

STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

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

In the Matter of:) DOCKET No. 06-AFC-5
)
Modification of the Certification)
for the PANOCHÉ ENERGY CENTER)
_____)

ENERGY COMMISSION STAFF'S SUPPLEMENTAL EXHIBITS

At the September 28, 2007 prehearing conference, the Hearing Officer requested additional documents. The applicant will be providing those which have not already been submitted with its evidence. Staff submits the following relating to the applicable building standards for the project:

1. Exhibit 101: Recently Approved Changes in Code Standards for the 2007 California Building Codes;
2. Exhibit 102: 2006 Annual Code Adoption Cycle (2007 Triennial Codes);
3. Exhibit 103: amended GEN 1; and
4. Exhibit 104: Panoche Energy Center (06-AFC-5) Supplemental Testimony of John Kessler and Dick Anderson Soil and Water Resources.

Dated: October 9, 2007

Respectfully submitted,



Jared Babula
Attorney for Commission Staff

Proof of Service (Revised ^{7/12/07}) filed with original.
Mailed from Sacramento on 10-9-07 



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State agencies may propose changes to building standards or regulations related to the implementation or enforcement of building standards. Building standards law requires the agency to submit adopted building standards to the California Building Standards Commission (BSC) for approval.

Recently Approved Standards

The following table lists approved building standards that are not yet available in a published format. When an approved standard is published, it is published as a supplement to the California Code of Regulations, [Title 24](#).

Agency that proposed the change	Approved standard
Building Standards Commission (BSC) 2006 Triennial Code Adoption Cycle for the 2007 Edition of the California Building Standards Code, California Code of Regulations, Title 24.	2007 Edition of Title 24, Parts 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, & 12 (Approved Standards) Approved: Jan. 16, 29 & 30, 2007 Published: July 1, 2007 Effective: January 1, 2008
Office of Statewide Health Planning and Development (OSHPD)	Emergency standards pertaining to air circulation for health facilities' toilet room (PDF) Approved: January 16, 2007 Effective: January 18, 2007
Department of Housing and Community Development (HCD)	Emergency standards pertaining to access to multistory dwellings. CCR, Title 24, Part 2 (PDF) Approved as permanent: July 27, 2006. Effective: January 25, 2006
Office of the State Fire Marshal (SFM)	Emergency standards pertaining to Wildland Urban Interface Fire Areas. Phase I CCR, Title 24, Part 2 (PDF) CCR, Title 24, Part 9 (PDF) Approved as permanent: July 27, 2006. Effective: Part 2 & 9 - Phase I – May 18, 2005 Part 1 & 12 – Phase II – Jan. 1, 2008
California Energy Commission (CEC)	Cool roof energy standards for design and construction. CCR, Title 24, Part 6 (PDF) Approved: July 27, 2006 Effective: Sept. 11, 2006

Effective Dates

Exhibit 101

The type of standard or regulation approved determines its effective date.

Type of standard or regulation	Effective date
Building standards adopted by any agency.	180 days after its publication in Title 24, or at a later date established by the BSC
Emergency building standard or regulation	Immediately upon its filing with the Office of the Secretary of State, or at a later date established by the BSC
Building standards adopted pursuant to Section 25402 of the Public Resources Code, or regulation relating to the implementation or enforcement of building standards	30 days after its filing with the Office of the Secretary of State

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The California Building Standards Commission completed the adoption and approval of the following building standards on January 30 2007. The Final Express Terms (FET) is the building standard language adopted by the Commission. It is shown in ~~strikeout (repealed text)~~ and underline (added text). The Final Express Terms will be integrated into each code by the publishers and will be available to the public by July 1, 2007 and effective on January 1, 2008.

2007 CALIFORNIA ADMINISTRATIVE CODE

Building Standards adopted by the Commission for the 2007 California Building Code (Part 1 of Title 24).

- **The Division of the State Architect – Structural Safety (DSA-SS)**
Administrative Standards (Final Express Terms, FET - [PDF](#))
- **The Division of the State Architect – Access Compliance (DSA-AC)**
Administrative Standards (Final Express Terms, FET - [PDF](#))
- **The Office of Statewide Health Planning and Development (OSHDP)**
Administrative Standards (Final Express Terms, FET - [PDF](#))

2007 CALIFORNIA BUILDING CODE

Building Standards adopted by the Commission for the 2007 California Building Code (Part 2 of Title 24), Based on the 2006 International Building Code (IBC).

