



United States
Department of Energy

WESTERN AREA
POWER ADMINISTRATION

Desert Southwest
Regional Office

AMENDED AND RESTATED IMPLEMENTATION AGREEMENT

BETWEEN

**UNITED STATES
DEPARTMENT OF ENERGY
WESTERN AREA POWER ADMINISTRATION
Desert Southwest Customer Service Region
Boulder Canyon Project
AGREEMENT NO. 95-PAO-10616**

AND

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
AGREEMENT NO. 5-CU-30-P1128**

AND

**BOULDER CANYON PROJECT
ELECTRIC SERVICE CONTRACTORS**

**AMENDED AND RESTATED
BOULDER CANYON PROJECT
IMPLEMENTATION AGREEMENT**

between

The United States,

acting through

The Western Area Power Administration, Department of Energy

and

The Bureau of Reclamation, Department of the Interior,

and the parties identified in

Attachment 10.IA – Boulder Canyon Project Electric Service Contractors

Table of Contents

<u>Section</u>	<u>Title</u>	<u>Page No.</u>
1.	Parties	1
2.	Explanatory Recitals	1
3.	Agreement Amended and Restated.....	3
4.	Term of Restated Agreement.....	3
5.	Definitions.....	4
6.	Relationship to the Contracts	10
7.	Committees	10
8.	Roles and Responsibilities of the Coordinating Committee, Engineering & Operating Committee, and Technical Review Committee.....	11
9.	Formal Decision-Making Process.....	16
10.	Contingency Planning	23
11.	Future Electric Power Development Related to Hoover Dam Facilities.....	24
12.	Billing and Payment.....	24
13.	Lower Colorado River Multi-Species Conservation Program.....	25
14.	Treasury Payments.....	25
15.	Working Capital.....	26
16.	Transition of Financial Obligations	27
17.	Multi-Project Benefits and Costs	28
18.	Audits	28
19.	Visitor Facilities.....	32
20.	Replacement and Repayable Capital Investments	33
21.	Reimbursement of Working Capital, Repayable Capital Investments, and Reconciling Items for Reallocation of a Contractor's Allocation.....	39
22.	Applicable Laws	40
23.	Restated Agreement	41
24.	Notice	41
25.	Disputes.....	41
26.	Relationship of Parties	41
27.	Federal/Tribal Contractor Consultations and Communications ..	42
28.	Modification and Waiver	42
29.	Effect of Section Headings	42
30.	Resolutions.....	42
31.	Exhibits and Attachments	43
32.	Successor or Assignee.....	43
33.	Execution by Counterpart	43
34.	Authority to Execute	44
Signatures		

Attachment 1.IA	Committee Representatives
Attachment 2.IA	Lower Colorado River Multi-Species Conservation Program
Attachment 3.IA	Working Capital Calculation
Attachment 4.IA	Multi-Project Written Procedures
Attachment 5.IA	Contingent Capacity, Firm Energy, and BCP Percentages
Attachment 6.IA	Appendix G of the 1995 Implementation Agreement
Attachment 7.IA	Table 7 from Calculations for Repayable Capital Investments (Repayable Advances) from the 1995 Implementation Agreement
Attachment 8.IA	Calculations for Replacements and Repayable Capital Investments from the 2016 Restated Agreement
Attachment 9.IA	Boulder Canyon Project Ten Year Operating Plan
Attachment 10.IA	Boulder Canyon Project Electric Service Contractors

**AMENDED AND RESTATED BOULDER CANYON PROJECT
IMPLEMENTATION AGREEMENT**

1. **PARTIES:** The Parties to this Amended and Restated Boulder Canyon Project Implementation Agreement (Restated Agreement) are the United States of America, acting by and through the Administrator, Western Area Power Administration (Western) Department of Energy, represented by the officer executing this Restated Agreement or a duly appointed successor, and acting by and through the Commissioner, Bureau of Reclamation (Reclamation) Department of the Interior, represented by the Regional Director, Lower Colorado Region or a duly appointed successor; and the entities specified in Attachment 10.IA, that have a fully executed Boulder Canyon Project (BCP) Electric Service Contract with Western. Such entities may be referred to individually as Party or collectively as Parties.
2. **EXPLANATORY RECITALS:** This Restated Agreement is made with reference to the following facts:
 - 2.1. Pursuant to the Hoover Power Plant Act of 1984, Western entered into a Boulder Canyon Project Electric Service Contract with each Schedule A and Schedule B Contractor for the sale of contingent capacity and associated firm energy from the Hoover Powerplant for the period June 1, 1987 through September 30, 2017, with Reclamation a concurring signatory to each BCP Electric Service Contract insofar as its responsibilities were involved.
 - 2.2. Pursuant to the Hoover Power Allocation Act of 2011, Western is entering into a BCP Electric Service Contract (Contract) with each Contractor for the sale of contingent capacity and associated firm energy from the Hoover Powerplant for the period October 1, 2017 through September 30, 2067, with Reclamation a concurring signatory to each Contract insofar as its responsibilities are involved.

- 2.3. Reclamation and Western recognize each agency has responsibilities to ensure the BCP's plans, programs, budget, operation, maintenance, and replacements are managed in an efficient manner. The power output of the Hoover Powerplant will be delivered to the Contractors at the lowest possible cost consistent with applicable laws, statutes, regulations, and sound business principles.
- 2.4. Reclamation has the responsibility and authority for establishing the overall budget and the revenue requirement for the BCP. Reclamation is also responsible for the operation, maintenance, and replacements (OM&R) of the Hoover Dam Facilities. Western has the responsibility and authority for the OM&R of the Federal transmission system, including the delivery point(s) at Mead Substation. Western is also responsible for the administration of the Contracts and for the sale of contingent capacity and associated firm energy from the Hoover Powerplant.
- 2.5. The Parties have previously established Committees for the exchange of information and viewpoints regarding Contract administration, including the Hoover Dam Facilities' OM&R in accordance with applicable practices, standards, and regulatory requirements, and the Parties agree to extend and modify the Committees as set forth in this Restated Agreement.
- 2.6. In March 2014, the contractors of the BCP Implementation Agreement that was effective as of February 17, 1995 (Agreement) paid the outstanding principal balance for the Visitors Center and Air Slot loans due to the United States Treasury.
- 2.7. The applicable resolutions approved by the Engineering & Operating Committee and documented under the Agreement have been incorporated into the Contract or this Restated Agreement.
- 2.8. The Agreement was developed in conjunction with the BCP Electric Service Contracts in effect from June 1, 1987 through September 30, 2017. The Parties desire to enter into this Restated Agreement pursuant to the Hoover Power

Allocation Act of 2011, the Conformed Criteria, and the Contracts as defined in section 5.14 herein.

3. **AGREEMENT AMENDED AND RESTATED:** Now therefore, in consideration of the above recitals, the mutual covenants, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree this Restated Agreement amends and restates the Agreement dated February 17, 1995, in its entirety.
4. **TERM OF RESTATED AGREEMENT:**
 - 4.1. This Restated Agreement shall become effective on October 1, 2016, and shall remain in effect until replaced by a successor agreement among the Parties, or with respect to an individual Contractor until termination of any BCP electric service agreement with that Contractor. The financial obligations incurred under this Restated Agreement, including but not limited to sections 12, 13, and 20 herein, shall remain enforceable until all such obligations hereunder have been performed in full.
 - 4.2. If a Contractor's Allocation is reallocated in accordance with section 16 of the Contract, the Contractor will no longer be a Party to this Restated Agreement as of the effective date of the reallocation provided in written notice from Western to Reclamation and the Contractors. The Contractor shall have no further payment obligations after the effective date of the reallocation except for outstanding Contract and/or Restated Agreement payment obligations incurred prior to the reallocation. If the Contractor receiving the reallocation is not an existing Contractor, the new Contractor shall execute this Restated Agreement not later than the effective date of the reallocation.
 - 4.3. If a Contractor's Contract is terminated in accordance with section 17 of the Contract, the Contractor will no longer be a Party to this Restated Agreement as of the effective date of the termination provided by written notice from Western to

Reclamation and the Contractors.

5. **DEFINITIONS:** The following terms, when used herein and in the Attachments as attached and future exhibit(s), if any, shall have the meanings specified:

- 5.1. Annual Revenue Requirement: The estimated BCP expenses for the Rate Year less any carryover of funds from prior Fiscal Year(s) and revenues from other sources as provided under subsection 7.4 of the Contract.
- 5.2. Area Manager: The Area Manager, Lower Colorado Dams Office, Reclamation.
- 5.3. Base Charge: The total charge paid by the Contractors for their allocated contingent capacity and firm energy based on the Annual Revenue Requirement, in accordance with section 7 of the Contract. The Base Charge shall be composed of a capacity component and an energy component.
- 5.4. Boulder Canyon Project (BCP): All works and the real property associated with such works authorized by the Boulder Canyon Project Act, as amended, the Hoover Power Plant Act of 1984, as amended, and any future additions authorized by Congress, to be constructed and owned by the United States, but exclusive of the main canal and its related appurtenances authorized by the Boulder Canyon Project Act, known as the All-American Canal.
- 5.5. Boulder Canyon Project Act: The Act of Congress approved December 21, 1928 (45 Stat. 1057, 43 U.S.C. 617), as amended and supplemented.
- 5.6. Boulder Canyon Project Adjustment Act: The Act of Congress approved July 19, 1940 (54 Stat. 774, 43 U.S.C. 618), as amended and supplemented.
- 5.7. Boulder Canyon Project Ten Year Operating Plan (BCP Ten Year Operating Plan): The written product of the annual budget planning process for the on-going operation of the BCP, developed by Reclamation in consultation with Western and the Contractors. A preliminary and final plan will be developed each year. The final plan will include, but is not limited to, information regarding proposed budget

and revenues, staffing projections, hydrology and generation projections, and historic data.

- 5.8. Change in Law: Any of the following events occurring after the execution date of the Contract: (a) a material change in or repeal of any applicable act, statute or regulation or (b) an enactment or making of a new applicable act, statute or regulation.
- 5.9. Colorado River Dam Fund (Dam Fund): The special fund in the United States Treasury established by Section 2(a) of the Boulder Canyon Project Act and available for carrying out the provisions of said Act, the Boulder Canyon Project Adjustment Act, the Hoover Power Plant Act of 1984, the Hoover Dam Miscellaneous Sales Act, and the Hoover Power Allocation Act of 2011.
- 5.10. Committees: The Coordinating Committee, the Engineering & Operating Committee, and the Technical Review Committee.
- 5.11. Conformed Criteria: The Conformed General Consolidated Power Marketing Criteria or Regulations for Boulder City Area Projects, published in Federal Register Notice 49 FR 50582, dated December 28, 1984, as amended by Federal Register Notice 77 FR 35671, dated June 14, 2012.
- 5.12. Contractor(s): The parties specified in Attachment No. 4 of the Contract that have a fully executed Contract with Western for BCP electric service.
- 5.13. Contractor's Allocation: The Contractor's contingent capacity and firm energy provided for under the Contract as set forth in Exhibit A of the Contract and inclusive of excess energy that may be available to the Contractor.
- 5.14. Contract(s): Each and all of the Boulder Canyon Project Electric Service Contracts between each Contractor and Western, with the concurrence of Reclamation, effective from October 1, 2016 through September 30, 2067, with an initial service date of October 1, 2017.

- 5.15. Coordinating Committee: The Coordinating Committee established pursuant to section 8 herein.
- 5.16. Coordinating Committee Chairperson: Reclamation's Representative on the Coordinating Committee authorized to chair the Coordinating Committee.
- 5.17. Engineering and Operating Committee (E&OC): The Engineering and Operating Committee established pursuant to section 8 herein.
- 5.18. E&OC Chairperson: Reclamation's Representative on the E&OC authorized to chair the E&OC.
- 5.19. Energy Deemed Delivered: The amount of energy scheduled, metered, and determined to be delivered to each Contractor, including Motoring Losses (M_L) and Unloaded Synchronized Generation Losses (S_L) as defined in Exhibit D to the Contract, all determined in accordance with the Metering and Scheduling Instructions (MSI) developed and agreed upon in accordance with subsection 6.12.2 of the Contract. Such energy amount shall exclude energy purchased by Western, at the request of a Contractor, in accordance with subsection 6.9.4 of the Contract.
- 5.20. Federally Recognized Indian Tribe(s): A Native American Indian tribe that is eligible to contract with Western for an allocation of Schedule D contingent capacity and firm energy.
- 5.21. Fiscal Year: The twelve (12) month period so designated by Federal law. Until changed by Federal law, Fiscal Year means the period commencing October 1 of each year, immediately after midnight of September 30, and ending at midnight of September 30 of the following year.
- 5.22. Hoover Dam Facilities: The dam and incidental works constructed by the Secretary of the Interior pursuant to the authority granted in Section 1 of the Boulder Canyon Project Act and the Hoover Power Plant Act of 1984, including all associated facilities, but not limited to the dam, support buildings, power houses, station

service system, central section, intake towers, penstocks, spillways, tunnels, and Visitor Facilities.

- 5.23. Hoover Dam Miscellaneous Sales Act: The Act of Congress approved November 7, 2000 (114 Stat. 1989, 43 U.S.C. 619), as amended and supplemented.
- 5.24. Hoover Power Allocation Act of 2011: The Act of Congress approved December 20, 2011 (125 Stat. 777, 43 U.S.C. 619a) that amends the Hoover Power Plant Act of 1984, for certain statutory schedules governing contracts for delivery commencing October 1, 2017, of hydroelectric power generated at the Hoover Powerplant to the BCP marketing area within Arizona, California, and Nevada.
- 5.25. Hoover Power Plant Act of 1984: The Act of Congress approved August 17, 1984 (98 Stat. 1333, 43 U.S.C. 619) and amended by the Hoover Power Allocation Act of 2011.
- 5.26. Hoover Powerplant: The power houses included in the Hoover Dam Facilities, consisting of the existing seventeen (17) main generating units and their associated equipment used to produce the power and ancillary services related to the Contractors' contingent capacity and firm energy, as may be improved, replaced, renovated, or expanded during the term of the Contract.
- 5.27. Lower Colorado River Multi-Species Conservation Program (MSCP): As defined in Section 9401 of the Omnibus Public Land Management Act of 2009 (Public Law 111-11; 123 Stat. 1327).
- 5.28. Power Repayment Study (PRS): The Power Repayment Study used by Western to calculate the Base Charge and capacity and energy rates for the BCP.
- 5.29. Rate Year: The Fiscal Year for which the Annual Revenue Requirement is forecast for annual rate determination purposes in the PRS.
- 5.30. Readvances: Available funds appropriated by the Secretary of the Treasury to the Dam Fund for replacements related to the BCP pursuant to the Boulder Canyon

Project Act and the Boulder Canyon Project Adjustment Act. These funds are only readvanced to the Dam fund if requested by the Secretary of the Interior.

- 5.31. Regional Director: The Regional Director, Lower Colorado Region, Reclamation.
- 5.32. Repayable Capital Investments: The calculation that shows the difference between the amount funded by the Contractors and the amount that would have been paid by the Contractors if replacements were funded by Readvances and amortized for fifty (50) years. The term Repayable Capital Investments has the same meaning and replaces the defined term Repayable Advances as used in the Contract, and the term repayable advances as used in the Hoover Power Allocation Act of 2011 and the Conformed Criteria.
- 5.33. Replacement Capital Investment: Ninety-six (96) percent of the total amount expensed for multi-year and annual replacements. Multi-year replacements include interest during construction. The Replacement Capital Investment is amortized for fifty (50) years, as if Readvances were appropriated for the replacements. Replacement Capital Investment is used to calculate the Repayable Capital Investment. The Replacement Capital Investment is documented in the Fiscal Year following the year the replacements have been placed in service.
- 5.34. Representative(s): The primary or alternate Committee representative(s) designated by a Contractor pursuant to subsection 7.3 herein.
- 5.35. Restated Agreement: This Amended and Restated Boulder Canyon Project Implementation Agreement No. 95-PAO-10616 (Western) and No. 5-CU-30-P1128 (Reclamation), including all Attachments and future exhibit(s), if any.
- 5.36. Schedule A Contractor: An entity listed in Attachment No. 4 of the Contract that has entered into a Contract with Western in accordance with Section 105 (a) (1) (A) of the Hoover Power Plant Act of 1984, as amended by the Hoover Power Allocation Act of 2011, and the Conformed Criteria.

- 5.37. Schedule B Contractor: An entity listed in Attachment No. 4 of the Contract that has entered into a Contract with Western in accordance with Section 105 (a) (1) (B) of the Hoover Power Plant Act of 1984, as amended by the Hoover Power Allocation Act of 2011, and the Conformed Criteria.
- 5.38. Schedule D Contractor: An entity listed in Attachment No. 4 of the Contract that has entered into a Contract with Western in accordance with Section 2(d) of the Hoover Power Allocation Act of 2011 and the Conformed Criteria.
- 5.39. Technical Review Committee (TRC): A subcommittee of the E&OC established pursuant to section 8 herein.
- 5.40. Transitional Items: Financial obligations of the BCP funded by the Schedule A and Schedule B Contractors prior to October 1, 2017, which have not been expensed as of that date. Transitional Items also include sequestered funds as described in section 16 herein, which are unavailable to spend as of October 1, 2017.
- 5.41. Treasury: The United States Treasury.
- 5.42. Tribal Contractor(s): Any Contractor that is a Federally Recognized Indian Tribe, or an entity, enterprise, or authority of a Federally Recognized Indian Tribe(s) that is formed by such a tribe(s) to lawfully use the Contractor's Allocation.
- 5.43. Visitor Facilities: The facilities at the BCP that contribute to the safety, education, and quality of recreation and tourism opportunities for Hoover Dam visitors. The facilities include, but are not limited to, the historic exhibit building, the multi-story parking structure, tour galleries, visitor center, exhibits, Spillway building, and viewing platform at the Hoover Dam Facilities.
- 5.44. Visitor Related Revenues: Revenues collected by Reclamation from fees established by Reclamation for public use of the Visitor Facilities including, but not limited to, fees for parking, entrance, tours and exhibits, and other visitor related revenues including, but not limited to sales of photographs and memorabilia.

- 5.45. Working Capital: Funds advanced by the Contractors to meet BCP cash flow needs. Such funds will be adjusted, if needed, through the Annual Revenue Requirement in accordance with section 15 and Attachment 3.IA herein.
6. **RELATIONSHIP TO THE CONTRACTS**: The Contracts and this Restated Agreement shall be interpreted and implemented together. In the event of any conflict or inconsistency between the Contracts and this Restated Agreement, the Contracts shall control.
7. **COMMITTEES**:
- 7.1. Reclamation, Western, and the Contractors have formed the Coordinating Committee, the E&OC, and the TRC (Committees) to facilitate the exchange of information in a manner that promotes enhanced collaboration, communication, and transparency in order to seek consensus among the Parties regarding funding and management of the BCP.
- 7.2. The Committees will share information and provide an avenue for Contractor input so that capacity and energy charges for the BCP shall be at the lowest possible cost consistent with applicable laws, statutes, regulations, and sound business principles.
- 7.3. The Parties shall appoint a Representative(s) for the Committees by the effective date of the Restated Agreement. The Representatives are referenced in Attachment 1.IA, and will be reviewed annually by the Parties to this Restated Agreement. The designated Representatives shall be authorized to make decisions and commitments with regard to the issues being considered by the Committees. Changes to a designated Representative shall be communicated to the Chairperson of the appropriate Committee in writing at least fifteen (15) business days prior to the next committee meeting. Any person who is not a Representative will not act as a Representative. A minimum of five (5) business days advance notice to the Chairperson is requested for all guest attendance. Reclamation's Representative for each committee shall be the Chairperson.

