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BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
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PETITION TO AMEND THE:
HIGH DESERT POWER PROJECT

Docket No. 97-AFC-01C

STAFF'S COMMENTS ON RECOMMENDED DECISION

Introduction

On March 20, 2018, the California Energy Commission Committee (Committee) assigned to conduct proceedings on the Project Owner's Petition for Modification (Petition) to Drought-Proof the High Desert Power Plant (HDPP) filed "Notice of Availability of the Committee Recommended Decision and Notice of the Energy Commission Hearing" (Notice). The Notice set the deadline for comments as April 4, 2018.

Background

On October 30, 2015, the current proceeding was initiated by Project Owner's Petition. An order of interim relief was granted by the Energy Commission in June 2016 to ensure HDPP's water supply during the continuation of the proceeding. On September 1, 2017, the parties in the proceeding, Energy Commission Staff, Project Owner, and California Department of Fish and Wildlife, filed a Stipulated Agreement to all Soil & Water conditions of certification, except for Soil & Water 6(b), which was subsequently briefed.

Discussion

In general, Staff is not opposed to the language changes in the Recommended Decision; however, in two of the conditions (**Soil&Water-4**, and **Soil&Water-6**), changes or omissions were made that Staff feels were essential to the agreed-upon conditions.

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Conclusion

Therefore, in **Attachment A** to these comments, Staff is providing a few substantive edits to **Soil&Water-4 and Soil&Water-6,** which serve to return those conditions to the language agreed upon by the parties and minor edits to other conditions of certification.

Date: April 3, 2018

Respectfully submitted,

Kerry A. Willis

KERRY A. WILLIS
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EXHIBIT "A"
HIGH DESERT POWER PLANT
CONDITIONS OF CERTIFCATION FOR SOIL AND WATER RESOURCES[1]

SOIL&WATER-1 Water Supplies

A. Permissible Sources of Water and Reporting Requirements

1. For project operation (except for domestic purposes), Project Owner shall only use State Water Project (SWP) water obtained by the Project Owner consistent with the provisions of the Mojave Water Agency's (MWA) Ordinance 9 or appropriately treated recycled waste water. SWP water used may be either directly available SWP water or banked SWP water that has been either percolated or injected ("Banked SWP Water") that is available for extraction in accordance with **SOIL&WATER-6**.

2. 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.

3. 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 Compliance Project Manager (CPM) in acre-feet (AF). The monthly report shall include AF usage by source, as well as total. Specific recycled water events of unavailability or quality issues will also be included with daily detail.

4. 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, subject to the restrictions set forth below.

B. Limitations on Water Usage

1. Project Owner shall use recycled waste water, to the extent it is available and its quality is sufficient to maintain cooling tower functions and reliable operation of the facility, provided that the use of recycled waste water:

   a. Shall not exceed 2,500 acre-feet per year (AFY) in any calendar year (the "Maximum Annual Recycled Water Use");

   b. Shall not exceed 2,000 AFY calculated on 3-year

[1] These Conditions of Certification shall be the exclusive rights and obligations of the Project Owner.

calendar year rolling average (the "Average Annual Recycled Water Use"); and

c. Shall meet a minimum of 20 percent of annual cooling water needs. Calculation of cooling water needs shall be done on an annual basis. The "Average Annual Recycled Water Blend Percentage" shall be calculated on a three-year rolling basis and shall exclude periods recycled water is not available or is not of sufficient quality.

2. The Maximum Annual Recycled Water Use, the Average Annual Recycled Water Use and Average Annual Recycled Water Blend Percentage shall be calculated annually and shall be based on the metered data reported pursuant to Paragraph A, above. The Project Owner shall exclude from the calculations (a) water used when recycled water is unavailable when the project requests recycled water; and (b) water used when recycled water of sufficient quality is unavailable. Sufficiency of water quality shall be determined based upon the water quality specification in the Project Owner's agreement with its retail water supplier at the time the recycled water was requested. Recycled Water unavailability shall be logged by the facility's operators and reported monthly to the CPM.

C. Meet and Confer

1. In the event Project Owner fails to use the minimum Average Annual Recycled Water Blend Percentage or exceeds either the Maximum Annual Recycled Water Use or the Average Annual Recycled Water Use, the Project Owner, the CPM, and the California Department of Fish and Wildlife (CDFW) shall meet, as soon as practicable, to determine whether the failure to use the minimum Average Annual Recycled Water Blend Percentage or exceedance of use of either the Maximum Annual Recycled Water Use or the Average Annual Recycled Water Use was the result of an extensive, unavoidable disruption of water supply due to a natural disaster, an emergency, or other unforeseen circumstance outside the exclusive control of the Project Owner and to determine how future water use will satisfy the terms of **SOIL&WATER-1**.

