

Balancing Authority of Northern California

Regular Meeting of the Commissioners of BANC and Strategic Planning Session

1:00 P.M.

Wednesday, August 21, 2019

Scott's Seafood on the River

Tower Room

4800 Riverside Blvd

Sacramento, CA 95822

Balancing Authority of Northern California

NOTICE OF REGULAR MEETING AND AGENDA

Notice is hereby given that a regular meeting of the Commissioners of the Balancing Authority of Northern California (BANC) will be held on **August 21, 2019 at 1:00 p.m.**, in the **Tower Room at Scott's Seafood on the River, 4800 Riverside Blvd, Sacramento, CA 95822.**

AGENDA

- 1 Call to Order.**
- 2 Introduction and Logistics.**
- 3 Matters subsequent to posting the Agenda.**
- 4 Public Comment** – any member of the public may address the Commissioners concerning any matter on the agenda.
- 5 Consent Agenda.**
 - A. Minutes of the Regular Commission Meeting held on July 24, 2019.
 - B. BANC Operator Reports (July).
 - C. Compliance Officer Report (August).
 - D. PC Committee Chair Report (August).
 - E. General Manager's Report and Strategic Initiatives Update.
- 6 BANC Strategic Planning Session – “BALANCING RELIABILITY, MARKETS, AND POLICY”.**
 - A. Consider and Possibly Approve Resolution 19-08-13 *Approval of First Amended and Restated EIM Participation Agreement, Phase 2 Participation Percentages, and Phase 2 Model.*
 - B. Consider and Possibly Approve Resolution 19-08-09 *Acceptance of Proposed EIM Phase 2 Implementation Budget Estimate.*
 - C. Consider and Possibly Approve Resolution 19-08-10 *Approval of Revised 2019 Annual Budget for BANC.*
 - D. Consider and Possibly Approve Resolution 19-08-14 *Authorization of the General Manager to Enter into Negotiations for a BANC EIM Phase 2 Implementation Agreement with the California Independent System Operator.*
 - E. Consider and Possibly Approve Resolution 19-08-11 *Authorization of Amendment to Utilicast Contract for Services Related to Phase 2 of Energy Imbalance Market to Include Task 3.*
 - F. Consider and Possibly Approve Resolution 19-08-12 *Authorization of Additional Amendments to Exhibit C of the Energy Imbalance Market Phase 2 BANC Cost Sharing Agreement with WAPA-SNR.*
- 7 Closed Session:** Conference with legal counsel in anticipation of litigation pursuant to subdivision (c) of Cal. Gov't Code § 54956.9; one case. Performance evaluation of a public employee: General Manager pursuant to subdivision € of Cal. Gov't Code § 54957.
- 8 Adjournment.**

Balancing Authority of Northern California

Consent Agenda Items

- A. Minutes of the July 24, 2019 BANC Regular Meeting.**
- B. BANC Operator Report (July).**
- C. Compliance Officer Report (August).**
- D. PC Committee Chair Report (August).**
- E. General Manager Report and Strategic Initiatives Update.**

MINUTES OF THE REGULAR MEETING OF THE COMMISSIONERS OF THE
BALANCING AUTHORITY OF NORTHERN CALIFORNIA (BANC)

July 24, 2019

On this date, a Regular Meeting of the Commissioners of the Balancing Authority of Northern California (BANC) was held at 915 L Street, Suite 1480, Sacramento, CA 95814.

Representatives Present:

Member Agency	Commissioner
Modesto Irrigation District	Greg Salyer
City of Redding	Dan Beans, Chair
City of Roseville	Michelle Bertolino
Sacramento Municipal Utility District	Paul Lau
City of Shasta Lake	James Takehara
Trinity Public Utilities District	Absent

Agency	Liaison(s)
Western Area Power Administration	Sonja Anderson Arun Sethi Carl Dobbs

1. Call to Order: Chair Salyer called the meeting to order at 2:00 p.m.
2. Matters Subsequent to Posting the Agenda: None.
3. Public Comment: Chair Salyer invited comments from the public and none were given.
4. Consent Agenda: Mr. Takehara moved, Mr. Beans seconded, and the participating Commissioners unanimously approved the Consent Agenda items comprised of: (A) Minutes of the Regular Commission Meeting held on May 15, 2019. (B) BANC Operator's Reports for May and June; (C) Compliance Officer's Reports for June and July; (D) PC Committee Chair's Report for June and July; and (E) General Manager's Report and Strategic Initiatives Update.
5. Regular Agenda Items:
 - A. Mr. Shetler informed the Commission that Greg Salyer had reached his 2 year term limit as Chairperson per the JPA, so a new BANC Chairperson must be selected. Ms. Bertolino nominated Dan Beans. Mr. Takehara seconded the nomination, and the Commissioners unanimously approved Dan Beans as the BANC Chairperson.
 - B. Mr. Shetler provided an operations update, including a briefing on CA public safety Power Shutoff program (PSPS) and impacts to adjacent BAs. He summarized CAISO's plan going before their board to address transmission shutdowns and minimize impacts to adjacent Balancing Authorities, to the extent they are capable of doing so, by providing emergency backup service (once other actions necessary to reduce loads/imports across transmission system.) The BANC Operator has worked with CAISO

MINUTES OF THE REGULAR MEETING OF THE COMMISSIONERS OF THE BALANCING AUTHORITY OF NORTHERN CALIFORNIA (BANC)

on plans for implementation pending approval, so BANC is prepared to respond as appropriate. A discussion of potential future reciprocity arrangements followed, and Mr. Salyer asked if Mr. Shetler would bring a recommendation back to Commission for approval at some future point in time should it be determined to be appropriate, and Mr. Shetler confirmed that he would.

- C. EIM/RC Updates - Mr. Shetler provided an update on EIM Phase 1 and noted that all is going well and the total expended budget is within plan. CAISO has issued first quarter EIM benefits results. With regard Phase 2 efforts, initial GAP assessments have been provided to Phase 2 entities and final reports are being prepared. A Phase 2 go live decision is still anticipated at the August BANC Commission meeting scheduled for August 21, 2019.

Mr. Salyer moved, Mr. Lau seconded, and the participating Commissioners unanimously approved 19-07-09 *Authorization of Amendments to Energy Imbalance Market Phase 2 BANC Cost Sharing Agreement with WAPA-SNR*.

With regard to RC Services, BANC continues to be engaged with other entities in the West on coordination issues. An approved Western Interconnection Data Sharing Agreement (WIDSA) will replace the Universal Data Sharing Agreement (UDSA), which will remain in effect until December. CAISO released a notice yesterday seeking signoff and submittal of the WIDSA. BANC successfully transitioned to RC West as of July 1 without issue.

Mr. Jon Olson, SMUD's Director of Energy Trading & Contracts, and Ms. Debra Warady, SMUD's Manager, Resource Optimization gave a BANC/SMUD EIM Benefits presentation for the benefit of the members.

- D. Mr. Shetler provided a brief 2019 WECC/NERC BANC Audit update, stating that it is expected to be heavily focused on Critical Infrastructure Protection (CIP) over Operations and Planning (O&P) standards. The audit will take place during the first half of September.
 - E. Mr. Shetler provided various financial updates to the Commission, including 2018 BANC budget vs. actuals, EIM Phase 1 budget vs. actuals, and a 2020 Draft BANC budget.
 - F. The August 21st BANC Commission Meeting will serve as this year's strategic planning session, where the focus is expected to be on EIM Phase 2 discussion and decision making as well as future BANC Engagement Strategy. The meeting will be held at Scott's on the River from 1-5 with a reception to follow.
6. Closed Session:
- A. The Commission retired to closed session for conference with legal counsel in anticipation of litigation pursuant to subdivision (c) of Cal. Gov't Code § 54956.9; one case.

After returning to open session, Mr. Smith reported that no action was taken in closed session.

The meeting was adjourned at 4:09 p.m.

Minutes approved on August 21, 2019.