- 7.4. Representatives may participate in Committee meetings either in person or remotely, using available electronic methods. A Committee Representative may represent and act for one (1) or more non-participating Contractor(s), provided that the non-participating Contractor(s) provides prior written notice of such representation to the Committee Chairperson at least five (5) business days prior to the meeting in which the Contractor is unable to participate.
- 7.5. The Chairperson shall provide an agenda for all Committee meetings to each Committee Representative at least ten (10) business days prior to the scheduled meeting date. Each meeting notice shall include an agenda and a list of all action items to be addressed, including any proposed resolutions. Meeting locations shall be designated by the Chairperson.
- 7.6. Minutes for the Coordinating Committee and the E&OC shall be prepared by Reclamation and copies thereof shall be transmitted to each Committee Representative within twenty (20) business days, and Reclamation shall allow at least five (5) business days between transmittal of the minutes and the Area Manager making a decision under section 9 herein. Minutes shall be finalized at the following meeting. A report for the TRC shall be prepared by the Contractor Representatives of the TRC and copies thereof shall be transmitted to the E&OC Representatives.
- 7.7. Nothing in this section 7 shall limit the United States or Federally Recognized Indian Tribes and Tribal Contractors which are signatories to this Restated Agreement from conducting government-to-government consultations and communications at any time, as stated in section 27 herein.
8. **ROLES AND RESPONSIBILITIES OF THE COORDINATING COMMITTEE, ENGINEERING & OPERATING COMMITTEE, AND TECHNICAL REVIEW COMMITTEE:**

- 8.1. Coordinating Committee: The Coordinating Committee shall consist of persons from each of the Parties designated to act as Representatives.
- 8.1.1. General Functions: The function of the Coordinating Committee is to resolve issues, disputes, or disagreements arising from the actions of the E&OC, TRC, or any other subcommittee.
- 8.1.2. Formal Decision-Making Process: In the event consensus is not achieved, the Coordinating Committee Representatives may participate in the formal decision-making process as provided in section 9 of this Restated Agreement.
- 8.1.3. Meetings: The Coordinating Committee shall meet at the call of the Coordinating Committee Chairperson or upon the written request of two (2) or more Coordinating Committee Representatives.
- 8.2. Engineering & Operating Committee: The E&OC is a subcommittee of the Coordinating Committee. The E&OC is intended to consist of program managers.
- 8.2.1. General Functions: The function of the E&OC is to share information and communicate the BCP's budget, projects, and OM&R status, provide an avenue for Contractor input, and facilitate implementation of the Contracts and this Restated Agreement.
- 8.2.1.1. The E&OC may establish subcommittees to address specific issue(s) and report back to the E&OC.
- 8.2.1.2. The E&OC shall perform such other functions as directed by the Chairperson or Coordinating Committee.
- 8.2.2. Formal Decision-Making Process: In the event consensus is not achieved, the E&OC Representatives may participate in the formal decision-making process as provided in Section 9 of this Restated Agreement.

- 8.2.3. Meetings: The E&OC shall meet at least three (3) times a year, unless otherwise agreed to by the E&OC Representatives, with prior notice provided by the E&OC Chairperson to the E&OC Representatives. The E&OC Chairperson may schedule additional E&OC meetings as necessary. If an issue occurs outside of an E&OC meeting, a special meeting may be requested to address the issue.
- 8.2.3.1. Agenda items for the next E&OC meeting shall be submitted to the Chairperson at least fifteen (15) business days prior to the meeting by any E&OC Representative. Reclamation and Western shall use their best efforts to present supporting documents and studies.
- 8.2.3.2. The E&OC may consider, discuss, and comment upon all matters presented to it. A Contractor's Representative may present issues, comments, or concerns in writing to the E&OC Chairperson at any time for inclusion on the agenda for the next E&OC meeting. The E&OC Chairperson may also present matters to the E&OC on behalf of Reclamation or Western, including proposed actions or recommendations.
- 8.2.3.3. The E&OC may appoint subcommittees to consider any matter before the E&OC and to make recommendations to the E&OC.
- 8.2.4. Outages: Reclamation shall provide the Hoover Dam 17-Month Operating Schedule on a monthly basis to the Representatives of the E&OC.
- 8.2.5. Resolutions: When clarification or implementing provisions of the Restated Agreement are necessary, the E&OC Representatives or a subcommittee may draft resolutions, and such resolutions shall become effective when approved by the E&OC Representatives.

- 8.3. Technical Review Committee: The TRC is a subcommittee of the E&OC. The TRC is intended to consist of persons with engineering, operating, or other technical capabilities.
- 8.3.1. General Functions: The function of the TRC is to review, discuss, and make recommendations regarding the BCP Ten Year Operating Plan.
- 8.3.2. Meetings: The TRC shall meet annually in September, unless otherwise agreed to by the TRC Representatives with prior notice provided by the E&OC Chairperson to the TRC Representatives. The main purpose of the annual meeting is to present the background for, and answer questions relating to, the preliminary BCP Ten Year Operating Plan.
- 8.3.2.1. Following the annual TRC meeting, the Contractor Representatives of the TRC shall review and prepare a report of recommendations for the E&OC on the preliminary BCP Ten Year Operating Plan.
- 8.4. General Provisions Applicable to all Committees:
- 8.4.1. The recommendations of the Committees shall not limit or impair any Party's rights or obligations as provided by their respective Contracts, or as provided by applicable laws, statutes, or regulations.
- 8.4.2. Reclamation or Western shall forward issues or concerns raised by Contractors which are outside the scope of this Restated Agreement or the Contracts to the appropriate authorities.
- 8.4.3. Nothing in this section 8 shall authorize any of the Committees to amend or modify this Restated Agreement or the Contracts.
- 8.4.4. Nothing in this section 8 is intended to restrict, modify, or waive any provision of section 20 of the Contracts (Disputes).
- 8.4.5. Nothing in this section 8 shall limit the United States or Federally Recognized Indian Tribes and Tribal Contractors which are signatories to

this Restated Agreement from conducting government-to-government consultations and communications at any time, as stated in section 27 herein.

8.5. Ten-Year Planning Process:

8.5.1. Reclamation and Western, in coordination with the E&OC and the TRC, shall conduct an annual planning process to provide to the Contractors:

- a) information, including but not limited to plans for the on-going operation, safety, and security of the BCP;
- b) information regarding plans for the integrated operation with the Parker-Davis Project and the financial impact of such integration on the Hoover Dam Facilities;
- c) the opportunity to submit input into the OM&R of the Hoover Powerplant prior to the expenditures of significant funds;
- d) assurance that the Hoover Dam Facilities are being operated as efficiently and effectively as possible; and
- e) a mechanism to link the budget, Annual Revenue Requirement, Base Charge, and rate and ten-year planning processes.

8.5.2. The product of the annual planning process will be a preliminary and final BCP Ten Year Operating Plan. The Parties intend that the annual planning process be completed in advance of the budget finalization, Annual Revenue Requirement and Base Charge development, and rate making process so that the E&OC and the TRC will have the ability to constructively comment during the preparation of the BCP Ten Year Operating Plan.

8.5.3. Reclamation and Western shall take into consideration the budget, hydrology, and generation contained in the most current final BCP Ten Year Operating Plan during the development of all budgetary documents, Annual

Revenue Requirement and Base Charges, and rate analysis prepared by Western or Reclamation.

8.5.4. Attachment 9.IA shall serve as the guideline for the BCP Ten Year Operating Plan. The form of the BCP Ten Year Operating Plan may be modified and adjusted by Reclamation and Western in coordination with the E&OC.

8.5.5. Western and Reclamation shall utilize the most current information available in developing the PRS. Each year, in conjunction with the ten-year planning process, Reclamation will determine the total costs to be recovered in the upcoming year and submit those costs to Western for inclusion in the PRS for purposes of calculating the Base Charge. The data developed in accordance with the ten-year planning process shall be used in the PRS, unless prior to the distribution of the PRS to the Contractors more current data is communicated to and reviewed with the Contractors.

8.6. Annual Revenue Requirement Analysis: Each year, Western and Reclamation shall present the analysis of the Annual Revenue Requirement and proposed Base Charges.

8.7. Early Participation: From October 1, 2016, through September 30, 2017, the Schedule D Contractors' participation in Committees is limited to business related to Fiscal Year 2018 and beyond.

9. **FORMAL DECISION-MAKING PROCESS**: The formal decision-making process will be used when consensus is not achieved related to any matter that has been or may be submitted to the E&OC for consideration as provided in subsection 8.2.3.2 herein. Proposed decisions by the Area Manager relating to contingency planning under section 10 herein are subject to the formal decision-making process described in this section 9.

9.1. The formal decision-making process begins with the E&OC. The formal decision-making process will typically be concluded within seventy-five (75) days. The following steps will be used during the formal decision-making process:

9.1.1. E&OC: When the Area Manager proposes to make a decision taking action on a matter that is subject to this section 9, the matter will be included on the agenda of the next E&OC meeting. During the E&OC meeting, Reclamation and Western will solicit discussion and comments concerning proposed action(s) on the matter from those E&OC Representatives who participate in the E&OC meeting either in person or remotely, using available electronic methods. An E&OC Representative may represent and act for one (1) or more non-participating Contractor(s), provided that the non-participating Contractor(s) provides prior written notice of such representation to the E&OC Chairperson at least five (5) business days prior to the meeting in which the Contractor is unable to participate. The E&OC will exercise all reasonable efforts to unanimously agree on actions proposed by Reclamation or Western during an E&OC meeting. If objections are raised at the E&OC meeting, the E&OC Chairperson or any participating E&OC Representative may call for each Representative to state their position on Reclamation's or Western's proposed action(s). Those E&OC Representatives participating in the meeting, or a designated Representative who has been appointed by written notice to the E&OC Chairperson, will state their position(s). The E&OC Chairperson or his/her designee will document the position for each Representative as advisory information to show which E&OC Representatives support or oppose the proposed action(s). Once the position of each participating Representative has been documented, any Representative may verbally request, during the

meeting, a written decision from the Area Manager concerning the proposed action(s). Additionally, any Representative who participated in the E&OC meeting, or Contractor who was represented at the meeting, may request a written decision from the Area Manager by submitting a written request to the Area Manager with a copy to all of the E&OC Representatives. If no request for a written decision is requested, no further action is required. If there are no objections, Reclamation and Western shall be deemed to have the support of the E&OC to pursue the proposed action(s).

9.1.2. Area Manager's Written Decision: If a written decision is requested during or after the E&OC meeting, within ten (10) business days of receipt of the request, the Area Manager, in concurrence with Western as appropriate, will issue a written decision to the E&OC Representatives after considering the position of each E&OC Representative, as documented in the minutes of the applicable meeting, and additional information provided by interested Contractors.

9.1.3. Coordinating Committee: The Representatives of two (2) or more of the Contractors may request that the Area Manager's decision be reviewed by the Coordinating Committee. Such a request shall be made in writing to the Coordinating Committee Chairperson and the Area Manager with a copy to the E&OC and Coordinating Committee Representatives, within five (5) business days of the date of the receipt of the Area Manager's decision. The Coordinating Committee Chairperson shall establish a date for the Coordinating Committee to meet within fifteen (15) business days after the Coordinating Committee Chairperson's receipt of the required notice. A written request to convene the Coordinating Committee shall include an

explanation of the basis for opposing the Area Manager's decision, and offer a proposal for advancing an alternate position.

9.1.3.1. Either or both Reclamation and Western will present the rationale supporting the Area Manager's decision and solicit comment from those Coordinating Committee Representatives, who participate either in person or remotely, using available electronic methods. A Coordinating Committee Representative may represent and act for one (1) or more non-participating Contractor(s) provided that the non-participating Contractor(s) provides written notification of such representation to the Coordinating Committee Chairperson at least five (5) business days prior to the meeting in which the Contractor is unable to participate. The Representatives will have an opportunity to express their support or opposition to the Area Manager's decision or present an alternate position. The Coordinating Committee will consider all positions and exercise reasonable efforts to unanimously agree on actions to be taken. The Coordinating Committee Chairperson or any participating Representative may call for each Representative to state their position on the proposed action(s) sustained by the Area Manager's decision or any alternate position presented by a participating Representative. Those Coordinating Committee Representatives participating in the meeting, or a designated Representative who has been appointed by written notice to the Coordinating Committee Chairperson, will state their position(s). The Coordinating Committee Chairperson or his/her designee will document the position for each Representative as advisory information to show

which Coordinating Committee Representatives support or oppose the original proposed action(s) sustained by the Area Manager's decision or an alternate position(s) presented by Coordinating Committee Representatives. Once the position of each participating Representative has been documented, any Representative may verbally request a written decision from the Reclamation Deputy Regional Director, Lower Colorado Region (Deputy RD). Additionally, any Representative who participated in the Coordinating Committee meeting, or any Contractor who was represented at the meeting, may request a written decision from the Deputy RD by submitting a written request to the Deputy RD with a copy to all of the Coordinating Committee Representatives. If no request for a written decision is requested, no further action is required. If there are no objections, Reclamation and Western shall be deemed to have the support of the Coordinating Committee to pursue the proposed action(s).

- 9.1.4. Deputy RD's Written Decision: If a written decision is requested during or after the Coordinating Committee meeting, within ten (10) business days of receipt of the request the Deputy RD, in concurrence with Western as appropriate, will issue a written decision to the E&OC and Coordinating Committee Representatives after considering the position for each of the E&OC and Coordinating Committee Representatives, as documented in the minutes of the applicable meetings. The Deputy RD shall consider:
- a) the Representatives' written requests for additional review;
 - b) the position of each E&OC and Coordinating Committee Representative as documented in the minutes of the applicable

meetings and additional information provided by interested Contractors;

c) the Area Manager's decision; and

d) applicable laws, statutes, regulations, and sound business principles.

9.1.5. Regional Director's Involvement: Two (2) or more Representatives who participated at the applicable Coordinating Committee meeting or Contractor(s) who were represented at the meeting may submit a written request for the Regional Director to review the decision of the Deputy RD. Such notice requesting the Deputy RD's issued decision be reviewed shall be submitted to the Regional Director, the Deputy RD, and the Coordinating Committee Representatives, within five (5) business days of receipt of the Deputy RD's decision. The Representatives' written request for the Regional Director's review shall include an explanation of the basis for opposing the Deputy RD's decision, and offer a proposal for advancing an alternate position. The Regional Director, in concurrence with Western as appropriate, shall consider:

a) the Representatives' written requests for additional review;

b) the position of each Representative as documented in the minutes of the applicable meetings and additional information provided by interested Contractors;

c) the Area Manager's and Deputy RD's decision; and

d) applicable laws, statutes, regulations, and sound business principles.

9.1.6. Regional Director's Written Decision: The Regional Director will issue a written decision to all the Committee Representatives within twenty (20) business days of the required notice. The decision rendered by the Regional

Director shall only be reviewed, modified or overturned subject to the provisions identified in section 25 (Disputes) of this Restated Agreement.

9.1.7. No Early Action During Formal Decision-Making Process: Although nothing in this formal decision-making process shall prohibit Reclamation from continuing operations of the Hoover Dam Facilities, whenever possible Reclamation or Western will not proceed with an action(s) under review until a final decision to proceed, as proposed, is rendered pursuant to the formal decision-making process detailed in this section 9. Except as provided below, any action(s) subject to the formal decision-making process under this section 9 may not be submitted for dispute under section 25 of this Restated Agreement until the Regional Director has issued a written decision in accordance with subsection 9.1.6 herein. In the event that a decision is not rendered by the Area Manager or Deputy RD within the timeframes established in this section 9, any Contractor may elevate a proposed action for additional review by the next higher decision-making official identified in this section 9. In the event the Regional Director does not issue a decision within the timeframe established in subsection 9.1.6 herein, any Contractor may elect to submit the matter for dispute under section 25 herein.

9.2. Emergency Decisions: The formal decision-making process does not apply to actions that are required in response to emergency conditions which may adversely affect public safety, public health, property, or the operation of the BCP, as determined by the Area Manager.

9.3. Nothing in this section 9 shall limit the United States or Federally Recognized Indian Tribes and Tribal Contractors which are signatories to this Restated

Agreement from conducting government-to-government consultations and communications at any time, as stated in section 27 herein.

10. **CONTINGENCY PLANNING:**

10.1. In an effort to address potential events that may have an adverse effect on the BCP, the Parties agree to engage in contingency planning if any of the following occurs:

10.1.1. Capacity Loss Below 1000 MW: Hoover Dam 17-Month Operating

Schedule reveals one (1) of the following capacity levels will be sustained:

- a) Level 1 - Below 1000 MW for > 45 days;
- b) Level 2 - Below 850 MW for > 30 days;
- c) Level 3 - Below 700 MW for > 1 day.

10.1.2. Force Majeure: The operation of the Hoover Dam Facilities is significantly compromised by an act of God or of a public enemy, a major catastrophe, drought, or any other unforeseen and unavoidable cause, or an “uncontrollable force,” as defined in Provision 34 of the Western Area Power Administration General Power Contract Provisions, which are made part of the Contract and are attached thereto as Exhibit E.

10.2. As a result of the above events, additional meetings may be requested by any E&OC Representative or TRC Representative, as provided in subsection 8.2.3 of this Restated Agreement. The purpose of a meeting called under this subsection shall be for the Parties to meet, confer, and recommend appropriate action by any or all Parties, in connection with the operation of the Hoover Dam Facilities, which may include:

- a) Identifying the full range of cost containment opportunities to mitigate adverse financial impacts to the Contractors due to loss of generation;
- b) Reviewing available hydrology data;

- c) Evaluating the ability of Reclamation to seek alternate statutorily authorized funding sources; and/or
- d) Evaluating other operational or adverse impacts to the BCP.

11. **FUTURE ELECTRIC POWER DEVELOPMENT RELATED TO HOOVER DAM FACILITIES:**

11.1. **New Hydropower:** Pursuant to the Boulder Canyon Project Act, Reclamation reserves the right to pursue all proposed hydropower developments at the Hoover Dam Facilities, unless such proposed hydropower developments would adversely impact the BCP. Reclamation and Western will meet and confer with any or all Contractor(s) to discuss the proposed hydropower development. Reclamation and Western will consider hydropower development proposals that involve the financial participation by all or some of the Contractors, provided that participation by fewer than all of the Contractors does not adversely impact the non-participating Contractors and provided that the proposal can be implemented as determined by Reclamation and Western. The parameters of any proposed hydropower development will be determined by written agreement, and considered part of the Hoover Dam Facilities.

11.2. **New Non-Hydropower:** Proposals for non-hydropower development at the Hoover Dam Facilities and appurtenant lands will be governed by applicable laws at the time such development proposals are made. Reclamation and Western will meet and confer with the Contractors to discuss any proposed non-hydropower development. Reclamation must determine that the non-hydropower development proposal is compatible with and does not adversely impact BCP purposes before it can proceed.

12. **BILLING AND PAYMENT:** Western shall bill and collect for all amounts in accordance with the Contracts, except for the amounts billed by Reclamation. Reclamation shall bill

and collect, in accordance with this Restated Agreement, for MSCP payments, Transitional Items, and Repayable Capital Investments, as provided in sections 13, 16, and 20 herein.

Failure by a Contractor to submit payment on a timely basis will result in accrual of charges for interest, penalties, and administrative costs as provided by applicable law.

13. **LOWER COLORADO RIVER MULTI-SPECIES CONSERVATION PROGRAM:**

Reclamation will issue bills for collection on a quarterly schedule to the Schedule D Contractors in California and the Tribal Contractors in Arizona and Nevada, for their proportionate shares of the MSCP funding schedule based on the MSCP cost share of the non-federal MSCP funding specified in Attachment 2.IA attached hereto. The bills will be sent out approximately thirty (30) days before the start of a Fiscal Year quarter, and are due on or before the first business day of the Fiscal Year quarter. The billing will begin in Fiscal Year 2018 with the first bill issued on September 1, 2017, due on October 1, 2017. After timely payment of the amount due, the Schedule D Contractor's MSCP payment obligation under section 11 of the Contract will be satisfied.

The amounts billed to Schedule D Contractors in California and the Tribal Contractors in Arizona and Nevada in accordance with this section shall be credited quarterly toward the respective MSCP cost share funding obligations of the California Permittees, Arizona Permittees, and Nevada Permittees as specified in section 8 of the Lower Colorado River Multi-Species Conservation Program Funding and Management Agreement dated April 4, 2005. Payment of amounts billed to Schedule D Contractors in California and the Tribal Contractors in Arizona and Nevada in accordance with this section shall not be deemed an obligation of any other Contractors or Permittees, either jointly or individually.

14. **TREASURY PAYMENTS:** The Annual Revenue Requirement includes principal and interest currently due to the Treasury. When sufficient funds are available to meet the requirements of the BCP in accordance with the Contracts, Reclamation will pay principal on a monthly basis, or in the early part of the Fiscal Year as a lump sum, rather than at the

end of the year; provided, however, the annual principal payments over the term of the Contracts shall not exceed the cumulative principal payments that would be made under a level amortization schedule. Reclamation shall report the timing and amount of principal payments paid in the prior Fiscal Year at the first E&OC meeting of each Fiscal Year.

15. **WORKING CAPITAL:**

15.1. The Working Capital advanced by the Contractors shall be used only to: bridge the time delay between the date of billing by Western for the Base Charge and the date of receipt by Reclamation of the resulting revenues; and assure that sufficient funds are available during each Fiscal Year to avoid deferral for work necessary to maintain the safe operation of the BCP and to meet required obligations. The Working Capital is available only to cover expenditures for those BCP uses included in the authorized budget of Reclamation or Western.

