# CVP Power Initiative Implementation Plan

**Last Revised:** 4/27/2020

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Action</th>
<th>Target Completion</th>
<th>Status</th>
<th>Completion Date</th>
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<tbody>
<tr>
<td><strong>I. Reporting and Implementation</strong></td>
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<td>(I).1.a.</td>
<td>Provide a report of implementation to the Commissioner and Deputy Commissioners.</td>
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<td>Reclamation provided a coordinated action plan, complete with milestones, tasks and target completion dates for each directive on August 23. All information can be found here <a href="https://www.usbr.gov/mp/hydro.html">https://www.usbr.gov/mp/hydro.html</a>.</td>
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<td>(I).1.b.</td>
<td>Provide an implementation status report to the Commissioner and Deputy Commissioners.</td>
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<td>This revised plan as of October 18, 2019 is the 120-day status report.</td>
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<td>This revised plan as of April, 2020 and presented to the next customer forum (CCC), tentatively schedule May 14, 2020.</td>
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<td><strong>II. Implementation - Cost Stability - Predictability and Transparency</strong></td>
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<td>(II).1.a.</td>
<td>Work with customers, WAPA and project proponent for Sites/North-of-Delta Off-Stream Storage (NODOS) Project on hydropower purpose analysis.</td>
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<td>Discussion Initiated in January 2019 customer meeting and ongoing per customer request to receive updates.</td>
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<td></td>
<td>Discuss analysis of benefits, costs, and financial impacts associated with the draft feasibility report’s inclusion of a hydropower purpose to the proposed Sites/NODOS project with power customers at Power Customer Customer Coordination Committee (CCC) meeting.</td>
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<td>Draft Lt-Gen hydropower purpose analysis for Sites/NODOS project discussion with power preference customers.</td>
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<td>Draft Lt-Gen analysis in review processes. MP-700 currently reviewing Paul Landry white paper.</td>
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<td>Discussion with Power customers on 2/11/2020 CCC Meeting and with WAPA/Sites Administrator. Sites/NODOS is behind schedule due to staffing issues. Met internally and with Sites administrator in Jan/Feb 2020. Currently pursuing 2x paths with USBR as exchange customer or investor. AECOM is still working on the Feasibility report itself and expect delivery at the end of April 2020. A determination of feasibility is expected by the Secretary around November 2020. The feasibility report will go forward using the 2017 draft EIS/EIR that went out for public comment. The final EIS/EIR is to be completed by end of 2021.</td>
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<td></td>
<td>Submit administrative Final Feasibility Report to Commissioner’s Office.</td>
<td></td>
<td>10/31/2020</td>
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<td>Draft Lt-Gen analysis in review processes. MP-700 currently reviewing Paul Landry white paper.</td>
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<td>Provided updates to NODOS/Sites to Power customers on 2/11/2020 CCC meeting.</td>
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<td>Submit administrative Final Environmental Impact Statement to Commissioner’s Office.</td>
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<td>10/31/2020</td>
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<td>Expected in May 2020</td>
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<td></td>
<td>Participate in regular calls and discussions with Joint Power Authority to develop operations plan proposal.</td>
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<td>Ongoing</td>
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<td>Schedule will be created after determination of Feasibility; Principles of Operation and basic guidelines include no harm to CVP Operations</td>
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<td>Ongoing</td>
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<td></td>
<td>Work with WAPA, customers and project proponents to finalize operations plan after determination of feasibility.</td>
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<td>TBD</td>
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<td>(II).1.b.</td>
<td>Communicate any modifications to the benefits analysis in the NODOS Feasibility Report to power customers and appropriate stakeholders.</td>
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</table>
1. Develop a Standard Operating Procedure (SOP) to document methodology and procedures for construction cost recovery.

   - Meet with CVP Financial Affairs Committee (FAC) to determine items for SOP.
     - Delegated to FAC.
   - Share draft SOP at next FAC meeting.
     - Delegated to FAC.
   - Develop draft SOP within 60 days of meeting with FAC.
     - Delegated to FAC.


   - Develop document describing handling of aid-to-irrigation for WIIN Act construction prepayment and new construction projects funded under WIIN authorities within 60 days of memo.
     - Delegated to FAC.

