



DOCKET 06-AFC-5
DATE <u>JUL 26 2007</u>
RECD. <u>JUL 26 2007</u>

July 26, 2007

James W. Reede, Jr., Ed.D.
Energy Facility Siting Project Manager
California Energy Commission
1516 - 9th Street
Sacramento, CA 95814

RE: Panoche Energy Center (06-AFC-5) County of Fresno General Plan Conformity Application

Dear Dr. Reede:

Panoche Energy Center, LLC submitted a General Plan Conformity Application for the Panoche Energy Center Project (06-AFC-5) to the County of Fresno Department of Public Works and Planning on July 18, 2007.

Enclosed are 1 original, 12 hard copies, and 3 electronic copies (on CD) of the General Plan Conformity Application package.

If you have any questions or concerns please do not hesitate to call me at 714-648-2759.

Sincerely,

Margaret M. Fitzgerald
Program Manager

CC: Jeffrey D. Byron, CEC
James D. Boyd, CEC
Paul Kramer, Jr., CEC
Dick Ratliff, CEC
Public Advisers Office, CEC
Gary Chandler, Panoche Energy Center, LLC
David Jenkins, Panoche Energy Center, LLC
Michael King, Panoche Energy Center, LLC
Allan Thomson, Counsel for PEC
Larry Tobias, Ca. Independent System Operator
Electricity Oversight Board
Gloria D. Smith, CURE
Marc D. Joseph, CURE

URS Corporation
2020 East First Street, Suite 400
Santa Ana, California 92705
Tel: 714.635.6886
Fax: 714.433.7701



July 26, 2007

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Domingo Morales, City of Mendota
Giersch & Associates, Mendota City Engineer
Ben Gallegos, City of Firebaugh
Fred Rabe, Rabe Engineering



Fresno County Department of Public Works and Planning

MAILING ADDRESS:
Department of Public Works and Planning
Development Services Division
2220 Tutare Street, 6th Floor
Fresno, CA 93721

LOCATION:
Southwest corner of Tutare & "M" Streets, Suite A
Street Level
Fresno Phone: (559) 262-4055
Toll Free Phone: 1-800-742-1011

APPLICATION FOR:

- Amendment Application
- Amendment to Text
- Conditional Use Permit
- Director Review and Approval
- Site Plan Review/Occupancy Permit
- Variance/Minor Variance
- No Shoot/Dog Leash Law Boundary
- Other General Plan Conformity Application
- ALCC/RLCC
- Pre-Application (Check Type)
 - General Plan Amendment
 - Specific Plan Amendment
 - Specific Plan
- Determination of Merger
- Agreements

DESCRIPTION OF PROPOSED USE OR REQUEST:

Panache Energy Center, LLC
Power Plant - whether
Proposed use is consistent
with existing land use
Designations

PLEASE TYPE OR PRINT IN BLACK INK. Answer all questions completely. Attach required site plans, forms, statements and deeds as specified on the Pre-Application Review.

LOCATION OF PROPERTY: South side of Panache Rd
between S. Greenwood Ave and S. Franklin Ave
Street address 45499 W. Panache Rd. Firebaugh East (actual site)
APN 021-060-785 Parcel size 12.8 AC Sec-Twp/Rg. 5 - 15S 13E

LEGAL DESCRIPTION: (Attach Copy of Deed)

[Signature] (signature), declare that I am the owner, or authorized representative of the owner, of the above described property and that the application and attached documents are in all respects true and correct to the best of my knowledge. The foregoing declaration is made under penalty of perjury.

PAN Investments, LLC 45499 W. Panache Firebaugh CA 93622
Owner (Print or Type) Address City Zip Phone

Marcus D. Magness 7108 N. Fresno St. Ste 410 Fresno CA 93700 448-98
Applicant (Print or Type) Address City Zip Phone
Marcus D. Magness 7108 N. Fresno St. Ste 410 Fresno CA 93700 448-98
Representative (Print or Type) Address City Zip Phone

OFFICE USE ONLY

Application Type / No.: General Plan Fee: \$817 PLU: 100
 Application Type / No.: Conformity Fee: _____ PLU: _____
 Application Type / No.: _____ Fee: _____ PLU: _____
 Application Type / No.: _____ Fee: _____ PLU: _____
 Initial Study No.: _____ Fee: _____ PLU: _____
 Environmental Review: _____ Fee: _____ PLU: _____
 Health Department Review: _____ Fee: _____ PLU: _____
 Received by: [Signature]
 This permit is sought under Ordinance Section: _____
 Related applications: _____
 Drafting verification: Zona District: _____
 APN# _____
 APN# _____
 APN# _____
 Sec. Twp. Rg. _____
 Parcel Size _____

WHEN VALIDATED THIS APPLICATION IS YOUR RECEIPT

** ORDER # 0038 **
MP # 1
DOT SPEC 8177.00
DATE 01/18/2011 10:21 AM
CASH 481.00
0.00

**Gilmore
Wood
Vinnard
& Magness**

A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW

JAMES D. DEMSEY
ROBERT J. TYLER
DAVID M. GILMORE
RUSSELL O. WOOD
GERALD D. VINNARD
MARCUS D. MAGNESS
WILLIAM H. LIPER
JUDY L. WINTER

July 18, 2007

BY HAND DELIVERY

Ms. Margie McHenry
Mr. Jared Nimer
County of Fresno, Department of Public Works and Planning
Development Services Division
2220 Tulare Street
Fresno, CA 93721

Re: General Plan Conformity Applications – Starwood Power-
Midway, LLC and Panoche Energy Center, LLC

Dear Ms. McHenry and Mr. Nimer,

As you know, our firm represents the owner of the real property on which the two proposed power plants will be situated in western Fresno County. On behalf of the landowner and as an accommodation to the proposed tenants (Starwood Power-Midway, LLC (“Starwood”), and Panoche Energy Center, LLC (“Panoche”)), please find enclosed respective *General Plan Conformity Applications*. These applications are being submitted under a single cover as a result of both projects being situated on the same parcel (APN 027-060-78s) and both undergoing similar, but independent, approval processes with the California Energy Commission (CEC). Each application is accompanied by attachments and a filing fee in the amount of \$817.00.¹

As we have discussed, the CEC stated in its Panoche *Preliminary Staff Assessment* (also enclosed):

“Staff cannot conclude that the Panoche Energy Center (P.E.C.) is consistent with the Fresno County General Plan Agriculture and Land Use Element

¹ Note: Due to a delay in the mails, the attachments for the Panoche application will be submitted tomorrow.

STREET ADDRESS
718 N 4TH STREET
SUITE 400
FRESNO, CALIFORNIA 93724

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FRESNO, CALIFORNIA 93729-8907

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ATTORNEYS AT LAW

Ms. Margie McHenry
Mr. Jared Niuer
July 18, 2007
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because power plants are not expressly listed as a permitted or conditional use under that designation and Fresno County has not provided sufficient information that would demonstrate how the PEC is substantially similar in character and intensity to such uses listed in Table LU-3. Staff also cannot conclude the PEC is consistent with the AE-20 zoning designation because power plants are not expressly listed as a permitted or conditional use in that zone and Fresno County has not provided complete information in its Site Plan Review (SPR) analysis to determine whether the project would be consistent with the intent and purpose of the AE-20 zone."

By filing these applications, Starwood and Patache request that the County provide the additional information sought by the CTC.

I appreciate your attention to these applications. Please do not hesitate to call.

Very truly yours,

Marcus D. Magness

Enclosures

cc: Richard Weiss, Starwood Power-Midway, LLC
David Jenkins, Patache Energy Center, LLC

January 24, 2007

**The County of Fresno
Site Plan Review**

**Starwood Power-Midway LLC
West Panoche Road
Firebaugh, CA 93662**

**Richard H. Weiss
Starwood Power-Midway LLC
2737 Arbuckle St
Houston, TX 77005
713-662-3688
713-828-1801 cell**

SITE PLAN REVIEW SUBMITTAL REQUIREMENTS

DATE: 1/24/07 PROJECT ADDRESS: West Panoche Road
OWNER: STARWOOD Power-Midway LLC
ADDRESS: 591 West Putnam Ave, Greenwich CT 06830
APPLICANT/REPRESENTATIVE: RICHARD H. WEISS
ADDRESS: 2737 ARBUCKLE ST. Houston TX 77005

A. GENERAL REQUIREMENTS

1. A total of eleven (11) copies of the plan must be submitted with the application.
- 1A. A total of four (4) copies of building elevations and four (4) copies of building floor plans.
2. The plan must be drawn on a sheet having a minimum dimension of 18" x 24".
3. The plan must show the entire parcel described in the application. If only a portion of an existing parcel is to be developed, or if the development includes two (2) or more sheets, a key map shall be included showing the entire parcel.
4. The plan must be drawn to scale, and the scale must be clearly shown. (Scale shall be large enough to adequately show the required information).
5. The plan shall be oriented to the north and show an accurate north arrow.
6. Each plan shall be folded individually with bottom right hand corner facing up. Maximum size accepted shall be 9" x 12"

NOTE:

A grading and drainage plan showing how the runoff from the property shall be retained on said property MAY BE REQUIRED. The grading and drainage plan must be prepared by a Registered Civil Engineer.

Development within the Fresno Metropolitan Flood Control District may require a fee to be paid prior to the issuance of building permits.

L E G E N D

- X - Correction Needed
- Satisfied
- 0 - Not Applicable

B. SPECIFIC INFORMATION TO BE SHOWN (IF APPLICABLE)

COUNTY APPLICANT

- | | | | |
|-----|-----|----|--|
| () | () | 1. | All existing and proposed buildings and structures, including buildings to be removed. |
| () | () | 2. | The proposed use of all buildings and structures. |
| () | () | 3. | All adjacent streets and roads and their names. |
| () | () | 4. | Access to the property: pedestrian, vehicular, and service. |
| () | () | 5. | Access to buildings: size and location. |
| () | () | 6. | Pedestrian walkways: (1) Location, (2) Width, and (3) Type of pavement and type of slip-resistant finish. |
| () | () | 7. | Proposed street improvements and dedications.
(a) service utilities |
| () | () | 8. | Existing and proposed off-street parking and loading areas.
(a) Location
(b) Type of paving
(c) Number of spaces (detailed layout)
(d) Internal circulation pattern
(e) Dimension of all parking and loading spaces |

- () () 9. The following measurements:
- a. All dimensions of property or properties.
 - b. All dimensions of buildings and structures (including height and elevation plan, if available).
 - c. The distance of all buildings, structures, fuel tanks or storage tanks from property lines.
 - d. The distance between all buildings, structures, fuel tanks and storage tanks.
 - e. Contours of land, if natural slope is greater than ten percent.
 - f. Irrigation canals or easement.
- () () 10. Walls, retaining wall, and fences: Location, height, and type of material.
- () () 11. Existing and proposed signs: (1) Location, (2) type of lighting, (3) face area, and (4) height.
- () () 12. Existing and proposed on-site lighting:
- (a) Location
 - (b) Type of lighting
 - (c) Height
 - (d) Method of controlling glare and illumination.
- () () 13. Landscaping: location and type of plant material.
- () () 14. All existing wells and private sewage disposal systems within 150' adjacent to each other shall be delineated.
- () () 15. Handicap requirements (waiver).

- () () 16. Show all natural drainage channels.
- () () 17. A floor plan shall be submitted for places of assembly to calculate parking.
- () () 18. An employee and vehicle statement shall be submitted for industrial and manufacturing uses to calculate parking.
- () () 19. Show where solid waste will be picked-up. Garbage trucks require a minimum turn around radius of 37 feet.



Development

Services

Division

Operational Statement Checklist

DEPARTMENT OF PUBLIC WORKS AND PLANNING

It is important that the operational statement provides for a complete understanding of your proposal. The operational statement that you submit must address all of the following that apply to your proposal. Your operational statement must be typed or written in a legible manner on a separate sheet(s) of paper. Do not submit this checklist as your operational statement. It should serve only as a guide for preparing a complete statement.

- ___ 1. Nature of the operation--what do you propose to do? Describe in detail.
- ___ 2. Operational time limits:
Months (if seasonal): _____ Days per week: _____
Hours (from _____ to _____) Total hours per day: _____
Special activities: _____ Frequency: _____ Hours: _____ Are these indoors or outdoors?
- ___ 3. Number of customers or visitors:
Average no. per day: _____ Maximum no. per day: _____ Hours (when they will be there): _____
- ___ 4. Number of employees:
Current: _____ Future: _____ Hours they work: _____ Do any live on-site as a caretaker?
- ___ 5. Service and delivery vehicles:
Number: _____ Type: _____ Frequency: _____
- ___ 6. Number of parking spaces for employees, customers, and service/delivery vehicles.
Type of surfacing on parking area: _____
- ___ 7. Are any goods to be sold on-site? If so, are these goods grown or produced on-site or at some other location? Explain.
- ___ 8. What equipment is used? If appropriate, provide pictures or brochure.
- ___ 9. What supplies or materials are used and how are they stored?
- ___ 10. Does the use cause an unsightly appearance?
Noise? _____ Glare? _____ Dust? _____ Odor? _____
If so, explain how this will be reduced or eliminated?
- ___ 11. List any solid or liquid wastes to be produced.
Estimated volume of wastes: How and where is it stored?
How is it hauled, and where is it disposed? How often?
- ___ 12. Estimated volume of water to be used (gallons per day). Source of water?
- ___ 13. Describe any proposed advertising including size, appearance, and placement.
- ___ 14. Will existing buildings be used or will new buildings be constructed?
Describe type of construction materials, height, color, etc. Provide floor plan & elevations, if appropriate.
- ___ 15. Explain which buildings or what portion of buildings will be used in the operation.
- ___ 16. Will any outdoor lighting or an outdoor sound amplification system be used?
Describe and indicate when used.
- ___ 17. Landscaping or fencing proposed? Describe type and location.
- ___ 18. Any other information that will provide a clear understanding of the project or operation.

PUBLIC HEARING WAIVER

I, _____, the owner of the parking facility located at _____, have elected to waive the required public hearing before the Board of Supervisors relating to the enforcement of parking for the physically handicapped, per Section 855-I-4.E. of the Fresno County Zoning Ordinance. I declare the parking facilities will be held open for use of the public, subject to approval of Site Plan Review No. _____.

OWNER - (Signature)

EMPLOYEE AND VEHICLE STATEMENT
FOR SITE PLAN REVIEW

Total number presently employed

1

Number of employees to be added

1

Number of salesmen

0

Total number of trucks and/or other
company vehicles

0

Number of trucks and/or company
vehicles to be added

0

Signature of Owner

Richard H. Win

Signature of Authorized
Representative and Title
of Individual

DIRECTOR
STARWOOD POWER-MIDWAY LLC

SECTION 3 FACILITY DESCRIPTION AND LOCATION**3.1 INTRODUCTION**

The Serrano Power Midway, LLC Peaking Project (Midway) is a proposed simple-cycle electric generating facility located within western Fresno County adjacent to the Panoche Hills and east of the San Benito county line. The 5.1-acre project site is approximately 50 miles from the city of Fresno and approximately 2 miles east of the Interstate 5 (I-5). The proposed facility will include two (2) FT8-3 SwiftPac Combustion Turbine Generator (CTG) units installed in a simple-cycle power plant arrangement. The gas turbines are equipped with a water injection system to reduce production of nitrous oxides (NOx), a selective catalytic reduction system (SCR) with 19% aqueous ammonia to further reduce NOx emissions, and an oxidation catalyst to reduce carbon monoxide (CO) emissions. The nominal plant peaking rating will be 120 megawatts (MW).

Each SwiftPac unit has two (2) FT8-3 combustion gas turbines that drive opposite ends of a single electric generator. The FT8 generating package has been in operation at locations around the world since 1992. The FT8 package is a modernization and more efficient version of the older Pratt & Whitney (P&W) FT4 package, which was sold for over 30 years, and is still operating in many locations, including California. The most critical components of the FT8 package are the P&W GG8 engines which have been adapted from the FT8F commercial aviation engine as its core. The FT8F heritage dates back to the early 1960's and P&W has sold nearly 15,000 of these engines.

On a worldwide basis there are multiple FT8 packages operating or under construction, in total containing a total of 284 FT8 engines. Some are single engine applications and some are dual engine applications. These 284 units have a total of nearly 2 million operating hours. There are 3 dual engine FT8 applications in California operated by CalPak Power, LLC that have been in operation since 2002 and have demonstrated an average availability of 97% since startup.

Three models of the FT8 package that have been developed and are labeled FT8-1, FT8-2, and FT8-3. The FT8-1 model uses water injection into the combustor to control NOx formation and was the original version of the FT8 engine developed in the early 1990's. In the mid 1990's a combustor was developed to reduce NOx formation without water injection (DLN at dry low NOx) and this version of the FT8 engine was labeled FT8-2. All other aspects of the FT8-1 and FT8-2 engines are identical. The power output of the FT8-2 engines are less than the FT8-1 engines because the water injection contributes to mass flow through the engine in addition to reducing NOx formation.

The FT8-3 model (proposed for use at Midway) is also a slight modification of the FT8-1 engine and was introduced in 2004. The FT8-3 uses some thermal barrier and coatings traditionally used in other P&W aviation engines in the hot section of the turbine. This improvement in the hot section of the turbine allows the engine to generate approximately 15% more power than the FT8-1 at essentially the same cost. This hot section design has been used in aviation engines for over 10 years and was migrated to the land based engines in 2004. There are now 34 FT8-3 engines operating or under construction around the world. The FT8-3 engine is only offered with water injection to control NOx production.

The two SwiftPac units proposed for Midway consist of dual engine FT8-3 engines with each unit nominally rated at 110MW under ISO (International Organization for Standardization) conditions. These units are similar to the five FT8-2 units that CalPeak Power operates in California (the FT8-2 units are nominally rated at 50MW). As stated previously, these CalPeak units have demonstrated an availability of 97% since operation began in 2003.

In summary, the P&W FT8 units have been a reliable and proven technology for over 15 years and for 38 years prior to that in the form of the less efficient FT4 units. The dual engine design provides advantages in reliability and operating flexibility since the units can be operated with one engine. Midway will be efficient, environmentally compliant and reliable with the use of FT8 technology.

Typical operating hours for the Midway site will be comparable to the existing CalPeak Pattoche plant located adjacent to the Midway site. The Midway plant will have the same heat rate as the CalPeak Pattoche plant, and therefore would be dispatched for system operation in a similar manner. Currently the CalPeak Pattoche plant runs substantially less than 4000 hours per year, averaging approximately 4.5 hours per start.

3.2 FACILITY LOCATION

The project site is located in the unincorporated area of western Fresno County approximately 50 miles west of the city of Fresno. The site is adjacent to the Pattoche Hills and east of the San Benito County line. West Pattoche Road lies just north of the site. The nearest intersections are West Pattoche Road and South Fairfax Avenue approximately one mile to the northeast and West Pattoche Road and I-5 approximately 2 miles to the southwest. The site is more specifically described as the Southwest Quarter of Section 5, T40N31E, Range 13 East, on the USGS Quadrangle map. (Figure 3.2-1). The assessor parcel number (APN) is 027-060-78S.

3.3 SITE DESCRIPTION

The facility will be situated on approximately 3.6 acres of land within a 128-acre parcel. The plant site is leased by the applicant from the property owners. Portions of the 128-acre parcel, not used for electric generation facilities, are currently in agricultural production with pomegranate trees. The 3.6-acre site is used as a storage-yard by CalPeak Power and contained several large pieces of equipment and items used at the CalPeak Pattoche plant directly southwest and adjacent to the site. A Wellhead Peaker Plant is southeast and the PG&E Pattoche Substation is to the west. The land surrounding these electric facilities is agricultural. The site is relatively flat and supports sparse growth of annual, mineral weeds and grasses.

3.3.1 Topography

Site topography, shown in Figure 3.3-1, is generally flat. The elevation ranges from approximately 400 feet above mean sea level (msl) at the northwest corner of the site closest to West Pattoche Road and gently slopes to the southeast where the elevation is approximately 395 feet above msl. The natural earth material consists of layers of silt, bent clay and sand.

3.3.2 Geologic Setting and Seismology

A general description of Site geology and seismology is outlined in the sections which follow.

3.3.2.1 Subsurface Conditions

During July of 2016 a field geotechnical exploration was conducted by Kleinfelder, Inc. Nine test borings were drilled within the project site with depths of up to 41.5 feet with the exception of one boring to a depth of 111.3 feet below existing ground surface. Soils encountered include fill near the surface underlain by discontinuous layers of silty sand, lean clay and poorly graded sand. No groundwater was encountered within the depths explored.

3.3.2.2 Seismic Conditions

The project site and its vicinity are in an area traditionally characterized by low seismic activity. There are no known faults that cut through the local soils in or near the site. The site is not located in and Alquist-Prado Earthquake Fault zone. Review of published data, the current geologic framework, and the tectonic setting of the proposed development reveal that the primary source of seismic shaking at the Project site is anticipated to be the Great Valley Fault System, Segment 1A, which is located approximately 4.7 miles southwest of the site.

There are no anticipated geotechnical factors at the Project site that are unique and require special seismic consideration. The Project site is within Seismic Zone 3 of the Uniform Building Code (UBC). The California Energy Commission (CEC, 1983) recommends that non-nuclear power plants be designed to the level of conservatism implied by the Uniform Building Code (UBC, 1997). Seismic Zone 4 of the UBC is the highest earthquake hazard zone recognized by the code and the Midway project will build to the specifications required for Seismic Zone 4.

3.3.2.3 Liquefaction Potential

Liquefaction and associated settlement of soils due to ground shaking generally occur under four specific conditions: 1) the subsurface soils are in a relatively loose state; 2) the soils are saturated; 3) the soils are non-plastic; 4) ground shaking is of sufficient intensity to act as a triggering mechanism. The absence of groundwater (mentioned previously in Section 3.3.2.1) precludes these conditions being present and therefore the potential for liquefaction to occur is remote.

3.3.3 Hydrological Setting

The project lies in the western portion of the San Joaquin Valley which is characterized as semi-arid with relatively mild winters and long, hot, dry summers. Interannual wet period prior making the area's average precipitation approximately 11 inches. Average annual temperature is 63.3 degrees. The nearest weather station to the site is located outside of Fresno, approximately 45 miles to the east.

3.3.3.1 Surface Water

There are no long-term natural or artificial water bodies in the vicinity of the site, except for the California Aqueduct (over 100 (2) miles to the East). Surface streams are dry most of the year. Flow in streams in the Panoche Flat area occurs as brief runoff events following precipitation. The largest streambed in the area is Patuche Creek, which flows from the northwest approximately two miles northwest of the project site. In the immediate vicinity of the site, precipitation runoff occurs as sheet flow in the northeast across the alluvial flat surface of the site. The entirety of the Midway site is included within the special flood hazard area inundated by the 100-year flood with no base flood elevation determined (Zone A) on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map.

3.3.3.2 Groundwater

Groundwater in the western San Joaquin Valley occurs in thick alluvial aquifers that fill the valley. Aquifers underlying the site include a lower confined zone and an upper semi-confined zone that are separated by the Chinlestan Clay of the Tulare Formation. The site is located in the Westside Sub-basin of the San Joaquin Valley Groundwater Basin.

Historically, groundwater was extensively used for agricultural development of the area surrounding the site. Groundwater withdrawal caused compaction of aquifer systems and extensive ground subsidence. Pumping of groundwater for agricultural use was substantially reduced following delivery of surface water to the region in the late 1960s, and land subsidence due to groundwater withdrawal has slowed considerably or stopped in much of the San Joaquin Valley. Agricultural use of groundwater in the area is limited except in times of drought when surface water supplies are curtailed.

3.4 FACILITY DESCRIPTION

3.4.1 Overview

The Midway project will consist of two (2) FT8-3 SwiftPac Combustion Turbine Generator units installed in a simple cycle power plant arrangement. Nominal plant power rating will be 120 MW. The two (2) FT8-3 CTG units will be part of a power plant that will also include the following Balance of Plant (BOP) equipment/systems:

- One (1) CTG Main Step-up transformer (11.8/11.5 kV)
- An SCR/CO catalyst system that will be implemented on both CTG units to provide post-combustion emissions control. The facility will include an aqueous ammonia storage and delivery system in support of the SCR catalyst system
- A Water Treatment system starting with a Reverse Osmosis (RO) unit will feed a demineralizer to provide high-purity water to the gas turbines for water injection / inlet fogging. Water injection will be utilized for control of NOx emissions during combustion. Inlet fogging will be utilized to provide cooling of inlet air. The water treatment system will

- n) Two (2) Buffer Air Heat Exchangers
 - o) Interconnecting Field Piping
 - p) Cable Tray System
 - q) One (1) Fogging Pump/Control Skid - for Inlet Air Cooling
 - r) Two (2) Fogging Inlet Spray Pipes
 - s) One (1) Water Wash Skid - per unit
2. One (1) Gas Fuel Condenser/Filter
 3. Two (2) SCR/NO Catalysts - each with 50' Exhaust Stack
 4. Two (2) Anhydrous Ammonia Storage Tanks
 5. One (1) Anhydrous Ammonia Forwarding Skid
 6. Two (2) Anhydrous Ammonia Injection Control Skids
 7. One (1) Wash Down Drain Tank
 8. Two (2) Continuous emissions monitoring system (CEMS) Monitors
 9. Two (2) DI Water Tanks (75,000 gallons each)
 10. One (1) Raw Water Tanks (75,000 gallons)
 11. Provision for Mobile Water Treatment Trailers
 12. One (1) DI Water Forwarding Skid
 13. Two (2) Air Compression Skids
 14. One (1) Air Dryer/Tank Skid
 15. One (1) Generator Step-Up Transformer (13.8/115 kV)
 16. One (1) 480V Auxiliary Transformers
 17. 480V Switchgear
 18. Plant Halls
 19. One (1) 1,000 Gallon "D" Drain Holding Tanks - per unit
 20. Reverse Osmosis (RO) Unit
 21. One (1) Dily Waste Storage Tank (1,700 gallons)

Table 3.4-1 provides further information about key equipment.

TABLE 3.4-1
DIMENSIONS OF KEY EQUIPMENT

Dimensions of Key Equipment				
Qty.	Description	Length (Feet)	Width (Feet)	Height (Feet)
2	Combustion Turbine Generator Units	120	35	33 (Top of CTG Inlet Air Filter)
1	GSU Main Transformer Dead End Structure	50	25	50
2	Exhaust Stack	N/A	15' diameter	50
2	Primary Control Enclosure	45	12	15
1	Secondary Control Enclosure	40	15	15
3	Water Storage Tanks (Vertical)	23' diameter	n/a	25
2	Ammonia Injection Skids	30	18	10
1	Ammonia Feed Skid	10	10	10
2	Ammonia Tank (Horizontal)	30'	n/a	12' diameter
2	SCR/CO Catalyst	65	20	4.5
1	DI Water FWD Skid	30	10	10
1	RO Unit	12.5	3.7	7.3

All structure dimensions shown are approximate. Actual dimensions will be determined during detailed design.

3.4.3 Site Access

Site access from West Panache Road would be provided via a 20-foot wide access roadway easement adjacent (east of) the PG&E Substation. From a proposed entrance gate, which would be located just south of West Panache Road, the proposed access roadway would be graded gravel and asphalt for approximately 250 feet length and east to the site. At the project site the proposed roadway would become asphalt, with a vehicle turnaround area providing access to the project equipment. The asphalt portion of the proposed roadway would be approximately 1,150 feet.

3.4.4 Site Layout

The site layout shows the location and size of the proposed plant facilities including off-site improvements. The plant facilities have been arranged in optimum use of the property as well as to ensure ease of maintenance and operation.

Off-site improvements associated with the project include an approximate 300-foot electric transmission line to tie into the PG&E Substation, a 1,200-foot underground water pipeline connecting the project to the existing CalPeak Panache plant well adjacent to the project site, 50 feet of new gas transmission line and a gas metering set which will tap into the existing PG&E gas trunkline.

Milway includes the plant site and all of the described on-site and off-site improvements.

3.4.5 Power Plant Cycle

Approximately 60 MW of electricity is produced by each of the two CTGs. Output is dependent on inlet air ambient conditions and inlet evaporative cooling. The CTG design incorporates an inlet fogging cooler and increased firing temperatures in order to achieve a high efficiency. The CTGs are equipped with SCRs to reduce NO_x, CO, and volatile organic compound (VOC) emissions.

The following paragraphs describe the major components of the generating facility.

3.4.5.1 Gas Turbine Generator

The Milway project will use two (2) FT8-3 SwiftPac CTG units installed in a simple cycle power plant arrangement. Nominal plant power rating will be 120 MW. Each CTG unit will consist of two (2) FT8-3 combustion gas turbines and one (1) electric generator. The FT8-3 combustion gas turbines are semi-derivative engines designed by Pratt and Whitney Power Systems.

3.4.5.1.1 CTG Water Injection Combustors

The FT8-3 SwiftPac units will utilize water injection to limit NO_x levels at the exit of each CTG to 17 ppmvd referenced to 15% O₂. The FT8-3 SwiftPac units will also limit CO levels at the exit of each CTG to 10 ppmvd referenced to 15% O₂.

3.4.5.1.2 Post-Combustion Emissions Controls

An SCR/CO Catalyst system will be installed in the CTG exhaust streams of both units.

Aqueous ammonia (NH₃) will be introduced upstream of the SCR catalyst. The catalyst causes NH₃ to combine with NO_x, producing N₂ and H₂O. The SCR system will limit NO_x emissions at the stack exit to 2.5 ppmvd referenced to 15% O₂, while limiting ammonia slip to 10.0 ppmvd, referenced to 15% O₂. The SCR/CO Catalyst system will also limit CO at the stack exit to 6.0 ppmvd referenced to 15% O₂.

The emission rates include estimates of particulate (PM₁₀) emissions. A stack exit PM₁₀ level of 3.7 pounds per hour for each SwiftPac unit (two units operating) is expected at 100% power, based on results for source tests conducted over several years at the FlatPeak Particulate facility.

CEMS will be utilized to monitor NO_x, CO, and oxygen levels at the stack exit.

3.4.5.1.3 Emissions Dispersion

The exhaust gases will exit through a vertical stack. The stack discharges the gases to the atmosphere at a minimum temperature of approximately 750 °F and at a height of 30 feet above finished grade. At this temperature and elevation the gases mix with ambient air and are dispersed.

3.4.5.2 Performance Data

Predicted performance data play a major role in the selection of turbine generators. Key performance data are power output, fuel input and heat rate. Refer to Figures 3.4-3A, 3.4-3B, and 3.4-3C for heat/mass balances at 100% power for three different ambient conditions (low temp, high temp, and ISO conditions). Note that these heat/mass balances are per SwiftPac Unit. The plant will have two SwiftPac Units – each with the same performance characteristics.

Gas turbine power output and efficiency are greatly affected by atmospheric conditions and load variations. Power output is roughly proportional to mass flow which increases as the inlet air becomes colder and denser. Higher humidity makes the air less dense and also decreases the oxygen level per unit mass. Consequently, more fuel can be added and more power is produced at lower temperatures and humidity. Alternatively, less fuel can be added and less power is produced at higher temperatures and humidity. Turbine efficiency decreases as conditions depart from the optimum full-load design point.

3.4.5.3 Emissions Data

Air pollutant emissions are affected by turbine design and operating conditions. NO_x startup and shutdown emissions are based upon actual data reported for the FlatPeak units and standard industry formulas.

3.4.6 Heat Rejection System

The FTB-3 SwiftPac unit auxiliary heat exchangers are all air-cooled fin-fan types. The SCR/CO Catalyst system also includes an air-cooled heat exchanger to maintain stack temperature less than the catalyst design upper limit.

3.4.7 Major Electrical Equipment and Systems

An overall one-line diagram of the proposed facility electrical generation and distribution system is shown in Figure 3.4-4 A & B. The ETE produces power at 13.8 kV. The generator output passes through a step-up transformer where the voltage is increased to a transmission level of 115 kV for

interconnection to the existing CalPeak Peaker Generator tie line. A portion of the plant output is converted to lower voltages to be utilized on-site for power station auxiliaries via a 480V Auxiliary Transformer. A 125 Voltage Direct Current (VDC) system provides battery power for an alternating current (AC) uninterruptible power supply (UPS) and for direct current (DC) control systems.

3.4.7.1 Step-up Transformers

The FT8-3 SwiftPac Combustion Turbine Generator (CTG) units generate power at 11.8 kV. The electricity generated at 11.8kV will be stepped up to 115 kV for transmission by a three-winding, oil-filled, generator step-up transformer (GSI). The transformer is anchored on concrete foundations that also provide oil containment. The high side of the step-up transformer is terminated at the plant 115kV switchyard. Surge arrestors are installed on the high voltage bushings of the transformer to protect the transformer from surges due to lightning strikes, switching or other disturbances on the 115 kV system. Transformer impedances and turns ratio are to be selected to optimize 115 kV system voltage reactive (VAR) support by the generators. Transformer will have on-load tap changer at the high voltage side.

Each auxiliary transformer will supply power to two combustion turbine auxiliary loads in normal operation. The auxiliary power transformer will be sized to take care of the complete auxiliary load of the entire facility in case there is any failure or shut down of one of the auxiliary power transformer or the generator step up transformer. The Secondary Unit Substation (SUS) transformers will be oil-filled indoor type and will each supply 480V, 3-phase power to the SUS busbar through normally closed SUS main breakers. The 480V system will be solidly grounded.

The SUS transformers will be sized to provide 480V auxiliary load to the entire facility. The two 480V switchgears are designed to be interconnected in case of emergency to supply power only from one 480V bus.

The SUS will provide power through feeder breakers to the various large 480V motors and to motor control centers (MCCs). The MCCs will distribute power to smaller 480V motors, to 480V power panels, and other intermediate 480V loads. The normal supply for the two BOP MCCs will be from the SUS transformers, but automatic transfer switches will allow supply from an alternate source. The MCCs will distribute power to 480-480/277V isolation transformers when 277V, single-phase lighting loads are to be served. The 480V power panels will distribute power to small 480V loads.

Power for the AC power supply (120/208V) system will be provided by the 480V MCCs and 480V power panels. Transformation of 480V power to 120/208V power will be provided by 480-120/208V dry-type transformers.

3.4.7.2 115kV Switchyard

The 115 kV transmission system will enter the Mirhag switchyard via the dead end structure. An 115 kV circuit breaker with twelve integral current transformers provides the switching for installation. 115 kV air break disconnect switches provide breaker isolation as required by Code. A set of 115 kV potential devices connected to the dead end structure provide system voltage for Utility metering and

site voltage monitoring schemes. One set of current transformers at the 115 kV breaker is to be specified with metering accuracy and it is to be used as the required input to the utility metering package.

Control, protection and monitoring panel or devices for the switchyard will be located in the electrical building and generation control module. Monitoring and alarms will be available to the PLC operator workstations in the control room. The 125Vdc battery system will provide control and protection voltage to circuit breakers.

The switchyard design will meet the requirements of the National Electrical Safety Code-ANSI C2.

A grounding grid will be provided to control step and touch potentials in accordance with IEEE Standard 80, Safety in AC Substation Grounding. All equipment, structures and fencing will be connected to the grounding grid of buried bare copper conductors and ground rods, as required. The substation ground grid will be tied to the plant ground grid.

