

**SECTION 5.7 LAND USE
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5.7 LAND USE

This section provides a discussion of existing land uses and an evaluation of potential land use impacts associated with the Tesla Power Project (TPP) in accordance with CEC guidelines.

Land use issues have been identified and evaluated based on: onsite surveys; review of current U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps; aerial photography; review of local land use ordinances; and review of land use goals and policies identified in the Alameda County and San Joaquin County General Plans and associated maps. The project area defined by CEC siting regulations includes lands within one mile of the power plant site and within 0.25-mile (1320 feet) of linear facilities (transmission lines and pipelines). Planning designations, zoning, and existing land uses are shown in Figures 5.7-1, 5.7-2, and 5.7-3, respectively.

The TPP consists of a nominal 1,120 MW natural gas-fired power plant, water supply pipeline, natural gas pipeline, and transmission line (see Section 3.0 for a complete description of the proposed facilities).

The following section provides an overview of regional land use, applicable plans and policies, and discusses the potentially affected environment associated with each project component. Potential impacts to existing or planned land uses are also described.

5.7.1 Affected Environment

5.7.1.1 Overview

The proposed power plant site, water pipeline, and transmission line are located in eastern Alameda County. The natural gas supply pipeline from milepost (MP) 0.0 at the power plant to MP 1.0 is in Alameda County and the remaining 1.8 miles of the pipeline are in San Joaquin County.

Alameda County has a land area of approximately 737.5 square miles. Important land uses include urban residential and commercial, government, recreation, transportation and military bases.

The proposed natural gas supply pipeline is located in western San Joaquin County. San Joaquin County has a land area of approximately 1,400 square miles of which 559,435 acres is devoted to agriculture. Nearly 45 percent of San Joaquin County's 563,598 residents live in the county's capital city, Stockton (US Census, 2000).

Pasture is the predominant land use surrounding the project site. The Pacific Gas & Electric (PG&E) Tesla Substation is located approximately one-half mile south of the project site.

The Bethany Reservoir is the nearest recreational facility, approximately four miles northwest of the project site in Alameda County.

5.7.1.2 Plans and Policies

County General Plans and Policies

County and regional land use management plans relevant to the proposed TPP project area include the East County Area Plan-A Portion of the Alameda County General Plan, and the San Joaquin County General Plan.

East County Area Plan. Land use plans and controls in the project area are administered by the Alameda County Planning and Community Development Department. The East County Area Plan subsection of the Alameda County General Plan applies county policy to property within the unincorporated area by the use of land use designations. General Plan Land Use Designations for the project area are illustrated in Figure 5.7-1 and defined in Table 5.7-1 (General Plan Land Use Designations). The General Plan designation for the site of the proposed facility is Large Parcel Agriculture (see Figure 5.7-1).

Table 5.7-1. County General Plan Land Use Designations¹

Land Use Designation	Definition
Alameda County	
Large Parcel Agricultural	Large Parcel Agricultural requires a minimum parcel size of 100 acres, except as provided in Programs 39A and 40. The maximum building intensity for non-residential buildings shall be .01 FAR (floor area ratio), but not less than 20,000 square feet. Where permitted, greenhouses shall have a maximum intensity of 0.25. One single family home per parcel is allowed provided that all other County standards are met for adequate road access, sewer and water facilities, building envelope location, visual protection, and public services. Residential and residential accessory buildings shall have a maximum floor space of 12,000 square feet. Additional residential units may be allowed if they are occupied by farm employees required to reside on-site. Apart from infrastructure under Policy 14A, all buildings shall be located on a contiguous development envelope not to exceed 2 acres, except they may be located outside the envelope if necessary for security reasons or, if structures for agricultural use, necessary for agricultural use. Subject to the provisions of the Initiative, this designation permits agricultural uses, agricultural processing facilities (for example wineries, olive presses), limited agricultural support service (for example animal feed facilities, silos, stables, and feed stores), secondary residential units, visitor-servicing commercial facilities (by way of illustration tasting rooms, fruit stands, bed and breakfast inns, recreational uses, public and quasi-public uses, solid waste landfills and related waste management facilities, quarries, windfarms and related facilities, utility corridors, and similar uses compatible with agriculture. Different provisions may apply in the South Livermore Valley Plan Area or in the North Livermore Intensive Agriculture Area.

