California Department of Fish and Game (CDFG) and the U. S. Fish and Wildlife Service (USFWS), referred to as "listed species," and other sensitive biological resources. Evaluations in the areas of wildlife biology, fishery biology, marine biology, and botany may be necessary.

Approach

The staff's analysis starts with information provided in the application describing the biological setting of the proposed project. In areas where sensitive biological resources may occur, we require the Applicant to include the results of appropriate biological surveys be conducted at the proper time of year by suitably trained biologists. Surveys are necessary to ensure timely project review and a complete impact analysis and to assess the potential for biological mitigation of a proposed energy facility project. The cost of avoidance and mitigation of impacts to listed species and other sensitive biological resources can be substantial. If impacts cannot be avoided, we work with an applicant to mitigate a project's significant biological resource impacts. When such a situation arises, the applicant must be prepared to discuss the availability of mitigation, including off-site mitigation and its costs. Various mitigation approaches have been recommended in the past and can be explored in meetings with the staff.

Applicants may need state and/or federal permits if a rare, threatened, or endangered species is present at the site. The staff will work with the applicant to identify other necessary permits, however, it is up to the applicant to file for and obtain those permits.

6.13 SOIL AND AGRICULTURAL RESOURCES

Purpose

It is the goal of the California Energy Commission's Staff that the conversion of agricultural land by energy facility projects be avoided whenever feasible and that such conversion may be a significant adverse impact.

Scope

Staff assesses the potential direct and indirect effects of a project on the agricultural resources of a project area by analyzing the soil productivity and social and economic factors important to a site's viability for agricultural purposes.

Approach

Staff begins by evaluating the potential agricultural productivity of the soil, which is based upon the soil's Land Capability Class System rating and the Storie Index rating. A site assessment is also prepared that identifies five factors that affect the economic viability of the site for agricultural uses. The five factors include size of the project site, water availability, surrounding and adjacent land uses, protected resources lands, and constraints to agriculture. These factors are then rated to determine their relative importance. Typically local agencies would develop the thresholds of significance for land converted from an agricultural use, thus, the thresholds can vary from project location to project location. Although avoidance of productive farmland is the preferred mitigation, the use of development fees may be an acceptable mitigation method where conversion of farmland would otherwise be unavoidable. Fees would be based upon the cost of acquiring a conservation easement or other development right over equivalent or better property. Additional approaches to mitigating impacts from agricultural land conversion may be available for specific projects, mitigation approaches of which can be explored by meeting with staff and with the local government.

6.14 WATER RESOURCES

Purpose

It is the goal of the California Energy Commission's Staff to protect California's water resources by avoiding or minimizing the impacts of energy facilities on water supplies and water quality, and to prevent the occurrence of flood damage to or by such projects.

Scope

Staff assesses power plant operation in order to determine whether or not there would be impacts associated with water supplies, water quality, flood hazards and drainage, the level of impact, and would then require mitigation as appropriate. Staff follows the established policies of other federal, state, regional and local governments and seeks to minimize the impact on the state's water resources by encouraging use of less water-intensive technologies.

Approach

Water supply is assessed to determine the adequacy of proposed water sources to meet construction and operational needs without adversely diminishing or degrading local or regional water supplies; how the project is would meet emergency demands when the primary water supply is interrupted; and any proposed fresh water conservation methods. The assessment for water quality is site specific and addresses erosion and sedimentation of local waterways; impact of discharges on ground water quality; spill containment methods; potential for off-site waste disposal sites to degrade local water quality; and, treatment plan for spills and runoff. Flood hazards and drainage conditions associated with a project are also evaluated to assess the vulnerability of the energy facility to 100-year frequency overland or overflow flooding, or 100-year frequency tidal run-up flooding caused by a tsunami, seiche, or coastal surge; the adequacy of a facility to carry runoff; and the increased exposure of downstream properties to flooding, erosion or sediment deposition. Mitigation to reduce impacts to water supply, water quality and flood hazards are dependent upon the conclusions of the assessment. However, some methods include management plans, sediment traps or catch basins, lined diversion ditches, berms or dikes, increasing the grade of the site.

6.15 GEOLOGICAL RESOURCES

Purpose

It is the goal of the California Energy Commission's Staff to safeguard life and limb, health, property and the public's general welfare by ensuring that energy facilities can be built in compliance with all applicable laws, ordinances, regulations and standards (LORS) related to geological hazards.

Scope

Staff analyzes of the potential for geological hazards (e.g. earthquake shaking, landslides, soil liquefaction, surface fault rupture, and differential settlement) in order to determine whether the project can be designed and constructed in accordance with all applicable laws and regulations.

Approach

In order to evaluate potential hazards and impacts, staff begins by evaluating the geological descriptions included in an application, and supplementing that information as necessary by utilizing staff expertise and resources. Some of the potential hazards that may be encountered at a project site include: fault rupture, seismic ground shaking; seismic ground failure, including liquefaction; seiche, tsunami, or volcanic hazard; landslides or mud flows; erosion, changes in topography or unstable soil conditions from excavation, grading, or fill; subsidence of the land; expansive soils; and unique geologic or physical features. Additionally, staff review the overall foundation conditions at the site to determine, whether unstable soils exist at the project site. For example, if potentially unstable or deep soils are discovered they are evaluated to determine their extent and behavior during earthquake shaking. If the site is located in hilly or mountainous terrain, landslide conditions are evaluated both above and below the site. Mitigation could include changes in the engineering design methods, rearrangement of the project, or pile foundations depending upon geologic conditions that exist at the site. However, if the potentially unstable ground is too extensive and/or the mitigation too expensive, the proposed site may not be appropriate for use as a power plant site, transmission line tower, or natural gas pipeline.

6.16 PALEONTOLOGIC RESOURCES

Purpose

It is the goal of the California Energy Commission's Staff to preserve significant paleontologic resources and to protect and maintain California's diverse fossil resources by avoiding or minimizing potential impacts of energy-related projects to significant fossil resources.

Scope

Staff assesses the potential for a project to cause significant adverse impacts to paleontologic resources and to recommend methods to mitigate any potentially significant impacts that cannot be avoided.

Approach

Proposed energy facility projects are often located in areas where the underlying geologic formations are likely to contain fossil materials. Since construction of a project usually entails ground surface disturbance and sub-surface excavation, impacts to paleontologic resources in such areas are possible. Staff begins their assessment with a project site visit to evaluate pre-project survey conditions, determine the site's sensitivity for resources, inspect any fossil resource localities identified during pre-application surveys, and evaluate the potential significance of any resources and/or sites identified. Additionally, staff performs literature review, map and records searches, surveys, and testing programs. The extent of analysis varies from project to project, depending upon the potential of the underlying geologic formations to contain significant paleontologic resources. Should potential impacts be unavoidable, the commission staff may recommend recovery of any sensitive paleontologic materials, recordation and analysis of all pertinent data and scientific information from the site and any recovered fossil resources, and curation in a qualified repository, of the data and materials recovered.

6.17 FACILITY DESIGN

Purpose

It is the goal of the California Energy Commission's Staff to ensure the facility design will meet its intended purposes and safeguard life and limb, health, property and public welfare through compliance with all applicable engineering design codes and standards.

Scope

The facility design analysis focuses on the design of the mechanical, structural, civil, and electrical components of the project and confirms that it meets applicable building code requirements and mechanical/electrical design standards.

