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BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

PETITION TO AMEND THE
HIGH DESERT POWER PLANT

Docket No. 97-AFC-01C

**COMMITTEE RECOMMENDED PRESIDING MEMBER'S PROPOSED
DECISION GRANTING INTERIM RELIEF TO DROUGHT-PROOF THE
FACILITY**¹

This **Committee Recommended Decision Granting Interim Relief to Drought-Proof the Facility (Decision)** contains the rationale of the California Energy Commission (Energy Commission) in determining whether to grant interim relief to the High Desert Power Plant (HDPP). This Decision also discusses the inapplicability of the California Environmental Quality Act (CEQA) to the request, pursuant to Executive Order B-29-15.²

Background

The HDPP is an 830-megawatt (MW) water-cooled, natural gas-fired, combined-cycle electric generating facility located in the City of Victorville in San Bernardino County. The HDPP was certified by the Energy Commission on May 3, 2000 (Original Decision)³ and began commercial operation in April, 2003.

The Original Decision characterizes the issue of water resources as the most highly contested area in the proceedings.⁴ The Mojave River is the major surface drainage within the project vicinity, flowing approximately one mile east of the HDPP.⁵ This surface water is connected to the groundwater, with the Mojave River being fed by some of the groundwater.

Groundwater serving the area around the HDPP comes from the Mojave Basin; specifically, the HDPP is located in the Alto Subarea, one of five subareas in the Mojave

¹ Where text is revised, additions are shown in **underline** and deletions are shown in ~~strikeout~~. The Decision filed on May 3, 2016 (TN 211348) is modified only by changing the title and adding underline and strikeout in the attached Condition of Certification to highlight the changes between the existing condition adopted in 2014 (TN 203108) and those made in this Decision.

² Executive Order B-29-15 was issued by Governor Edmund G. Brown Jr., on April 1, 2015.
https://www.gov.ca.gov/docs/4.1.15_Executive_Order.pdf.

³ http://www.energy.ca.gov/sitingcases/highdesert/documents/2000-05-03_HD_DECISION.PDF

⁴ *Id.* at 208.

⁵ *Id.* at 209.

Basin.⁶ The Original Decision found that the Mojave Basin was severely overdrafted; that is, more water is pumped or used from the basin than is replaced.⁷ Replacement of the water used in the Mojave Basin occurs from a variety of sources, including rainfall, irrigation, and reclaimed water from waste water treatment plants operated by the Victor Valley Water Reclamation Authority (VWVRA).⁸ The most significant source of Mojave Basin recharge is the importation of State Water Project (SWP) water.⁹

The overdraft of the Mojave Basin led to litigation to determine the native natural water supply and individual water production rights of producers within it. The litigation resulted in an adjudication of individual water production rights within the Mojave Basin (the Judgment) that was affirmed by the California Supreme Court in August 2000.¹⁰ The Judgment named the Mojave Water Agency (MWA) as Watermaster, ensuring that proper water balances are maintained in each Subarea through a combination of natural supply, imported water, water conservation, water reuse, and transfers of production allowances between producers.¹¹

The Mojave River also supports a mesquite bosque that provides habitat to several state and federally listed species, as well as species of special concern. Any decrease in riparian flows would likely result in impacts to available habitat and significantly affect protected species. Because of the interconnection between the Mojave River and the groundwater basin, any use of groundwater might impact the riparian habitat near the HDPP.

The Original Decision thus limited the source of cooling water for HDPP to SWP water, either delivered directly to the HDPP or by HDPP creating a “water bank” through aquifer injection.¹² HDPP was specifically precluded from using any other source of water, including reclaimed water.¹³ The Original Decision therefore concluded that any potential impacts to the Mojave River and its associated habitat would be mitigated by HDPP “banking water” and by ensuring that the HDPP did not cause any reductions in discharges or banked water flows.¹⁴

In 2008, the Petitioner submitted a petition to the Energy Commission to amend the original conditions of certification to allow it to use reclaimed water for a portion of its water needs.¹⁵ The Energy Commission granted the request on November 18, 2009, authorizing HDPP to use reclaimed water to meet up to one-third (approximately 1,000 acre-feet per year (AFY)) of its project cooling water needs (the 2009 Amendment).¹⁶ As

⁶ *Id.* at 212.