Table 5.7-1. County General Plan Land Use Designations¹
(Continued)

Land Use Designation	Definition
Water Management	Water Management Lands allows for a minimum parcel size of 100 acres and a maximum building intensity of .01 FAR. One single family home per parcel is allowed provided that all other County standards are met for adequate road access, sewer and water facilities, building location, visual protection, and public services. Residential and residential accessory uses shall have a maximum floor space of 12,000 square feet. Apart from infrastructure under Policy 14A, all buildings shall be located on a contiguous development envelope not to exceed 2 acres, except they may be located outside the envelope if necessary for security reasons or if structures for agricultural use, necessary for agricultural purposes. Subject to the provisions of the Initiative, this designation provides for sand and gravel quarries, reclaimed quarry lakes, watershed lands, arroyos, and similar and compatible uses. Sand and gravel quarries allow a range of uses including sand and gravel processing, associated manufacturing and recycling uses requiring proximity to quarries, reclamation pits, and public use areas. Note: See individual reclamation plans for specific uses, planned public access, development, and quarry areas. Quarry lakes currently are used for quarrying operations as an interim use and are not open to the public but may be in the future. Watershed lands generally are not open to the public but serve as passive open space and are protected from development. Arroyos are typically used for flood control and may be accessible for public use.
San Joaquin County	
General Agricultural	This land use designation describes areas generally committed to agriculture with viable commercial agricultural enterprises that require large land areas to efficiently produce their crops.
Limited Industrial	This land use designation describes areas encompassing a wide range of industrial activities whose impacts are typically limited.

Source: East County Area Plan, 1994 (Land Use Element); San Joaquin County General Plan, 1992.

¹ The land use designations identified have been summarized, and only those designations directly affected by or adjacent to the proposed project are discussed.

The East County Area Plan includes specific policies designed to preserve and enhance existing development and to provide for orderly and appropriate new development to meet the needs of the area up to the year 2010. The Area Plan has four elements: land use, transportation, public services and facilities, and environmental health. All of these elements contain goals, policies and implementation measures pertinent to proposed development. In November 2000, the voters of Alameda County amended the Area Plan through a ballot initiative popularly known as "Measure D." Measure D, now part of the Area Plan, provides specific requirements that relate to the construction of infrastructure within the East County area. Zoning, subdivision approvals, regulations, and other actions must be consistent with the East County Area Plan within the Alameda County General Plan.

San Joaquin County General Plan. A portion of one project component, the natural gas pipeline, is within San Joaquin County. Land use plans and controls for this project component

are administered by the County Community Development Department. The County General Plan, adopted in 1992, applies county policy to property within the unincorporated area through the use of land use designations. General Plan Land Use Designations for the project area are illustrated in Figure 5.7-1 and defined in Table 5.7-1 (General Plan Land Use Designations). The General Plan designation for the natural gas pipeline route is a combination of General Agriculture and Limited Industrial (see Figure 5.7-1).

State Land Use Plans and Policies

The CEC has both policy development and permitting responsibilities for generating projects over 50 MW. Large generating facilities, such as the TPP, require CEC approval. The CEC is also the lead agency for implementation of CEQA review for the TPP.

The Williamson Act implements a state land use policy that serves to preserve open space and agricultural land. It discourages premature urbanization and relieves pressure on landowners to develop their property because their property taxes are based on the greater value of the land for commercial or residential use. The Williamson Act is implemented through voluntary contracts with property owners that restrict land use for 10 years, with an automatic annual renewal. In return for the agreement to restrict the use of land for 10 years, the landowner receives preferential property tax rates based on the use of the land rather than its market (i.e., development) value. The County of Alameda administers the contracts associated with land under Williamson Act with oversight by the Department of Conservation, Office of Land Conservation. Portions of the TPP natural gas pipeline will traverse Williamson Act lands. In addition, the project site and the adjacent construction staging area are subject to Williamson Act contracts.

Federal Land Use Plans and Policies

Potential project-related impacts to prime or unique farmland as designated by the Natural Resource Conservation Service are described in Section 5.6 Agriculture and Soils.

5.7.1.3 Zoning

Zoning is one of the regulatory mechanisms used by the counties to implement land use policy. The project is located in unincorporated areas of Alameda and San Joaquin counties.

Alameda County. The ordinance implements the General Plan by applying development standards and construction requirements on land as it is developed within the unincorporated portion of the County. It regulates such items as building height, property line setbacks, parking spaces, landscaping, and land use.