Approach

Facility design is composed of four technical disciplines: civil, structural, mechanical, and electrical engineering. Facility design review consists of several components including site preparation and development, structure design, mechanical systems, electrical systems, quality assurance/quality control for both conceptual and preliminary designs. Staff assesses whether or not site preparation and development can be accomplished in accordance with applicable laws and. A complete and detailed final design review of the proposed facilities, including construction inspections, takes place after certification. Any significant environmental impacts uncovered during the final assessment would need to be mitigated. Staff typically recommend that the project proponent work with the local agency building officials to ensure the project is built to current standards, and requires preparation of soils and geology engineering reports so that any potential geological conditions associated with a site can be mitigated.

6.18 ENERGY FACILITY RELIABILITY

Purpose

It is the goal of the California Energy Commission's Staff to ensure that approved energy facilities do not compromise the reliability of the power supply system. This is accomplished by ensuring that each power plant is designed, constructed and maintained to typical industry standards.

Scope

Staff conducts a generating facility reliability analyses to determine whether the proposed facility is likely to exhibit a level of reliability at least equal to the bulk of the generating plants on the system.

Approach

Generating facility reliability is determined by availability and maintainability. Staff considers whether there is an adequate and reliable source of fuel, that a market for the fuel exists, the existence of substitute fuels, and the means for transporting the fuel to the power plant. Staff also analyzes water availability to determine if there is an adequate and reliable source of water and how it would be transported to the site. The project would be analyzed to determine its ability to resist any natural hazards because hazards such as flooding or earthquakes can threaten the ability of a power plant to generate power when needed. Availability can be maintained in the face of such hazards through proper siting and design of the proposed facility.

Maintainability refers to the ease of maintaining the facility in operating condition. Staff commonly analyzes maintainability by examining the applicant's maintenance plan to ensure a facility can be maintained in operating condition even during an emergency. If the power plant employs commonly-used technology, then staff recommends conditions of certification that could include 1) that the power plant be designed and constructed by an experienced firm, and 2) ongoing monitoring of reliability. Additional conditions may be required dependent upon the conclusions of the analysis.

6.19 GENERATING EFFICIENCY

Purpose

It is the goal of the California Energy Commission's Staff to ensure that power plants comply with all applicable laws and regulations governing efficiency of fuel consumption, and that they do not waste significant amounts of fuel.

Scope

Staff assesses the design of the generating equipment and ancillary facilities to determine whether they would result in a significant adverse impact on energy resources or a significant adverse impact on the energy delivery system.

Approach

Power plants that fall under the commission's jurisdiction are likely to consume substantial amounts of fuel. Staff analyzes the source and amount of fuel required by the proposed project to determine if it would result in a significant impact to fuel resources. Because inefficient and unnecessary consumption of energy (e.g. non-renewable fuels such as natural gas and oil) constitutes an adverse environmental impact, part of the analysis considers whether or not the use of the fuel is wasteful. Staff then considers alternatives to the project and the feasibility of implementing the alternatives. An alternative is generally considered feasible if it is available for installation within the project's time frame, meets the project's needs for energy supply and operational characteristics, is sufficiently reliable and licensable, and is financeable. Project needs are balanced with the benefits and costs of increased efficiency to achieve an optimum result. If a feasible alternative is identified by staff that offers substantial cost-effective energy savings compared to the proposed project, the applicant would be notified. At that time, the applicant can withdraw the application and redesign the project to incorporate the more efficient alternative, or offer some compensating mitigation. Other mitigation may be identified to either eliminate or reduce impacts as required on a project.

6.20 TRANSMISSION SYSTEM ENGINEERING

Purpose

It is the goal of the California Energy Commission's Staff to ensure adequate outlet capacity, maintain reliable service to customers, maintain high efficiency of operation and minimize costs to customers, minimize environmental impacts, avoid adversely affecting interconnected utilities and ensure conformance with applicable laws, ordinances, regulations, and standards (LORS).

Scope

Staff assesses the engineering and planning design of the transmission facilities, their compliance with applicable legal requirements, and the effects of an applicant's proposal on the existing and future transmission system.

Approach

Staff's analyzes the adequacy of design, as well as planning provisions to protect environmental quality, ensure public health and safety and the general welfare and the likelihood of conformance of the proposed facilities with applicable LORS. The analyses can vary depending if the transmission line proposed is by an investor owned utility, a municipal utility, a qualifying facility (QF), or independent power producer (IPP). However, the focus of the analysis is to ensure adequate outlet capacity, reliable service to ratepayers, and high efficiency of operation at a reasonable cost to ratepayers. Additionally, the analysis attempts to minimize environmental impacts while avoiding adverse effects to interconnected utilities. As part of the transmission engineering assessment, an engineering analysis and a system evaluation are prepared. The transmission engineering analysis covers design of the power plant switchyard, the outlet transmission line and the termination or connection to the utility system. The transmission system evaluation is an assessment of the applicant's and host utility's planning proposals that would affect system performance and reliability. Also included in the assessment is a reconnaissance or preliminary analysis of potential transmission alternatives that compares cost and reliability. If staff believes there are superior technical alternatives, they are brought to the attention of the applicant. Mitigation recommended is intended to ensure reliability, efficiency and adequate outlet capacity, and to reduce environmental impacts associated with the proposed facility.

CHAPTER 7 GENERAL CONDITIONS, COMPLIANCE MONITORING, AND CLOSURE

The project General Conditions, including Compliance Monitoring and Closure Plan, (Compliance Plan) are established as required by Public Resources Code section 25532. The Compliance Plan provides a means for assuring that the facility is constructed, operated and closed in conjunction with air and water quality, public health and safety, environmental and other applicable regulations, guidelines, and conditions adopted or established by the Energy Commission and specified in the written decision on the Application for Certification or otherwise required by law. The Compliance Plan is included as part of the final decision on the project.

The Compliance Plan is composed of the following elements:

1. General conditions that:
 - a) set forth the duties and responsibilities of the Compliance Project Manager (CPM), the project owner, delegate agencies, and others;
 - b) set forth the requirements for handling confidential records and maintaining the compliance record;
 - c) state procedures for settling disputes and making post-certification changes; and
 - d) state the requirements for periodic compliance reports and other administrative procedures that are necessary to verify the compliance status for all Energy Commission approved conditions; and
 - e) establish requirements for facility closure plans.
2. Specific conditions of certification that follow each technical area contain the measures required to mitigate any and all potential adverse project impacts associated with construction, operation and closure to an insignificant level. Each specific condition of certification also includes a verification provision that describes the method of verifying that the condition has been satisfied.

A CPM will oversee the compliance monitoring and shall be responsible for:

1. ensuring that the design, construction, operation, and closure of the project facilities is in compliance with the terms and conditions of the Commission Decision;
2. resolving complaints;

3. processing post-certification changes to the conditions of certification, project description, and ownership or operational control;
4. documenting and tracking compliance filings; and,
5. ensuring that the compliance files are maintained and accessible.

The CPM is the contact person for the Energy Commission and will consult with appropriate responsible agencies and the Energy Commission when handling disputes, complaints and amendments.

All project compliance submittals are submitted to the CPM for processing. Where a submittal required by a condition of certification requires CPM approval, it should be understood that the approval would involve all appropriate staff and management.

The CPM will schedule pre-construction and pre-operation compliance meetings prior to the projected start-dates of construction, plant operation, or both. The purpose of these meetings will be to assemble both the Energy Commission s and the project owner s technical staff to review the status of all pre-construction or pre-operation requirements contained in the Energy Commission s conditions of certification to confirm that they have been met, or if they have not been met, to ensure that the proper action is taken. In addition, these meetings shall ensure, to the extent possible, that Energy Commission conditions will not delay the construction and operation of the plant due to oversight or inadvertence and to preclude any last minute, unforeseen issues from arising. Pre-construction meetings held during the certification process may need to be publicly noticed unless they are confined to administrative issues and process.