- **The California Building Standards Commission (BSC)**
Building Standards (Final Express Terms, FET - [PDF](#))
Seismic Retrofit Standards (Final Express Terms, FET - [PDF](#))
- **The Division of the State Architect – Structural Safety (DSA-SS)**
Building standards (Final Express Terms, FET - [PDF](#))
Seismic Retrofit Standards (Final Express Terms, FET - [PDF](#))
- **The Division of the State Architect – Access Compliance (DSA-AC)**
Accessibility Standards (Final Express Terms, FET - [PDF](#)), (Figures–[PDF](#) [40MB])
Accessibility Standards DOJ Cert. (Final Express Terms, FET - [PDF](#)), (Figures–[PDF](#) [11MB])
- **The Department of Housing and Community Development (HCD)**
Building Standards (Final Express Terms, FET - [PDF](#))
- **The Office of the State Fire Marshal (SFM)**
Building Standards (Final Express Terms, FET - [PDF](#))
- **The Office of Statewide Health Planning and Development (OSHDP)**
Non-Structural Provisions, except Ch.12 (Final Express Terms, FET - [PDF](#))
Non-Structural Provisions, Chapter 12 (Final Express Terms, FET - [PDF](#))
Structural Provisions (Final Express Terms, FET - [PDF](#))

2007 CALIFORNIA ELECTRICAL CODE

Building Standards adopted by the Commission for the 2007 California Building Code (Part 3 of Title 24), Based on the 2005 National Electrical Code (NEC).

- **The California Building Standards Commission (BSC)**
Electrical Standards (Final Express Terms, FET - [PDF](#))
- **The Division of the State Architect – Structural Safety (DSA-SS)**
Electrical Standards (Final Express Terms, FET - [PDF](#))

CALIFORNIA ELEVATOR SAFETY CODE

Building Standards within the Elevator Safety Code (Part 7) will no longer be published in Title 24. These provisions will be published solely in the California Code of Regulations, Title 8. This Part of Title 24 will be vacant.

2007 CALIFORNIA HISTORICAL BUILDING CODE

Building Standards approved by the Commission for the 2007 California Historical Building Code (Part 8 of Title 24)

The Division of the State Architect – Historical Building Code Board (SHBCB)
(Final Express Terms, FET - [PDF](#))

2007 CALIFORNIA FIRE CODE

Building Standards adopted by the Commission for the 2007 California Fire Code (Part 9 of Title 24), Based on the 2006 International Fire Code (IFC).

- The Office of the State Fire Marshal (SFM)
Building Standards (Final Express Terms, FET - [PDF](#))
- The Division of the State Architect – Access Compliance (DSA-AC)
Accessibility Standards (Final Express Terms, FET - [PDF](#))

2007 CALIFORNIA EXISTING BUILDING CODE

(Previously known as the California Code for Building Conservation)

Building Standards adopted by the Commission for the 2007 California Building Code (Part 10 of Title 24), Based on the 2006 International Existing Building Code (IEBC).

- The California Building Standards Commission (BSC)
Building Standards (Final Express Terms, FET - [PDF](#))
- The Department of Housing and Community Development (HCD)
Building Standards (Final Express Terms, FET - [PDF](#))

2007 CALIFORNIA REFERENCED STANDARDS CODE

Building Standards adopted by the Commission for the 2007 California Referenced Standards Code (Part 12 of Title 24)

- The Division of the State Architect – Access Compliance (DSA-AC)
Accessibility Standards (Final Express Terms, FET - [PDF](#))

Westlaw.

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West's Ann.Cal.Health & Safety Code § 18938.5

C**Effective: [See Text Amendments]**

West's Annotated California Codes Currentness

Health and Safety Code (Refs & Annos)

Division 13. Housing (Refs & Annos)

Part 2.5. State Building Standards (Refs & Annos)

Chapter 4. The California Building Standards Code (Refs & Annos)

→ § 18938.5. Application of standards; local ordinances; and model codes

(a) Only those **building standards** approved by the commission, and that are effective at the local level at the time an application for a **building** permit is submitted, shall apply to the plans and specifications for, and to the construction performed under, that **building** permit.

(b) (1) A local ordinance adding or modifying **building standards** for residential occupancies, which are published in the **California Building Standards Code**, shall apply only to an application for a **building** permit submitted after the effective date of the ordinance and to the plans and specifications for, and the construction performed under, that permit.

(2) Paragraph (1) shall not apply to any of the following:

(A) A city or county that has been subject to an emergency proclaimed pursuant to the California Emergency Services Act (Chapter 7 (commencing with Section 8850) of Division 1 of Title 2 of the Government Code).