⁷ *Id.* at 210.

⁸ *Id.*

⁹ *Id.*

¹⁰ *City of Barstow v. Mojave Water Agency* (2000) 23 Cal.4th 1224, 99 Cal.Rptr.2d 294, 5 P.3d 853

¹¹ *Original Decision* at 210-212.

¹² *Id.* at 213-215; 222; 230-231; see also Conditions of Certification Soil & Water-1 and Soil & Water-4.

¹³ *Id.*

¹⁴ *Id.* at 136-137, 139-140.

¹⁵ TN 47547.

¹⁶ The amount authorized was 1000 acre-feet. While the Original Decision and subsequent amendments have not set a firm limit on the amount of water the HDPP requires to operate, the Petition lists 3090

part of this approval, the Energy Commission further required the Petitioner to provide, by December 31, 2011, a study analyzing the feasibility of converting HDPP to 100 percent reclaimed water use.¹⁷ This December 2011 deadline for the feasibility study was ultimately extended to November 2014 to allow for adequate testing at the facility based on the source of the reclaimed water (treated wastewater from the City of Victorville's industrial plant or from the VVWRA domestic treatment plant).¹⁸

In April 2014, Petitioner submitted an "Amendment Petition for Alternative Water Supplies to Address Drought-related Reliability Impacts" (2014 Amendment Petition) to modify the conditions of certification. First, the 2014 Amendment Petition requested the ability to send backwash streams to the City of Victorville industrial wastewater treatment plant in order to improve the water quality of the reclaimed water received from that plant. Second, the 2014 Amendment Petition sought authority for HDPP to use groundwater from the Mojave Basin that it had obtained under the provision of the Judgment.¹⁹

On September 10, 2014, the Energy Commission partially granted the 2014 Amendment Petition (the 2014 Amendment). The Energy Commission modified Condition of Certification SOIL&WATER-1, allowing HDPP to use groundwater from the Mojave Basin only if reclaimed water of sufficient quantity or quality was not available. The Energy Commission further limited HDPP's ability to use groundwater to water years 2014/2015 and 2015/2016,²⁰ and to a maximum of 2000 AFY in each of those water years. HDPP was also required to file a petition to amend by November 1, 2015, that would either implement reliable primary and backup water supplies that are consistent with state water policies or that would allow construction of an alternate cooling system, such as dry cooling.²¹

The feasibility study required under the 2009 Amendment was provided to the Energy Commission on November 3, 2014.²² HDPP argues that the Alto Subarea is not in a condition of "overdraft" and that the Judgment has resulted in groundwater sustainability. HDPP also argues that the quantity and quality of reclaimed water make it infeasible to use it exclusively for cooling purposes.²³

Energy Commission staff (Staff) provided its response to the feasibility study on October 9, 2015. Staff's analysis argues that, in most cases, there is sufficient reclaimed water available to meet the cooling requirements of the HDPP and that use of reclaimed water from VVWRA would mitigate the potential impacts of pumping groundwater from the adjudicated Mojave Water Basin. Staff further argues that HDPP's use of up to 1600

acre-feet as the limit of groundwater. Thus, it appears that 3090 acre-feet of water is needed annually for plant operation.

¹⁷ TN 54277.

¹⁸ TN 60649, 62362.

¹⁹ TN 202211.

²⁰ The water year runs from October 1 to September 30. (TN 203108.)

²¹ TN 203108.

²² TN 203306.