The Energy Commission shall maintain as a public record, in either the Compliance file or Docket file, for the life of the project (or other period as required):

1. all documents demonstrating compliance with any legal requirements relating to the construction and operation of the facility;
2. all monthly and annual compliance reports filed by the project owner;
3. all complaints of noncompliance filed with the Energy Commission; and,
4. all petitions for project or condition changes and the resulting staff or Energy Commission action taken.

It is the responsibility of the project owner to ensure that the general compliance conditions and the conditions of certification are satisfied. The general compliance conditions regarding post-certification changes specify measures that the project owner must take when requesting changes in the project design, compliance conditions, or ownership. Failure to comply with

any of the conditions of certification or the general compliance conditions may result in reopening of the case and revocation of Energy Commission certification, an administrative fine, or other action as appropriate.

Who Should the Developer-Applicant Contact?

The Energy Commission staff assigns a Compliance Project Manager (CPM) along with a Project Manager (PM) when an application is filed with the Commission. The CPM and the PM work along side each other during the entire licensing process. Once a project is successfully licensed by the Commission, the CPM takes over and handles the project during the construction and operation phases. If the developer-applicant has any questions about compliance issues before they file an application, they should contact the Energy Commission's Siting Office by calling or writing to:

Chuck Najarian
Compliance Program Manager
California Energy Commission
1516 Ninth St., M.S. 15
Sacramento, CA 95814
(916) 654-4079
cnajaria@energy.state.ca.us

CHAPTER 8 LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

The following Laws, Ordinances, Regulations and Standards (LORS) represent the LORS that are typically applicable and required in the permitting and construction of energy facilities in California. The CEC is required by law to ensure that projects certified under its jurisdiction are in compliance with all applicable federal, state and local LORS. This compilation of LORS is intended as a guide to assist applicants in compiling the LORS applicable to their specific project. Not all LORS are applicable to all projects and it is particularly difficult to provide guidance on local LORS. As a result, we have provided general guidance with respect to the type of local LORS that have been applicable to past siting cases.

8.1 AIR QUALITY

LOCAL

The U.S. Environmental Protection Agency (EPA), typically has reviewed and approved the air quality management districts (AQMD) regulations and has delegated to AQMD the implementation of the federal PSD, Non-attainment NSR, and Title V programs. The AQMD implements these programs through its own rules and regulations, which are, at a minimum, as stringent as the federal regulations. Proposed projects are subject to various AQMD rules and regulations. The rule entitled New Source Review, applies to all new and modified stationary sources. It defines requirements related to Best Available Control Technology (BACT), offsets, emission calculation procedures to estimate bankable emission reduction credits (ERCs), and requirements for the federal acid rain program.

STATE

CALIFORNIA STATE HEALTH AND SAFETY CODE

The California State Health and Safety Code, Section 41700, requires that no person shall discharge from any source whatsoever such quantities of air contaminants or other material which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, response, health, or safety of any such person or the public, or which causes, or have a natural tendency to cause, injury or damage to business or property.

The state's Air Resources Board (ARB) promulgates state-level ambient air quality standards, which are, in general, more stringent than the national ambient air quality standards.

FEDERAL

FEDERAL CLEAN AIR ACT

The federal Clean Air Act requires any new major stationary sources of air pollution and any major modifications to major stationary sources to obtain an air pollution permit before commencing construction. This process is known as the New Source Review (NSR). Its requirements differ depending on the attainment status of the area where the major facility is to be located. Prevention of Significant Deterioration (PSD) requirements apply in areas that are in attainment of the national ambient air quality standards. The Non-attainment area NSR requirements apply to areas that have not been able to demonstrate compliance with national ambient air quality standards. The entire program, including both PSD and Non-attainment NSR permit reviews, is referred to as the federal NSR program.

Title V of the federal Clean Air Act requires states to implement and administer an operating permit program to ensure that large sources operate in compliance with the requirements included in the Code of Federal Regulations 40, part 70. A Title V permit contains all of the requirements specified in different air quality regulations which affect an individual project.

8.2 PUBLIC HEALTH

LOCAL

Typically the local Air Pollution Control District has no specific rules implementing Health and Safety Code section 44300. It may however, require the results of a health risk assessment as part of the application for the Authority to Construct (ATC).

STATE

CALIFORNIA HEALTH AND SAFETY CODE

California Health and Safety Code section 39606 requires the California Air Resources Board (CARB) to establish California's ambient air quality standards to reflect the California-specific conditions that influence its air quality. Such standards have been established by the CARB for ozone, carbon monoxide, and sulfur dioxide, PM10, lead, hydrogen sulfide, vinyl chloride and nitrogen dioxide. The same biological mechanisms underlie some of the health effects of most of these and the noncriteria pollutants. The California standards are listed together with the corresponding federal standards in the **Air Quality** section.

California Health and Safety Code section 41700 states that No person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause or have a natural tendency to cause injury or damage business or property.

The California Health and Safety Code section 39650 et seq. mandates the California Environmental Protection Agency (Cal-EPA) to establish safe exposure limits for toxic, noncriteria air pollutants and identify the best available methods for their control. These laws also require that the new source review rules for each air district include regulations establishing procedures to control the emission of these pollutants. The toxic emissions from natural gas combustion are listed in CARB's April 11, 1996 California Toxic Emissions Factors (CATEF) database for natural gas-fired combustion turbines. Cal-EPA has developed specific cancer potency estimates for assessing their related cancer risks at specific exposure levels. For noncancer-causing toxic air pollutants, Cal-EPA established specific no-effects levels (known as reference exposure levels) for assessing the likelihood of producing health effects at specific exposure levels. Such health effects would be considered likely only when exposure exceeds these reference levels. Staff uses these Cal-EPA potency estimates and reference exposure values in its health risk assessments.

California Health and Safety Code section 44300 et seq. requires facilities that emit large quantities of criteria pollutants and any amount of noncriteria pollutants to provide the local air district an inventory of toxic emissions. Such facilities may also be required to prepare a quantitative health risk assessment to address the potential health risks involved. The CARB and the San Joaquin Valley Air Quality Management District will ensure implementation of these requirements for the proposed project.

FEDERAL

CLEAN AIR ACT OF 1970

The Clean Air Act of 1970 (42 U.S.C., section 7401 et seq.) required establishment of ambient air quality standards to protect the public from the effects of air pollutants. These standards have been established by the United States Environmental Protection Agency (EPA) for the major air pollutants, nitrogen dioxide, ozone, sulfur dioxide, carbon monoxide, sulfates, particulate matter with a diameter of 10 micron or less (PM10) and lead. The Act required states to adopt plans to ensure compliance by 1982. These plans are known as the State Implementation Plans (SIPs). The EPA considers it appropriate to differentiate between PM10 and particulate matter with a diameter of 2.5 micron or less (PM2.5). Such particulate matter may serve as a source of exposure to both criteria and noncriteria pollutants.

8.3 WORKER SAFETY AND FIRE PROTECTION

LOCAL

UNIFORM FIRE CODE (UFC)

The uniform fire code contains provisions necessary for fire prevention and information about fire safety, special occupancy uses, special processes, and explosive, flammable, combustible and hazardous materials.

Uniform Fire Code Standards. This is a companion publication to the UFC and contains standards of the American Society for Testing and Materials and of the National Fire Protection Association.

CALIFORNIA BUILDING CODE (CAL. CODE REGS., TIT. 24, /501 ET SEQ.)

The California Building Code is designed to provide minimum standards to safeguard human life, health, property and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, etc. of buildings and structures.