2. In the event that the Project Owner, CPM, and CDFW determine that the failure to use the minimum Average Annual Recycled Water Blend Percentage or exceedance of use of either the Maximum Annual Recycled Water Use or the Average Annual Recycled Water Use was within the control of the Project Owner, the penalties set forth in

subparagraph (D), below, shall apply.

3. In the event that the Project Owner, CPM, and CDFW cannot determine that the failure to use the minimum Average Annual Recycled Water Blend Percentage or exceedance of use of either the Maximum Annual Recycled Water Use or the Average Annual Recycled Water Use was within the control of the Project Owner, the normal regulatory process to resolve the issue may be used, including, but not limited to, an enforcement action.

D. Penalties

In the event that the Project Owner, CPM, and CDFW determine that the failure to use the minimum Average Annual Recycled Water Blend Percentage or exceedance of use of either the Maximum Annual Recycled Water Use or the Average Annual Recycled Water Use was within the control of the Project Owner, Project Owner shall make a financial payment to CDFW by March 1 for the previous calendar year's water use for deposit in a High Desert Power Project Mitigation and Protection Expendable Funds Account to be established by CDFW pursuant to Fish and Game Code section 13014(b)(1)(E) as follows: (1) $500 per acre-feet (AF) of Recycled Water used in excess of 2,500 AFY in any calendar year; (2) $500 per AF of Recycled Water used in excess of 2,000 AFY calculated on a three year rolling average; or (3) $500 per AF for the difference in AF between 20 percent of total HDPP project industrial annual water use and total Recycled Water used in the calendar year. The amounts listed herein are in 2017 dollars and will be adjusted for inflation using the Consumer Price Index.

VERIFICATION: The Project Owner shall report all use of water and recycled water unavailability in acre feet to the CPM and CDFW on a monthly basis for each supply: Recycled Water, SWP Water, and Banked SWP Water. The monthly report shall contain a brief statement on the water quantity and water quality of the supplies available in the prior month.

SOIL&WATER-2 Storage Agreement between Mojave Water Agency and Victorville Water District

The Project Owner shall provide a copy of the storage agreement between the Mojave Basin Area Watermaster (Mojave Water Agency) and VWD

prior to the initiation of any groundwater banking, and within fifteen (15) days of any amendment or renewal of the storage agreement.

VERIFICATION: The Project Owner shall submit to the CPM and CDFW a copy of the approved storage agreement from the Mojave Basin Area Watermaster within fifteen (15) days of receipt of the agreement.

In the event that the storage agreement from the Mojave Basin Watermaster expires or is otherwise not in effect, the Project Owner shall notify the CPM immediately. The Project Owner, CPM, and CDFW shall meet and confer promptly to determine what additional steps may be taken to determine how future water use will satisfy the terms of **SOIL&WATER-1**.

SOIL&WATER-3 [Deleted in 2018.]

SOIL&WATER-4. Banking Schedule.

A. The Project Owner may 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 Losses minus 1000 acre-feet, as defined in **SOIL&WATER-6**.

B. The Project Owner may bank SWP water in the Mojave Groundwater Basin through percolation using existing Mojave Water Agency (MWA) facilities **for the sole use of the HDPP facility**, subject to the terms of any necessary agreement(s) with MWA, the Mojave Basin Area Watermaster, the City of Victorville or the Victorville Water District.

VERIFICATION: Estimates of SWP water to be injected shall be included in the monthly report required under **SOIL & WATER-1**. The Project Owner shall provide to the CPM and to CDFW a copy of any agreement(s) with MWA, Mojave Basin Area Watermaster, City of Victorville, or the Victorville Water District, relating to the percolation and **injection** banking of SWP water. For other related items, see the verification to **SOIL & WATER-5** and **SOIL & WATER-12**.

SOIL&WATER-5 Calculation of Water Bank Balance

A. The amount of injected, banked groundwater available to the project shall be reported to the Mojave Basin Area Watermaster pursuant to existing and future storage agreements for HDPP between Watermaster and Victorville Water District (VWD).

B. When calculating the amount of injected, banked groundwater available to the project, MWA or the Mojave Basin Area Watermaster may subtract any amount of water that is produced by VWD from the project wells for

purposes other than use by the project that exceeds the baseline, as defined in **SOIL&WATER-17**.

C. The amount of percolated, banked groundwater available to the project will be calculated by MWA or the Mojave Basin Area Watermaster in accordance with the storage agreement between Watermaster and VWD.

VERIFICATION: The Project Owner shall submit to the CPM and to CDFW in writing, on a quarterly basis, a monthly accounting of all groundwater pumped, all SWP water treated and injected, and all SWP banked through percolation by MWA in the preceding quarter. Within thirty (30) days of receipt of the approved annual storage agreement, pursuant to **SOIL&WATER-2**, the Project Owner shall submit to the CPM and to the CDFW an annual written estimate of the anticipated amount of SWP water that will be banked and the anticipated amount of groundwater that will be pumped in the coming year.