²³ TN 203306, 206454, 206468.

acre-feet of groundwater from Mojave Water Basin for emergency backup would be acceptable.²⁴

Current Proceedings and Interim Relief

HDPP filed a Petition for Modification to Drought-Proof the High Desert Power Project (Petition) on October 30, 2015, that proposed amending Condition of Certification SOIL&WATER-1 that would add a “Loading Sequence” for the sources of water to be blended with reclaimed water at HDPP, maximizing the use of reclaimed water as the primary supply, in order to operate the facility reliably. The other sources are 1) water directly from the SWP; 2) banked SWP water; and 3) adjudicated groundwater from the Mojave Basin; they would be blended in that order of preference. HDPP proposed a limit of 3090 acre-feet of groundwater in any given year on a five-year rolling average.²⁵

On January 13, 2016, the Energy Commission appointed a Committee consisting of Karen Douglas, Commissioner and Presiding Member, and Janea A. Scott, Commissioner and Associate Member, to conduct proceedings on the Petition.²⁶

The Committee has conducted a series of public meetings with the parties to resolve the issues presented by the Petition. In addition to the positions of Staff and HDPP, Intervenor California Department of Fish and Wildlife (CDFW) argues that, despite the Judgment and the actions of MWA as Watermaster, the Alto Subarea is still in a condition of groundwater “overdraft”. Because of this, CDFW asserts that the proposed use of over 3,090 AFY of reclaimed water could have a detrimental effect on groundwater recharge in the Alto Subarea, and, as a consequence, on the habitat necessary to support state and federally listed species and species of special concern. CDFW thus argues that SWP water should continue to make up the majority of water used for plant cooling purposes.²⁷

The parties have filed testimony and documentation regarding the Petition in preparation for evidentiary hearings. However, the Committee has found that additional evidence is required to resolve the Petition. In specific, the Committee would like to see a water balance calculation to show inflow and outflow from the Mojave Basin and the potential impacts to the Alto Subarea and the habitat it supports. MWA has indicated such a calculation would require action by its governing board and more time than had originally been allocated for the presentation of testimony.²⁸ As such, evidentiary hearings may be delayed beyond the expiration of the 2014 Amendment.

The permission to use groundwater granted by the 2014 Amendment expires at the end of the current water year (September 30, 2016). HDPP has stated that it requires time before the end of the water year to secure supplies for the next water year (October 1, 2016 to September 30, 2017). Petitioner alleges that it has certain entitlements to SWP

²⁴ TN 206321, 210083.

²⁵ TN 206468, pp. 5, 7, 32-33.

²⁶ TN 207552.

²⁷ TN 210565.

²⁸ TN 210667.

water, but taking that water has been problematic because of its quality. Petitioner has also noted that the quantity of water available varies greatly, subject to complete curtailment in emergency conditions.²⁹

The Petitioner also requests that it be allowed to pursue an alternate method for groundwater banking: percolation. One reason for HDPP's request is the need to "clean" SWP water before injection. To do so, the plant must be operating. Percolation, by comparison, requires no such "cleaning". Moreover, HDPP currently has an agreement with the City of Victorville authorizing groundwater banking only through injection. The City of Victorville in turn has master agreements with MWA regarding groundwater recharge. Therefore, any change to the method of SWP water banking is dependent on modifications to these agreements. Petitioner has stated that it needs sufficient time to make the required changes to the various agreements in order to take its full allotment of SWP water in this water year, as well as for any future changes.