(B) A permit that is subsequently deemed expired because the building or work authorized by the permit is not commenced within 180 days from the date of the permit, or the permittee has suspended or abandoned the work authorized by the permit at any time after the work is commenced.

(C) A permit that is subsequently deemed suspended or revoked because the building official has, in writing, suspended or revoked the permit due to its issuance in error or on the basis of incorrect information supplied.

(c) No model code made applicable to any additional occupancy shall apply to any project that has been submitted for a building permit prior to the effective date of that model code.

CREDIT(S)

(Added by Stats.1985, c. 577, § 1, eff. Sept. 14, 1985. Amended by Stats.1987, c. 1053, § 21; Stats.1992, c. 623 (A.B.2963), § 1; Stats.1992, c. 897 (A.B.3515), § 29.5.)

HISTORICAL AND STATUTORY NOTES

2006 Main Volume

Under the provisions of § 40 of Stats.1992, c. 897, the 1992 amendments of this section by c. 623 and c. 897 were given effect and incorporated in the form set forth in § 29.5 of c. 897. An amendment of this section by § 29 of Stats.1992, c. 897, failed to become operative under the provisions of § 40 of that Act.

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West's Ann.Cal.Health & Safety Code § **18938.5**

Amendment of this section by § 2 of Stats.1992, c. 623, failed to become operative under the provisions of § 3 of that Act.

CROSS REFERENCES

"**Building standard**" defined for purposes of this Part, see Health and Safety Code § 18909.

"Model code" defined for purposes of this Part, see Health and Safety Code § 18916.

"Occupancy" defined for purposes of this Part, see Health and Safety Code § 18917.

LIBRARY REFERENCES

2006 Main Volume

Health ↻392.

Municipal Corporations ↻601.

Westlaw Topic Nos. 198H, 268.

C.J.S. Health and Environment §§ 35, 51 to 54, 56 to 64.

RESEARCH REFERENCES

Encyclopedias

CA Jur. 3d **Building** Regulations and Development § 41, Revocation or Suspension of Permit.

CA Jur. 3d **Building** Regulations and Development § 42, Expiration of Permit.

CA Jur. 3d **Building** Regulations and Development § 96, Applicable **Building Standards** and **Building** Codes.

Treatises and Practice Aids

Cal. Common Interest Devs.: Law and Practice § 14:16, Application of **Building Standards**.

Miller and Starr **California** Real Estate § 25:226, Reliance Upon a Grant of Authority or Permit to Do Specific Work as Described in the Grant or Permit.

West's Ann. **Cal.** Health & Safety Code § **18938.5**, CA HLTH & S § **18938.5**