Lightning protection will be provided by shield wires and/or lightning masts for any overhead lines. The lightning protection system will be designed in accordance with IEEE 998 guidelines.

All electrical faults shall be detected, isolated, and cleared in a safe and coordinated manner as soon as practical to insure the safety of Equipment, Personnel, and the Public. Protective relaying will meet ANSI and IEEE requirements and will be coordinated with PG&E's requirements.

The protection will be designed to maintain redundancy at the 115 kV level. The transformer will be protected by differential, over current and restricted ground fault logic. A second and redundant protection using separate instrument transformers will provide protection for the 115 kV breaker, transformer and generator breaker. There will be a breaker failure scheme associated with the 115 kV breaker. Interfaces required with the PG&E system are included in the design. Each generator protective system has a breaker failure scheme. The 115 kV circuit breaker will have 2 redundant trip coils.

Interface with PG&E's supervisory control and data acquisition (SCADA) system will be provided. Interface will be at the interface terminal box and RTU. Communication between the facility switchyard and the control building in which it is connected will be included.

3.4.7.3 AC Power Distribution

Each auxiliary transformer will supply power to two condenser turbine auxiliary loads in normal operation. The auxiliary power transformer will be sized to handle the complete auxiliary load of the entire facility in case there is any failure or shut down of one of the auxiliary power transformer or the generator step up transformer. The Secondary Unit Substation (SUS) transformers will be oil-filled indoor type and will each supply 480V, 3-phase power to the SUS buses through normally closed SUS main breakers. The 480V system will be high resistance grounded to minimize the need for individual ground fault protection.

The SUS transformers will be sized to provide 480V auxiliary load to the entire facility. The two 480V switchgear are designed to be interconnected in case of emergency to supply power only from one 480V bus.

The SLSs will provide power through feeder breakers to the various large 480V motors and to MCCs. The MCCs will distribute power to smaller 480V motors, to 480V power panels, and other immediate 480V loads. The normal supply for the two BOP MCCs will be from the SUS transformer, but automatic transfer switches will allow supply from an alternate source. The MCCs will distribute power to 480-480/277V isolation transformers when 277V, single-phase lighting loads are to be served. The 480V power panels will distribute power to small 480V loads.

Power for the AC power supply (120/208V) system will be provided by the 480V MCCs and 480V power panels. Transformation of 480V power to 120/208V power will be provided by 480-120/208V dry-type transformers.

3.4.7.4 DC Power Supply

The DC power supply system for BOP loads will consist of two 125V DC battery bank, two 125V DC full capacity battery chargers, inverting, ground detection, and distribution panels. One 125V DC battery bank will be dedicated to the essential service uninterruptible power supply (EPS) system. The other 125V DC battery bank will feed all other station DC loads. Additional 125V DC systems may also be supplied as part of the UTG equipment.

Under normal operating conditions, the battery chargers will supply DC power to the DC loads. The battery chargers will receive 480V, 3-phase AC power from the AC power supply (480V) system and continuously float-charge the battery while supplying power to the DC loads. The ground detection scheme will detect ground on the DC power supply system.

Under abnormal or emergency conditions when power from the AC power supply (480V) system is unavailable, the battery will supply DC power to the DC power supply system loads. Recharging of a discharged battery will occur whenever 480V power becomes available from the AC power supply (480V) system. The rate of charge will be dependent on the characteristics of the battery bank, battery charger, and the connected DC load during charging. However, the anticipated maximum recharge time will be 12 hours.

The BOP 125V DC system will be used to provide control power to the 4,160V switchgear, the 480V SUSs, and to critical control systems.

3.4.7.5 Uninterruptible Power Supply (UPS) System

The UTG will also have an essential service 120V AC, single-phase, 60 hertz power source to supply AC power to essential instrumentation, critical equipment loads, and unit protection and safety systems that require uninterruptible AC power. Both the essential service AC system and the DC power supply system will be designed to ensure that all critical safety and unit protection control circuits always have power and can take the correct action on a unit trip or any of plant AC power.

The essential service AC system will consist of one full-capacity inverter, a solid-state transfer switch, a manual bypass switch, an alternate source transformer and voltage regulator, and AC panel boards for each LTFU.

The normal source of power to the system will be from the DC power supply system through the inverter to the panel boards. A solid-state static transfer switch will continuously monitor both the inverter output and the alternate AC source. The transfer switch will automatically transfer essential AC loads without interruption from the inverter output to the alternate source upon loss of the inverter output.

A manual bypass switch will also be included to enable isolation of the inverter-static transfer switch for testing and maintenance without interruption to the essential service AC loads.

3.4.7.6 Emergency Power System

In the event of a total loss of auxiliary power, or in situations when the utility transmission system is out of service, the emergency power required for emergency lighting and LTFU critical loads, such as fueling hot oil pumps, will be provided from batteries.

3.4.8 Natural Gas Fuel System

The FT8-3 SwiftPay Combustion Turbine Generator units will operate solely on natural gas. Natural gas will be supplied from PJ&E's trunk line system immediately to the north of the property and would require approximately 50 feet of new line at the Midway site in order to tap into the existing PJ&E system. Each FT8-3 SwiftPay LTFU unit requires an approximate maximum flow of 625MMBtu/hr at 500-600 psig fuel gas pressure, and approximately 12,000 standard cubic feet per minute (SCFM) of flow at ISO, 100% power conditions. The natural gas supply pipeline will supply the required inlet pressure without need of supplementary compression.

3.4.9 Water Supply and Treatment

The process uses for water are N₂O control and inlet cooling. The Midway project has three viable alternate water supply sources:

1. The existing Oakbrook Pansody Well (Upper Aquifer Groundwater)
2. Irrigation Return Flow - Agricultural Backwash Pond
3. New Deep Well at Project Site (Lower Aquifer Groundwater)

Regardless of the water supply source, the plant will store water in three 25,000-gallon storage tanks, one for raw water and two for demineralized water. The Midway plant will use an RO unit to filter the water prior to demineralization. The RO wastewater will be discharged into a 25,000 square foot pond for evaporation.

The plant water need can be satisfied from any of the proposed sources. It should be noted that if the facility were to operate in excess of 400 hours in a year, the quantity of the wastewater generated could exceed the capacity of the evaporation pond. However, if the plant were to operate for enough hours so that the RO wastewater evaporation pond reaches its design capacity, the RO unit would be shut down and the demineralization units would run on raw water. This approach would eliminate a RO wastewater flow that would require more frequent replacement of the demineralizer (about once every other day). A vendor will perform demineralizer unit regeneration off site.

3.4.9.1 Water Balance and Supply Requirements

Essential plant functions requiring water are inlet cooling of the CFB inlet air which is done via the SwiftPac Inlet Fogging skid, water injection for NOx control during CFB combustion, and utility water for washdown and other purposes. The peak supply flow rate required at the site is approximately 138 gpm.

3.4.9.1.1 Water Balance

Plant water supply requirements and water balance calculations for the Midway project are tabulated and illustrated in Figure 3.4-5 of this document. The Figure provides peak water usage supply conditions. More specifically, Midway peak water requirements are as follows.

The peak flow rates are:

NOx Control	98GPM
Inlet Fogging	40GPM

During a typical 4.5-hour operating day the plant will require approximately 49,680 gallons of water. The operating water requirements are based upon the expected 400 annual service hours and the Power Purchase Agreement (PPA) maximum 4000 hours are shown in Table 3.4-2 below.

**TABLE 3.4-2
MIDWAY ANNUAL WATER SUPPLY REQUIREMENTS**

	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter	Total
Expected Operating Hours [400]	117	101	116	76	400
Water Consumption [acre-feet]	1.6	3.4	6.0	2.6	13.6 (4.4 million gallons)
PPA Maximum Hours [4,000]	800	900	1,400	1,000	4,000
Water Consumption [acre-feet]	27.1	27.1	47.4	33.9	135.6 (44.2 million gallons)

*The data is based upon operating at maximum water flow conditions at 114 degrees.

3.4.9.1.2 Water Supply Sources

The Midway project has the option to use a number of alternate water sources.

Existing CalPeak Panoche Well (Upper Aquifer Groundwater) The Midway project can use well water from the existing well at the neighboring, CalPeak Panoche project. The 400-foot deep well has been tested to produce 1,000 GPM and has TDS of approximately 1,400 ppm.

Irrigation Return Flow – Agricultural Backwash Pond The Midway site is located on a 128-acre parcel of land owned by PAJ Investments, LLC. A large portion of this parcel and approximately 7,000 acres of land in the region is owned by the Baker Farming Company, LLC (Baker). To take advantage of the economies of scale, Baker has developed a water delivery system that serves all of the property it farms in this area. The water system is owned and operated by Baker and utilizes approximately 24,000 acre-feet of water in the Baker's farming operations, annually. Through a process described in Section 3.5 – Water Resources, the farming operations primarily filter irrigation water filter backwash produce approximately 160 acre-feet of wastewater on an annual basis which is discharged in an evaporation pond. Wastewater from this pond could potentially supply Midway's water needs.

Using the Baker's irrigation return flow water would require installing approximately 2-miles of piping in order to access the water source.

New Deep Well at Project Site Lastly, the Midway project could drill a new 1,500-ft well to access the lower aquifer where the water has less TDS than the existing CalPeak Pamuche well (1,200 ppm as compared to 3,400 ppm TDS). The well would be located adjacent to the RO unit in order to limit the amount of piping needed.

3.4.9.2 Water Quality

Table 3.4-3 summarizes the expected TDS concentration for each source.

**TABLE 3.4-3
SUPPLY WATER ANALYSIS**

Source	TDS (ppm)
1. The existing CalPeak Pamuche Plant Well (Upper Aquifer Groundwater)	3,400
2. Irrigation Return Flow – Agricultural Backwash Pond	190
3. New Deep Well at Project Site (Lower Aquifer Groundwater)	1,000

3.4.9.3 Water Treatment

The Midway site has included in its design a RO unit through which the supply water would first be processed. After being processed through the RO unit the water would then be demineralized. A 75,000 gallon Raw Water Storage Tank is included in the design to hold water after it has been through the RO Unit, prior to it being processed by the demineralizer.

The Midway project will utilize a mobile water treatment system to produce the required DI water. This will involve use of rental mobile demineralizer trailers that will reside on a pad (See Figure 3.4-1). The rental company will perform regeneration of these units at their facility.

The DI water produced by the trailers will meet the following water quality limits required by PWPS standards:

* Total Solids	<1.0 PPM	ASTM D1888
* Sodium	<0.10 PPM	ASTM D2791
* Silica	<0.01 PPM	ASTM D859
* Conductivity	<1.0-1.3 Microhm/cm	ASTM D5391

Demineralized water will be stored in two (2) 75,000-gallon tanks. A forwarding system will be utilized to provide this DI water to the gas turbines within the required flow and pressure limits.

3.4.9.4 Waste Water Treatment Systems

The Midway project will utilize two different systems to manage wastewater.

3.4.9.4.1 Treatment and Disposition of Liquid Process Wastes

Wastewater generated by the RD process will be conveyed by gravity to an on-site, lined evaporation pond (which can accommodate 10 acre-feet per year) on the east side of the Midway site. The average wastewater generation rate that will require disposal is expected to be approximately 25gpm. Residue from this pond would be disposed of in a permitted landfill.

3.4.9.4.2 Plant Drains and Wash-down

A sump will collect oils and chemicals that could drain from the gas turbine exhaust floor drains, the generator floor drains, the transformer containment area, the equipment wash down areas, and the ammonia storage. Oil leakage from equipment is expected to be minimal. Containment will be similar to standard parking lot impacts. Nonetheless, all equipment that has potential for significant leakage of oil or hazardous chemicals, such as glycol coolants, will be located within spill containment basins which would also flow into the sump. A sump pump will convey this oily waste water/chemical drain water to an on-site 4,700 gallon storage tank. Waste from the storage tank will be pumped out and moved offsite. The storage tank will include level and leak detection instrumentation.

3.4.9.4.3 Domestic Sanitary Wastewater

The project will not require sanitary waste systems. Portable sanitary units will be delivered and maintained by a local service company.

3.4.9.4.4 Stormwater Drainage

Rainfall from the project site will be predominantly drained by sheet flow and efforts will be made to maintain the integrity of the existing drainage patterns, wherever possible. Based on the final site-grading plan, some isolated areas may require underground stormwater collection and drainage piping.

3.4.10 Waste Management

The project will generate a variety of non-hazardous and hazardous wastes during construction and operation (see Tables 3.4-4 and 3.4-5). These include liquids and solids from the wastewater system (discussed in Section 3.4.9.4), replaceable parts, rags, and other waste materials and chemicals produced during construction and operation.

Handling of hazardous wastes is discussed in Section 3.4.

3.4.10.1 Solid Waste – Non-Hazardous**3.4.10.1.1 Construction Waste**

Other solid wastes resulting from construction activities may include timber, excess concrete, metal and scrap, and empty non-hazardous containers. Management of these wastes will be the responsibility of the construction contractor(s). Typical management practices required for construction waste include recycling when possible, proper storage of waste and debris to prevent wind dispersion, and weekly pickup of wastes with disposal at local Class III landfills. The total amount of solid waste generated by construction activities has been estimated to be similar to that for normal commercial construction. It is not expected to result in a significant impact on public health or to cause adverse effects on local landfill capacity. Table 3.4-4 provides an overview of the waste streams anticipated for the construction phase of the project. For projected quantities refer to Section 5.1.4.

3.4.10.1.2 Operations Waste

Other solid wastes generated at the facility during operation are predominantly routine maintenance wastes. Scrap materials such as paper, packing materials, glass, metal, and plastic will be segregated and managed for recycling. Non-recyclable inert wastes will be stored in covered trash bins in accordance with local ordinances and picked-up by an authorized local trash hauler on a regular basis for transport and disposal in a suitable landfill in the area. Table 3.4-5 provides an overview of the waste streams anticipated for when the project is operational. For projected quantities refer to Section 5.1.4.

3.4.10.2 Liquid Wastes – Non-Hazardous

Non-hazardous liquid wastes produced in the facility consist of wastewater system wastes. Handling and disposal of these wastes is discussed in the Waste Management Section (Section 5.1.4) as well as the Hazardous Materials Handling Section (Section 3.15) of this application. Skid oil collected from equipment drains and other liquids obtained from equipment will generally be treated as hazardous due to possible heavy metals content.

**TABLE 3.4-4
SUMMARY OF CONSTRUCTION WASTE STREAMS AND MANAGEMENT**

Waste Stream	Waste Classification	Estimated Frequency of Generation	On-site Treatment	Disposal Method
Paper, wood, glass, and plastics from parking materials, waste lumber, insulation, and empty non-hazardous containers	Non-hazardous	Intermittent	None	Weekly collection for recycling and/or disposal at a Class III Landfill
Residual Sludges from Evaporation Pond (dirt and concrete particles)	Non-hazardous	One time at end	None	Excavate at end of construction and spread onsite
Empty hazardous material containers—drums	Hazardous Recyclable	Every 90 days	Store for < 90 days	Recondition, recycle, or waste disposal at Class I Landfill
Used and waste lube oil during Combustion Turbine Generator (CTG) Lube Oil Flushes	Hazardous Recyclable	Every 90 days	Store for < 90 days	Recycle
Spent batteries: lead acid	Hazardous	Every 90 days	Store for < 90 days	Recycle
Spent batteries: alkaline type, sizes AA, AAA, C, and D	Recyclable	Every 90 days	Store for < 90 days	Recycle
Sanitary waste—portable chemical toilets and construction office porting tanks	Sanitary	Periodically pumped to tanker truck by licensed contractors	None	Criftation by licensed contractor (minimum) for offsite treatment/disposal
Stormwater	Non-hazardous	Intermittent	None	Discharged as sheet flow from the site
Waste oil including used engine oil, transmission fluid, hydraulic fluid, and antifreeze	Hazardous	Every 90 days	Store for < 90 days	Hazardous waste disposal facility or recycle
Waste paint, thinners, and solvents	Hazardous	Every 90 days	Store for < 90 days	Hazardous waste disposal facility or recycle
Oil rags	Hazardous	Every 90 days	Store for < 90 days	Hazardous waste disposal facility or recycled
Oil Absorbents	Hazardous	Every 90 days	Store for < 90 days	Hazardous waste disposal facility

**TABLE A4-5
SUMMARY OF OPERATIONS WASTE STREAMS AND MANAGEMENT METHODS**

Waste Stream	Waste Classification	Estimated Frequency of Generation	On-site Treatment	Treatment Off-Site
Paper, wood, plastic, cardboard	Non-hazardous	Intermittent	None	Weekly collection for recycling and for disposal at a Class III Landfill
Empty hazardous material containers	Hazardous	Every 30 days	Store for < 90 days	Recondition or recycle
Used hydraulic fluids, oils, grease, oily filters from CTG and other equipment using hydraulic actuators and lubricants	Hazardous	Intermittent	Store for < 90 days	Recycle
Used Air Filters from the CTG	Non-hazardous	Every 5 years	None	Recycle
Spent batteries	Hazardous	Intermittent	Store for < 90 days	Recycle
Spent selective catalytic reduction (SCR) catalyst	Hazardous	Every 25,000 hours of operation	N/A	Recycle
Oil rags from CTG and other equipment using hydraulic actuators and lubricants	Hazardous	Intermittent	Store for < 90 days	Hazardous waste disposal facility or recycle
Oily absorbent from CTG and other equipment using hydraulic actuators and lubricants	Hazardous	Intermittent	Store for < 90 days	Recycle or hazardous waste disposal facility
Sanitary waste-portable chemical toilets and construction office holding tanks	Sanitary	Continuous	Continuous	Collection by licensed contractor (minimum) for offsite treatment/disposal
CTG periodic operational chemical cleaning	Hazardous	Every 10 days	Store for < 90 days	Hazardous waste disposal facility (by licensed subcontractors)
RO evaporation pond residue	Non-hazardous	Once every 5 years (assumes 400 hours/year)	NA	Landfill

3.4.11 Management and Disposal of Hazardous Material and Hazardous Waste

The Project will implement a Hazardous Materials Management Program (HMMP) developed for Midway which will include procedures for hazardous materials handling, use and storage; emergency response; spill control and prevention; employee training; and reporting and record keeping. The

Midway HMMP program is based off plans which have been developed for the nearby CalPeak Panoche plant. The HMMP will be developed and implemented prior to commercial operation. The content will be very similar to the plan for the existing CalPeak Panoche plant adjacent to Midway. The procedures outlined in the HMMP are in accordance with all applicable LURS.

3.4.11.1 Chemical Management

There will be a variety of chemicals stored and used during the construction and operation of Midway. The storage, handling, and use of all chemicals will be conducted in accordance with applicable LURS.

- Chemicals will be stored in appropriate chemical storage facilities. Bulk chemicals will be stored in storage tanks, and other chemicals will be stored in returnable delivery containers. Chemical storage and chemical spill areas will be designed to retain leaks and spills. Secondary containment area design will allow a full-tank-capacity spill. For multiple tanks located within the same area, the capacity of the largest single tank will determine the volume of the area and drain piping. Volatile chemicals will be capped and isolated from other drains to eliminate emissions in toxic vapors.
- The aqueous ammonia storage and unloading area will have spill containment and ammonia vapor detection equipment. Aqueous ammonia will be transported and stored in two 12,000-gallon tank onsite, as a 10.5 percent solution, by weight.
- Eyewash stations will be provided in the vicinity of all chemical storage areas.
- Plant personnel will use approved personal protective equipment during chemical spill containment and cleanup activities. Personnel will be properly trained in the handling of these chemicals and instructed in the procedures to follow in case of a chemical spill or accidental release. Adequate supplies of absorbent material will be stored onsite for small-scale spill cleanup.

3.4.11.2 Hazardous Wastes

Table 3.3-4 Summary of Operation Waste Streams and Management lists the types of wastes to be generated during operation of the project. These wastes will be managed in accordance with applicable LURS and consistent with the implementation of the HMMP developed for Midway, and carried out similarly to that for the existing CalPeak Panoche Peaker plant. Several methods will be used to properly manage and dispose of hazardous wastes generated by Midway.

- Workers will be trained to handle hazardous wastes generated at the site.
- Waste lubricating oil will be recovered and reclaimed by a waste oil recycling contractor. Spent lubrication oil filters will be disposed of in a Class I landfill.

- Spent SCF and oxidation catalysts will be reclaimed by the supplier or disposed of in accordance with regulatory requirements.
- When applicable, contractors working on site will be responsible for managing and disposing of their generated waste streams.
- The only chemical cleaning wastes are the detergent solutions used during turbine washing. These wastes, which contain primarily dust from the air and potentially compressor blade metals, will be temporarily stored onsite in portable tanks, monitored, and disposed of offsite by the chemical cleaning contractor in accordance with applicable regulatory requirements.

3.4.12 Emissions Control and Monitoring Equipment

CEMS equipment will record NO_x and CO emissions and alert operators of deviations from design levels. The following subsections describe the emissions controls, emissions data, and emissions impacts. Applicable regulations are addressed in the Air Quality Section 15.2 and the Air Quality Technical Report (Appendix I) of this application. Emissions that will be controlled include:

- Oxides of nitrogen (NO_x)
- Carbon monoxide (CO)
- Particulate matter (PM)
- Volatile organic compounds (VOCs)
- Oxides of sulfur (SO_x)

3.4.12.1 NO_x Formation

NO_x is a general term pertaining to compounds including nitric oxide (NO), nitrogen dioxide (NO₂), and other oxides of nitrogen. Nitrogen oxides are produced from burning fuels, including gasoline, diesel, and coal under high temperature. In the typical combustion process, temperature distribution is erratic. NO_x production is greatest where the highest temperatures exist. Nitrogen oxides react with volatile organic compounds (VOC) to form haze in the presence of sunlight.

3.4.12.2 CGT Water Injection for NO_x Emission Controls

The FT8-1 SwiftPac units will utilize water injection to limit NO_x levels at the exit of each CGT to 37 ppb (referred to 15% O₂). The formation of NO_x in the combustor is primarily a function of flame temperature. By injecting water into the combustor the flame temperature is reduced thereby limiting the formation of thermal NO_x.

3.4.12.3 Post Combustion NO_x Emissions Controls

An SCR/CO catalyst system will be installed in the CTG exhaust stream of both units.

The SCR process will use 10 percent aqueous ammonia (NH₃) as the reducing agent to activate the catalyst. Diluted ammonia vapor will be injected into the exhaust gas stream via a grid of nozzles located upstream of the catalyst module. The subsequent chemical reaction with the catalyst will reduce NO_x to nitrogen and water. Ammonia slip, or the concentration of unreacted ammonia in the exiting exhaust gas, will be limited to 10 ppmv, referenced to 15% O₂. The SCR equipment will include a reactor chamber, catalyst module, ammonia storage system, ammonia vaporization and injection system, and monitoring equipment and sensors.

The plant will have two (2) SCR systems and an aqueous ammonia system. The main components of the aqueous ammonia system are as follows:

- One (1) Ammonia Unloading Station with an Unloading Pump skid
- Storage Tank(s) (2@12,000) gallons
- One (1) Ammonia Forwarding Pump skid
- Two (2) Ammonia Injection Control Skids that include:
 - Dilution air fan(s)
 - Electric air heater(s)
 - Ammonia flow control valve(s)
 - Air/ammonia mixing vessel

3.4.12.3.1 Operation

Aqueous ammonia is transferred from a storage tank to each SCR ammonia injection control skid via the forwarding pump skid. The control skid meters the amount of ammonia to be injected into the SCR based on the CEMS emission monitoring system and adjusts the ammonia flow control valve as required. The ammonia injection skid is controlled via an independent Programmable Logic Controller (PLC).

Preheated air is used at the dilution and injection medium to deliver the ammonia from the mixing vessel into the SCR. This air is provided by the dilution air fans and flows through an electric air heater before reaching the mixing vessel. Once the heated dilution air reaches the mixing vessel it combines with the atomized aqueous ammonia and vaporizes the ammonia for injection into the SCR. The ammonia will be atomized into the mixing vessel through the ammonia spray nozzle. The heated air ensures that the ammonia is completely vaporized and does not damage the SCR.

3.4.13 Fire Protection and Safety System

The Midway project fire prevention and safety systems are designed to limit personnel injury, property loss, and plant downtime caused by a fire or other event. The systems are designed in accordance with:

- Federal, State and Local fire codes, occupational health and safety regulations, and other jurisdictional requirements
- California Building Code (CBC)
- National Fire Protection Association (NFPA) standard practices

The subsections below provide a detailed description of the fire protection and safety systems.

3.4.13.f Fixed Fire Protection Systems

Each of the Pratt & Whitney Power Systems F18 model CTG units comes with independent fire protection systems consisting of detection and suppression subsystems that meet the intent of National Fire Protection Association (NFPA) 37, *Standard for Installation and Use of Stationary Combustion Engines and Gas Turbines*, as modified by NFPA 850, NFPA 12, *Carbon Dioxide Extinguishing Systems*, and NFPA 72, *Fire Alarm Code*.

The two (2) CTG enclosures are protected with independent high pressure CO₂ fire suppression systems. The CO₂ tanks, actuators, and manifolds are located outside each enclosure, with the system's control module located in the unit's Control House. The Generator and the Control House enclosures are protected by portable fire extinguishers that are located at the enclosures.

The CTG Units are also protected by a fire shut-off valve in the fuel line to each engine, outside each CTG enclosure. This valve is wired directly into the CTG unit fire protection panel in the Control House and closes upon a fire trip. It must be reset manually and locally.

There is a CTG unit fire protection system panel that monitors and displays the status of all fire system inputs and provides outputs to activate audible and visual alarms, discharge suppression systems, close fuel fire safety valves, and signal turbine and unit control systems for required responses. The system operates on 24 volts DC and contains its own internal power supply and battery backup. Automatic fire detection is provided by rate compensated thermal detectors in each CTG enclosure. Facilities for manual (electric and mechanical) initiation of the fire systems are also provided. Each control house is monitored by smoke detectors. The CTG fire protection system shall provide automatic notification to a station that is continuously manned.

Immediately upon activation of a CTG enclosure suppression system, the CTG enclosure secondary air supply fans are re-energized and the gas fuel supply shut off via manually reset fire safety valves located outside the CTG enclosures. A 20-second time delay permits shutdown of the gas turbine and generator before a solenoid valve releases the pressurized CO₂ into its distribution manifold. A

pneumatic cylinder, actuated by the pressurized CO₂, releases spring biased dampers to close off the enclosure ventilation air supply. Simultaneously, a series of nozzles floods the CTG enclosures to a 34% CO₂ concentration, sufficient for inverting the combustion process. The CO₂ supply to the manifold is fed from pressurized tanks. The first set of tanks is quick emptying, while the second set of slow-emptying tanks maintains the 5% level required to overcome dilution from air leakage. This CO₂ concentration is maintained for approximately 30 minutes, sufficient time to allow combustibles to cool below their auto ignition temperatures. A CO₂ status display board is provided near each protected CTG enclosure entry to visually indicate the status of the fire protection system (i.e. CO₂ armed or disarmed).

Disarming may be accomplished by disabling the CO₂ suppression system, either electronically by means of a key switch and/or blocking the flow of CO₂ by a normally activated safety block valve in the CO₂ piping discharge system. When disarmed the detection alarm system will remain active while the CO₂ discharge capability will be disabled. Continuous signals (supervisory) are sent to the monitoring system notifying the operator while the system is disarmed.

Additional safety features include a suppression release delay and audible and visual alarms inside and outside the CTG enclosures.

Each CTG enclosure is also provided with a resistance type combustible gas detection system. When the gas concentration reaches a 20% lower explosive level (LEL), the gas hazard alarm will be displayed in the CTG unit fire protection panel and warning alarms will be activated on the CTG enclosure. When a 10% LEL level is reached an automatic trip of the fuel and gas turbine will be initiated. The CTG enclosures ventilation system will remain operational to reduce the gas hazard.

3.4.13.2 Fire Alarm and Detection

The main fire control panel will be located in the Midway Control Room and will annunciate activation of a fire protection/detection system by location zones. The alarms will also be monitored in the remote CalPeak Power control room. The panel operates on 120 VAC power through the UPS system. The alarm and detection system is designed to comply with NFPA 70 and 72.

Local building fire pull boxes and audible alarms will be provided. Flashing lights will be used in addition to audible alarms in high noise areas.

3.4.13.3 Portable Extinguishers

Hand held CO₂ and dry chemical extinguishers will be located throughout the project area, with size, rating, and spacing in accordance with NFPA 10. Halon/CO₂ extinguishers will be provided as needed for specific hazards.

3.4.13.4 Miscellaneous Fire Safety Items

All materials of construction used in the plant will be free of asbestos and will meet the required fire and smoke rating requirements of NFPA 255.

Plant management will coordinate with the local County fire marshal and fire department to provide an appropriate orientation to the project and its operating and emergency procedures for emergency personnel.

3.4.14 Plant Auxiliaries

3.4.14.1 Lighting

Lighting will be required for safe and efficient operation in a number of areas. These include:

- Outdoor equipment platforms and walkways
- Transformer areas

To avoid intrusion on sensitive areas, outdoor lighting will be directed downwards and towards the interior of the plant.

Emergency lighting from DC battery packs will be provided in areas of normal personnel traffic to permit safe egress from the area in case of failure of the normal lighting system. In major control equipment areas and electrical distribution equipment areas, emergency lighting will be sufficient to allow equipment operation and to facilitate reestablishment of auxiliary power.

FAA Advisory Circular 70/7460-1K requires that all airspace obstructions over 200 feet in height or in close proximity to an airfield have obstruction lighting. The Midway exhaust stacks are elevated 50 feet above grade. Since the stacks are below the 200 feet limit and there is no airfield in close proximity to the site, the exhaust stacks will not require obstruction lighting.

3.4.14.2 Grounding and Lightning Protection

The electrical system may experience unit ground potential rise due to ground fault, lightning strike, or switching surge. This constitutes a hazard to site personnel and electrical equipment. A ground grid grounding system to permit dissipation of ground fault currents and minimize ground potential rise will be installed. The grounding grid will control step and touch potentials in accordance with IEEE Standard 80, Safety in AC Substation Grounding. All equipment, structures and fencing will be connected to the grounding grid of buried bare copper conductors and ground rods, as required.

Lightning protection will be provided by shield wires and/or lightning masts for any overhead lines. The lightning protection system will be designed in accordance with IEEE 998 guidelines.

All electrical faults shall be detected, isolated, and cleared in a safe and coordinated manner as soon as practical to insure the safety of Equipment, Personnel, and the Public. Protective relaying will meet ANSI and IEEE requirements and will be coordinated with PG&E's requirements.

3.4.14.3 Cathodic Protection

Cathodic protection may be provided, using an impressed current or buried anode system to prevent corrosion of buried carbon steel piping and structure. Protective coatings are applied as primary protection and to minimize cathodic protection current requirements. The requirement for a cathodic protection system will be determined during detailed design.

3.4.14.4 Freeze Protection

Midway design incorporates insulation for all pipes less than 2-inches in diameter in order to protect from freezing.

3.4.14.5 Programmable Logic Controller

The programmable logic controller (PLC) provides modulating control, digital control, monitoring, and indicating functions for the plant process block systems. It is described in more detail in Section 3.11 in which facility operations are detailed.

3.4.14.6 Plant Instrument and Service Air System

A compressed air system will provide clean, dry air to the gas turbines, BOP instrumentation, and BOP servicing areas. This system will include an air compression skid with two(2) 100% capacity oil flooded rotary screw compressors and a dryer skid with twin desiccant type heatless regenerative air vessels.

3.5 CIVIL/STRUCTURAL FEATURES

This section describes the buildings, structures, and other civil/structural features that will comprise the facility as shown on the Site Plan.

3.5.1 Power Block

The Midway project will consist of two power blocks and associated BOP auxiliary equipment. Each power block will consist of one (1) FT&J SwiftPac Combustion Turbine Generator unit, SCR, and exhaust stack. Both power blocks will feed one (1) one generator step-up transformer. Corresponding auxiliary mechanical and electrical equipment will be located adjacent to the power blocks. Refer to Figure 3.1-1 for a general arrangement of equipment.

The CTG units will be supported on a reinforced concrete foundation at grade. Individual reinforced concrete pads at grade will be used to support the BOP mechanical and electrical equipment. Foundation pilings will be used for major equipment and building foundations if required. All equipment will have seismic anchoring that meets or exceeds requirements for USC Seismic Zone 4.

3.5.2 Exhaust Stacks

Each CIG unit will be provided with one self-supporting steel stack. The stack will be 15 feet in diameter and 50 feet tall and will include associated appurtenances, such as sampling ports, exterior ladders and site step platforms.

3.5.3 Buildings

The plant buildings will include two (2) primary control enclosures (one for each SwiftPar unit) and one (1) secondary control enclosure. Building dimensions are shown in Table 3.4-1. All of the enclosures will be supported on mat foundations or individual spread footings.

3.5.4 Storage Tanks

The Midway project will utilize two (2) Hot Water Storage Tanks (75,000 gallons each) and one (1) Raw Water Storage Tank (75,000 gallons). Each of these three storage tanks will be approximately 21' in diameter and 24' high, and will be supported by a concrete ringwall foundation. The Midway project will also utilize two (2) Aqueous Ammonia Storage Tanks (12,000 gallons each).

3.5.5 Roads

The site will be accessed from West Panther Road via a new entrance road shown in Figure 3.4-1. The access road network serving the project will consist of a graded gravel entrance road extending for approximately 250 feet to an approximately 1,150-foot asphalt turn-around adjacent to the plant.

3.5.6 Site Security Fencing

A security fence will enclose the plant site. Access gates will be provided, as required, in addition to the perimeter security fence, the substation and transformer area will be fenced and provided with access gates. Security will be maintained on a 24-hour basis with either surveillance devices or personnel.

3.5.7 Site Grading and Drainage

The plant site will consist of a graded gravel entrance road, parking area, and an asphalt road turn-around adjacent to the plant equipment. Stormwater will continue to run off the site as sheet flow. A Stormwater Pollution Prevention Plan (SWPPP) will be prepared prior to construction of the site. This plan will be utilized at the site to control and minimize stormwater during the construction of the facility. The plan will use best management practices such as stabilized construction runways, silt fencing, berms, hay bales, and detention basins to control runoff from all construction areas.

3.5.8 Site Flood Issues

According to the Federal Emergency Management Agency (FEMA), the site is within the 100-year flood plain. The site will be raised one foot in conformance with the Fernald County Ordinance Title

15 Flood Hazard Area to ensure that in the event of a 100-year storm, the site and equipment is not subjected to any flood damage.

3.5.9 Earthwork

Excavation work will consist of the removal, storage, and/or disposal of earth, sand, gravel, vegetation, organic matter, large rock, boulders, and debris to the liner and grades necessary for construction. Material suitable for backfill will be stockpiled at designated locations using proper erosion protection methods. Any excess material will be removed from the site and disposed of at an acceptable location. If contaminated material is encountered during excavation, its disposal will comply with applicable LORS.