STATE

CALIFORNIA CODE OF REGULATIONS

Title 8, California Code of Regulations, /450 et seq. (Applicable requirements of the Division of Industrial Safety, including Unfired Pressure Vessel Safety Orders, Construction Safety Orders, Electrical Safety Orders, and General Industry Safety Orders)

Title 8, California Code of Regulation, /5192 (HAZWOPER Standard) Defines the regulations for Hazardous Waste Operations and Emergency Response. This section covers the clean-up operations, hazardous removal work, corrective actions, voluntary clean-up operations, monitoring, and emergency response required by Federal, state, local agencies of hazardous substances that are present at controlled and uncontrolled hazardous waste sites.

FEDERAL

CODE OF FEDERAL REGULATIONS

29 U.S.C. /651 et seq. (Occupational Safety and Health Act of 1970)

29 C.F.R. /1910.120 (HAZWOPER Standard) Defines the regulations for Hazardous Waste Operations and Emergency Response. This section covers the clean-up operations, hazardous removal work, corrective actions, voluntary clean-up operations, monitoring, and emergency response required by Federal, state, and local agencies of hazardous substances that are present at controlled and uncontrolled hazardous waste sites.

29 C.F.R.//1910.1 - 1910.1500 (Occupational Safety and Health Administration Safety and Health regulations)

29 C.F.R.//1952.170 - 1952.175 (Approval of California s plan for enforcement of its own Safety and Health requirements, in lieu of most of the federal requirements found in 1910.1 - 1910.1500.

8.4 TRANSMISSION LINE SAFETY AND NUISANCE

LOCAL

There are no local laws or regulations specifically aimed at the physical structure or dimension s of electric power lines to limit their obstruction or hazardous shock hazards, or eliminate the interactive effects of their electric or magnetic fields. All the noted LORS are implemented industry wide to ensure that lines are uniformly constructed to reflect existing health and safety information while ensuring efficiency and reliability.

STATE

GENERAL ORDER 52

General Order 52 (GO-52), California Public Utilities Commission (CPUC). Provisions of this order govern the construction and operation of power and communications lines and specifically deal with measures to prevent or mitigate inductive interference. Such interference is produced by the electric field induced by the line in the antenna of a radio signal receiver.

GENERAL ORDER 128

GO-128 Rules for Construction of Underground Electric Supply and Communications Systems . Provisions of this order establish requirements and minimum standards for the safe construction of underground AC power and communications circuits.

GENERAL ORDER 95

General Order 95 (GO-95), CPUC, Rules for Overhead Electric Line Construction . This order specifies tree trimming criteria to minimize the potential for power line-related fires.

GO-95, CPUC, Rules for Overhead Line Construction . These rules specify uniform statewide requirements for overhead line construction regarding ground clearance, grounding, maintenance and inspection. Implementing these requirements usually ensures the safety of the general public and line workers.

CALIFORNIA CODE OF REGULATIONS

Title 14 Section 1250 of the California Code of Regulations, Fire Prevention Standards for Electric Utilities . This code specifies utility-related measures for fire prevention.

Title 8, Section 2700 et seq., High Voltage Electric Safety Orders . These safety orders establish essential requirements and minimum standards for safely installing, operating, and maintaining electrical installations and equipment.

NATIONAL ELECTRICAL SAFETY CODE

National Electrical Safety Code, Part 2: Safety Rules for Overhead Lines. Provisions in this part of the code specify the national safe operating clearances applicable in areas where the line might be accessible to the public. Such requirements are intended to minimize the potential for direct or indirect contact with the energized line.

FEDERAL

CODE OF FEDERAL REGULATIONS

Title 14, Part 77 of the Federal Code of Regulations (CFR), Objects Affecting the Navigation Space . Provisions of these regulations specify the criteria used by the Federal Aviation Administration (FAA) for determining whether a Notice of Proposed Construction or Alteration is required for potential obstruction hazards. The need for such a notice depends on factors related to the height of the structure, the slope of an imaginary surface from the end of nearby runways to the top of the structure, and the length of the runway involved. Such notification allows the FAA to ensure that the structure is located to avoid any significant hazards to area aviation.

FAA Advisory Circular (AC) No. 70/460-2H, Proposed Construction and or Alteration of Objects that May Affect the Navigation Space . This circular informs each proponent of a project that could pose an aviation hazard of the need to file the Notice of Proposed Construction or Alteration (Form 7640) with the FAA.

FAA AC No. 70/460-1G, Obstruction Marking and Lighting . This circular describes the FAA standards for marking and lighting objects that may pose a navigation hazard as established using the criteria in Title 14, Part 77 of the CFR.

FEDERAL COMMUNICATIONS COMMISSION REGULATIONS

Transmission line-related radio-frequency interference is one of the indirect effects of line operation as produced by the physical interactions of line electric fields. The level of such interference usually depends on the magnitude of the electric fields involved. Because of this, the potential for such impacts could be assessed from field strength estimates obtained for the line. The following regulations are intended to ensure that such lines are located away from areas of potential interference and that any interference is mitigated whenever it occurs.

Federal Communications Commission (FCC) regulations in Title 47 CFR, Section 15.25. Provisions of these regulations prohibit operation of any devices producing force fields that interfere with radio communications, even if (as with transmission lines) such devices are not intentionally designed to produce radio-frequency energy. Such interference is due to the radio noise produced by the action of the electric fields on the surface of the energized conductor. The process involved is known as corona discharge but is referred to as spark gap electric discharge when it occurs within gaps between the conductor and insulators or metal fittings. Such noise, when generated, manifest as perceivable interference with radio or television signal reception or interference with other forms of radio communication. Since the level of interference depends on factors such as line voltage, distance from the line to the receiving device, orientation of the antenna, signal level, line configuration and weather conditions, maximum interference levels are not specified as design criteria for modern transmission lines. The FCC requires each line operator to mitigate all complaints about interference on a case-specific basis. Staff usually recommends specific conditions of certification to ensure compliance with this FCC requirement. Since electric fields cannot penetrate the soil and other objects, underground lines do not produce the radio noise associated with overhead lines.

Several design and maintenance options are available for minimizing these electric field-related impacts. When incorporated in the line design and operation, such measures also serve to reduce the line-related audible noise discussed below.

8.5 HAZARDOUS MATERIALS MANAGEMENT

LOCAL AND REGIONAL

THE UNIFORM FIRE CODE (UFC)

The UFC contains provisions regarding the storage and handling of hazardous materials. These provisions are contained in Articles 79 and 80. The latest revision to Article 80 was in 1997 (UFC, 1997). These articles contain minimum setback requirements for outdoor storage of ammonia.

THE CALIFORNIA BUILDING CODE (CBC)

The CBC contains requirements regarding the storage and handling of hazardous materials. The Chief Building Official at the local government level must inspect and verify compliance with these requirements prior to issuance of an occupancy permit.

STATE

THE CALIFORNIA HEALTH AND SAFETY CODE

Section 25534 directs facility owners, storing or handling acutely hazardous materials in reportable quantities, to develop a Risk Management Plan (RMP) and submit it to appropriate local authorities, the United States Environmental Protection Agency (EPA), and the designated local Administering Agency for review and approval. The plan must include an evaluation of the potential impacts associated

with an accidental release, the likelihood of an accidental release occurring, the magnitude of potential human exposure, any preexisting evaluations or studies of the material, the likelihood of the substance being handled in the manner indicated, and the accident history of the material. This new, recently developed program supersedes the California Risk Management and Prevention Plan (RMPP).

TITLE 8, CALIFORNIA CODE OF REGULATIONS

Section 5189 requires facility owners to develop and implement effective safety management plans to insure that large quantities of hazardous materials are handled safely. While such requirements primarily provide for the protection of workers, they also indirectly improve public safety and are coordinated with the RMP process.