Executive Order B-29-15

On January 17, 2014, Governor Edmund G. Brown, Jr. proclaimed a State of Emergency due to the ongoing drought in California. On April 1, 2015, the Governor issued Executive Order B-29-15 (Executive Order), Paragraph 25 of which provides:

The Energy Commission shall expedite the processing of all applications or petitions for amendments to power plant certifications issued by the Energy Commission for the purpose of securing alternate water supply necessary for continued power plant operation. Title 20, section 1769 of the California Code of Regulations is hereby waived for any such petition, and the Energy Commission is authorized to create and implement an alternative process to consider such petitions. This process may delegate amendment approval authority, as appropriate, to the Energy Commission Executive Director. The Energy Commission shall give timely notice to all relevant local, regional, and state agencies of any petition subject to this directive, and shall post on its website any such petition.³⁰

Paragraph 26 of the Executive Order also provides, in part, that for purposes of carrying out the directives in Paragraph 25, the California Environmental Quality Act (CEQA) is suspended until May 31, 2016.³¹

As set forth above, the HDPP is a water-cooled power plant. At present, its ability to use Mojave Basin groundwater expires on September 30, 2016. In order to maximize its use of SWP water, Petitioner requires certain changes to the Conditions of Certification to allow for percolation, in addition to the already-authorized injection. As a consequence, we find that the Petition and the granting of interim relief to Petitioner fall within the scope of the Executive Order B-29-15.

²⁹ TN 206468, p.18.

³⁰ https://www.gov.ca.gov/docs/4.1.15_Executive_Order.pdf.

³¹ *Id.*

The Executive Order states that power plant certification and amendments are exempt from Title 20, section 1769 of the California Code of Regulations and from CEQA. Section 1769 addresses the process and procedures for reviewing amendments, while CEQA codifies a statewide policy of environmental protection. Accordingly, we need not conduct environmental review before granting interim relief. While we find that the Petition for Interim Relief falls within the ambit of the Executive Order, the Executive Order does not preclude the Energy Commission from exercising its discretion under the Warren-Alquist Act to assess the costs and benefits in approving such projects.³²

Aliso Canyon State of Emergency

On January 6, 2016, Governor Edmund G. Brown, Jr. issued an Emergency Proclamation (January 2016 Proclamation) addressing the gas leak at the Aliso Canyon storage facility.³³ The January 2016 Proclamation called on the Energy Commission, the California Public Utilities Commission, and California Independent System Operator (CAISO) to coordinate and take all necessary actions to ensure the reliability of the natural gas and electricity supplies during the moratorium on gas injections into Aliso Canyon. This joint agency coordination resulted in the creation of a joint agency reliability team that also collaborated with Los Angeles Department of Water and Power and Southern California Gas Company (SoCalGas).

The joint agency team issued the “Aliso Canyon Action Plan to Preserve Gas and Electric Reliability for the Los Angeles Basin” (Action Plan)³⁴ and the “Aliso Canyon Risk Assessment Technical Report” (Technical Report).³⁵ The Action Plan identified Aliso Canyon as essential to the overall reliability of both gas and electrical systems in the Los Angeles Basin.³⁶ To address the possible curtailment of gas deliveries to electrical generating facilities reliant on Aliso Canyon, the Action Plan recognizes that CAISO may call on out-of-basin operators that do not rely on natural gas supplied from Aliso Canyon.³⁷ The Technical Report further states that, “There are some gas-fired resources located in southern California that can take gas service from other pipelines other than those of SoCalGas for example the High Desert Generations facility. These resources can be used to help mitigate gas curtailments to gas fired resources on the SoCalGas system but may not serve to mitigate local transmission constrained areas such as Orange County.”³⁸

HDPP operates on a gas source that is not reliant on Aliso Canyon.³⁹ The record does not definitively establish that the HDPP will be required to provide substitute power

³² Pub. Resources Code §§ 25523, 25525.

³³ <https://www.gov.ca.gov/news.php?id=19264>.

³⁴ http://www.energy.ca.gov/2016_energypolicy/documents/2016-04-08_joint_agency_workshop/Aliso_Canyon_Action_Plan_to_Preserve_Gas_and_Electric_Reliability_for_the_Los_Angeles_Basin.pdf. (Action Plan).