C. Anthony Braun, Secretary



BALANCING AUTHORITY OF NORTHERN CALIFORNIA

P.O. BOX 15830 • D109 • SACRAMENTO • CA 95852 -1830

TO: BANC Commission

RE: BANC Operator Report for July 2019

Operations:

- BA Operations: Normal
- Significant BA Issues: None
- NWPP Reserve Energy Activations
 - 0 contingency requiring activation of NWPP
 - 0 MW average generation lost
 - 0 MW maximum generation lost
 - Generating unit(s) and date(s) affected: None
 - All recoveries within 0 minutes
- USF
 - 9 of 31 days with instances of USF mitigation procedure utilized
 - 4 days on Path 66
 - No operational impact on BANC
- BAAL Operation:
 - Data under evaluation

Monthly Notes:

- BANC EEA1 declaration on July 29th

A JOINT POWERS AUTHORITY AMONG

Modesto Irrigation District, City of Redding, City of Roseville, Trinity Public Utilities District,

City of Shasta Lake, and Sacramento Municipal Utility District

Compliance Officer Report

BANC Commission Meeting

August 2019

The following summarizes routine issues for the Commission's information and consideration. Any major issues or action items will be identified separately on the Commission agenda for action.

BA Compliance Issues:

- No significant operational Balancing Authority compliance events occurred.
- All required BA compliance reports and operating data were submitted to WECC.
- BANC Compliance Staff is coordinating responses to early data requests being issued by WECC in advance of the 2019 Audit, scheduled to be held Sept. 3 – 13, 2019. BANC will be audited on a total of 19 requirements (12 CIP/7 O&P) addressing its compliance obligations as a BA/PC.
- BANC's Q3, 2019 self-log will be submitted to WECC by 10/31/19. At present, there were no potential instances of non-compliance to report.

BANC MCRC:

- The next BANC MCRC teleconference is scheduled to be held at 10:00 AM on Monday, August 19, 2019.

BANC PC Committee Chair's Report

August 2019

The following summarizes Planning Coordinator-related issues for the Commission's information and consideration. Any major issues or action items will be identified separately on the Commission agenda for action.

BANC PC Committee Issues:

SMUD staff continues to work toward demonstrating compliance with PC-related NERC reliability standards.

- TPL-001-4 (TPL) – A draft version of the report was sent out on July 5, 2019, and comments were due on July 26, 2019. The finalized report was scheduled to be sent out by August 9, 2019 assuming there were no major comments/changes from the members.
- FAC-014-2 –The report was finalized and sent out on August 1, 2019.
- PRC-023-3 Transmission Relay Loadability – Staff completed the study, and the draft report was sent out for comments on August 9, 2019. Comments are due on August 23, 2019.
- PRC-026-1 Relay Performance During Stable Power Swings – Staff has started to perform this study, and it is due by the end of year.

The table below shows the current status of all PC-related standards:

PC Standard	Estimated % Complete	Notes
FAC-002-2 Interconnection Studies	95%	Write RSAW at end of year
FAC-010-3 SOL Methodology for Planning Horizon	95%	Write RSAW at end of year
FAC-013-2 Transfer Capability for Near-Term Planning Horizon	75%	Coordinate with BANC PC participants to be consistent with operation SOLs
FAC-014-2 Establish and Communicate SOLs	95%	Final Report sent out on 8/1/2019.
IRO-017-1 Outage Coordination	0%	Email TPL-001-4 Report
MOD-031-2 Demand and Energy Data	0%	2020 cycle starts in November
MOD-032-1 Data for Power System Modeling & Analysis	70%	Ongoing activity Write RSAW at end of year

PC Standard	Estimated % Complete	Notes
MOD-033-1 System Model Validation	70%	BANC system validated for 7/01/2019 deadline for R1.2 R1.1 due 10/01/2019
PRC-006-2 Underfrequency Load Shedding	80%	Support WECC study Write RSAW at end of year
PRC-010-2 Undervoltage Load Shedding	60%	Study/draft report will be done by the end of this year.
PRC-023-3 Transmission Relay Loadability	90%	Draft report will be sent out for comments on August 9, 2019.
PRC-026-1 Relay Performance During Stable Power Swings	10%	Started study.
TPL-001-4 Transmission System Planning Performance	85%	Final Report will be sent out on 8/9/2019.
TPL-007-1 GMD Transmission Performance	95%	Write RSAW at end of year

GM Report

BANC Commission Meeting

August 21, 2019

I wanted to summarize routine issues for the Commission's information and consideration. Any major issues or action items will be identified separately on the Commission agenda for action.

Outreach Efforts:

Refer to GM outreach report provided under separate distribution. In addition, here are some other noteworthy items:

LADWP/Seattle City Light/SRP

Dialogue continues with these entities regarding EIM participation. Based upon the group's discussions, we have agreed to continue to interact on an informal basis to make sure we are on the same page on EIM issues from a POU perspective. We are routinely holding bi-weekly calls to provide updates and discuss issues. To date, we have collaborated with the other POUs on joint language to use in the EIM Entity agreement that we will all need to sign for EIM operations, on how to address market-based rate authority with DMM, potential common language for OATT revisions, and joint comments on the EIM governance issues. We have also used this forum to discuss POU positions regarding the EDAM development. In addition we have worked with the other three entities to agree upon the joint funding of BBSW to monitor CAISO interfaces for us.

POU Western Markets Initiative

BANC continues to participate in this effort, which is being coordinated by APPA. The group continues to evaluate how best to represent the POUs in the ever-changing power markets in the West. An update call was held on July 29, 2019. The calls are mainly used for updates on market developments and we also discussed possible comments on the CAISO governance review process. The next meeting will be face-to-face on September 9, 2019, in Sacramento. APPA has suggested that this will be the last in-person meeting and any future needed updates will be by conference call.

Market Initiatives:

EIM Participation

The BANC EIM Phase 1 implementation effort was completed on April 3, 2019, with the successful go-live of BANC as the EIM Entity and SMUD as a Participating Resource. We are now monitoring EIM participation. SMUD provided a benefits update from their first quarter of operations at the July Commission meeting. We are working with SMUD to provide the benefits update presentation to a broader audience of BANC members.

The BANC EIM Phase 2 effort was kicked off with a meeting of BANC, SMUD, the Phase 2 Entities (MID, Redding, and Roseville), WAPA-SNR, and the consultant (Utilicast) on 3/7/19. We are continuing with efforts to allow decision-making by the members that will support a Commission decision at the August 21st meeting regarding moving forward with Phase 2. Utilicast has finalized the EIM Phase 2 gap analysis work and has provided reports to the EIM Phase 2 participants. We held a follow-up discussion with the CAISO on the Phase 2 effort on July 2nd. We also held a BANC EIM Phase 2 Working Group meeting on August 13, 2019, to finalize preparations for the discussion at the August 21st meeting.

EDAM Participation

The CAISO has also announced the intent to allow EIM entities to participate in an extended Day-ahead Market (EDAM). Based upon the discussions among the EIM entities and the CAISO, we have agreed to perform a feasibility assessment of the proposed market design. The feasibility assessment was initiated in December 2018 and was planned for completion in June 2019. Initial model runs have been performed and the group is reviewing these initial results. As a result of the initial review the group is working with the consultants on refinements to the model and modeling assumptions. These refinements are nearly complete. It is expected that if an EDAM looks feasible the CAISO would use late 2019 and early 2020 to conduct a formal stakeholder process followed by tariff filings at FERC. An EDAM go-live is currently estimated to be early 2022 timeframe. In accordance with the BANC plan for this effort, we have executed contracts with the consultants for some additional BANC/SMUD focused work on the feasibility assessment.

WAPA:

Market Engagement

We are continuing to work with WAPA on integrating them in to the EIM implementation discussions. We have included WAPA-SNR in our Phase 2 planning efforts. As a result of the Commission approval of the amendment to the Utilicast contract, WAPA-SNR/Bureau have been included in the gap analyses efforts. BANC is also supporting WAPA-SNR in their customer meetings. WAPA-SNR has requested

that we update the BANC/WAPA-SNR EIM Funding Agreement to include costs for EIM Phase 2 implementation, which was approved at the July 24, 2019, Commission meeting.