CALIFORNIA HEALTH AND SAFETY CODE

Section 41700 requires that No person shall discharge from any source whatsoever such quantities of air contaminants or other material which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause injury or damage to business or property.

CALIFORNIA GOVERNMENT CODE

Section 65850.2 restricts the issuance of an occupancy permit to any new facility involving the handling of acutely hazardous materials until the facility has submitted an RMP to the administering agency with jurisdiction over the facility.

FEDERAL

THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III

This Act and the Clean Air Act of 1990 established a nationwide emergency planning and response program and imposed reporting requirements for businesses that store, handle, or produce significant quantities of extremely hazardous materials. The Act (codified in 40 C.F.R., 68.110 et seq.) requires the states to implement a comprehensive system to inform local agencies and the public when a significant quantity of such materials is stored or handled at a facility. The requirements of these Acts are reflected in the California Health and Safety Code, section 25531 et seq.

8.6 WASTE MANAGEMENT

LOCAL

COUNTY GENERAL PLAN PUBLIC FACILITIES ELEMENT

Generators and processors of hazardous waste may be encouraged to develop long-term waste management programs. Large generators of hazardous waste may be encouraged to recycle, treat and detoxify their wastes on site.

STATE

CALIFORNIA HEALTH AND SAFETY CODE, SECTION 25100 ET SEQ. (HAZARDOUS WASTE CONTROL ACT OF 1972, AS AMENDED).

This act creates the framework under which hazardous wastes must be managed in California. It mandates the State Department of Health Services (now the Department of Toxic Substances Control under the California Environmental Protection Agency, or Cal EPA) to develop and publish a list of hazardous and extremely hazardous wastes, and to develop and adopt criteria and guidelines for the identification of such wastes. It also requires hazardous waste generators to file notification statements with Cal EPA and creates a manifest system to be used when transporting such wastes.

TITLE 14, CALIFORNIA CODE OF REGULATIONS, SECTION 17200 ET SEQ. (MINIMUM STANDARDS FOR SOLID WASTE HANDLING AND DISPOSAL)

These regulations set forth minimum standards for solid waste handling and disposal, guidelines to ensure conformance of solid waste facilities with county solid waste management plans, as well as enforcement and administration provisions.

TITLE 22, CALIFORNIA CODE OF REGULATIONS, SECTION 66262.10 ET SEQ. (GENERATOR STANDARDS)

These sections establish requirements for generators of hazardous waste. Waste generators must determine if their wastes are hazardous according to specified characteristics or lists of hazardous wastes. As in the federal program, hazardous waste generators must obtain EPA identification numbers, prepare manifests before transporting the waste off-site, and use only permitted treatment, storage, and disposal facilities. Additionally, generators must use registered hazardous waste transporters for any offsite shipments. Requirements are also established for record keeping, reporting, packaging, and labeling of hazardous wastes, use of containers and tanks for hazardous waste storage, and limiting the amount of time that hazardous waste can be stored onsite.

FEDERAL

RESOURCE CONSERVATION AND RECOVERY ACT (42 U.S.C. SECTION 6921 ET SEQ.)

The Resource Conservation and Recovery Act (RCRA) establishes requirements for the management of hazardous wastes from the time of generation to the point of

ultimate treatment or disposal. Section 6922 requires generators of hazardous waste to comply with requirements regarding:

- record keeping practices which identify quantities of hazardous wastes generated and their disposition,
- labeling practices and use of appropriate containers,
- use of a manifest system for transportation to permitted treatment, storage, or disposal facilities, and
- submission of periodic reports to the U.S. Environmental Protection Agency (EPA) or authorized state agency.

TITLE 40, CODE OF FEDERAL REGULATIONS, PART 260

These sections contain regulations promulgated by the EPA to implement the requirements of RCRA as described above. Characteristics of hazardous waste are described in terms of ignitability, corrosivity, reactivity, and toxicity. Specific types of wastes are also listed.

8.7 LAND USE

LOCAL

GENERAL PLANS

General Plan policies relevant to projects may include:

- land use elements;
- public facilities, institutions, and utilities elements; and
- traffic and circulation elements.

AREA SPECIFIC PLANS

Area specific plans may also contain requirements applicable to siting cases.

ZONING ORDINANCES

Zoning ordinances generally protect the public health, safety, and general welfare, and implement the policies of the General Plan. These ordinances contain regulations that establish zoning districts, govern the use of land and the placement of buildings and improvements within districts, and establish performance standards.

STATE

CALIFORNIA COASTAL ACT OF 1976 (PUB. RESOURCES CODE/30000 ET SEQ.)

The California Coastal Act establishes a comprehensive scheme to govern land use planning along the entire California coast. The Coastal Act sets forth general policies (30200 et seq.) which govern the California Coastal Commission's review

of permit applications and local plans. Specific to energy facilities, the Coastal Act requires that the Coastal Commission designate specific locations within the coastal zone where the establishment of a thermal power plant subject to the Warren-Alquist Act could prevent the achievement of the objectives of the Coastal Act (30413(b)). Pursuant to section 30500, each local government lying within the coastal zone is required to prepare a local coastal program (LCP) for management of that portion of the coastal zone within its jurisdiction. Once the Coastal Commission certifies a LCP, the authority to issue coastal development permits for development within the coastal zone is delegated to the local jurisdiction (30519(a)). Notwithstanding section 30519(a), section 30600(a) of the Coastal Act specifies that a proponent must obtain a coastal development permit for any development other than a facility subject to the provisions of Section 25500 (i.e., a thermal power plant or related facility subject to the Warren-Alquist Act).

DELTA PROTECTION ACT OF 1992 (PUBLIC RESOURCES CODE/29700 ET SEQ.)

This Act created the Delta Protection Commission with a mandate to develop a long-term resource management plan for the Delta Primary Zone. The goals of the plan are to protect, maintain and, where possible, enhance and restore the overall quality of the delta environment, including, but not limited to, agriculture, wildlife habitat, and recreational activities. All local general plans for areas within the Primary Zone are required to be consistent with the regional plan. The Secondary Zone consists of areas within the statutory Delta (as defined in Section 12220 of the California Water Code) but not part of the Primary Zone. Local general plans for land use within the Secondary Zone are not required to conform to the regional plan.

8.8 TRAFFIC AND TRANSPORTATION

LOCAL

COUNTY AND REGIONAL PLANS

The county and regional general plans may set up local goals and guidance policies about building and transportation improvements and introduce planning tools essential for achieving the local and regional transportation goals and policies. Typical goals and policies have included considerations such as:

- private development access to existing roadway network,
- future growth and improvement based on traffic monitoring data,
- traffic congestion management,
- truck traffic on highways,
- truck routes,
- transportation of hazardous materials, and
- road pavement damage.

STATE

THE CALIFORNIA VEHICLE CODE

California Vehicle Code, section 353 defines hazardous materials.

California Vehicle Code, sections 31303-31309 regulate the highway transportation of hazardous materials, the routes used, and restrictions thereon.

California Vehicle Code, sections 31600-31620 regulate the transportation of explosive materials.

California Vehicle Code, sections 32000-32053, regulate the licensing of carriers of hazardous materials and include noticing requirements.

California Vehicle Code, sections 32100-32109, establish special requirements for the transportation of inhalation hazards and poisonous gases.

California Vehicle Code, sections 34000-34121, establish special requirements for the transportation of flammable and combustible liquids over public roads and highways.

California Vehicle Code, sections 34500 et seq., regulate the safe operation of vehicles, including those that are used for the transportation of hazardous materials.

California Vehicle Code, sections 2500-2505, authorize the issuance of licenses by the Commissioner of the California Highway Patrol for the transportation of hazardous materials including explosives.