Figure 5.7-2 illustrates zoning for all project components; Alameda County zoning designations are defined in Table 5.7-2. The proposed power plant site is zoned A-BE, Agricultural-Minimum Parcel 160 acres. Section 17.06 of the Alameda County General Ordinance Code defines Agricultural designated land as established to promote implementation of general plan land use proposals for agricultural and other non-urban uses, to conserve and protect existing agricultural uses, and to provide space for and encourage such

uses in places where more intensive development is not desirable or necessary for the general welfare (Alameda County, 2001).

Table 5.7-2. Zoning Districts Within the Study Area¹

Zoning District	Description
Alameda County	
Agriculture-Minimum Parcel Size 160 Acres (A-BE)	160 acre minimum. Permitted uses: Public utility building or uses, excluding such uses as a business office, storage garage, repair shop or corporation yard; subject to the provisions of County General Ordinance Section 17.06.040, Conditional Uses Zoning Administrator.
San Joaquin County	
General Agricultural - 160 (AG160)	160 acre minimum. The General Agriculture (AG) Zone is established to preserve agricultural lands for the continuation of commercial agricultural enterprises. This zone is intended to implement the General Agriculture land use category of the General Plan.
Industrial (I-P)	The Industrial (I-P) Zone is established to designate areas encompassing a wide range of industrial activities whose impacts are typically limited.

Source: Alameda County Zoning Code; San Joaquin County Development Title, 2001.

¹ The study area consists of that area within one mile of the power plant site and within a one-half-mile wide corridor of the project linear features.

San Joaquin County. In San Joaquin County, the natural gas pipeline crosses areas zoned General Agricultural with a minimum parcel size of 160 acres (AG160) and Industrial (I-P) (see Figure 5.7-2). San Joaquin County zoning designations are defined in Table 5.7-2. Pipelines are permitted in areas zoned AG and I-P, however, a site development review would be required.

5.7.1.4 Land Use for Project Components

Land use for project components is summarized in Table 5.7-3.

Power Plant Site. Site topography is relatively flat and lies in a topographic basin within the Diablo Range foothills. The site is not developed and is only sparsely vegetated; grazing of farm animals is the current activity on the project site and in the surrounding area. The Tesla Substation operated by PG&E is located to the south of the site on Midway Road. No residences are located within the site boundaries or on adjacent properties.

Table 5.7-3. Land Use, Zoning, and Potentially Sensitive Land Uses within the Study Area¹

Project Element	Mile Post*	Land Use	Zoning	Sensitive Land Use
Power Plant Site	0.0	Agriculture (grazing)	Agriculture (A B-E)	None
Transmission Line Interconnection	0.0-0.8	Agriculture (grazing)	Agriculture (A B-E)	None
Natural Gas Supply Pipeline	0.0-0.9	Agriculture (grazing)	Agriculture (A B-E)	None
	0.9 – 1.5	Agriculture (grazing)	General Agricultural (AG160)	None
	1.5-1.9	Industrial (fallow)	Limited Industrial (I-P)	None
	1.9-2.8	Agriculture (grazing)	General Agricultural (AG160)	None
Water Supply Pipeline	0.0 – 1.7	Agriculture (grazing) Rural Residential	Agriculture (A B-E)	None

* See Figure 5.7-1 for Mile Post locations; distances are approximate.

¹ The study area consists of that area within one mile of the power plant site and within a one-half-mile corridor of the project linear features.

Transmission Line. Land along the 0.8-mile transmission line route is used for agriculture (pasture). There are no sensitive land uses within one-quarter mile of the proposed transmission line route.

Natural Gas Supply Pipeline. Land use along the natural gas supply pipeline is primarily agricultural (see Figure 5.7-3). There are no sensitive land uses within one-quarter mile of the natural gas supply pipeline route.

Water Supply Pipeline. Land use along the water supply pipeline is primarily agricultural (see Figure 5.7-3). There are no sensitive land uses within one-quarter mile of the water supply pipeline route.

5.7.2 Environmental Impacts

Potential environmental consequences are discussed for the project study area, which includes lands within 1 mile of the proposed project site and one-half mile wide corridor for the project linear facilities (i.e., 0.25-mile on either side of linear facilities). The following section identifies potential construction- and operation-related impacts, and cumulative impacts.

5.7.2.1 Compatibility with Existing and Proposed Land Uses

Construction of the power plant facility will be on undeveloped land currently being used for grazing purposes. Construction activities will be restricted to the site itself and the adjacent construction staging area.

The proposed project will convert approximately 25 acres (see Table 3.7-3) of land currently used for grazing to industrial uses. The electrical generation facilities will be situated in the

southwestern part of the site. The project will not preclude continued use of the surrounding agricultural lands for grazing cattle. The general provisions of the Alameda County Code allow for public utility uses in any zoning district with appropriate review and approval by the County Planning Commission (Alameda County General Ordinance Code, 2001).