San Luis Transmission Project

WAPA-SNR has announced its intent to work with the Bureau of Reclamation and CDWR to construct the SLTP. BANC met with WAPA and the other parties to fully understand the implications of having this new transmission project in the BANC BA/WAPA-SNR sub-BA. There is a possibility that the DWR may also consider bringing some of the State Water Project in to the BANC through participation in the SLTP. We are participating in follow-up meetings with WAPA-SNR, DWR, and the State Water Contractors on this project. In December the State Water Contractors board voted to recommend that DWR participate in the SLTP with at least a 50 MW share. A follow-up meeting was held in mid-March. In addition, the SLTP developers (DATC) have completed the open season on the additional capacity for the project and we are anticipating announcements relative to next steps by September.

Peak Reliability:

RC Services Alternatives

BANC provided its certification of readiness for commencement of RC West operations and RC West went live for the CA footprint successfully on July 1, 2019. The next phase will be the BC Hydro RC go-live, which is on schedule for September 3, 2019.

On July 18, 2018, Peak unilaterally made the decision to wind down its operations based upon the informal feedback it had been receiving from the Funding Parties. BANC is working with the other Funding Parties to coordinate on the wind down and closure efforts for Peak. At the April 30th Annual Meeting it was announced that the Peak membership had approved by an 81% majority the resolution to dissolve Peak effective in December. Based upon the current RC transition schedule, it is anticipated that Peak will cease operations as a registered RC on or about December 4, 2019. It is anticipated that full closure of Peak will be completed during the first half of 2020.

Peak MAC and Board Meetings

The next Peak MAC call is scheduled for August 22. There will also be a MAC call and a Board call in mid-September.

WECC

Electricity/Natural Gas Reliability Interface

WECC initiated its natural gas/electricity interface study in September 2017. WECC continues its outreach on this effort and is planning some next steps on industry coordination regarding follow-up actions.

WECC Board Meetings

The next WECC MAC and Board meetings will be September 10-11 in Seattle, which will also be the WECC Annual Meeting. I currently plan on attending.

RC Services for the West

WECC and NERC are focused on the RC transition in the West and view it as a major reliability issue for the coming year. WECC/NERC are gearing up for the certification effort for the new RCs. They have determined that Peak will not require a formal recertification on each of the four RC transitions in 2019. WECC has posted a map on its website that shows the basic boundaries of the future four RC's in the Western Interconnection in 2019. WECC also held an RC Forum webinar on July 26, which was supported by the RC Transition Coordination Group and will hold another RC Forum on September 5, 2019. The generation-only RC (GridForce) has announced plans for RC West (CAISO) to provide initial RC services for them starting this fall. They are still evaluating whether to become a separate RC at a later date.

BANC/SMUD NERC/WECC Audit

Our triennial audit for NERC standards' compliance is scheduled for 9/3-13/19 this year. BANC is working with SMUD to coordinate this effort. To date SMUD has conducted an operations readiness review and brought in a third party to conduct a CIP mock audit. We have also been in discussions with WECC regarding the scope of the planned audit this fall. WECC has made initial data requests and SMUD is working to provide the responses on behalf of BANC.

CDWR Delta Pumping Load:

BANC is coordinating with SMUD, CDWR, WAPA, and the CAISO regarding how the construction and pumping loads and ancillary services will be provided for this project. The CAISO has reached out to BANC/SMUD/WAPA-SNR regarding contacts for initiating discussions on how CAISO will supply energy for the construction loads in our footprints. With the Governor's recent announcement that the project will be downsized from two to one tunnel, CDWR announced that it will be withdrawing the current applications and submitting revised environmental documentation. We expect at least a 2-3 year delay in any start to the project.

Strategic Initiatives:

An update of the 2018/2019 Strategic Initiatives is attached to this report.

BANC 2018/2019 Strategic Plan - Routine Initiatives - August 2019 Update

No./Priority	Focus Area	Initiative	Responsibility	Target Due Date	Status
1 Medium	INDEPENDENCE	Effectively oversee the BA operations.	Jim Shetler	Ongoing	See monthly Ops, PC, Compliance, & GM Reports
2 Medium		Develop long-term succession plan and traits for General Manager	Jim Shetler/Commission	4th Qtr. 2019	
3 Low		Organizational Issues: ~ Develop BANC procedures & processes as appropriate	Jim Shetler/BBSW	4th Qtr. 2019	
4 Medium	OUTREACH	Engage in industry forums (WECC, Peak, NWPPA, etc.)	Jim Shetler	Ongoing	Continue attending Peak & WECC Board mtgs, WEIL, & NWPP Exec. Forum
5 Medium		Coordinate with other POU BAs (Ca and regionally)	Jim Shetler	Ongoing	Coordinating with SCL, SRP, LADWP, & TID on EIM
6 Medium		Outreach to regulatory and legislative bodies on key issues	Jim Shetler/BBSW	Ongoing as Necessary	Attend CREPC/WIRAB Mtg 4/17-18/19
7 Medium	ASSETS	Evaluate joint dispatch options	Resource Committee	4th Qtr. 2019	Based upon current EIM Phase 2 this has been put on hold.
8 Low	MEMBER SERVICES	Identify and outreach to potential new BANC members	Jim Shetler	Ongoing	Follow-on discussions with TID suspended

BANC 2018/2019 Strategic Plan - Routine Initiatives - August 2019 Update

No./Priority	Focus Area	Initiative	Responsibility	Target Due Date	Status
9 High	INDEPENDENCE	Manage implementation of EIM Phase 1 participation effort	Jim Shetler/SMUD	4/3/19	COMPLETE Go-live 4/3/19
10 High		Planning efforts for possible EIM Phase 2 ~ Gap analysis by Utilicast ~ Develop BANC processes ~ Finalize Phase 2 processes ~ Phase 2 EIM Impl. Agrmt.	Jim Shetler Jim Shetler/BBSW Jim S./BBSW/Mark W. Jim Shetler/BBSW	10/1/19 7/1/19 10/1/19 12/31/18 10/1/19	Initiated Phase 2 Effort 8/21/19 Decision Meeting Reports finalized Finalizing w/ ISO/Entities Draft under review
11 High		EDAM Phase 1 evaluation ~ Feasibility Assessment ~ CAISO Stakeholder Process	Jim Shetler/BBSW Jim Shetler/BBSW	2nd Qtr. 2019 4th Qtr. 2019	FA effort in refinement
12 Medium	OUTREACH	Evaluate opportunities to engage other entities in market development	Jim Shetler	4th Qtr. 2017	~ Continue coordination w/ LA, SCL, SRP ~TID discussions on hold
13 Medium		Regional Policy Issues: Monitor/weigh-in where appropriate	Jim Shetler/Commission	Ongoing	Engaged in EIM GRC issue
14 High		Regionalization: ~Monitor CAISO governance ~EDAM discussions	Jim Shetler/BBSW Jim Shetler/BBSW	Ongoing	Reviewing EIM Gov. Prop. Active participation
15 High		Transition of RC Services ~Transfer from Peak to CAISO ~Coordinate Peak Wind Down to support transition	Jim Shetler Jim Shetler	7/1/19 12/31/19	COMPLETE 7/1/19 Participating in RCTCG
16 Medium	ASSETS	2018 IRP Review Issues ~SMUD UARP Capabilities ~WAPA/BOR CVP Capabilities ~Coordination w/ CAISO/TID ~Discuss DWR capabilities ~Coordinate on next IRPs	Jim S./Res. Com./SMUD Jim S./Res. Com./WAPA Jim S./Res. Com. Jim S./Res. Com. Jim S./Res. Com.	12/31/19 12/31/19 12/31/19 12/31/19 12/31/19	Discussions initiated Discussions initiated
17 Medium		Evaluate TP services for Redding & Roseville	Jim Shetler/J. Gillette	12/31/18	Direct between SMUD and Redding/Roseville

Balancing Authority of Northern California

Agenda Item 6A

1. ***Resolution 19-08-13 Approval of First Amended and Restated EIM Participation Agreement, Phase 2 Participation Percentages, and Phase 2 Model.***
2. **First Amended and Restated Energy Imbalance Market Participation Agreement Between the Balancing Authority of Northern California and the Modesto Irrigation District, City of Redding, City of Roseville, Sacramento Municipal Utility District and the United States Department of Energy Western Area Power Administration Central Valley Project, California .**

Braun Blaising Smith Wynne, P.C.