15.2. Working Capital calculations shall be based on the formula included in Attachment 3.IA. Reclamation will prepare a Projected Dam Fund Balance, as described in Attachment 3.IA, by February 1 of each year.

15.3. Initial Working Capital: The initial Working Capital required shall be calculated based on the lowest balance of the Projected Dam Fund balance and shall be included in the Annual Revenue Requirement.

15.3.1. Working Capital and unapplied carryover amounts due to Schedule A and Schedule B Contractors from the contract ending September 30, 2017, will be refunded or credited against monthly energy and capacity bills as available in Fiscal Year 2018.

15.4. Annual Working Capital: The first Working Capital adjustment will occur in Fiscal Year 2018 to be available in Fiscal Year 2019 and thereafter the Working Capital may need to be adjusted based on the Projected Dam Fund Balance. Reclamation

and Western will work with the E&OC to determine the adjustment amount and timing. Adjustments will be included in the Annual Revenue Requirement.

15.5. FY 2068: The Working Capital balance shall be returned to the Contractors in Fiscal Year 2068 according to their proportionate shares. The proportionate shares will be calculated by dividing the Working Capital balance amount by two (2) and allocating to each Contractor based on each Contractor's percentage of contingent capacity and firm energy.

16. **TRANSITION OF FINANCIAL OBLIGATIONS**: Reclamation will bill Schedule D Contractors in California and the Tribal Contractors in Arizona and Nevada for their proportionate share of the financial obligations of the BCP funded by the Schedule A and Schedule B Contractors prior to October 1, 2017, for which benefits have not been received as of that date. Reclamation will bill the Arizona Power Authority (APA) and the Colorado River Commission of Nevada (CRC) for the proportionate shares of Transitional Items for the Schedule D non-tribal entities in Arizona and Nevada, which have contracted for BCP electric service with APA or CRC. The proportionate share to be billed shall be calculated by dividing the required total Transitional Item amount by two (2) and allocating to each Schedule D Contractor. Half of the Transitional Items billed will be allocated based on each Schedule D Contractor's percentage of contingent capacity, and the other half will be allocated based on the Schedule D Contractor's percentage of firm energy. The amounts billed under this section 16 will be returned prior to October 1, 2018, to the Schedule A and Schedule B Contractors in proportion to their shares of the BCP under the prior contract. Financial obligations include the following items:

- a) Undelivered orders as of September 30, 2017. Undelivered orders are obligated funds for undelivered work;

- b) Sequestered funds as of September 30, 2017. Sequestered funds are an unobligated cash balance set aside from the available funding based on Executive Order 13589 in response to the Budget Control Act of 2011;
 - c) Multi-year project funding as of September 30, 2017. Multi-year project funding is unobligated funds collected in prior years for work not completed in the Fiscal Year budgeted, but needed in the following Fiscal Year to continue work.
- 16.1. FY 2068: Collection and reimbursement of transitional items, at the end of the Contract term, September 30, 2067, shall follow the procedure outlined in this section 16, substituting appropriate dates, and entities as necessary, subject to applicable laws, regulations, and policies.
17. **MULTI-PROJECT BENEFITS AND COSTS**: Western develops procedures for multi-project benefits and costs, which specify: the procedures to determine multi-project benefits and costs; calculation of the benefits and costs of integrated operation of the BCP with other federal projects; and allocation of such benefits and costs among other projects. Any reports, data, or analysis pertaining to BCP-related multi-projects benefits and costs provided to the contractors of other federal projects shall be made available to the E&OC Representatives for review prior to inclusion of the multi-project benefits and costs in any PRS. The Multi-Project Written Procedures are included as Attachment 4.IA.
18. **AUDITS**: The Parties desire to establish procedures for audits of the financial records for the BCP. Western and Reclamation shall make available any and all audit reports that are completed pursuant to this section 18. It is the intent of the Parties that audits provided for in this Restated Agreement must follow the procedures outlined in this section 18.
- 18.1. Conduct of Audits:
- 18.1.1. All recommendations from audits conducted pursuant to this Restated Agreement shall be evaluated and reviewed by the E&OC, and those recommendations with which the E&OC Representatives unanimously

agree shall be implemented by Western or Reclamation, as applicable. If a recommendation will not be fully implemented, Reclamation and Western agree to provide a written explanation to the E&OC for discussion, and such explanation shall specify the reasons for non-implementation. Any E&OC Representative may request a meeting, under the formal decision-making process pursuant to section 9 herein, to discuss any audit recommendation which Reclamation or Western does not plan to implement.

18.1.2. All audits shall be conducted in accordance with the generally accepted auditing standards and other established standards or guidelines.

18.1.3. Audit reports produced as a result of audits of the BCP shall be made available to and reviewed with Reclamation and Western before finalization. Reclamation and Western shall receive copies of the final audit report.

18.2. Periodic Audit:

18.2.1. The Contractors agree to have a periodic audit of the BCP performed by an independent auditor beginning Fiscal Year 2019 and every third year thereafter. This schedule may be modified by the E&OC. Audits scheduled for a period longer than three (3) years may not include all supporting documentation, as some records are retained for only three (3) years in accordance with federal document retention policies. The Parties shall mutually agree upon the specific date that periodic audits will commence.

18.2.2. The costs incurred to complete periodic audits and the administrative costs associated therewith shall be deemed an operation and maintenance expense for the BCP and shall be included in the BCP Ten Year Operating

Plan and the Annual Revenue Requirement. Each Contractor shall pay its proportionate share of the cost through the Annual Revenue Requirement.

- 18.2.3. The scope of the periodic audit is to review Reclamation's and Western's records to ensure the records are maintained in accordance with the Restated Agreement and the Contracts. The scope of the periodic audit may include cash balances, undelivered orders, carryover, repayable schedules, debt service, and allocated costs. The information for the periodic audit shall be limited to that available pursuant to section 28 of the Contracts.
- 18.2.4. Reclamation's Acquisitions and Assistance Management Division, Operations Branch in Denver, Colorado, or another Reclamation regional office, will solicit and award the contract for the periodic audit. The Reclamation contracting officer assigned with soliciting and awarding the contract for the periodic audit will appoint a Contracting Officer's Representative (COR) with the necessary audit expertise to function independently of Reclamation's Lower Colorado Region. The COR advises the Reclamation contracting officer with regard to all technical aspects of the contract requirements, including any technical issues that may arise during contract administration.
- 18.2.5. The Contractors may designate a small committee of representatives to participate in the contracting process in an advisory capacity. Such committee will review and comment on the written audit scope of work, the evaluation criteria, the independent cost estimate, and the proposals received from vendors. To ensure the final actual costs for the audit services are fair and reasonable, the Reclamation contracting officer will seek competing proposals for the contract for audit services from

participating qualified vendors. The Reclamation contracting officer will make the final determination for the contract selection.

18.2.6. Reclamation and Western will provide documents to the independent auditor in accordance with all applicable laws, regulations, and federal document retention policies.

18.3. Annual Chief Financial Officers Audits: Western and Reclamation are subject to an annual audit pursuant to the Chief Financial Officers Act of 1990 (Public Law 101-576). The audit is conducted according to generally accepted accounting principles and audit standards, reviews Reclamation's and Western's records to ensure they are maintained in compliance with applicable standards, laws, regulations, and procedures, and verifies that appropriate internal fiscal controls and procedures are in place. Such audits are authorized pursuant to section 28 of the Contract. Reclamation's audit is a subset of the Department of the Interior audit.

18.4. Other Audits:

18.4.1. Other audits may be performed by the Contractors. If any Contractor(s) request(s) an audit, then all Contractors shall be provided the opportunity to participate in the audit. All audits shall be performed at the sole expense of the Contractors participating therein. The auditor(s) shall have access for any purpose at all reasonable times to applicable portions of all books and records of Reclamation and Western relating to transactions associated with the Contract. Prior to commencement of the audit, the participating Contractors shall have agreed to the details of conducting the audit. Such details may include, but shall not be limited to:

- a) the scope and work plan;
- b) whether the audit is to be conducted by an independent auditor or an audit team of the Contractors;

- c) the identity of the independent auditors and the estimated costs thereof, or the identity of the audit team and the basis for the audit team's estimated charges;
- d) how the costs and expenses of the audit shall be allocated among, and paid by, the Contractors participating in the audit; and
- e) distribution of the audit report.

18.4.2. The Contractors shall provide Reclamation and Western at least thirty (30) days advance written notice of intent to conduct an other audit, the audit scope, and the proposed work plan. Reclamation, Western, and the Contractors shall mutually agree upon the date on which the other audit will commence, which shall be within ninety (90) days of such notice.

19. **VISITOR FACILITIES:**

- 19.1. Reclamation will perform OM&R activities to the Visitor Facilities as necessary in accordance with applicable safety, security, regulatory requirements, or other Reclamation standards.
- 19.2. The cost of OM&R of the Visitor Facilities and related services shall be included in the BCP Ten Year Operating Plan and in the Annual Revenue Requirement.
- 19.3. Reclamation shall use its best efforts to establish, maintain, and maximize Visitor Related Revenues. The total amount of Visitor Related Revenues collected annually shall be deposited in the Colorado River Dam Fund. The revenue estimated to be available from Visitor Related Revenues shall be credited against the expenses estimated for the Annual Revenue Requirement.
- 19.4. Reclamation shall provide the E&OC an estimate of Visitor Related Revenues to be used in the PRS.
- 19.5. Reclamation shall at least annually review the Visitor Related Revenues at an E&OC and/or TRC meeting, including the existing fees, scheduled adjustments in

fees, actual and projected visitation, and total revenues from Visitor Related Revenues.

20. **REPLACEMENT AND REPAYABLE CAPITAL INVESTMENTS:** Replacements are expensed in full and documented as Replacement Capital Investments in the Fiscal Year following the year the replacements were placed in service. The purpose of this section is to identify costs and benefits of capital investments in future years. The Repayable Capital Investment is calculated as if the BCP utilized Readvances for replacements, amortized over a fifty (50) year period. The Increased Allocation Contractors, as defined in subsection 20.5.1 herein, will pay their proportionate share of the difference between the amount the contractors paid and the amount that would have been paid by the contractors if the replacements were funded by Readvances amortized over fifty (50) years, as of October 1, 2017 or October 1, 2067.

20.1. **Repayable Advances:** The term Repayable Capital Investments has the same meaning and replaces the defined term Repayable Advances as used in the Contract, and the term repayable advances as used in the Hoover Power Allocation Act of 2011 and the Conformed Criteria.

20.2. **Readvances:** Reclamation may request readvances from the Treasury for each Fiscal Year to cover all or some portion of the total cost of replacements required for the BCP pursuant to Section 5 of the Boulder Canyon Project Adjustment Act. It is recognized that budget priorities or constraints may prevent Reclamation from requesting or obtaining such readvances. Those replacements funded with readvances shall be amortized and repaid pursuant to the Boulder Canyon Project Adjustment Act.

20.3. **Replacements:**

20.3.1. Replacements are defined as one (1) or more item of equipment, facility, structure, or system that is classified as a "replacement" in the most recent

final BCP Ten Year Operating Plan; or fits into one (1) or more of the following categories unless classified as an item of maintenance in the annual revision of the final BCP Ten Year Operating Plan.

- a) "Unit of Property/Plant Item Service Life" as described in Table 6 of the Department of Energy, the Department of the Interior, and the Department of Army, Blue Covered Manual entitled "REPLACEMENTS, UNITS, SERVICE LIVES, FACTORS", (hereafter called the "Bluebook");
- b) "Summary of Units of Property and Service Lives" described in the Bluebook related table; and
- c) Any item covered by revisions to the documents described in a) and b) in this subsection.

20.3.2. In any Fiscal Year during the term of the contract in which the amounts required for replacements for the BCP are not funded by readvances from the Treasury, the amounts not funded by readvances shall be provided by revenues of the BCP pursuant to Section 1 of the Boulder Canyon Project Adjustment Act. Ninety-six (96) percent of the sum of the multi-year and annual replacement amounts, together with interest during construction on those expenditures which are for replacement items not placed in service in the year such expenditures are made, shall be Replacement Capital Investments. The remaining four (4) percent of replacement expenditures shall not be included in the Replacement Capital Investments calculation because of the 50-year life cycle and/or repayment period.

20.3.3. Reclamation agrees that moderating the Annual Revenue Requirement and the rate impacts of year-to-year changes in OM&R costs is a relevant criterion for scheduling OM&R in accordance with the BCP Ten Year

Operating Plan, and agrees to manage such expenditures over the Contract term with the objective of avoiding excessive or precipitous annual increases in OM&R expenses. Such commitment notwithstanding, Reclamation shall schedule OM&R as necessary for the safe and reliable operation of the BCP.

- 20.4. Repayable Capital Investments: Reclamation shall, in consultation with Western and the Contractors, annually calculate the Repayable Capital Investments, in accordance with the tables in Attachment 8.IA and the procedures in a) through d) of this subsection. Such calculations shall be completed by the end of the second month following the end of each Fiscal Year. The calculations shall:
- a) identify the replacements as multi-year or annual as shown in Tables 1 through 3 of Attachment 8.IA;
 - b) identify the annual Replacement Capital Investments, which are amortized for fifty (50) years as shown in Tables 4 and 5 of Attachment 8.IA;
 - c) identify the capital (principal) which the Treasury would have recovered annually and cumulatively each Fiscal Year from October 1, 2017, if replacements funded through the Annual Revenue Requirement had been funded by Readvances pursuant to Section 5 of the Boulder Canyon Project Adjustment Act and amortized on a levelized basis, as shown in Table 6 of Attachment 8.IA. For the calculation, the amortization repayment period shall be fifty (50) years, beginning with the first (1st) day of the Fiscal Year following the Fiscal Year in which the investment is placed in service. Interest rates incorporated in the calculation shall be determined in accordance with repayable interest rates as provided by Reclamation's Directives and Standards; and

- d) identify the annual and cumulative difference between items b) and c) of this subsection as shown in Table 7 of Attachment 8.IA. The amount by which b) exceeds c) in this subsection shall constitute the amount of Repayable Capital Investments.

20.5. Recovery of Repayable Capital Investments: The calculation of payment obligations and the reimbursements due related to Repayable Capital Investments shall be in accordance with this subsection.

20.5.1. The value of "P" shall be calculated pursuant to subsection 20.5.2 herein for each Increased Allocation Contractor with a payment obligation (such "Increased Allocation Contractor" is a Contractor which receives an increase in the percentage of total BCP contingent capacity and/or firm energy after September 30, 2017, based on the percentage referenced in Attachment 5.IA and Attachment 6.IA). The value of "R" shall be calculated pursuant to subsection 20.5.3 herein for each Contractor with a reimbursement due. The cumulative value of P less the cumulative value of R calculated for all Contractors shall be equal to zero (0).

20.5.2. Responsibility for payment of Repayable Capital Investments shall be calculated for each Increased Allocation Contractor in accordance with the following formula:

$$P = 0.5 \times RCI \times (C2 - C1) + 0.5 \times RCI \times (E2 - E1) \text{ where:}$$

P = The portion of the Repayable Capital Investments to be paid by each Increased Allocation Contractor as defined in 20.5.1 herein.

RCI = The total amount of Repayable Capital Investments as of September 30, 2017, as illustrated in Table 7, Column 5 for Fiscal Year 2017, of Attachment 7.IA.

C1 = The Contractor's contingent capacity decimal percentage from Appendix G of the 1995 Agreement as referenced in Attachment 6.IA.

C2 = The Contractor's contingent capacity decimal percentage from Attachment 5.IA.

E1 = The Contractor's firm energy decimal percentage from Appendix G of the 1995 Agreement as referenced in Attachment 6.IA.

E2 = The Contractor's firm energy decimal percentage from Attachment 5.IA.

20.5.3. Entitlement to reimbursement for Repayable Capital Investments shall be allocated to each Decreased Allocation Contractor (such "Decreased Allocation Contractor" is a Contractor which either receives no allocation of BCP contingent capacity and/or firm energy after September 30, 2017, or receives a decrease in the percentage of total BCP contingent capacity and/or firm energy after September 30, 2017, based on the percentage referenced in Attachment 5.IA and Attachment 6.IA herein) in accordance with the following formula:

$$R = 0.5 \times RCI \times (C1 - C2) + 0.5 \times RCI \times (E1 - E2)$$
 where:

R = The portion of the Repayable Capital Investments to be reimbursed to each Decreased Allocation Contractor.

The definitions for RCI through E2 are the same as above, relating to the formula for P, in subsection 20.5.2 herein.

20.5.4. Reclamation will issue bills for collection to the Schedule D Contractors in California and the Tribal Contractors in Arizona and Nevada for their proportionate shares of the Repayable Capital Investments, per subsection

20.5.2 herein. Reclamation will bill APA and CRC for the proportionate shares of the Repayable Capital Investments, per subsection 20.5.2 herein, for the Schedule D non-tribal entities in Arizona and Nevada which have contracted for BCP electric service with APA or CRC. Amounts collected will be refunded to the “Decreased Allocation Contractors”.

20.5.5. This process shall be conducted upon any new electric service contract or change in allocations of contingent capacity and/or firm energy in the future.

20.5.6. Repayable Capital Investments shall be reimbursed with interest to eligible Contractors, pursuant to subsection 20.5.3 herein, from the revenues collected by Western pursuant to subsection 20.5.2 herein.

Reimbursements shall be made in no more than five (5) annual installments commencing on September 30, 2018, and each year thereafter, with interest calculated from October 1, 2017. Such interest shall be compounded at the prime rate, as published in the Wall Street Journal, or such successor rate or publication which substitutes for the prime rate, on the last business day of Fiscal Year 2017 less one (1) percent.

20.5.7. Reimbursement to “Decreased Allocation Contractors” will be paid by October 31 of each year for five (5) years, with the first payment beginning October 31, 2018. Payment will represent Repayable Capital Investments plus interest collected from the “Increased Allocation Contractors” for that particular year.

20.6. FY 2068: Collection and reimbursement of Repayable Capital Investments at the end of the Contract term, September 30, 2067, shall follow the procedure outlined in subsection 20.5 herein, substituting appropriate dates, Attachments, and entities as necessary, subject to applicable laws, regulations, and policies.

20.7. Equal Treatment: If the United States shall implement funding of replacements on terms which are more favorable to a Contractor than the terms contained in this Restated Agreement, the United States shall promptly make such terms available to all Contractors.

21. **REIMBURSEMENT OF WORKING CAPITAL, REPAYABLE CAPITAL INVESTMENTS, AND RECONCILING ITEMS FOR REALLOCATION OF A CONTRACTOR'S ALLOCATION:**

21.1. In the event that Western reallocates a Contractor's Allocation under section 16 of the Contract, each party contracting with Western for all or part of such reallocation shall, within ninety (90) days after the reallocation becomes effective, reimburse the relinquishing Contractor for the relinquishing Contractor's proportionate shares of Working Capital, Repayable Capital Investments, and reconciling items, including but not limited to undelivered orders, sequestered amounts, and multi-year project funding, as of the last full month prior to the reallocation. The reimbursement will be in an amount proportionate to the portion of the reallocated Contractor's Allocation taken by such party, unless reimbursement for these items is waived by written notice to Western from the Contractor requesting the reallocation of their Contractor's Allocation. The total amounts of the relinquishing Contractor's proportionate shares of Working Capital, Repayable Capital Investments, and reconciling items shall be determined by Reclamation as of the last day of the calendar month immediately preceding the effective date of the reallocation under section 16 of the Contract. Reclamation shall determine the relinquishing Contractor's proportionate share of Working Capital in accordance with section 15 herein. Reclamation shall determine the relinquishing Contractor's proportionate share of reconciling items in accordance with current Reclamation and/or Department of the Interior standards. Reclamation shall determine the relinquishing

Contractor's proportionate share of Repayable Capital Investments in accordance with section 20 herein.

- 21.2. In the event a Contractor's Allocation is terminated by Western under section 17 of the Contract, the terminated Contractor shall not be entitled to reimbursement for Working Capital, Repayable Capital Investments, and reconciling items. The terminated Contractor's proportionate shares of Working Capital, Repayable Capital Investments, and reconciling items shall be reallocated in the same manner as Western reallocates the terminated Contractor's Allocation under section 17 of the Contract.
- 21.3. Upon request by a Contractor, Reclamation shall identify the amount of the Contractor's estimated share of their current contributions for Working Capital, Repayable Capital Investments, and reconciling items, as of the last full month prior to the request.
22. **APPLICABLE LAWS**: Any reference in the Contract or this Restated Agreement, to any Federal act, statute, or regulation, shall be deemed to be a reference to such act, statute, or regulation and all amendments and supplements thereto in existence on the date of execution of the Contract or this Restated Agreement, unless specifically noted otherwise; provided, that nothing in the Contract or this Restated Agreement is intended to limit the sovereign authority of Congress. The charges for electric service under the Contract are currently established to recover the costs and financial obligations associated with the BCP as specified by law. In the event that a Change in Law materially impairs any right, benefit, or interest of a Contractor under the Contract or this Restated Agreement, or imposes any material increase in cost, or reduction in allocation of capacity or energy, or otherwise materially changes an obligation on a Contractor under the Contract or this Restated Agreement, the Parties shall promptly meet and discuss in good faith regarding possible changes to the Contract, or this Restated Agreement, to mitigate the impact of the

Change in Law. The rights and remedies under this section and section 24 of the Contract are cumulative and in addition to, not exclusive of or in substitution for, any other rights and remedies available under law or equity.

