DOCKETED

Docket Number:	97-AFC-01C
Project Title:	High Desert Power Plant (COMPLIANCE)
TN #:	203108
Document Title:	Order Approving Petition to Amend
Description:	N/A
Filer:	Joe Douglas
Organization:	CEC/ Douglas/ Hochschild/ McAllister/ Scott/ H. Kallemeyn
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STATE OF CALIFORNIA

Energy Resources Conservation
And Development Commission

In the Matter of:	)	Docket No. 97-AFC-01C
	)	
	)	Order No. 14-0910-2
The Application for	)	
For the High Desert Power Project	)	**ORDER APPROVING**
[HDPP]	)	**PETITION TO AMEND**
	)	

ENERGY COMMISSION FINDINGS

Based on staff's analysis, the Energy Commission concludes that the proposed changes to Condition of Certification **SOIL&WATER-1** will not result in any significant impact to public health and safety, or the environment. The Energy Commission public review process has been certified as a CEQA-equivalent, and therefore satisfies CEQA requirements. The Energy Commission finds that:

- The petition meets all the filing criteria of Section 1769(a) concerning post-certification project modifications;
- The modification will not change the findings in the Energy Commission's Final Decision pursuant to Section 1755;
- The project will remain in compliance with all applicable laws, ordinances, regulations, and standards, subject to the provisions of Public Resources Code section 25525;
- The change will be beneficial to the public;
- The change is based on information that was not available to the parties prior to Commission certification.

CONCLUSION AND ORDER

The California Energy Commission hereby adopts the following changes to the High Desert Power Project Decision. New language to Condition of Certification **SOIL&WATER-1** is shown as underlined, and deleted language is shown in ~~strikeout~~. The proposed changes to SOIL&WATER-7 regarding the installation of a brine wastewater pipeline is not approved.

CONDITION OF CERTIFICATION

SOIL&WATER-1

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 SWP water is available to be purchased from the city of Victorville, or recycled waste water is available, the project owner shall use direct delivery of such water for project operation~~ 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 in water year 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) of MRB Adjudicated Water Rights and the acquisition, use and transfer of MRB Adjudicated Water Rights shall be in compliance with the Judgment and Rules and Regulations of the MWA Watermaster. 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. ~~Whenever water is not available to be purchased from the city of Victorville, the project owner may use SWP water banked in 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.~~The project owner shall report all use of water from all sources to the Energy Commission CPM on a monthly basis in acre-feet.

c. ~~If there is no SWP water available to be purchased from the MWA city of Victorville, and there is no reclaimed water available and there is no banked water available to the project, as determined pursuant to SOIL&WATER-5, no groundwater shall be pumped, and the project shall not operate. 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.~~ 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, 201~~3~~4. 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

IT IS SO ORDERED.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of an Order duly and regularly adopted at a meeting of the California Energy Commission held on September 10, 2014.

AYE: Douglas, Hochschild, McAllister, Scott
NAY:
ABSENT: Weisenmiller
ABSTAIN:

H. Kallemeyn

Harriet Kallemeyn,
Secretariat