

DOCKETED

Docket Number:	97-AFC-01C
Project Title:	High Desert Power Plant
TN #:	212397
Document Title:	High Desert Power Project, LLC Summary of Relief Requested
Description:	N/A
Filer:	Eric Janssen
Organization:	Ellison, Schneider & Harris L.L.P.
Submitter Role:	Applicant Representative
Submission Date:	7/22/2016 4:30:46 PM
Docketed Date:	7/22/2016

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

Application for Certification for the
HIGH DESERT POWER PROJECT

Docket No. 97-AFC-1C

**HIGH DESERT POWER PROJECT, LLC
SUMMARY OF RELIEF REQUESTED**

INTRODUCTION

Pursuant to the Committee’s *Notice of August 11, 2016 Committee Status Conference and Related Orders*¹, High Desert Power Project, LLC (“HDPP”) provides the following *Summary of Relief Requested* related to the High Desert Power Project (the “Facility”).

While HDPP’s objectives for permanent relief in its October 2015 Petition for Modification² have not changed, the extensive discussions among HDPP, California Energy Commission (“CEC”) Staff, and the California Department of Fish & Wildlife (“CDFW”) have led to a common agreement and compromise on many issues reflected in the All-Party Stipulation³ for interim relief. The parties’ agreement that HDPP should have the permanent authority to store State Water Project Water in the groundwater bank via percolation is the only relief not requested in the Petition for Modification. If the authority to percolate water is made permanent, HDPP would also agree to make permanent the All-Party Stipulation’s limitation on its use of MRB Adjudicated Water as an emergency backup supply. HDPP believes that the terms proposed in All-Party Stipulation should serve as the basis for permanent relief. As explained further below, HDPP has proposed modifications to the Conditions of Certification for the Facility necessary to incorporate the terms of the All-Party Stipulation, in Attachment A to this *Summary of Relief Requested*.

In short, HDPP requests adoption of the proposed modifications to the Facility’s Conditions of Certification set forth in Attachment A to this *Summary of Relief Requested*.

I. PERCOLATION OF SWP WATER, WHICH WAS GRANTED AS INTERIM RELIEF, SHOULD BE MADE PERMANENT.

HDPP seeks only one form of relief not set forth in the October 2015 Petition: the permanent right to percolate SWP Water. The permanent right to percolation is consistent with the “Interim Relief” granted by the Committee and also was proposed as Interim Relief in the

¹ TN # 212263.

² *High Desert Power Project (97-AFC-1C) Petition for Modification to Drought-Proof the High Desert Power Project*, hereinafter, the “Petition,” TN # 206468.

³ *Stipulation between High Desert Power Project LLC, California Energy Commission Staff, and California Department of Fish and Wildlife In Support of Proposed Amendments to Soil&Water Conditions of Certification to Provide for Interim Drought Relief*, dated June 1, 2016, hereinafter the “All-Party Stipulation,” TN # 211710.

All-Party Stipulation presented to the Committee by HDPP, the CEC Staff, and the CDFW.⁴ As discussed herein, the All-Party Stipulation, modified to be permanent, provides the framework for a Final Decision in this Amendment proceeding.

Percolation will allow HDPP to build and maintain the groundwater bank for the Facility. The groundwater bank in turn provides the highest quality blending water source for HDPP's preferred – and lowest cost – water supply, Recycled Water. It is clear from their public statements that all Parties to this proceeding believe that the percolation of groundwater will benefit the Facility, the Mojave River Basin, the environment, and the Watermaster's ability to manage the groundwater basin. Accordingly, the Final Decision in this Amendment Proceeding should grant HDPP the permanent right to percolate SWP Water, consistent with the requirements of the Watermaster.

II. HDPP REQUESTS THE AUTHORITY TO BLEND THE AVAILABLE WATER SUPPLIES TO ALLOW FOR SAFE AND RELIABLE OPERATION OF THE FACILITY 24 HOURS A DAY, SEVEN DAYS A WEEK.

While the record in this proceeding is considerable for an Amendment proceeding, the fundamental objectives of the Petition as filed by HDPP in November of 2014 remain the same. No single water source is available in sufficient quantities and of sufficient qualities to have any single source provide for the safe and reliable operation of the Facility. Accordingly, HDPP continues to seek the authority to blend available water supplies to ensure the safe and reliable operation of the facility on a 24 hours a day, seven days a week basis.