The site is currently a storage yard. If needed, fill will be imposed to establish finish grade. Finish grade will be approximately one foot higher than existing grade. The quantity of fill for the project is approximately 9,700 cubic yards all of which will come from the site, as described in the Appendix L.

Graded areas will be smooth, compacted, free from irregular surface changes, and sloped to drain. 1:1 and 3:1 slopes for permanent embankments will be designed to withstand horizontal ground accelerations for Seismic Zone 4. For slopes requiring soil reinforcement to resist seismic loading, geogrid reinforcement will be used for fills and soil nailing for cuts. Slopes for embankments will be no steeper than 3:1 (horizontal:vertical). Construction will be at one foot above existing grade, which is fairly level; therefore major cuts and fills are not anticipated.

Areas to be backfilled will be prepared by removing unsuitable material and rock. The bottom of an excavation will be examined for loose or void areas. Such areas will be excavated fully and backfilled with compacted fill.

Backfilling will be done in layers of uniform, specified thickness. Soil in each layer will be properly moistened to facilitate compaction to achieve the specified density. To verify compaction, representative field density and moisture-content tests will be performed during compaction. Structural fill supporting foundations, roads, and parking areas will be compacted to at least 95 percent of the maximum dry density as determined by American Society for Testing Materials (ASTM) D-1557 as described in Appendix I, Geotechnical Report. Embankments, dikes, bedding for buried piping, and backfill surrounding structures will be compacted to a minimum of 90 percent of the maximum dry density. Backfill placed in remote and/or unshaded areas will be compacted to at least 85 percent of the maximum dry density.

Where fills are to be placed on subgrades sloped at 6:1 (horizontal:vertical) or greater, keys into the existing subgrade may be provided to help withstand horizontal ground accelerations.

The subgrades (original ground), subbases, and base courses of roads will be prepared and compacted in accordance with California Department of Transportation (Caltrans) standards. Testing will be in accordance with ASTM and Caltrans standards.

3.6 ELECTRICAL INTERCONNECTION

The Project will interconnect to the 115kV bus at PG&E's Panoche Substation via the existing CalPeak Panoche generator tie line (see Figure 3.6-1). The tie line connecting the existing CalPeak Panoche Plant to PG&E's system is already sized to carry the output of the Midway plant. Midway will construct a 300-foot generator tap line from Midway in the first point of interconnection, the existing CalPeak Panoche Peaker tie line. The transmission line will be located entirely on either the Project site or the PG&E substation property.

3.6.1 Electrical Interconnection Points

The 115 kV transmission line for the existing CalPeak Panoche Plant is a direct intertie between the CalPeak Panoche switchyard and PG&E's Panoche Substation. The existing CalPeak Panoche Generator Tie line which connects the Peaker Plant to the 115 kV switchyard at PG&E's Panoche Substation is the point of interconnection for the project. Although the Midway project will be interconnected in the CalPeak Panoche transmission line, each project will have independent breakers for isolation from the PG&E system. Neither plant will be dependent on the other for its transmission interconnection.

3.6.2 Transmission Line Specifications

The proposed 115kV lines will be overhead conductor design, supported by wooden poles, with a transmission line span of 300 feet. There will be two dead-end take off structures, one existing at the PG&E Panoche substation and the other proposed as part of the Midway project. The line will originate at the main step-up transformer located at the Midway site and terminate at the tap point where it will intersect with the tie-line between the existing CalPeak Panoche Plant and the PG&E Substation.

3.6.2.1 Conductor

The generator tap line connecting the Midway project to the tap point at the CalPeak Peaker site will be constructed using 715.5 kcmil aluminum or equivalent.

3.6.2.2 Ground Wire

The transmission line will have shield or ground wires in place. The location of the shield wires in relation to conductors shall be in accordance with best industry practices and determined by the surrounding terrain. The shield wire shall be extra high strength galvanized steel or copper-clad steel as determined by the location and the detailed design.

3.6.2.3 Route

The proposed transmission line will originate from the Midway generator step-up transformer near the western perimeter of the site north of the CTG Units (Figure 3.4-1). The 115kV transmission line will run from the northwest edge of the project site and run west approximately 300 feet in the into

the existing CalPeak Panoche tie line to the Panoche Substation. Line design will take into account a 90 degree orientation differential between the Midway dead-end structure and the CalPeak Panoche/PG&E tie-line. Intermediate structures will be installed as required.

3.6.2.4 Tie Line Interconnect

In order to interconnect the 115kV bus at PG&E's Panoche Substation via the existing CalPeak Panoche generator tie line, the Midway project will have to arrange or rebuild or avoid multiple line crossings for the construction of the Project's tie line. This may be done by raising a segment of the PG&E transmission line in order to accommodate the Midway generator tie lines. Line clearances over roads and under existing lines will conform to all applicable standards and requirements found in the NESC, ANSI SFL C2, for such applications.

3.6.2.5 Transmission Structures

The proposed 115kV transmission lines will be overhead conductor design with a transmission line span of 3000 feet. There will be one dead-end take off structure on-site. The structure will be at the originating substation located in the new Midway facility. The design of the transmission structures including lines and poles will be coordinated with PG&E in accordance with their specifications.

3.6.2.6 Types

The take off for the dead end structure will be an A frame type. It will be approximately 50 feet high with additional 15-foot lighting masts. The tower conductor, the ground, and the shield wire will be attached in accordance with PG&E specifications.

3.6.2.7 Foundations

Foundations will be required for 115kV disconnect switch, 115kV circuit breaker, voltage and current transformers, and outgoing dead end structure. The foundations will be drilled pier concrete foundations with the necessary anchor bolts. The dead end structure and, if deemed necessary, any intermediate line support will have foundations designed to meet seismic criteria applicable to the site.

3.6.2.8 Access to Structures

The entire electrical interconnection phase of the project will be located wholly within the property boundaries of either the project, the CalPeak Panoche Plant, or the PG&E substation. It will originate at the facility substation switchyard dead end structure and terminate at the CalPeak Panoche tie line to the PG&E substation. The public will not have access to any portions of the transmission lines or the switchyard.

3.6.3 Midway Transmission System Evaluation

PG&E performed a System Impact Study (SIS), March 2006, and a Facility Study, September 2006, under PG&E's Transmission Openex's Tariff for the Midway plant. The System Impact Study determined the impact on the PG&E system based on power flows on the existing transmission lines and transformers, short circuit duties of the existing transmission facilities and stability of the interconnected system considering various contingencies and fault conditions. The Facility Study outlined mitigation measures for transmission facility overloads.

3.6.3.1 Transmission System Reliability Criteria

The North American Electric Reliability Council (NERC) and the Western System Coordinating Council (WSCC) Reliability Criteria for Transmission System Planning, the Independent System Operator (ISO) and the PG&E Reliability Criteria, will be used in the evaluation of the interconnection of this facility to the transmission system. These criteria will also be utilized in the analysis to insure minimum criteria requirements are achieved to and project objectives are met. The ISO processes will be monitored throughout the transmission system evaluation to insure that any changes in the criteria are considered.

3.7 PIPELINES

The project includes both a natural gas supply pipeline and a water supply pipeline. The natural gas line would tap into an existing PG&E mainline and would consist of a 6-inch line, approximately 50 feet of which would be off-site and approximately 600 feet on-site. The PG&E mainline tie in is adjacent to the entrance of the property. The underground water pipeline would consist of approximately 1,200 feet of 3-inch line piped from the CalPeak Pamche site.

3.7.1 Natural Gas Supply Line

Natural gas will be delivered to the plant site from a connection to a PG&E main line. A metering and regulator station will be provided on the PG&E right of way northwest of the site. The gas will be metered by PG&E as it enters the project site. Additional flow metering will be provided at each UFGI.

3.7.1.1 Pipeline Routes

PG&E will tap the 6-inch gas service line serving the existing CalPeak Pamche Peaker facility approximately 25 feet upstream of the existing meter set, and install 50 feet of 6-inch steel pipeline to a new 6-inch mainline meter set adjacent to CalPeak Power's existing meter set. See Figure 3.4-1 for the location of the meter sets. From the newly installed meter set, approximately 600 feet of gas line would be constructed along the western perimeter of the project site.

3.7.1.2 Buried Pipe

Construction will primarily use an open trench method.

The pipeline will be constructed of carbon steel in accordance with the American Petroleum Institute (API) specifications for gas pipelines or specifications of the ASTM. The pipe will have corrosion-protection coating that is either factory- or field-applied. Joints will be welded, inspected using x-ray, and wrapped with a corrosion-protection coating.

Construction of the natural gas pipeline is described in the following subsections.

3.7.1.2.1 Trenching

The width of the trench is dependent on the soil type encountered and requirements of governing agencies. The optimal dimensions of the trench will be about 18 inches wide and 48 inches deep. For loose soil, a trench of up to 8 feet wide at the top and 2 feet wide at the bottom may be required. The pipeline will be buried with a minimum 36-inch cover. The excavated soil will be piled on one side of the trench and later used for backfilling after the pipe is installed in the trench.

3.7.1.2.2 Stringing

The pipe will be laid out (stringing) on wooden skids along the side of the open trench during installation.

3.7.1.2.3 Installation

Installation consists of:

- Welding, coating, and bending of pipe
- Laying sand or fine soil on the trench floor
- Lowering the pipe string into the trench

Welding will meet the applicable API and ASTM standards and shall be performed by qualified welders. Welds will undergo radiographic inspection by an independent, qualified radiography contractor. All coatings will be checked for holidays and will be repaired before lowering the pipe into the trench.

3.7.1.2.4 Backfilling

Backfilling consists of returning excavated soil back into the trench around and on top of the pipe, and up to the original grade of the surface. The backfill will be compacted to protect the stability of the pipe and minimize subsequent subsidence.

3.7.1.2.5 Plating

Plating consists of covering any open trenches, for safety purposes, with solid rectangular plates in areas of foot or vehicular traffic at the end of a workday. Plywood plates can be used in areas of foot traffic and steel plates in areas of vehicular traffic.

3.7.1.2.6 Pneumatic Testing

Pneumatic testing consists of plugging both open ends of a pipeline that is to be tested, filling the pipe with air up to a pressure specified by code requirements, and maintaining the pressure for a period of time.

3.7.1.2.7 Clean up

Clean up consists of restoring the ground surface by removing construction debris, grading the surface to its original state, and replanting vegetation.

3.7.1.2.8 Commissioning

Commissioning consists of cleaning and drying the interior of the pipeline, purging air from the pipeline, and filling the pipeline with natural gas.

3.7.1.2.9 Safety

Safety consists of complying with all applicable CalOSHA, OSHA, and other regulations and standards as well as contractor's specific safety plans for the project, which will address specific pipeline safety issues.

3.7.2 Water Supply Line

Water can be supplied to the project from multiple sources but for purposes of this report and data presented we will assume water will be delivered to the plant site from a connection to the existing CalPeak Panocha Peaker Plant well.

3.7.2.1 Pipeline Routes

The water pipeline tying Midway to the existing CalPeak Panocha well would follow the perimeter of the CalPeak Panocha site before turning northwest along the shared property line between Midway and CalPeak Panocha. At the point where the water line reaches the north side of the Midway CTG

mits, prior to the Midway step-up transformer, the line would travel east and north into the Midway Site where it would then tap into the RLJ unit.

3.7.2.2 Buried Pipe

Construction of the water pipeline, similar to the natural gas line, will use the open trench method. See sections 3.7.1.2.1 thru 3.7.1.2.4 above.

3.8 PROJECT CONSTRUCTION

Construction of the Midway project includes site preparation, foundation construction, erection of major equipment and structures, installation of piping, electrical systems, control systems, and start-up/testing. These construction activities are expected to require approximately 10 months. The schedule commences when the Owner issues a notice to proceed and is completed when the project is commercially operational.

Table 3.8-1 presents the major construction milestones.

TABLE 3.8-1
CONSTRUCTION MILESTONES

Activity	Dates
Final Financing	December 2007 to February 2008
Engineering, Design, Procurement	February to June 2008
Construction	June 2008 to March 2009
Performance Testing	March to May 2009

Per the Buyer Purchase Agreement and EPC contract, the plant is to be in commercial service by May 1, 2009. Engineering, design, and procurement will commence February 2008 and will be completed by June 2008. Construction is scheduled to occur over a 10 month period after the notice to proceed is received. Construction will be completed by March 2009. Performance testing will be conducted between the end of construction and May 1, 2009 when commercial operation will begin.

3.8.1 Project Schedule and Workforce

The detailed work plans, logistical studies, project procedures, schedules and administrative control systems developed to perform, monitor, and control the Midway project and its implementation will all be prepared in accordance with the CEC regulations and applicable EPCRS.

The general sequence of work will proceed as follows:

- Receipt of the Final Decision from the CEC
- Close project financing

- Issuance of a notice to proceed by the District in the contractor
- Development of the project schedule incorporating items required by the CEC
- Commencement of engineering and procurement activities
- Site preparation and construction mobilization
- Installation of underground piping and electrical systems
- Construction of concrete foundations
- Installation of power-generating equipment
- Installation, interconnection, and testing of all underground piping and electrical systems
- Installation, interconnection, and testing of instrumentation and control devices and distributed control system

Construction will conclude with start-up and testing activities, which will continue until the entire facility is capable of reliable operation within permit requirements and good operating practice. All of the systems and subsystems in each unit will be tested and adjusted, first individually and then redundant with others, before the project is deemed ready for startup.

The Midway project will be declared commercially operational after successful completion of plant start-up activities, and after appropriate testing has been completed. Facility optimization activities may continue after commencement of commercial operation.

Attachments A and B present the projected manpower required for construction. Required manpower averages approximately 75 people per month for a total required 743 man-months during the 10 month construction period. Monthly required manpower peaks at 110 people. Attachment B specifically illustrates the manpower breakdown by craft.

3.8.2 Execution Plans – Engineering and Construction Phases

3.8.2.1 Engineering and Pre-Construction Mobilization

Engineering activities will begin following the California Energy Commission (CEC) Final Approval of the project, which is anticipated by December 2007. Staff from the engineering and construction groups will work together in the same office to prepare a safe, qualitative, cost effective, and sequentially effective plan for the project. The initial focus will include the purchase and delivery of engineered equipment and specialty, long-lead material. Facility design will include early milestones to complete the civil, structural, and mechanical equipment aspects of the project. As the ground breaking occurs and site grading commences, the design and procurement continues to support the

overall schedule and reliability of the final project. Contractor is anticipated to mobilize within four months after notice to proceed.

3.8.2.2 Construction Facilities

Mobile trailer or similar suitable facilities (e.g., modular offices) will be used as construction offices for owner, contractor, and subcontractor personnel.

3.8.2.3 Construction Parking

Construction parking will be within existing site boundaries. Construction access will be from West Panache Road, via the access road. There will be adequate parking space for construction personnel and visitors during construction on site.

3.8.2.4 Laydown and Storage

As part of the site access road construction previously described, an adjacent gravel laydown area will also be constructed (see Figure 3.4-1). In addition to the laydown area, other areas within the site boundary may also be used as off-load and staging during construction. All laydown and storage areas are wholly within the site perimeter and once construction is complete will be within site security perimeter fencing. Post-construction, the gravel laydown area will be used for parking as needed.

3.8.2.5 Emergency Facilities

The General Contractor will have a Safety Coordinator who will prepare a site-specific safety plan. Emergency services will be coordinated with the County of Flexon Fire Department and local hospital in the City of Mendota. An urgent care facility will be contacted to set up non-emergency physician referrals. First aid kit will be provided in the construction offices and regularly maintained. At least one person trained in first aid will be part of the construction crew. In addition, all foremen and supervisors will be given first aid training.

3.8.2.6 Construction Facilities

During construction, temporary utilities will be provided for the construction office, laydown area, and the project site.

Temporary construction power will initially be provided by using diesel- and gas-powered generators. Eventually, temporary con

Water trucks and ponded water delivery will initially provide construction water. As the project matures and the build-out of water wells is completed, the onsite water wells will then be used as the source of construction water.

Portable toilets will be provided throughout the site during construction.

3.8.2.7 Site Services

The General Contractor will provide the following site services:

- Environmental health and safety training
- Site security
- Site first aid
- Construction testing (e.g., nondestructive examination, soil compaction)
- Site fire protection and extinguisher maintenance
- Furnishing and servicing of sanitary facilities
- Trash collection and disposal
- Disposal of hazardous materials and waste in accordance with local, state, and Federal regulations

3.8.2.8 Construction Equipment and Materials Delivery

Materials and supplies will be delivered to the site by truck. Truck deliveries of construction materials and equipment will generally occur on weekdays between 6:00 a.m. and 6:00 p.m., however, some larger heavy load deliveries may be delivered outside these hours. Site access will be controlled for personnel and vehicles.

3.9 FACILITY OPERATIONS AND MAINTENANCE

This section describes operation and maintenance procedures that will be followed by the Midway staff to ensure safe, reliable, and environmentally acceptable operation of the power plant, transmission system, and pipeline. Additional information will be provided in the attached appendices.

3.9.1 Introduction

Midway will require approximately 2 full time employees. Plant operation will be directed from an existing and remote control room located in San Diego, California. All system equipment will be controlled through PLC's utilizing control integration software and the project controls will be integrated into this proven control system.

3.9.2 Power Plant Facility

The Midway plant is designed as a simple cycle peaking facility with two Simplemac units. Each unit consists of two FT8-3 Gas Turbines with power turbines and a single generator. The project will be designed to emphasize efficiency and flexibility.

3.9.2.1 Peaker Plant Operation

The plant will be operated to provide its maximum available electrical output during the periods when the demand for electricity is greatest. As a peaking facility, the plant is contracted and will acquire all permits to operate a maximum of 4,000 hours per year. Midway expects actual operations under normal conditions to be substantially less than contracted hours. Plants with similar operation parameters in California typically operate less than 400 hours annually. The plant will be dispatched by PG&E in accordance with their economic dispatch parameters. The project equipment will be integrated with a CalPex's Power plant performance monitoring program that allows plant staff to make critical decisions as to when the equipment performance has deteriorated to the extent requiring corrective action. This program also allows the plant staff to accurately determine the cost of electrical production. This ability in conjunction with an experienced and adaptable staff will allow the plant to be operated and maintained in the most efficient method possible.

Plant maintenance will be coordinated to coincide with periods of low power demand in the California Independent System Operator (CAISO) system.

3.9.2.1.1 Annual Operating Practices

Generally, the plant will be operated to provide its maximum availability when the demand for electricity is highest. Plant maintenance will be coordinated with demand fluctuations so that outages occur during periods of low demand. Normally, this work will be planned during non-peak periods when electrical demand is low and must be supplied by PG&E and the California Independent System Operator.

3.9.2.1.2 Operation with Seasonal Variation in Ambient Temperature

Unit output is sensitive to the temperature and density of the ambient air taken into the FTG inlet and used in the combustion process. The temperature and humidity of the air ingested into the gas turbine inlets affect power output. The gas turbine will be equipped with evaporative coolers that will be operated when needed to enhance the power output of the gas turbines. Evaporative coolers will also reduce the inlet air temperatures whenever the ambient temperature is higher than 61°F.

3.9.2.1.3 Startup and Shutdown

The typical time required for startup is approximately 10 minutes. The PG&E contract allows for a maximum of 103 startups and shutdowns per unit in a one-year period. Plants with similar operating parameters in California typically have less than 50 startups and shutdowns annually.

3.9.2.2 Control Philosophy

The control system will consist of a state-of-the-art, integrated, microprocessor-based PLC using control integration software. The control system will provide for startup, shutdown, and control of plant operation limits and will provide protection for the equipment.

- Interlock and logic systems will be provided via hard-wired relays, and/or PLCs.
- Process switches (i.e., pressure, temperature, level, flow) used for protective functions will be connected directly to the PLC and the protective system.

3.9.2.3 Degree of Automation

The plant will be designed with automation where practical in order to reduce the required actions performed by operating personnel. Through subsystem automation and use of the PLC, the number of individual control switches and indicators that confront the operator will be greatly reduced. This will reduce the complexity and size of the main control room workstations and panels.

3.9.2.4 Centralized Control

The majority of the equipment that is required to support the operation of the plant will be located in the control and electrical equipment rooms. The control room contains the PLC CRT-based operator workstations and the auxiliary control panels. In addition, the control room contains the alarm, status, and log printers.

Local control panels or stations will be furnished only where operator attention is required to set up a system for operation, or where the equipment requires intermittent attention during plant operation. Main control room indicators and control functions will only be duplicated for those variables critical to plant availability.

All of the control processes furnished on the local control panels and central control system will be mirrored in the San Diego operations control center. The plant will have the capability of being operated locally or from the remote location in San Diego. The remote operation will be transferred to the San Diego control center via T-1 line and internet service and will have redundant systems provided by a telephone dial up connection.

3.9.3 Transmission System Operation and Maintenance

Mitway will be responsible for the maintenance, inspection, and normal operation of the new 230-foot 115kV interconnecting transmission line in agreement with PG&E and NED protocols. Operation of the electrical interconnection facilities will be locally controlled at the new generating plant. Control and protection equipment at the plant and within the PG&E switchyard will monitor and control the safe operation of the line, and will automatically trip the plant (or a portion of it) and/or the line in the event of a fault. Mitway will have continuous access to all of the electrical interconnection facilities in the event of an emergency.

The ground, protection, and metering equipment for the interconnection will be tested for proper operation. The protection and metering equipment will be calibrated and tested approximately every 12 months in accordance with the Midway and PG&E procedures. Inspections of the transmission line and structures are anticipated to occur every 6 to 12 months. Periodic cleaning of the transmission line and switchyard insulators and bushings may be required to remove contamination. The cleaning will be performed based on visual inspections scheduled by plant and switchyard operating personnel. Washing operations will consist of spraying insulators with deionized water through high-pressure equipment mounted on a truck.

3.9.4 Pipelines

PG&E will own the natural gas pipeline from PG&E Gas Line 3 through the outlet of the project meter station. Maintenance of this fuel gas supply line will be performed by PG&E in accordance with applicable Federal Energy Regulatory Commission (FERC) and U.S. Department of Transportation (DOT) regulations. This piping system will receive periodic inspections as part of PG&E's pipeline maintenance program.

The water line will be owned by Starwood Power-Midway, LLC. The system will receive periodic inspections as part of Midway's maintenance program.

3.10 SAFETY, AVAILABILITY, AND RELIABILITY

3.10.1 Safety Precautions and Emergency Systems

Safety precautions and emergency systems will be implemented as part of the design and construction of the plant to ensure safe and reliable operation of project facilities. Administrative controls will include classroom and hands-on training in operating and maintenance procedures and general safety items, and a well-planned maintenance program. These will work with the system design and monitoring features to enhance safety and reliability.

Safety, auxiliary, and emergency systems will consist of lighting, grounding, DC backup for controls, fire and hazardous materials safety systems, security systems, and natural gas, steam, and chemical safety systems. The plant will include its own utilities and services such as plant and instrument air and fire suppression.

3.10.1.1 Safety Precautions**3.10.1.1.1 Worker Safety**

Midway will implement programs to assure that compliance with federal and state occupational safety and health program requirements is maintained. In addition to compliance with these programs, Midway will identify and implement plant specific programs that effectively assess potential hazards and mitigate them on a routine basis.

3.10.1.1.2 Hazardous Material Handling

Hazardous materials will be stored and used at Midway during both construction and operation. Design and construction of hazardous materials storage and dispensing systems will be in accordance with applicable codes, regulations, and standards. Hazardous materials storage areas will be earthen or diked to contain spills or leaks.

Potential hazards that are associated with hazardous materials will be further mitigated by implementing a hazards communication (HAZCOM) program. This program involves thorough training of employees on proper identification, handling, and emergency response to spills or accidental releases.

Emergency eyewashes and showers will be provided at appropriate locations. Appropriate Personal Protective Equipment (PPE) will be provided during both construction and operation of the facility.

3.10.1.1.2.1 Aqueous Ammonia System

Midway will minimize the potential for an occurrence of an accidental release of aqueous ammonia at the facility. Ammonia system design features will include containment basins, drainage of the unloading area into the containment area below the storage tank, emergency shutdown procedures, ammonia sensors, alarms, training, emergency response plans, and other appropriate safety procedures that will ensure safe operation of the aqueous ammonia system. Midway's Operations Manager will have overall responsibility for administering the Risk Management Plan (RMP), which will be requested under the California Accidental Release Prevention Program (CalARP). The important safety features implemented by CalPeak Power are discussed in this ICMP document. These key features of the ammonia system at the Facility will include:

- Proactive facility inspection and maintenance program that will be administered by the Midway Operations Manager, and is designed to identify potential hazards before a release occurs.
- A below-grade containment area sized to contain the entire contents of one of the storage tanks (12,000 gallons) plus 10% average, plus the maximum rainfall in 24 hours for the entire period of record.

- An unloading area that is sloped in the containment area so that any spills occurring during unloading operations will be fully contained.
- System design incorporating the latest building codes designed for Seismic Zone 4.
- Automatically actuated safety valves throughout the system.
- Pressure relief valves that vent back to the storage tank.
- An emergency shut-off valve located on the aqueous ammonia truck that can be activated by the delivery truck operator.
- Comprehensive training of employees, facility operators, and contractors.
- Written standard operating procedures.

The facility will be operated in a manner that will protect all employees, contractors, and the public from exposure to hazardous chemicals. The facility will be designed to assure safety and minimize the potential for ammonia releases. The system will have several features (control systems, pressure gauges, flow control indicators, level indicators, alarms, etc.) that will assure that the system will operate safely. In addition, Midway will install ammonia sensors that will provide operators with an indication of a release at the site. Any release that triggers the high alarm on the sensors will trigger emergency response procedures. Midway will implement policies and procedures that will assure proper operation and safety of the aqueous ammonia system.

3.10.1.1.2.2 System Safety Features

Midway has included both passive and active mitigation features in the aqueous ammonia system design. Passive controls such as connected fill and vent lines will be in place to minimize potential vent leakage paths and ammonia releases without the assistance of automatic shut-down, or human intervention. Passive controls at the site will include a below-grade containment area surrounding the 12,000-gallon aqueous ammonia tank that will be capable of containing 100% capacity of the tank plus rainfall. In addition, the truck unloading pad will be sloped toward the below-grade containment area so that any spills of aqueous ammonia that occur during unloading operations will be directed in the containment area. A berm will also be installed around the vaporizer shed to contain any aqueous ammonia releases that occur in that area.

Several active mitigation elements are incorporated into the aqueous ammonia system design. The facility will be operated and controlled remotely at a site located in San Diego. The Midway Operations Manager will be responsible for administering the RMP. Operators will be present at the remote control room at all times, and will continually monitor the aqueous ammonia system. The site itself will be equipped with ammonia sensors and the control system will be designed such that the aqueous ammonia system will automatically shut down in the event of a detection of aqueous ammonia above the sensors' set points. A Midway operator will be present at the site during aqueous ammonia unloading for added safety.

3.10.1.1.2.3 Process Safety Equipment

The aqueous ammonia system is designed so that each part of the system can be isolated in the event of an accident or other event. System valves are generally designed to fail closed so that the systems are isolated. This will minimize the amount of a release in the event of an accident at the facility involving the aqueous ammonia system.

The process equipment associated with the aqueous ammonia system is part of the facility's SCR emissions control system for NOx. NOx emissions are monitored at the control room to ensure proper system operation. High NOx emissions will trigger an alarm resulting in a personnel investigation to determine the cause. The remote operations center will also monitor the aqueous ammonia level in the tank. As described above, the Facility will be equipped with ammonia sensors that will alarm in the event of an ammonia release. The ammonia sensors will trigger an automatic shutdown of the ammonia system, isolating the various components of the aqueous ammonia system. Operating the Facility during an ammonia release would not exacerbate the effects of the release or present any additional hazard. Depending on the amount of release or due to potential emissions increases, the Facility may ultimately have to be shut down, but this would remain at the discretion of the operator.

Table 3.11-1 presents a summary of the devices that will be monitored by the operator and would indicate occurrence of a leak.

**TABLE 3.11-1
SUMMARY OF MONITORED DEVICES**

Device	Manufacturer	Detection Capabilities	Event(s) Triggering an Alarm
Ammonia Tank Level Indicator	Rochester float indicator Model AG142-12-144 with R6315-23 level transmitter	Output: 4-20 mA Currentity, $\pm 1.5\%$	Operator monitors ammonia tank level visually. Should the operator observe a rapid drop in level, or should the high level alarm be triggered, the operator will evaluate the event and shut down the ammonia system as necessary.
Ammonia Sensors (5)	Scott Bacharach, Model 4600 GasPaks	11 to 50, 150, 250, 500 ppm, with 1 to 100 ppm as an optional range value Sensor repeatability: $\pm 2\%$ full scale Sensor linearity: $\pm 2\%$ full scale Sensor life: 22-24 months average	Detection of a concentration of 50 ppm NH ₃

3.10.1.1.3 Security

A security fence will enclose the plant site. Access gates will be provided, as required. In addition to the perimeter security fence, the substation and transformer area will be fenced and provided with access gates. Security will be maintained on a 24-hour basis with either surveillance devices or personnel.

3.10.1.1.4 Public Health and Safety

The programs implemented to protect worker health and safety will also benefit public health and safety. Facility design will include controls and monitoring systems to minimize the potential for upset conditions that could result in public exposure to acutely hazardous materials. Potential public health impacts associated with operation of the project will be mitigated by development and implementation of an Emergency Response Plan (ERP), a HAZCOM Program, a Spill Prevention, Control, and Countermeasures (SPCC) Plan, safety programs, and employee training.

Midway will coordinate with local emergency responders, provide them with copies of the plant site ERP, conduct plant site tours to point out the location of hazardous materials and safety equipment, and encourage these providers to participate in annual emergency response drills.

3.10.1.2 Emergency Systems**3.10.1.2.1 Fire Protection Systems**

Midway will have onsite fire protection systems and will be supported by local fire protection services. Section 3.4.11 includes a detailed description of the fire protection systems.

Portable and fixed fire suppression equipment and systems will be installed in the project. Portable fire extinguishers will be located at strategic locations throughout the project site. The fixed fire protection system will also include a carbon dioxide fire suppression system.

Employees will be given fire safety training including instruction in fire prevention, the use of portable fire extinguishers and hose stations, and reporting fires to the local fire department. Employees will only suppress fires in their incipient stage. Fire drills will be conducted at least twice each year for each work area.

The Fresno County Fire Protection Division (CFPD) Station #06, located at 101 Melrose, Mendota, with an estimated response time of 15-20 minutes, will provide primary fire protection, fire fighting, and emergency response services to the Midway site. The County Fire Marshal will perform a final fire safety inspection upon completion of construction and, thereafter, will conduct periodic fire safety inspections. Prior to starting the CFPD will be requested to visit the project site to become familiar with the site and with project emergency response procedures.

3.10.1.2.2 Medical Services and Emergency Response

Midway will have an Emergency Response Plan (ERP). The ERP will address potential emergencies, including chemical releases, fires, and injuries, and will describe emergency response equipment and its location, evacuation routes, procedures for reporting to local emergency response agencies, responsibilities for emergency response, and other actions to be taken in the event of an emergency.

Employee response to an emergency will be limited to an immediate response to minimize the risk of escalation of the accident or injury. Employees will be trained to respond in fires, spills, earthquakes,

and injuries. A first-aid facility with adequate first-aid supplies and personnel qualified in first-aid treatment will be onsite.

3.10.2 Aviation Safety – Power Generation Stacks

The FAA Regulations Part 77 establishes standards for determining obstructions in navigable space and sets forth requirements for notification of proposed construction. These regulations require notification of any construction over 200 feet in height above ground level. The closest airfield with regularly scheduled commercial flights is Fresno, approximately 50 miles away. A small general aviation airport in Firebaugh (Firebaugh Airport) is also located approximately 24 miles from the site.

The stacks will be 511 feet above ground. A Notice of Construction or Alteration will not be required to be filed with the FAA. Local air uses, such as crop dusting operations, will be reviewed to determine the need for other aviation safety markings.

3.10.3 Transmission Line Safety and Nuisance

3.10.3.1 Transmission Line Description

The onsite interconnection facilities will consist of 115kV outdoor switchyard, line surge arresters, high voltage disconnect switch, high voltage circuit breakers, metering and relaying devices, foundations, ground grid, fencing, and all other components necessary to connect the output of the generator to the existing CalPeak Panache tie-line. The transmission line will be approximately 300 feet long.

3.10.4 Facility Availability

This facility consists of four simple cycle gas turbines (two per SwiftPac Unit) and two generators that are specifically designed for peaking services. To support dispatch service, each turbine generator is commonly operated at 100 percent of base load, hence the facility will be operated in support dispatch service control in response to system demands for electricity.

The facility will be designed for an operating life of 30 years. Reliability and availability projections are based on this operating life. Operations and maintenance procedures will be consistent with industry standard practices to maintain the useful life spans of the plant components.

The portion of time that the power plant is projected to be operated is defined as the “service factor.” The service factor considers the amount of time that a unit is operating and generating power, whether at full or partial load. Midway will be licensed to operate up to 4,000 hours per year, as required by PG&E. This differs from the equivalent availability factor (EAF), which considers the projected percent of energy production capacity achievable.

The EAF may be defined as a weighted average of the percent of full energy production capacity achievable. The projected EAF for Midway is estimated to be approximately 95 to 99 percent.

The EAF, which is a weighted average of the percent of energy production capacity achievable, differs from the "availability of a unit," which is the percent of time that a unit is available for operation, whether at full load, partial load, or standby.

3.10.5 Equipment Reliability and Redundancy

Turbine systems and auxiliary equipment serving the power generating and transmission equipment will be selected for high reliability, where possible. Redundant equipment and systems will be installed to allow the plant to resume operating in the case of an auxiliary equipment failure where cost efficiency or necessary for safety. Section 3.4.2 and Table 3.4-1 of this application list the plant's main generating components and major auxiliary equipment.

Reliability will be further ensured through a regular inspection and maintenance program. Downtime will normally occur during times when regional electric demand is low and surplus generating capacity is readily available.

To further enhance reliability, the project will participate in the manufacturer leased engine program. The gas turbine engines are readily interchangeable, within 72 hours a new engine can be installed to replace one that has failed. An outage caused by an engine failure will be remedied within 72 hours through the use of a lease engine.

Gas turbine inspections and overhauls will dictate the length and frequency of major scheduled outages. Under expected operating conditions, the gas turbine combustors and hot sections will require a scheduled outage during the off-peak period. Depending on the length of the outage a lease engine may be installed while the Midway engine is under repair. As dictated by operating hours, major gas turbine overhauls will require scheduled outages. Major hot section overhauls will be required at about 25,000 equivalent fired hours and major overhauls of the complete turbine and compressor will be required at about 50,000 hours.

3.10.5.1 Personnel and Administration

Along with the plant hardware, plant administrative and operational procedures will be designed to enhance reliability. Plant operations and maintenance activities will be carried out in accordance with documented procedures and by personnel trained in accordance with a documented training program. To ensure operational efficiency, selected spare parts for plant equipment and machinery will be maintained onsite. The training program will include classroom and hands-on training. Plant operations and maintenance personnel will also participate in the commissioning, startup and test activities during the plant construction period.