3. Share the SOP documenting the methodology for treatment of non-permanent revenue.

   - Review the guidelines annually.
     - Delegated to FAC.
   - Two draft SDPs have been prepared. They are being looked at internally and shared with Reclamation FAC customers prior to sharing with WAPA. This is something that needs shared with the FAC for their comment prior to providing to WAPA for their comments. Still in Internal review process.
     - Delegated to FAC.
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     - Delegated to FAC.

4. Provide Shasta Dam raise updates at WAPA CCC meeting to ensure benefits, costs, and financial impacts associated with the draft feasibility report's inclusion of a hydropower purpose to the proposed project are analyzed, evaluated, and considered as the project moved forward.

   - LT-Gen and PLEXOS models continue to be analyzed by Reclamation. LT-Gen model may be overpredicting generation and therefore planning division is reviewing model and looking for solutions. They are currently migrating to a greater focus on LT GEN for power modeling, instead of PLEXOS. Currently finishing CalSim modeling and then will pivot focus on LTGen.
     - Delegated to FAC.
   - Contract to be awarded to provide additional PLEXOS runs to improve hydropower benefits analysis.
     - Delegated to FAC.
   - Complete revised benefits analysis.
     - Delegated to FAC.

5. Reclamation's Planning Office (MP-700) will begin coordination and development of detailed operations plan if and when feasibility is appropriately determined and Congressional authorization is provided for a project.

   - LT-Gen corrections for power benefits due/to-be-completed.
     - Delegated to FAC.
   - Complete revised benefits analysis.
     - Delegated to FAC.

6. Work with WAPA, customers and project proponents to finalize operations plan after determination of feasibility.

   - Reclamation met with the CVP FAC and determined the SOP will document what Reclamation will do to ensure repayment is accomplished by 2030.
     - Delegated to FAC.
   - Benefits analysis will be provided at the power customer meeting following completion.
     - Delegated to FAC.
   - Currently reviewing the modelling results of the revised benefits analysis.
     - Delegated to FAC.

7. Participate in regular calls and discussions with Joint Power Authority to develop operations plan proposal.

   - Reclamation will begin updates to CMP 09-02 in 2019. CMP 09-02 was revised on December 12, 2019. As D&S are updated, BOR will provide updates to CVP Power customers as relevant.
     - Delegated to FAC.
   - Benefits analysis will be provided at the power customer meeting following completion.
     - Delegated to FAC.
   - Currently reviewing the modelling results of the revised benefits analysis.
     - Delegated to FAC.

8. Work with non-federal cost share partners, preference power customers, WAPA and stakeholders for Shasta Raise hydropower purpose analysis.

   - LT-Gen corrections for power benefits due/to-be-completed.
     - Delegated to FAC.
   - Complete revised benefits analysis.
     - Delegated to FAC.

9. Discuss as a part of Reclamation's "Power Update" at all Power Customer CCC meetings.

   - Benefits analysis will be provided at the power customer meeting following completion.
     - Delegated to FAC.
   - Currently reviewing the modelling results of the revised benefits analysis.
     - Delegated to FAC.

10. Review the guidelines annually.

    - Benefits analysis will be provided at the power customer meeting following completion.
      - Delegated to FAC.
    - Currently reviewing the modelling results of the revised benefits analysis.
      - Delegated to FAC.
(II).1.h. - Work with WAPA to maintain 10-year forecast of capital improvements. Review with customers at Technical Committee Meetings.

- Complete 10-year forecast of capital improvements for CVP power infrastructure. 8/6/2019
- Complete and ongoing revisions tied to each MMPPC meeting. 8/6/2019
- Reclamation provided a presentation and an opportunity to review the 10-year forecast with CVP customers at Technical Committee Meetings. 8/6/2019
- For latest updates, please contact Steve Melavic at smelavic@usbr.gov. The forecast is being revised and shared with power customers more frequently than annually (MMPPC, Technical Committee and CCC meetings). ongoing
- Update 10-year forecast annually. 8/1/2020
- For latest updates, please contact Steve Melavic at smelavic@usbr.gov. The forecast is being revised and shared with power customers more frequently than annually (MMPPC, Technical Committee and CCC meetings). ongoing

(II).1.i. - Work with WAPA, power customers, and stakeholders to develop a variance percentage threshold between budgeted and actual expenditures.