SOIL&WATER-6 Banked Water Available for Project Use

A. 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 in accordance with **SOIL&WATER-4(b)**; and (2) the amount of SWP water injected in accordance with **SOIL&WATER-4(a)**, minus the amount of groundwater pumped by the Project Owner, minus the amount of ~~dissipated~~ groundwater **losses**, minus one thousand (1,000) acre feet, and minus any amount described in **SOIL&WATER-5(b)**.

B. During the three (3) years prior to project closure, the Project Owner may withdraw the balance of banked groundwater determined to be available to the project, except for one thousand (1,000) acre-feet, pursuant to **SOIL&WATER-5**. The Project Owner is not required to replace this final withdrawal of groundwater. However, during the three (3) years prior to project closure, at no time may the balance of banked groundwater decline below one thousand (1,000) acre-feet. Furthermore, there must be a remaining balance of one thousand (1,000) acre-feet banked in the groundwater system at closure, as determined to be available to the project pursuant to **SOIL&WATER-5**. This balance of one thousand (1,000) acre-feet must remain in the groundwater system, and the Project Owner, by contract or other conveyance, may not transfer the rights to this balance.

C. [Deleted in 2018.]

D. [Deleted in 2018.]

E. [Deleted in 2018.]

VERIFICATION: The Project Owner shall use the same verification as for **SOIL&WATER-5;** however, in addition, any facility closure plan submitted during that last three (3) years of commercial operation shall address the disposition of any

remaining water available to the project, as well as the disposition of the water treatment facility.

SOIL&WATER-7 Ownership and Control of Water Treatment Facilities

The Project Owner shall retain ownership and operational control of the water treatment facility.

VERIFICATION: Should the Project Owner choose to transfer ownership or operational control of the water treatment facility, it must apply for an amendment to the Energy Commission Decision, and include an evaluation of any environmental effects associated with the transfer of ownership or operational control to another entity.

SOIL&WATER-8 [Deleted in 2018.]

SOIL&WATER-9 [Deleted in 2018.]

SOIL&WATER-10 [Deleted in 2018.]

SOIL&WATER-11 Submission of Waste Discharge Requirement

The Project Owner shall submit an approved Waste Discharge Requirement prior to the start of any groundwater injection banking unless the Lahontan Regional Water Quality Control Board (RWQCB) decides to waive the need to issue a waste discharge requirement or waive the need for the Project Owner to file a Report of Waste Discharge.

VERIFICATION: If the RWQCB decides to waive the need to file a Report of Waste Discharge or the need for a waste discharge requirement, the Project Owner shall submit a copy of the letter from the RWQCB to the CPM. If a waste discharge requirement is required by the RWQCB, the Project Owner shall provide a copy of the approved permit to the CPM.

SOIL&WATER-12 Water Treatment and Monitoring Plan

The Project Owner shall prepare and submit to the 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 obtained from the Department of Water Resources for water at 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 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 injection of SWP water within the Regional Aquifer, the Project Owner shall submit to the Lahontan RWQCB and the 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 CPM and, if appropriate, to the Lahontan RWQCB for review and approval. The CPM's review shall be conducted in consultation with the MWA, the VWD, 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 Water Treatment and Monitoring Plan

The Project Owner shall implement the approved water treatment and monitoring plan. All 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 CPM 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 CPM and, if applicable, to the RWQCB.

VERIFICATION: The Project Owner shall annually submit monitoring results as specified in the approved plan to the CPM. The Project Owner shall identify any proposed changes to SWP water treatment levels for review and approval by the CPM and, if appropriate, the Lahontan RWQCB. The Project Owner shall notify the RWQCB, the VWD, and the CPM of the injection of any inadequately treated SWP water into the aquifer due to an upset in the treatment process or for other reasons. Monitoring results shall be submitted to the CPM.

SOIL&WATER-14 Access Provided to Air Force

The Project Owner shall provide access to the United States Air Force for all efforts to characterize and remediate all soil and groundwater contamination at the power plant site.

VERIFICATION: The Project Owner shall submit, in writing, a copy within two (2) weeks of receipt of any request from the Air Force for site access to characterize or remediate contaminated soil and/or groundwater to the CPM.

SOIL&WATER-15 [Deleted in 2018.]

SOIL&WATER-16 [Deleted in 2018.]