The HDPP Facility was originally prohibited from using Recycled Water. Not surprisingly, the Facility as certified was not designed to use Recycled Water; however, HDPP is committed to increasing its utilization of Recycled Water.⁵ Accordingly, the Facility must have more than one water source to ensure adequate water supply quality and quantity through blending from available water sources – “supply diversity.”

As is well documented in this Amendment proceeding, supply diversity requires access to the four water supplies currently available to HDPP. It is highly unlikely that the Facility will operate at baseload 24 hours a day, seven days a week. Nevertheless, in order to participate in California's markets and in order to avoid the California Independent System Operator (“CAISO”) characterizing the Facility as a “limited use resource,” the Facility requires supply

⁴ See, All-Party Stipulation, TN # 211710.

⁵ CDFW and CEC Staff positions on Recycled Water use are in direct conflict. The Staff's Substitute Proposal requiring use of 100% Recycled Water is described in the *Staff Analysis/ Opening Testimony of Proposed Petition to drought proof the project and allow the use of alternative water supplies*, TN# 210083; and *Energy Commission Staff's Rebuttal Testimony*, TN# 210303. CDFW objects to the Staff's Substitute Proposal and recommends capping HDPP's use of Recycled Water from the VVWRA Shay Road plant due to concerns about reduced discharge of Recycled Water to the Mojave River. *Opening Testimony*, TN# 210565; *Prehearing Conference Statement*, TN# 210647. HDPP is amenable to a reasonable cap or conditions on its use of Recycled Water from the VVWRA plant and believes that the parties can develop appropriate conditions without completing an elaborate water balance study. The long-term, regional water planning processes should continue to take place outside this Amendment proceeding.

diversity. To enable safe and reliable operation under all conceivable water supply, operating, and weather scenarios, HDPP needs supply diversity to blend its available supplies.

1) **SWP Water:** The original certification required the exclusive use of SWP Water and Banked SWP Water and expressly prohibited use of Recycled Water. *HDPP seeks no changes to its use of its SWP Water supply.*

2) **Banked SWP Water:** The original certification required HDPP to bank SWP Water using injection. HDPP now seeks authority to percolate this water supply. Both injected and percolated SWP Water will become part of the Facility's groundwater bank. While seeking an additional and more effective means of banking SWP Water via percolation, *HDPP seeks no changes to its use of its Banked SWP Water supply.*

3) **Recycled Water:** Nearly a decade after the original Certification, HDPP proactively requested that the Commission lift the prohibition on the use of Recycled Water. This request was predicated on significant changed circumstances, including, but not limited to: (a) California Supreme Court substantially affirmed the Judgment of the Riverside County Superior Court adjudicating the water rights in the Mojave Basin and appointing the Mojave Water Agency ("MWA") to act as the Watermaster to implement the Adjudication; (b) Victor Valley Wastewater Reclamation Authority ("VWVRA") and CDFW entered into an MOU wherein VWVRA agreed to continue to discharge minimum quantities of recycled water to the Mojave River to protect instream resources, thus freeing surplus Recycled Water for other uses in the region; and (c) starting in 2007, water deliveries from the State Water Project were reduced as a result of court decisions regarding the Delta smelt in the Sacramento-San Joaquin Delta ("Delta Smelt Biological Opinion"). The SWP Water reductions have undermined the Commission's and HDPP's mutual understanding and belief that SWP Water alone would be a dependable supply.⁶

In 2009, HDPP was granted the right to use up to 1,000 Acre Feet per Year ("AFY") of Recycled Water, to be blended with the first two supplies. Recycled Water of sufficient quantity and quality is not available at all times from the two sources, VWVRA and the City of Victorville's Industrial Wastewater Treatment Plant ("IWTP"). In the Petition, and in every filing since, HDPP has committed to use Recycled 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. *HDPP seeks no changes to its use of its Recycled Water Supply, and remains committed to using a maximum amount of Recycled Water that is available, in sufficient quality and quantity, subject to the limits of the plant's existing equipment.*

⁶ For further discussion of the changed circumstances over the past 16 years, see the Executive Summary of the Petition.

III. HDPP PROPOSES TO MAKE PERMANENT THE INTERIM RELIEF'S LIMITATION THAT MRB ADJUDICATED WATER SERVES ONLY AS AN EMERGENCY, BACKUP SUPPLY

HDPP's fourth water supply is MRB Adjudicated Water. This supply is groundwater managed by the Watermaster for the Mojave Basin. HDPP petitioned to use 3,090 acre-feet of MRB Adjudicated Water per year measured on a five-year rolling average, a quantity that represented a worst case demand due to complete outage of SWP Water.