3.10.5.2 Combustion Turbine

The power block consists of four separate combustion turbines and two generators operating in the simple-cycle mode. Each combustion turbine generator can provide 25 percent of the total plant output and operate independent of its operating combustion turbines.

3.10.5.3 Control and Information System

Critical functions will have redundant sensors and controls. The control systems will be designed with a redundancy level such that critical controls and indications do not fail due to a single component failure.

Control systems in general, and especially the equipment protection systems, will be designed according to stringent reliability criteria.

Plant operation will be controlled from either a locally installed operator panel or a control room off-site in San Diego, California.

3.10.5.4 RO and Demineralized Water Systems

The RO and demineralized water systems will provide high-purity water to be used for NUCx control and idling. A 75,000 gallon Raw Water Storage Tank is included in the design to hold water after it has been processed through the RO Unit, prior to it being processed by the demineralizer.

The Midway project will utilize a mobile water treatment system to produce the required demineralized water. Demineralized water will be stored in two 75,000 gallon demineralized water storage tanks.

3.10.6 Power Plant Performance Efficiency

CTG output and efficiency are greatly affected by atmospheric conditions and load variations. The CTG design incorporates an idling water and increased firing temperatures in order to achieve a high efficiency. Air-cooled fin-fan heat exchangers are used to maintain stack temperature at less than 750°F.

3.10.7 Fuel/Water Availability**3.10.7.1 Gas Supply**

The Midway site will be fueled by natural gas supplied from PG&E's trunk line system immediately to the north of the property. The gas interconnection would be require approximately 650 feet of new line at the Midway site in order to tap into the existing PG&E system. The proposed pipeline would have sufficient capacity to supply each FTR-J SwiftPac CTG unit with approximately 625MMBtu/hr at a pressure of 500-600 psig.

3.10.7.2 Water Availability

The water will come from the adjacent and existing CalPeak Power Plant well (upper groundwater aquifer). The proposed annual water use of approximately 43.6 acre-feet per year will not exceed the safe perennial yield of groundwater in the Westside Sub-basin of the San Joaquin Valley Groundwater Basin.

3.10.8 Project Quality and Control

The general contractor, the design-engineer contractor, and all significant vendors, suppliers, and subcontractors for the project will be required to develop a project-specific quality program prior to beginning work. Each program will define quality goals, processes to measure events, and incentive programs. Quality standards will include safety and environmental compliance objectives.

3.10.8.1 Quality Assurance

The quality assurance manual will define the quality management system and processes, management responsibility and organization, project execution, and measurement methods. Other elements of the quality assurance program will include a procedure manual, standards, job quality analysis, quality audits, preventive action planning, internal and external assessment, training, and trending.

Key quality indicators will be tracked and include surveillance, deficiencies, non-conformances, weld reject rate, audit results, quality incidents, and rework. The quality indicators will be metrically measured and reported.

3.10.8.2 Quality Control Records

Quality records will be maintained during the detailed design phase of the project, during the construction phase, and during plant commissioning. Quality records include written documentation that procedures and standards are followed including inspection and testing reports, audit checklists, audit reports, and quality incident investigation reports.

Prepared for:

Starwood Power, LLC
10000 1st Street
Midway, CA 94560

Surveyed and Plotted by:

TRI-CITY ENGINEERING
10000 1st Street
Midway, CA 94560

Site Benchmark:

NAD: NAD83
Elevation: 422.80
Horizontal: 115.12

Title:

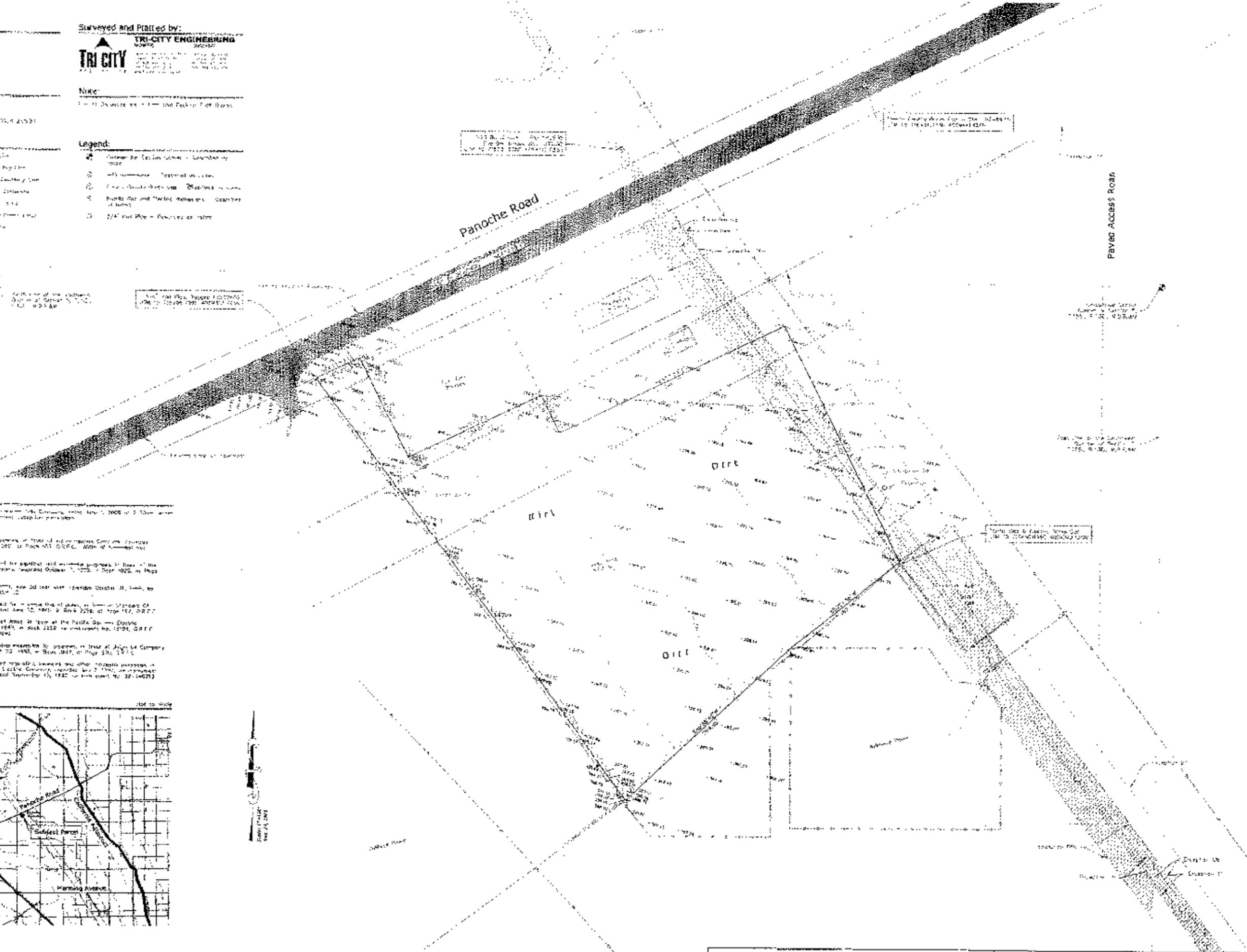
Topographic Survey Map

Legend:

- Proposed Right-of-Way
- Right-of-Way
- Easement
- Utility
- Boundary
- Contour
- Spot Elevation
- Structure
- Obstacle
- Proposed Structure
- Proposed Easement
- Proposed Utility
- Proposed Boundary
- Proposed Contour
- Proposed Spot Elevation
- Proposed Structure
- Proposed Obstacle

Legend:

- ★ Station
- Spot Elevation
- Structure
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- ▭ Proposed Easement
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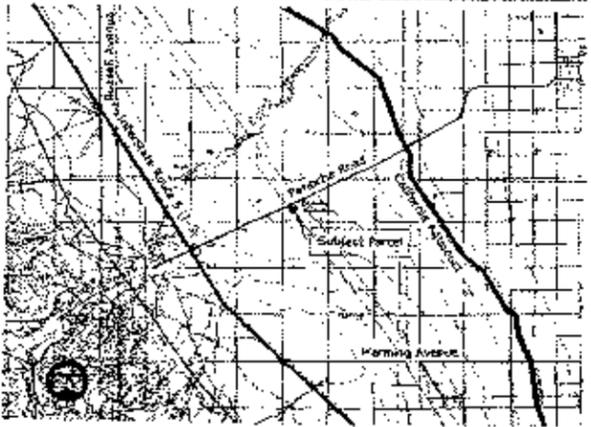


Exemptions/Exceptions:

Refer to the following for the exemptions/exceptions: California Public Resources Code, Section 45000, and California Public Resources Code, Section 45001.

- Exemption 1: Aerial photograph for the purpose of determining the location of the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 2: A 15-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 3: Incorporated in the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 4: A 20-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 5: A 10-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 6: A 5-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 7: A 3-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 8: A 2-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 9: A 1-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 10: A 0.5-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 11: A 0.2-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 12: A 0.1-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 13: A 0.05-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 14: A 0.02-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 15: A 0.01-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 16: A 0.005-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 17: A 0.002-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 18: A 0.001-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 19: A 0.0005-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 20: A 0.0002-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.
- Exemption 21: A 0.0001-foot wide strip adjacent to the subject parcel, as shown on the map, is a true and correct representation of the subject parcel, as shown on the map, as of the date of the survey.

Vicinity Map:



NO.	REV.	DATE	BY	CHKD.
1	AS BUILT			
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3	REVISION			
4	REVISION			
5	REVISION			
6	REVISION			
7	REVISION			
8	REVISION			
9	REVISION			
10	REVISION			



NOTE: FOR PAPER AND CONSTRUCTION, SEE SHEETS 1-100 TO 1-105.

PRELIMINARY

Starwood Power
Midway, LA

ENERGY

PRELIMINARY DESIGN

NO. 100

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Panoche Energy Center, LLC

**Site Plan & Operational Statement
for
*Site Plan Review***

January 26, 2007

**Submitted to:
The County of Fresno
Division of Public Works and Planning
Development Services Division**

**Submitted by:
Panoche Energy Center, LLC**

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OVERVIEW

Panoche Energy Center, LLC (PEC) respectfully submits this *Site Plan* and *Operational Statement* to the Fresno County, Division of Public Works and Planning, Development Services Division (Division) for two purposes: (1) to facilitate the Division's review of the Land Use section of the *Application for Certification* (AFC), submitted by PEC to the California Energy Commission (CEC) on August 2, 2006, and (2) to facilitate the Division's **Site Plan Review** process in regard to the California Subdivision Map Act.

This submittal consists of two main parts, the *Site Plan* and the *Operational Statement*. The *Site Plan* is a single 30" x 43" drawing that shows details for site boundaries, roads, topography, general arrangement of equipment and buildings, among others. (Note that there are eleven full-size copies of the *Site Plan* included in this submittal.) The *Operational Statement* is a narrative description, herein, based on the Division's guidelines. Additional drawings, as identified throughout, serve as attachments to this submittal.

1. NATURE OF THE OPERATION

1.1 Introduction

The Panoche Energy Center (PEC) is a proposed simple-cycle electrical generating facility which will be permitted by the California Energy Commission. The generating facility will include four General Electric LM500 natural gas-fired combustion turbine generators (CTGr), each equipped with water injection to the combustors for reducing production of oxides of nitrogen (NO_x), a selective catalytic reduction (SCR) system with 19 percent aqueous ammonia injection to further reduce NO_x emissions, and an oxidation catalyst to reduce carbon monoxide (CO).

The total net generating capacity will be approximately 400 megawatts (MW). Electricity generated by the PEC will be delivered to the existing Pacific Gas and Electric (PG&E) electrical transmission system at the adjacent Panoche Substation. Interconnection at this substation will minimize impacts to the PG&E transmission system while providing efficient peaking power for use during peak electricity demand.

Process water and non-potable water uses will be supplied to the PEC from two new groundwater wells drilled onsite into the Westside Sub-basin of the San Joaquin Valley Groundwater Basin. These wells will draw water from a brackish aquifer. Potable water will be supplied to the PEC by a drilled water service.

Process wastewater will be disposed of using a deep well injection system. Sanitary wastes will be directed to a septic system and leach field designed to treat the sanitary flow from the administration and control building and restrooms. An artist rendering of the power plant and site is provided as *Attachment 1- Artist Rendering*.

1.2 Location

The project area is located in the unincorporated area of western Fresno County, adjacent to the Panoche Hills and east of the San Benito County line. The site is approximately 50 miles west of the City of Fresno and approximately 2 miles east of Interstate 5. The site is more specifically described as the Southwest Quarter of Section 5, Township 15 South, Range 13 East, on the United States Geological Survey (USGS) Quadrangle map. The assessor's parcel number (APN) is 027-060-78S.

The facility site will be located on a 12.8-acre site within a 128-acre parcel. The construction staging area, including laydown and parking, consists of an 8-acre portion of the 128-acre parcel immediately south of the 12.8-acre plant site. The plant site and construction area are leased by the applicant from the property owners. The 128-acre parcel is currently in agricultural production with pomegranate trees. Offsite improvements associated with the project include a 400-foot paved access road south of West Panoche Road to the plant site, 2,400 linear feet of new gas pipeline, 300-foot transmission line to tie into the Panoche Substation, and the PG&E expansion of the Panoche Substation by approximately 1.1 acres south of the existing substation boundary.

The site and laydown area are shown relative to the 128-acre parcel and surrounding area in the *Attachment 2 - General Vicinity*.

1.3 Site Description

The site is in an agricultural area and is currently planted in pomegranate trees. Power line easements are located along the western boundary and adjacent to the northeast corner of the site. The site is essentially flat, with a slight slope down to the northeast.

The current site topography is shown on *Attachment 2 - General Vicinity*. The site elevation is about 410 feet above mean sea level and slopes gently down to the northeast at approximately one percent grade. The surface is composed of sands, silts, and clays.

1.4 Project Description

The generating facility will consist of four (4) General Electric LM5100 natural gas-fired Combustion Turbine Generators (CTG), each equipped with water injection to the combustors for reducing production of NO_x , a SCR system with 19 percent aqueous ammonia injection to further reduce NO_x emissions and an oxidation catalyst to reduce CO emissions. The total net generating capacity will be approximately 400 MW.

Auxiliary equipment will include inlet air filters with evaporative coolers, turbine compressor section inter-cooler, mechanical draft cooling tower, circulating water pumps, water treatment equipment, natural gas compressors, generator step-up and auxiliary transformers, and water storage tanks. Information on the major equipment is listed in a table in Section 8 below.

Electric power generated at the PEC facility will be sold to PG&E under a 20-year power purchase agreement (PPA) between PEC and PG&E. Design of the plant and equipment selection is based on requirements in the PPA. The agreement was executed in April 2006 and requires that the facility be online by August 1, 2009 in order to avoid delay-related damages.

The PEC will connect to the PG&E electrical transmission system at the adjacent Panoche Substation. The connection will require approximately 300 feet of 230 kilovolt (kV) transmission line located within the plant site and PG&E's substation. Interconnection at this substation minimizes impacts to the PG&E transmission system while providing efficient peaking power for use during peak demand as projected by PG&E.

1.5 Site Access

Access to the site will be from Davidson Avenue, approximately 400 feet south of the intersection with West Panoche Road via a 24-foot-wide newly paved road. The existing access will be improved for the project. Improvements will require a 50 foot access easement, widening the road surface, improving drainage, and laying gravel on approximately 400 feet of road surface from the intersection with West Panoche Road to the facility's main gate. These improvements will support the expected traffic loads and reduce dust emissions. The newly paved road will have two 12-foot-wide lanes with 5-foot-wide gravel shoulders and enclosed drainage ditches.

1.6 Site Plan

The attached *Site Plan* shows the location and size of the proposed plant facilities and all site improvements including the improved access road, the gas pipeline, the 230kV transmission line, the expansion area for the PG&E electrical substation, the construction lay down area, and a basin for storm water retention.

The plant facilities have been arranged for optimum use of the property as well as to ensure ease of operation. Investigations and evaluations have been conducted to define the specific facility equipment requirements and the suitability of the proposed project site to accommodate these facilities. Grading and drainage for the project site is described in *Section 18.J Site Grading & Drainage*.

1.7 Building and Structural Features

This section describes the buildings, structures, and other civil/structural features that will constitute the facility. As noted above, the general arrangement is shown in *Site Plan*. Elevations of major structures and equipment are shown in *Attachment 3 - Elevations of Structures*.

The power block will consist of four separate simple-cycle combustion turbine power generation trains, each consisting of one General Electric Energy LMS100 CTG, an Air Inlet System, an Intercooler and Variable Bleed Valve Silencer, a SCR system, one stack, a power control module, an intercooler motor control center, a fuel gas filter/separator, and a step-up transformer.

In addition to the four combustion turbine power generation trains, there will be a five-cell cooling tower, an ammonia storage tank, a natural gas compressor facility, a water treatment facility, and two auxiliary transformers. There will also be balance-of-plant (BOP) mechanical and electrical equipment.

The major equipment will be supported on reinforced concrete foundations at grade, with pile-supports as necessary. Individual reinforced pads at grade will be used to support the BOP mechanical and electrical equipment. The gas compressors will be in an enclosed acoustic building for noise attenuation. The water treatment equipment will also be in an enclosed building.

Stacks. The SCR system will include an integral stack/silencer system. The stack will be a self-supporting steel stack, 90 feet tall, and will include the associated appurtenances, such as sampling ports, exterior ladders, side step platforms, a lighting system if required by FAA regulations, and electrical grounding.

Buildings. The plant buildings will include an administration and control building, a warehouse building, a water treatment building, a firewater pump building, switchgear modules, and a gas compressor building. The administration and control building will house the administrative areas and the control room for the new facility. All of the buildings will be supported on mat foundations or individual spread footings.

Transformer Foundations and Fire Walls. There will be four 13.8kV to 210kV step-up oil-filled transformers and two auxiliary oil-filled transformers. Each will be supported on reinforced concrete foundations at grade, with pile-supports as necessary. Construction of a concrete retention basin around each transformer will provide oil containment, in the event of a failure of a transformer. Concrete firewalls are planned for each step-up transformer and auxiliary transformer to limit a potential transformer fire to its concrete basin area.

Yard Tanks. The yard water storage tanks will include the demineralized water storage tank (240,000 gallons), the raw water/firewater storage tank (500,000 gallons), and the wastewater collection tank (20,000 gallons). The yard storage tanks will be vertical, cylindrical, field-erected, or shop-fabricated steel tanks. Each tank will be supported on a suitable foundation consisting of either a reinforced concrete ring wall with an interior bearing layer of compacted sand for the tank bottom, or a reinforced concrete mat.

Roads. The new facilities will be served by the road network shown on the *Site Plan*. The new site will be accessed from West Panoche Road via a new asphalt paved entrance road (Davidson Road) shown in the *Site Plan*. All new roads, miscellaneous access drives, and permanent parking areas within the site boundaries will be asphalt paved.

2. OPERATIONAL TIME LIMITS

Each of the four CTG will generate approximately 100 MW under most ambient conditions. The CTGs are expected to operate no more than 5,000 hours per year (each CTG), with an expected plant capacity factor of 57 percent. As required in the PG&E Power Purchase Agreement, each CTG will be available to run up to the following hours on a quarterly basis:

- 1st quarter = 1400 hours
- 2nd quarter = 1100 hours
- 3rd quarter = 1600 hours
- 4th quarter = 1200 hours

Each CTG may run any day of the week for up to 24 hours. Given that these are “peaking” generating units, likely they will operate a few hours each day rather than continuously. Per the PPA, each unit may start-up and shut-down once per day, 365 days per year. While these units may run continuously for periods greater than 24-hours, likely they will run during peak energy demand periods – typically between 6:00 AM through 8:00 PM.

3. NUMBER OF CUSTOMERS OR VISITORS

Given the nature of the PEC as a generator of electricity connected to PG&E’s electrical transmission system, PEC will not have customers visiting the site. Visitors will mainly consist of service and material vendors as described in Section 5.2 below. PEC estimates that there will be, on-average, less than ten visitor vehicles per day.

4. NUMBER OF EMPLOYEES

4.1 Construction: The PEC project construction is envisioned to be completed within a 16-month construction schedule. The average construction workforce will be about 150 workers over this time period. During an approximately 3-month peak period, the construction workforce may reach up to 364 workers during the peak month. Independent of the power plant construction activities, expansion of the adjacent substation would require up to 19 workers onsite during a 5-month construction period.

4.2 Operations: The PEC will employ 12 full-time employees. These will consist of six operators, four maintenance specialists, one office administrator and one plant manager. The six non-operating employees will typically work 8:00 AM to 5:00 PM Monday through Friday. The other six employees, notably the operating staff, will work various shifts around-the-clock. Typically, there will be two operators at any given time present at the plant.

5. SERVICE AND DELIVERY VEHICLES

The effects and impacts of service and delivery vehicles are described in two distinct phases – construction and operations.

5.1 Construction-related impacts (Year 2008 Peak Project Construction) The PEC project construction is envisioned to be completed within a 16-month construction schedule. The average construction workforce will be about 150 workers over this time period. During an approximately 3-month peak period, the construction workforce may reach up to 364 workers during the peak month. Independent of the power plant construction activities, expansion of the adjacent substation would require up to 19 workers onsite during a 5-month construction period. During the project construction period, small quantities of hazardous materials will be delivered and construction waste products will be hauled to and from the project site.

Typically, construction activity early work starts before the 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM adjacent street peak hour traffic, but for traffic impact analysis purposes, it was conservatively assumed that construction workers traffic would commute alone and within the 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM adjacent street peak hour traffic window.

In addition to the construction workforce trips, construction equipment deliveries and construction-related truck traffic would contribute additional trips during the construction period. Truck and heavy equipment traffic were estimated using a passenger car equivalent (PCE) factor of 1 cars per truck. The following table lists the Peak Project Construction Trip for the PEC construction phase.

PEAK PROJECT CONSTRUCTION TRIP GENERATION

	Daily Trips	AM Peak Hour Trips		PM Peak Hour Trips	
		In	Out	In	Out
Peak PEC Construction Workers ¹	725	364	0	0	364
Equipment Deliveries ²	42	9	9	0	12
Construction Trucks ^{3,4}	48	12	0	0	12
Substation Workers	38	19	0	0	19
Total Trips	859	404	9	0	407

¹ Worker traffic during 3-month peak project construction period in Year 2008

² Equipment movement during 3-month peak project construction period in Year 2008

³ Construction truck movement during 3-month peak project construction period in Year 2008

⁴ 3 Passenger Car Equivalent (PCE) per truck

As shown in the table above, during the peak 3-month project construction period, it is conservatively estimated that there will be approximately 853 daily trips and 413 AM peak hour and 407 PM peak hour trips. These figures were used as the basis for the peak project construction traffic analysis.

5.2 Operations-related Impacts (Year 2009 Project Operations)

Upon completion of the proposed PEC construction and commissioning of the facility, the PEC will generate operations-related trips that are substantially less than the peak construction activities. During the normal operational phase of the project, a planned 12-employee workforce will oversee the operation and maintenance of the project.

Occasional deliveries and maintenance-related trips are anticipated as part of the normal operations of the plant. Based on the operational needs of the PEC the following sources of vehicular traffic are anticipated:

- Operations personnel vehicles
- Bottled water deliveries
- Trash pickup
- Tools and spare parts deliveries
- Janitorial staff visits
- Chemical (e.g., aqueous ammonia, sulfuric acid, water treatment) deliveries
- Lubricating oil and filters deliveries
- Laboratory analysis waste deliveries
- Hazardous and non-hazardous waste pickups
- Visitor vehicles

During the project operations, small quantities of hazardous materials will be delivered and operational waste products will be hauled to and from the project site. More detailed discussion on project waste management and handling of hazardous materials are presented in the AEC *Section 5.14, Waste Management* and *Section 5.15, Hazardous Materials*, respectively.

Upon completion of the proposed project construction, it is anticipated that there will be approximately 12 workers staffing the PEC plant operations. These workers will not all commute during the 7-9 AM and 4-6 PM adjacent street peak hour traffic but were included for purposes of evaluating the worse-case scenario during plant operations. During normal plant operating hours, occasional visitor trips, maintenance visits and as-needed material and equipment deliveries are anticipated on a non-recurring basis and will more likely be occurring outside of the 7-9 AM and 4-6 PM analysis peak hours.

The following table presents the project operations trip generation estimates for the proposed project.

PROJECT OPERATIONS TRIP GENERATION

	Daily Trips	AM Peak Hour Trips		PM Peak Hour Trips	
		In	Out	In	Out
Operational Workforce ¹	24	12	0	0	12
Total Trips	24	12	0	0	12

¹ All operational workers (12 employees) were conservatively assumed to commute during the 7-9 AM and 4-6 PM adjacent street peak hour traffic.

5.3 Year 2008 Conditions Impact Analysis. Based on the Fresno County Division of Public Works traffic impact threshold criteria, none of the project study intersections would be significantly impacted during the peak project construction activity in Year 2008. The existing circulation system including study roadways, freeway segments and intersections have sufficient capacity to accommodate peak PEC project construction traffic.

5.4 Year 2009 Conditions Traffic Impact Summary. As discussed previously, the Year 2008 Peak Construction activities represented the worst possible case traffic analysis scenario for the proposed PEC. Upon completion of the proposed PEC project construction and commissioning of the facility, the PEC will generate operations-related trips that are substantially less than peak construction activities. Post-construction background traffic within the project study area is anticipated to be slightly higher than pre-construction levels with minor incremental traffic increase attributed to ambient growth and added trips from plant operations.

Based on the Fresno County Division of Public Works traffic impact threshold criteria, none of the project study intersections would be significantly impacted with the start of project operations by Year 2009. The projected incremental net increase of trips attributed to project operations would not create significant traffic impacts to the surrounding roadway circulation system.

5.5 Mitigation Measures (Construction)

The result of the project construction traffic analysis showed that no study roadway segment or intersection would be significantly impacted by the proposed project during Year 2008 Peak Construction activities. Based on these findings, the Year 2008 Peak Construction conditions would not require traffic mitigation.

The following mitigations are voluntarily offered by PEC either as part of the construction activity requirements, or as pro-active measures initiated by PEC to minimize construction related trip-making and resultant increases of traffic to the surrounding roadway circulation system.

During project construction, PEC will designate a construction worker, equipment and material delivery/haul route via I-5, the short segment of Panoche Road, the PEC Service Road and vice versa. Construction traffic on Panoche Road east of the project site is anticipated to be primarily by worker trips and will be minimized to the extent feasible.

If required, a traffic and transportation control plan will be prepared in coordination with Fresno County and Caltrans to address short-term construction traffic and material deliveries during project construction.

5.6 Mitigation Measures (Operations)

There were no project operational traffic impacts identified in this study. Thereby, no operations-related mitigations were proposed in the AFC.

6. NUMBER OF PARKING SPACES

The PEC parking layout, as depicted on the *Site Plan*, is designed to meet the Division's *Off Street Parking Design Standards*, namely, one space per every two employees, one handicap space, one visitor space, and one space for each dedicated facility vehicle. This equates to six employee spaces, one handicap space and one visitor space, for a total of eight parking spaces.

7. GOODS SOLD ON-SITE

PEC will sell its only product, electricity, solely to PG&E as it is per the terms of the Power Purchase Agreement with PG&E. No goods or services will be sold on-site.

8. EQUIPMENT

The generating facility will consist of four (4) General Electric LMS100 natural gas-fired CTGs, each equipped with water injection in the combustors for reducing production of NO_x, a SCR system with 19 percent aqueous ammonia injection to further reduce NO_x emissions and an oxidation catalyst to reduce CO emissions. The total net generating capacity will be approximately 400 MW. Auxiliary equipment will include inlet air filters with evaporative coolers, turbine compressor section inter-cooler, mechanical draft cooling tower, circulating water pumps, water treatment equipment, natural gas compressors, generator step-up and auxiliary transformers, and water storage tanks. The following table lists major equipment information for the PEC.

MAJOR EQUIPMENT INFORMATION

Description	Capacity	Dimensions		
		Length (ft)	Width (ft)	Height (ft)
Combustion Turbine Generators (4)	103 MW	130	30	40
Inter-cooler Heat Exchangers (4)	105 MMBtu/hr ¹	44	15	13.5
CTG Stacks (4)	--	--	14.5 diameter	90
Variable Bleed Vents, with Silencers (4)	--	--	12	53
CTG Auxiliary Skid	--	34	13	15
Hot SCR	--	70	25	35
Cooling Tower (5 Cells)	440 MMBtu/hr	151	42	42
Raw Water Storage Tank	500,000 gal	--	44, diameter	44
Demineralized Water Storage Tank	240,000 gal	--	35, diameter	35
Waste Water Collection Tank	20,000 gal	--	15, diameter	15
Administration/Control Building	--	65	40	20
Warehouse/Maintenance Building	--	60	40	28
Water Treatment Building	--	124	60	14
Electrical Building	--	56	15	20
Gas Compressor Enclosures (3)	--	27	17	15

¹ MMBtu/hr = million British Thermal Units per hour

This equipment is depicted in the Site Plan and the Elevation Plan. Major equipment is also shown on *Attachment 1 - Artist Rendering*.

9. SUPPLIES & MATERIALS

There will be a variety of supplies and materials stored and used during the construction and operation of PEC. The storage, handling, and use of all supplies and materials will be conducted in accordance with applicable laws, ordinances, regulations, and standards (LORS).

Chemicals will be stored in appropriate chemical storage facilities. Bulk chemicals will be stored in storage tanks, and other chemicals will be stored in returnable delivery containers. Chemical storage and chemical feed areas will be designed to retain leaks and spills. Dike and drain piping design will allow a full-tank-capacity spill without overflowing the dikes. For multiple tanks located within the same diked area, the capacity of the largest single tank will determine the volume of the diked area and drain piping. Drain piping for volatile chemicals will be trapped and isolated from other drains to eliminate noxious or toxic vapors. After neutralization, if required, water collected from the chemical storage areas will be directed to the cooling tower basin, or trucked offsite for disposal at an approved wastewater disposal facility. The aqueous ammonia storage and unloading area will have spill containment and ammonia vapor detection equipment. Aqueous ammonia will be transported and stored in a 20,000-gallon tank onsite, as a 19 percent solution, by weight.

Safety showers and eyewashes will be provided in the vicinity of all chemical storage and use areas. Hose connections will be provided near the chemical storage and feed areas to flush spills and leaks to the plant wastewater collection system.

Approved personal protective equipment will be used by plant personnel during chemical spill containment and cleanup activities. Personnel will be properly trained in the handling of these chemicals and instructed in the procedures to follow in case of a chemical spill or accidental release. Adequate supplies of absorbent material will be stored onsite for spill cleanup.

A list of the chemicals anticipated to be used at the generating facility and their locations is provided below. This list identifies each chemical by type, intended use, and estimated quantity to be stored onsite.

HAZARDOUS MATERIALS AND WASTES USAGE AND STORAGE DURING OPERATIONS¹

Material	Purpose	Usage/Day	Maximum Stored	Storage Type
Acetylene	Welding	As needed	270 cf	Cylinder
Aqueous ammonia ((19% NH ₃ (OH))	NO _x emissions control	300 lbs/day	20,000 gal	Aboveground tank
Acid (Sulfuric or HCL)	Cooling tower pH control		5,000 gal	Aboveground tank
Argon	Welding	As needed	270 cf	Cylinder
Cleaning Chemicals and Detergents	Miscellaneous cleaning	As needed	20 gal	Manufacturer containers
Diesel Fuel Oil	Emergency generator	As needed	2,000 gal	Tank
Disperant	Prevent particulate settlement deposit on cooling tower basin	As needed	200 gal	Aboveground container
Hydraulic Oil	Power transmission medium in hydraulically operated equipment	As needed	500 gal	55-gallon drums
Laboratory Reagents	Miscellaneous lab work	As needed	20 gal liquid 100 lbs solid	Manufacturers containers
Lubricating Oil	Beating and sleeves lubrication	As needed	24,000	Lubricating sumps of turbines and 55-gallon drums
Mineral Transformer Insulating Oil	Provides overheating and insulation protection for transformers	As needed	60,000 gal	Transformers
Nitrogen	Transformers	As needed	275 cf	Cylinder
Scale/Corrosion Inhibitor	Prevent scale and corrosion in cooling tower circulation water lines	As needed	200 gal	Aboveground container
Sodium hypochlorite (12% wt NaOCl)	Biocide for condenser cooling water system water treatment	As needed	5,000 gal	Aboveground storage tank, plastic
Sulfuric acid for station batteries	Electrical/crit. Bldg., Combustion turbine, miscellaneous	As needed	100 gal	Battery

10. NUISANCE CONDITIONS

10.1 Noise

This sub-section presents an overview of the Noise Study that was conducted and represented in the PEC AFC. The reader should refer to *AFC Section 5.12 - Noise for details on the noise background measurements, facility projections, analysis, and regulatory setting.*

The project site and surrounding land uses are generally agricultural, with some associated residential use. (The project site is described in Section 1.1.) The predominant noise sources in the area include vehicular traffic (automobiles and agricultural equipment) and industrial noise from mechanical equipment and processes at the existing Wellhead Power Purchase, LLC power plant and Pacific Gas & Electric (PG&E) substation.

Noise would be produced at the proposed project site, including the intake and discharge structures, during construction and operation of the project. Potential noise impacts from both project phases were studied.

10.1.1 Construction Noise. Construction at the project site would result in a short-term temporary increase in the ambient noise level near the construction activity. The magnitude of the increase would depend on the type of construction activity, the noise levels generated by various pieces of construction equipment, the duration of the construction phase, and the distance between the noise sources and receiver. Construction would occur during the daytime hours (7:00 a.m. to 7:00 p.m. [5:00 p.m. on Saturday or Sunday]). Construction noise is expected to comply with Fresno County Ordinance Code requirements. No significant impacts would occur.

10.1.2 Operational Noise. Project operation would involve the introduction of noise-generating equipment. The overall noise level generated would depend upon the physical layout of the facility, noise generation of equipment, numbers of individual equipment units, and the noise control measures incorporated into the facility design. Noise-producing equipment is listed in the following table.