³⁵ http://www.energy.ca.gov/2016_energypolicy/documents/2016-04-08_joint_agency_workshop/Aliso_Canyon_Risk_Assessment_Technical_Report.pdf (Technical Report).

³⁶ Action Plan at 8.

³⁷ *Id.* at 28.

³⁸ Technical Report at 46.

³⁹ Original Decision at 50, 76, 78-80.

generation in the event of natural gas delivery curtailments in the Los Angeles region. However, we may infer that because HDPP operates on natural gas provided from a different source, it may be called on to help mitigate any curtailment of natural gas electrical generating facilities in the Los Angeles region.

Interim Relief

The parties (Petitioner, Staff, and Intervenor CDFW) have agreed that some form of interim relief is necessary. Staff and Petitioner have suggested that HDPP be granted an additional two years of Mojave Basin groundwater use, similar to that granted under the 2014 Amendment.⁴⁰

We agree that a narrowly tailored interim relief is appropriate, to address immediate needs and provide time to develop the record to resolve the issues presented by the Petition. Therefore, we grant interim relief to the Petitioner by amending Condition of Certification Soil & Water-1, as set forth in Exhibit “A” to this Decision.

Next Steps

This Decision only addresses interim relief. Further processing of the Petition will be in conformity with the “Orders after April 21, 2016, Status Conference” to be filed after this Decision.

FINDINGS OF FACT

1. The High Desert Power Plant requires water for cooling in order to operate.
2. Pursuant to the 2014 Amendment, the High Desert Power Plant currently has the ability to use groundwater from the Mojave Basin until September 30, 2016.
3. The Aliso Canyon Natural Gas Storage Facility may be unable to provide sufficient natural gas supplies to natural gas-fired electrical generating facilities in the Los Angeles basin.
4. The Aliso Canyon Action Plan to Preserve Gas and Electric Reliability for the Los Angeles Basin, prepared by the California Public Utilities Commission, the Energy Commission, the California Independent System Operator (CAISO), and the Los Angeles Department of Water and Power, recognizes that natural gas-fired electrical generation facilities that rely on natural gas from sources other than Aliso Canyon may be called upon to provide power.
5. The High Desert Power Plant does not obtain natural gas for plant operations from the Aliso Canyon Natural Gas Storage Facility so that it may provide electrical power to the Los Angeles basin.
6. Executive Order B-29-15 creates an exemption from CEQA for amendments to power plant certifications for the purpose of securing alternate water supply necessary for continued power plant operation.

⁴⁰ TN 210800 (Transcript of March 15, 2015, Prehearing Conference); TN 210088 (Petitioner's Opening Testimony), pp. 31-33; TN 211258 (Staff's Proposed Changes to Provide Interim Relief).

7. Providing water to the High Desert Power Plant on an interim basis falls under the exemption created by Executive Order B-29-15.
8. In exercising the discretion granted to the Energy Commission under Public Resources Code sections 25523 and 25525, the limited amount of time during which this interim relief applies minimizes the impacts on the environment while allowing this facility to continue to operate during the resolution of the remaining issues of the Petition.

CONCLUSIONS OF LAW

1. Consideration of the Petition for Modification to Drought-Proof the High Desert Power Project is exempt from California Code of Regulations, title 20, section 1769, pursuant to Executive Order B-29-15.
2. Consideration of the Petition for Modification to Drought-Proof the High Desert Power Project is exempt from Division 13 (commencing with section 21000) of the Public Resources Code and regulations adopted pursuant to that Division the California Environmental Quality Act, California Public Resources Code section 21000 et seq., as well as any regulations adopted pursuant to Executive Order B-29-15.
3. Consideration of the evidence and facts offered in the Petition for Modification to Drought-Proof the High Desert Power Project continues to be subject to the discretion of the Energy Commission under the Warren-Alquist Act, California Public Resources Code section 25000, including, but not limited to sections 25523 and 25525.