In the All-Party Stipulation, HDPP, CEC Staff and DFW agreed HDPP may use up to 2,000 AFY of MRB Adjudicated Water if the HDPP groundwater bank fell below 4,000 AF in 2016/2017 and below 5,000 AF in 2017/2018. The All Party Stipulation, and in particular HDPP's willingness to use MRB Adjudicated Water only as an emergency supply, was greatly influenced by the parties expectation that new authority to percolate SWP Water would allow HDPP to more effectively bank SWP Water when it is available in surplus years like 2016.

HDPP proposes to make permanent the Interim Relief's limitation on its access to MRB Adjudicated Water as an emergency, backup supply tied to the water in the Facility's groundwater bank on two conditions. First, HDPP proposes that the Facility would use MRB Adjudicated Water as an emergency backup supply for blending, if, and only if, HDPP's groundwater bank falls below 4,000 AF. The quantity used would be limited to the amount required to blend with available Recycled Water and SWP Water to ensure the safe and reliable operation of the Facility. Second, to respect the authority of and ensure consistency with the Mojave Judgment⁷, the amount of percolated water available for withdrawal by HDPP must be determined by the Watermaster or MWA, and not using the Commission's dissipation model that was developed for a different purpose and for different facilities. HDPP seeks the permanent ability to percolate SWP Water and have that groundwater accounted for by MWA/Watermaster -- like any other water user in the Basin. The assumption that the Commission would defer to MWA's and Watermaster's legal authority and expertise in water banking and accounting enabled HDPP to agree to the modified Loading Sequence in the All-Party Stipulation. Assuming that HDPP is treated like all other similarly situated parties in the Basin, HDPP would use MRB Adjudicated Water only as an emergency, backup supply.

IV. THE ALL-PARTY STIPULATION PROVIDES A SIMPLE FRAMEWORK FOR CONVERTING "INTERIM RELIEF" INTO A FINAL DECISION ON THIS AMENDMENT.

To effectuate HDPP's commitment to use as much Recycled Water as feasible, HDPP commits to maximize Recycled Water use in a way that is objective and verifiable by operating the Facility under a priority-of-use system (i.e., the "Loading Sequence") to select water for operational use on an as-needed basis. The original Loading Sequence was set forth in the Petition⁸ and modified in the All Party Stipulation.⁹ The modified Loading Sequence is

⁷ *City of Barstow v. Mojave Water Agency* (2000) 23 Cal. 4th 1224.

⁸ Petition, pp. 16-19, TN # 206468

⁹ All-Party Stipulation, pp. 1-2, TN # 211710

acceptable to HDPP, assuming the Committee places HDPP on equal footing with every other user in this adjudicated Basin by accepting the Watermaster's banking and accounting for percolated SWP Water.

The only changes to the All-Party Stipulation necessary to convert Interim Relief to a Final Decision in this Amendment proceeding would be minor modifications to portions of Condition of Certification SOIL&WATER-1. Specifically, HDPP's proposed modifications provide access to MRB Adjudicated Water, if and only if, the Facility's groundwater bank has less than 4,000 AF available, approximately one year's supply under reasonable operating assumptions. This ensures that HDPP will use no MRB Adjudicated Water so long as SWP Water is available to build the bank. Moreover, with the permanent authority to percolate SWP Water, the chances of the Facility's groundwater bank dropping below 4,000 AF are considerably less than the status quo where HDPP is forced to rely solely on injection.

HDPP's proposed modifications to effectuate this proposed Final Decision for this proceeding are attached hereto as Attachment A. With the exception of the removal of the dates in paragraphs 3 and 4 of SOIL&WATER-1 and deletion of SOIL&WATER-22, all other amendments in Attachment A were proposed in the All-Party Stipulation.

CONCLUSION

While the Facility must have supply diversity, the Petition clearly articulated HDPP's commitment to use as much Recycled Water as feasible:

HDPP restates and affirms its commitment to use as much Recycled Water as feasible. As a merchant-based power plant, HDPP's commitment to use as much Recycled Water at the Facility as feasible is also aligned with its desire to minimize variable expense and use the least cost water supply while satisfying operating conditions in the Facility.¹⁰

With respect to supply diversity, HDPP's requested relief has not changed throughout this protracted proceeding.

The only substantive change from the Petition is the agreement, apparently shared by all Parties, that permanent authority to percolate SWP Water will benefit the Facility, the Mojave River and groundwater basin, the environment, and the Watermaster's ability to manage the groundwater basin. As such, HDPP requested the ability to build its groundwater bank through percolation. In this filing, HDPP has proffered to make permanent the Interim Relief's limitation on its access to MRB Adjudicated Water as an emergency, backup supply if, and only if, HDPP's groundwater bank falls below 4,000 AF.