EQUIPMENT SOUND POWER LEVELS

Noise Source	Sound Power Level (dB) at Octave Band Center Frequency (Hz)									
	31.5	63	125	250	500	1000	2000	4000	8000	A-WE
Air Compressor Skid	95	102	100	100	97	96	95	94	90	103
Ammonia Forwarding Pumps	91	102	96	96	93	92	91	90	86	98
Ammonia Injection Skid	91	102	96	96	93	92	91	90	86	98
Circulating Water Pumps	96	103	101	101	98	97	96	95	91	103
Cooling Tower (pet cell)	105	106	104	100	97	97	97	97	104	106
Auxiliary Skid	85	87	92	104	106	102	99	101	80	108
Cooling/Purge Air Fans	51	90	104	96	96	95	85	80	82	98
Air Inlet Filter House	108	106	101	91	71	66	77	90	90	94
Generator Enclosure Walls	107	106	106	94	89	90	86	77	77	96
Generator Exhaust Silencer, Damper & Exit	111	103	108	96	81	78	77	75	76	94
Generator Vent Fan Motor & Shell Surfaces	-	102	102	91	78	73	71	68	65	88
Water Silencer Shell Surfaces	-	101	94	91	84	79	75	71	63	87
Turbine Enclosure Walls	108	105	101	95	91	84	85	87	83	95

Turbine Vent Fan Discharge	103	105	98	96	8d	85	86	83	76	93
Turbine Vent Fan Shell, Motor & Silencer Shell Surfaces	101	98	99	99	91	89	84	85	80	96
Step-Up Transformer	95	101	103	98	98	92	87	82	75	98
Deminerlized Water Pumps	91	102	96	96	93	92	91	90	86	98
Fire Water Pump Building	101	104	98	92	78	69	62	56	55	86
Fuel Gas Compressor	114	112	107	104	102	102	100	96	92	107
Fuel Gas Compressor Aftercooler	69	109	122	115	109	106	105	105	107	114
Fuel Gas Regulator Skid	-	-	-	88	90	95	105	103	95	109
Raw Water Pumps	91	102	96	96	93	92	91	90	86	98
Selective Catalytic Reduction Unit	121	116	113	106	97	83	76	68	51	102
Wastewater Forwarding Pumps	91	102	96	96	93	92	91	90	86	98
Turbine Exhaust Duct Casing	116	104	103	104	99	90	87	84	65	100
Turbine Exhaust Stack	140	132	134	140	141	133	130	130	118	141
Turbine Exhaust Stack Silencer	-2	-6	-14	-27	-35	-30	-26	-15	-7	-35

Source: Bibb and Associates, Inc.

Project noise control measures include an exhaust stack silencer, an enclosure around the fuel gas compressors, and a 30-foot high barrier adjacent to the fuel gas compressors and combustion turbine generators.

Acoustical calculations were performed to estimate the sound level from the project at the Noise Sensitive Areas (NSAs) identified as ML1, ML2, and ML3 on *Attachment 2 - General Vicinity*. From the center of the site, ML1 is approximately 1,900 feet northeast, ML2 is approximately 800 feet north and ML3 is approximately 3,300 feet northeast. There are scattered structures that could provide acoustical shielding near ML1 and ML3. There are no other NSAs within one mile of the project site.

Left unabated, PEC power plant operational noise levels at the two closest receptors, ML-2 and ML-1, would exceed the Fresno county nighttime noise limit. To mitigate this projected noise condition on ML-1 and ML-2, PEC proposed the following plan to the CEC in its Issues Notification Response dated December 8, 2006:

“ML-2 consists of potentially three small residential buildings. The Applicant is working with the owner of these residences toward reaching an agreement whereby these receptors would not be used as a residences for the 20-year operational duration of the power plant. Under such an agreement, the Applicant will relocate the current residents to an acceptable location of sufficient distance from the proposed project site to eliminate the need for additional noise mitigation measures. The relocation will occur prior to the operational start-up of the power plant.”

"ML-1 consists of a five-unit one-story residential complex. Given the added distance from the PEC site, these receptors would be affected to a lesser extent than those of ML-2. The Applicant is evaluating abatement designs that would limit noise levels at ML-1 to meet County standards. Meanwhile, it should be noted that Starwood Power - Midway, LLC (Starwood) filed an AFC with this Commission on November 17, 2006 (AFC 06-AFC-10). The proposed Starwood project will be located approximately 460 feet from ML-1. (Starwood AFC, Section 5.12.5.1). The Starwood AFC, in section 5.12.5.1, points out "A signed agreement is in place between the landowner of the 5-plex at ML-1 and Starwood-Power Midway, LLC to relocate the current residences."

If Starwood implements its agreement with the landowner to relocate the residences at ML-1, then PEC will not have to implement its abatement design. Conversely, if Starwood does not implement its agreement, PEC will implement its noise abatement design. Under either scenario, the PEC will be able to demonstrate compliance with the Fresno County noise standards."

10.2 Glare

Glare from PEC is expected to be minimal due to the site arrangement and choice of building materials. Exposed building, structure and related improvement materials consisted mostly of various metals and alloys. The surfaces of most of these exterior building materials will be protected by coatings such as paints, galvanizing and anodizing. Glare will occur mainly from reflections of glass windows of the office/control room building. Windows are not proposed in any of the other structures. Notwithstanding the limited sources for glare, PEC will be surrounded on the north, west and south sides by pomegranate trees (approximately 10' tall) and the PG&E Panoche Substation to the east, thereby greatly reducing line-of-sight reflections from facility. *Attachment 1 - Aerial Aerialview* the PEC facility relative to its surroundings. *Attachment 2 - General Vicinity*, also shows the rural nature of the PEC surroundings.

10.3 Dust

Fugitive dust from the PEC construction and operating phases were studied and results submitted as part of the PEC AFC Section 5.2 - Air Quality. The AFC Air Quality section presents site ambient conditions, projected construction phase impacts and projected operational phase impacts. The study was conducted and presented in regard to "criteria pollutants, which include air contribute to dust (particulate matter). The overview of the Air Quality study presents information on all the criteria pollutants.

10.3.1 Construction Emissions

The primary emission sources during construction will include exhaust from heavy construction equipment and vehicles and fugitive dust generated in areas disturbed by tree removal, well construction, grading, excavating, and erection of facility structures.

Construction activities are associated with four areas of development: a 12.8-acre site where the new turbines will be located; an 8-acre laydown area that will be used as a parking area during the construction phase, a 1.11-acre area north of the site where the natural gas pipeline will be connected, and a 1.1-acre site adjacent to the existing substation. While emission estimates include all areas of development, the construction schedule calls for the project site to be disturbed during various construction phases. Fugitive dust will be greatly reduced during earthwork and construction vehicle movement by applying water as needed.

10.3.2 Operational Emissions

The most important emission sources during the operational phase of the project will be the four simple-cycle combustion turbine generators (CTG) burning exclusively natural gas fuel. Annual operational emissions from each of the four project CTGs were estimated by summing the emissions corresponding to normal operating conditions, limited hours of maintenance operations without emissions controls, and turbine startup/shutdown conditions. Estimated annual emissions of air pollutants for each turbine have been calculated based on 5,000 hours of normal operation, which includes up to 20 hours of maintenance (operation without SCR and CO catalyst), and up to 365 startup and shutdown events for each CTG.

Details of projected construction and operational-related emissions are presented in the *AFC Section 5.02 – Air Quality*.

10.4 Odor

Since the four units will run exclusively on natural gas, the combustion sources will not directly emit odors. The only likely source of odors will result from the handling and use of 10% liquid ammonia. Incidental air-borne ammonia will be emitted during ammonia unloading. During normal operations, ammonia will be limited to 10 parts per million (PPM). This will not contribute to odor concerns beyond the facility boundary.

11 SOLID & LIQUID WASTES

Construction and operation of PEC will produce wastes typical of natural gas-fueled power generation facility. These wastes include oily rags, broken and rusted metal and machine parts, defective or broken electrical materials, empty containers, and other solid wastes, including the typical refuse generated by workers. Recyclable materials will be taken offsite. Waste collection and disposal will be in accordance with applicable regulatory requirements to minimize health and safety effects.

11.1 Construction Waste. Construction of the PEC will generate wastes typical for the construction of simple-cycle, natural gas-fired combustion turbine power generation plants. Typical wastes will include packing materials and dunnage, surplus excavated materials, excess materials (trimmed from standard dimension materials whether wood, metal, wire, or other basic building materials), concrete spoil, temporary weather covers, consumable abrasive and cutting tools, broken tools, parts and electrical and electronic components, construction equipment maintenance materials, empty containers, oily rags, and other solid wastes, including the typical refuse generated by workers.

Solid waste will be segregated, where practical, for recycling. Non-recyclable waste will be placed in covered dumpsters and removed on a regular basis by a certified waste-handling contractor for disposal at a Class III landfill.

Hazardous wastes generated during construction and operation will be handled and disposed of in accordance with applicable laws, ordinances, regulations, and standards (DORS). Hazardous wastes will be either recycled or disposed of in a licensed Class I disposal facility, as appropriate.

Some hazardous solid waste, such as welding materials and dried paint, may also be generated. The hazardous waste will be collected in satellite accumulation containers near the points of generation. This waste will be moved daily to the contractor's 90-day hazardous waste storage area. The waste will be delivered to an authorized hazardous waste management facility, before the expiration of the 90-day storage limit.

Startup will generate wastes typical of normal operation plus initial cleaning wastes such as rags, consumable materials, and failed components. The following table lists solid waste types and amounts expected to be generated during construction.

SOLID WASTE GENERATED DURING CONSTRUCTION

Waste Stream	Waste Classification	Amount	Treatment
Paper, Wood, Glass, and Plastics from packing material, waste lumber, insulation, and empty non-hazardous chemical containers	Non-hazardous	50 tons	Onsite Dumpsters; Waste disposal facility (Class III landfill)
Excess Concrete	Non-hazardous	34 tons	Recycle or Waste disposal facility (Class III landfill)

Waste Stream	Waste Classification	Amount	Treatment
Metal, including steel from welding/cutting operations, packing materials, empty non-hazardous chemical containers, aluminum waste from packing material, and electrical wiring	Non-hazardous	13 tons	Recycle or Waste disposal facility (Class III landfill)
Oily Rags	Hazardous	2 to 3 55-gal drums	Recycled or disposed by certified oil recycler
Empty hazardous material containers-drums	Hazardous, Recyclable	2 cu. yard/week	Recondition, recycle, or Waste disposal facility (Class I)

11.2 Operations Waste. Operation of the facility will generate wastes resulting from processes, routine facility maintenance, and office activities. Non-hazardous waste during operation of the facility will be recycled to the greatest extent practical, and the remainder removed on a regular basis by a certified waste-handling contractor.

The plant will produce maintenance and plant waste typical of power generation operations. The following types of non-hazardous solid waste may be generated: paper, wood, plastic, cardboard, broken and rusted metal and machine parts, defective or broken electrical materials, empty non-hazardous containers, and other miscellaneous solid wastes including the typical refuse generated by workers.

Office paper, newspaper, aluminum cans, wood, insulation, yard debris, concrete, gravel, scrap metal, cardboard, glass, plastic containers, and other non-hazardous waste material will be recycled to the extent practical, and the remainder will be removed on a regular basis by a certified waste-handling contractor for disposal at a Class III landfill.

Hazardous waste will be accumulated at the generating facility according to California Code of Regulations (CCR) Title 22 requirements for satellite accumulation. Hazardous waste will be collected by a licensed hazardous waste hauler, using a hazardous waste manifest. Waste will only be shipped to an authorized hazardous waste management facilities. Biannual hazardous waste generator reports will be prepared and submitted to the Division of Toxic Substances Control (DTSC). Copies of manifests, reports, waste analyses, and other documents will be kept onsite and will remain accessible for inspection for at least 3 years.

Waste lubricating oil will be recovered and recycled by a waste oil-recycling contractor. Spent oil filters and oily rags will be recycled. Spent SCR and oxidation catalysis will be recycled by the supplier, if possible, or disposed of in a Class 1 landfill. Laboratory analysis wastes will be recycled if possible, or disposed of in a Class 1 landfill. The following table lists solid waste types and amounts expected to be generated during operation.

SOLID WASTE GENERATED DURING OPERATION

Waste Stream	Waste Classification	Amount	Treatment
SCR Catalysts Unit	Hazardous	500 lbs every 3 to 5 years	Recycled by SCR manufacturer or disposed of in Class 1 landfill
CO Catalyst Units	Hazardous	500 lbs every 3 to 5 years	Recycled by manufacturer
Oily Rags	Hazardous	200 lbs/year	Recycled or disposed by certified oil recycler

Non-Hazardous liquid wastes will consist mainly of water treatment cooling tower blow-down wastewater. This liquid waste stream will be injected via dedicated and specially designed wells into underlying earth to about 5000 feet below the surface. Sanitary wastewater will be collected and disposed by leach field.

11.3 Hazardous Wastes

Several methods will be used to properly manage and dispose of hazardous wastes generated by PEC. Waste lubricating oil will be recovered and reclaimed by a waste oil recycling contractor. Spent lubrication oil filters will be disposed of in a Class 1 landfill. Spent SCR and oxidation catalysts will be reclaimed by the supplier or disposed of in accordance with regulatory requirements.

The only chemical cleaning wastes are the detergent solutions used during turbine washing. These wastes, which contain primarily dust from the air and potentially compressor blade metals, will be temporarily stored onsite in portable tanks, monitored, and disposed of onsite by the chemical cleaning contractor in accordance with applicable regulatory requirements.

Workers will be trained to handle, store and dispose of hazardous wastes generated at the site in accordance with local, state and federal standards.

12 WATER USE

PEC process water will be supplied via two on-site production wells connected to a lower aquifer. Process water uses include fire protection water, plant service water, sanitary water, cooling tower makeup, combustion turbine NO_x injection (after treatment), and combustion turbine inlet air evaporative cooler makeup (partly from treated water). The CTG injection water will be treated using a reverse osmosis (RO) system, followed by trailer-mounted demineralizers. The total maximum water withdrawal from the two production wells will be less than 1200 acre-feet per year.

These wells will also supply facility showers, sinks, toilets, eye wash stations, and safety showers in hazardous chemical areas. Signs will be posted to alert personnel that production well water is not for human consumption. Potable drinking water will be supplied by a bottled water purveyor.

Wastewater will be disposed of using a new deep well injection system. The deepwell locations are shown on the Site Plan. The combined wastewater discharge from the plant will consist of cooling tower blowdown, RO rejects, evaporative cooler blowdown, CTG intercooler condensation, and water effluent from the oil-water separator.

13 ADVERTISING

There will be no advertising appurtenances, such as billboards, associated with the PEC. There will be a facility identification sign near the entrance gate on Davidson Road that will read: "Panoche Energy Center, LLC." The specific size and design for this sign has not been established.

14 EXISTING & NEW BUILDINGS

Presently, the site consists entirely of pomegranate trees. As such, there are not existing structures on the site. Structures to be constructed are described below and are depicted on the *Site Plan* and *Attachment 3 - General Arrangement Elevation* drawing.

The power block will consist of four separate simple-cycle combustion turbine power generation trains, each consisting of one General Electric Energy LM6000 CTG, an Air Inlet System, an Intercooler and Variable Bleed Valve Silencer, a SCR system, one stack, a power control module, an intercooler motor control center, a fuel gas filter/separator, and a step-up transformer.

In addition to the four combustion turbine power generation trains, there will be a five-cell cooling tower, an ammonia storage tank, a natural gas compressor facility, a water treatment facility, and two auxiliary transformers. There will also be BOP mechanical and electrical equipment.

The major equipment will be supported on reinforced concrete foundations at grade, with pile-supports as necessary. Individual reinforced pads at grade will be used to support the BOP mechanical and electrical equipment. The gas compressors will be in an enclosed acoustic building for noise attenuation. The water treatment equipment will also be in an enclosed building.

Stacks. The SCR system will include an integral stack/silencer system. The stack will be a self-supporting steel stack, 90 feet tall, and will include the associated appurtenances, such as sampling ports, exterior ladders, side step platforms, a lighting system if required by FAA regulations, and electrical grounding.

Buildings. The plant buildings will include an administration and control building, a warehouse building, a water treatment building, a firewater pump building, switchgear modules, and a gas compressor building. Building dimensions are shown in Figure 3.5-1. The administration and control building will house the administrative areas and the control room for the new facility. All of the buildings will be supported on mat foundations or individual spread footings.

Transformer Foundations and Fire Walls. There will be four 13.8kV to 230kV step-up oil-filled transformers and two auxiliary oil-filled transformers. Each will be supported on reinforced concrete foundations at grade, with pile-supports as necessary.

Construction of a concrete retention basin around each transformer will provide oil containment, in the event of a failure of a transformer. Concrete firewalls are planned for each step-up transformer and auxiliary transformer to limit a potential transformer fire to its concrete basin area.

Yard Tanks. The yard water storage tanks will include the demineralized water storage tank (240,000 gallons), the raw water/firewater storage tank (500,000 gallons), and the wastewater collection tank (200,000 gallons). The yard storage tanks will be vertical, cylindrical, field-erected, or shop-fabricated steel tanks. Each tank will be supported on a suitable foundation consisting of either a reinforced concrete ring wall with an interior bearing layer of compacted sand for the tank bottom, or a reinforced concrete mat.

Roads. The new facilities will be served by the road network shown in the *Site Plan*. The site will be accessed from West Paniche Road via a new asphalt paved entrance road. All new roads, miscellaneous access drives, and permanent parking areas within the site boundaries will be asphalt paved.

On-Site Septic System. See *Section 18.3 Sanitary System* below for a description of the septic system. The on-site septic system catch field is shown on the *Site Plan*.

15 BUILDINGS FOR OPERATIONS

There are no existing buildings. Proposed buildings and structures are described in Section 14 above.

16 OUTDOOR LIGHTING & SOUND SYSTEMS

Lighting will be provided in the following areas:

- Interior of buildings such as office, control, and maintenance
- Exterior at entrances to buildings
- Platforms and walkways
- Transformer and switchyard areas
- Plant roads
- Parking areas
- Entry gate
- Cooling tower

The amount of lighting will meet the requirements from a security, normal operations and maintenance, and safety standpoint. Lighting in areas not normally accessed as part of routine operation or to ensure safety of personnel and property (high illumination areas not normally occupied on a continuous basis) will be controlled by either switches or motion detectors.

Emergency lighting fixtures with integral battery packs will be located in areas of regular personnel traffic to allow exit from areas where normal lighting has failed. In areas with major control equipment and electrical distribution equipment, emergency lighting located in these areas will be sufficient to allow operations to reestablish auxiliary power during normal lighting failure.

17 LANDSCAPING & FENCING

A chain-link security fence surrounding the perimeter of the site will enclose the new facility. A controlled-access gate will be located at the entrance off the new access road from Panoche Road. During construction, a temporary chain-link security fence will be erected around the outside perimeter of the laydown site. This fence will be removed at the conclusion of the construction phase.

Given its rural setting and surrounding pomegranate tree agricultural use, PEC does not propose to have any landscaping, per se. Incidental landscaping may be placed as part of the entrance gate sign. This detail has not been determined.

18 OTHER INFORMATION

18.1 Site Grading and Drainage Plan

Construction Phase. Construction is expected to begin in the Fall of 2008 and be completed by Late spring 2009. The expected schedule for the entire construction effort is provided below.

EXPECTED PEC CONSTRUCTION SCHEDULE

Injection Well Installation

Month 1
2 wells drilled

Production Well Installation

Months 2 and 3
2 wells drilled

Clearing and Grubbing (Removal of Trees)

Month 4

Civil Work (Site Grading)

Months 5 and 6

Facility Building

Months 7 - 16
Includes 8 months Concrete Pouring

Natural Gas Pipeline Construction

Month 13
Overlaps in time with Facility Building

Substation Expansion

Months 14 - 18
Overlaps in time with Facility Building

The existing site, as described in Section 1 above, is relatively level. See *Attachment 2 - General Vicinity* for existing topography of the site and surrounding area. According to the Federal Emergency Management Agency (FEMA), a small corner of the site is within the 100-year flood plain. No structures will be located within the flood plain area.

During the initial construction phases, including the installation of the wells and tree clearing, erosion potential will be relatively minimal. Site grading will begin during the civil work phase. Top soil will be removed and transported to nearby locations for re-use as topsoil. (This soil has been tested for pesticides, and has been determined to be non-hazardous.) Construction-grade soil will be imported, placed, graded and compacted to serve as a base for equipment and building structure foundations. The final grade elevations are shown on the *Site Plan*. During soil removal and site preparation, appropriate erosion methods will be used to ensure that sediments will not leave the construction site. As the final grade is established, the storm-water drainage and on-site infiltration pond will be constructed. This system, once constructed, will serve as a storm-water system during the remaining construction period and into the operational period.

Operational Period. Operations are expected to begin in June 2009. Once the site final grade is developed and the storm-water system is constructed during the construction phase, all drainage on the site will be collected and managed on-site. The infiltration pond will serve as the final repository for all drainage that does not evaporate. In addition to serving as a storm-water management system, it will serve as a means to eliminate the possibility of any material releases from exiting the site.

The plant site will consist of paved roads, paved parking areas, and graveled areas. Storm water will be conveyed by overland flow and swales to an infiltration basin located at the southeast corner of the proposed site. The infiltration basin will serve as a storm water treatment facility to manage the quantity of storm water runoff from the proposed site. The infiltration basin is sized to capture 85 percent of the annual storm water runoff from the site according to standards set in the "California Storm Water BMP Handbook." The infiltration basin will also serve to manage peak storm water runoff during 100-year 24-hour storm events. The peak runoff for the developed conditions will not exceed the peak runoff rate of the existing conditions. Refer to the *Site Plan* for location.

A Storm Water Pollution Prevention Plan (SWPPP) will be prepared prior to construction of the PEC. This plan will be utilized at the PEC site to control and minimize storm water during the construction of the facility. The plan will use best management practices such as stabilized construction entrances, silt fencing, berms, hay bales, and detention basins to control runoff from all construction areas. Storm water will be conveyed by overland flow and swales to an infiltration basin located at the southeast corner of the proposed site. The infiltration basin will serve as a storm water treatment facility to manage the quantity of storm water runoff from the proposed site.

REFERENCES

PEC (Panoche Energy Center Project) 2006a – Application for Certification. Submitted to the California Energy Commission on August 2, 2006.

California Dept of Conservation (CDDC) 2006a – Comments and Recommendations. Submitted to the California Energy Commission on September 28, 2006.

PEC (Panoche Energy Center Project) 2006e – Supplement to the Application for Certification. Submitted to the California Energy Commission on November 7, 2006.

PEC (Panoche Energy Center Project) 2006f – Petition for Partial Cancellation of Williamson Act Contract No. 367-APN-027-060-78s. Submitted to the California Energy Commission on December 1, 2006.

PEC (Panoche Energy Center Project) 2007a – Data Responses. Submitted to the California Energy Commission on January 9, 2007.

California Dept of Conservation (CDDC) 2007a – Tentative Approval of Land Conservation Contract Cancellation. Submitted to the California Energy Commission on February 23, 2007.

FRES (Fresno County) 2007a – Site Plan Review. Submitted to the California Energy Commission on April 10, 2007.

FRES (Fresno County) 2007b – Agricultural Land Conservation Committee Staff Report. Submitted to the California Energy Commission on May 1, 2007.

Tani, Robin. Senior Planner, Fresno County Planning Department. Personal communication with staff in December 2006.

Tani, Robin. Senior Planner, Fresno County Planning Department. Meeting with Amanda Sternick and David Jenkins in January 2007.

Should the Energy Commission certify the project, staff recommends that the Energy Commission adopt the following conditions of certification.

PROPOSED CONDITION OF CERTIFICATION

LAND-1 The project owner shall mitigate for the loss of 15 acres of prime farmland at a one-to-one ratio.

Verification: The project owner shall provide a mitigation fee payment to a Fresno County agricultural land trust or a statewide agricultural land trust at least 30 days prior to the start of construction. The fee payment will be determined by Fresno County and the project owner and set forth in a prepared Farmlands Mitigation Agreement (FMA), also determined between the project owner and Fresno County. The project owner shall provide a copy of the FMA to the Compliance Project Manager (CPM) for approval at the time of fee payment submittal. The FMA will require that 15 acres of prime farmland and/or easements shall be purchased within two years of start of construction as compensation for the 15 acres of prime farmland to be converted by the PEC. The FMA shall guarantee that the land managed by the trust will be located in Fresno County (if feasible) and will be farmed in perpetuity. The project owner shall provide to the CPM updates in the Annual Compliance Report on the status of farmland/easement purchase(s).

LAND-2 The project owner shall design and construct the project to the applicable development standards in Sections 816.5 and 843 of the Fresno County Ordinance Code.

1. Any access gate shall be setback a minimum of 20 feet (or the length of the longest vehicle to initially enter the site from the edge of the ultimate road right-of-way).
2. The number of parking spaces required as part of this project shall be one space for every permanent employee, one space for each sales person, and one space for each company vehicle for a total of 6 spaces.
3. Each lot shall have a front yard of not less than 35 feet extending across the full width of the lot; each lot shall have a side yard on each side of not less than 20 feet.

Verification: At least sixty (60) days prior to the start of construction the project owner shall submit to the Compliance Project Manager (CPM) written documentation including evidence of review by Fresno County that the project conforms to the standards in Sections 816.5 and 843 of the Fresno County Ordinance Code.

LAND-3 The project owner shall provide a copy of Fresno County's Final Certificate of Cancellation of Contract from Agriculture Preserve No. 367.

Verification: At least 60 days prior to construction, the project owner shall submit to the CPM a copy of Fresno County's Final Certificate of Cancellation of Contract from Agriculture Preserve No. 367.

period was still in effect. In the Tesla case as in the PEC, Alameda County conditioned its tentative approval of the cancellation upon Commission certification of the project.

- **Subdivision Map Act** – staff is satisfied that the applicant's submittal of its site plan to Fresno County for the county's SPR complies with the exemption provision of the Subdivision Map Act.

Because staff's analysis can arguably show how the proposed project does not conform to the Fresno County General Plan Agriculture and Land Use Element and is not consistent with the AE-20 zone designation, staff suggests that the applicant work with Fresno County to resolve the issue of conformity prior to the publication of the Final Staff Assessment (FSA). In seeking resolution of local LORS, the applicant may want to ask Fresno County to address the four items from Policy LU-A.3 in the Fresno County Agriculture and Land Use Element and the four findings required for granting an unclassified conditional use permit in the AE-20 zone.

Policy LU-A.3 in the Fresno County Agriculture and Land Use Element

- The use shall provide a needed service to the surrounding agricultural area which cannot be provided more efficiently within urban areas or which requires location in a non-urban area because of unusual site requirements or operational characteristics;
- The use should not be sited on productive agricultural lands if less productive land is available in the vicinity;
- The operational or physical characteristics of the use shall not have a detrimental impact on water resources or the use or management of surrounding properties within at least 1/4-mile radius; and
- A probable workforce should be located nearby or be readily available.

Findings required for granting an unclassified conditional use permit in the AE-20 zone.

- That the site of the proposed use is adequate in size and shape to accommodate the use including all yards, spaces, walls, fences, parking, loading, landscaping, and other features required by the use.
- That the site for the proposed use relates to streets and highways adequate in width and pavement type to carry the quantity and kind of traffic generated by the proposed use.
- That the proposed use will have no adverse effect on abutting property and surrounding neighborhood or the permitted use thereof.
- That the proposed use is consistent with the Fresno County General Plan.

Staff is satisfied that as conditioned, the proposed PEC would not have a significant adverse affect on the environmental justice population living within the project's six-mile radius. The project would convert 15 acres of prime soil to a non-agricultural use. Staff's proposed Condition of Certification **LAND-1** will reduce this impact to less than significant.

Staff has insufficient information for reaching an agreement with the DOC's conclusions about the project's consistency with Fresno County's General Plan land use policies. Also, the DOC's letter does not address the direct loss of prime farmland. Staff's analysis concluded that the conversion of this farmland to a non-agricultural use would result in a significant impact requiring mitigation. Therefore, staff proposes condition of certification **LAND-1**, which would require the project owner to mitigate for the loss of prime farmland at a one-to-one ratio. Staff believes that with the adoption of this condition, the impact to farmland will be reduced to less than significant.

Fresno County submitted to the Energy Commission their Agricultural Land Conservation Committee Staff Report Agenda Item No. 3, April, 4, 2007 on the proposed Williamson Act cancellation for the 12.8 acres of prime farmland (see Land Use Appendix 2 for the full text). In its staff report, Fresno County makes a recommendation of approval to the Board of Supervisors for the cancellation of the 12.8 acres.

Staff has insufficient information for concurrence with Fresno County's conclusions that support its statement that "...the cancellation is for an alternative use that is consistent with the provisions of the County General Plan." The County, in its staff report recognizes that its "...General Plan allows for development of certain non-agricultural uses in areas designated for Agriculture." However, staff believes the County does not provide an adequate discussion of the proposed power plant's consistency with the provisions and intent of the Agriculture land use designation or provide a discussion as to how the County allows for such nonagricultural uses as a power plant in areas designated Agriculture.

Fresno County's May 2, 2007 letter (docketed May 7, 2007) to Energy Commission staff is discussed under the section Fresno County General Plan.

CONCLUSIONS

Energy Commission staff cannot conclude that the PEC complies with all applicable LORS. The following conclusions summarize staff's analysis.

- **Fresno County General Plan Agriculture and Land Use Element** – staff cannot conclude that the PEC is consistent with the Agriculture land use designation because power plants are not expressly listed as a permitted or conditional use under that designation and Fresno County has not provided sufficient information that would demonstrate how the PEC is substantially similar in character and intensity to such uses listed Table LU-3.
- **Fresno County Zoning Ordinance** - staff cannot conclude that the PEC is consistent with the AE-20 zoning designation because power plants are not expressly listed as a permitted or conditional use in that zone and Fresno County has not provided sufficient information in its SPR analysis to determine whether the project would be consistent with the intent and purpose of the AE-20 zone.
- **Williamson Act** – Fresno County's 180-day appeal period for the cancellation would begin once the County issues the Tentative Certificate of Cancellation. In the most recent siting case (Tesla) the Commission certified the project while the appeal

has been used as a storage yard and for farm worker housing. Staff notes that although the Starwood site has not been used for recent crop production, it remained in a Williamson Act contract until April 2007.

Because the Starwood Midway site would be located in an area dominated by agricultural use, staff used the LESA model to determine whether it would have a significant land use impact. Staff's analysis showed that the Starwood Midway project also would have a significant impact on agricultural resources. To mitigate this impact, in the Starwood Midway PSA, staff proposes a condition of certification similar to LAND-1 in this PSA. Therefore, with mitigation, there will be no net loss of agricultural land in Fresno County as a result of the PEC and the Starwood Midway projects and no cumulative significant impact to land use from conversion of agricultural land to nonagricultural uses.

In addition to the two proposed energy projects, existing land uses in the immediate vicinity (other than agriculture, farm residences, and related buildings), include the PG&E Panoche Substation, the CalPeak Peaker Plant, and the Wellhead Power Generation facility. The CalPeak Peaker Plant and the Wellhead Power Generation facility were permitted by Fresno County within the last few years. Because the proposed project is situated near other nonagricultural industrial/energy uses, it would not result in a physical division or disruption of the established agricultural community, no new physical barriers would be created by the project, and no existing roadways or pathways would be blocked that would be detrimental to agricultural uses.

RESPONSE TO AGENCY AND PUBLIC COMMENTS

The Department of Conservation (DOC) submitted a letter to the Energy Commission (docketed on September 28, 2006) commenting on the proposed PEC's AFC. The DOC concluded that "... prior to any activity related to placing the PEC on the subject contracted parcel, the involved contract must be terminated by nonrenewal or cancellation for the portion of land involving the plant and access road..."

Staff concurs with the DOC's September 28, 2006 letter.

The DOC submitted a letter (dated January 19, 2007) to Fresno County (docketed on February 23, 2007) commenting on the partial cancellation of Land Conservation (Williamson Act) Contract No. 367; APN 027-060-78S. The DOC concluded that assuming the information the applicant provided on the cancellation application is accurate and correct, the DOC concurs that the Fresno County Board of Supervisors has a basis to find cancellation of the 12.82-acre portion of the contract consistent with the purposes of the Williamson Act, that development of the proposed power generation facility will not negatively affect adjacent agricultural lands or cause their removal from agricultural use, that the proposed alternative use appears consistent with the agricultural land use policies in the Fresno County General Plan, and due to the location of the existing PG&E substation, will not produce discontinuous patterns of urban development. Overall, the DOC letter concurs that there is not proximate or noncontracted land that is suitable or available for the proposed PEC.

(see Land Use Appendix 4). Under the California LESA scoring threshold a score between 80 and 100 points is significant.

When staff identifies a significant impact, staff's analysis needs to discuss how that impact would affect the environmental justice population (**Socioeconomics Figure 1**) within the project's six-mile radius. The direct and indirect impacts of project construction would be that 15 acres of agricultural land would be converted to a nonagricultural use. When agricultural land is converted, the effect can be experienced by the residents of the area as a loss of open space, a loss of farmland, and the encroachment of urban uses into a nonurban setting.

Another effect of the loss of 15 acres of prime farmland would be an economic one for those who are directly and indirectly employed in the farming sector of the area's economy. Because CEQA considers the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses a significant impact requiring mitigation, staff proposes a similar condition of certification that was used on other Energy Commission siting projects (Tesla, Salton Sea, East Altamont) where agricultural land was converted to nonagricultural uses. Condition of Certification **LAND-1** requires the project owner to mitigate for the loss of 15 acres of prime farmland at a one-to-one ratio. Staff believes that with the adoption of this condition, the impact to farmland will be reduced to less than significant and any impact to the environmental justice population would be mitigated because there would be no net loss of productive agricultural land within Fresno County.

LAND USE COMPATIBILITY

Energy Commission staff has found no unmitigated impacts in the areas of **Noise**, **Air Quality**, **Public Health**, **Traffic and Transportation**, and **Visual Resources**. Because the PEC would create no unmitigated noise, dust, public health hazard or nuisance, traffic, or visual impacts the project would be compatible with surrounding land uses. As discussed earlier, no aerial spraying is done in this area that might necessitate a buffer between the proposed PEC and adjacent agricultural operations. Therefore, staff does not expect the PEC to preclude or negatively impact the continued agricultural use of the remainder of the parcel or that of the surrounding area.

CUMULATIVE IMPACTS AND MITIGATION

A project may result in a significant adverse cumulative impact where its effects are cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. (Cal. Code Regs., tit. 14, section 15130.)

The PEC is planned to serve the region's existing and anticipated electrical needs. Staff does not expect the PEC to make a significant contribution to regional impacts related to new development and growth.

Both the PEC and Starwood Midway projects would be situated in an area dominated by large agricultural parcels under Williamson Act Contracts. Although the proposed Starwood Midway site is classified as having prime soils, for the past five years the site

Based on Fresno County's SPR analysis of the proposed project, Energy Commission staff cannot conclude that the SPR satisfies Fresno County's unclassified use permit process. An SPR normally, but for the Energy Commission's exclusive jurisdiction merely ensures the project's compliance with the development standards in the AE-20 zone. For these reasons and those discussed above, staff cannot conclude that the PEC would be consistent with the AE-20 zone designation.

DISRUPT OR DIVIDE AN ESTABLISHED COMMUNITY

While the proposed project is located in an area dominated by agriculture, there are three existing energy uses within one-half mile of the proposed PEC: the Wellhead Peaker Plant; the CalPeak Peaker Plant; and the PG&E Substation. The two peaker plants (both under 50 MW) were approved by Fresno County within the last few years. Another proposed energy facility, the Starwood Midway Energy Project (06-AFC-7) is currently under Energy Commission review and would be located north of the existing electrical generating uses and PG&E Substation on the same 128-acre parcel as the PEC. Given the existing cluster of energy/industrial uses, development of the proposed site as an energy/industrial use would continue the trend toward industrial development in the immediate area. Because of the established pattern of energy/industrial uses, the proposed project would not result in a physical division or disruption of the established agricultural community. No new physical barriers would be created by the project and no existing roadways or pathways would be blocked that would be considered detrimental to agricultural use.