23. **RESTATED AGREEMENT**: Except as provided in section 31 herein, it is mutually understood and agreed that this Restated Agreement represents the complete agreement of the Parties, and that no amendment, alteration or variation of the terms, conditions, covenants, and obligations of this Restated Agreement, shall be valid and binding unless made in writing and signed by the Parties hereto.
24. **NOTICE**: Any notice, demand, or request specifically required or permitted under this Restated Agreement to be in writing shall be deemed properly served, given, or made when delivered in person or sent by postage prepaid registered or certified mail, commercial delivery service, facsimile, electronic, prepaid telegram, or by other means with prior agreement of the Parties, to each Party's authorized representative at the principal offices of the Party. The designation of the person to be notified may be changed at any time by similar notice. Where facsimile or electronic means are utilized for any communication covered herein, the sending Party shall keep a contemporaneous record of such communications, as objective proof of delivery.
25. **DISPUTES**: Any unresolved issues or any disputes arising out of this Restated Agreement shall be subject to section 20 of the Contract. Aside from the Tribal Contractor's limited waiver to submit to dispute resolution related to the Contracts or this Restated Agreement as described in subsections 20.3 and 20.4 of the Contract, nothing in this Restated Agreement, or in any current or future schedules, attachments, exhibits, amendments, or addenda, is intended to be or shall be construed as a waiver of any Tribal Contractor's sovereign immunity.
26. **RELATIONSHIP OF PARTIES**: The covenants, obligations, and liabilities of the Parties are intended to be separate and not joint or collective, and nothing herein contained

shall be construed to create an association, joint venture, trust, or partnership of the Parties. Each Party shall be individually responsible for its own covenants, obligations, and liabilities as herein provided. No Party shall be the agent of or have a right or power to bind any other Party or to waive any other Party's rights without such other Party's express written consent. Default in the performance of any obligation under this Restated Agreement, or lack of capacity to enter into this Restated Agreement, on the part of any Contractor shall not affect the performance of this Restated Agreement and the enforceability thereof between the United States and each of the other Contractors.

27. **FEDERAL/TRIBAL CONTRACTOR CONSULTATIONS AND**

COMMUNICATIONS: Nothing in this Restated Agreement, including but not limited to sections 7, 8, and 9 herein, shall limit the United States or Federally Recognized Indian Tribes and Tribal Contractors which are signatories to this Restated Agreement from conducting government-to-government consultations and communications at any time.

28. **MODIFICATION AND WAIVER**: Any modification, extension, or waiver of any provision or requirement of the Contract or this Restated Agreement granted for the benefit of Contractor in connection with electric service from the BCP shall not be denied to any other Contractor, provided that any Federal obligations due to the unique constitutional and political status of Federally Recognized Indian Tribes shall remain exclusive to Tribal Contractors. Any waiver at any time by any Party hereto of its rights with respect to a default or any other matter arising under or in connection with this Restated Agreement shall not be deemed to be a waiver with respect to any subsequent default or matter.

29. **EFFECT OF SECTION HEADINGS**: Other than definitions, section headings appearing in this Restated Agreement are inserted for convenience only, and shall not be considered as interpretation of text.

30. **RESOLUTIONS**: Resolutions adopted in accordance with subsection 8.2.5 herein will be attached and made part of this Restated Agreement.

31. **EXHIBITS AND ATTACHMENTS:** Any future exhibit(s), as well as Attachments 1.IA through 10.IA, are incorporated by reference herein and shall be considered a part of this Restated Agreement. Any future exhibit(s) may be added or updated, from time to time by written consent of the Parties, which consent shall not be unreasonably withheld. Any future exhibit(s) shall be in force and effect until superseded by a subsequent exhibit executed by the Parties. Changes, additions, or modifications to the Attachments may be made by Reclamation and Western as appropriate; provided, that Reclamation and Western shall provide to the Contractors written notice of, and an opportunity to comment on, any proposed changes, or addition of an Attachment, at least thirty (30) days prior to the effective date of such revised Attachment and at least ninety (90) days for an additional Attachment. Attachments shall be in force and effect until superseded by a subsequent Attachment. This section does not permit and shall not be interpreted to allow Reclamation or Western to distribute or issue any Attachment on a subject matter not addressed in an initial Attachment without the prior written consent of the Contractors.
32. **SUCCESSOR OR ASSIGNEE:** Any successor or assignee of the rights of any Party, whether by voluntary transfer, judicial or foreclosure sale or otherwise, shall be subject to all the provisions and conditions of the Contract and this Restated Agreement to the same extent as though such successor or assignee were the original Party under the Contract and this Restated Agreement, and the execution of a mortgage or trust deed, or judicial or foreclosure sale made thereunder, shall not be deemed voluntary transfer within the meaning of this section. No assignment or transfer of any rights under the Contract and this Restated Agreement shall be effective unless and until the assignee or transferee agrees in writing to assume all of the obligations of the assignor or transferor and to be bound by all of the provisions and conditions of the Contract and this Restated Agreement.
33. **EXECUTION BY COUNTERPART:** This Restated Agreement may be executed in any number of counterparts and, upon execution and delivery by each Party, the executed and

delivered counterparts together shall have the same force and effect as an original instrument as if all Parties had signed the same instrument. Any signature page of this Restated Agreement may be detached without impairing the legal effect of any signatures thereon, and may be attached to another counterpart of this Restated Agreement identical in form hereto, by having attached to it one (1) or more signature pages.

34. **AUTHORITY TO EXECUTE**: Each individual signing this Restated Agreement certifies that the Party represented has duly authorized such individual to execute this Restated Agreement that binds and obligates the Party.

[Remainder of Page Intentionally Blank]

The Parties agree this Restated Agreement to the Contract has been executed by duly authorized representatives of the Contractors, Western, and Reclamation and is to be effective in accordance with section 4, herein.

THE UNITED STATES OF AMERICA
DEPARTMENT OF ENERGY
WESTERN AREA POWER ADMINISTRATION

Date_____ By_____

Jack D. Murray

Title_____ Vice President of Power Marketing_____

Address_____ for Desert Southwest Region_____

_____ P.O. Box 6457_____

_____ Phoenix, AZ 85005-6457_____

THE UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

Date_____ By_____

Terrance J. Fulp, Ph.D.

Title_____ Regional Director_____

Address_____ Bureau of Reclamation_____

_____ Lower Colorado Region_____

_____ P.O. Box 61470_____

_____ Boulder City, NV 89006-1470_____

[Remainder of Page Intentionally Blank]

City of Riverside agrees this Restated Agreement to Contract No. 16-DSR-12649 has been executed by a duly authorized representative of the Contractor and is to be effective in accordance with section 4, herein.

(SEAL)

CITY OF RIVERSIDE, CALIFORNIA

ATTEST

By_____

By_____

John A. Russo

Title_____

Title_____

City Manager

Date_____

Address_____

City of Riverside

3900 Main Street

Riverside, CA 92522

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Attachment 1.IA to
Amended and Restated Boulder Canyon Project
Implementation Agreement (Restated Agreement)
Agreement No. 95-PAO-10616 (Western)
Agreement No. 5-CU-30-P1128 (Reclamation)

ATTACHMENT 1.IA

COMMITTEE REPRESENTATIVES

COORDINATING COMMITTEE REPRESENTATIVES

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SAN DIEGO COUNTY WATER AUTHORITY

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Attachment 2.IA to
Amended and Restated Boulder Canyon Project
Implementation Agreement (Restated Agreement)
Agreement No. 95-PAO-10616 (Western)
Agreement No. 5-CU-30-P1128 (Reclamation)

ATTACHMENT 2.IA

LOWER COLORADO RIVER MULTI-SPECIES CONSERVATION PROGRAM

ATTACHMENT 2.IA

LOWER COLORADO RIVER MULTI-SPECIES CONSERVATION PROGRAM

1. In accordance with section 11 of the Contracts and subsection 2(d)(2)(E) of the Hoover Power Allocation Act of 2011, each Contractor's proportionate share of its State's respective contribution to the cost of the MSCP is determined in accordance with each State's applicable funding agreement. The funding agreement applicable to Contractors located in Arizona is the Trust Indenture and Joint Payment Agreement. The funding agreement applicable to Contractors located in California is the First Amended California Joint Payment Agreement for the Lower Colorado River Multi-Species Conservation Program. The funding agreement applicable to Contractors located in Nevada is the First Amended Agreement to Share the Costs of Implementation of the Lower Colorado River Multi-Species Conservation Program Among the Colorado River Commission of Nevada and Electric Service Contractors.
2. Each Schedule A and Schedule B Contractor is a party to its respective State's funding agreement. Each Schedule A and Schedule B Contractor has paid, and shall continue to be required to pay, its respective MSCP cost share contribution in the amounts and in the manner specified by its respective State funding agreement. Reclamation will not issue bills for collection to Schedule A or Schedule B Contractors, under this Restated Agreement.
3. As provided in section 13 of the Restated Agreement, Reclamation will issue quarterly bills for collection to Schedule D Contractors in California and the Tribal Contractors in Arizona and Nevada, and these Schedule D Contractors shall make payment to Reclamation. Although these Schedule D Contractors are not expected to become parties to any of the State funding agreements, the amount of each of these Schedule D Contractor's proportionate share of the MSCP funding schedule billed by Reclamation will be determined in accordance with the applicable State funding agreement. This provision does not apply to non-tribal entities that received Schedule D allocations from Western and are offered contracts through APA and CRC.

4. On an annual basis, the entity responsible under each State funding agreement for determining the proportionate MSCP cost share payment due from each Contractor located in that State shall determine the amount payable by each Contractor in accordance with the terms of the State funding agreement, and shall provide written notice to Reclamation and to each of the Contractors located in that State indicating the amount payable. Reclamation will issue bills to the Schedule D Contractors in California and the Tribal Contractors in Arizona and Nevada for collection based on this notice.
5. The proportionate share of the MSCP cost share contribution is based on the cost share allocations specified in MSCP program documents, specifically including Section 8 of the MSCP Funding and Management Agreement and Table 7-1 of the MSCP Habitat Conservation Plan, stated in 2003 dollars. In accordance with the MSCP program documents, the amount of the cost share contribution is adjusted annually for inflation.
6. The tables below identify the respective cost share contributions for each Schedule D Contractor in California and the Tribal Contractors in Arizona and Nevada as of October 1, 2017, as determined under the applicable State funding agreements.
7. Should a Schedule D Contractor's Allocation be reduced or increased, as described in section 16 of the Contract, the Contractor's funding obligation will be reduced or increased, accordingly, as of the effective date of the reallocation. The State MSCP cost-share formulas are based on the capacity and energy of all BCP and Parker-Davis Project power users within the state, so adjustments may be made to cost-share amounts if the energy and capacity of the power users are adjusted.

MSCP COST SHARE

Schedule D Tribal Contractors – Arizona Allocation

Quarterly Payment Due:

$\$119,000 \times IA^{(1)} \times \text{Tribal } \%$

Tribal %

Fort McDowell Yavapai Nation	.0806 %
Gila River Indian Community	.7154 %
Hualapai Indian Tribe	.0909 %
Kaibab Band of Paiute Indians	.0296 %
Navajo Tribal Utility Authority	.7154 %
Pascua Yaqui Tribe	.1042 %
Salt River Pima-Maricopa Indian Community	.7154 %
Tohono O'odham Nation	.6460 %
Tonto Apache Tribe	.0596 %

Schedule D Contractors – California Allocation

Quarterly Payment Due:

$\text{California Required Payment (2003 dollars)} \times 20\% \times IA^{(1)} \times \text{Contractor } \%$

Tribal %

Agua Caliente Band of Cahuilla Indians	.1077 %
Augustine Band of Cahuilla Indians	.0356 %
Bishop Paiute Tribe	.0283 %
Cabazon Band of Mission Indians	.0746 %
Chemehuevi Indian Tribe	.1039 %
Morongo Band of Mission Indians	.0817 %
Pechanga Band of Luiseno Mission Indians	.1487 %
San Luis Rey River Indian Water Authority	.2230 %
San Manuel Band of Mission Indians	.1899 %
Timbisha Shoshone Tribe	.0089 %
Torres Martinez Desert Cahuilla Indians	.1234 %
Twenty-Nine Palms Band of Mission Indians	.0982 %
Viejas Band of Kumeyaay Indians	.1032 %

Non-Tribal %

Anza Electric Cooperative, Inc.	.1186%
California Department of Water Resources	.2230%
City of Cerritos	.2230%
City of Corona	.2221%
City of Rancho Cucamonga	.2230%
City of Victorville	.1951%

Schedule D Tribal Contractors – Nevada Allocation

Quarterly Payment Due:

$$\underline{\$469,635 \times \text{IA}^{(1)} \times \text{Tribal \%}}$$

Tribal %

Las Vegas Paiute Tribe	.1265 %
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⁽¹⁾ IA = Inflation Adjustment means for any Program Year the inflation adjustment factor calculated for that Program Year pursuant to Section 8.1.1 of the Funding and Management Agreement.

Attachment 3.IA to
Amended and Restated Boulder Canyon Project
Implementation Agreement (Restated Agreement)
Agreement No. 95-PAO-10616 (Western)
Agreement No. 5-CU-30-P1128 (Reclamation)

ATTACHMENT 3.IA

WORKING CAPITAL CALCULATION

ATTACHMENT 3.IA
WORKING CAPITAL CALCULATION

1. The annual Working Capital will be collected by the process described in section 15.4 of the Restated Agreement.
2. By February 1st of each year after Fiscal Year 2017, Reclamation shall prepare a Projected Dam Fund Balance Analysis.
 - 2.1. The Projected Dam Fund Balance Analysis shall be based upon the most recent approved final BCP Ten Year Operating Plan prepared in accordance with section 8 of the Restated Agreement.
 - 2.2. The analysis reflects the monthly cash in-flows to the Colorado River Dam Fund by Annual Revenue Requirement and out year projected revenue by the established categories.
 - 2.3. The analysis reflects the monthly obligations to the Colorado River Dam Fund by established categories.
 - 2.4. The analysis reflects the balance of unobligated funds in the Colorado River Dam Fund on the last day of each month.
3. The Working Capital methodology may be changed to meet changing needs of the project. Each year following Fiscal Year 2019, the change in the amount of Working Capital, to be accumulated through or credited against the Annual Revenue Requirement during the upcoming Fiscal Year, shall be determined by Reclamation. The Working Capital amount will be positively or negatively adjusted to ensure the balance of the unobligated funds in the Colorado River Dam Fund on the last day of each month in the upcoming Fiscal Year is zero (0) or a positive amount.
4. Reclamation shall mitigate, to the extent possible, any increases in the Working Capital amount. Based upon any adjustments to the Annual Revenue Requirement, Reclamation shall prepare a revised Projected Dam Fund Balance Analysis. The Projected Dam Fund Balance Analysis shall be emailed to the

E&OC Representatives within two (2) weeks after submission of the most recent final BCP Ten Year Operating Plan.

5. The Projected Dam Fund Balance Analysis shall be reviewed and discussed at the third Fiscal Year regularly scheduled E&OC meeting. If necessary, as determined by the E&OC, a subcommittee of the E&OC will be established to further meet, review and analyze the Monthly Obligated Funds Flow Analysis with Reclamation.
6. Upon approval of the Projected Dam Fund Balance Analysis by the E&OC, Reclamation shall notify Western of any necessary changes in the amount of the Working Capital to be accumulated through or credited against the Annual Revenue Requirement during the upcoming Fiscal Year.

Example Calculation:

BOULDER CANYON PROJECT Projected Dam Fund Balance Using Incremental Obligation Funding Fiscal Year 2018 BASED ON FY2016 FINAL TEN YEAR PLAN																
Month	REVENUE						OBLIGATIONS									
	Beginning Balance	Net Power	Water	WAPA-Other	Visitor Services	TOTAL REVENUE	Operation Maintenance A&GE	EOM	Visitor Services	Replacements	Payment of States	Principal Payment	Interest Payment	Transfers to WAPA	TOTAL OBLIGATIONS	ENDING BALANCE
October '17	0		44,167		887,345	931,512	2,688,291	63,000	446,578	875,000	-	-	-	656,583	4,729,452	(3,797,940)
November '17	(3,797,940)		44,167		797,518	841,685	4,397,046	62,000	652,857	1,009,000	-	-	-	656,583	6,777,486	(9,733,742)
December '17	(9,733,742)	4,084,523	44,167	120,833	870,364	5,119,887	4,120,475	182,000	977,359	1,009,000	-	-	-	656,583	6,945,417	(11,559,272)
January '18	(11,559,272)	4,843,390	44,167	120,833	832,728	5,841,118	2,489,438	386,000	405,455	1,009,000	-	538,000	-	656,583	5,484,476	(11,202,630)
February '18	(11,202,630)	4,800,683	44,167	120,833	781,768	5,747,451	3,857,891	385,000	570,997	1,282,000	-	-	-	656,583	6,752,471	(12,207,650)
March '18	(12,207,650)	5,201,470	44,167	120,833	1,103,502	6,469,972	4,483,848	203,000	1,088,717	1,707,000	-	-	-	656,583	8,139,148	(13,876,826)
April '18	(13,876,826)	5,244,177	44,167	120,833	1,185,350	6,594,527	3,776,006	200,000	557,498	990,000	-	-	-	656,583	6,180,087	(13,462,387)
May '18	(13,462,387)	6,141,020	44,167	120,833	1,001,504	7,307,524	3,785,152	200,000	658,457	585,000	600,000	-	-	656,583	6,485,192	(12,640,055)
June '18	(12,640,055)	6,683,068	44,167	120,833	1,171,768	8,019,836	3,985,896	813,000	899,914	586,000	-	-	434,000	656,583	7,375,393	(11,995,612)
July '18	(11,995,612)	6,380,835	44,167	120,833	1,315,719	7,861,554	3,572,092	813,000	630,029	425,000	-	-	-	656,583	6,096,704	(10,230,763)
August '18	(10,230,763)	6,052,321	44,167	120,833	1,137,336	7,354,657	3,900,146	813,000	676,034	422,000	-	-	-	656,583	6,467,763	(9,343,869)
September '18	(9,343,869)	6,029,325	44,167	120,833	915,099	7,109,424	3,995,721	813,000	1,069,106	-	-	-	-	656,583	6,534,410	(8,768,855)
October '18	(8,768,855)	5,362,442		120,833		5,483,275									0	(3,285,580)
November '18	(3,285,580)	4,879,526		120,833		5,000,360									0	1,714,780
Total		65,702,780	530,000	1,450,000	12,000,000	79,682,780	45,052,000	4,933,000	8,633,000	9,899,000	600,000	538,000	434,000	7,879,000	77,968,000	

Lowest Monthly Balance projected Fiscal Year 2018

\$13,876,826

FY 2018 Lowest Monthly Balance rounded to the nearest million

\$14,000,000

Plus an additional \$1,000,000 increase to ensure solvency

\$ 1,000,000

Total Working Capital Fund Reserve

\$15,000,000

Attachment 4.IA to
Amended and Restated Boulder Canyon Project
Implementation Agreement (Restated Agreement)
Agreement No. 95-PAO-10616 (Western)
Agreement No. 5-CU-30-P1128 (Reclamation)

ATTACHMENT 4.IA

MULTI-PROJECT WRITTEN PROCEDURES

*****PROCEDURES FOR MULTI-PROJECTS COSTS*****

Multi-project Costs (MPC) are the costs of those facilities which are paid for through the appropriation process by one Project, but provide benefits to other Projects.

Projects identified in the MPC allocation process:

AC Intertie Project

Boulder Canyon Project

Central Arizona Project

Colorado River Basin Salinity Control Project

Colorado River Front Work and Levee System

Colorado River Storage Power System

Parker-Davis Project

Facilities identified in the MPC allocation process that benefit other Projects:

Items 1. Phoenix Service Center and Mead Service Center.