¹⁰ HDPP Petition, p. 6.

The All-Party Stipulation provides a simple framework for converting Interim Relief into a Final Decision in the Amendment proceeding. Therefore, HDPP requests adoption of the proposed modifications to the Facility's Conditions of Certification set forth in Attachment A.

Respectfully submitted,



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ATTACHMENT A

**HDPP'S PROPOSED MODIFICATIONS
TO SOIL & WATER CONDITIONS OF CERTIFICATION
(APPROVED AS OF JUNE 14, 2016)
TO CONVERT THE INTERIM RELIEF TO A FINAL DECISION
IN THIS AMENDMENT PROCEEDING**

**HDPP'S PROPOSED MODIFICATIONS
TO CONVERT THE INTERIM RELIEF TO A FINAL DECISION
IN THIS AMENDMENT PROCEEDING**

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 Water Rights") as administered by the Watermaster (the "Judgment").

a. 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 (a) directly available SWP water or (b) banked SWP Water from the four HDPP wells as long as the amount of banked SWP water used does not exceed the amount of water determined to be available to the project pursuant to SOIL&WATER-5.

3. If there is insufficient directly available SWP Water of quality or quantity sufficient to maintain cooling tower functions for reliable operation of the facility and the amount of banked SWP water determined to be available to the project pursuant to SOIL&WATER-5 is less than 4,000 acre-feet (AF) ~~in water year 2015/2016 (ending September 30, 2016) and less than 5,000 AF in water year 2016/2017 (ending September 30, 2017)~~, 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.

4. The Project Owner shall consume no more than 2,000 AF of MRB Water Rights per water year (October 1 through September 30 of the following calendar year), ~~in water year 2015/2016 (October 1, 2015 – September 30, 2016) and no more than 2,000 AF in water year 2016/2017 (October 1, 2016 – September 30, 2017)~~. The acquisition, use and transfer of MRB Water Rights shall comply with the Judgment and Rules and Regulations of the 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. 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-foot usage by source, as well as total.

c. 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.

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 Water Rights. The project owner shall report all use of water in acre feet to the Energy Commission CPM on a monthly basis for each supply: Recycled Water, SWP Water, Banked SWP Water, and MRB Water Rights. The monthly report shall contain a brief statement on (1) the water quantity and water quality of the supplies available in the prior month and (2) a summary of efforts to use available supplies to provide cooling water for operations, build the HDPP groundwater bank, and/or preserve the HDPP water.

SOIL&WATER-4 ~~Injection~~ Banking Schedule

- a. The project owner shall inject one thousand (1000) acre-feet of SWP water within twelve (12) months of the commencement of the projects commercial operation.
- b. By the end of the four years and two months from the start of commercial operation, the project owner shall install and begin operation of a pre-injection ultraviolet (UV) disinfection system.
- c. By the end of the fifth year of commercial operation, the project shall submit a report to the CPM demonstrating that HDPP has maintained an average THM concentration level consistent with the WDR permit requirements.
- d. After the end of the fifth year of commercial operation, the project owner shall inject SWP water when it is available in excess of volumes needed to operate the project, up to a cumulative quantity of 13,000 acre-feet, subject to equipment capabilities and permit requirements. The amount of **injected SWP** water available to HDPP for extraction is equal to Injection minus Extraction minus Dissipation minus 1000 acre-feet, as defined in **SOIL&WATER-6**.

e. As an additional method to build the project's groundwater bank, the project owner will work with MWA, Mojave Basin Area Watermaster, the City of Victorville or the Victorville Water District to seek a feasible agreement or modify existing agreements to allow the project to bank SWP water in the Mojave River Basin through percolation using existing MWA facilities for the sole use of HDPP at HDPP. If agreement is reached, the project shall be permitted to bank SWP water through percolation in accordance with the terms of such agreement(s).