Attorneys at Law

8/13/2019

To: BANC Commission

From: BANC Counsel

RE: Commission Approval of BANC First Amended and Restated EIM [Phase 2] Participation Agreement, Phase 2 Participation Percentages (Exhibit A) and Phase 2 Model (Exhibit B)

The purpose of this memorandum is to summarize three key internal BANC EIM Phase 2 documents for Commission approval and to request authorization for the General Manager to execute an agreement with its members to establish the contractual rights and obligations for participation in the Energy Imbalance Market (EIM) within the BANC EIM Entity footprint. These document summaries include:

1. First Amended and Restated BANC Energy Imbalance Market (EIM) [Phase 2] Participation Agreement
2. EIM Phase 2 Participation Percentages – EIM PA, Exhibit A.
3. EIM Phase 2 Model – EIM PA, Exhibit B.

The EIM PA and the proposed exhibits have been reviewed by BANC, BANC member EIM Phase 2 participants and Western Area Power Administration (WAPA) staff and counsel. While additional minor edits may continue after approval, attached is a substantively final version. Thus, only non-substantive changes may occur subsequent to this approval.

1. First Amended and Restated BANC Energy Imbalance Market (EIM) [Phase 2] Participation Agreement (EIM PA): We are seeking Commission approval of the EIM PA, along with authorization for the General Manager to execute the EIM PA on behalf of BANC with BANC EIM participants. The EIM PA is the project agreement which defines the respective roles and responsibilities of BANC, as the EIM Entity and BANC EIM participants. Initially, the agreement was between BANC and SMUD. However, subsequent decisions either have been, or are likely to be, made by several BANC members and WAPA to participate in what has been referred to as BANC EIM Phase 2 (Phase 2). Therefore, this is the *First Amended and Restated* EIM Participation Agreement. Some key provisions we have highlighted include:

- a) Term and Termination (Section 4). The term is 40 years due to the participation of WAPA. Termination by any participant would require one (1) year notice to afford an opportunity to make any needed changes within the BANC EIM network topology and other possible changes, as well as corresponding CAISO adjustments to its network models and systems. The EIM PA would also terminate if BANC no longer can, or

desires to, serve as an EIM Entity, but BANC would be obligated to cooperate with a successor entity, should the participants so decide.

b) Scope of Agreement (Section 5). The EIM PA also incorporates key documents, including the Participation Percentages (discussed below), the EIM Phase 2 Model (also discussed below), the EIM Implementation Agreement (the agreement between BANC and the CAISO which set forth the implementation details and milestones for Phase 2 participants – filed with the Federal Energy Regulatory Commission), and the EIM Entity Agreement (the agreement between the CAISO, as the EIM Market Operator, and BANC, as the EIM Entity, describing the respective roles and obligation of the parties –filed with FERC).

c) EIM Entity and EIM Participant Obligations (Sections 6 and 7, respectively). These provide the broad obligations of both BANC and the participating entities.

d) EIM Participant and New EIM Participant Costs (Section 8). This section outlines the various cost responsibilities of the BANC EIM participants. Of note, there are several different costs which will be recovered. These are discussed more below in our discussion of Exhibit A, which set forth the agreed-upon allocation percentages (Participation Percentages) for each of the BANC EIM participants, including WAPA. One particular cost relates to a one-time assessment to Phase 2 participants only. This assessment reflects the BANC EIM start-up costs originally borne solely by SMUD. BANC later underwent a process to determine and allocate the costs (on a pro-rated basis) shared by new EIM participants. These costs relate to the infrastructure commonly shared by all EIM participants inside of BANC.

e) EIM Committee (Section 10). The Agreement also establishes an EIM Committee, which will serve in an advisory role to the BANC General Manager. As an advisory committee, the EIM Committee is not subject to the Brown Act. To ensure that the EIM Committee's input is given proper consideration by the General Manager, a mechanism is in place to resolve any disputes which might arise between EIM Committee recommendations and decisions of the General Manager. Should the parties fail to reach resolution, the EIM Committee may provide a summary of its position to the Commission for its own deliberation. All EIM participants within BANC will be given a seat on the EIM Committee. Key issues of import to participants, such as the adoption of EIM Business Practices, will be addressed within the Committee under the direction of the General Manager; however, any final work product will be presented to the Commission for approval. With respect to budget changes, the EIM Committee will be tasked with review and concurrence with any changes prior to submission to the Commission for final approval.

f) Reliability Standards Violations (Section 12). Similar to the Phase1 EIM PA, the Phase 2 EIM PA establishes that any liability for violations of Northern Electric Reliability Corporation Reliability Standards (Reliability Standards) applicable to BANC which arise due to EIM participation will be the responsibility of the EIM Participants

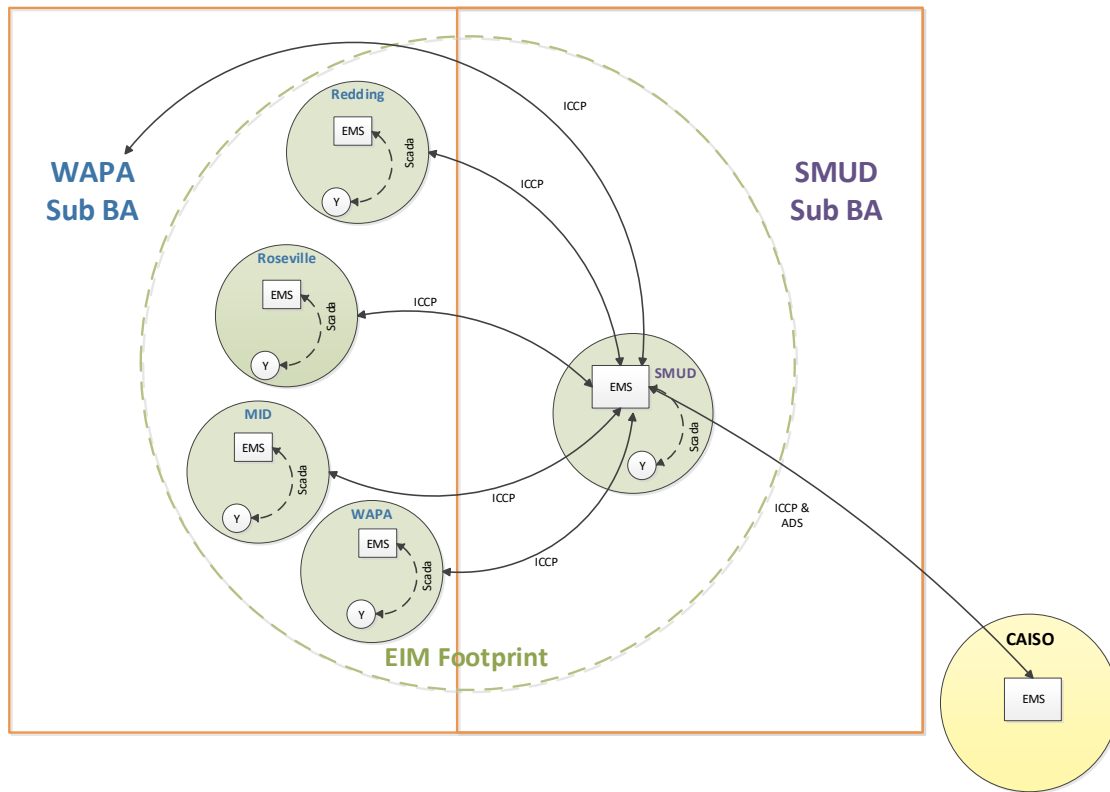
(Section 12). Without such a provision, liability for violations of Reliability Standards applicable to the BA are spread to all BANC members based upon membership percentages. While Phase 2 includes nearly all BANC members and WAPA, it still excludes the direct participation by the City of Shasta Lake and the Trinity Public Utilities District. Moreover, Section 12 also recognizes that WAPA, as an EIM participant, cannot be legally allocated penalties for adjudicated Reliability Standards violations, but can still be required to perform mitigation actions.