Current through Ch. 255 of 2007 Reg.Sess. urgency legislation

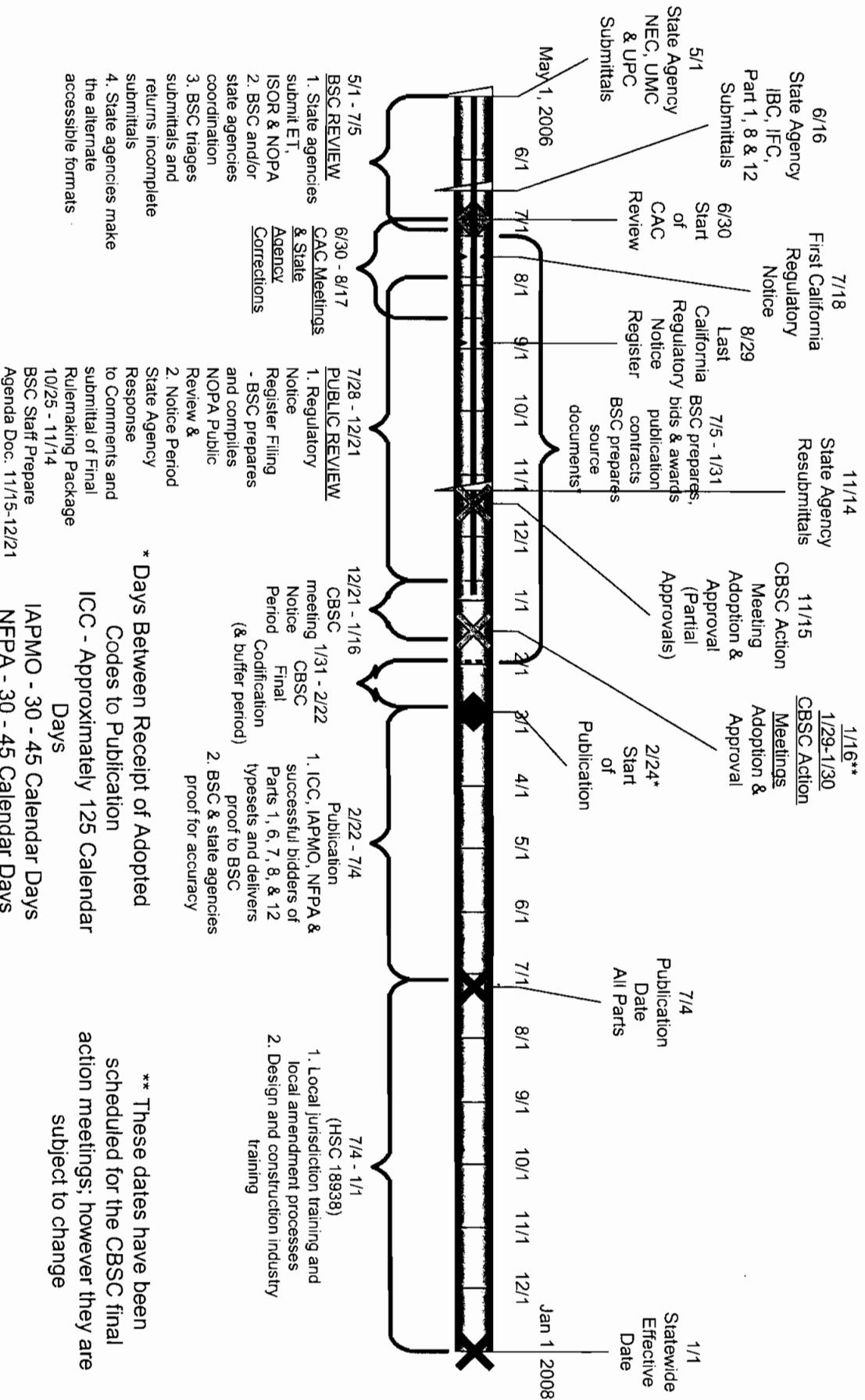
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END OF DOCUMENT

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2006 Annual Code Adoption Cycle (2007 Triennial Codes)

January 1, 2008 Effective Date



GEN-1 The project owner shall design, construct and inspect the project in accordance with the ~~2004~~ 2007 California Building Standards Code (CBSC) (also known as Title 24, California Code of Regulations), which encompasses the California Building Code (CBC), California Building Standards Administrative Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Fire Code, California Code for Building Conservation, California Reference Standards Code, and all other applicable engineering LORS in effect at the time initial design plans are submitted to the CBO for review and approval. (The CBSC in effect is that edition that has been adopted by the California Building Standards Commission and published at least 180 days previously.) The project owner shall insure that all the provisions of the above applicable codes be enforced during any construction, addition, alteration, moving, demolition, repair, or maintenance of the completed facility [~~2004~~ 2007 CBC, Section 101.3, Scope]. All transmission facilities (lines, switchyards, switching stations and substations) are handled in Conditions of Certification in the **TRANSMISSION SYSTEM ENGINEERING** section of this document.

In the event that the initial engineering designs are submitted to the CBO when a successor to the ~~2004~~ 2007 CBSC is in effect, the ~~2004~~ 2007 CBSC provisions identified herein shall be replaced with the applicable successor provisions. Where, in any specific case, different sections of the code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern.

The project owner shall insure that all contracts with contractors, subcontractors and suppliers shall clearly specify that all work performed and materials supplied on this project comply with the codes listed above.

Verification: Within 30 days after receipt of the Certificate of Occupancy, the project owner shall submit to the Compliance Project Manager (CPM) a statement of verification, signed by the responsible design engineer, attesting that all designs, construction, installation and inspection requirements of the applicable LORS and the Energy Commission's Decision have been met in the area of facility design. The project owner shall provide the CPM a copy of the Certificate of Occupancy within 30 days of receipt from the CBO [~~2004~~ 2007 CBC, Section 109 – Certificate of Occupancy].

Once the Certificate of Occupancy has been issued, the project owner shall inform the CPM at least 30 days prior to any construction, addition, alteration, moving, demolition, repair, or maintenance to be performed on any portion(s) of the completed facility which may require CBO approval for the purpose of

complying with the above stated codes. The CPM will then determine the necessity of CBO approval on the work to be performed.