CONVERSION OF PRIME FARMLAND

The 12.8-acre project site and 8-acre laydown area consist of prime, irrigated soils planted in a mature pomegranate orchard. According to section 5.4 of the AFC, the project site has been irrigated for many years. The 8-acre laydown area will be replanted in pomegranates after project construction. Therefore, staff does not consider the temporary use of this acreage for a laydown area to be a significant impact to agriculture.

State CEQA Guidelines Appendix G provides direction to lead agencies when determining whether impacts to agricultural resources are significant environmental effects. Appendix G states that lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment (LESA) model prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. The LESA model provides an approach for rating the relative quality of land resources based upon specific measurable features. The California LESA model is composed of six different factors: two Land Evaluation factors based upon measures of soil resource quality; and four Site Assessment factors that provide measures of a given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands.

Staff used the LESA model to determine whether the project's conversion of the 12.8 acres would be significant. Because staff considers the conversion of the 2.2 acres for the Panoche Substation expansion an indirect impact of the project, staff included that acreage in its LESA analysis. Staff determined the final LESA score to be 84.5 points

Setbacks: Each lot shall have a front yard of not less than 35 feet extending across the full width of the lot; each lot shall have a side yard on each side of not less than 20 feet.	Consistent as proposed. The applicant's site plan shows that the footprint of the PEC is outside the 35-foot front yard and 20-foot side yard setbacks. Therefore, the project meets Fresno County's setback requirements.
Parking: The number of parking spaces required is 1 space for every 2 permanent employees, 1 space for each salesperson, and 1 space for each company vehicle.	Consistent as proposed. For the project to conform to this standard a minimum of 6 parking spaces would have to be provided. The applicant's site plan shows 8 parking spaces.
Off-Site Improvements: The project owner shall ensure that any access gate shall be setback a minimum of 20 feet (or the length of the longest vehicle) to initially enter the site from the edge of the ultimate road right-of-way).	Consistent with implementation of a Condition of Certification. For the project to conform to this standard the site plan would need to show that any access gate shall be setback a minimum of 20 feet (or the length of the longest vehicle) to initially enter the site from the edge of the ultimate road right-of-way. Staff's proposed Condition of Certification LAND-2 would require the project owner to conform to this off-site improvement.

AE-20 Zoning District, Section 816 of the Fresno County Ordinance Code

The PEC site is zoned AE-20. The AE-20 District "is intended to be an exclusive district for agriculture and those uses which are necessary and an integral part of the agricultural operation. This district is intended to protect the general welfare of the agricultural community from encroachments of non-related agricultural uses which by their nature would be injurious to the physical and economic well-being of the agricultural district." Section 816 lists the uses permitted, the uses permitted subject to director review and approval, the uses permitted subject to a conditional use permit, uses expressly prohibited, and the property development standards. Staff's review of the uses for this zone shows that power plants are not expressly listed as a permitted or conditional use. Therefore, similar to the discussion of the project's consistency with the Fresno County General Plan land use designation, staff cannot conclude that the proposed project would be consistent with the AE-20 zoning because power plants are not expressly listed in any of the use categories of this zone and because Fresno County's SPR analysis did not address whether the project would be consistent with the intent and purpose of the AE-20 zone designation.

According to Fresno County staff, each zone district in Fresno County has a list of uses allowed by right and uses allowed through a discretionary permit such as a Director Review and Approval, or a Conditional Use Permit, which may be classified or unclassified (Tani 2006). The AFC states that Fresno County would ordinarily require an unclassified conditional use permit for a use such as the PEC (PEC 2006a). Listed below are the findings Fresno County would have to make for an unclassified conditional use permit were it the permitting authority.

- That the site of the proposed use is adequate in size and shape to accommodate the use including all yards, spaces, walls, fences, parking, loading, landscaping, and other features required by the use.
- That the site for the proposed use relates to streets and highways adequate in width and pavement type to carry the quantity and kind of traffic generated by the proposed use.
- That the proposed use will have no adverse effect on abutting property and surrounding neighborhood of the permitted use thereof.
- That the proposed use is consistent with the Fresno County General Plan.

mechanism that enables the county to allow through a discretionary permit, the non-agricultural uses listed in Table LU-3 in areas designated Agriculture.

Therefore, Energy Commission staff cannot conclude that the PEC would be consistent with the Fresno County General Plan Agricultural and Land Use Element.

Fresno County Zoning Ordinance

Site Plan Review Section 874 of Fresno County's Ordinance Code

To assess conformity with the exemption provision of the Subdivision Map Act, Fresno County and Energy Commission staffs required the applicant to submit a site plan to Fresno County and complete the County's SPR process (Section 874 of Fresno County's Ordinance Code). Section 874 states that, "The purpose of the site plan is to enable the Director to make a finding that the proposed development is in conformity with the intent and provisions of this Division and to guide the Development Services Division in the issuance of permits." The County is aware that their SPR is advisory and their actions in this matter represent a review of the project that the County would normally undergo but for the Energy Commission's exclusive jurisdiction and permit authority.

The applicant submitted its site plan to Fresno County on January 26, 2007. Fresno County submitted its SPR analysis to the Energy Commission (docketed April 10, 2007). In its SPR process, Fresno County determined that as conditioned, the proposed PEC would be in conformity with the development standards for the AE-20 zone. In addition to zoning development standards, the SPR addresses and conditions the project in the areas of visual resources, drainage and flood control, health, waste, hazardous waste, facility design, socioeconomic resources, worker safety and fire protection, air quality, and traffic and transportation.

Staff reviewed Fresno County's SPR and determined that as conditioned, the PEC would meet the development standards of the AE-20 zone. However, Fresno County provided no information in its SPR that addressed whether the project is in conformity with the intent and provisions of the AE-20 zoning district. Land Use Table 2 shows the development standards and staff's consistency determination for the PEC. Fresno County's proposed conditions of approval have been analyzed by Energy Commission staff and incorporated as LAND-2.

**LAND USE Table 2
Development Standards and Consistency Determination for PEC**

<u>Development Standards for the AE-20 Zone, Zoning Ordinance Sections 816.5</u>	<u>Consistency Determination</u>
Lot Size: Each lot size shall have a minimum acreage as indicated by the district acreage designation. The minimum lot size in the AE-20 zone is 20 acres.	Consistent as proposed. The proposed site would total 12.8 acres. Because the parcel would be created through a lease, it would not be subject to the 20-acre parcel size (Tan 20dT).
Building Height: Non-dwelling structures and other accessory farm buildings are exempted from building height restrictions.	Consistent as proposed. Four 90-foot turbine stacks are proposed for the PEC. However, Fresno County does not limit the height of non-dwelling structures in the AE-20 zone.

According to information provided by the applicant, the location of a power generation facility within an urban environment has the potential to impact sensitive receptors such as schools and hospitals in addition to greater land use conflicts with residences. Further, the applicant indicated that the site selection investigation that was performed looked for land that was in sufficient proximity to the infrastructure listed above [PG&E substation, natural gas lines, and transmission lines]. The applicant reported that no less productive agricultural lands were identified as a result of the site selection investigation. Based on the information provided by the applicant, staff believes that the proposed alternate use is consistent with the General Plan. Based on this information, this finding can be made."

Staff cannot conclude from Fresno County staff's report that it provided compelling evidence to recommend to the Board of Supervisors that the alternate use, in this case the PEC, is consistent with Fresno County's General Plan Agriculture and Land Use Element.

In the Fresno County General Plan Agriculture and Land Use Element, the Agriculture land use designation provides for the production of crops and livestock and for location of necessary agriculture commercial centers, agriculture processing facilities, and certain nonagricultural activities. Table LU-3 in the Fresno County General Plan Agriculture and Land Use Element lists uses allowed by right and by special permit in areas designated Agriculture. The special permit uses are agriculturally related and value added agricultural uses such as wineries, commercial packing, and processing of crops, or they are non-agricultural uses such as sewage treatment plants, cemeteries, radio and television broadcasting stations, and golf courses. The most closely related special permit uses comparable to a power generating facility in Table LU-3 would be "electrical substation" and "mineral extraction and oil and gas development."

On April 17, 2007 Energy Commission staff sent a letter to Fresno County requesting that the County provide a discussion of how a use such as a power plant would be consistent with the provisions and intent of the Agriculture land use designation and with the uses allowed by right or by special permit listed in Table LU-3 in the General Plan Agriculture and Land Use Element. Fresno County's response letter to the Energy Commission (docketed May 7, 2007) states that Fresno County staff did discuss with Energy Commission staff, the basis for Fresno County's conclusion that the proposed project is consistent with the County's General Plan. The letter also states that the Fresno County Board of Supervisors concurred with its staff and determined that the proposed use is consistent with the General Plan when they approved the petition for partial cancellation of the 12.8-acre site from the Williamson Act.

While Energy Commission staff does not disagree with Fresno County's letter, staff believes that Fresno County has not provided Energy Commission staff a discussion of how the proposed project is substantially similar in character and intensity to such uses listed Table LU-3 in the Fresno County General Plan Agriculture and Land Use Element that would warrant a determination of consistency. In addition, Fresno County has not, in its staff report for cancellation or in its response to Energy Commission staff's letter addressed the four criteria listed in its general plan Policy LU-A.3, which is the

The **Water and Soil Resources** section has concluded that with mitigation, the PEC would not significantly impact water resources on the site or impact the use or management of surrounding properties. The **Socioeconomic Resources** section of this document has concluded that a sizeable workforce is available in Fresno County and the surrounding region. Please refer to the sections on **Water and Soil Resources** and **Socioeconomic Resources** for a complete discussion on potential impacts and mitigation for water resources and construction workforce.

Policy LU-A.13. The county shall protect agricultural operations from conflicts with nonagricultural uses by requiring buffers between proposed non-agricultural uses and adjacent agricultural operations.

No aerial spraying is done in this area that might necessitate a buffer between the proposed PEC and adjacent agricultural operations. Therefore, staff does not expect the PEC to preclude or negatively impact the continued agricultural use of the remainder of the parcel or that of the surrounding area.

Energy Commission Staff's General Plan Consistency Determination for the PEC

As part of the licensing process, the Energy Commission must determine whether a proposed facility complies with all applicable state, regional, and local LORS (Public Resources Code section 25523(d)(1)). The Energy Commission must either find that a project conforms to all applicable LORS or make specific findings that a project's approval is justified even where the project is not in conformity with all applicable LORS (Public Resources Code section 25525).

When determining LORS compliance, staff is permitted to rely on a local agency's assessment of whether a proposed project is consistent with that agency's zoning and general plan. On past projects staff has requested that the local agency provide a discussion of the findings and conditions that agency would make when determining whether a proposed project would comply with the agency's LORS, were they the permitting authority. Any conditions recommended by an agency are considered by Energy Commission staff for inclusion in the conditions of certification staff recommends for the project.

As part of staff's analysis of local LORS compliance and specifically to determine the County's view on the project's consistency with their general plan, staff reviewed Fresno County's Agricultural Land Conservation Committee Staff Report on the proposed Williamson Act cancellation. As stated in the section California Land Conservation Act (Gov. Code § 51200-51297.4), one of the findings the Board of Supervisor's must make is whether the "cancellation is for an alternative use which is consistent with applicable provisions of the county general plan." In their staff report, Fresno County staff provided the following information.

"The subject property is designated Agriculture in the Fresno County General Plan. The proposed alternate use of the property is development of a thermal power plant... Nevertheless, the County's General Plan allows for development of certain non-agricultural uses in areas designated for Agriculture.

Policy LU-A.1. The county shall maintain agriculturally-designated areas for agriculture use and shall direct urban growth away from valuable agricultural lands to cities, unincorporated communities, and other areas planned for such development where public facilities and infrastructure are available.

The proposed project would be sited on a parcel that is was formerly under a Williamson Act Contract in an area dominated by large agricultural parcels also in the Williamson Act. The proposed use is not an agricultural use nor is it considered an ancillary agricultural use because to function it does not need to locate adjacent to an agricultural use. On that basis, the project could be considered a use that would be more compatible in an area where industrially zoned land is available and where adjacent land uses are similar in character and intensity.

Policy LU-A.3. The county may allow by discretionary permit in areas designated Agriculture, special agricultural uses and agriculturally related activities including value-added processing facilities, and certain non-agricultural uses listed in Table LU-3 (see **LAND USE Appendix 3** for the full text). Approval of these and similar uses in areas designated Agriculture shall be subject to the following criteria:

- The use shall provide a needed service to the surrounding agricultural area which cannot be provided more efficiently within urban areas or which requires location in a non-urban area because of unusual site requirements or operational characteristics;
- The use should not be sited on productive agricultural lands if less productive land is available in the vicinity;
- The operational or physical characteristics of the use shall not have a detrimental impact on water resources or the use or management of surrounding properties within at least a 1/4-mile radius; and
- A probable workforce should be located nearby or be readily available.

As stated in the AFC, the objectives of the PEC are to provide reliable service to PG&E's customer loads in the area, which would include agricultural as well as urban users. The PEC has specific site requirements (proximity to a substation and transmission lines) that would be provided by the adjacent PG&E substation. However, the PEC's operational characteristics (industrial nature of the project) do not require that the project locate in a non-urban area. Similar energy facilities have been sited in urban areas where the zoning and adjacent land uses are compatible with uses such as power plants.

The PEC would be located on productive agricultural lands in an area dominated by large agricultural parcels, also in agricultural production. In addition, the project site and most of the surrounding area within a one-mile radius are mapped Prime Farmland by the California Department of Conservation's Farmland Mapping and Monitoring Program. Because of the area's prime soils, less productive agricultural land in the vicinity of the proposed site is not available. The land use in the vicinity of the current proposed location that makes the site feasible is the adjacent PG&E substation, which would provide the necessary infrastructure that another site in the vicinity would not provide.

As part of its staff report, Fresno County had to address Finding no. 2, which asks whether the cancellation "is not likely to result in the removal of adjacent lands from agricultural use." In its response, Fresno County did not state that the cancellation of the 12.8 acres would require the cancellation of an additional 2.2 acres to accommodate the expansion of the PG&E Panoche Substation. Staff discusses the removal of the adjacent 2.2 acres from agricultural use under the heading **CONVERSION OF PRIME FARMLAND**.

The Board's approval action and the findings are necessary to conclude that the cancellation of the Williamson Act contract has lawfully occurred, thereby permitting the power generation facility to be considered for this site. In addition to the Board's approval, cancellation requires the issuance of a Final Certificate of Cancellation of the Williamson Act contract. According to Fresno County staff, the Final Certificate of Cancellation will be recorded when the following conditions of approval for the cancellation have been met.

1. Payment in full of the cancellation fee.
2. Unless the cancellation fee is paid or a Certificate of Cancellation of Contract is issued within one year from the date of the recording of this certificate, the cancellation fee shall be recomputed as of the date of notice by the landowner to the Board of Supervisors required by Government Code Section 51283.4.
3. The landowner shall obtain all permits necessary to commence this project.

As shown by condition no. 3, the Certificate of Cancellation of Contract will not be recorded until all permits, including the Energy Commission's license are issued. Please refer to **Land Use APPENDIX 2** for a copy of the Board of Supervisors' Resolution #07-203 and the Certificate of Tentative Cancellation. Interested parties would have up to 180 days to challenge the final cancellation.

Fresno County General Plan

The Fresno County General Plan, adopted in 2000, contains an evaluation of existing conditions and provides long-term goals and policies to guide growth and development in the county for the next 15 to 25 years. The general plan is implemented by the county through its zoning, subdivision ordinances, specific plans, growth management policies, planned development districts, development agreements, development review, code enforcement, land use database, capital improvement programs, environmental review procedures, building and housing codes, and redevelopment plans. The general plan land use designation for the site is Agriculture.

Fresno County General Plan Goal **LU-A** states that the county shall promote the long-term conservation of productive and potentially productive agricultural lands and to accommodate agricultural-support services and agriculturally-related activities that support the viability of agriculture and further the county's economic development goals.

The applicable land use policies from Fresno County's General Plan Agriculture and Land Use Element are given below. Staff's discussion is given in *italics* after each policy.

COMPLIANCE WITH LORS

Subdivision Map Act (Pub. Resources Code § 66410-66499.58)

The Subdivision Map Act provides procedures and requirements regulating land divisions and the determination of parcel legality. Regulation and control of the design and improvement of subdivisions by the Map Act have been vested in the legislative bodies of local government. Section 66412.1 of the Subdivision Map Act exempts a project from state subdivision requirements provided that the project demonstrates compliance with local ordinances regulating design and improvements. The project's compliance with local development standards is discussed under the heading Fresno County Zoning Ordinance.

California Land Conservation Act (Gov. Code § 51200-51297.4)

The California Land Conservation Act, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space uses. The landowner commits the parcel to an annually renewing ten-year period wherein no conversion out of agricultural use is permitted. In return, the land is taxed at a rate based on the actual use of the land for agricultural purposes, as opposed to its unrestricted market value. Participation in the Williamson Act program is dependent on county adoption and implementation of the program. Property owner participation in the program is voluntary.

The proposed 12.8-acre project site was a portion of a 128-acre parcel within Fresno County Agricultural Preserve No. 367 that is under a Williamson Act Contract. The applicant filed a request with Fresno County for cancellation of the 12.8 acres from the Williamson Act Contract and on April 24, 2007, the Fresno County Board of Supervisors approved the request. Fresno County staff in its Agricultural Land Conservation Committee Staff Report Agenda Item No. 3, April, 4, 2007 recommended approval of the cancellation to the Board of Supervisors (see Land Use Appendix 1 for the full text). In accordance with Government Code section 51282, the Fresno County Board of Supervisors made the following findings to approve the cancellation from Agricultural Preserve No. 367.

1. That the cancellation is for land on which a notice of contract nonrenewal has been filed.
2. That cancellation is not likely to result in the removal of adjacent lands from agricultural use.
3. That cancellation is for an alternative use which is consistent with applicable provisions of the city or county general plan.
4. That cancellation will not result in discontinuous patterns of development.
5. That there is no proximate (i.e. nearby) noncontracted land which is both available and suitable for the proposed use.

The zoning and general plan land use designations within one mile of the subject parcel are AE-20 and Agriculture, respectively. The project site and most of the surrounding area are mapped Prime Farmland by the California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP). Land Use Figure 1 shows the general plan designations and Land Use Figure 2 shows the zoning for the site and within one mile of the site. Other than agriculture, farm residences, and related buildings, land uses in the immediate vicinity of the proposed project include the PG&E Panoche Substation, the CalPeak Peaker Plant, and the Wellhead Power Generation facility.

As stated in the AFC and the PEC substation expansion letter (docketed May 7, 2007), there is limited land within the existing PG&E Panoche Substation so PG&E will expand the substation (located on APN 027-060-61SU) to interconnect to the PEC site. A lot line adjustment will be filed by PG&E to accommodate the expansion. All substation expansion work will be performed by PG&E. The expansion would total 96,000 square feet, or about 2.2 acres. The conversion of this 2.2 acres to a nonagricultural use is discussed under the heading **CONVERSION OF PRIME FARMLAND**. Other offsite improvements required by the PEC would include 2,400 linear feet of gas pipeline and a 300-foot transmission line to tie into the PG&E Panoche Substation.

ASSESSMENT OF IMPACTS AND DISCUSSION OF MITIGATION

METHOD AND THRESHOLD FOR DETERMINING SIGNIFICANCE

Significance criteria are based on the CEQA Guidelines and on performance standards or thresholds adopted by responsible agencies. An impact may be considered significant if the project results in:

- conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect;
- disruption or division of the physical arrangement of the established community;
- conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps pursuant to the Farmland Mapping and Monitoring Program of the California Department of Conservation (i.e., a department within the California Resources Agency), to non-agricultural uses;
- conflict with existing zoning for agricultural use, or a Williamson Act Contract;
- involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to nonagricultural use;
- unmitigated noise, dust, public health hazard or nuisance, traffic, or visual impacts, or when it precludes or unduly restricts existing or planned future uses.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

The following table contains all applicable land use laws, ordinances, regulations, and standards.

LAND USE Table 1
Laws, Ordinances, Regulations, and Standards (LORS)

Applicable Law	Description
Federal	The proposed project is not located on federally administered lands and is not subject to federal land use regulations.
State	Subdivision Map Act (Pub. Resources Code § 66410-66499.58), § 66412.1. Section 66412.1 of the Subdivision Map Act exempts a project from state subdivision requirements provided that the project demonstrates compliance with local ordinances regulating design and improvements. California Land Conservation Act (Gov. Code § 51200-51297.4) Section 51282 addresses Williamson Act Contract cancellation procedures. In order for a contract to be cancelled, the local elected officials (e.g. a City Council or a County Board of Supervisors) need to make a series of findings and approve the cancellation.
Local	Fresno County would require an unclassified conditional use permit for the proposed project in the A-E 20 Zone, but for the exclusive siting authority of the Energy Commission.

SETTING

The applicant proposes to build the PEC on a 12.8-acre portion of a 128-acre parcel in the northwestern section of the Westside Valley Area in Fresno County. The closest community to the project is Mendota, located 16 miles to the east and northeast of the proposed PEC. The site is located southeast of the intersection of West Panoche Road and Davidson Avenue, about 2 miles east of Interstate 5, and 14 miles west of Highway 33. Primary access to the site is from West Panoche Road via Interstate 5 or Hwy 33.

PROJECT SITE AND VICINITY

The 12.8-acre project site was formerly a portion of a 128-acre parcel within Fresno County Agricultural Preserve No. 367, the remainder of which is still under a Williamson Act contract. In April 2007, the Fresno County Board of Supervisors approved the request for cancellation of the 12.8-acre site from the Williamson Act contract.

The proposed project would be located in an area of large agricultural parcels that are also under Williamson Act contracts. The Assessor's Parcel Number (APN) for the 128-acre parcel is 027-060-78S. The project site is designated Agriculture by the Fresno County General Plan Agriculture and Land Use Element; the zoning designation is AE-20 (Exclusive Agriculture with a 20-acre minimum parcel size). The site is currently planted in pomegranates, as is the adjacent eight-acre laydown area.

LAND USE

Amanda Stennick

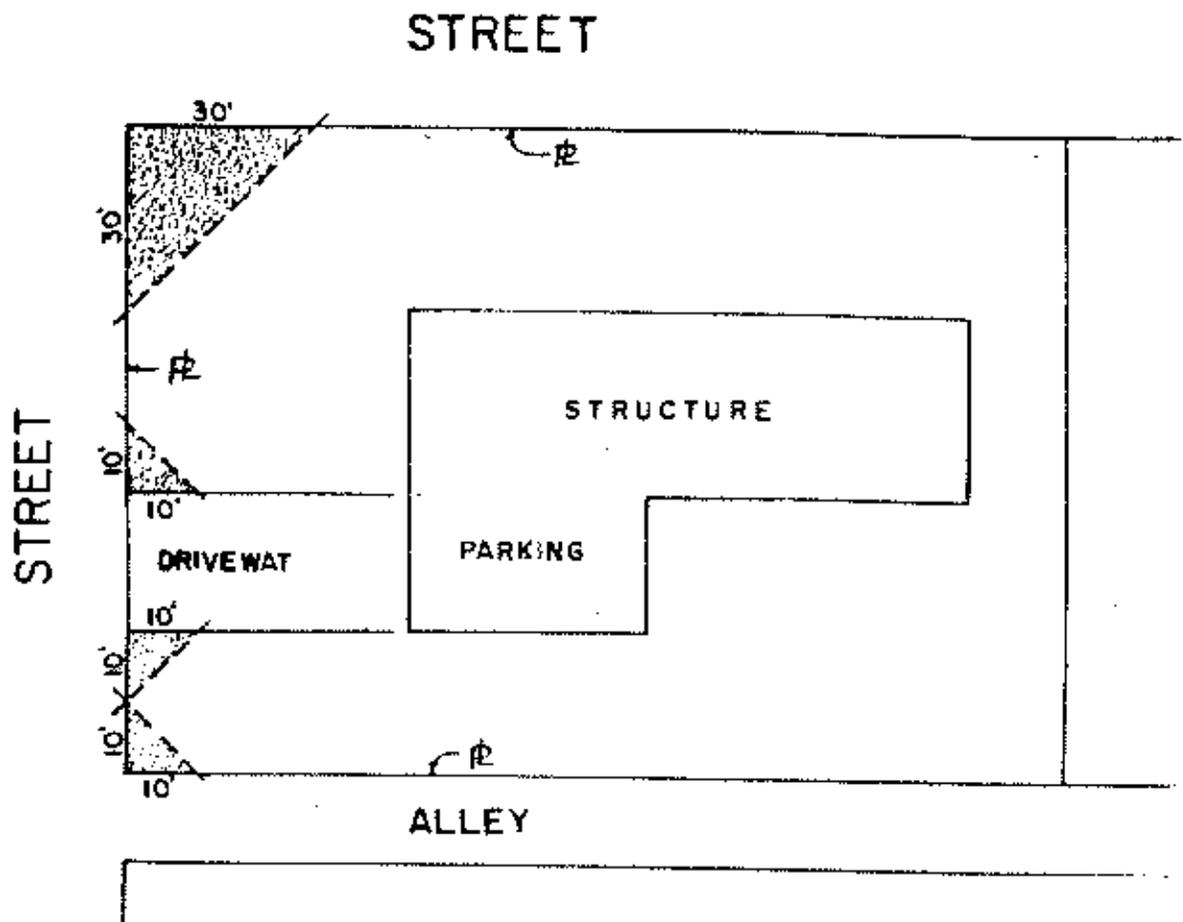
SUMMARY OF CONCLUSIONS

Staff cannot conclude that the Panoche Energy Center (PEC) is consistent with the Fresno County General Plan Agriculture and Land Use Element because power plants are not expressly listed as a permitted or conditional use under that designation and Fresno County has not provided sufficient information that would demonstrate how the PEC is substantially similar in character and intensity to such uses listed in Table LU-3. Staff also cannot conclude the PEC is consistent with the AE-20 zoning designation because power plants are not expressly listed as a permitted or conditional use in that zone and Fresno County has not provided complete information in its Site Plan Review (SPR) analysis to determine whether the project would be consistent with the intent and purpose of the AE-20 zone.

Staff used the California Agricultural Land Evaluation and Site Assessment (LESA) model to assess the loss of 22.2 acres of prime agricultural land (12.8-acre project site, 8 acres laydown area (temporary), and 2.2-acre PG&E substation expansion) and concluded the PEC's impact to agriculture to be significant. To mitigate for the loss of prime farmland, condition of certification LAND-1 requires the applicant to pay a fee to an agricultural land trust to purchase 15 acres of prime farmland. With staff's recommended conditions of certification, the potential significant adverse environmental impacts of the PEC will be mitigated to a level below significance pursuant to the California Environmental Quality Act (CEQA).

INTRODUCTION

The land use analysis of the PEC Application for Certification (06-AFC-5) focuses on the project's consistency with land use plans, ordinances, and policies, and the project's compatibility with existing and planned land uses. In this case the land use analysis also focuses on the project's consistency with the Williamson Act. In general, a power plant and its related facilities have the potential to create land use impacts if they create unmitigated noise, dust, public health hazard or nuisance, traffic, or visual impacts. These individual resource areas are discussed in separate sections of this document. A power plant would also create a significant impact if it converts prime or unique farmland or farmland of statewide importance to non-agricultural uses.



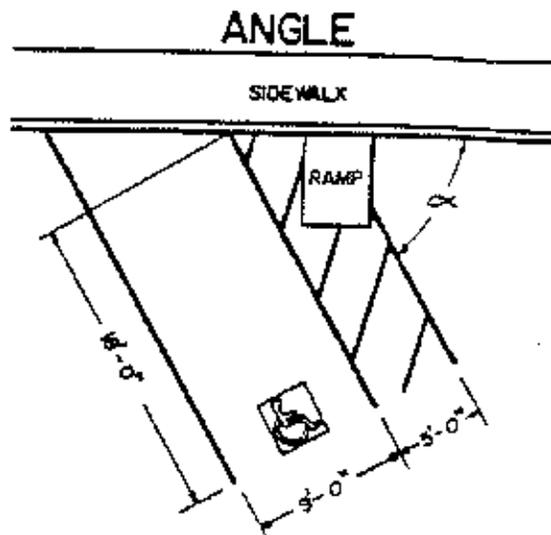
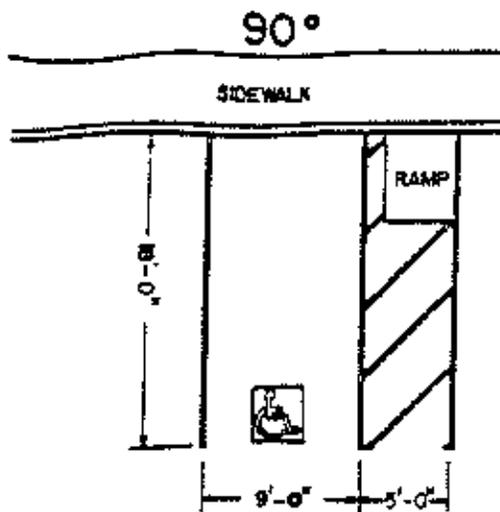
TYPICAL CORNER CUT-OFF
(INDICATED IN GREY)

REQUIREMENTS OF THE CORNER CUT-OFF AREA

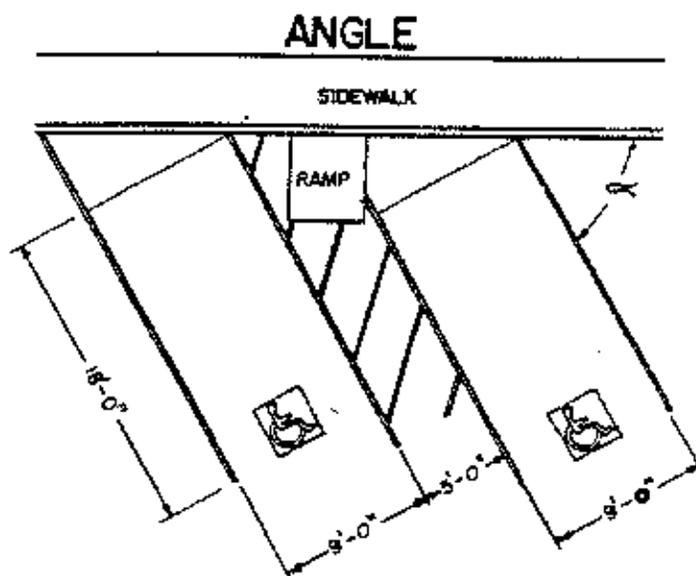
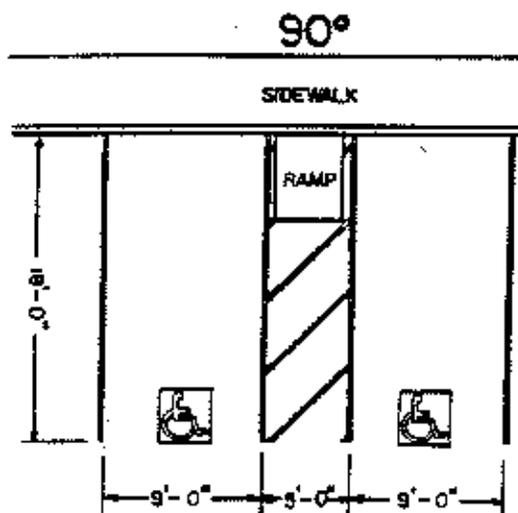
1. The branches of trees located within the corner cut-off area must be trimmed and maintained at a height of not less than seven (7) feet.
2. Bushes and shrubs must be trimmed and maintained at a height not to exceed three (3) feet. Fences, hedges, and walls shall not exceed three (3) feet in height.

HANDICAPPED PARKING STALLS

SINGLE STALL



DOUBLE STALLS



NOTES:

1. Dimensions shown are the allowed minimums.
2. Angle α is a variable, allowed angles are: 30°, 40°, 45°, 50°, 60°, & 75°.
3. 2½' wide stripes in the loading zone shall be 3' on center.
4. The location of the ramp may vary and must comply with Fresno County Standards.
5. Sidewalks and ramp shall have a minimum width of 48".
6. The handicapped logo shall be a white symbol on a blue background.
7. A sign of not less than 70 square inches in area shall be placed on center of the interior end of the parking space at a minimum height of 80 inches from the bottom of the sign to the surface of the parking space.
8. Where applicable, the curb or the bumper stop shall be painted the same color blue as the handicapped logo.

CALIFORNIA FIRE CODE, 902.2.2 **Obstruction & control of fire apparatus access**
The required width of a fire apparatus access shall not be obstructed in any manner, including parking of vehicles. Minimum required widths and clearances established under section 902.2.2.1 shall be maintained at all times.

CALIFORNIA FIRE CODE, 902.2.2.2 **Surface**
Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with a surface so as to provide all-weather driving capabilities.

CALIFORNIA FIRE CODE, 901.4.4 **Premises Identification**
Approved numbers of addresses shall be provided for all new and existing buildings in such a position as to be plainly visible and legible from the street or road fronting the property.

CALIFORNIA FIRE CODE, 902.4 **Key Boxes**
When access to or within a structure or area is unduly difficult because of secured openings or where immediate access is necessary for life-saving or firefighting purposes, the chief is authorized to require a key box to be installed in an accessible location. The key box shall be of an approved type and shall contain keys to gain necessary access as required by the chief.

CALIFORNIA FIRE CODE, 1007.1.2 **Clear space around hydrants**
A 3-foot clear space shall be maintained around the circumference of the fire hydrants except as otherwise required or approved.

Submit plans for all buildings that will be Sprinkled.
Submit plans for all buildings that will be Fire Alarmed.

Please contact me at (559) 485-7500 Ext. 113, if you have any questions.

Sincerely,

BECKY ROBERTSON, CHIEF

By: George Mavrikis-FPS-1
Fire Protection Planning

FRESNO COUNTY

FIRE PROTECTION DISTRICT



March 6, 2007

Richard Perkins, Planner
County of Fresno
Fresno County Public Works & Development Services
2220 Tuttle Street, Suite 1100
Fresno, CA 93721

Transmitted by Email to: rperkins@fcpd.fresno.ca.us

RE: SPR# 7586
Panthe Energy Center, LLC
43649 Panoche Road
Firebaugh, Ca.

Dear Richard Perkins, Planner:

The Fresno County Fire Protection District comments in regards to the above project requires compliance of the 2001 California Fire Code and the following Articles & Sections:

CALIFORNIA FIRE CODE, 903.2 Required water supply for fire protection
An approved water supply capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities, buildings or portions of buildings are hereafter constructed or moved into or within the jurisdiction.

Note: When any portion of the facility or building protected is in excess of 150 feet [45 720 mm] from a water supply on a public street, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the chief. See Section 903.4.
Submit water plans to the Fire Prevention Bureau for approval

CALIFORNIA FIRE CODE, 1002.1 Portable fire extinguishers
Portable fire extinguishers shall be in accordance with UFC Standard 10-1, UFC Standard 10-1, 1-B.9 Extinguishers installed under conditions where they are subject to physical damage shall be protected from impact.