2. EIM Phase 2 Participation Percentages (EIM PA, Exhibit A). We are seeking formal approval of the EIM Phase 2 Participation Percentages (Participation Percentages), which determine how various EIM participation costs will be allocated among the BANC EIM participants in accordance with Section 8 of the EIM PA. The Participation Percentages will be incorporated into the EIM PA as Exhibit A. These are percentages that have been previously agreed upon and approved by Commission¹, however, we are now proposing them within the context of the EIM PA, as an amendable exhibit. The Participation Percentages represent tiers of costs which vary by participant. First, under Tier 1, there is an allocated load ratio share among everyone presumed to be in EIM – i.e., MID, Redding, Roseville, SMUD and WAPA. However, the percentages differ for other costs, represented by two other tiers. For example, each new entrant into EIM will be paying its share of EIM Entity start-up costs, originally only paid by SMUD. Thus, SMUD's allocated share of these costs is zero. Also, implementation and gap study costs are also different. For example, WAPA has a separate cost sharing agreement with BANC for its share of these costs, and obviously SMUD has already paid them. Thus, they are both zero. These various cost components are therefore described in detail in Section 8 of the EIM PA. As an attachment to Exhibit A, we have included the previously circulated white paper with the allocations and background that was developed by the General Manager and circulated among the prospective EIM participants and SMUD. These allocations can later be amended should there be a need to make adjustments; however, any such amendments to the allocations to which WAPA objects cannot be applied to them unless the concerns are resolved. Such objection by WAPA does not limit the remaining EIM participants' ability to revise their respective allocations among themselves. Given the working relationships inside of BANC and among the proposed EIM participants, we do not anticipate this occurring. Nevertheless, it was proposed by WAPA to address Federal funding limitations.

3. EIM Phase 2 Model (EIM PA, Exhibit B). We are seeking Commission approval of the EIM Phase 2 Model, since all implementation details and timelines are tied directly to this framework. This model has been developed in conjunction with the input of EIM Phase 2 participants and under close consultation with the CAISO. Thus, it is essential for the project that we retain the superstructure of the EIM Phase 2 Model. This does not mean that some of the implementation details and information exchanges will not be further refined, but this will all be done in full retention of the broader model itself. The general model superstructure is detailed in the EIM PA, Exhibit B, Option 2, Figure 2, which is excerpted below. The model itself can only be amended with written consent of all EIM participants and approval of the BANC Commission.

¹ See R.19-01-15 *Approval of BANC EIM Cost Allocation For Phase 2 Participation*, approved by the BANC Commission on January 23, 2019.

BANC Footprint



Commission Action

Based upon thorough vetting with BANC members' and WAPA's staff and counsel, BANC Counsel recommends that the Commission approve and authorize the General Manager to execute the EIM PA and approve the EIM Phase 2 Participation Percentages (EIM PA, Exhibit A) and the EIM Phase 2 Model (EIM PA, Exhibit B), which will be incorporated into the EIM PA.

**Balancing Authority of Northern California
Resolution 19-08-13**

**APPROVAL OF FIRST AMENDED AND RESTATED EIM PARTICIPATION AGREEMENT, PHASE 2
PARTICIPATION PERCENTAGES, AND PHASE 2 MODEL**

WHEREAS, the Balancing Authority of Northern California ("BANC") was created by a Joint Powers Agreement ("JPA") to, among other things, acquire, construct, maintain, operate, and finance Projects; and

WHEREAS, BANC, its members, and contracted consultants performed a net benefit evaluation of participation in the California Independent System Operator ("CAISO") Energy Imbalance Market ("EIM"); and

WHEREAS, based upon this evaluation, BANC and its members have concluded that the EIM does support meeting BANC's strategic principles with an indicative net benefit for BANC overall and individually for those entities that were evaluated; and

WHEREAS, BANC determined using a phased approach through a BANC EIM Project would allow BANC and the Sacramento Municipal Utility District ("SMUD") to proceed with participation in the EIM under Phase 1 while other members and the Western Area Power Administration – Sierra Nevada Region ("WAPA-SNR") further considered EIM participation; and

WHEREAS, certain BANC members, namely the Modesto Irrigation District, the City of Redding, and the City of Roseville, along with WAPA-SNR, have determined to join in EIM Phase 2 subject to final entity approval; and

WHEREAS, BANC, along with its prospective Phase 2 EIM participants and SMUD, developed a First Amended and Restated EIM Participation Agreement ("EIM PA") to address the roles and responsibilities of EIM participation within the BANC EIM Entity footprint; and

WHEREAS, BANC, along with its prospective Phase 2 EIM participants and SMUD, developed the EIM Phase 2 Cost Allocation Methodology to address Phase 2 implementation and participation among BANC EIM participants, which shall be incorporated into the EIM PA as Exhibit A; and

WHEREAS, BANC, along with its prospective Phase 2 EIM participants, SMUD and the CAISO, developed the BANC EIM Phase 2 Model, which establishes the BANC EIM structure for Phase 2 implementation, which shall be incorporated into the EIM PA as Exhibit B.

NOW, THEREFORE, BE IT RESOLVED that the Commissioners of the Balancing Authority of Northern California hereby:

1. Approve the EIM PA, and authorize and direct the General Manager to execute the Agreement.
2. Approve the EIM Phase 2 Participation Percentages, which shall be incorporated into the EIM PA as Exhibit A.
3. Approve the BANC EIM Phase 2 Model, which shall be incorporated into the EIM PA as Exhibit B.

**Balancing Authority of Northern California
Resolution 19-08-13**

PASSED AND ADOPTED by the Commissioners of the Balancing Authority of Northern California
this 21st day of August 2019, by the following vote:

		Aye	No	Abstain	Absent
Modesto ID	Greg Salyer				
City of Redding	Dan Beans				
City of Roseville	Michelle Bertolino				
City of Shasta Lake	James Takahara				
SMUD	Arlen Orchard				
TPUD	Paul Hauser				

Dan Beans
Chair

Attest by: C. Anthony Braun
Secretary

**FIRST AMENDED AND RESTATED
ENERGY IMBALANCE MARKET PARTICIPATION AGREEMENT
BETWEEN THE
BALANCING AUTHORITY OF NORTHERN CALIFORNIA
AND THE
MODESTO IRRIGATION DISTRICT,
CITY OF REDDING,
CITY OF ROSEVILLE
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AND THE
UNITED STATES
DEPARTMENT OF ENERGY
WESTERN AREA POWER ADMINISTRATION
CENTRAL VALLEY PROJECT, CALIFORNIA**

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1 PREAMBLE

This First Amended and Restated Energy Imbalance Market (EIM) Participation Agreement (Agreement) is entered into between the BALANCING AUTHORITY OF NORTHERN CALIFORNIA, a joint exercise of powers agency organized under Section 6500 *et seq.*, of the California Government Code, hereinafter called “BANC,” its successors and assigns; and the MODESTO IRRIGATION DISTRICT (MID), the CITY OF REDDING, CA (Redding), the CITY OF ROSEVILLE, CA (Roseville), and the SACRAMENTO MUNICIPAL UTILITY DISTRICT (SMUD), each created and existing under the laws of the State of California, and the UNITED STATES OF AMERICA, acting by and through the Administrator, WESTERN AREA POWER ADMINISTRATION, DEPARTMENT OF ENERGY (WAPA), all operating Electric Systems within the BANC Balancing Authority Area. BANC or EIM Participant may be referred to herein individually as the “EIM Participant” or “Party” or collectively as the “EIM Participants” or the “Parties.”