**Panoche Energy Center (06-AFC-5)
Supplemental Testimony of John Kessler and Dick Anderson
Soil and Water Resources**

Introduction

On October 2, 2007, the applicant in the proposed Panoche Energy Center (PEC) project submitted supplemental testimony that included a water conservation plan for conserving more water over the life of the project than they propose to use. Under this proposal, PEC would conserve Central Valley Project (CVP) water through an established water conservation program. This proposal includes providing \$1.5 million for a revolving loan program that allows farmers using less efficient irrigation practices and equipment to borrow funds to buy new equipment and implement more water-efficient practices. The farmer pays back the loan over a four-year period and the funds are then available for additional loans for the next 4-year term. The normal service life of the irrigation efficiency improvements is about 8 years. In this way, the \$1.5 million would sustain the level of water conservation achieved after the 5th year for an indefinite period. In light of this proposal where the applicant has increased their proposed contribution by three-fold, staff is re-analyzing the PEC project for its effects to water supply.

Background

In the Final Staff Assessment (FSA) staff recommended that PEC use the lowest quality water available to PEC from the semi-confined aquifer. PEC proposes using water from the confined aquifer, which is the second lowest quality water available to PEC. The confined aquifer is currently used for irrigation in Westlands Water District when allocations of CVP water are inadequate. The confined aquifer is also the 2nd highest quality water available to the local area around the project site, with CVP water being of the highest quality. Staff found that using water from either the semi-confined aquifer or the confined aquifer did not have a significant adverse impact on water supply or water quality in the area. However, staff and applicant disagreed on the characterization of the proposed water supply as to whether it should be considered fresh inland water and if the proposed use from the confined aquifer is in conformance with state policies for water conservation. State water policy encourages the use of the lowest quality water reasonably available for power plant cooling and process needs, and discourages the use of “fresh water” that can be used for higher beneficial purposes such as domestic, municipal, or agricultural purposes.

Analysis of Water Conservation Proposal

Comparison of Water Quality

Confined aquifer water is generally only relied upon for irrigation supply when CVP water is not adequate because the confined aquifer is marginal in quality, and is suitable for primarily low-economic yield crops. A comparison of the

quality of the three potential resources of water supply in the vicinity of the proposed PEC, in order of highest to most degraded quality, are as shown in **Soil and Water Resources – FSA Supplement Table 1**.

SOIL AND WATER RESOURCES – FSA Supplement Table 1
SPP Alternative Water Supplies Water Quality

Constituent (Units)	Central Valley Project	Proposed Water Supply	Alternative Water Supply
	Surface Water	Groundwater from the Confined Aquifer	Groundwater from the Semi-Confined Aquifer
Chloride (mg/L)	48	40-85	200
Sulfate as SO ₄ (mg/L)	21	370-440	1900
Total Dissolved Solids (mg/L)	170	820-1100	3400
Hardness (mg/L equiv CaCO ₃ /L)	61	40-56	1500
Silica (mg/L)	10	31-40	47

It could be reasoned that any use of a water supply (such as the confined aquifer) for agricultural use qualifies the source as fresh inland water under criteria of State Water Resources Control Board (SWRCB) Resolution 75-58. In this case there is an alternative source (the semi-confined aquifer) that clearly is more degraded and does not meet any criteria for fresh inland water. The criteria staff believes is applicable for determining if a source is fresh inland water is applied to the three potential sources of water supply in the vicinity of the proposed PEC and summarized in **Soil and Water Resources – FSA Supplement Table 2**.

SOIL AND WATER RESOURCES – FSA SUPPLEMENT TABLE 2
TDS Comparison of the Proposed, Alternative & CVP Water Supplies with
LORS Criteria Defining Fresh Inland Water

(Yes indicates staff believes it conforms with criteria for fresh inland water)

Constituent (Units)	TDS (mg/L)	Title 22 Secondary levels	SWRCB Res. 75-58	SWRCB Res. 88-63	Source Meets All Criteria for Fresh Inland Water
LORS Criteria		Recommended ≤ 500 Upper ≤ 1,000 Short-term ≤ 1,500	<u>Waters suitable for use as domestic, municipal or agricultural supply & provide habitat for fish & wildlife</u>	≤ 3,000	
CVP Water	170	Yes	Yes	Yes	Yes
Proposed Water Supply Confined Aquifer	820 – 1,100	Yes	Yes	Yes	Yes
Alternative Water Supply Semi-Confined Aquifer	3,400	No	No	No	No