California Vehicle Code, sections 13369, 15275, and 15278, address the licensing of drivers and the classifications of licenses required for the operation of particular types of vehicles. In addition, these sections require the possession of certificates permitting the operation of vehicles transporting hazardous materials.

CALIFORNIA STREETS AND HIGHWAYS CODE

California Streets and Highways Code, sections 117 and 660-72, and California Vehicle Code 35780 et seq., require permits for the transportation of oversized loads on county roads.

California Streets and Highways Code, sections 660, 670, 1450, 1460 et seq., and 1480 et seq., regulate right-of-way encroachment and the granting of permits for encroachment on state and county roads.

CALIFORNIA HEALTH AND SAFETY CODE

California Health and Safety Code, section 25160 et seq., addresses the safe transport of hazardous materials.

FEDERAL

CODE OF FEDERAL REGULATIONS:

Title 49, Code of Federal Regulations, Section 171-177, governs the transportation of hazardous materials, the type of materials defined as hazardous, and the marking of the transportation vehicles.

Title 49, Code of Federal Regulations, Section 350-399, and Appendices A-G, Federal Motor Carrier Regulations, addresses safety considerations for the transport of goods, materials and substances over public highways.

8.9 NOISE

LOCAL

COUNTY GENERAL PLAN - NOISE ELEMENT

Typically the county has established environmental noise limits based on the land use of the property receiving the noise. The permissible noise levels are generally available in the county or city general plan noise element.

STATE

Similarly, there are no state regulations governing offsite (community) noise. Rather, state planning law (Gov. Code, /65300) requires that all counties and cities prepare and adopt a General Plan. Government Code section 65302(f) requires that a noise element be prepared as part of the General Plan. This element is to address existing and foreseeable noise problems .

CAL-OSHA

As a result of the passage of Cal-OSHA the California Occupational Safety and Health Administration (Cal-OSHA) has promulgated Occupational Noise Exposure Regulations (Cal. Code Regs., tit. 8, /5095 et seq.) that set employee noise exposure limits. These standards are equivalent to the federal OSHA standards described above.

CEQA

CEQA requires that significant environmental impacts be identified, and that such impacts be eliminated or mitigated to the extent feasible. The applicable CEQA Guidelines (Cal. Code Regs., tit. 14, /15000 et seq., Appendix G/XI) explain that a significant effect from noise may exist if a project would result in:

- (a) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

- (b) Exposure of persons to, or generation of, excessive ground vibration or ground-borne noise levels.
- (c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- (d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

FEDERAL

OCCUPATIONAL SAFETY AND HEALTH ACT

Under the Occupational Safety and Health Act of 1970 (29 USC/651 et seq.), the Department of Labor, Occupational Safety and Health Administration (OSHA) has adopted regulations (29 CFR/1910.95) that establish maximum noise levels to which workers at a facility may be exposed. These OSHA noise regulations are designed to protect workers against the effects of noise exposure, and list permissible noise level exposure as a function of the amount of time during which the worker is exposed. OSHA regulations also dictate hearing conservation program requirements and workplace noise monitoring requirements.

There are no federal laws governing offsite (community) noise.

8.10 VISUAL RESOURCES

LOCAL

CITY AND COUNTY GENERAL PLANS

Policies within city and county general plans that are relevant to siting projects have included policies related to:

- land use elements,
- community image,
- parks and recreation elements,
- public facilities, institutions, and utilities elements,
- zoning ordinances,
- land use elements, and
- open space elements.

FEDERAL AND STATE

Proposed projects, including the linear facilities, located on private lands are not subject to federal land management requirements. Likewise, if no roadway in the project vicinity is a designated or eligible State Scenic Highway, no federal or state regulations pertaining to scenic resources are applicable to the project.

8.11 CULTURAL RESOURCES

Cultural resources are indirectly protected under provisions of the federal Antiquities Act of 1906 (Title 16, United States Code, /431 et seq.) and subsequent related legislation, policies and enacting responsibilities, e.g. federal agency regulations and guidelines for implementation of the Antiquities Act. The following laws, ordinances, regulations, standards and policies apply to the protection of cultural resources in California. Projects permitted by the Energy Commission are reviewed to ensure compliance with these laws.

LOCAL

Although the Energy Commission has pre-emptive authority over local laws, it typically ensures compliance with local laws, ordinances, regulations, standards, plans, and policies and local laws may have requirements related to Cultural Resources

STATE

PUBLIC RESOURCES CODE

Public Resources Code, Section 5020.1 defines several terms, including the following:

- Historical resource. Historical resource includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.
- Substantial adverse change. Substantial adverse change means demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired.

Public Resources Code, Section 5024.1 establishes a California Register of Historic Places; sets forth criteria to determine significance; defines eligible properties; and lists nomination procedures.

Public Resources Code, Section 5097.5 states that any unauthorized removal or destruction of archaeological or paleontological resources on sites located on public land is a misdemeanor. As used in this section, public lands means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority or public corporation, or any agency thereof.

Public Resources Code, Section 5097.98 defines procedures for notification of discovery of Native American artifacts or remains and for the disposition of such materials.

Public Resources Code, section 5097.99 prohibits obtaining or possessing Native American artifacts or human remains taken from a grave or cairn and sets penalties for these actions.

Public Resources Code, section 5097.991 states that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. Public Resources Code, section 21000, et seq, California Environmental Quality Act (CEQA). This act requires the analysis of potential environmental impacts of proposed projects and requires application of feasible mitigation measures.

Public Resources Code, section 21083.2 states that the lead agency determines whether a project may have a significant effect on unique archaeological resources; if so, an EIR shall address these resources. If a potential for damage to unique archaeological resources can be demonstrated, such resources must be avoided; if they can't be avoided, mitigation measures shall be required. The law also discusses excavation as mitigation; discusses the costs of mitigation for several types of projects; sets time frames for excavation; defines unique and non-unique archaeological resources; provides for mitigation of unexpected resources; and sets financial limitations for this section.

Public Resources Code, section 21084.1 indicates that a project may have a significant effect on the environment if it causes a substantial adverse change in the significance of a historic resource; the section further defines a historic resource and describes what constitutes a significant historic resource.

Public Resources Code, section 5097.98. If the county coroner determines that the remains are Native American, the coroner is required to contact the Native American Heritage Commission, which is then required to determine the Most Likely Descendant to inspect the burial and to make recommendations for treatment or disposal.

CEQA GUIDELINES

CEQA Guidelines, Title 14, California Code of Regulations, section 15126.4 Consideration and Discussion of Mitigation Measures Proposed to Minimize Significant Effects, sub-section (b) Mitigation Measures Related to Impacts on Historical Resources. Subsection (b) discusses impacts of maintenance, repair, stabilization, restoration, conservation, or reconstruction of a historical resource. Subsection (b) discusses documentation as a mitigation measure. Subsection (b) discusses mitigation through avoidance of damaging effects on any historical resource of an archaeological nature, preferably by preservation in place, or by data recovery through excavation if avoidance or preservation in place is not feasible. Data recovery must be conducted in accordance with an adopted data recovery plan.

CEQA Guidelines, Title 14, California Code of Regulations, section 15064.5 Determining the Significance of Impacts to Archaeological and Historical Resources. Subsection (a) defines the term historical resources. Subsection (b) explains when a project may be deemed to have a significant effect on historic resources and defines terms used in describing those situations. Subsection (c) describes CEQA's applicability to archaeological sites and provides a bridge between the application of the terms historic resources and a unique archaeological resources.

CEQA Guidelines, Title 14, California Code of Regulations, section 15064.7 Thresholds of Significance . This section encourages agencies to develop thresholds of significance to be used in determining potential impacts and defines the term cumulatively significant .