2 EXPLANATORY RECITALS

- 2.1** WHEREAS, BANC was created by a Joint Powers Agreement to, among other things, acquire, construct, maintain, operate, and finance projects;
- 2.2** WHEREAS, BANC had evaluated various market options including the Energy Imbalance Market (EIM) operated by the California Independent System Operator Corporation (CAISO);
- 2.3** WHEREAS, BANC engaged certain consultants for the purposes of providing initial analytical studies to assess both the cost and the benefits of individual BANC member and WAPA participation in the CAISO EIM through the BANC Balancing Authority;
- 2.4** WHEREAS the initial studies produced on behalf of BANC did show net benefits to some BANC members, while also highlighting for some BANC members and WAPA that some of the technical and operational hurdles might take additional time to address;
- 2.5** WHEREAS, based upon these studies and further discussions among BANC members, WAPA and the CAISO, it was also determined that SMUD was in the best position to join the EIM initially and that subsequent phases of EIM implementation would continue to be investigated in order to allow other BANC members and WAPA to join if they determined it was in each of their respective interests to do so upon further study;
- 2.6** WHEREAS, the Commission therefore directed BANC staff to pursue the CAISO EIM under a phased approach, including that BANC become an EIM Entity and execute all applicable agreements with the CAISO and among BANC and EIM Participants, as approved by the Commission, and that SMUD, pursuant to approval by

its governing board, might also become the first EIM Participating Resource in the BANC EIM footprint;

2.7 WHEREAS, it was contemplated that in the future, additional BANC members and/or WAPA may desire to become Parties to this Agreement, at which time BANC and SMUD would use reasonable efforts to accommodate new EIM Participants, including the adoption of any amendments to this Agreement deemed necessary to enable such participation;

2.8 WHEREAS, it was decided by certain non-participating BANC members and WAPA, to conduct further studies to determine what gaps need to be addressed in their systems and processes to participate in the CAISO EIM through BANC;

2.9 WHEREAS, [COMMISSION VOTED ON April 26, 2017 TO PROCEED WITH PHASE 2 GAP Studies];

2.10 WHEREAS, on April 3, 2019, BANC began participating in the CAISO EIM as an EIM Entity and SMUD as an EIM Participating Resources;

2.11 WHEREAS, [DECISION TO PARTICIPATE BASED ON GAP STUDIES]

2.12 WHEREAS, based on the decision to proceed with EIM implementation for the specified BANC members and WAPA, the original EIM Participation is hereby being restated and amended to reflect the expanded participation within the BANC EIM Entity footprint.

NOW THEREFORE, in view of the understandings set forth in the recitals above, which the Parties acknowledge and agree are accurate representations of the facts, the Parties agree to the terms of this Agreement that set forth the roles, obligations, and responsibilities of each Party to one another.

3 DEFINITIONS

Unless otherwise defined herein, capitalized terms when used with initial capitalization, whether singular or plural, shall have the meaning set forth in the FERC-approved Glossary of Terms used in NERC Reliability Standards, the NERC Functional Model, the CAISO Tariff, as defined, the BANC EIM Business Practices, the SMUD Open Access Transmission Tariff, the Interconnected Operating Agreements, and the WAPA Open Access Tariff.

3.1 *Balancing Authority* shall mean the responsible entity that integrates resource plans ahead of time, matches generation and load, maintains interchange with other Balancing Authority Areas, and maintains frequency in real time of the electric power systems.

3.2 *Balancing Authority Area* shall mean the collection of generation, transmission, and loads within the metered electrical boundaries of the Balancing Authority.

- 3.3 *BANC EIM Business Practices*** shall mean the business practices established by BANC to govern participation in EIM as these BANC EIM Business Practices may be adopted or amended from time-to-time in accordance with this Agreement.
- 3.4 *CAISO* or *ISO*** shall mean the “California Independent System Operator Corporation.”
- 3.5 *CAISO Tariff*** shall mean the CAISO’s open access transmission tariff filed with, and approved by, FERC, as that tariff may be amended from time-to-time.
- 3.6 *Commission*** shall mean the “BANC Commission,” as established in the BANC Joint Powers Agreement, as that agreement may be amended from time-to-time.
- 3.7 *Compliance Costs*** shall mean those costs described in Section 12.2.2 of this Agreement.
- 3.8 *Compliance Enforcement Authority*** shall mean FERC, NERC, WECC, and any other agency, court, organization, or other entity or person duly authorized pursuant to law or regulation to: (a) audit or determine compliance with applicable Reliability Standards; or (b) impose, enforce, excuse, or rescind penalties or otherwise take action binding on one or more Parties with respect to a finding of failure to comply with a Reliability Standard.
- 3.9 *Confidential Information*** shall mean : (a) all written materials marked “Confidential,” “Proprietary,” or with words of similar import provided to a Party by another Party; and (b) all observations of equipment (including computer screens) and oral disclosures related to a Party's systems, operations, or activities that are indicated as such at the time of observation or disclosure (or are identified as "confidential" or "proprietary" in a letter sent to another Party no later than five (5) calendar days after the disclosure), respectively. Confidential Information includes portions of documents, records, and other material forms or representations that any Party may create, including but not limited to, handwritten notes or summaries that contain or are derived from such Confidential Information.
- 3.10 *Energy Imbalance Market or EIM*** shall have the meaning set forth in the CAISO Tariff, as that tariff shall be amended from time-to-time.
- 3.11 *EIM Committee*** shall mean the administrative committee established in Section 10 of this Agreement.
- 3.12 *EIM Entity*** shall have the meaning set forth in the CAISO Tariff, as that tariff shall be amended from time-to-time. BANC is the EIM Entity under this Agreement.
- 3.13 *EIM Entity Agreement*** shall have the meaning set forth in the CAISO Tariff, as that tariff shall be amended from time-to-time. The EIM Entity Agreement is between BANC and the CAISO.

- 3.14 *EIM Implementation Agreement*** shall have the meaning set forth in the CAISO Tariff, as that tariff shall be amended from time-to-time. The EIM Implementation Agreement for this participation is between BANC and the CAISO.
- 3.15 *EIM Operator*** shall have the meaning set forth in the CAISO Tariff, as that tariff shall be amended from time-to-time. The CAISO is the EIM Operator.
- 3.16 *EIM Participant*** shall mean a signatory to this Agreement.
- 3.17 *EIM Participant Cost(s)*** shall mean the cost responsibility of each EIM Participant to BANC as described in Section 8 of this Agreement.
- 3.18 *EIM Participating Resource*** shall have the meaning set forth in the CAISO Tariff, as that tariff may be amended from time to time.
- 3.19 *EIM Participation Agreement*** shall mean this Agreement.
- 3.20 *EIM Participation Percentage*** shall mean the percentage allocation attributable to each EIM Participant for purposes of EIM Participant Costs in Section 8 and Exhibit A and liability for NERC Penalties as set forth in Section 12 of this Agreement.
- 3.21 *EIM Project Manager*** shall mean the individual(s) selected by the Parties to oversee and manage BANC EIM implementation activities.
- 3.22 *EIM Project Work*** shall mean the multi-phased work plan to implement and operate in the EIM as developed and overseen by the EIM Committee.
- 3.23 *EIM Services*** shall mean the services provided by the EIM Services Provider to BANC, as set forth in the EIM Services Agreement.
- 3.24 *EIM Services Agreement*** shall mean the agreement between BANC, as the EIM Entity, and the EIM Services Provider.
- 3.25 *EIM Services Provider*** shall mean the entity providing EIM Services to BANC. SMUD, or its successor, shall be the EIM Services Provider.
- 3.26 *Electric System*** shall mean all properties and assets that are owned or operated by a Party, including any interests in joint powers agency facilities, that are used for or pertain to the generation, transmission, transformation, or distribution of electric power, including all additions, replacements, extensions, expansions, improvements, and betterments thereto, and equipment associated therewith. Communication systems and equipment associated with operation of the Electric System shall be included as part of a Party's Electric System. To the extent a Party is not the sole owner of an asset or property, only that entity's ownership portion or entitlement in such property shall be considered as a part of its Electric System.
- 3.27 *FERC*** shall mean the “Federal Energy Regulatory Commission,” or its successor.