References: Title 22, Div. 4, Ch 15, Art. 16 - Secondary Drinking Water Standards, SWRCB Resolution 75-58 – Water Quality Control Policy on the Use and Disposal of Inland Waters Used for Powerplant Cooling, and SWRCB Policy 88-63 – Sources of Drinking Water;

If the confined aquifer is determined to be fresh water, the next test for conformance with state policies is to determine if there is a reasonable and more degraded alternative source of water, such as the semi-confined aquifer, and to determine if it is environmentally undesirable or economically unsound for use in power plant cooling. While staff and applicant have disagreed on whether the confined aquifer should be characterized as fresh inland water, and if so, would PEC's use of the more degraded semi-confined aquifer better conform to state policies, staff believes the applicant's latest proposal for conserving CVP water is now a factor deserving consideration among all the facts of the case.

Mechanics of Westlands Water District's Expanded Irrigation System Improvement Program

The District's Expanded Irrigation District Improvement Program (EISIP) offers low interest rates to water users and land owners for the design and lease-purchase of irrigation system equipment. While the type of irrigation equipment may typically include portable aluminum irrigation pipe, micro irrigation, linear move, center pivots and tail-water re-use systems, about 90% of the program directs its funds towards installation of micro irrigation. The program began in 2000 and has steadily increased its effectiveness in accomplishing water conservation since then. Currently, the program is supported with a revolving fund on the order of about \$10 million which allows for about 25% or \$2.5 million per year to be made available for funding new or ongoing conservation efforts using funds returned to the account from farmer's loan payments obliged to repay over a 4-year term.

The micro irrigation systems tend to have a service life of about 8 years before needing replacement. At such time as replacement is needed, farmers may apply again for the low interest loans (at 3.1% annually) to replace their micro irrigation system. Many of the new installations of micro irrigation, such as using buried drip tape, are replacing furrow irrigation practices of row crops with potential for significant water conservation benefits. The EISIP lease may be executed for up to \$130,000, and after requiring a 20% deposit from the farmer, \$104,000 may be financed under the low-interest loan. The irrigation improvements for each loan are normally applied to a 160-acre parcel (1/4 of a square mile). If the applicant were to contribute \$1,500,000 to the EISIP, this could be applied to establishing about 15 additional leases equivalent to applying more efficient irrigation to about 2,400 acres (3.75 square miles). Based on Westland Irrigation District's experience and studies in the agricultural industry, the annual water savings over the first 4 years after implementation would be about 628 acre-feet/year (AFY). With the loans being repaid within 4 years, the funds could be reallocated and applied during Year 5 to an additional 15 parcels resulting in an additional 628 AFY for a total water conservation of 1,256 AFY during years 5 – 8 of PEC's project operation. Assuming after 8 years the micro irrigation equipment needed replacement for the parcels initially funded, the cycle could be repeated to maintain micro irrigation indefinitely for about 30 parcels (4,800 acres) and water conservation of about 1,256 AFY. The applicant proposes to use up to 1,154 AFY; thus the applicant's EISIP contribution would result in net conservation of about 9% more water than the PEC would use annually starting in year 5 and thereafter. This estimate assumes maximum water use possible by PEC based on an annual operation of 5,000 hours per year. **Soil and Water Resources – FSA Supplement Table 3** provides a cumulative accounting of what staff believes would be PEC's water use of the confined aquifer compared to conservation of CVP water during the first 20 years.

**SOIL AND WATER RESOURCES – FSA Supplement Table 3
Cumulative Accounting of PEC’s Proposed Water Use of the Confined
Aquifer Compared to Conservation of CVP Water**

End of Year	PEC’s Avg. Annual Water Use (AFY)	PEC’s Cumulative Water Use (AF)	Annual CVP Water Savings from Applicant’s Contribution to EISIP (AFY)	Cumulative CVP Water Savings from Applicant’s Contribution to EISIP (AF)
Construction			628	628
1	1,154	1,154	628	1,256
2	1,154	2,308	628	1,884
3	1,154	3,462	628	2,512
4	1,154	4,616	1,256	3,768
5	1,154	5,770	1,256	5,024
6	1,154	6,924	1,256	6,280
7	1,154	8,078	1,256	7,536
8	1,154	9,232	1,256	8,792
9	1,154	10,386	1,256	10,048
10	1,154	11,540	1,256	11,304
11	1,154	12,694	1,256	12,560
12	1,154	13,848	1,256	13,816
13	1,154	15,002	1,256	15,072
14	1,154	16,156	1,256	16,328
15	1,154	17,310	1,256	17,584
16	1,154	18,464	1,256	18,840
17	1,154	19,618	1,256	20,096
18	1,154	20,772	1,256	21,352
19	1,154	21,926	1,256	22,608
20	1,154	23,080	1,256	23,864