Item 2. SCADA System

Items 1, Phoenix Service Center and Mead Service Center:

The factor for distribution of costs for the Phoenix Service Center and the Mead Service Center was based on the methodology used for the Desert Southwest Regional Office's distribution of General Western Allocations (GWA). This distributes building

costs in the same percentage as the direct hours charged against the Projects. The procedure for developing the distribution of General Western Allocations (GWA) is:

- a) Determine direct labor hours (DLH) from the General Ledger 451 report (O&M) from the previous year. Insert them in the second column of the table below.

- b) Divide these hours by a productive staff hour figure that accounts for loss of productive staff hours related to sick leave, annual leave, training, and other uses. The current figure for staff hours is 1,750. The 1,750 number was based on a 5-year average of previous actual data. The resultant figure is shown in the third column of the table below.

- c) Determine the percentage figure of the total for each project in the fourth column of the table below. This percentage figure is then used to allocate the MPC to each project.

- d) Current year data is provided in Appendix D.

Sample Showing FY 1994 Distribution for Service Centers MPCs

Project	Direct Labor Hours	# of FTE	Percentage
AC Intertie Project	14,966.00	8.57	7.02%
Boulder Canyon Project	23,772.80	13.58	11.12%
Central Arizona Project	14,269.70	8.15	6.67%
Colorado River Basin Salinity Control Project	958.40	0.55	0.45%
Colorado River Front Work and Levee System	945.00	0.54	.044%
Colorado River Storage Project	14,144.00	8.08	6.62%

Parker-Davis Project	144,670.23	82.67	67.68%
Total	213,756.13	122.14	100.00%

Item 2, SCADA:

- a) The factor for each Project is based on the total distribution of data point count requirements currently allocated and in service. The calculations are based on documented current point count utilization requirements for the SCADA as determined by Operations as of April 1994. The number of points will be reviewed annually.

- b) The percentages for the point factor are calculated by dividing the number of the individual project points by the total number of points. The total SCADA point count used in the current analysis is included in Appendix C.

- c) The following table displays an example of calculating the point factor percentage for each project based on the number of total points to each individuals project points, based on current point allocations.

- d) Current year data is provided in Appendix C.

Distribution Showing FY 1994 SCADA costs in MPCs

Project	# of Points	Percentage
AC Intertie Project	1,441	16.50%
Boulder Canyon Project	733	8.39%
Central Arizona Project	479	5.48%
Colorado River Basin Salinity Control Project	50	.57%
Colorado River Front Work and Levee System	0	0%
Colorado River Storage Project	474	5.43%
Parker-Davis Project	5,558	63.63%
Total	8,735	100.005

Elements of costs related to Items 1 and 2 are:

1. Historic and Future Investments Costs (both Additions and Replacements)
2. Interest Expense

Procedures for compiling the Multi-projects Costs.

1. Identify Investments, include both Plant-In-Service and Construction Work-In-Progress (CWIP) for historic years and appropriate future years. The Investments in the current study were identified by a Desert Southwest Regional Office MPC Process Improvement Team and documented in their final report.

While reviewing the data under the Phoenix Service Center in Western's FY 1994 Results of Operations Plant-In-Service (Schedule 1), \$7,351,068 is related to the old SCADA system. Western has determined that the old SCADA system should be fully funded by the Parker-Davis Project. Based on this information, Western proposed that the costs for the old SCADA system should not be included in the Multiproject Cost allocation process. All other cost booked to the SCADA system accounts are related to

the new SCADA system and should be included in the Multiproject cost allocation process.

The SCADA costs from the Engineering & Construction Ten-Year Plan were evaluated further to determine which portion of the costs were Replacements and which portion of the costs were Additions. A tabulation and analysis was compiled by Operations and is included in Appendix C.

2. Gather the current year Plant in Service data from Western's Results of Operations (ROOS), Schedule 1, General Ledger 10100/10610. The data for the current tables in Appendix A are marked on page 15 of GL 10100 and page 29 of GL 10610 of the Parker Davis ROOS for the Phoenix Service Center; page 2 of the Intertie ROOS for GL 10100 for the Mead Service Center; and page 4 of the Intertie ROOS for GL 10610 for the Mead Service Center. This data is then directly input into a spreadsheet which is shown in Appendix D titled "Multiproject Cost Allocations").
3. Gather the budgeted annual investment cost for the current year and the first five (5) future years. This information for the Phoenix O&M Stage 02 and for the SCADA as shown in Appendix B, is obtained from the 1995 Final Engineering and Construction Ten-Year Plan, Section B, page A1, items 6 and 7; and from GL 10710, Schedule 2, pages 9 and 10 in Appendix A. Add the Construction Work in Progress amounts from GL 10710 for all the work order totals shown on pages 9 and 10 plus the current year IDC to the Phoenix Service Center costs.
4. The SCADA costs in Appendix C are taken from the data from the paragraph above and allocated into Replacements and Additions.
5. Allocated the historical and future cost by the allocation factors.
6. The procedure for determining the interest rate is documented in the DOE Order RA 6120.2.11, Change 1, Dated October 1, 1983. A paraphrase of Paragraphs 11.a and b of the Order is that the interest rate used for computing interest during construction (IDC) and interest on the unpaid balance of the costs of Federal power facilities is the "yield rate" which is determined by the Secretary of the Treasury as of October 1 of the preceding fiscal year. The yield rate is the average yield during the preceding fiscal year on interest-bearing marketable securities of the United States, which, at the time of the computation, have terms of 15 years or more remaining to maturity. In the year, construction costs are charged to a FERC plant accounts 301 and 350 or above, the Treasury interest rate for that year is the interest rate is assigned to the life of the investment.

7. To determine service lives of investments, look up the unit of property in the current edition of the book entitled “Replacements Units Service Lives Factors” as jointly published by the U.S. Department of Energy, Western Power Administration, and the U.S. Department of Interior, Bureau of Reclamation, dated May 1989.

Set up project-specific amortization tables for each facility. A sample amortization table is included in Appendix D with references to where the input data comes from. The amortization tables begin with Page 2 of the same spreadsheet titled “Allocations”. The amortization tables for each project consist of:

- a) an amortized amount from steps (2), (3), and (4) above.
 - b) the Project allocated costs as determined in (5) above.
 - c) an interest rate
 - d) a Service Life
-
9. The Rates Division will update the power repayment study for each project so that the future revenue distribution will reflect the current percentages for the Multiproject Costs. For those Projects with annual appropriations or annual funds advancement, the recovery of costs will be handled annually by accounting adjustments to Operating Expenses as a separate “Rental/Lease” payment entry.
 - a) The Boulder Canyon Project rates are determined each year. The rate process allows the addition of MPC.
 - b) Parker-Davis Project, Pacific Northwest-Pacific Southwest Intertie Project and the Colorado River Storage Project have multi-year rate processes. The rate process will allow the addition of the MPC.

c) The Central Arizona Project Contracts will allow the addition of MPC.

d) Western and the Bureau of Reclamation have a “Master and Operating Agreement” which covers the operation and maintenance of joint use facilities as well as facilities transferred to Western. This agreement included the Colorado River Basin Salinity Control Project and Colorado River Front Work and Levee System. The MPC is covered as associated funding requirements under these Projects.

10. The Rates Team Lead will initiate a memo to the Financial Manager for request of the appropriate accounting entries to each project accounts for the specific current year costs and specific current year offsets to the costs prior to September 15 of each Fiscal Year.

11. The timelines for updating Appendices and repayment tables are as follows:

Requests financial data (Rates Team Lead)	September
Updates Appendix A data (Rates)	January
Prepares final PRS (Rates)	December
Updates Service Center hour distribution table (Rates)	December
Updates SCADA points table (Appendix C) (Operations)	December
Updates Ten-Year Engineering Plan (Maintenance)	October
Updated Amortization Tables (Appendix D) (Rates)	January
Distributes to E&OC	February

**MULTI PROJECT BENEFITS
PROCEDURES**

BCP MULTI PROJECT BENEFITS

OVERVIEW

Purpose: Provide a written summary of the process for determining, calculating, and allocating the Multiproject benefits of exchange energy through resource integration of Western Area Lower Colorado (WALC) federal projects, inclusive of internal energy exchanges among the Boulder Canyon Project participants, and among the Parker-Davis Project participants.

Resource Integration Definition: The process of mutually agreeing to a statically scheduled firm monthly exchange of energy among individual participants of the Boulder Canyon Project and among the Parker-Davis Project customers is Resource Integration. All monthly energy exchanges must zero balance at the completion of each fiscal year. The energy exchanged is a firm commitment by all participants and is received within each contractor's available contract capacity entitlement. Additional capacity to deliver or receive energy is not a component of the integration process.

Resource Integration Criteria: The primary points of concern to Western, as the resource manager, when planning and implementing the integration process are Equity, Risk Management, Operational feasibility, and serving Customer requests consistent with sound business practice. A more focused description of the criteria elements follows:

Equity: Each participant and project, within the requested compatible monthly energy exchange profiles, realized an energy diversity benefit on a fiscal year basis similar in value to other participating contractors and projects. If a contractor's requested monthly exchange profile is not compatible with the integrated offering of other participants, energy exchanges for the individual contractor will not be possible. The individual participants value the energy diversity benefits. When requested, Western will provide an estimate of benefit based on the spot market replacement of energy.

Risk: Western Area Lower Colorado (WALC), in agreeing to exchange firm blocks of monthly energy between federal projects, gauges and accepts a degree of uncertainty in resource and load availability, which could cause detrimental operational effects throughout the fiscal year. Each contractor agrees to accept the possible detrimental effects that altered monthly energy target may have on their individual resource availability profiles.

Operational Feasibility: WALC, in conformance with all active contractual obligations, considers resource impacting elements such as planned unit outages, levels of monthly projected generation from Hoover, Parker and Davis planned capacity restrictions and Lower Colorado river release restrictions, in preparation of monthly energy exchanges used in the Resource Integration program.

Customer Requests: Each contractor requests exchange energy to achieve improved load and resource matching and thus reduce the cost of operation. WALC attempts to provide the desired exchange energy within EQUITY, RISK, and OPERATIONAL FEASIBILITY criteria. At times, the individual customer monthly energy exchange requests cannot be met within all criteria or does not contain adequate diversity to permit energy exchanges. The customer making such an energy exchange will be excluded from the Resource Integration Program. The customer energy exchange requests are considered first among the contractors and then between the WALC federal projects. WALC responds to each requesting participants with their level of Resource Integration participation prior to June 1 of each calendar year.

Resource Integration Conflicting Requests: Circumstances in which Resource Integration participants request similar exchanges on certain months, that cannot both be served, will be individually considered when an adjustment in the particular month's exchange energy is made. Due to each customer's varying monthly requests a pro-rata reduction in exchanges between the individual customers is usually not operationally feasible and are reviewed individually. The thorough review results in a monthly exchange profile reduced to coincide with other requests over the 12 months of the target fiscal year.

Guidelines: These guidelines are used for determining the monthly exchange of energy for the Boulder Canyon Project and Parker-Davis Project follow.

PARKER DAVIS PROJECT: The primary elements which derive the projected resources and loads used in developing the PDP project Resource Integration energy exchanges are as follows:

a) Generation –

The monthly load profile is indexed according to the Bureau of Reclamation 2 year most probable water supply study and loss of interchanges received from other entities.

b) External –

The allocated load, using the baseline 1988 exhibits, as a reference is indexed to totalize monthly firm allocated load. This is also referred to as external load.

c) MWD Parker Dam Energy Entitlement –

Based on Parker monthly estimated releases, MWD received $\frac{1}{2}$ of the projected generation. These indexed values will act as additional firm Parker-Davis project load.

d) Internal –

Historical load profiles serve as the monthly WALC Control area internal kWh value and act as the third component of Parker-Davis project load.

e) Surplus/Deficiency in Generation –

To compute Parker-Davis surplus or deficiency in generation and provide a parameter for monthly energy exchange the following computation serves as a guideline which

may be adjusted as required. $\text{Generation (a)} - \text{External Load (b)} - \text{MWD Load (c)} - \text{Internal Load} - (d) = \text{Parker-Davis Generation Surplus/Deficiency}$.

f) Parker-Davis Monthly exchange generation –

On a monthly basis the surplus or deficiency in generation is evaluated as to the maximum quantity available, but not necessarily to be exchanged between projects.

g) Proposed Parker-Davis monthly Exchanged energy –

The computation for Parker-Davis project monthly exchanged energy is developed from each individual customer's proposed exchange requests. Each customer's separate request is listed using the following formula for proposed exchanges: $\text{Firm Allocation} - \text{Proposed Customer Allocation} = \text{Parker-Davis proposed Exchange}$, indexed by month. If the individual requested monthly exchanges do not comply with the Resource Integration criteria, then an adjustment on the pertinent month(s) is performed.

h) Parker-Davis Capacity –

To assure ample capacity is available for total Parker-Davis load and reserve requirements, a computation including consideration of planned unit outages is performed.

i) P-DP Customer notification –

P-DP customers interested in Resource Integration are formally notified by Western of the level of Integration possible for the subject fiscal year. P-DP customers rejecting Western integration plan may notify WALC's Power Scheduling Office by fax with a formal follow up letter to the Area Manager.

BOULDER CANYON PROJECT:

a) Generation –

The Hoover Master Schedule's preliminary monthly energy target pertaining to the subject fiscal year is the baseline resource reference for BCP resource integration planning purposes. A preliminary Master Schedule based on the latest BOR's 24 Month Most Probably Water Supply Study is distributed to the BCP contractors by December 15.

b) Individual exchange analysis –

Each customer's requested monthly exchange profile is provided to WALC by January 15th and is subtracted from the preliminary Master Schedule to ascertain each customer's energy exchange request. Individual Boulder Canyon participants energy exchange is assessed in two Stages. Stage 1 consists of 2 phases. Phase 1 conducted by WALC, is the total exchange analysis among all interested BCP contractor's requesting exchange. Phase 2 is the "individual" exchange analysis performed between BCP participants desiring energy exchanges on a one on one basis. Stage 2 is the Project exchange between Parker-Davis and Boulder Canyon Project. Exchange energy between Projects must meet the same Equity criteria as for individual participants. Ample diversity must be evident between Projects to permit a zero balanced energy exchange condition for each fiscal year.

c) Project exchange analysis –

The totalized Boulder Canyon Project proposed monthly exchange quantity, in Stage 2, is used to compare maximum monthly quantities offered by the Parker-Davis project. This comparison of the projects exchange quantities is the occasion in which the Resource Integration criteria is applied to determine the level of monthly exchange by each project.

d) BCP Master Schedule Redraft –

Following adjustment of the customers requested exchange to a practical level in Stage 2, a redraft of the Master Schedule, containing the proposed energy exchanges, is distributed to the customers. Following BCP customer acceptance of the proposed

energy exchange a draft of the Master Schedule is generated and distributed to the BCP customers. A minimum two week customer comment period is provided before the Actual Master Schedule is created.

f) Actual Master Schedule –

This document is created and distributed, in accordance with the contract, to all Boulder Canyon Contractors and includes Resource Integration energy exchange by June 1 of each year. Distribution of the Actual Master Schedule marks the completion of Resource Integration planning and is the date of formal acceptance by the Contractors.

SUMMARY OF ANNUAL RESOURCE INTEGRATION PROCESS AND REVIEW

The following is a narrative of the Resource Integration information presented at the June 9, 1995 Multiproject cost/benefit Meeting. It represents the annual process and review performed by the operations group.

HOOVER STG1 – VS - STG2 EXCHANGE: This graphical presentation compares Multiproject cost/benefit levels of available and accepted energy exchanges in Stage 1 as compared with Stage 2.

HOOVER ENERGY INTERCHANGE ACCOUNTING (Stage 1 and Stage 2 Summed): Information shown here is a listing of the final energy exchanged between all BCP participants on a monthly basis. The process as described in the Guidelines Section of stage 1 (phase 1 and phase 1) coincides with the creation of these values. All monthly exchange data listed in this summary are a component of the Hoover Master Schedule for the coming fiscal year.

DEPICTION OF ENERGY EXCHANGE FOR THE FISCAL YEAR: The information graphically and numerically shown here indicated the monthly exchange profile by project. The limitations to exchange are described in the Overview and Guidelines Sections. Complete and equitable exchanges that zero balance and that provide a degree of equity among the participants are shown here.

HOOVER STAGE 1&2 RESOURCE INTEGRATION EVALUATION & REVENUE COSTS:

This sheet is an example of the type of analysis available when requested for reviewing the replacement cost of energy exchanged as part of Stage 1 and Stage 2. Zero integration which was planned for in Stage 2, results in all Hoover Exchange Benefit to reflect only that which has to occur in Accepted Stage 1 value.

The sheet's purpose is to estimate the value of benefit the BCP contractors receive directly from energy exchanges.

Each Contractor may choose to assess this exchange value differently and may have a differing benefit weighting process for assessing value than are used by Western.

REVENUE ANALYSIS OF ENERGY EXCHANGES:

This sheet is an example of the type of analysis available, when requested for reviewing the stage 2 saving estimates. These are based on energy replacement and a weighted average of energy market prices over a period of time. Since there were no energy exchanges between BCP and P-DP for the fiscal year there was a zero net loss and a zero net gain between the two projects. The Parker-Davis Project exercised other exchange and purchase alternatives external to WALC projects.

PARKER-DAVIS CAPACITY FORECAST:

This summary has three sections (A, B, & C) that reflect the forecasted Parker-Davis Capacity availability and surplus capacity above reserve requirements. The data indicates that P-DP has the capacity available to meet its spinning reserve obligations.

HOOVER CAPACITY BALANCE:

The Hoover Capacity Balance sheet numerically and graphically depicts the capacity support provided amongst Hoover and Parker Davis as part of WALC Control Area resources. The information shows the level of capacity transfers made in the FY 94 fiscal year as a result of fungible resources being integrated into Control Area Operations. The Outcome is indicative of current operating practices which result in loading units at the most efficient point possible in response to the varying capacity schedules requested on a "Real Time" basis at Hoover.

CONCLUSION: The primary resource evaluation reference is the BOR 24 Month Study for P-DP and BCP. The historical internal load estimates and contractual firm loads serve as load references for P-DP Resource Integration analysis. A series of correspondences between Western and the Contractors in which Western provides the projected monthly generation estimates and receives energy exchange requests occurs between December 1st and January 15th each fiscal year. Following an analysis by Western a response indicating the level energy exchange possible is distributed to the Contractors. The Contractors reply to Western accepting or rejecting the exchange offered. Western then formally notifies the customers, by

June 1st, either through individual documents or through a Master Schedule of the finalized energy exchanges for the subject fiscal year. These guidelines may require modification to adjust to fluctuating hydro resource availability forecast or changing conditions in evaluating individual project exchanges or in analyzing individual customer exchange requests.