- 3.28 *Financial Penalties*** shall mean those costs described in Section 12.2.1 of this Agreement.
- 3.29 *Interconnected Operating Agreements*** shall mean agreements between WAPA and individual BANC members which define the roles and responsibilities of the interconnected parties.
- 3.30 *Internal Compliance Program*** shall mean the BANC Internal Compliance Program, approved by the Commission, as that program may be amended from time-to-time.
- 3.31 *Internal Compliance Program Charter*** shall mean the policy-level document outlining the Internal Compliance Program, which has been adopted by the Commission, as that program may be amended from time-to-time.
- 3.32 *NERC*** shall mean the “North American Electric Reliability Corporation,” or its successor.
- 3.33 *NWPP*** shall mean the “Northwest Power Pool.”
- 3.34 *Phase 1 EIM Committee*** shall mean the EIM Committee established for Phase 1 of BANC EIM operations, which includes the sole Phase 1 EIM Participant, the BANC General Manager, one non-voting representative from among the non-participating BANC members and one non-voting representative from WAPA.
- 3.35 *Phase 1 EIM Participant*** shall mean SMUD.
- 3.36 *Reliability Standards*** shall mean those NERC Reliability Standards and WECC Regional Reliability Standards that have been approved by FERC under Section 215 of the Federal Power Act and WECC applicable Regional Criteria referenced in FERC-approved Reliability Standards.
- 3.37 *Reserve Sharing Group*** shall mean the group operated by the NWPP to comply with Reliability Standard BAL-002-WECC-2a, or its successor standard. BANC is a member of the NWPP and a participant in the NWPP Reserve Sharing Group.
- 3.38 *SMUD OATT*** shall mean the “Open Access Transmission Tariff” posted on the SMUD Open Access Same-Time Information System website.
- 3.39 *WAPA OATT*** shall mean the “Open Access Transmission Tariff” posted on the WAPA Open Access Same-Time Information System website.
- 3.40 *WECC*** shall mean the “Western Electricity Coordinating Council,” or its successor.

4 TERM AND TERMINATION

4.1 Effective Date

This Agreement shall be effective upon the date of execution by the Parties (Effective Date).

4.2 Term

This Agreement shall remain in effect from the Effective Date until terminated pursuant to Section 4.3, 4.4, or 4.5 of this Agreement.

4.3 Termination by EIM Participants

Subject to Section 4.5 (Surviving Obligations), any EIM Participant may terminate its participation in this Agreement by providing a notice of termination not less than one (1) year in advance of the date of intended termination.

4.4 Termination of this Agreement

This Agreement shall terminate if: 1) terminated by BANC, 2) if BANC ceases to be a Balancing Authority, 3) the CAISO terminates the EIM Entity Agreement between the CAISO and BANC, 4) there are no remaining EIM Participants, or 5) upon the expiration of forty (40) years from the Effective Date. BANC shall provide EIM Participants no less than sixty (60) calendar days written notice prior to seeking a termination decision by the Commission. In the event of a decision by the Commission to terminate this Agreement and there is a successor entity assuming the role of EIM Entity on behalf of the EIM Participant(s), BANC agrees to work with the successor EIM Entity and EIM Participant(s) to coordinate transfer of the EIM Entity responsibilities to a successor EIM Entity. BANC shall also conform its termination with the EIM Participant(s) timelines and procedures required for termination as an EIM Entity as set forth in its EIM Entity Agreement with the CAISO.

4.5 Surviving Obligations

Termination of this Agreement or a Party's participation herein shall not extinguish the obligation of any Party to complete in-progress compliance investigations, implement any resulting corrective mitigating actions and otherwise complete any active compliance process as well as satisfy all other obligations, including any financial responsibilities. In addition, any outstanding financial right or obligation, and any provision of this Agreement necessary to give effect to such right or obligation, shall survive until satisfied, and all limitations of liability provided in this Agreement will survive until all statutes of limitation related to claims that could be made in connection with this Agreement have run.

5 SCOPE OF AGREEMENT

This Agreement, including its Exhibit A (EIM Participation Percentages), Exhibit B (BANC EIM Phase 2 Model), Exhibit C (BANC Phase 2 EIM Implementation Agreement) and Exhibit D (BANC Phase 2 EIM Entity Agreement), which are incorporated herein by reference, is for the purpose of establishing BANC as the EIM Entity in support of the EIM Participant(s) and is the sole expression of the Parties. Exhibits may be subject to future revision in accordance with the individual terms contained in that Exhibit and such changes do not constitute an amendment hereto.

6 BANC (EIM ENTITY) OBLIGATIONS

BANC shall be responsible for the following:

- 6.1** Negotiating a new or amended EIM Implementation Agreement and a new or amended EIM Entity Agreement with the CAISO which reflects the directive of the Commission;
- 6.2** Participating, through the General Manager, on the EIM Committee as set forth in Section 10 of this Agreement and providing support to Committee activities, as needed;
- 6.3** Cooperating with the EIM Participant(s) in the exchange of data and information necessary to support EIM activities;
- 6.4** Providing support and information needed to facilitate EIM examination and/or participation by any proposed new EIM Participant;
- 6.5** Providing regular updates to the Commission, as needed;
- 6.6** Participating, as the EIM Entity, in any relevant stakeholder activities related to EIM;
- 6.7** To the extent reasonably practicable, taking any position on regulatory actions to ensure that the interest of BANC, as an EIM Entity, and those of the EIM Participant(s), are reasonably maintained, as deemed necessary by the Commission, or by the General Manager, to the extent consistent with authority delegated by the Commission for participation in those fora;
- 6.8** Serving as the EIM Entity on behalf of the EIM Participant(s) in accordance with this Agreement, including its Exhibits, as they may be amended from time-to-time;
- 6.9** Ensuring its role as EIM Entity does not adversely affect its compliance with NERC Reliability Standards;
- 6.10** Complying with CAISO Tariff provisions applicable to an EIM Entity; and

- 6.11** Coordinating with the CAISO on EIM activities related to the operation and implementation of EIM.

7 EIM PARTICIPANT OBLIGATIONS

The EIM Participant shall be responsible for the following, “EIM Participant Obligations,” as set forth herein:

- 7.1** Negotiating necessary agreements for its EIM participation;
- 7.2** Working collaboratively with BANC in the most transparent means practicable;
- 7.3** Along with BANC, using reasonable efforts to control costs associated with EIM implementation with respect to costs re-assignable to new the EIM Participant(s) under the terms of this Agreement;
- 7.4** Comply with CAISO Tariff provisions applicable to EIM Participating Resources or EIM Non-Participating Resources;
- 7.5** Using reasonable efforts to comply and/or abide by any directives of the EIM Entity, consistent with BANC EIM Business Practices, the CAISO Tariff and procedures, policies or timelines adopted by the EIM Committee;
- 7.6** Participating on the EIM Committee, as set forth in Section 10 of this Agreement;
- 7.7** Paying in a timely manner any cost assessed to the EIM Participant, including but not limited to EIM Participant Costs as set forth in Section 8 and any final costs associated with EIM-related violation(s) of Reliability Standards applicable to the Balancing Authority, as set forth in Section 12 of this Agreement; and
- 7.8** To the extent reasonably practicable, taking any positions on regulatory actions deemed needed to ensure that the interest of BANC, as the EIM Entity, and those of the EIM Participant(s), are reasonably maintained; however, nothing herein requires EIM Participant to take a position that it reasonably believes is contrary to its own interests.

8 EIM PARTICIPANT AND NEW EIM PARTICIPANT COSTS

Each EIM Participant shall be responsible to pay its share of costs associated with its participation in EIM within the BANC EIM Entity footprint. First, all EIM Participants shall pay a one-time assessment associated with becoming a new EIM Participant as described below in Section 8.1. Second, each EIM Participant shall pay its share of the BANC EIM implementation costs associated with its phase of EIM implementation, as described in Section 8.2. Third, each EIM Participant shall pay its share of the ongoing costs incurred by BANC as the EIM Entity, as

described in Section 8.3. Collectively, these costs set forth in Sections 8.1, 8.2, and 8.3 herein are referred to as EIM Participant Costs and are described as follows:

8.1 New EIM Participants shall be required to pay a one-time EIM assessment to BANC based on BANC's implementation costs multiplied by the allocation percentage contained in Exhibit A. This one-time EIM assessment is intended to cover the new EIM Participant's share of the costs incurred by the BANC in order to facilitate it becoming an EIM Entity and EIM participation by entities within the BANC footprint. These costs should be allocated to subsequent BANC EIM Participants based on their respective load ratio percentage of overall BANC member load. BANC and any new EIM Participants may agree on the method of payment of the EIM assessment, which may be paid in installments in any manner agreed upon by the Parties; provided that the entire amount is paid no longer than 18 months from the payment commencement date.