Based on the accounting above, after experiencing a deficit of water conservation compared to PEC water use during PEC’s initial 3 years of operation, the cumulative volume of CVP water conserved begins exceeding the cumulative water used by PEC during the 13th year of PEC operation. By Year 20, the cumulative volume of CVP water conserved of 23,864 AF exceeds the cumulative water used by PEC of 23,080 by a net difference of 764 AF. While one could consider that some of the irrigation water conserved could be from the confined aquifer during years when the CVP allocation may be curtailed to Westlands, the projected water use by PEC is based on the maximum water use possible assuming an annual operation of 5,000 hours per year. Therefore, staff believes that in consideration of these factors, the applicant’s proposed water conservation plan by contributing to the EISIP would likely achieve within the initial 20 years of PEC operation the conservation of CVP water at a volume equivalent to or greater than PEC’s use of the confined aquifer. Historic data actually suggests that a peaking facility such as PEC is likely to operate at less than the maximum numbers of hours assumed in the above analysis. A

reasonable forecast of PEC's average annual hours of operation shows the amount of fresh water conserved by PEC's contribution to the EISIP would be as much as 10 percent more than the amount of water PEC is reasonably expected to use.

Merits of the Water Conservation Proposal

Staff believes the applicant has demonstrated its willingness to commit to a program that would overall result in a benefit to the water resources of the state. The applicant's contribution to Westland Water District's EISIP would accomplish the following:

1. Conserve CVP water, which is the highest quality water available to the region and has a full spectrum of potential uses due to its high quality;
2. Conserve confined aquifer water since there would be less reliance on the only alternative for irrigation water in the area when CVP supplies are curtailed;
3. Reduce the effects of CVP water supply curtailments to Westlands Water District by reducing the volume of water needed for sustaining agriculture with more efficient irrigation practices.

PEC would not propose to provide funding to the water conservation program if semi-confined aquifer water was required. However, if PEC is allowed to use confined aquifer water they do propose to contribute to the water conservation plan. The water conservation proposal along with using confined aquifer water has a net benefit over using confined or semi-confined aquifer water without the water conservation plan. Conserving high quality CVP water meets the intent of conserving fresh/high quality water for beneficial uses other than for power plant processes. Table 1 provides water quality data regarding the CVP, confined aquifer and the semi-confined aquifer. It is clear that the CVP water is very high quality and has greatest value for other beneficial uses. PEC's water conservation plan would reduce the use of the CVP water over the life of the project by more than the PEC would use, which is a net benefit to the state. Conserving the highest quality water complies with the intent of state water conservation goals such as State Constitution Article X that encourages conservation of high quality fresh water and meets the intent of state policy 75-58 by conserving high quality CVP freshwater over the life of the project. The uniqueness of the water situation at the PEC site, together with the applicant's proposal, allows for the goal of the Energy Commission's 2003 IEPR restatement of state water policy to be met by increasing conservation of an environmentally superior quality water supply while using lower quality water.

Conclusions

Staff finds that allowing the PEC to use confined aquifer water will not result in a significant adverse impact and that permitting the use of confined aquifer water with the PEC proposed water conservation proposal provides an overall net benefit to the state's water resources. Therefore staff recommends approval of the use of confined aquifer water with proposed revisions to staff's previously proposed Condition of Certification **Soil & Water-8** and a newly proposed Condition of Certification **Soil & Water-9** that requires the PEC to contribute \$1.5 million to the Westlands Water District's EISIP for the purpose of conserving an average of 1,154 ac/ft per year or more, of higher quality surface water during the life of the project and require an accounting system that verifies and quantifies the water conserved on an annual basis.