Dated: May 3rd, 2016, at Sacramento, California

Original signed by _____
KAREN DOUGLAS
Commissioner and Presiding Member
High Desert Power Plant Amendment
Committee

Original signed by _____
JANEA A. SCOTT
Commissioner and Associate Member
High Desert Power Plant Amendment
Committee

EXHIBIT "A" TO ~~PRESIDING MEMBER'S PROPOSED~~ COMMITTEE

RECOMMENDED DECISION

GRANTING INTERIM RELIEF

FOR THE HIGH DESERT POWER PLANT

97-AFC-01C

SOIL&WATER-1 The only water used for project operation (except for domestic purposes) shall be State Water Project (SWP) water obtained by the project owner consistent with the provisions of the Mojave Water Agency's (MWA) Ordinance 9 and/or appropriately treated recycled waste water, and/or an alternative water supply obtained from the Mojave River Basin (MRB) consistent with the "Judgment After Trial" dated January 1996 in *City of Barstow, et al., v. City of Adelanto, et al.* (Riverside County Superior Court Case No. 208568) (collectively, "MRB Adjudicated Water Rights") as administered by the ~~MWA~~ Watermaster (the "Judgment").

- a. Whenever recycled waste water of quality sufficient for project operations is available to be purchased from the City of Victorville, the project owner shall use direct delivery of maximum quantities of such water for project operations. Whenever the quantity or quality of recycled waste water is not sufficient to support project operations, the project may supplement recycled water supplies with SWP water, banked SWP water from the four HDPP wells as long as the amount of water used does not exceed the amount of water determined to be available to the project pursuant to SOIL&WATER-5, and/or MRB Adjudicated Water Rights. The Project Owner shall consume no more than 2,000 AF of MRB Water Rights in water years ~~2014/2015 (October 1, 2014 – September 30, 2015)~~ and no more than 2,000 AF in water year 2015/2016 (October 1, 2015 – September 30, 2016) and 2016/2017 (October 1, 2016 – September 30, 2017) ~~of MRB Adjudicated Water Rights and the~~. The acquisition, use and transfer of MRB Water Rights shall comply with the Judgment and Rules and Regulations of the Watermaster.

The project owner shall use no more than 3.090 AFY per year, regardless of the source of water, for plant cooling operations.

The project owner shall implement an interim "Loading Sequence" in the following order:

1. The project owner will use recycled waste water as the primary water supply, to the extent it is available and its quality is sufficient to maintain cooling tower functions and reliable operation of the facility.
2. If there is insufficient recycled waste water of quality or quantity sufficient to maintain cooling tower functions and reliable operation of the facility, recycled waste water may be blended with either directly available or banked SWP Water.
3. If there is insufficient directly available or banked SWP Water, the project owner may blend recycled waste water with MRB Water Rights to achieve the required cooling tower blowdown rate or cooling tower functionality, subject to the limitations contained above.

At the project owner's discretion, dry cooling may be used instead, if an amendment to the Commission's decision allowing dry cooling is approved.

- b. The project owner shall report, on or before the 15th of each month, the use of water from all sources for the prior month to the Energy Commission CPM in acre-feet. The monthly report shall include acre-feet usage by source, as well as total.
- c. The project owner shall submit a Petition to Amend (PTA) no later than November 1, 2015 that will implement reliable primary and backup HDPP water supplies that are consistent with state water policies or an alternate cooling system like dry cooling.
- d. (Item Deleted)
- e. The project's water supply facilities shall be appropriately sized and utilized to meet project needs. The project shall make maximum use of recycled waste water for power plant cooling given current equipment capabilities and permit conditions.
- f. The project owner shall continue with the feasibility study evaluating the use of 100 percent recycled water for evaporative cooling purposes and other industrial uses. The feasibility study shall be completed by the project owner and submitted to the CPM.