CEQA Guidelines, Appendix G: Issue V: Cultural Resources . Lists four questions to be answered in determining the potential for a project to impact archaeological, historic, and paleontologic resources.

CALIFORNIA PENAL CODE

California Penal Code, section 622.5 -- Anyone who willfully damages an object or thing of archaeological or historic interest can be found guilty of a misdemeanor.

CALIFORNIA HEALTH AND SAFETY CODE

California Health and Safety Code, section 7050.5. If human remains are discovered during construction, the project owner is required to contact the county coroner.

FEDERAL

Portions of a project may be on land managed by the US Bureau of Land Management (BLM). Therefore the project may become an undertaking according to federal definition and the BLM would be involved as the lead federal agency for cultural and paleontologic resources. If cultural resource sites are identified on non-federal lands and they meet federal criteria for eligibility for listing in the National Register of Historic Places, then federal laws also would apply to these resources.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

Title 42, United States Code, section 4321-et seq., requires federal agencies to consider potential environmental impacts of projects with federal involvement and to consider appropriate mitigation measures.

FEDERAL LAND POLICY AND MANAGEMENT ACT (FLPMA)

Title 43, United States Code, Section 1701 et seq., requires the Secretary of Interior to retain and maintain public lands in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric water resource, and archeological values [Section 1701(a)(8)]; the Secretary, with respect to the public lands, shall promulgate rules and regulations to carry out the purposes of this Act and of other laws applicable to public lands [Section 1740].

FEDERAL REGISTER 48 44739-44738 190 SEPTEMBER 30, 1983

Federal Guidelines for Historic Preservation Projects: The US Secretary of the Interior has published a set of Standards and Guidelines for Archaeology and Historic Preservation. These are considered to be the appropriate professional methods and techniques for the preservation of archaeological and historic properties. The Secretary s standards and guidelines are used by federal

agencies, such as the Forest Service, the Bureau of Land Management, and the National Park Service. The State Historic Preservation Office refers to these standards in its requirements for selection of qualified personnel and in the mitigation of potential impacts to cultural resources on public lands in California.

SECTION 106 OF THE FEDERAL GUIDELINES (16 U.S.C. SEC.106)

This section sets forth procedures to be followed for determining eligibility for nomination, the nomination, and the listing of cultural resources in the National Register of Historic Places (NHRP). The eligibility criteria and the process are used by federal, state and local agencies in the evaluation of the significance of cultural resources. Very similar criteria and procedures are used by the state in identifying cultural resources eligible for listing in the State Register of Historic Resources.

EXECUTIVE ORDER 11593, PROTECTION OF THE CULTURAL ENVIRONMENT, MAY 13, 1971, (36 FEDERAL REGISTER, 8921)

This orders the protection and enhancement of the cultural environment through providing leadership, establishing state offices of historic preservation, and developing criteria for assessing resource values.

AMERICAN INDIAN RELIGIOUS FREEDOM ACT

Title 42, United States Code, Section 1996 protects Native American religious practices, ethnic heritage sites, and land uses.

NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT (1990)

Title 25, United States Code Section 3001, et seq. defines cultural items, sacred objects, and objects of cultural patrimony; establishes an ownership hierarchy; provides for review; allows excavation of human remains, but stipulates return of the remains according to ownership; sets penalties; calls for inventories; and provides for return of specified cultural items.

8.12 SOCIOECONOMICS

LOCAL

COUNTY GENERAL PLAN

The public facilities component is typically pertinent to socioeconomic considerations in siting cases. In evaluating a development application, a county may consider impacts on the local school districts.

STATE

CALIFORNIA GOVERNMENT CODE, SECTION 65996-65997

As amended by SB 50 (Stats. 1998, ch. 407, sec. 23), states that public agencies may not impose fees, charges or other financial requirements to offset the cost for school facilities.

FEDERAL

Executive Order 12898, Federal Actions to address Environmental Justice (EJ) in Minority Populations and Low-Income Populations. The order focuses federal attention on the environment and human health conditions of minority communities and directs agencies to achieve environmental justice as part of this mission. The Executive Order requires the US Environmental Protection Agency (EPA) and all other federal agencies (as well as state agencies receiving federal funds) to develop strategies to address this problem. Agencies are required to identify and address any disproportionately high and/or adverse human health or environmental effects of their programs, policies, and activities on minority and/or low-income populations. The Energy Commission receives federal funds and is thus subject to this Executive Order.

8.13 BIOLOGICAL RESOURCES

LOCAL

County General Plan Land Use, Open Space, and Conservation Elements may have goals, policies and implementation procedures related to biological resources.

STATE

CALIFORNIA ENDANGERED SPECIES ACT OF 1984

Fish and Game Code sections 2050 et seq. protects California's rare, threatened, and endangered species.

CALIFORNIA CODE OF REGULATIONS

Title 14, California Code of Regulations sections 670.2 and 670.5 list animals of California designated as threatened or endangered.

FULLY PROTECTED SPECIES

Fish and Game Code sections 3511, 4700, 5050, and 5515 prohibits take of animals that are fully protected in California.

SIGNIFICANT NATURAL AREAS

Fish and Game Code section 1930 et seq. designates certain areas such as refuges, natural sloughs, riparian areas and vernal pools as significant wildlife habitat.

STREAMBED ALTERATION AGREEMENT

Fish and Game Code section 1600 et seq. Requires CDFG to review project impacts to waterways, including impacts to vegetation and wildlife from sediment, diversions and other disturbances.

NATIVE PLANT PROTECTION ACT OF 1977

Fish and Game Code section 1900 et seq. designates state rare, threatened, and endangered plants.

FEDERAL

ENDANGERED SPECIES ACT OF 1973

Title 16, United States Code, section 1531 et seq., and Title 50, Code of Federal Regulations, part 17.1 et seq., designate and provide for protection of threatened and endangered plant and animal species, and their critical habitat.

MIGRATORY BIRD TREATY ACT

Title 16, United States Code, sections 703 - 712, prohibits the take of migratory birds.

8.14 SOIL & WATER RESOURCES

LOCAL

Local sewer system use rules and regulations may set forth the pretreatment requirements for non-domestic discharges to the sewer and wastewater treatment system. Also, there may be local requirements using the California Building Code for grading and erosion control and local ordinances controlling non-storm water discharges to the city's storm water system.

STATE

STATE WATER RESOURCES CONTROL BOARD

Under provisions of the Clean Water Act, the State Water Resources Control Board (SWRCB) adopted two general National Pollutant Discharge Elimination System (NPDES) Permits for control of stormwater runoff during construction and operation of industrial facilities, such as a power plant and associated facilities.

Under the General Construction Activity Storm Water Permit, developers are required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) if activities disturb greater than five acres. This plan identifies best management practices to reduce sediment, oil and other contaminants in stormwater discharges from the site. The general NPDES permit for Industrial Activities also requires developers of industrial facilities, such as power plants, to prepare and implement a SWPPP that identifies best management practices to

reduce the discharge of contaminants from facility operation in stormwater discharge.

The SWRCB has also adopted a number of policies that provide guidelines for water quality protection. The principle policy of the SWRCB which addresses the specific siting of energy facilities is the Water Quality Control Policy on the Use and Disposal of Inland Waters Used for Powerplant Cooling (adopted by the SWRCB on June 19, 1976 by Resolution 75-58). This policy states that use of fresh inland waters should only be used for power plant cooling if other sources or other methods of cooling would be environmentally undesirable or economically unsound. This SWRCB policy requires that power plant cooling water should, in order of priority come from wastewater being discharged to the ocean, ocean water, brackish water from natural sources or irrigation return flow, inland waste waters of low total dissolved solids, and other inland waters. This policy goes on to address cooling water discharge prohibitions.