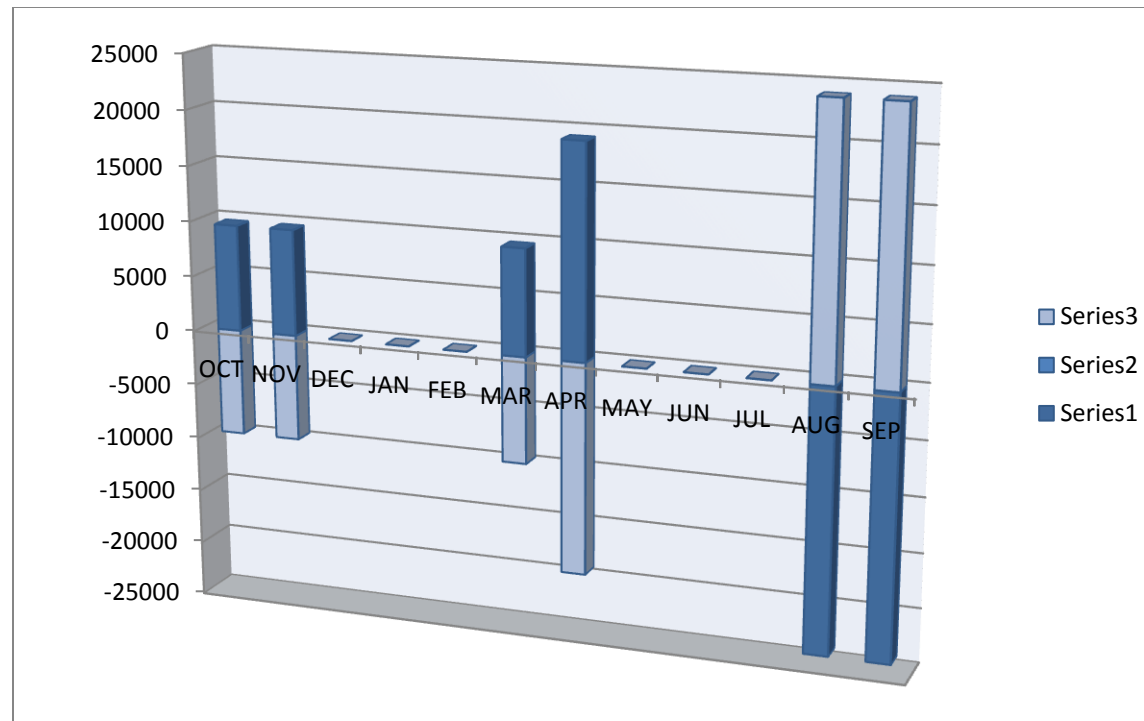
Western Area Power Administration														
FY96														
HOOVER ENERGY INTERCHANGE ACCOUNTING														
STAGES 1 & 2 SUMMED (MWh)														
Contractor	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	
LADWP SCHED ENTITY														
LADWP	700	-2664	2000	-709	125	0	0	0	175	175	198	0	0	0
BURBANK	-100	-350	-250	-400	200	0	0	0	200	300	400	0	0	0
GLENDALE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PASADENA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LADWP TOTAL	600	-3014	1750	-1109	325	0	0	0	375	475	598	0	0	0
SCE SCHED ENTITY														
SCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MWD	-690	8154	-1830	1230	-84	0	0	0	-2042	-2308	-2430	0	0	0
ANAHEIM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AZUSA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BANNING	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLTON	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RIVERSIDE	20	20	20	20	18	0	0	0	-138	20	20	0	0	0
SCE TOTAL	-670	8174	-1810	1250	-66	0	0	0	-2180	-2288	-2410	0	0	0
VERNON SCHED ENTITY														
VERNON	70	-22	60	-141	-259	0	0	0	92	100	100	0	0	0
SRP SCHED ENTITY														
APA	0	-5138	0	0	0	0	0	0	1713	1713	1712	0	0	0
NPC SCHED ENTITY														
CRC	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BOULDER CITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPC TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOOVER TOTAL														
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STAGE 2 MASTER for BCP Exchange														

Western Area Power Administration

FY96

DEPICTION OF ENERGY EXCHANGE FOR THE FISCAL YEAR

	PDP	HVR	ALT
OCT	9600	0	-9600
NOV	9600	0	-9600
DEC	0	0	
JAN	0	0	
FEB	0	0	
MAR	9600	0	-9600
APR	19200	0	-19200
MAY	0	0	
JUN	0	0	
JUL	0	0	
AUG	-24000	0	24000
SEP	-24000	0	24000



EXCHANGE.XLS

WESTERN AREA POWER ADMINISTRATION											
HOOVER STAGE 1 & 2 RESOURCE INTEGRATION COST EVALUATION AND REVENUE COSTS											
FY 96											
Stage 2											
		STG 1	STG1	STG 1	STG 1	STG 2	STG 2	STG 2	STG 2	STG 6	TOTAL
		REQUEST	REQUEST	Accepted	Accepted	Accepted	REQUEST	Accepted	Accepted		HOOVER
		EXCH	VALUE	EXCH	VALUE	EXCH	VALUE	EXCH	VALUE	AVERAGE	EXCH
		W/HVR	\$/MWH	W/HVR	\$/MWH	W/LCA	\$/MWH	W/LCA	\$/MWH	\$/MWH	BENEFIT
OCT	95	50669	\$ 960,408.06	790	\$ 14,965.23	49909	\$ 945,442.82	0	\$0.00	18.94	\$ 14,965.23
NOV	95	-34814	\$ (672,722.53)	8174	\$ 157,948.93	-42988	\$ (830,671.45)	0	\$0.00	19.32	\$ 157,948.93
DEC	95	-314	\$ (6,353.27)	2080	\$ 42,085.33	-2394	\$ (48,438.60)	0	\$0.00	20.23	\$ 42,085.33
JAN	96	66786	\$ 1,313,012.76	1250	\$ 24,575.00	65536	\$ 1,288,437.76	0	\$0.00	19.66	\$ 24,575.00
FEB	96	67778	\$ 1,225,200.31	343	\$ 6,200.30	67435	\$ 1,219,000.02	0	\$0.00	18.08	\$ 6,200.30
MAR	96	-45008	\$ (856,802.29)	0	\$0.00	-45008	\$ (856,802.29)	0	\$0.00	19.04	\$0.00
APR	96	-93442	\$ (1,884,413.67)	0	\$0.00	-93442	\$ (1,884,413.67)	0	\$0.00	20.17	\$0.00
MAY	96	-76258	\$ (1,415,094.29)	0	\$0.00	-76258	\$ (1,415,094.39)	0	\$0.00	18.56	\$0.00
JUN	96	4930	\$ 111,270.10	2180	\$ 49,202.60	2750	\$ 62,067.50	0	\$0.00	22.57	\$ 49,202.60
JUL	96	2467	\$ 56,782.12	2308	\$ 53,122.47	159	\$ 3,659.65	0	\$0.00	23.02	\$ 53,122.47
AUG	96	24659	\$ 595,679.24	2430	\$ 58,700.70	22229	\$ 536,978.54	0	\$0.00	24.16	\$ 58,700.70
SEP	96	57687	\$ 1,379,488.46	0	\$0.00	57687	\$ 1,379,488.46	0	\$0.00	23.91	\$0.00
TOTAL		25140	\$ 806,455.01	19555	\$ 406,800.56	5615	\$ 399,654.35	0	\$0.00		\$ 406,800.56
EXPLANATION: All cost evaluations are based on historical average sales prices of spot market energy. The Column entitled "Total Hoover Exch Value" is the savings to BCP exchange participants. Total Hoover Exchange benefit is based on the premise that each participant is benefitting in the exchange process when receiving energy when needed. This energy exchange value has been multiplied by the monthly historical average to produce an estimate of value.											

STAGE 2 MASTER for BCP Exchange

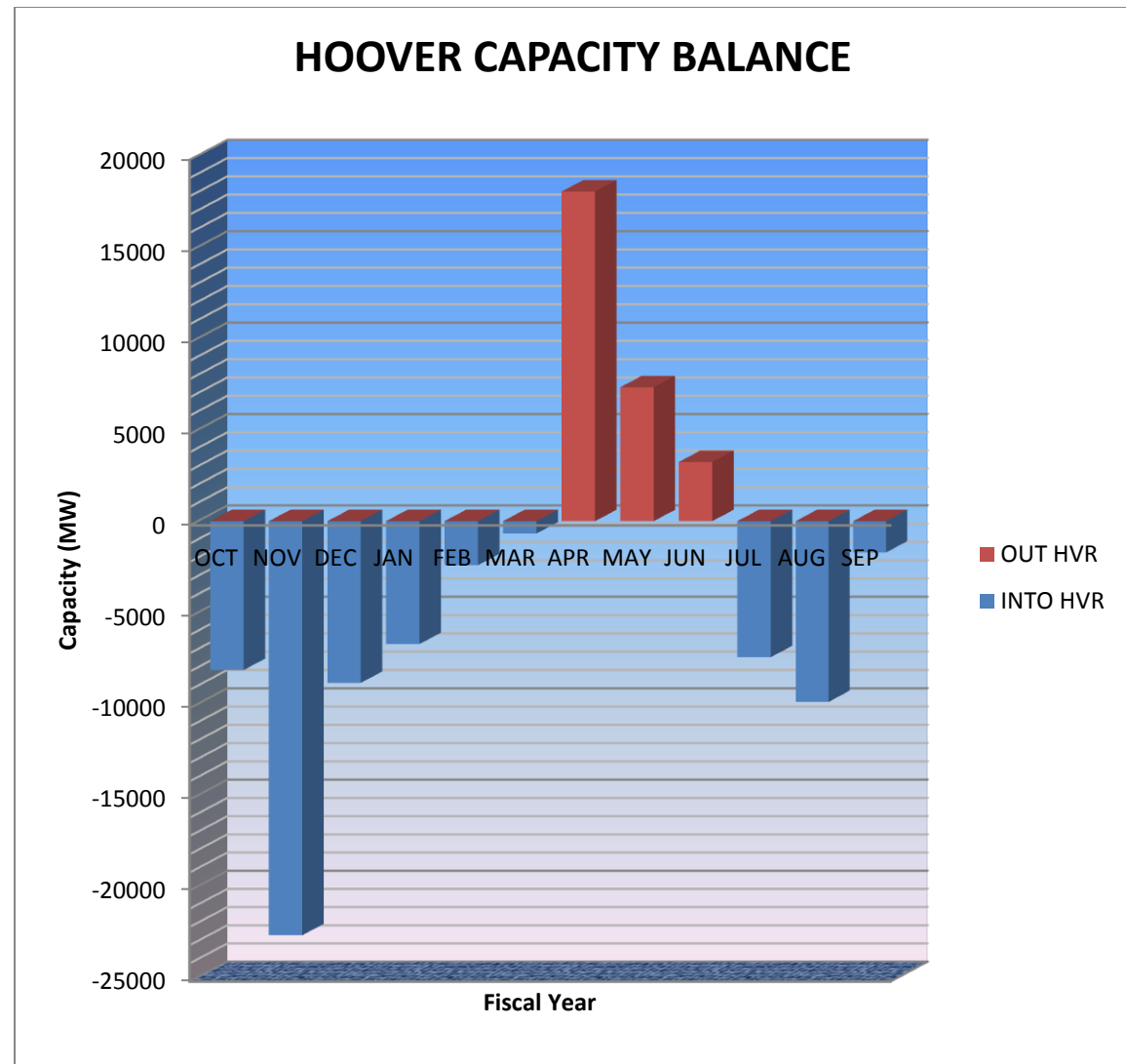
WESTERN AREA POWER ADMINISTRATION							
REVENUE ANALYSIS OF ENERGY EXCHANGES							
FY96	STAGE 2 ENERGY EXCHANGE ONLY						
	MWh	\$\$\$	MWh	\$\$\$	MWh	\$\$\$	ENERGY
	EXCH	VALUE	EXCH	VALUE	EXCH	VALUE	Exchange
MONTH	PDP*	PDP	HVR	HVR	Alt. Source	Alt. Source	PRICE
OCT	9600	(\$181,856.00)	0	\$0.00	-9600	\$181,856.00	\$18.94
NOV	9600	(\$185,504.00)	0	\$0.00	-9600	\$185,504.00	\$19.32
DEC	0	\$0.00	0	\$0.00	0	\$0.00	\$20.23
JAN	0	\$0.00	0	\$0.00	0	\$0.00	\$19.66
FEB	0	\$0.00	0	\$0.00	0	\$0.00	\$18.08
MAR	9600	(\$182,752.00)	0	\$0.00	-9600	\$182,752.00	\$19.04
APR	19200	(\$387,200.00)	0	\$0.00	-19200	\$387,200.00	\$20.17
MAY	0	\$0.00	0	\$0.00	0	\$0.00	\$18.56
JUN	0	\$0.00	0	\$0.00	0	\$0.00	\$22.57
JUL	0	\$0.00	0	\$0.00	0	\$0.00	\$23.02
AUG	-24000	\$579,760.00	0	\$0.00	24000	(\$579,760.00)	\$24.16
SEP	-24000	\$573,920.00	0	\$0.00	24000	(\$573,920.00)	\$23.91
TOT	0	\$ 216,368.00	0	\$0.00	0	(\$216,368.00)	\$20.64
<p>The anticipated savings estimates above are based on energy replacement and spot sale pricing. The Parker-Davis Project realized an approximate Net Loss of zero and a Net Gain of zero Revenue as there was no energy exchanges between BCP and P-DP for the Fiscal Year.</p> <p>The Parker-Davis Project and Boulder Canyon Project realized an avoided cost of \$216,368.00, through monthly energy exchanges.</p> <p>The exchange energy price is based on a monthly composite spot energy index averaged over the last 3 years. The polarity used in this spreadsheet is: +=Surplus energy, -=Deficiency of energy</p>							

EXCHANGE.XLS

FY96		PARKER-DAVIS CAPACITY FORECAST														
AREA - A																
A	B	C	D	E	F	G	H	I		J	K	L	M	N		O
			B x C			E x F		D + G + H					J + K + L + M			I - N
MONTH	DAVIS UNIT	OUTAGE Reduction	DAVIS Reserve	PARKER UNIT	OUTAGE Reduction	PARKER Reserve	HDG Reserve	TOTAL RESERVE		MWD Load	Allocated Firm Load	Spinning Reserve	WALC Internal	TOTAL Peak Load		Capacity Above
	RATING	%	Capacity	RATING	%	Capacity	Capacity	Capacity		Capacity	Capacity	Obligation	Capacity	Capacity		Obligation
OCT	270	80%	216	108	75%	81	14	311		41	184	24	25	274		38
NOV	270	80%	216	108	75%	81	14	311		41	184	24	25	274		38
DEC	270	80%	216	108	75%	81	14	311		41	184	24	25	274		38
JAN	270	75%	203	108	75%	81	14	298		41	184	24	25	274		24
FEB	270	72%	194	108	100%	108	14	316		54	184	24	25	287		29
MAR	270	95%	257	108	100%	108	14	379		54	244	24	25	347		32
APR	270	100%	270	108	100%	108	14	392		54	244	24	35	357		35
MAY	270	100%	270	108	100%	108	14	392		54	244	24	40	362		30
JUNE	270	100%	270	108	100%	108	14	392		54	244	24	40	362		30
JUL	270	100%	270	108	100%	108	14	392		54	244	24	45	367		25
AUG	270	100%	270	108	100%	108	14	392		54	244	24	45	367		25
SEP	270	100%	270	108	100%	108	14	392		54	244	24	45	367		25

AREA -B				AREA -C						EXPLANATION:						
Forecasted Spinning Above Reserves				Forecasted Spinning for FY96 using FY94 Actual Load												
(PRIOR to reduction for Spinning Obligation)				(AFTER reduction for Spinning Obligation)												
A	B	C	D	E	F	G	H	I	J							
							F -G		H - I							
	FY-96	FY94	Spinning		FY-96	FY94	Spinning		Spinning							
	FORECAST	ACTUAL	Available		FORECAST	ACTUAL	Available		Available							
	Available	LOAD	Above		Available	LOAD	BEFORE	Spinning	AFTER							
MONTH	Capacity	reported	Reserve	MONTH	Capacity	reported	Reserve	Reserve	Reserve							
	for LOAD	to IPP	Obligation		for LOAD	to IPP	Obligation	Obligation	Obligation							
OCT	311	203	108	OCT	311	203	108	24	84	AREA A - The Projected Parker-Davis (PDP) Generation Capacity less Projected Load and Spinning Reserve Obligation. This Area indicates PDP's ability to cover the WALC Spinning Reserve Obligation.						
NOV	311	209	102	NOV	311	209	102	24	78							
DEC	311	257	54	DEC	311	257	54	24	30							
JAN	298	239	59	JAN	298	239	59	24	35							
FEB	316	249	67	FEB	316	249	67	24	43	AREA B - The Projected PDP Generation Capacity (before spinning reserve reductions) less the Actual Peak Load for the prior fiscal year. This Area indicates that sufficient spinning capacity is available above using actual data. Negative values, if apparent, are covered through IPP purchases or interchanges. One must remember the numbers used for load are Peak values and are therefore the extreme in analyzing reserve capacity.						
MAR	379	283	96	MAR	379	283	96	24	72							
APR	392	292	100	APR	392	292	100	24	76							
MAY	392	266	126	MAY	392	266	126	24	102							
JUN	392	293	99	JUN	392	293	99	24	75	AREA C - The Projected PDP Generation Capacity less Actual Load and less the spinning obligation to indicate probable surplus PDP capacity.						
JUL	392	279	113	JUL	392	279	113	24	89							
AUG	392	314	78	AUG	392	314	78	24	54							
SEP	392	348	44	SEP	392	348	44	24	20							

HOOVER CAPACITY (MW) BALANCE		
	FY94	FY94
	CAPACITY	CAPACITY
	Into HVR	Out HVR
OCT	-8136	0
NOV	-22681	0
DEC	-8841	0
JAN	-6720	0
FEB	-2406	0
MAR	-669	0
APR	0	18031
MAY	0	7322
JUN	0	3235
JUL	-7437	0
AUG	-9887	0
SEP	-1713	0
TOTAL	-68490	28588



EXCHANGE.XLS

APPENDIX A

WESTERN'S RESULTS OF OPERATIONS (ROOS)

APPENDIX B

DESERT SOUTHWEST ENGINEERING & CONSTRUCTION TEN-YEAR PLAN

APPENDIX C

ANALYSIS OF SCADA SYSTEM

APPENDIX D

COST ALLOCATION TABLE AND AMORTIZATION TABLES

Attachment 5.IA to
Amended and Restated Boulder Canyon Project
Implementation Agreement (Restated Agreement)
Agreement No. 95-PAO-10616 (Western)
Agreement No. 5-CU-30-P1128 (Reclamation)

ATTACHMENT 5.IA

**CONTINGENT CAPACITY, FIRM ENERGY,
AND BCP PERCENTAGES**

ATTACHMENT 5.IA

CONTINGENT CAPACITY, FIRM ENERGY,

AND BCP PERCENTAGES

The following table is meant to identify the Contractors' percentage entitlements to Contingent Capacity and Firm Energy pursuant to the Contracts. Contingent Capacity and Firm Energy are given equal weight in calculating the Contractor BCP percentages. When used in a formula in this Restated Agreement, numbers expressed as a percent (i.e. 10.2345%) shall be interpreted to be the decimal equivalent (i.e. 0.102345). The percentages below shall be updated by September 30, 2017, to reflect the final percentages including the allocation of Schedule D power.

Schedule A, B and D BCP Percentages	% of Contingent <u>Capacity</u>	% of Firm <u>Energy</u>	% of <u>BCP</u> ⁽¹⁾
Schedule A and B Percentages			
Arizona:			
Arizona Power Authority	18.3572%	18.0051%	18.1811%
Nevada:			
Colorado River Commission	18.3572%	22.2021%	20.2797%
U.S. (Boulder City)	0.9739%	1.6788%	1.3263%
California:			
Anaheim	1.9477%	1.0912%	1.5195%
Azusa	0.1947%	0.1049%	0.1498%
Banning	0.0974%	0.0420%	0.0697%
Burbank	0.9800%	0.5582%	0.7691%
Colton	0.1461%	0.0839%	0.1150%
Glendale	0.9739%	1.5080%	1.2409%
Los Angeles	23.9022%	14.6517%	19.2770%
Metropolitan Water District of Southern California	12.0515%	27.1123%	19.5819%
Pasadena	0.9738%	1.2948%	1.1343%
Riverside	1.4608%	0.8184%	1.1396%
Southern California Edison Company	13.5123%	5.2609%	9.3866%
Vernon	1.0713%	0.5876%	0.8294%
Total Schedule A and B	95.0000%	95.0000%	95.0000%

Schedule D Percentage	% of Contingent Capacity	% of Firm Energy	% of BCP ⁽¹⁾
Arizona:			
Arizona Power Authority (APA)	1.4028%	1.4028%	1.4028%
Arizona Tribes:			
Fort McDowell Yavapai Nation	0.0163%	0.0163%	0.0163%
Gila River Indian Community	0.1446%	0.1447%	0.1447%
Hualapai Indian Tribe	0.0184%	0.0184%	0.0184%
Kaibab Band of Paiute Indians	0.0060%	0.0060%	0.0060%
Navajo Tribal Utility Authority	0.1446%	0.1447%	0.1447%
Pascua Yaqui Tribe	0.0211%	0.0211%	0.0211%
Salt River Pima-Maricopa Indian Community	0.1446%	0.1447%	0.1447%
Tohono O'odham Nation	0.1306%	0.1306%	0.1306%
Tonto Apache Tribe	0.0121%	0.0121%	0.0121%
	0.6383%	0.6385%	0.6384%
Schedule D Percentages			
Nevada:			
Colorado River Commission (CRC)	1.0610%	1.0609%	1.0609%
Nevada Tribes:			
Las Vegas Paiute Tribe	0.0332%	0.0332%	0.0332%
Schedule D Percentage			
California:			
Agua Caliente Band of Cahuilla Indians	0.0699%	0.0699%	0.0699%
Anza Electric Cooperative, Inc.	0.0770%	0.0769%	0.0769%
Augustine Band of Cahuilla Indians	0.0231%	0.0231%	0.0231%
Bishop Paiute Tribe	0.0183%	0.0183%	0.0183%
Cabazon Band of Mission Indians	0.0484%	0.0484%	0.0484%
California Department of Water Resources	0.1446%	0.1447%	0.1447%
Chemehuevi Indian Tribe	0.0674%	0.0674%	0.0674%
City of Cerritos	0.1446%	0.1446%	0.1446%
City of Corona	0.1441%	0.1440%	0.1440%
City of Rancho Cucamonga	0.1446%	0.1446%	0.1446%
City of Victorville	0.1266%	0.1265%	0.1266%
Imperial Irrigation District	0.1446%	0.1447%	0.1447%
Morongo Band of Mission Indians	0.0529%	0.0530%	0.0529%

Schedule D Percentage (continued)	% of Contingent <u>Capacity</u>	% of Firm <u>Energy</u>	% of <u>BCP</u> ⁽¹⁾
California:			
Pechanga Band of Luiseno Mission Indians	0.0964%	0.0965%	0.0964%
San Diego County Water Authority	0.0781%	0.0780%	0.0781%
San Luis Rey River Indian Water Authority	0.1446%	0.1447%	0.1447%
San Manuel Band of Mission Indians	0.1231%	0.1232%	0.1232%
Timbisha Shoshone Tribe	0.0057%	0.0057%	0.0057%
Torres Martinez Desert Cahuilla Indians	0.0800%	0.0800%	0.0800%
Twenty-Nine Palms Band of Mission Indians	0.0636%	0.0637%	0.0637%
Viejas Band of Kumeyaay Indians	0.0669%	0.0669%	0.0669%
	1.8647%	1.8648%	1.8647%
Total Schedule D	5.0000%	5.0000%	5.0000%

⁽¹⁾ The % of BCP equals the sum of the percent of Contingent Capacity plus the percent of Firm Energy divided by two.