VERIFICATION: The project owner shall provide final design drawings of the project's water supply facilities to the CPM, for review and approval, thirty (30) days before commencing project construction. The project owner shall submit to the CPM

documentation showing the agreements entered into between the project owner, MWA Watermaster, and water right owners in MRB regarding the acquisition, use and transfer of MRB Adjudicated Water Rights. The project owner shall report all use of water from MRB to the Energy Commission CPM on a monthly basis.

The project owner shall provide a biannual report on the progress being made on the project design for use of 100 percent recycled water for power plant cooling. The report shall include information related to project modifications that may be needed for using up to 100 percent recycled water. The first report shall be due six months after adoption of this condition of certification, and the final feasibility report shall be submitted to the CPM no later than November 1, 2014. Verifying compliance with other elements of Condition SOIL&WATER-1 shall be accomplished in accordance with the provisions of the Verifications for Conditions 2, 3, 6, 20, and 21 as appropriate.

The project owner shall submit a PTA no later than November 1, 2015 that will implement reliable primary and backup HDPP water supplies that are consistent with state water policies or an alternate cooling system like dry cooling.

The final feasibility study should contain, but not be limited to, the following information:

I- Water Supply

- A. Potential sources of recycled water, its current and projected use, and alternative pipeline routes
- B. Adequacy of recycled water supplies to meet plant operation demand (provide future projections of supply and demand considering annual volumes, monthly patterns of plant water use vs. availability of water supply, and peak day supply and demand)
- C. Quality of existing and recycled water supplies
- D. Water treatment requirements for existing and recycled water supplies
- E. Cooling cycles of concentration for existing and potential recycled water supplies

II- Cooling & Process Needs

- A. Consumptive water uses e.g.: cooling tower make-up, evaporative cooling of CTG inlet air, CTG compressor intercooling, and STG condensation; CTG NOx control; CTG power augmentation; boiler water makeup

- B. Space requirements for additional treatment of recycled water supplies vs. space available on the plant site
- C. Water balance diagrams for recycled water use and wastewater discharge for average and peak conditions to include distinctions in using existing vs. recycled water

III- Wastewater Treatment Disposal

- A. Method (existing discharge via sewer system to WWTP, dedicated brine return line, deep well injection, or zero liquid discharge (ZLD) recovery)
- B. Available capacity & operating limitations

IV- Economic Costs of Existing Source and Recycled Sources (where applicable)

A. Capital costs

1. water supply pipeline
2. water supply pumping station(s)
3. well(s)
4. water treatment system
5. wastewater pipeline & facility capacity charge
6. permitting (PM 10, Legionella, discharge quality and quantities)
7. Right of Way and Easement acquisitions
8. engineering, procurement, construction inspection and testing
9. biologic surveys/environmental assessment reports

B. Annual (operating and maintenance) Costs

1. existing and recycled water purchase cost
2. chemicals (cooling tower & water treatment)
3. labor
4. energy (water supply pumping, water .treatment)
5. wastewater discharge fee
6. solids disposal (class of waste, transportation & landfill fees)

C. Project Life - Identify project life

D. Total Project Cost (base case)

E. Installed cost per watt

F. Total Annualized Cost - expressed as the uniform end-of-year payment (AIP) of Capital Costs + Annual Costs

G. Cost of Capital

H. Debt to equity ratio

I. Average debt service coverage ratio

V- Expected Effects on Electric Customers

A. Description of existing electricity rate structure and current rates to customers using existing water source

B. Description of expected electricity rates to customers using recycled water over remaining life of the plant

VI- Environmental Considerations for the use of Recycled Water

A. Describe the potential effects of recycled water use on the generation of hazardous waste and on the quality of its wastewater discharge

B. Describe the potential impacts to public health through the use and discharge of recycled water

C. Describe the potential effects of recycled water use and discharge on the degradation of water quality and its potential to be injurious to plant life, fish, and wildlife

D. Describe potential effects on existing water rights or entitlements

VII- Discussion of applicable California Water Code provisions