Verification: The project owner shall submit an installation and operation report describing the pre-injection ultraviolet disinfection system (UV) by the end of the fourth year of commercial operation. Forecasted estimates of SWP water to be injected shall be included in the quarterly Aquifer and Storage Recovery Well Report. The project owner shall submit a UV performance report by the fifth year of commercial operation. For other related items, see the verification to **Condition 5**. See also the verification to **Condition 12**. **If the project owner, MWA, Mojave Basin Area Watermaster, City of Victorville or the Victorville Water District are able to reach an agreement or modify existing agreements regarding use of existing MWA facilities for the percolation and banking of SWP water that is feasible for the facility, the project owner shall provide a copy of such agreement or modified agreements to the CPM.**

SOIL&WATER-5 Calculation of Water Bank Balance

- a. The amount of banked groundwater **as injected SWP water** available to the project shall be calculated by the CEC staff using the HDPP model, FEMFLOW3D. **The amount of banked groundwater as percolated SWP water by MWA available to the project shall be calculated by MWA or the Mojave Basin Area Watermaster.** The amount of banked groundwater available shall be updated on a calendar

year basis by the CEC staff, taking into account the amount of groundwater pumped by the project during the preceding year and the amount of water banked by the project during the preceding year.

SOIL&WATER-6 Banked Water Available for Project Use

a. The amount of banked groundwater available to the project during the first twelve (12) months of commercial operation is the amount of SWP water injected by the project owner into the High Desert Power Project (project) wells, minus the amount of groundwater pumped by the project owner, minus the amount of dissipated groundwater, and minus any amount described in SOIL&WATER-5(b).

b. The amount of banked groundwater available to the project after the first twelve (12) months of commercial operation is: (1) the amount of SWP water percolated by MWA and (2) the amount of SWP water injected by the project owner into the project wells, minus the amount of groundwater pumped by the project owner, minus the amount of dissipated groundwater, minus one thousand (1,000) acre feet, and minus any amount described in SOIL&WATER-5(b).

SOIL&WATER-12

The project owner shall prepare and submit to the CEC CPM and, if applicable, to the Lahontan RWQCB for review and approval, a water treatment and monitoring plan that specifies the type and characteristics of the treatment processes and identify any waste streams and their disposal methods. The plan shall provide water quality values for all constituents monitored under requirements specified under California Code of Regulations, Title 22 Drinking Water Requirements, from all production wells within two (2) miles of the injection wellfield for the last five (5) years.

The plan shall also provide SWP water quality sampling results from Rock Springs, Silverwood Lake, or other portions of the East Branch of the California Aqueduct in this area for the last five (5) years. Also identified in the plan will be the proposed treatment level for each constituent based upon a statistical analysis of the collected water information. The statistical approach used for water quality analysis shall be approved prior to report submittal by the CEC CPM and, if applicable, the RWQCB. Treatment of SWP water prior to injection shall be to levels approaching background water quality levels of the receiving aquifer or shall meet drinking water standards, whichever is more protective. The plan will also identify contingency measures to be implemented in case of treatment plant upset.

The plan submitted for approval shall include the proposed monitoring and reporting requirements identified in the Report of Waste Discharge (Bookman-Edmonston 1998d) with any modifications required by the RWQCB.

Verification: Ninety (90) days prior to **banking injection** of SWP water within the Regional Aquifer, the project owner shall submit to the Lahontan RWQCB and the CEC CPM a proposed statistical approach to analyzing water quality monitoring data and determining water treatment levels. The project owner shall submit the SWP water treatment and monitoring plan to the CEC CPM and, if appropriate, to the Lahontan RWQCB for review and approval. The CEC CPM's review shall be conducted in consultation with the MWA, the VVWD, and the City of Victorville. The plan submitted for review and approval shall reflect any requirements imposed by the RWQCB through a Waste Discharge Requirement.

SOIL&WATER-13

The project owner shall implement the approved water treatment and monitoring plan. All **banked injected** SWP water shall be treated to meet local groundwater conditions as identified in Condition SOIL&WATER-12. Treatment levels may be revised by the CEC and, if applicable, by the RWQCB,

based upon changes in local groundwater quality identified in the monitoring program not attributable to the groundwater banking program. Monitoring results shall be submitted annually to the CEC CPM and, if applicable, to the RWQCB.

~~SOIL & WATER 22~~

~~Until September 30, 2018, and notwithstanding the existing Soil & Water Conditions of Certification, the project owner may percolate SWP water consistent with an agreement with MWA (or modification to any existing agreement regarding SWP water banking), provided that the amount of percolated water that will be available to withdraw for power plant cooling shall be calculated by MWA or the Mojave Basin Area Watermaster.~~

~~Verification: If the project owner and MWA are able to reach an agreement or modify existing agreements regarding use of existing MWA facilities for the percolation of SWP water, the project owner shall provide a copy of such agreement or modified agreements, and any subsequent modifications to the CPM, within 10 days of their finalization.~~