Attachment 6.IA to
Amended and Restated Boulder Canyon Project
Implementation Agreement (Restated Agreement)
Agreement No. 95-PAO-10616 (Western)
Agreement No. 5-CU-30-P1128 (Reclamation)

ATTACHMENT 6.IA

APPENDIX G OF THE 1995 IMPLEMENTATION AGREEMENT

**APPENDIX G
CONTINGENT CAPACITY, FIRM ENERGY,
AND PROJECT PERCENTAGES**

For ease of understanding this Agreement and reference, the following table is meant to duplicate the Contractor's percentage entitlement to Contingent Capacity and Firm Energy pursuant to the Contracts. Contingent Capacity and Firm Energy are given equal weight in calculating the Contractor's Project percentage. When used in a formula in this Agreement, numbers expressed as a percent (i.e. 10.2345%) shall be interpreted to be the decimal equivalent (i.e. 0.102345).

	<u>% of Contingent Capacity</u>	<u>% of Firm Energy</u>	<u>% of Project (1)</u>
Arizona:			
Arizona Power Authority	19.3234%	18.9527%	19.1381%
Nevada:			
Colorado River Commission	19.3234%	23.3706%	21.3470%
U. S. (Boulder City)	1.0251%	1.7672%	1.3961%
California:			
Anaheim	2.0503%	1.1487%	1.5995%
Azusa	0.2050%	0.1104%	0.1577%
Banning	0.1025%	0.0442%	0.0733%
Burbank	1.0315%	0.5876%	0.8096%
Colton	0.1538%	0.0884%	0.1211%
Glendale	1.0251%	1.5874%	1.3063%
Los Angeles	25.1602%	15.4229%	20.2915%
Metropolitan Water District	12.6858%	28.5393%	20.6125%
Pasadena	1.0251%	1.3629%	1.1940%
Riverside	1.5377%	0.8615%	1.1996%
Southern California Edison	14.2235%	5.5377%	9.8806%
Vernon	1.1276%	0.6185%	0.8731%

(1) The % of Project equals the sum of the percent of Contingent Capacity plus the percent of Firm Energy divided by two.

Attachment 7.IA to
Amended and Restated Boulder Canyon Project
Implementation Agreement (Restated Agreement)
Agreement No. 95-PAO-10616 (Western)
Agreement No. 5-CU-30-P1128 (Reclamation)

ATTACHMENT 7.IA

**TABLE 7 FROM CALCULATIONS FOR
REPAYABLE CAPITAL INVESTMENTS (REPAYABLE ADVANCES) FROM
THE 1995 IMPLEMENTATION AGREEMENT**

Table # 7				
CALCULATION OF REPAYABLE CAPITAL INVESTMENTS				
(1)	(2)	(3)	(4)	(5)
Fiscal Year	Annual Replacement Amount to be Amortized	Sum of Annual Principal Payments Recovered Based on Amortization of Replacement Amount	Repayable Advance Amount Cole (2 - 3)	Cumulative Repayable Advances
	\$	\$	\$	\$
Historical Expense:				
1989	1,744,871	1,959	1,742,912	1,742,912
1990	3,347,645	6,434	3,341,211	5,084,123
1991	2,240,603	10,015	2,230,588	7,314,711
1992	174,377	11,163	163,214	7,477,925
1993	2,708,728	17,090	2,691,638	10,169,563
1994	5,851,590	32,355	5,819,235	15,988,798
1995	5,832,686	48,110	5,784,576	21,773,374
1996	4,101,862	59,998	4,041,864	25,815,238
1997	21,460,909	119,743	21,341,166	47,156,405
1998	4,068,478	139,000	3,929,478	51,085,883
1999	2,799,682	158,828	2,640,854	53,726,737
2000	7,651,285	198,973	7,452,312	61,179,050
2001	3,290,264	223,406	3,066,858	64,245,907
2002	2,473,225	248,709	2,224,516	66,470,423
2003	3,153,914	278,834	2,875,080	69,345,503
2004	2,569,674	310,862	2,258,812	71,604,315
2005	2,639,725	344,197	2,295,528	73,899,843
2006	4,335,357	390,864	3,944,493	77,844,336
2007	3,318,829	433,385	2,885,444	80,729,780
2008	5,760,722	490,638	5,270,084	85,999,864
2009	6,908,500	561,286	6,347,214	92,347,078
2010	6,140,371	637,351	5,503,020	97,850,098
2011	6,283,219	716,769	5,566,450	103,416,548
2012	5,179,890	794,764	4,385,126	107,801,674
2013	6,449,341	900,218	5,549,123	113,350,797
2014	10,724,514	1,048,384	9,676,130	123,026,928
2015	7,320,125	1,165,716	6,154,409	129,181,337
Subtotal	\$138,530,386	\$9,349,049		\$129,181,337
2016	7,424,438	1,289,496	6,134,942	135,316,278
2017	11,101,440	1,448,395	9,653,045	144,969,323
2018	0	1,526,568	(1,526,568)	143,442,756
2019	0	1,609,432	(1,609,432)	141,833,324
2020	0	1,697,295	(1,697,295)	140,136,029
2021	0	1,790,484	(1,790,484)	138,345,544
2022	0	1,889,352	(1,889,352)	136,456,192
2023	0	1,994,272	(1,994,272)	134,461,921
2024	0	2,105,645	(2,105,645)	132,356,276
2025	0	2,223,902	(2,223,902)	130,132,374
2026	0	2,349,503	(2,349,503)	127,782,870
2027	0	2,482,944	(2,482,944)	125,299,926
2028	0	2,634,386	(2,634,386)	122,665,540
2029	0	2,785,970	(2,785,970)	119,879,570
2030	0	2,947,170	(2,947,170)	116,932,400
2031	0	3,118,634	(3,118,634)	113,813,766
2032	0	3,301,069	(3,301,069)	110,512,697
2033	0	3,495,224	(3,495,224)	107,017,472
2034	0	3,701,914	(3,701,914)	103,315,558

Table # 7				
CALCULATION OF REPAYABLE CAPITAL INVESTMENTS				
(1)	(2)	(3)	(4)	(5)
Fiscal Year	Annual Replacement Amount to be Amortized	Sum of Annual Principal Payments Recovered Based on Amortization of Replacement Amount	Repayable Advance Amount Cols (2 - 3)	Cumulative Repayable Advances
	\$	\$	\$	\$
2035	0	3,921,999	(3,921,999)	99,393,560
2036	0	4,156,410	(4,156,410)	95,237,150
2037	0	4,406,150	(4,406,150)	90,831,000
2038	0	4,685,875	(4,685,875)	86,145,124
2039	0	4,505,760	(4,505,760)	81,639,364
2040	0	4,767,517	(4,767,517)	76,871,847
2041	0	4,846,127	(4,846,127)	72,025,719
2042	0	5,108,748	(5,108,748)	66,916,972
2043	0	5,184,030	(5,184,030)	61,732,942
2044	0	5,048,113	(5,048,113)	56,684,829
2045	0	4,893,768	(4,893,768)	51,791,061
2046	0	4,840,158	(4,840,158)	46,950,903
2047	0	3,567,615	(3,567,615)	43,383,288
2048	0	3,445,256	(3,445,256)	39,938,032
2049	0	2,955,346	(2,955,346)	36,982,685
2050	0	3,081,479	(3,081,479)	33,901,206
2051	0	2,996,955	(2,996,955)	30,904,251
2052	0	2,972,362	(2,972,362)	27,931,889
2053	0	2,907,199	(2,907,199)	25,024,690
2054	0	2,885,209	(2,885,209)	22,139,481
2055	0	2,851,835	(2,851,835)	19,287,646
2056	0	2,739,056	(2,739,056)	16,548,590
2057	0	2,665,985	(2,665,985)	13,882,605
2058	0	2,457,149	(2,457,149)	11,425,456
2059	0	2,197,001	(2,197,001)	9,228,455
2060	0	1,988,376	(1,988,376)	7,240,079
2061	0	1,757,947	(1,757,947)	5,482,132
2062	0	1,575,267	(1,575,267)	3,906,865
2063	0	1,375,363	(1,375,363)	2,531,502
2064	0	1,003,463	(1,003,463)	1,528,039
2065	0	732,318	(732,318)	795,721
2066	0	447,520	(447,520)	348,201
2067	0	0	0	348,201
Subtotal	\$157,056,264	\$156,708,063		\$348,201
Notes:				
Col. (1) This column provides the beginning year for amortization of the replacement expense				
Col. (2) Provides, from Table #4, the replacement expense that is to be amortized.				
Col. (3) Total annual principal amount, from Table #6, which would have been paid by the Contractors each year had appropriations been available to fund the replacement cost.				
Col. (4) Displays the difference between the annual replacement expense to be amortized, shown in column (2), and the principal payments shown in column (3). The difference represents an amount funded by the Contractors that is in excess of the amount that would have been paid by the Contractors if replacement were funded by appropriations and amortized.				
Col. (5) This is the reimbursement due to the present Hoover Power Contractors by the Post-2017 Contractors having a payment obligation as set out in Section 6.4, of the Boulder Canyon Project Implementation Agreement.				

Attachment 8.IA to
Amended and Restated Boulder Canyon Project
Implementation Agreement (Restated Agreement)
Agreement No. 95-PAO-10616 (Western)
Agreement No. 5-CU-30-P1128 (Reclamation)

ATTACHMENT 8.IA

CALCULATIONS FOR REPLACEMENTS AND REPAYABLE CAPITAL

INVESTMENTS FROM THE 2016 RESTATED AGREEMENT

TABLE #1
SUMMARY OF BOULDER CANYON PROJECT REPLACEMENTS

ITEM NO.	DESCRIPTION	AMORT. CLASS	FY 2018 \$	FY 2019 \$	FY 2020 \$	FY 2021 \$	FY 2022 \$	FY 2023 \$	FY 2024 \$	FY 2025 \$	FY 2026 \$
1	Drum Gate Control Valve	Annual		115,000	620,000						
2	Generator Coolers	Annual	481,000	504,000	528,000	579,000	581,000	610,000	639,000	670,000	702,000
3	Stainless Steel Wicket Gates	Annual	510,000								
4	Drum Gate Repair & Components	Annual	1,850,000	2,547,000	2,674,000	2,703,000	1,435,000				
5	A2, A4, A7, PRV Modernization	Annual	801,000								
6	Flow Meter	Annual	870,000	177,000	177,000	177,000					
7	Hoover 16.5 KV Generator Breaker	Annual	5,250,000	1,350,000							
8	Elevator Motor and Controller	Annual	1,340,000	1,290,000	920,000						
9	Wastewater Treatment Facility	Annual		170,000	2,900,000						
10	Hoover-Mead Consolidation	Multi-yr	800,000	1,000,000	400,000						
11	Jet Flow Gates - Install/Design	Multi-yr	100,000	70,000							
12	Station/Domestic Water Systems	Multi-yr		900,000	400,000	150,000					
TOTAL REPLACEMENTS COST REPAYABLE TO U.S. TREASURY			\$12,002,000	\$8,123,000	\$8,619,000	\$3,609,000	\$2,016,000	\$610,000	\$639,000	\$670,000	\$702,000

- * This table compiles all replacements from the Final Ten Year Operating Plan and identifies them as an Annual or Multi-Year Replacement.
- * Annual Replacement: Replacement items placed into service in the same year expenditures are made.
- * Multi-Year Replacement: Replacement items not placed into service in the year expenditures are made.

TABLE #2
CALCULATION OF INTEREST DURING CONSTRUCTION (IDC)
FOR REPLACEMENTS NOT PLACED IN SERVICE IN THE
FISCAL YEAR EXPENDITURE IS MADE

BEGINNING IN FY 2018 MULTI-YEAR REPLACEMENTS W/IDC								
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Fiscal Year	Item No.	Replacement Description	Replacement Expenditure	96% of Replacement Expenditure	Current Interest Rate	Annual IDC	End of Period Expenditure	Multi-Year Total For Amortization
2018	10	Hoover-Mead Cons	800,000	768,000	3.375%	12,960	780,960	
2019	10		1,000,000	960,000	3.375%	42,557	1,783,517	
2020	10		400,000	384,000	3.375%	66,674	2,234,191	
			<u>2,200,000</u>	<u>2,112,000</u>		<u>122,191</u>	<u>2,234,191</u>	
2021	10	Amort Start Year						\$2,234,191

TABLE #2
CALCULATION OF INTEREST DURING CONSTRUCTION (IDC)
FOR REPLACEMENTS NOT PLACED IN SERVICE IN THE
FISCAL YEAR EXPENDITURE IS MADE

BEGINNING IN FY 2019 MULTI-YEAR REPLACEMENTS W/IDC								
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Fiscal Year	Item No.	Replacement Description	Replacement Expenditure	96% of Replacement Expenditure	Current Interest Rate	Annual IDC	End of Period Expenditure	Multi-Year Total For Amortization
2020	12		400,000	384,000	3.500%	37,489	1,300,609	
2021	12		150,000	144,000	3.500%	48,041	1,492,650	
			<u>1,450,000</u>	<u>1,392,000</u>		<u>100,650</u>	<u>1,492,650</u>	
2022	12	Amort Start Year						\$1,492,650

BEGINNING IN FY 2018 MULTI-YEAR REPLACEMENTS W/IDC								
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Fiscal Year	Item No.	Replacement Description	Replacement Expenditure	96% of Replacement Expenditure	Current Interest Rate	Annual IDC	End of Period Expenditure	Multi-Year Total For Amortization
2018	11	Jet Flow Gates	100,000	96,000	3.375%	1,620	97,620	
2019	11		70,000	67,200	3.375%	4,429	169,249	
			<u>170,000</u>	<u>163,200</u>		<u>6,049</u>	<u>169,249</u>	
2020	11	Amort Start Year						\$169,249

* This table is linked to Table #1 and calculates IDC on each Multi-Year Replacement.

- (1) Beginning and final year for each multi-year replacement, as well as, the year amortization of the replacement expense will begin.
- (2) Item Number of the multi-year replacement.
- (3) Description of the multi-year replacement activity.
- (4) Actual cost of each multi-year replacement.
- (5) 96% of the Replacement Expenditure as specified in section 20.3.2 of the Restated Agreement.
- (6) Current interest rate for each fiscal year, as determined in accordance with repayable interest rates as provided by the Department of the Interior.
- (7) Interest During Construction calculation based on a twelve month period. IDC is the product of column (5) and (6) multiplied by half an annual interest period plus the product of the previous year's amount, if any, in column (8) and (6).
- (8) Accumulation of the sum of columns (5) and (7).
- (9) Total amount, inclusive of IDC, that is to be amortized. The amount and fiscal year are inputted to Table #4.

TABLE #3
REPLACEMENTS PLACED IN SERVICE IN THE
SAME FISCAL YEAR EXPENDITURE IS MADE

FY 2018					
ANNUAL REPLACEMENTS W/O IDC					
(1)	(2)	(3)	(4)	(5)	(6)
Fiscal Year	Item No.	Replacement Description	Annual Replacement Cost	96% of Annual Replacement Cost	Cumulative Annual Total For Amortization
2018	2	Generator Coolers	481,000	461,760	461,760
2018	3	Stainless Steel Wicket Gates	510,000	489,600	951,360
2018	4	Drum Gate Repair & Components	1,850,000	1,776,000	2,727,360
2018	5	A2, A4, A7, PRV Modernization	801,000	768,960	3,496,320
2018	6	Flow Meter	870,000	835,200	4,331,520
2018	7	Hoover 16.5 KV Generator Breaker	5,250,000	5,040,000	9,371,520
2018	8	Elevator Motor and Controller	1,340,000	1,286,400	10,657,920
2019		Annual Amort Start Year Total			\$10,657,920

FY 2019					
ANNUAL REPLACEMENTS W/O IDC					
(1)	(2)	(3)	(4)	(5)	(6)
Fiscal Year	Item No.	Replacement Description	Annual Replacement Cost	96% of Annual Replacement Cost	Cumulative Annual Total For Amortization
2019	1	Drum Gate Control Valve	115,000	110,400	110,400
2019	2	Generator Coolers	504,000	483,840	594,240
2019	4	Drum Gate Repair & Components	2,547,000	2,445,120	3,039,360
2019	6	Flow Meter	177,000	169,920	3,209,280
2019	7	Hoover 16.5 KV Generator Breaker	1,350,000	1,296,000	4,505,280
2019	8	Elevator Motor and Controller	1,290,000	1,238,400	5,743,680
2019	9	Wastewater Treatment Facility	170,000	163,200	5,906,880
2020		Annual Amort Start Year Total			\$5,906,880

* This table is linked to Table #1 and calculates 96% on each Annual Replacement.

- (1) Fiscal year of each annual replacement, as well as, the year amortization of the replacement expense will begin.
- (2) Item Number of the annual replacement.
- (3) Description of the annual replacement.
- (4) Actual cost of each annual replacement.
- (5) 96% of the Replacement Expenditure as specified in section 20.3.2 of the Restated Agreement.
- (6) Accumulation of the sum of column (5). The amount and fiscal year are inputted to Table #4.

TABLE #4
SUMMARY OF AMORTIZATION AMOUNTS

(1)	(2)	(3)	(4)	(5)
Amortization Start Year	Multi-Year Replacement Total	Annual Replacement Total	Replacement Capital Investments (Total Amount to be Amortized)	Interest Rate
2018	0	0	0	3.375%
2019	0	10,657,920	10,657,920	3.500%
2020	169,249	5,906,880	6,076,129	3.375%
2021	2,234,191	7,506,240	9,740,431	3.125%
2022	1,492,650	3,320,640	4,813,290	3.000%
2023	0	1,935,360	1,935,360	3.000%
2024	0	585,600	585,600	3.000%
2025	0	613,440	613,440	3.000%
2026	0	643,200	643,200	3.000%
Total	\$3,896,090	\$31,169,280	\$35,065,370	

* This table is linked to Table #2 and Table #3 and compiles the total amortization dollars for both Multi-Year and Annual Replacements.

- (1) Start year for amortization of replacement expenditures.
- (2) Multi-Year Replacement expenditures to be amortized, from Table #2, column (9).
- (3) Annual Replacement expenditures to be amortized, from Table #3, column (6).
- (4) Sum of columns (2) and (3). The amount is inputted in Table #5.
- (5) Current interest rate for each fiscal year, as determined in accordance with repayable interest rates as provided by the Department of the Interior.