- Reclamation will seek customer and stakeholder input on appropriate variance percentage threshold. 10/31/2019
- Coordinate variance percentage determination with WAPA, power customers and stakeholders. 1/13/2020
- Determine appropriate variance percentage threshold between budgeted and actual expenditures for transparency of multipurpose O&M and construction costs. 1/13/2020
- Document and share variance percentage commitment with power customers. 6/1/2020
- This information will be shared at CCC meeting. ongoing

(II).1.j. - Implement benchmarking of CVP hydropower data and share annually.

- Prepare preliminary report outlining results of cost and operational data for CVP generators. 10/31/2019
- Reclamation continues to develop this report and will share when completed. Suggested metrics for the data shared with customers via email. CVO Office shared Benchmarking data from 2016-2018 with Power customers in February 2020 at the TC Meeting 2/6/2020
- Share results with Reclamation management and power customers. 10/31/2019
- Results were shared at customer TC meeting in February 2020 following completion. This is an annual requirement and will continue each year after benchmarking results are finalized. 2/6/2020
- Prepare and share report with Reclamation management and power customers annually. 10/31/2020
- Results will be shared at TC meetings annually. ongoing

III. Implementation - Lost Production Opportunities

(III).1.a. - Use best available science with plant bypass operations.

- Coordinate with the American River and Sacramento River groups when evaluating power plant bypass operations for species mitigation. ongoing
- Reclamation will continue to coordinate with the groups to use data for decision-making and to incorporate real-time monitoring into decisions. Updates from these meetings are provided during customer meetings. In late October 2019, Reclamation and WAPA’s engagement with the American River group resulted in mitigating a proposed bypass of Folsom Powerplant by applying available science. ongoing

(III).1.b. - Coordinate with WAPA fisheries biologist in adaptive management committees.

- Invite WAPA fisheries biologist to tour the Central Valley Office control center and provide an overview of CVO operations. 4/26/2019
- Complete. 4/26/2019
- Invite WAPA fisheries biologist to attend adaptive management committees (American River Group and Sacramento River Temperature Task Group) to help ensure requests for power bypass operations are supported by best available science. 6/20/2019
- Any information from those meetings is updated through WAPA’s channels. 6/20/2019


- Reclamation will evaluate the forecast-informed reservoir operations when the U.S. Army Corps of Engineers opens this process for comment. ongoing
- This action will occur when the U.S. Army Corps of Engineers initiates revisions to the WCM. ongoing
(III).1.d. - Provide updates on flood control operations.

Include flood operations updates in the weekly status reports to power customers. 8/30/2019

Discuss as a part of Reclamation’s “Power Update” at all Power Customer CCC meetings. Ongoing

Reclamation provides water operations updates at each power customer CCC meeting. This includes flood control operations when relevant. 8/30/2019

(III).1.e. - CVP Hydropower Outage Scheduling - Framework at Maintenance and Major Project Planning Committee (MMPPC)

Inform customers about the concepts adopted in the CVP Hydropower Outage Scheduling Framework document by posting to Reclamation’s website. 6/25/2019

This framework is available at https://www.usbr.gov/mp/hydro.html. 6/25/2019

Include an agenda item on the next MMPPC and the MP SNR O&M meeting to discuss FY20 outage schedule and receive input from power customers. 9/5/2019

This action will occur when the next MMPPC is scheduled (proposed date is 7/15/2020). 4/13/2020

(III).1.f. - Coordinate O&M, outages at MMPPC

Include an ongoing agenda item for the MMPPC meeting to discuss and coordinate items related to O&M and planned and ongoing outages. Ongoing

Reclamation added this item to its agenda and will continue to discuss and coordinate at MMPPC meetings. ongoing

Develop a scheduling guide that Reclamation Area Offices will utilize to help schedule outages. 4/1/2020

Reclamation continues to develop this guide and provide updates at MMPPC meetings. ongoing

(IV).1.a. - Continued support for WAPA - Energy imbalance market (EIM)

Continue to meet with customers to evaluate benefit and costs for implementation. 4/2019 - Ongoing

Continue coordination meetings with Reclamation, WAPA and BANC. 4/2019 - Ongoing

Continue to provide support for following WAPA determination on implementing EIM. Ongoing