The 0.8 mile long transmission line is not expected to have a significant impact on land use. The route of the proposed transmission line is adjacent to existing transmission lines connecting at the Tesla substation and crosses land used for grazing. Once the poles are installed, land will be restored to its original condition. Operational impacts will be limited to the total area permanently affected by the poles, i.e., non-usable land following construction (400 square feet per pole structure). Structures will be located to reduce conflicts with existing transmission lines.

The natural gas pipeline will not cause significant land use impacts, change the character of the area, or alter the pattern of existing land uses. The surface will be restored following installation of the pipeline and prior land uses may resume.

5.7.2.2 Consistency with Land Use Plans, Policies, and Regulations

The power plant will be located on lands that are: designated Large Parcel Agriculture in the East County Area Plan and zoned “A” or Agricultural according to its land use designation by Alameda County. The power plant facility will occupy approximately 25 acres of the 60-acre project site. The power plant will be consistent with county and local government planning and policies. Operation of the power plant will not significantly impact land use of the project site or surrounding land uses.

The East County Area Plan allows “public and quasi-public uses” in agriculturally zoned property. Power plant facilities are considered by the Alameda County staff to be public utilities as previously stated in Staff’s recommendations to the CEC in the East Altamont Siting Case and would constitute a public or quasi-public use allowable under the Area Plan. Measure D, a recently enacted component of the Area Plan, allows for the construction of “infrastructure,” if the infrastructure has no excessive growth inducing effect on the East County area. The proposed power plant facility is allowable infrastructure because it will serve existing projected generation resource needs. Therefore, it will not excessively induce growth.

The Williamson Act presumes the erection of electric facilities is compatible within any agricultural preserve. Alameda County has no ordinance or policy that would make placement of an electrical facility on agricultural land an incompatible use.

The majority of the proposed natural gas pipeline will be placed through agricultural fields used for grazing (see Figure 3.2-2). During construction, excavation and installation of the pipeline could impact crops located in the right-of-way, restrict irrigation, or lead to soil compaction from the operation of heavy equipment. Property owners will be compensated for construction period damages to production, and after completion of construction, the land will be restored to its original condition.

The pipeline will be buried at depths compatible with the agricultural uses anticipated for land along the route. Once installed, agricultural uses will not be restricted by the presence of the gas pipeline.

5.7.3 Mitigation Measures

Although no significant land use impacts are identified in this analysis, the following are general mitigation measures that will be implemented/ incorporated into project design for the proposed TPP. These mitigation measures will help to avoid or minimize land use impacts associated with the construction and operation of the proposed project.

- Construction scheduling (e.g., daily/weekly scheduling) to avoid conflicts with agricultural operations during sensitive time periods.
- Agricultural facilities (e.g., irrigation systems, fences, and gates) are damaged during construction of the natural gas pipeline, repair or replacement of these facilities.

5.7.4 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impact on land use resources is anticipated as a result of the construction and operation of the TPP.

5.7.5 Cumulative Impacts

The project will be located within the East County Area Plan of the Alameda County General Plan. This plan accommodates the increasing needs for urban development while making an attempt to balance growth with preservation. Alameda County planning estimated that eastern Alameda County would increase in population 90% within the next ten years. Accordingly, the 25 acres developed as a result of this project will have little significance on a cumulative basis.

5.7.6 Applicable Laws, Ordinances, Regulations and Standards (LORS)

Design, construction and operation of the TPP including transmission lines, pipelines, and ancillary facilities will be conducted in accordance with all LORS pertinent to land uses. Project compliance with LORS applicable to land use is summarized in Table 6.1-1. Applicable LORS pertaining to land use as they relate to the proposed TPP include the following:

5.7.6.1 Federal Authorities and Administering Agencies

The Federal Land Policy and Management Act of 1976 (FLPMA); 43 CFR Part 2800. This authority established management policies for public lands including those administered by Western, as well as other federal agencies that administer public lands and/or typically have land use plans for the lands that they manage.

The administering agency for the above authority is Western.

National Environmental Policy Act of 1969, Public Law 91; 83 Stat 852; 42 USC 4§ 4321 - 4327. NEPA requires analysis of potential environmental impacts of projects with federal involvement and requires application of appropriate mitigation measures.

The administering agency for the above authority is Western.