SOIL&WATER-17 Aquifer Storage and Recovery Agreement

The Project Owner shall enter into an Aquifer Storage and Recovery Agreement with the Victor Valley Water District or its successor Victorville Water District (VWD). This agreement shall contain the following conditions:

1. It shall prohibit VWD from producing or allowing others to produce water from project wells, except that VWD may produce water from project wells: (a) for use by the HDPP project pursuant to **SOIL&WATER-1**; and (b) for purposes other than use by the HDPP project pursuant to **SOIL&WATER-1** provided that such production, in combination with production from the VWD wells identified in "c" below does not exceed the amount identified as "the baseline", as defined in a below.

    a. The contract shall define the baseline as the average aggregated annual production of the wells identified in "c" during the immediately preceding five (5) years. The contract shall state that any water produced by VWD pursuant to ~~(ii)~~ **1(b)** above shall be included in subsequent calculations of the baseline only if that production does not exceed the baseline for the calendar year in which the production occurs, as required by this Condition.

    b. The contract shall require VWD to establish the first baseline using the five (5) calendar years preceding the operation of the project wells, and shall re-calculate the baseline on a calendar year basis by January 15 of each year.

    c. The contract shall state that "wells identified in "c" means VWD wells that are located in a corridor two (2) to two and one half (2½) miles wide adjacent to and west of the river's western bank including all wells within the following land sections:

- Within Township 6 North, Range 4 West, sections 31, 32, 33, and 34.
- Within Township 5 North, Range 4 West, sections 4, 5, the east 1/2 of 8, 9, 10, 15, 16, the east 1/2 of 21, 22, 23, 25, 26, 27, the east 1/2 of 28, the east 1/2 of 33, 34, 35, and 36.

2) It shall state that the Project Owner shall provide to the CEC CPM and CDFW on a quarterly basis a monthly accounting of: 1) all water pumped from project wells that is supplied to the Project Owner; and 2) water pumped from project wells that is supplied to VWD.

3) It shall state that VWD shall provide to the CPM and CDFW a baseline calculation no later than January 15 of each year.

4) The contract may include terms that require VWD to compensate HDPP for any costs associated with subtractions from the amount of banked groundwater available to HDPP under the terms of **SOIL&WATER-5**.

VERIFICATION: The Project Owner shall provide to the CPM and CDFW a copy of a signed Aquifer Storage and Recovery Agreement with the terms described above prior to commencing construction of the project. Any amendments to this agreement shall be approved by the CPM thirty (30) days prior to the effective date of the amendment.

SOIL&WATER-18 Installation of Flow Meters

The Project Owner shall ensure that flow meters are installed on project wells such that the total amount of water injected and produced on a monthly basis can be determined. In addition, the Project Owner shall ensure that separate flow meters are installed on:

1) that portion of the water delivery system that is dedicated to providing water to the Project Owner; and

2) on that portion of the water delivery system that will be used to provide water to VWD pursuant to **SOIL&WATER-17**.

VERIFICATION: The Project Owner shall provide to the CPM and CDFW on a quarterly basis a monthly accounting of: 1) all groundwater injected into project wells; 2) water pumped from project wells that is supplied to the Project Owner; and 3) water pumped from project wells that is supplied to VWD.

SOIL&WATER-19 [Deleted in 2018.]

SOIL&WATER-20 The Project Owner shall provide the CPM two copies of the executed Recycled Water Purchase Agreement (agreement) with the Victorville Water District (VWD) and/or City of Victorville (City) for the

long-term supply (20-25 years) and delivery of tertiary treated recycled water to the HDPP. The HDPP shall not connect to the City's recycled water pipeline without the final agreement in place. The Project Owner shall comply with the requirements of Title 22 and Title 17 of the California Code of Regulations and section 13523 of the California Water Code.

VERIFICATION: At least 30 days prior to the connection to the City's recycled water pipeline, the Project Owner shall submit two copies of the executed agreement for the long-term supply and delivery of tertiary treated recycled water to the HDPP. The agreement shall specify a maximum delivery rate of 4000 gpm and shall specify all terms and costs for the delivery of recycled water to the HDPP.

At least 30 days prior to connection to the City's recycled water pipeline, the Project Owner shall submit to the CPM a copy of the Engineering Report and Cross Connection inspection and approval report from the California Department of Public Health and all water reuse requirements issued by the Lahontan Regional Water Quality Control Board.

SOIL&WATER-21 Prior to the use of recycled water during the operation of the HDPP, 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 volume of recycled water used by the HDPP. The metering devices shall be operational for the life of the project, and an annual summary of daily water use shall be submitted to the CPM in the annual compliance report.

VERIFICATION: At least 10 days prior to use of recycled water for HDPP operation, the Project Owner shall submit to the CPM evidence that metering devices have been installed and are operational on the recycled water line serving the project. The Project Owner shall provide a report on the servicing, testing, and calibration of the metering devices in the annual compliance report.

SOIL&WATER-22 [Deleted in 2018.]