Conditions of Certification

SOIL & WATER-8: The project owner shall use groundwater from the ~~semi~~-confined aquifer supplied from on-site project wells as its water supply for landscape irrigation and all process uses including fire protection, plant service water, cooling tower makeup, combustion turbine NOx injection and combustion turbine inlet air evaporative cooler makeup. Prior to the use of ~~a~~-groundwater during commercial operation for cooling and process water, the project owner shall install and maintain metering devices as part of the water supply and distribution system to monitor and record in gallons per day the total volume(s) of water supplied to the Panoche Energy Center from groundwater. Those metering devices shall be operational for the life of the project. The project's water use shall not exceed 2,500,000 gallons a day or 1,154 acre-feet per year. The project owner shall prepare an annual Water Use Summary, which will include the monthly range and monthly average of daily non-potable water usage in gallons per day, and total water used by the project on a monthly and annual basis in acre-feet. The project owner shall record on-site potable water use on a monthly basis. For subsequent years, the annual Water Use Summary shall also include the yearly range and yearly average water use by the project. The project owner shall submit the annual Water Use Summary to the CPM as part of the annual compliance report. If the amount of water that is to be used by PEC will exceed 2,500,000 gallons a day or 1,154 Acre-feet per year during any annual reporting period, the project owner shall provide a written request and explanation for the anticipated water-use increase to the CPM sixty (60) days prior to the date when the water-use limit is expected to be exceeded. If the project owner can demonstrate that the requested increase is necessary and is not caused by wasteful practices or malfunctions in the water processing systems, the CPM shall approve an up to one-year increase in the water-use limit for the period requested.

Verification: At least sixty (60) days prior to commercial operation of Panoche Energy Center, the project owner shall submit to the CPM evidence that

metering devices have been installed and are operational on the groundwater supply and distribution system.

The project owner shall submit a Water Use Summary to the CPM in the annual compliance report. The project owner shall provide a report on the servicing, testing and calibration of the metering devices in the annual compliance report.

SOIL & WATER-9: Prior to site mobilization, the project owner shall provide a copy of an executed agreement with Westlands Water District (Westlands) and evidence of its one-time payment of \$1.5 million to Westlands for the purpose of conserving fresh water at an average of, or greater than, 1154 ac-ft of water per year over the life of the project through the Expanded Irrigation System Improvement Program (EISIP). The executed agreement shall include provisions for the following:

- 1) A term of the agreement equal to the life of the PEC project;
- 2) An annual report for the life of the PEC indicating the number and acreage of parcels involved in the EISIP for the current and previous years since EISIP inception in 2000, the total funding provided to the EISIP program and an estimate of fresh water conserved.
- 3) The annual account balance in the PEC's funded EISIP account;
- 4) The Project Owner shall be responsible for obtaining from Westlands Water District all data or other information necessary to conduct the annual water savings review.

In the event Westlands Water District discontinues the EISIP, the funds represented by Applicant's contribution shall be allocated to other conservation or similar programs. Any such re-allocation shall first be submitted to the Energy Commission for approval.

Verification: Prior to site mobilization for construction of Panoche Energy Center, the project owner shall submit to the CPM a copy of an executed agreement with Westlands and evidence of its one-time payment of \$1.5 million to Westlands for the purpose of conserving fresh water through the EISIP. The project owner shall include in its Annual Compliance Report the following information regarding the use of the PEC contributed funds:

- 1) The number and acreage of parcels involved in the EISIP for the current and previous years since EISIP inception in 2000, and an estimate of fresh water conserved.
- 2) The end-of-year account balance in the PEC's funded EISIP account;
- 3) For the current and previous years since the inception of the EISIP; the total number and acreage of parcels involved in the EISIP, the funding

provided through the EISIP program, and an estimate of annual fresh water conserved;

- 4) A general description for each loan funded by the Westlands Water District's EISIP during the previous calendar year including the following:
 - i. The date and amount of the loan;
 - ii. The change in the irrigation practice from before to after implementation of the irrigation conservation measure (as would apply for new conservation measures compared to replacements-in-kind); and
 - iii. The type of new equipment installed or modifications to existing equipment;

**STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION**

In the Matter of:) DOCKET No. 06-AFC-5
)
Modification of the Certification) PROOF OF SERVICE
for the PANOCHE ENERGY CENTER) (Revised 07/12/2007)
_____)

INSTRUCTIONS: All parties shall 1) send an original signed document plus 12 copies OR 2) mail one original signed copy AND e-mail the document to the web address below, AND 3) all parties shall also send a printed OR electronic copy of the documents that shall include a proof of service declaration to each of the individuals on the proof of service:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 06-AFC-5
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

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Public Advisers Office
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DECLARATION OF SERVICE

I, Julie Mumme, declare that on September 28, 2007, I deposited copies of the attached **ENERGY COMMISSION STAFF'S SUPPLEMENTAL EXHIBITS** in the United States mail at Sacramento, CA with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

OR

Transmission via electronic mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

I declare under penalty of perjury that the foregoing is true and correct.


Julie Mumme