5.7.6.2 State Authorities and Administering Agencies

California Public Resources Code § 25523(a); 20 CCR §§ 1752, 1752.5, 2300 - 2309, and Chapter 2. Subchapter 5, Appendix B, Part (i)(3) and (4). The authorities include provisions to assure protection of environmental quality, including compatibility of a proposed project with relevant land use plans.

The administering agency for the above authority is the CEC.

California Streets and Highways Code § 670. The code prescribes permit requirements for encroachment upon state highway rights-of-way.

The administering agency for the above authority is the California Department of Transportation (CalTrans).

5.7.6.3 Local Authorities and Administering Agencies

East County Area General Plan. The administering agency for this authority is the Alameda County Planning and Community Development Department. The project is consistent with the Plan's goal *to provide for the development, operation, and expansion of major public facilities and to ensure the compatibility of adjacent land uses* within the east county area.

Alameda County Code. The County Code was adopted by the County to regulate land uses. The current zoning for the TPP facility is A, Agricultural. Section 17.06 of the County Code defines Agricultural designated land as established to promote implementation of general plan land use proposals for agricultural and other non-urban uses, to conserve and protect existing agricultural uses, and to provide space for and encourage such uses in places where more intensive development is not desirable or necessary for the general welfare. Although this classification does not specifically refer to natural gas power generation facilities, the general provisions of the Alameda County Code allow for public utility uses in any zoning district with appropriate review and approval by the County Planning Commission (Alameda County Code, 2001).

Chapter 17.52.020 of the Alameda County Code permits public utility uses in any district, including underground, linear facilities.

The administering agency for the above authorities is the Alameda County Planning and Community Development Department. The following provisions of the Alameda County Code are applicable to the Project:

San Joaquin County General Plan. The administering agency for this authority is the San Joaquin County Planning and Community Development Department. The project is consistent

with the General Plan designation of Agriculture (AG) and Limited Industrial for the land crossed by the natural gas pipeline subject to site approval.

San Joaquin County Zoning Ordinance. The Zoning Ordinance was adopted by the County to regulate land uses. The current zoning for the proposed natural gas pipeline route is a mixture of General Agriculture and Limited Industrial. The project is consistent with the Zoning Ordinance, however, county site approval will be required for pipeline construction.

5.7.6.4 TPP Compliance with Land Use LORS

Project compliance with federal, state, and local land use LORS is summarized in Table 6.1-1.

5.7.7 Involved Agencies and Agency Contacts

Agencies and agency contacts relative to land use for TPP are provided in Table 5.7-4.

Table 5.7-4. Involved Agencies and Agency Contacts

Agency/Address	Contact/Telephone	Permits/Reason for Involvement
Alameda County Community Development Agency, Planning Department 399 Elmhurst Street, Room 136 Hayward, CA 94544	Bruce Jensen, Senior Planner (510) 670-6527	Alameda County Site Development and Review – Development of a quasi-public use in an agriculturally zoned area.
Alameda County Public Works Agency, Development Services 399 Elmhurst Street Hayward, CA 94544	John Rodgers (510) 670-5429	Encroachment Permit – Installation of natural gas and water supply pipeline.
San Joaquin County Planning Department 1810 East Hazelton Avenue Stockton, CA 95205	Jeff Fischer, Planner (209) 468-2193	San Joaquin Community Development Site Review – Natural gas pipeline is a permitted use subject to site review.
San Joaquin County, Public Works Department 1810 East Hazelton Avenue Stockton, CA 95205	Reed Campbell, Public Works Permitting Engineer (209) 468-3023	Encroachment Permit – Installation of natural gas and water supply pipeline.

5.7.8 Permits Required and Permit Schedule

Agency-required permits and permit schedule related to land use are summarized in Table 5.7-5.

Table 5.7-5. Permits Required and Permit Schedule

Permit/Approval Required	Schedule
County Encroachment Permit(s) for Water Supply and Natural Gas Pipelines	2 months for processing and approval.
County Site Development and Review	4-5 months for processing and approval.

5.7.9 References

Alameda County. 2001. General Ordinance.

(http://www.co.alameda.ca.us/admin/admincode/Alameda_County_General_Ordinance_Code/index.htm)

California Department of Conservation. 1993. Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, Riverside County.

Calpine Corporation. 2001. Application for Certification – East Altamont Energy Center.

San Joaquin County. 1992. General Plan.

San Joaquin County. 1994. East County Area Plan – A portion of the Alameda County General Plan.

State of California. 1997. California Environmental Quality Act: Statutes and Guidelines.

U.S. Census Bureau. 2001. Census 2000. (<http://www.census.gov>)