PORTER-COLOGNE WATER QUALITY CONTROL ACT OF 1967

Section 13551 of the Water Code prohibits the use of water from any source of quality suitable for potable domestic use for nonpotable uses, including industrial uses, if suitable recycled water is available given conditions set forth in Section 13550. These conditions take into account the quality and cost of the water, the potential for public health impacts and the effects on downstream water rights, beneficial uses and biological resources.

Section 13552.6 of the Water Code states that the use of potable domestic water for cooling towers, if suitable recycled water is available, is an unreasonable use of water. The availability of recycled water is based upon a number of criteria, which must be taken into account by the SWRCB. These criteria are that: the quality and quantity of the reclaimed water are suitable for the use; the cost is reasonable; the use is not detrimental to public health; will not impact downstream users or biological resources; and will not degrade water quality.

Section 13552.8 of the Water Code states that any public agency may require the use of recycled water in cooling towers if certain criteria are met. These criteria include that recycled water is available and meets the requirements set forth in section 13550; the use does not adversely affect any existing water right; and if there is public exposure to cooling tower mist using recycled water, appropriate mitigation or control is necessary.

FEDERAL

CLEAN WATER ACT

The Clean Water Act (33 USC/1257 et seq.) requires states to set standards to protect water quality. Although water quality standards are to be met through the regulation of point source discharges to surface water, Section 307 of the Act and Code of Federal Regulations 403, requires that all non-domestic discharges to wastewater treatment plants must receive a pretreatment permit. This permit is to

ensure that the discharge will not interfere with the treatment processes at the plant nor make the facility violate its own discharge permit limitations.

8.15 GEOLOGICAL AND PALEONTOLOGICAL RESOURCES

STATE AND LOCAL

CALIFORNIA BUILDING CODE

The California Building Code (CBC) 1998 edition is based upon the Uniform Building Code (UBC), 1997 edition, which was published by the International Conference of Building Officials. The CBC is a series of standards that are used in the investigation, design, (Chapters 16 and 18) and construction (including grading and erosion control as found in Appendix Chapter 33) that were based upon the UBC that includes supplemental standards specific to California.

CEQA GUIDELINES

The CEQA Guidelines Appendix G provides a checklist of questions that a lead agency should normally address if relevant to a project's environmental impacts. Section (V) (c) asks if the project will directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

Sections (VI) (a), (b), (c), (d), and (e) pose questions that are focused on whether or not the project would expose persons or structures to geological hazards.

Sections (X) (a) and (b) pose questions about the project's affect on mineral resources.

FEDERAL

There are no federal LORS for geological hazards and resources, or grading and erosion control. The United States Bureau of Land Management (BLM) requires an excavation permit for excavations and grading on land under their jurisdiction. For federal LORS related to paleontological resources that may be applicable also see Cultural Resources.

8.16 FACILITY DESIGN

The applicable LORS for engineering design include: Title 24, California Code of Regulations, which adopts the current edition of the CBC as minimum legal building standards; the 1998 California Building Code (CBC) for design of structures; the 1996 Structural Engineers Association of California's Recommended Lateral Force Requirements, for seismic design; ASME-American Society of Mechanical Engineers Boiler and Pressure Vessel Code; and NEMA-National Electrical Manufacturers Association.

8.17 POWER PLANT RELIABILITY

Presently, there are no LORS that establish either power plant reliability criteria or procedures for attaining reliable operation. However, the Energy Commission must make findings as to the manner in which the PDEF is to be designed, sited and operated to ensure safe and reliable operation (Cal. Code Regs., tit. 20, /1752(c)). Staff takes the approach that a project is acceptable if it does not degrade the reliability of the utility system to which it is connected. This is likely the case if the project exhibits reliability at least equal to that of other power plants on that system.

8.18 POWER PLANT EFFICIENCY

LOCAL

No local or county ordinances apply to power plant efficiency.

STATE

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA requires that an environmental analysis be completed prior to determining whether to approve an Application for Certification of a power plant. This analysis must include an identification of the significant effects of a project on the environment, feasible mitigation measures, and alternatives to the project (Pub. Resources Code, /21002.1).

CEQA Guidelines state that the environmental analysis shall describe feasible measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy (Cal. Code Regs., tit. 14, /15126.4(a)(1)). The Guidelines further require consideration of the project's energy requirements and energy use efficiency, its effects on local and regional energy supplies and energy resources, its requirements for additional energy supply capacity; its compliance with existing energy standards, and any alternatives that could reduce wasteful, inefficient and unnecessary consumption of energy (Cal. Code Regs., tit. 14, Appendix F).

WARREN-ALQUIST ACT

The Warren-Alquist Act requires the submittal to the Energy Commission of an NOI prior to filing an AFC (Pub. Resources Code, /25502); this NOI process commonly takes twelve months. Exemption from the NOI process is allowed for certain projects, including cogeneration plants (Pub. Resources Code, /25540.6(a)(1)). Cogeneration, in turn, is defined in terms of efficiency standards (Pub. Resources Code, /25134).

FEDERAL

No federal laws apply to efficiency.

8.19 TRANSMISSION SYSTEM ENGINEERING

LOCAL

There are no local LORS related to transmission system engineering.

STATE

GENERAL ORDER 95

California Public Utilities Commission (CPUC) General Order 95 (GO-95), Rules for Overhead Electric Line Construction formulates uniform requirements for construction of overhead lines. Compliance with this order will ensure adequate service and safety to persons engaged in the construction, maintenance, operation or use of overhead electric lines and to the public in general.

GENERAL ORDER 128

CPUC General Order 128 (GO-128), Rules for Construction of Underground Electric Supply and Communications Systems, establishes uniform requirements and minimum standards to be used for underground supply systems to ensure adequate service and safety.

CPUC Rule 21 provides standards for the reliable connection of parallel generating stations connected to participating transmission owners.

CAL-ISO

Cal-ISO Reliability Criteria also provide policies, standards, principles and guides to assure the adequacy and security of the electric transmission system. With regard to power flow and stability simulations, these Planning Standards are similar to WSCC's Criteria for Transmission System Contingency Performance and the NERC Planning Standards. The Cal-ISO Reliability Criteria incorporate the WSCC Criteria and NERC Planning Standards. However, the Cal-ISO Reliability Criteria also provide some additional requirements that are not found in the WSCC Criteria or the NERC Planning Standards. The Cal-ISO Reliability Criteria apply to all existing and proposed facilities interconnecting to the Cal-ISO controlled grid.

Cal-ISO Scheduling Protocols and Dispatch Protocols require conformance with NERC, WSCC, and Local Area Reliability and Planning Criteria. These standards will be applied in assessing the system reliability implications of the PDEF. Also of major importance to the PDEF and other privately funded projects which may sell through the California Power Exchange (Cal-PX) is the Cal-ISO Day/Hour Ahead Inter-zonal Congestion Management Scheduling Protocol (SP 10), the Transmission System Loss Management Scheduling Protocol (SP 4), and the Creation of the Real Time Merit Order Stack (SP 11). The Congestion Management Scheduling Protocol provides that dispatch not violate system criteria as market participants are requesting generation dispatch or the use of major interties. The Real Time Merit Order Stack is developed based on increasing energy bid prices so that the least cost bids are accepted early on and if congestion is anticipated the highest bids are not selected. The Transmission System Loss Management Scheduling Protocol

uses the Cal-ISO power flow model to identify the effects on total transmission losses at each generating unit and scheduling point. Additional calculations are performed to determine if the participant will be paid more or less than, for instance, the generating units dispatched net power output (ISO 1998e, ISO 1998f).

FEDERAL

There are no federal LORS related to transmission system engineering.