Reclamation provided the data for the gap analysis to BANC. Reclamation continues work on planning SCADA modifications for entering into the EIM. Reclamation received approval from customers' Governance Board for funding the EIM in future years. October 2019 status: Reclamation (CVO) planning to develop new dispatch algorithm by Sep 2020. WAPA and Reclamation have held meetings up through April 2020 in regards to evaluating benefits and costs for implementation. Reclamation has developed an O&M rate. 4/2020 - Ongoing

Public comment period on EIM ended on 8/16/19. On Aug 27, 2019, WAPA made a determination to move forward with their Sierra Nevada Region’s participation in EIM. Reclamation is continuing to support WAPA during implementation process. 8/27/2019

(IV).1.b. - Explore water order schedules to allow for better forecasting of O’Neil Pump/Generation Plant operations and power demands.

Meet with SLDMWA, San Joaquin River Water Authority, and San Joaquin River Exchange Contractors to discuss option on improving O’Neil Operations. 6/12/2019

Water customers (SLDMWA, San Joaquin River Water Authority, and San Joaquin River Exchange Contractors) have agreed to improve forecasting of operations at O’Neil. - Complete. 6/12/2019

Share power economics data with water customers. 6/12/2019

Economics shared - Complete. 6/12/2019
<table>
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<tr>
<th>Test the new process to transmit O'Neil and Tracy PUP schedules to the SLDMWA.</th>
<th>10/1/2019</th>
<th>The new process is in development and testing began in October 2019. The process will include transmitting daily pumping generation schedule to the water authority between CVO and SLDMWA. Denver it has approved direct transfer of data to SLDMWA Approximately December 2019.</th>
<th>12/31/2019</th>
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| (IV).1.c - Adopt principles outlined in framework on improved operational flexibility. | Ongoing | Power Update was provided at the CCC on October 10, 2019. | Ongoing |
| (IV).1.d - Advance discussions about optimizing operational flexibility scheduling. | 8/2019 - Ongoing | Experiments 1, which proposed lower minimum takes in daylight low value hours, and 2, which proposed lower minimum takes in surrounding hours by raising minimum takes in the morning on-peak hours, were accepted by Reclamation and WAPA to become a part of standard operations in August 2019. Experiment 3, under which customers pre-disclose portions of their intended BR schedule, appears to be a useful tool, but needs some automation to reduce the impact on schedulers for customer data collection. A new experiment (4) was proposed by a WAPA contractor at last customer meeting which would provide a volume target to customers with the goal of providing even more customer flexibility. The proposal is a recognition that there is a machine minimum at which some machines will operate at; an opportunity to watch lake levels to minimize between hours of midnight and HE16 and move production of BR energy to the high value hours Reclamation is considering this experiment and alternatives. Exp 4 could realize higher value from reshape, but could also create difficult generation transitions and create sub-optimal max peaking periods. All Experiments showed reduction on Max Peaking. | 2/2020 - Ongoing |
| (IV).2. - Track schedule for California zero carbon and carbon neutral rulemaking process. | 9/1/2021 | Reclamation is registered with California State list-serves serves responsible for SB-100 implementation and will receive updates as the rulemaking process continues. Reclamation’s Power Resources Office will continue to work with the HPOC to keep awareness of this action. Reclamation supports Power Customer’s desire to have large hydro count for renewable energy credits and understands the significance of this desire. | Ongoing |

| V. Implementation - Improved Customer Service |
| --- | --- | --- | --- |
| (IV).1.a. - Adopt framework for large-scale delta conveyance facility. | The State of California continues to proceed with planning efforts for the Delta Conveyance Project. The state released the Notice of Preparation (NOP) for the new project. Reclamation submitted a comment letter that requested a clear delineation between the existing biological monitoring requirements and the monitoring requirements resulting from changes from system wide programs due to the addition of the Delta Conveyance Project; an initial plan that describes how DWR would operate the Delta Conveyance Project and comply with Federal Endangered Species Act requirements related to operations; and a detailed analysis of the effects of the Delta Conveyance Project on the CVP. | The webpage and all associated information can be found here: https://www.usbr.gov/mp/hydro.html - Complete. | 6/24/2019 |
| (IV).1.b. - Develop Mid-Pacific webpage on Reclamation’s website to host initiative updates. | The webpage and all associated information can be found here: https://www.usbr.gov/mp/hydro.html - Complete. | Ongoing | 6/24/2019 |