CALIFORNIA FIRE CODE, 902.2.2.1 Fire Department Access - Dimensions
Fire apparatus access roads shall have an unobstructed width of not less than 20 feet and an unobstructed vertical clearance of not less than 13 feet 6 inches.

**PANOCHÉ ENERGY CENTER
APPLICATION FOR CERTIFICATION
RESPONSE TO CEC DATA ADEQUACY REQUESTS
06-AFC-5**

**LEGAL DESCRIPTION
PREMISES BOUNDARY MEASUREMENT
"PROPOSED PANOCHÉ ENERGY CENTER"
PORTION OF
ASSESSOR'S PARCEL 019-060-085
VICINITY OF FIREBAUGH,
FRESNO COUNTY, CALIFORNIA**

October 9, 2006

Being a portion of real property in the Southwest Quarter of Section 5 Township 15 South, Range 13 East, Mount Diablo Base and Meridian, according to the official plat thereof being South of Panoche Road, being a portion of that certain real property described in a document dated June 11, 1978 to Robert Rausen, Trustee under the Shafiq St. Baker Trust as Instrument No. 89-110620 Official Records, County of Fresno, vicinity of Firebaugh, California more particularly described as follows:

COMMENCING at the Southwest Corner of said Section 5 at a found 2" iron pipe thence along the West line of said Section 5 being the Southwest Quarter thereof North 01° 34' 29" East 902.88 feet; thence following the West line of said Section 5 through the interior of said Southwest Quarter of Section 5 the following several courses: South 39° 11' 03" East 14.93 feet to the **POINT OF BEGINNING** of the herein described real property; North 06° 49' 57" East 522.11 feet; South 89° 10' 11" East 1181.11 feet; North 10° 49' 51" West 690.91 feet; North 89° 10' 9" West 212.94 feet; North 10° 49' 57" East 168.86 feet; North 19° 10' 01" West 788.17 feet to the **POINT OF BEGINNING**.

Containing 558,646 square feet of land (12.82 acres), more or less.

This description is based on record information. The lists of Bearings are NAD 1983, Epoch 2004.50, California Coordinate System, Zone 1 and are based upon a GPS Survey computed to NGS monuments: ACFE 17 (IPGS DCA 18 NC) survey disk in bridge abutment and C/14142 (Z 144) stainless steel rod.

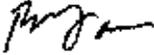
Site Plan Review No. 7584

Page 7

2220 Tulare Street, Sixth Floor
Fresno, CA 93721

If you have any questions, please contact me at (559) 262-4215.

Very truly yours,



Robin Tani, Senior Planner
Development Services Division

G:\4360Devs&Plan\BLD_SF\FY\Zoning\SPR\SPR Approvals\7586rev.doc

c: Fresno County Department of Community Health, Environmental Health System
Fresno County Fire Protection District; 210 S. Academy Ave.; Sanger, CA 93657
Gary R. Chandler; 2542 Singletree Lane; S. Jordan, UT 84095

Enclosure

- E. If the use of this property should ever change, the owner or operator is obligated to verify that the new use would be allowed by all applicable building codes and ordinances of Fresno County. Contact the Fresno County Department of Public Works and Planning, Permits Counter at (559) 262-4302 for information on applicable codes and ordinances.
- F. All hazardous waste shall be handled in accordance with the requirements set forth in the California Health and Safety Code, Chapter 6.5. This chapter discusses proper labeling, storage, and handling of hazardous wastes.
- G. Should a water well be drilled to serve the administration and control buildings, a Permit to Construct a Water Well shall be obtained from the Fresno County Department of Community Health, Environmental Health System. Contact Ed Yamamoto at (559) 445-3357 for information.
- H. The project description indicates the use of aqueous ammonia. Based upon the information contained in the operational statement, this facility will have to comply with the California Accidental Release Prevention (Cal-ARP) Program (Title 19, California Code of Regulations Section 2745.1(e)). A Risk Management Plan shall be submitted to the local Certified Unified Program Agency (CUPA) prior to the date in which the regulated substance (ammonia) is first present in the process above the listed threshold quantity of 500 pounds. Contact the CUPA at (559) 445-3271 for information.
- I. Fresno County Ordinances require that sanitary facilities shall be installed in accordance with requirements of the Fresno County Department of Public Works and Planning.
- J. Required site improvements may be bonded in accordance with the provisions of Section 874-C-2 of the Fresno County Zoning Ordinance.
- K. This Site Plan Review approval shall expire in two years from the date of approval unless substantial development has commenced.

This approval is final, unless appealed to the Fresno County Planning Commission. In this event, you must submit a fee of \$482.50 and file a written appeal setting forth your reasons for such appeal to the Commission. Such appeal shall be filed with the Director of the Department of Public Works and Planning within 15 days after the mailing of this decision and shall be addressed to:

Department of Public Works and Planning
Development Services Division
Attention: Robin Tani

- I. Waste water shall be disposed of in accordance with California Regional Water Quality Control Board requirements. Documentation shall be provided to this Department showing that this project is in compliance with Board requirements.

V. NOTES

- A. Specific industrial activities, including manufacturing, transportation, waste handling facilities and others which might generate contaminated runoff, must secure Storm Water Discharge Permits from the State Water Resources Control Board in compliance with the NPDES Regulations promulgated by the U.S.E.P.A. (CFR Parts 122-124, Nov. 1990). If the applicant determines that a NPDES Permit is required for operations of the proposed facility, a State General Permit Notice of Intent must be filed with the State Water Resources Control Board. Copies of the State General Permit and Notice of Intent are available at the Fresno Metropolitan Flood Control District. For more information on procedures, contact the California State Water Resources Control Board, Division of Water Quality, Attention: Storm Water Permit Unit, P.O. Box 1977, Sacramento, CA 95812-1977 or call (916) 341-5536 for an individual to address your concerns.
- B. Construction activities, including grading, clearing, grubbing, filling, excavation, development or redevelopment of land that would result in a disturbance of one (1) acre or more of the total land area, must secure a Storm Water Discharge Permit in compliance with the U.S.E.P.A.'s NPDES Regulations (CFR Parts 122-124, Nov. 1990). The Permit must be secured by filing a Notice of Intent for the State General Permit for Construction Activity with the State Water Resources Control Board. Copies of the State General Permit and Notice of Intent are available at the Fresno Metropolitan Flood Control District. For more information or procedures, contact the California State Water Resources Control Board, Division of Water Quality, Attention: Storm Water Permit Unit, P.O. Box 1977, Sacramento, CA 95812-1977 or call (916) 341-5538 for an individual to address your concerns.
- C. The proposed development shall implement all applicable Best Management Practices (BMPs) presented in the Construction Site and Post-Construction Storm Water Quality Management Guidelines, available at the Fresno Metropolitan Flood Control District office, to reduce the release of pollutants in storm water runoff to the maximum extent practicable. Contact the District at (559) 456-3292 for information.
- D. All hazardous waste shall be handled in accordance with the requirements set forth in the California Health and Safety Code, Chapter 6.5. This chapter discusses proper labeling

- C. Active storage areas, truck parking, and circulation areas shall be treated with a dust palliative and repeated as necessary to prevent the creation of dust by vehicles.
- D. All outdoor lighting shall be hooded and directed so as not to shine toward public roads or the surrounding properties.
- E. Any access gate shall be setback a minimum of 20 feet (or the length of the longest vehicle to initially enter the site) from the edge of the ultimate road right-of-way.

IV. MISCELLANEDUS

- A. Permits for structural, electrical, and plumbing work shall be obtained from the Department of Public Works and Planning, Permits Counter, prior to any construction.
- B. All proposed signs shall be submitted to the Department of Public Works and Planning, Permits Counter to verify compliance with the Zoning Ordinance.
- C. Vehicular access to this development shall be limited to the driveway approach shown on the approved plan.
- D. Fire protection improvements shall be in place and inspected by the Fresno County Fire Protection District prior to occupancy. Contact the District at (559) 485-7500 to arrange for an inspection. Allow 14 to 21 days for the District to complete the inspection.
- E. A Hazardous Materials Business Plan or Business Plan Exemption shall be completed and submitted to the Fresno County Department of Community Health, Environmental Health System. Contact the Certified Unified Program Agency (CUPA) at (559) 445-3271 for information. A letter shall be submitted from CUPA stating that the Business Plan or Exemption has been submitted.
- F. The Civil Engineer who prepares the on-site improvement plans shall inspect construction of the facilities and shall certify to the Department of Public Works and Planning that the work conforms with approved plans and specifications.
- G. A 45 degree (45°) corner cut-off of no obstruction to visibility shall be maintained. (See typical corner cut-off drawing.)
- H. A copy of the Permit to Operate issued by the San Joaquin Valley Unified Air Pollution Control District shall be submitted to this Department.

certification from the school district that the fee has been paid. An official certification form will be provided by the County when application is made for a building permit.

- G. A permit is required to be obtained from the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD). Contact the District at (559) 230-6000 for permitting requirements. A copy of the Authority to Construct shall be submitted to this Department.
- H. All Williamson Act requirements shall be satisfied.

Prior to the Certificate of Occupancy being granted all items listed below shall be completed/satisfied.

II. OFF-SITE IMPROVEMENTS

- A. The necessary permits for off-site improvements shall be obtained from the Fresno County Department of Public Works and Planning, Road Maintenance and Operations Division, and shall be installed in accordance with Fresno County Improvement Standards.
- B. The developer is responsible for relocating those utilities within the road right-of-way(s) to the correct alignment and grade affected by the developer's improvements.
- C. An asphalt concrete driveway approach 24 to 35 feet in width shall be constructed along Panoche Road. The driveway shall intersect the Road at a 90 degree angle.

III. ON-SITE IMPROVEMENTS

- A. The parking, circulation, and loading areas shall be graded and surfaced as noted on the approved plan. One parking space shall be provided for the physically disabled in accordance with the attached sheet. The space shall be located on the shortest possible route to an accessible entrance and shall be concrete or asphalt concrete paved. The required parking for the physically disabled shall be shown on the Grading and Drainage Plan.
- B. The driveway shall be graded and asphalt concrete paved a minimum width of 24 feet for the first 100 feet South of the ultimate road right-of-way. The driveway shall intersect the Road at a 90 degree angle.

Prior to the issuance of a Building Permit Required Development Clearances shall be completed/satisfied.

I. REQUIRED DEVELOPMENT CLEARANCES

- A. All driveways and parking areas to be used by motor vehicles shall be designed by an architect or civil engineer in accordance with Fresno County Standards. Engineered plans for the construction, including a complete listing of materials, costs, and quantities in place, shall be submitted to this Department for approval. A Plan Check Fee, based upon construction costs, will be collected with the submittal of the Grading and Drainage Plan. The engineer who prepares the plan shall certify to this Department that the facilities have been constructed in accordance with approved plans and specifications.
- B. Storm water due to this development shall be retained on the property being developed in accordance with Fresno County Improvement Standards.
- C. When provisions are made to retain all runoff from this development within a drainage pond(s) or other facility acceptable to the Director of the Department of Public Works and Planning, the storage capacity shall be based on the formula: Storage = (.50) CA.
- D. A Grading and Drainage Plan shall be prepared by a Registered Civil Engineer and submitted to the Department of Public Works and Planning, in accordance with Section 6731 of the California Business and Professions Code. The Plan shall have an Engineer's Certificate indicating that the grading and drainage will have no adverse effect on the adjoining properties. Contact the Drainage and Grading Engineer for Drainage Plan requirements at (559) 262-4167.
- E. The design of the on-site fire protection water system, including, but not limited to the location and number of fire hydrants, and the size of the water mains, shall be submitted to the Fresno County Fire Protection District for review (Their comments have been attached.). A plan must be submitted to this Department from the Fire District with their recommendations/approval. Contact Fire Protection Planning at (559) 485-7500 for an appointment.
- F. The Mendota Unified School District, in which you are proposing construction, has adopted a resolution requiring the payment of a Development Impact Fee. The County, in accordance with State law, which authorizes the fee, will not issue a building permit without



County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING
ALAN WEAVER, DIRECTOR

March 26, 2007

W. David Jenkins
1293 E. Jessup Way
Mooresville, IN 46158

To Whom It May Concern:

SUBJECT: SITE PLAN REVIEW NO. 7586

Site Address: 43883 W. Panoche Road
APN: 027-060-78S
Zoning District: AE-20 (Exclusive Agricultural)
Use Approved: Allow a 400MW Peaking Power Plant
Legal Description of Site: See attached description

The Department of Public Works and Planning has reviewed your application and determined that the required findings can be made and hereby approves Site Plan Review No. 7586 subject to the following conditions.

CONDITIONS OF APPROVAL

The required improvements are listed below and on the approved plans. An inspection is required prior to the issuance of a Certificate of Occupancy to assure compliance with these conditions and the approved Site Plan. Please call (559) 262-4029, Fresno County Department of Public Works and Planning, Building and Safety Section, to arrange for this inspection when required improvements are completed.



18.6 Security

The plant site will be enclosed by a security fence. Access gates will be provided, as required. In addition to the perimeter security fence, the substation and transformer area will be fenced and provided with access gates. Security will be maintained on a 24-hour basis with either surveillance devices or personnel.

18.7 Public Health and Safety

The programs implemented to protect worker health and safety will also benefit public health and safety. Facility design will include controls and monitoring systems to minimize the potential for upset conditions that could result in public exposure to acutely hazardous materials. Potential public health impacts associated with operation of the project will be mitigated by development and implementation of an Emergency Response Plan (ERP), a HAZCOM Program, a Spill Prevention, Control, and Countermeasures (SPCC) Plan, safety programs, and employee training.

PEC will coordinate with local emergency responders, provide them with copies of the plant site ERP, conduct plant site tours to point out the location of hazardous materials and safety equipment, and encourage these providers to participate in annual emergency response drills.

PEC will create and employ an Emergency Response Plan (ERP). The ERP will address potential emergencies, including chemical releases, fires, and injuries, and will describe emergency response equipment and its location, evacuation routes, procedures for reporting to local emergency response agencies, responsibilities for emergency response, and other actions to be taken in the event of an emergency.

Employee response to an emergency will be limited to an immediate response to minimize the risk of escalation of the accident or injury. Employees will be trained to respond to fires, spills, earthquakes, and injuries. A first-aid facility with adequate first-aid supplies and personnel qualified in first-aid treatment will be onsite.

List of Drawings and Attachments

Site Plan (eleven copies)

Attachment 1 - Artist Rendering (one copy)

Attachment 2 - General Vicinity (one copy)

Attachment 3 - General Arrangement Elevations (eleven copies)

18.3 Sanitary System

The sanitary system will consist of a septic system and leach field designed to handle the sanitary flow from the administration and control building and other restrooms, if any, located on the site. The septic tank and leach field will be located directly south of the administration and control building as shown on the *Site Plan*.

18.4 Earthwork

Excavation work will consist of the removal, storage, and/or disposal of earth, sand, gravel, vegetation, organic matter, loose rock, boulders, and debris to the lines and grades necessary for construction. Materials suitable for backfill will be stockpiled at designated locations using proper erosion protection methods. Excess material will be removed from the site and disposed of at an acceptable location. If contaminated material is encountered during excavation, its disposal will comply with applicable LORS.

Graded areas will be smooth, compacted, free from irregular surface changes, and sloped to drain. Cut and fill slopes for permanent embankments will be designed to withstand horizontal ground accelerations for Seismic Zone 4. For slopes requiring soil reinforcement to resist seismic loading, geogrid reinforcement will be used for fills and soil nailing for cuts. Slopes for embankments will be no steeper than 2:1 (horizontal:vertical). Areas to be backfilled will be prepared by removing unsuitable material and rocks. The bottom of an excavation will be examined for loose or soft areas. Such areas will be excavated fully and backfilled with compacted fill.

Backfilling will be done in layers of uniform, specified thickness. Soil in each layer will be properly moistened to facilitate compaction to achieve the specified density. To verify compaction, representative field density and moisture-content tests will be performed during compaction. Structural fill supporting foundations, roads, and parking areas will be compacted to at least 95 percent of the maximum dry density as determined by American Society for Testing Materials (ASTM) D-1557 as described in Appendix L, Geotechnical Report. Embankments, dikes, bedding for buried piping, and backfill surrounding structures will be compacted to a minimum of 90 percent of the maximum dry density. Backfill placed in remote and/or unsurfaced areas will be compacted to at least 85 percent of the maximum dry density.

Where fills are to be placed on subgrades sloped at 6:1 (horizontal:vertical) or greater, keys into the existing subgrade may be provided to help withstand horizontal seismic ground accelerations.

The subgrades (original ground), subbases, and base courses of roads will be prepared and compacted in accordance with California Division of Transportation (Caltrans) standards. Testing will be in accordance with ASTM and Caltrans standards.

18.2 Fire Protection Systems

Firewater System. The fire protection system will mitigate personnel injury, loss of life, property loss, and plant downtime due to fire. The fire protection system will consist of a 500,000-gallon raw water/firewater storage tank, a packaged fire pump system, a dedicated underground firewater distribution system with fire hydrants, sprinkler systems, and deluge systems as required by the National Fire Protection Association (NFPA) code. In addition, the combustion turbines and electrical buildings will be protected by a carbon dioxide fire protection system.

There will be a dedicated volume in the 500,000-gallon storage tank that will provide 2 hours of protection from an onsite worst-case single fire. Water from the raw water storage tank will be delivered to the underground firewater loop by means of the packaged fire pump system. This system will consist of a diesel-driven pump, a motor-driven pump, and a jockey pump. The main firewater pump will be the electric motor-driven pump. The diesel-driven pump will be the emergency firewater pump if the motor-driven pump fails due to electrical power failure or mechanical problems. The jockey pump maintains the pressure in the firewater loop.

The firewater distribution system will be designed in conformance with NFPA codes. The system will have sectionalizing valves so that a failure in any part of the system can be isolated while allowing the remainder of the system to function properly. Fire hydrants and fixed suppression systems will be supplied from the firewater loop. Fire hydrants will be spaced at approximately 300-foot intervals around the facility in accordance with NFPA 850 and local fire codes.

Fixed Fire Protection Systems. The fire protection water supply is shown on Figure 3.4-10. Fixed fire protection systems will be provided for the station oil-filled generator step-up transformers and the turbine lubrication oil system. In addition, buildings will have sprinkler systems as required by NFPA and local fire codes. Sprinkler and fixed-spray systems will be designed and installed in accordance with NFPA 13 and NFPA 15.

Fire Alarm and Detection. Fire alarms will be installed in buildings in accordance with NFPA 72 and as required by local fire codes. The alarm system will include alarm annunciation, supervisory, and trouble signals. Alarms will require urgent action by the plant operators. Supervisory signals indicate abnormal conditions that require investigation. Trouble signals indicate adverse conditions such as ground fault or power supply problem that should be rectified by qualified personnel.

Portable Extinguishers. Hand-held CO₂ and dry chemical fire extinguishers will be located throughout the plant in accordance with NFPA 10.

Miscellaneous Fire Safety Items. All material used in construction of the plant and its auxiliary systems will be free of asbestos and will meet the fire and smoke rating requirements of NFPA 255.

DOCKET	
06-AFC-5	
DATE	MAY 09 2007
RECD.	MAY 09 2007

3



1 AFTER RECORDING,
2 RETURN TO STOP #214

FRESNO County Recorder
 Robert C. Werner
DOC- 2007-0090290
 Monday, MAY 07, 2007 11:37:59
 Ttl Pd \$0.00 Nr-0002490003
 APR 7 11 37 -3

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BEFORE THE BOARD OF SUPERVISORS
 OF THE COUNTY OF FRESNO
 STATE OF CALIFORNIA
 CERTIFICATE OF TENTATIVE CANCELLATION
 (less than the total of the land subject to contract)

NOTICE IS HEREBY GIVEN:

By resolution dated April 24, 2007, the Board of Supervisors of the County of Fresno granted tentative approval of the petition by PAC Investments, LLC for cancellation of a portion of Agricultural Land Conservation Contract (ALCC) No. 367, which applies to the real property situated in the County of Fresno, State of California, and is more particularly described on the legal description attached as Exhibit "A" and made a part hereof describing the 12.62-acre parcel subject to cancellation.

The above-referenced property is less than the total of the real property subject to ALCC No. 367.

A Certificate of Cancellation of the Contract shall be issued and recorded at such time as the following contingencies and conditions are satisfied:

1. Payment in full of the cancellation fee, which is in the amount of \$6,375.00.
2. Unless the cancellation fee is paid or a Certificate of Cancellation of Contract is issued within one year from the date of the recording of this certificate, the cancellation fee shall be recomputed as of the date of

EXHIBIT 'A'
Legal Description
Area Covered by Petition for Partial
Cancellation of Williamson Act Contract

Being a portion of real property in the Southwest Quarter of Section 5 Township 15 South, Range 13 East, Mount Diablo Base and Meridian, according to the official plat thereof lying Southerly of Paroche Road, being a portion of that certain real property described in a document dated June 13, 1978 to Robert Hansen, Trustee under the Sheila M. Baker Trust as Instrument No. 88-105820 Official Records, County of Fresno, vicinity of Firebaugh, California more particularly described as follows:

COMMENCING at the Southwest Corner of said Section 5 at a found 2" iron pipe thence along the West line of said Section 5 being the Southwest Quarter thereof North $d1^{\circ}34'29''$ East 902.88 feet; thence leaving the West line of said Section 5 through the interior of said Southwest Quarter of Section 5 the following seven (7) courses: South $89^{\circ}10'03''$ East 38.95 feet to the POINT OF BEGINNING of the herein described real property; North $00^{\circ}48'57''$ East 522.11 feet; South $89^{\circ}10'03''$ East 1,001.11 feet; South $00^{\circ}48'57''$ West 890.87 feet; North $89^{\circ}10'03''$ West 212.94 feet; North $00^{\circ}48'57''$ East 188.86 feet; North $89^{\circ}10'03''$ West 788.17 feet to the POINT OF BEGINNING.

Containing 558,646 square feet of land (12.82 acres) more or less.

This description is based on record information. The Basis of Bearings are NAD 1983, Epoch 2004.50, California Coordinate System, Zone 4 and are based upon a GPS Survey constrained to NGS monuments: AC8117 (HPGN D CA 08 NC) survey disk in bridge abutment and GU4142 (Z 1444) stainless steel rod.

1 3. That the cancellation is for an alternative use that is consistent with the
2 provisions of the County General Plan.

3 4. That the cancellation will not result in discontinuous patterns of urban
4 development.

5 5. That there is no proximate non-contracted land which is both available
6 and suitable for the use to which it is proposed the contracted land be put or that
7 development of contracted land would provide more contiguous patterns of urban
8 development than development of proximate non-contracted land; and

9 WHEREAS, in accordance with Section 51284.1(c) of the Government Code the
10 Board has considered the comments of the Department of Conservation ("DOC"); and

11 WHEREAS, the Board has determined the cancellation to be consistent with the
12 purposes of the Williamson Act, subject to the following conditions:

13 1. Payment in full of the cancellation fee, which is in the amount of
14 \$6,375.00.

15 2. Unless the cancellation fee is paid or a Certificate of Cancellation of
16 Contract is issued within one year from the date of the recording of this certificate, the
17 cancellation fee shall be recomputed as of the date of notice by the landowner to the
18 Board of Supervisors as required by Government Code Section 51283.4.

19 3. The landowner shall obtain all permits necessary to commence the
20 project.

21 NOW, THEREFORE BE IT RESOLVED that the Board of Supervisors hereby
22 finds this cancellation of said contract as to 12.82 acres to be consistent with the
23 purposes of the Williamson Act; and

24 BE IT FURTHER RESOLVED that the partial cancellation of this contract be and
25 it hereby is approved for the 12.82-acre portion of ALCC No. 387 described on the
26 attached legal description (Exhibit "A"), subject to the following conditions:

27 1. Payment in full of the cancellation fee, which is in the amount of
28 \$6,375.00.

1 AFTER RECORDING,
2 RETURN TO STOP #214

4

FRESNO County Recorder
Robert C. Werner
DOC- 2007-0090289
Monday, MAY 07, 2007 11:11:58
Tel Pd \$0.00 Nbr-0002438802
RPR/R1/1-4

DOCKET
06-AFC-5
DATE MAY 09 2007
RECD. MAY 09 2007

6 BEFORE THE BOARD OF SUPERVISORS
7 OF THE COUNTY OF FRESNO
8 STATE OF CALIFORNIA

9
10 IN THE MATTER OF
11 AGRICULTURAL LAND
CONSERVATION CONTRACT

RESOLUTION APPROVING PARTIAL
CANCELLATION OF AGRICULTURAL
LAND CONSERVATION CONTRACT NO.
367 [ALCC No. 836]

12 WHEREAS, Agricultural Land Conservation Contract [ALCC] No. 367 was
13 entered into between the County of Fresno and Russell Giffen and Ruth P. Giffen, and
14 succeeded to by PAO Investments, LLC, hereinafter referred to as "Owners", and
15 recorded February 27, 1999, as Instrument No. 13855, Book 5865, Pages 182 to 188,
16 of the Official Records of Fresno County, California, and

17 WHEREAS, in accordance with Section 51283(b) of the Government Code, the
18 County Assessor certified the cancellation valuation to this Board for determination of
19 the cancellation fee; and

20 WHEREAS, this Board has determined the cancellation fee to be in the amount
21 of \$6,375.00; and

22 WHEREAS, the Agricultural Land Conservation Committee has recommended
23 approval of the proposed cancellation because of the ability to make all of the required
24 findings in accordance with Section 51282(b) of the Government Code:

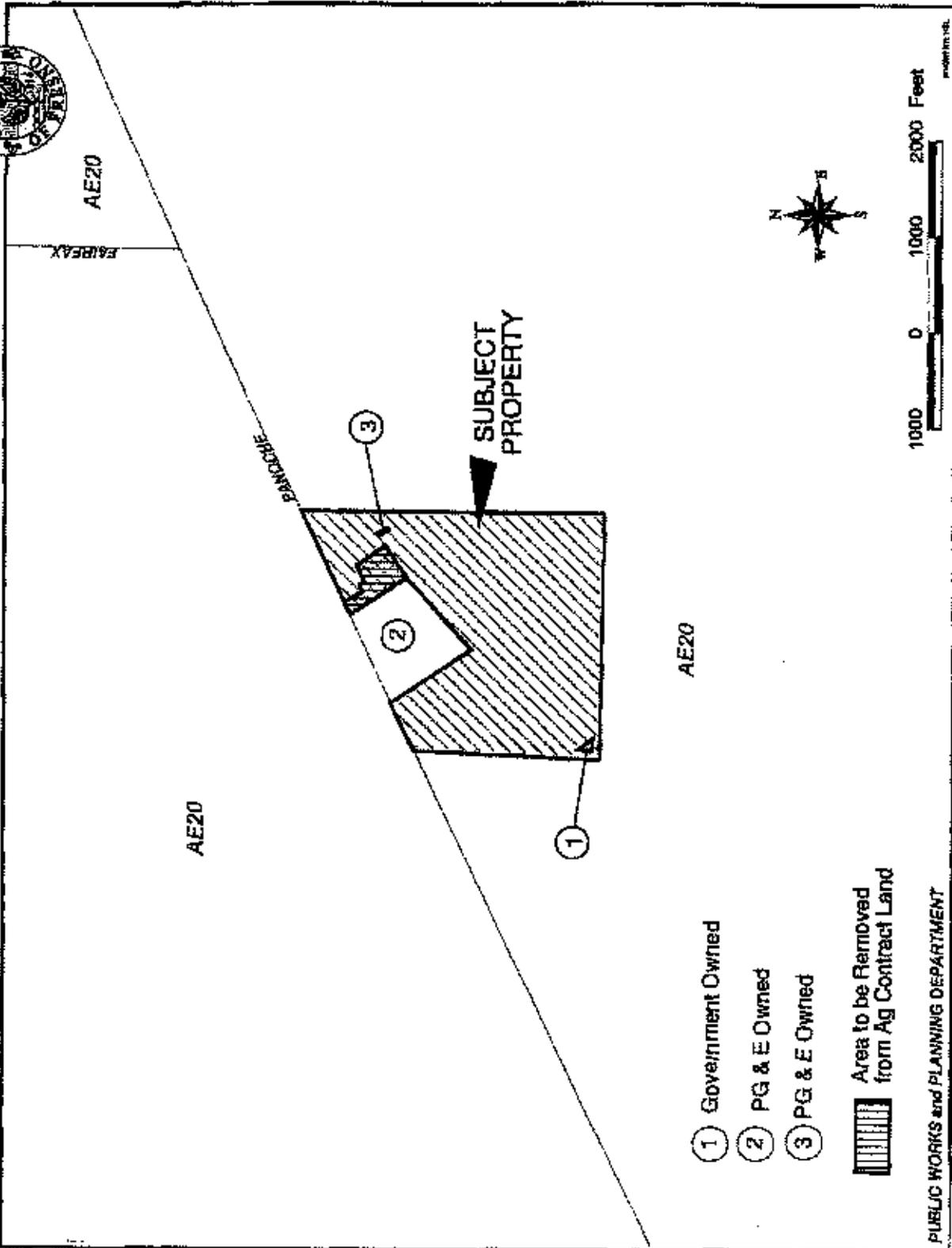
- 25 1. That the cancellation is for land on which notice of non-renewal has been
26 served pursuant to Section 51245.
27 2. That the cancellation is not likely to result in the removal of adjacent
28 lands from agricultural use.

LAND USE APPENDIX 2



RLCC 843
STR: 06 - 15/13

EXISTING ZONING MAP



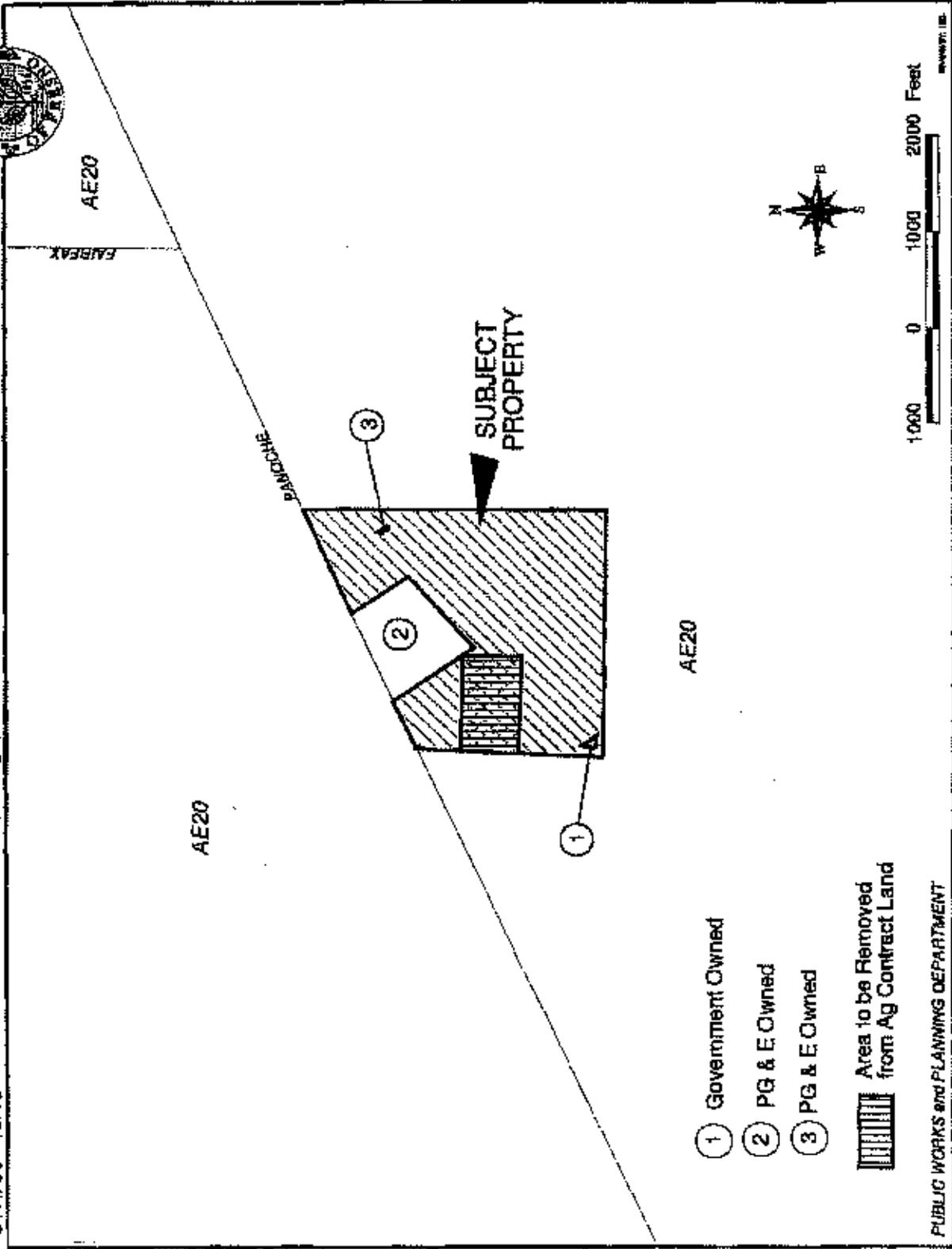
- ① Government Owned
- ② PG & E Owned
- ③ PG & E Owned

 Area to be Removed from Ag Contract Land

PUBLIC WORKS and PLANNING DEPARTMENT

RLCC 838
STR: 06 - 15/13

EXISTING ZONING MAP



- ① Government Owned
- ② PG & E Owned
- ③ PG & E Owned

 Area to be Removed from Ag Contract Land

PUBLIC WORKS and PLANNING DEPARTMENT



County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING
ALAN WEAVER, DIRECTOR

NOTICE OF PUBLIC HEARING FRESNO COUNTY BOARD OF SUPERVISORS

A public hearing will be held on Revision to Land Conservation Contract (RLCC) No. 838 filed by PAD Investments, LLC proposing to:

Allow partial cancellation of ALCC No. 838 to remove 12.82 acres of prime agricultural land from Williamson Act contract restrictions for development of a 200-megawatt thermal power plant. The subject property is located on the south side of Panoche Road between Interstate 5 and Fairfax Avenue approximately 12.6 miles southwest of the city limits of Mendota. (45489 Panoche Road) (SUP. DIST. 1) (APN: 027-080-78s).

The Board of Supervisors hearing will be held at 2:00 p.m. (or as soon thereafter as possible) on Tuesday, April 24, 2007, in Room 301, Hall of Records, Tulare and "M" Streets, Fresno.

Anyone may testify. For information, contact Jared Nimer, Department of Public Works and Planning, Development Services Division, 2220 Tulare Street, (Corner of Tulare & "M" Streets, Suite "B") Fresno, CA 93721, Phone: (558) 262-4846.

ALAN WEAVER, DIRECTOR
Department of Public Works and Planning

NOTES:

Please share this notice with your neighbors and with anyone you feel may be interested.

If at some later date you challenge the final action on this matter in court, you may be limited to raising only those issues you or someone else raised at the Public Hearing described in the notice or in written correspondence delivered to the Board of Supervisors at, or prior to, the public hearing.