TABLE #5
AMORTIZATION TABLES FOR
REPLACEMENT CAPITAL INVESTMENTS

FY 2019					
Amount to be Amortized		\$10,657,920			
Yearly Interest		3.500%			
Amortization Period		50 Years			
Principal & Interest Payment		\$454,387			
(1)	(2)	(3)	(4)	(5)	(6)
Fiscal Year	BOP Remaining Principal \$	Payments			EOP Remaining Principal \$
		P&I \$	Interest \$	Principal \$	
2019	10,657,920	454,387	373,0	81,359	10,576,561
2020	10,576,561	454,387	370,1	84,207	10,492,353
2021	10,492,353	454,387	367,2	87,154	10,405,199
2022	10,405,199	454,387	364,1	90,205	10,314,994
2023	10,314,994	454,387	361,0	93,362	10,221,633
2024	10,221,633	454,387	357,7	96,630	10,125,003
2025	10,125,003	454,387	354,3	100,012	10,024,992
2026	10,024,992	454,387	350,8	103,512	9,921,480
2027	9,921,480	454,387	347,2	107,135	9,814,345
2028	9,814,345	454,387	343,5	110,885	9,703,460
2029	9,703,460	454,387	339,6	114,766	9,588,695
2030	9,588,695	454,387	335,6	118,782	9,469,912
2031	9,469,912	454,387	331,4	122,940	9,346,972
2032	9,346,972	454,387	327,1	127,243	9,219,730
2033	9,219,730	454,387	322,6	131,696	9,088,034
2034	9,088,034	454,387	318,0	136,305	8,951,728
2035	8,951,728	454,387	313,3	141,076	8,810,652
2036	8,810,652	454,387	308,3	146,014	8,664,638
2037	8,664,638	454,387	303,2	151,124	8,513,514
2038	8,513,514	454,387	297,9	156,414	8,357,100
2039	8,357,100	454,387	292,4	161,888	8,195,212
2040	8,195,212	454,387	286,8	167,554	8,027,658
2041	8,027,658	454,387	280,9	173,419	7,854,239
2042	7,854,239	454,387	274,8	179,488	7,674,751
2043	7,674,751	454,387	268,6	185,770	7,488,980
2044	7,488,980	454,387	262,1	192,272	7,296,708
2045	7,296,708	454,387	255,3	199,002	7,097,706
2046	7,097,706	454,387	248,4	205,967	6,891,739
2047	6,891,739	454,387	241,2	213,176	6,678,563
2048	6,678,563	454,387	233,7	220,637	6,457,927
2049	6,457,927	454,387	226,0	228,359	6,229,567
2050	6,229,567	454,387	218,0	236,352	5,993,216
2051	5,993,216	454,387	209,7	244,624	5,748,591
2052	5,748,591	454,387	201,2	253,186	5,495,405
2053	5,495,405	454,387	192,3	262,047	5,233,358
2054	5,233,358	454,387	183,1	271,219	4,962,139
2055	4,962,139	454,387	173,6	280,712	4,681,427
2056	4,681,427	454,387	163,8	290,537	4,390,890
2057	4,390,890	454,387	153,6	300,706	4,090,185
2058	4,090,185	454,387	143,1	311,230	3,778,955
2059	3,778,955	454,387	132,2	322,123	3,456,831
2060	3,456,831	454,387	120,9	333,398	3,123,434
2061	3,123,434	454,387	109,3	345,066	2,778,367
2062	2,778,367	454,387	97,2	357,144	2,421,223
2063	2,421,223	454,387	84,7	369,644	2,051,580
2064	2,051,580	454,387	71,8	382,581	1,668,998
2065	1,668,998	454,387	58,4	395,972	1,273,026
2066	1,273,026	454,387	44,5	409,831	863,196
2067	863,196	454,387	30,2	424,175	439,021
2068	439,021	454,387	15,3	439,021	0
2069	0	0	0	0	0
Total		\$22,719,333	\$12,061,413	\$10,657,920	

TABLE #5
AMORTIZATION TABLES FOR
REPLACEMENT CAPITAL INVESTMENTS

FY 2020					
Amount to be Amortized		\$6,076,1293			
Yearly Interest		375%			
Amortization Period		50 Years			
Principal & Interest Payment		\$253,236			
(1)	(2)	(3)	(4)	(5)	(6)
Fiscal Year	BOP Remaining Principal \$	Payments			EOP Remaining Principal \$
		P&I \$	Interest \$	Principal \$	
2019	0	0	0	0	0
2020	6,076,129	253,236	205,069	48,167	6,027,962
2021	6,027,962	253,236	203,444	49,793	5,978,169
2022	5,978,169	253,236	201,763	51,473	5,926,696
2023	5,926,696	253,236	200,026	53,210	5,873,486
2024	5,873,486	253,236	198,230	55,006	5,818,479
2025	5,818,479	253,236	196,374	56,863	5,761,617
2026	5,761,617	253,236	194,455	58,782	5,702,835
2027	5,702,835	253,236	192,471	60,766	5,642,069
2028	5,642,069	253,236	190,420	62,817	5,579,253
2029	5,579,253	253,236	188,300	64,937	5,514,316
2030	5,514,316	253,236	186,108	67,128	5,447,188
2031	5,447,188	253,236	183,843	69,394	5,377,794
2032	5,377,794	253,236	181,501	71,736	5,306,058
2033	5,306,058	253,236	179,079	74,157	5,231,901
2034	5,231,901	253,236	176,577	76,660	5,155,241
2035	5,155,241	253,236	173,989	79,247	5,075,994
2036	5,075,994	253,236	171,315	81,922	4,994,073
2037	4,994,073	253,236	168,550	84,686	4,909,386
2038	4,909,386	253,236	165,692	87,545	4,821,842
2039	4,821,842	253,236	162,737	90,499	4,731,343
2040	4,731,343	253,236	159,683	93,554	4,637,789
2041	4,637,789	253,236	156,525	96,711	4,541,078
2042	4,541,078	253,236	153,261	99,975	4,441,103
2043	4,441,103	253,236	149,887	103,349	4,337,754
2044	4,337,754	253,236	146,399	106,837	4,230,916
2045	4,230,916	253,236	142,793	110,443	4,120,474
2046	4,120,474	253,236	139,066	114,170	4,006,303
2047	4,006,303	253,236	135,213	118,024	3,888,279
2048	3,888,279	253,236	131,229	122,007	3,766,272
2049	3,766,272	253,236	127,112	126,125	3,640,148
2050	3,640,148	253,236	122,855	130,381	3,509,766
2051	3,509,766	253,236	118,455	134,782	3,374,985
2052	3,374,985	253,236	113,906	139,331	3,235,654
2053	3,235,654	253,236	109,203	144,033	3,091,621
2054	3,091,621	253,236	104,342	148,894	2,942,727
2055	2,942,727	253,236	99,317	153,919	2,788,807
2056	2,788,807	253,236	94,122	159,114	2,629,693
2057	2,629,693	253,236	88,752	164,484	2,465,209
2058	2,465,209	253,236	83,201	170,036	2,295,173
2059	2,295,173	253,236	77,462	175,774	2,119,399
2060	2,119,399	253,236	71,530	181,707	1,937,692
2061	1,937,692	253,236	65,397	187,839	1,749,853
2062	1,749,853	253,236	59,058	194,179	1,555,674
2063	1,555,674	253,236	52,504	200,732	1,354,942
2064	1,354,942	253,236	45,729	207,507	1,147,435
2065	1,147,435	253,236	38,726	214,510	932,924
2066	932,924	253,236	31,486	221,750	711,174
2067	711,174	253,236	24,002	229,234	481,940
2068	481,940	253,236	16,265	236,971	244,969
2069	244,969	253,236	8,268	244,969	0
Total		\$12,661,820	\$6,585,691	\$6,076,129	

* This table is linked to Table #4 and calculates the Amortization Tables (Principal & Interest) for each fiscal year.

TABLE #6

**PRINCIPAL PAYMENTS REQUIRED IF REPLACEMENT CAPITAL INVESTMENTS
WERE FUNDED BY APPROPRIATIONS**

(1)	(2)	(3)
Fiscal Year	Sum of Annual Principal Payments from Amortization Tables \$	Cumulative Principal Payments \$
<u>Historical Expense:</u>		
2019	81,359	81,359
2020	132,374	213,734
Subtotal	\$213,734	\$213,734
<u>Budgeted Expense:</u>		
2021	136,947	350,681
2022	141,678	492,358
2023	146,572	638,931
2024	151,636	790,566
2025	156,874	947,441
2026	162,294	1,109,735

* This table is linked to Table #5 and sums the Annual and Cumulative Principal Payments.

(1) Fiscal Year of Principal Payments.

(2) Total annual principal which would have been paid each fiscal year by the Contractors, representing the capital recovered annually by the United States if all replacements had been funded by appropriations.

(3) Accumulation of the sum of column (2).

TABLE #7

CALCULATION OF REPAYABLE CAPITAL INVESTMENT AMOUNTS

(1)	(2)	(3)	(4)	(5)
Fiscal Year	Annual Replacement Capital Investments to be Amortized \$	Sum of Annual Principal Payments Recovered Based on Amortization Replacement Capital Investment Amount \$	Repayable Capital Investment Amount \$	Cumulative Repayable Capital Investment \$
<u>Historical Expense:</u>				
2019	10,657,920	81,359	10,576,561	10,576,561
2020	6,076,129	132,374	5,943,755	16,520,315
Subtotal	\$16,734,049	\$213,734	\$16,520,315	\$16,520,315
<u>Budgeted Expense:</u>				
2021	9,740,431	136,947	9,603,484	26,123,799
2022	4,813,290	141,678	4,671,612	30,795,412
2023	1,935,360	146,572	1,788,788	32,584,199
2024	585,600	151,636	433,964	33,018,164
2025	613,440	156,874	456,566	33,474,729
2026	643,200	162,294	480,906	33,955,635

* This table is linked to Table #4 and Table #6 and sums the total Repayable Capital Investments.

- (1) Fiscal Year of Repayable Capital Investments.
- (2) Replacement expense that is to be amortized; from Table #4, column (4).
- (3) Total annual principal amount which would have been paid each fiscal year by the Contractors, if all replacements had been funded by appropriations; from Table #6, column (2).
- (4) Difference between columns (2) and (3) representing the annual Repayable Capital Investments.
- (5) Accumulation of the sum of column (4) representing the total Repayable Capital Investments.

Attachment 9.IA to
Amended and Restated Boulder Canyon Project
Implementation Agreement (Restated Agreement)
Agreement No. 95-PAO-10616 (Western)
Agreement No. 5-CU-30-P1128 (Reclamation)

ATTACHMENT 9.IA

BOULDER CANYON PROJECT TEN YEAR OPERATING PLAN

ATTACHMENT 9.IA
BCP TEN YEAR OPERATING PLAN

1. **BCP TEN YEAR OPERATING PLAN:** The plan will be organized into a report containing the following sections and information unless Reclamation and Western, in coordination with the E&OC, agree otherwise.
2. **BUREAU OF RECLAMATION:** This section of the report will contain information applicable to Reclamation.

SECTION 1 – INTRODUCTION AND HIGHLIGHTS

This section contains a narrative summary of Reclamation’s BCP Ten Year Operating Plan with supporting tables, charts, and graphs, as appropriate.

SECTION 2 – ORGANIZATION CHART

This section contains Reclamation’s organization chart with staffing projections.

SECTION 3 – BUDGET SUMMARY

This section contains an overall picture of Reclamation and Western’s proposed budget and revenues.

SECTION 4 – OPERATION, MAINTENANCE, AND A&GE BUDGET SUMMARY

This section provides information regarding Reclamation’s planned operation and maintenance program, including administrative and general costs. This section will include: Reclamation’s projected budget for the current Fiscal Year and for the next nine (9) Fiscal Years; staffing projections; overhead costs; BCP ten year maintenance outage schedule; and justification for any projected increase.

SECTION 5 – EXTRAORDINARY MAINTENANCE, REPLACEMENTS, ADDITIONS, AND BETTERMENTS BUDGET SUMMARY

This section provides information regarding Reclamation’s planned extraordinary maintenance, replacements, additions, and betterments for the current Fiscal Year and for the next nine (9) Fiscal Years. The first five (5) years of data will be provided based on specific replacement programs. The second five (5) years of data will be provided on the basis of strategic planning processes with known items costing \$750,000 or more specifically identified. The program summaries provide information describing the substantial costs, schedule, and goals of the program for

the ten year planning period. A program report provides the following information for each item in the plan:

- a) Description of the item.
- b) Estimated Cost of the item.
- c) Schedule for the item.
- d) Justification for the item. Examples of justifications could be as follows: test reports; data analysis; maintenance costs and repair frequency; criteria and assumptions used to identify the need; probability of equipment failure without action in the time period shown; cost and resulting impact from failure of action; cost/benefit analysis; emergencies; changes in laws and regulations; unavailability of spare parts; and any other pertinent information or analysis.

SECTION 6 - VISITOR SERVICES BUDGET SUMMARY

This section provides information regarding: the planned visitor facility program for the current Fiscal Year and for the next nine (9) Fiscal Years; staffing projections related to visitor services; projections of the operation and maintenance costs for visitor services; and justification for any projected increase. This section of the report provides projections of any capital expenditures to be made in support of visitor services and provides supporting justification for any projected expenditure. This section of the report provides projections of revenues to be received from visitor services.

SECTION 7 - HISTORIC DATA

This section contains tables, graphs, charts, and narrative discussions, as appropriate, regarding historic operating statistics for the BCP for the most recently completed five (5) Fiscal Years for the following categories:

- A. Staffing Levels
- B. Operation and Maintenance:
 - (a) Reclamation Operation Line Items and Costs
 - (b) Reclamation Maintenance Line Items and Costs
- C. Administrative and General:
 - (a) Reclamation Administrative and General Costs
- D. Extraordinary Maintenance:
 - (a) Reclamation Extraordinary Maintenance Line Items and Costs

- E. Replacements, Additions and Betterments:
 - (a) Reclamation Replacement Line Items and Costs
 - (b) Reclamation Additions and Betterments Line Items and Costs
- F. Visitor Services
 - (a) Visitor Levels
 - (b) Visitor Service Revenues
 - (c) Visitor Facilities Operation and Maintenance Line Items and Costs
 - (d) Visitor Facilities Replacements, Additions and Betterments Costs
- G. Generation:
 - (a) Hydrology
 - (b) Generation Output
 - (c) Generating Unit Availability Factors
 - (d) Outage Schedules and Causes
 - (e) Plant Efficiency Factors

SECTION 8 - BUDGET EXPENDITURES

This section contains Reclamation's most recently completed Fiscal Year Fund Utilization Report.

SECTION 9 - HYDROLOGY AND GENERATION PROJECTIONS

This section contains projections of generation output, outflow from Lake Mead and Lake Mead elevation for the current Fiscal Year and for the next nine (9) Fiscal Years. It also contains supporting information identifying the methodology and assumptions used to develop the projections.

SECTION 10 – APPENDIX A: TRC REPORT AND RESPONSES

This section contains the TRC Recommendations Report submitted to the E&OC by the Contractors and the associated responses from Reclamation and Western.

3. **WESTERN AREA POWER ADMINISTRATION:** This section will contain information applicable to Western.

SECTION 11 – INTRODUCTION AND HIGHLIGHTS

This section contains a narrative summary of Western’s BCP Ten Year Operating Plan with supporting tables, charts, and graphs, as appropriate.

SECTION 12 – ORGANIZATION CHART

This section contains Western’s organization chart with staffing projections.

SECTION 13 – OPERATIONS, MAINTENANCE, & REPLACEMENTS

This section provides information regarding Western’s planned operation and maintenance program, facility expenses and system wide expenses. This section will include Western’s projected budget for the current Fiscal Year and for the next nine (9) Fiscal Years overhead costs; and justification for any projected increase.

This section also provides information regarding Western’s planned retirements, replacements, additions, and Mead Common Facilities projects for the current Fiscal Year and for the next nine (9) Fiscal Years. Specific projects will be included in years that have already been determined. The remaining data will be provided on the basis of strategic planning processes to identify projected amounts for projects to be determined at a later date

SECTION 14 - HISTORIC DATA

This section contains tables, graphs, charts, and narrative discussions, as appropriate, regarding historic operating statistics for the most recently completed five (5) Fiscal Years for the following categories:

- A. Staffing Levels
- B. Operation and Maintenance:
 - (a) Western Operation Line Items and Costs
 - (b) Western Maintenance Line Items and Costs
 - (c) Western Extraordinary Maintenance Line Items and Costs
- C. Administrative and General:
 - (a) Western Administrative and General Costs
 - (b) General Western Allocation Costs
- D. Retirements, Replacements, and Additions:
 - (a) Western Replacement Line Items and Costs

- (b) Western Retirement and Addition Line Items and Costs
- E. Multi-Project Allocations
 - (a) Multi-Project Expenses distributed to the BCP by other Western projects
 - (b) Multi-Project Revenues Received by the BCP from other Western projects
- F. Generation:
 - (a) Revenues from Sale of Electric Power

SECTION 15 - BUDGET EXPENDITURES

This section contains Western's most recently completed Fiscal Year Budget Execution Report.

SECTION 16 - MULTI-PROJECT PROGRAM

This section provides information regarding the planned Multi-Project Program for the current Fiscal Year and for the next nine (9) Fiscal Years; projections of multi-project costs to be paid to other Western projects and supporting documentation identifying the methodology and assumptions used to derive those projections; and projection of multi-project revenues to be received from other Western projects and supporting documentation identifying the methodology and assumptions used to derive those projections.

SECTION 17 - PRELIMINARY POWER REPAYMENT STUDY

This section contains a preliminary PRS projecting BCP rates utilizing the projected costs, revenues, and power sales contained in the previous sections of the BCP Ten Year Operating Plan and supporting work papers including investment repayment calculations, and interest during construction calculations.

SECTION 18 – REPLACEMENT CALCULATION

This section contains the previous year's calculation of repayable replacement amounts for the BCP.

4. BCP TEN YEAR OPERATING PLAN DEVELOPMENT:

- 4.1 Reclamation and Western will meet with the TRC, in September of each year, unless otherwise agreed to by the TRC Representatives, to present and discuss the Preliminary BCP Ten Year Operating Plan. The Preliminary BCP Ten Year

Operating Plan shall be mailed, or sent by means agreed to by the Representatives, to the E&OC ten (10) working days prior to the scheduled meeting.

- 4.2 The Contractor Representatives of the TRC shall prepare a report of recommendations for the E&OC on the Preliminary BCP Ten Year Operating Plan prior to the E&OC meeting that follows the TRC meeting. Reclamation and Western will provide responses to and consideration of the recommendations of the TRC for the inclusion and development of the Final BCP Ten Year Operating Plan.
- 4.3 The E&OC shall prepare and submit final comments to Reclamation and Western regarding the Preliminary BCP Ten Year Operating Plan within three (3) working days following the E&OC meeting.
- 4.4 Reclamation and Western shall prepare and submit a draft “Section 10: Appendix A: TRC Report and Responses” to the E&OC including responses to the recommendations and comments in paragraph 4.3 by December 1 of each year.
- 4.5 The E&OC, Reclamation and Western shall work together to finalize the Appendix A and address any other comments prior to finalizing the Final BCP Ten Year Operating Plan.
- 4.6 Reclamation and Western shall prepare and submit to the E&OC the Final BCP Ten Year Operating Plan by February 1st of each year.
- 4.7 The E&OC shall review the Final BCP Ten Year Operating Plan. Each E&OC Representative will be provided an opportunity to identify, in writing, concerns with the Final BCP Ten Year Operating Plan within fifteen (15) days of receipt.
- 4.8 Reclamation and Western shall respond in writing within thirty (30) days to any concerns expressed by any E&OC Representative regarding the Final BCP Ten Year Operating Plan.

Attachment 10.IA to
Amended and Restated Boulder Canyon Project
Implementation Agreement (Restated Agreement)
Agreement No. 95-PAO-10616 (Western)
Agreement No. 5-CU-30-P1128 (Reclamation)

ATTACHMENT 10.IA

BOULDER CANYON PROJECT ELECTRIC SERVICE CONTRACTORS

ATTACHMENT 10.IA

BOULDER CANYON PROJECT ELECTRIC SERVICE CONTRACTORS

Agua Caliente Band of Cahuilla Indians
Anza Electric Cooperative, Inc.
Arizona Power Authority
Augustine Band of Cahuilla Indians
Bishop Paiute Tribe
Cabazon Band of Mission Indians
California Department of Water Resources
Chemehuevi Indian Tribe
City of Anaheim, California
City of Azusa, California
City of Banning, California
City of Burbank, California
City of Cerritos, California
City of Colton, California
City of Corona, California
City of Glendale, California
City of Los Angeles, California
City of Pasadena, California
City of Rancho Cucamonga, California
City of Riverside, California
City of Vernon, California
City of Victorville, California
Colorado River Commission of Nevada
Fort McDowell Yavapai Nation
Gila River Indian Community
Hualapai Indian Tribe
Imperial Irrigation District
Kaibab Band of Paiute Indians
Las Vegas Paiute Tribe
Metropolitan Water District of Southern California
Morongo Band of Mission Indians
Navajo Tribal Utility Authority
Pascua Yaqui Tribe
Pechanga Band of Luiseno Mission Indians
Salt River Pima-Maricopa Indian Community
San Diego County Water Authority
San Luis Rey River Indian Water Authority
San Manuel Band of Mission Indians
Southern California Edison Company
Timbisha Shoshone Tribe
Tohono O'odham Nation
Tonto Apache Tribe
Torres Martinez Desert Cahuilla Indians
Twenty-Nine Palms Band of Mission Indians
United States, for Boulder City
Viejas Band of Kumeyaay Indians