SEE MAP ON REVERSE SIDE

G:\43600Devs&P\PLANNING\AGI\RLCC - Appeals\Advs Cancellation\RLCC 838 PAD Investments\mailing notice.doc

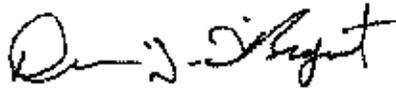
Mr. Jared Nimer, Planner II
January 19, 2007
Page 3 of 3

As a general rule, land can be withdrawn from Williamson Act contract through the nine-year nonrenewal process. The Supreme Court has opined that cancellation is reserved for extraordinary situations (Sierra Club v. City of Hayward (1981), 28 Cal.3d 840).

Lastly, legislation effective January 1, 2005, requires the county assessor to send notice to the Department and landowner of the current fair market value of the land and of the opportunity to request a formal review from the assessor prior to any action giving tentative approval to the cancellation of any contract. (SB 1820, Machado, Chapter 794, Statutes of 2004 (Section 51283(a))). To date, the Department has not received the required notice of the parcel's cancellation valuation.

Thank you for the opportunity to provide comments on the proposed cancellation. Please provide our office with a copy of the Notice of the Public Hearing on this matter ten (10) working days before the hearing and a copy of the published notice of the Board's decision within 30 days of the tentative cancellation pursuant to section 51284. If you have any questions concerning our comments, please contact Adala Lagomarsino, Program Analyst at (918) 445-9411.

Sincerely,



Dennis J. D'Bryant
Program Manager

Mr. Jared Nimer, Pianna
January 19, 2007
Page 2 of 3

of nonrenewal has been served, 2) removal of adjacent land from agricultural use is unlikely, 3) the alternative use is consistent with the County's General Plan, 4) discontinuous patterns of urban development will not result, and 5) that there is no proximate noncontracted land which is available and suitable for the use proposed on the contracted land or that development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land.

Provided the information received is accurate and correct, the Department concurs the Board has a basis to find cancellation of the 12.82-acre portion of the contract consistent with the purposes of the Williamson Act.

The landowner served a notice of nonrenewal. The 28.49-acre portion of Contract No. 387 (APN 027-060-78s) is scheduled to expire on December 31, 2016. Development of the proposed power generation facility will not negatively affect adjacent agricultural lands or cause their removal from agricultural use.

The proposed alternative use appears consistent with the agricultural land use policies contained in the Fresno County General Plan. The proposed alternative use will not produce discontinuous patterns of urban development and due to the location of the existing PG&E substation, the Department would concur that there is not proximate noncontracted land that is suitable or available for the alternative use proposed.

Cancellation is in the Public Interest

For the cancellation to be in the public interest, the Council must make findings with respect to all of the following: (1) other public concerns substantially outweigh the objectives of the Williamson Act and (2) that there is no proximate noncontracted land which is available and suitable for the use proposed on the contracted land or that development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land. Our comments have already addressed the second finding required under public interest finding above.

In order to find that "other public concerns substantially outweigh the objectives of the Williamson Act," the Supreme Court has directed that the Board must consider the interest of the public as a whole in the value of the land for open space and agricultural use. Though the interests of the local and regional communities involved are also important, no decision regarding the public interest can be based exclusively on their parochialism. Moreover, the paramount 'interest' involved is the preservation of land in agricultural production. In providing for cancellation, the Legislature has recognized the relevance of other interests, such as housing, needed services, environmental protection through developed uses, economic growth and employment. However, it must be shown that open space objectives, explicitly and unequivocally protected by the act, are substantially outweighed by other public concerns before the cancellation can be deemed "in the public interest" (Sierra Club v City of Hayward (1981), 28 Cal. 3d. 840, 857).



DEPARTMENT OF CONSERVATION

DIVISION OF LAND RESOURCE PROTECTION

801 K STREET • MS 18-01 • SACRAMENTO, CALIFORNIA 95814
 PHONE 916 | 324-0850 • FAX 916 | 327-3430 • TDD 916 | 324-2556 • WEBSITE conservation.ca.gov

January 19, 2007

RECEIVED
 JAN 25 2007

FRESNO COUNTY
 DEPT. OF
 PUBLIC WORKS & PLANNING

Mr. Jared Nimer, Planner II
 Fresno County Department of Public Works and Planning
 Development Services Division
 2220 Tulare Street, Sixth Floor
 Fresno, CA 93721

Subject: Partial Cancellation of Land Conservation (Williamson Act) Contract
 ALCC No. 367 (RLCC 838); APN 027-060-78a portion - PAO
 Investments

Dear Mr. Nimer:

Thank you for submitting notice to the Department of Conservation (Department) as required by Government Code section 51284.1 for the above referenced matter.

The petition proposes to cancel a 12.82-acre portion of the parcel's 128.49 prime agricultural acres subject to Contract No. 367 for development of a 200-megawatt thermal power plant. The parcel's remaining 115 acres are currently undergoing the nonrenewal process for contract termination.

The site is located south and adjacent to West Panoche Road, approximately $\frac{1}{4}$ of a mile west of the intersection of Fairfax Avenue and West Panoche Road in Fresno County.

Cancellation Findings

Government Code Section 51282 states that tentative approval for cancellation may be granted only if the local government makes one of the following findings: 1) cancellation is consistent with purposes of the Williamson Act or 2) cancellation is in the public interest. The Department has reviewed the petition and information provided and offers the following comments.

Cancellation is consistent with the purposes of the Williamson Act

For the cancellation to be consistent with purposes of the Williamson Act, the Fresno County Board of Supervisors must make all of the following five findings: 1) a notice

March 14, 2007
ER 5785;
Page 2 of 2

document prepared for the proposed thermal power plant site or facility, as required under Section 15271.

4. The division of land is proposed in accordance with the County's General Plan and Zoning Ordinance. The project will not result in any adverse impacts to the environment.

The proposed project meets the criteria for Section 15271 and is exempt from the provisions of CEQA.

If you have any questions, please call me at 262-4454.

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EXHIBIT 'D'

Inter Office Memo

DATE: March 14, 2007
TO: PAQ Investments, LLC
FROM: Briza Sholars, Development Services ^{HST}
SUBJECT: CEQA Determination
Environmental Review No. 5785 (45499 Panocha Road)

Project Description:

The project proposes a partial cancellation of Williamson Act Contract No. 367 on 12.8 acres of a 128 acre parcel of land in the AE-20 (Exclusive Agriculture, 20-acre minimum lot size) Zone District to allow for future development of a thermal power plant. The project is located on the south side of Panocha Road between South Brannon Avenue and South Fairfax Avenue in an unincorporated area of Fresno County.

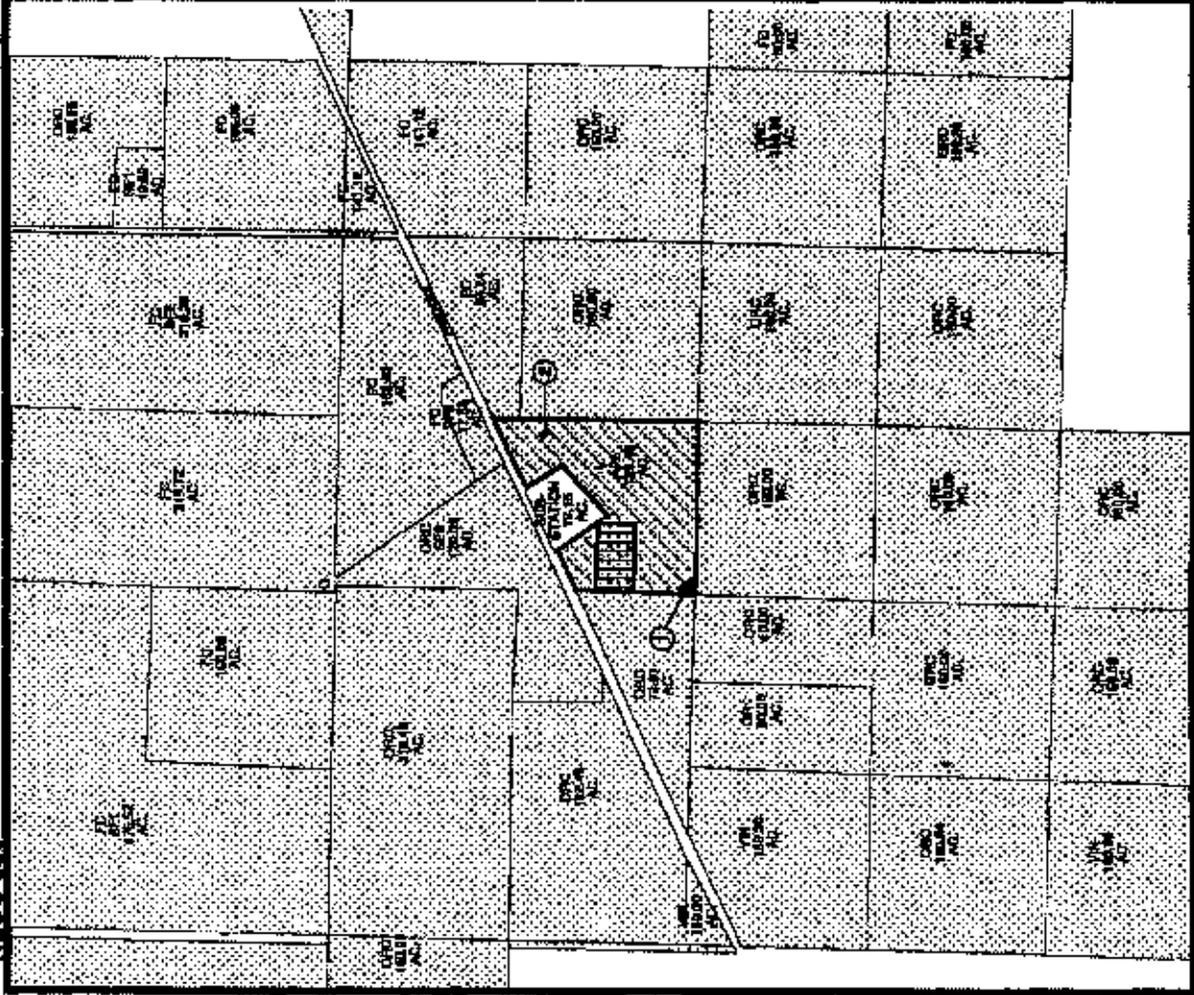
Determination

The proposed project is considered Statutory exempt from the California Environmental Quality Act (CEQA), under Section 15271, Early Activities Related to Thermal Power Plants. The following supports this determination:

1. The intent of Section 15271 of the CEQA Guidelines is to exempt or delay early activities related to thermal electric power plants which will be the subject of an EIR or Negative Declaration or other document or documents prepared pursuant to a regulatory program certified pursuant to Public Resources Code Section 21080.5, which will be prepared by:
 - (a) The State Energy Resources Conservation and Development Commission,
 - (b) The Public Utilities Commission, or
 - (c) The city or county in which the power plant and related facility would be located.
2. Cancellation of Williamson Act Contract No. 367 is required for development of the proposed thermal power plant and is therefore, determined to an early activity required for the project.
3. The cancellation of Williamson Act Contract No. 367 as an early activity will be further analyzed as part of an EIR, Negative Declaration, or other

EXISTING LAND USE MAP

RLCC 838



AP1 - APARTMENT
FC - FIELD CROP
ORC - ORCHARD
SF# - SINGLE FAMILY RESIDENCE
V - VACANT
VIN - VINEYARD

 Subject Property
 Ag Contract Land
 Area to be Removed from Ag Contract Land

- ① Government Owned
- ② PG&E Owned



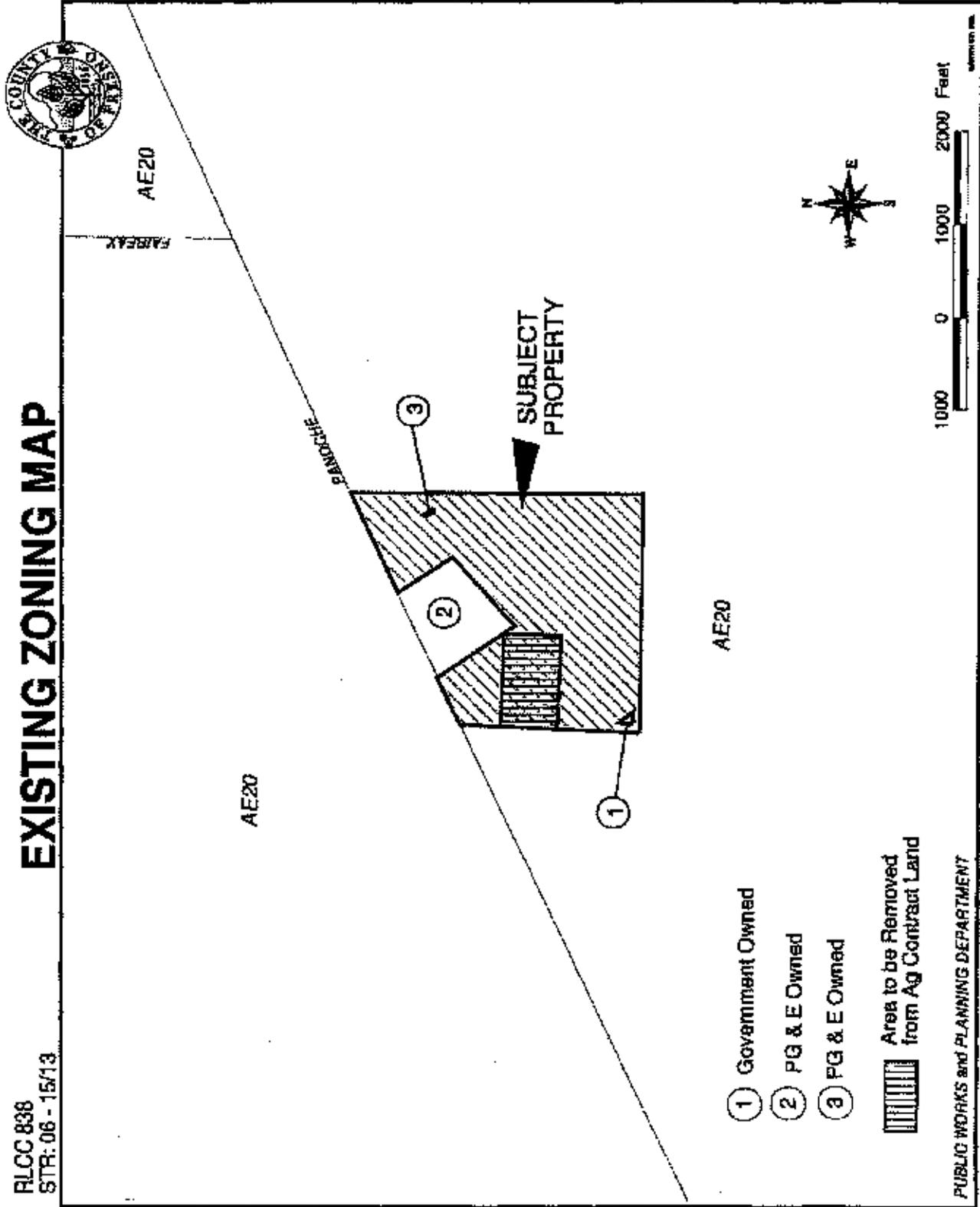
EXHIBIT 'C'

Prepared by County of Fresno The Department of Public Works and Planning 7/21/76

RLCC 838
STR: 06 - 15/13

EXISTING ZONING MAP

EXHIBIT 'B'

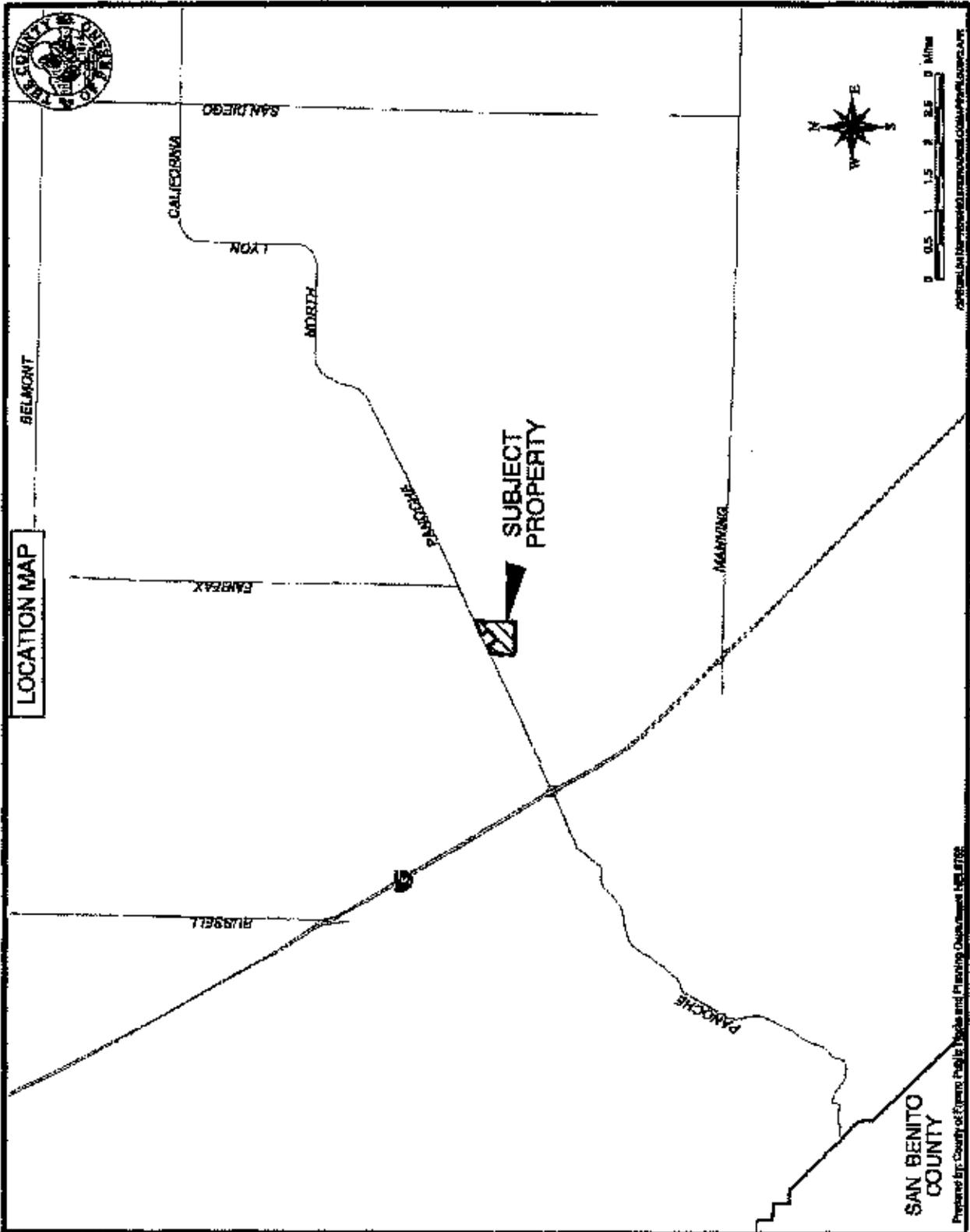


- ① Government Owned
- ② PG & E Owned
- ③ PG & E Owned

 Area to be Removed from Ag Contract Land

PUBLIC WORKS and PLANNING DEPARTMENT

EXHIBIT 'A'



AGRICULTURAL LAND CONSERVATION COMMITTEE

April 4, 2007

Page 3

applicant reported that no less productive agricultural lands were identified as a result of the site selection investigation. Based on the information provided by the applicant, staff believes that the proposed alternate use is consistent with the General Plan. Based on this information, this finding can be made.

4. *That the cancellation will not result in discontinuous patterns of urban development.*

The proposed use of the property for a thermal power plant would not be considered urban development. Based on this, staff believes this finding can be made.

5. *That there is no proximate non-contracted land which is both available and suitable for the use to which it is proposed that the contracted land be put, or that development of the contracted land would provide more contiguous patterns of urban development than development of proximate non-contracted land.*

The applicant conducted an analysis of proximate non-contracted land, to determine if any non-contracted land was both available and suitable for the proposed alternate use. The applicant stated that in order to be suitable for development, of the proposed power plant would require that the land be in close proximity to the existing PG&E substation and to high-volume natural gas lines. Parcels within three miles of the subject property were examined by the applicant, but were all either subject to Williamson Act Contract or were too distant from the existing PG&E substation and/or high-volume natural gas lines to be considered feasible alternatives to the subject property.

ENVIRONMENTAL DETERMINATION:

It has been determined that the project proposal is considered statutorily exempt from CEQA, under Section 15271, Early Activities Related to Thermal Power Plants. A copy of the County's CEQA Determination memo is included as Exhibit 'D'.

OTHER REVIEWING AGENCIES:

As of January 1, 2001, Government Code Section 51284.1(a) requires notification to be provided by the County to the Director of the State Department of Conservation (the Director) once a cancellation application has been accepted as complete. Under Government Code Section 51284.1(c), the Director's comments are required to be considered by the Board of Supervisors before acting on the proposed cancellation. Pursuant to the Director's January 19, 2007, letter providing comments on the applicant's information related to the required findings, the Department of Conservation stated that the Board of Supervisors has a basis to find cancellation of the 12.82-acre portion of the Contract consistent with the purposes of the Williamson Act. The Director's comments are attached as Exhibit E.

DISCUSSION:

In order to approve a cancellation request, the Board of Supervisors must determine that the action is consistent with the Land Conservation Act of 1985. The law requires that five findings be made. Staff analysis of the required findings is as follows:

1. *That the cancellation is for land on which Notice of Nonrenewal has been served pursuant to Section 51245 of the Government Code.*

An executed Notice of Partial Nonrenewal for ALCC No. 367 was accepted by the County Recorder on November 6, 2006, and was assigned Document No. 2006-0236374. Nonrenewal was initiated on the entire 128 acres that comprise APN 027-060-78s.

2. *That the cancellation is not likely to result in the removal of adjacent lands from agricultural use.*

The subject property and adjacent parcels are currently devoted to agricultural uses, with the exception of the existing PG&E substation located on a separate parcel adjacent to the northeast of the area proposed for Williamson Act cancellation. The applicant has stated that the proposed location of the thermal power plant is ideal due to the existing infrastructure installed at the existing Pacific Gas & Electric substation and by the existing high-volume natural gas lines and 115 kilovolt transmission lines located on the subject parcel. Two power generation facilities already exist next to the PG&E substation. The existing infrastructure allows for efficient interconnection, which minimizes impacts, specifically environmental impacts.

Staff agrees that the proposed use of the property for a thermal power plant would not cause any disruption to adjacent parcels and would not result in restrictions on the use of adjacent parcels. While it is possible that adjacent land may be removed from agricultural use, for development of additional power plants, this would be due to the clustering of the necessary infrastructure for efficient interconnection with existing facilities and resources rather than the development of the proposed thermal power plant.

3. *That the cancellation is for an alternative use that is consistent with the provisions of the County General Plan.*

The subject property is designated Agriculture in the Fresno County General Plan. The proposed alternate use of the property is development of a thermal power plant. Permitting for this use is issued through the State of California, so no land use applications would be processed by the County of Fresno during development of the thermal power plant. Nevertheless, the County's General Plan allows for development of certain non-agricultural uses in areas designated for Agriculture.

According to information provided by the applicant, the location of a power generation facility within an urban environment has the potential to impact sensitive receptors such as schools and hospitals in addition to greater land use conflicts with residences. Further, the applicant indicated that the site selection investigation that was performed looked for land that was in sufficient proximity to the infrastructure listed above. The

Panoche

County of Fresno



Department of Public Works and Planning
Alan Weaver, Director

DOCKET 06-AFC-5
DATE APR 04 2007
RECD. MAY 01 2007

Agricultural Land Conservation Committee Staff Report Agenda Item No. 3 April 4, 2007

SUBJECT: Review and make recommendation to forward to the Board of Supervisors regarding PARTIAL CANCELLATION of AGRICULTURAL LAND CONSERVATION CONTRACT NO. 367 (RLCC NO. 838)

STAFF CONTACT: Jared Nimer, Planner
(559) 262-4846

Margie McHenry, Senior Planner
(559) 262-4870

RECOMMENDATION:

Staff believes that the required findings can be made and recommends that application for Partial Cancellation of Agricultural Land Conservation Contract No. 367 be forwarded to the Board of Supervisors with a recommendation for approval, subject to the following conditions:

1. Payment in full of the cancellation fee.
2. Unless the cancellation fee is paid or a Certificate of Cancellation of Contract is issued within one year from the date of the recording of this certificate, the cancellation fee shall be recomputed as of the date of notice by the landowner to the Board of Supervisors required by Government Code Section 51283.4.
3. The landowner shall obtain all permits necessary to commence the project.

BACKGROUND:

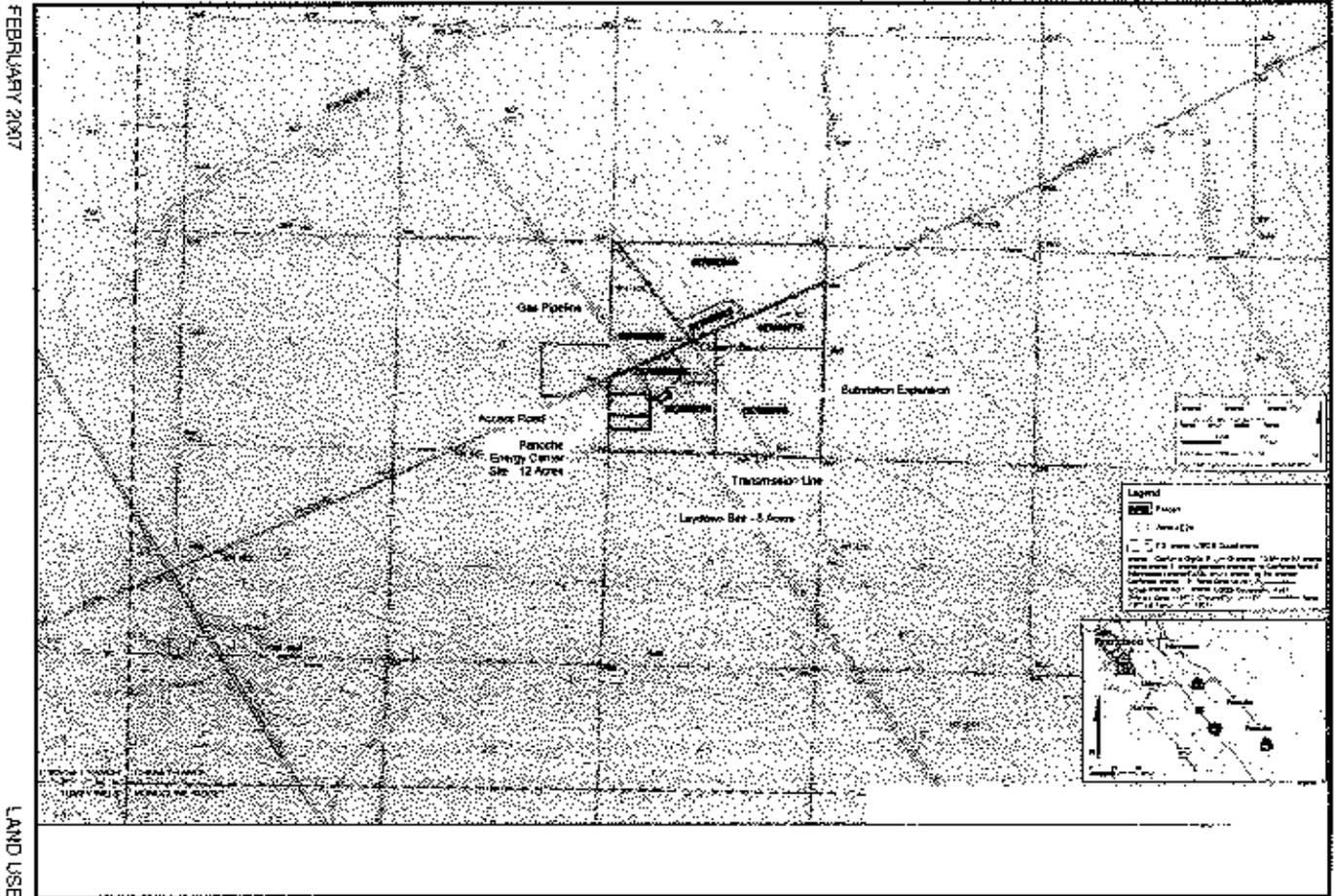
The Agricultural Land Conservation Committee reviews requests for Cancellation of Agricultural Land Conservation Contracts for consistency with the purposes of the Williamson Act, pursuant to Section 51282 of the Government Code. Action to approve or deny an application for contract Cancellation becomes a recommendation to the Board of Supervisors.

PAD Investments, LLC (Applicant) filed an application for Partial Cancellation of Agricultural Land Conservation Contract (ALCC) No. 367. The proposal seeks to remove 12.62 acres of prime agricultural land from Contract restrictions for development of a 200-megawatt thermal power plant. This application has been assigned RLCC No. 838.

The subject property is located on the south side of Panoche Road, between Interstate 5 and Fairfax Avenue, approximately 12.6 miles southwest of the City of Mendota. (See Location Map Exhibit 'A', Zoning Map Exhibit 'B', and Land Use Map Exhibit 'C').

LAND USE APPENDIX 1

LAND USE - FIGURE 2
Panoche Energy Center - Zoning Designations



FEBRUARY 2007

LAND USE

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notice by the landowner to the Board of Supervisors required by
Government Code Section 51283.4.

3. The landowner shall obtain all permits necessary to commence the
project.

IN WITNESS WHEREOF, I have unto set my hand and seal this 24th day of
April, 2007.



Bob Waterston, Chairman
Board of Supervisors

ATTEST:

Bernice E. Seidel, Clerk
Board of Supervisors



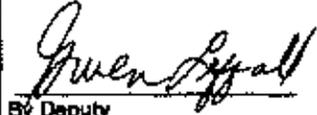

By Deputy

EXHIBIT 'A'
Legal Description
Area Covered by Petition for Partial
Cancellation of Williamson Act Contract

Being a portion of real property in the Southwest Quarter of Section 5 Township 15 South, Range 13 East, Mount Diablo Base and Meridian, according to the official plat thereof lying Southerly of Panoche Road, being a portion of that certain real property described in a document dated June 13, 1978 to Robert Nansen, Trustee under the Sharla M. Baker Trust as Instrument No. 89-106620 Official Records, County of Fresno, vicinity of Firebaugh, California, more particularly described as follows:

COMMENCING at the Southwest Corner of said Section 5 at a found 2" iron pipe thence along the West line of said Section 5 being the Southwest Quarter thereof North $01^{\circ}34'29''$ East 902.88 feet; thence leaving the West line of said Section 5 through the interior of said Southwest Quarter of Section 5 the following seven (7) courses: South $89^{\circ}10'03''$ East 39.95 feet to the POINT OF BEGINNING of the herein described real property; North $00^{\circ}49'57''$ East 522.11 feet; South $89^{\circ}10'03''$ East 1,001.11 feet; South $00^{\circ}49'57''$ West 690.97 feet; North $89^{\circ}10'03''$ West 212.94 feet; North $00^{\circ}49'57''$ East 166.85 feet; North $89^{\circ}10'03''$ West 788.17 feet to the POINT OF BEGINNING.

Containing 556,646 square feet of land (12.82 acres) more or less.

This description is based on record information. The Basis of Bearings are NAD 1983, Epoch 2004.50, California Coordinate System, Zone 4 and are based upon a GPS Survey constrained to NGS monuments: ACG 117 (HPGN G CA 06 NC) survey disk in bridge abutment and GU4 142 (Z 1444) stainless steel rod.

LAND USE APPENDIX 3

TABLE LU-3			
TYPICAL USES ALLOWED IN AREAS DESIGNATED AGRICULTURE (Policies LU-A.2 and LU-A.3)			
BY RIGHT	SPECIAL PERMIT USES		
Agricultural Uses	Special Agricultural Uses	Agriculturally-Related & Value-Added Agricultural Uses	Agricultural Commercial Center Uses & Other Non-Agricultural Uses
<p>Crop & livestock production, except as specified under special permit uses</p> <p>Packing, processing & sale of crops produced on premises, or where such activity is carried on in conjunction with or as part of a bonafide agricultural operation under the same ownership, except as specified under special permit uses</p> <p>Sale of livestock produced or raised on the premises</p> <p>Residences</p> <p>Home occupations</p> <p>Certain oil & gas development activities pursuant to the policies in Section 13S-C, Mineral Resources, of the Open Space and Conservation Element</p>	<p>Cattle feed lots</p> <p>Dairies</p> <p>Isolot lots</p> <p>Swine yards</p> <p>Poultry operations</p> <p>Fish farms</p>	<p>Wineries & distilleries</p> <p>Cotton ginning</p> <p>Cottonseed deinting</p> <p>Tree nut packing & shelling</p> <p>Trucking operations servicing the agricultural community</p> <p>Inspection & weighing services associated with transportation of agricultural products</p> <p>Commercial land leveling & developing establishments</p> <p>Farm labor camps</p> <p>Commercial grain elevators</p> <p>Dehydration operations</p> <p>Commercial soil preparation service establishments</p> <p>Commercial packing & processing of crops</p> <p>Commercial meat processing plants</p>	<p><u>Commercial Centers:</u></p> <ul style="list-style-type: none"> • Veterinary Services & hospitals • Medical & health services • Irrigation systems administration offices • Water-well drilling services • Farm equipment & machinery sales, rental, storage & maintenance • Weighing & packhouse shops • Agricultural employment services • Feed & farm supply sales • Fertilizer sales • Building materials sales • Hardware stores • Grocery stores • Gasoline service stations • Liquefied petroleum gas distribution & storage • Livestock auction market <p><u>Other:</u></p> <ul style="list-style-type: none"> • Organic & inorganic fertilizer manufacturing & mixing • Boarding & painting kennels • Home occupations • Sewage treatment plants • Solid waste disposal • Race tracks • Pistol & rifle range • Churches • Schools • Cemeteries • Commercial staples & riding academies • Golf courses • Radio & television broadcasting stations • Wireless communication facilities • Electrical substations • Liquefied petroleum gas distribution & storage • Airports • Detention facilities • Interstate freeway commercial development • Mineral extraction and oil and gas development pursuant to the policies in Section 13S-C, Mineral Resources, of the Open Space and Conservation Element

LAND USE APPENDIX 4

Table 4. Site Assessment Worksheet 2. - Water Resources Availability

A	B	C	D	E
Project Portion	Water Source	Proportion of Project Area	Water Availability Score	Weighted Availability Score (C x D)
1	irrigation	1		
2				
3				
4				
5				
6				
(Must Sum to 1.0)			Total Water Resource Score	

Site Assessment Worksheet 3.
 Surrounding Agricultural Land and Surrounding Protected Resource Land

A	B	C	D	E	F	G
Zone of Influence						
Total Acres	Acres in Agriculture	Acres of Protected Resource Land	Percent in Agriculture (A/B)	Percent Protected Resource Land (A/C)	Surrounding Agricultural Land Score (From Table)	Surrounding Protected Resource Land Score (From Table)
15	15	0	100	0		