8.1.1 The costs collected by BANC shall be allocated back to the Phase 1 EIM Participant, consistent with those accounting and tracking metrics developed and adopted by the Phase 1 EIM Committee and approved by the Commission.

8.2 In addition to the payments set forth in Sections 8.1 and 8.3, each EIM Participant shall pay its share of the BANC EIM Implementation costs for its EIM Implementation phase described in this Section 8.2. These costs shall be allocated to EIM Participants based on the applicable EIM Participation Percentages set forth in Exhibit A to this Agreement, as that Exhibit A may be amended from time-to-time, and include the costs incurred by BANC in its performance under the EIM Implementation Agreement, including implementation costs for the new EIM Participant.

8.3 In addition to the payments set forth in Sections 8.1 and 8.2, each EIM Participant shall pay its share of costs related to the ongoing operations of BANC as the EIM Entity described in this Section 8.3. These costs shall be allocated to EIM Participants based on the applicable EIM Participation Percentages set forth in Exhibit A to this Agreement, as that Exhibit A may be amended from time-to-time, and include the following components:

8.3.1 Costs reasonably incurred by BANC in fulfilling its obligations as an EIM Entity, including, but not limited to:

8.3.1.1 costs associated with BANC's obligations under its EIM Entity Agreement; and

8.3.1.2 costs associated with BANC's obligations under the EIM Services Agreement; and

8.3.1.3 ongoing costs, including administrative, legal and regulatory, as reviewed by the EIM Committee and approved by the Commission.

- 8.4** BANC shall calculate the EIM Participant Costs and invoice each EIM Participant to the addresses set forth in Appendix 1 (Notices) to this Agreement. The EIM Participant shall pay this invoice within thirty (30) calendar days of receipt of the invoice. Payments shall be sent by each EIM Participant to the following address:

Balancing Authority of Northern California
6001 S Street
M.S. D-109
Sacramento, CA 95852-1830

- 8.5** EIM Participant Costs will be determined through the EIM Committee process unless otherwise agreed, in writing, between the Parties. Any costs allocated by BANC to EIM Participants must be placed in the budget and reviewed and concurred with by the EIM Committee prior to submittal to the Commission for final approval. In the event BANC anticipates its costs may exceed the approved budget, BANC shall submit such costs to the EIM Committee for its review and concurrence prior to submitting to revised budget request to the Commission for approval.
- 8.6** EIM Participants shall be responsible for their costs incurred in becoming an EIM Participating Resource under the terms of the CAISO tariff.

9 NEW EIM PARTICIPANTS

- 9.1** Any BANC member, or WAPA, may become an EIM Participant by executing an EIM Participation Agreement with BANC, paying BANC a one-time EIM assessment, as determined in accordance with Section 8.1 of this Agreement, and entering into any other arrangements required by the CAISO Tariff and the Commission. BANC and the existing EIM Participants will work cooperatively with the proposed new EIM Participant to minimize the impact on the proposed new EIM Participant, other BANC members, WAPA and existing EIM Participants.
- 9.2** Upon the execution of an EIM Participation Agreement with BANC, the new EIM Participant shall be allowed to participate on the EIM Committee in accordance with Section 10 (EIM Committee) of this Agreement.

10 EIM COMMITTEE

10.1 Establishment of EIM Committee

On or after the Effective Date of this Agreement, the General Manager shall establish the EIM Committee by appointing EIM Committee members as set forth in Section 10.4.

10.2 General Responsibilities of EIM Committee

The EIM Committee is an advisory body to the General Manager and responsible for providing advice and counsel for matters related to the operation of EIM within the BANC EIM Entity footprint. Specifically, the EIM Committee may be called upon by the General Manager for advice on the following matters::

- 10.2.1 Establishing roles and responsibilities among BANC, the EIM Participant(s) and the EIM Operator;
- 10.2.2 Reviewing of budgets and costs incurred by BANC, for both EIM implementation and EIM operations and providing concurrence with respect to those costs prior to the submission to the Commission for approval in accordance with Section 8.5;
- 10.2.3 Developing and updating (as necessary), a scope for EIM Project Work according to Section 11 of this Agreement.
- 10.2.4 Developing metrics to track and categorize EIM costs for purposes of budgeting and determining the one-time assessment applied to any new EIM Participant(s), as set forth in Section 8.1 of this Agreement;
- 10.2.5 Developing metrics to measure EIM costs, gross benefits and net benefits from actual EIM operations;
- 10.2.6 Providing data and information, as reasonably requested, to BANC members and/or WAPA for the purpose of assessing their potential participation in the EIM;
- 10.2.7 Developing comments and positions for stakeholder processes that concern or relate to the EIM;
- 10.2.8 Coordinating relevant data and information as needed for any compliance-related inquiry or investigation, or in the furtherance of any assessment in conjunction with Section 12 (BANC Violations of Reliability Standards Arising from EIM Participation) in this Agreement;
- 10.2.9 Ensuring that required documentation and data transfers among the EIM Participant(s) the EIM Entity and the EIM Operator are occurring and assisting in the development of processes and procedures to aid in such transfers, as needed;
- 10.2.10 Providing regular reports and updates to the General Manager on EIM-related activities and operations, as requested;
- 10.2.11 Providing reports, data, and other information as necessary to the CAISO;

- 10.2.12 Assisting in the development of procedures and processes to improve the accuracy and efficiency of data transfers from the EIM Participant(s) to EIM Entity;
- 10.2.13 Recommendations to the General Manager with respect to BANC EIM Business Practices or amendments thereto for consideration by the Commission;
- 10.2.14 General oversight of any request for proposals (RFP) or request for offer of services (RFO) by the Parties; and
- 10.2.15 Oversight of the EIM Project Manager(s), system integrator(s) or other consultants.

10.3 EIM Committee Meetings

The EIM Committee may be convened on an “as needed” basis by the General Manager, or upon the request of BANC or the EIM Participant(s).

10.4 EIM Committee Representation and Alternates

Each EIM Participant shall select a primary voting representative and at least one alternate to the EIM Committee and provide those names to the General Manager. The General Manager will also participate on the EIM Committee. The EIM Services Provider shall also have a representative present at EIM Committee meetings, unless agreed to otherwise between the General Manager and the EIM Services Provider. Under the direction of the General Manager, the EIM Committee may form subgroups or delegate tasks to subject matter experts as it deems appropriate; provided, however, that any tasks delegated must be overseen and/or approved by the EIM Committee.

10.5 EIM Committee Chair

The EIM Committee may appoint a chair to conduct meetings. In the absence of an appointed chair, the General Manager will serve in that role.

10.6 EIM Committee Actions or Decisions

The EIM Committee will seek consensus on any actions or decisions in the furtherance of its responsibilities set forth in this Section. If an action or decision requires voting, each EIM Committee representative shall have one vote. In the event of a tie, an executive from BANC and the EIM Participant(s) shall attempt to reach consensus. If consensus cannot be reached, the General Manager shall serve as the tie breaker vote.

- 10.6.1 Conflicts Between the EIM Committee and the General Manager. If the EIM Committee and the General Manager have a dispute related to an action or proposal of either the EIM Committee or the General Manager, the EIM

Committee or a subgroup shall meet with the General Manager and attempt to reach resolution. Should the parties fail to resolve the conflict, the General Manager shall make the final decision; however, the General Manager shall inform the Commission of the dispute. The EIM Committee Chair, if that person is not the General Manager, or anyone delegated by the EIM Committee, may prepare a memorandum framing the disputed issue, and provide that memorandum to the General Manager for his or her consideration, and the General Manager shall provide a copy of the memorandum to the Commission for their information and any other action they may decide.

10.7 EIM Committee Charter and Procedures

In consultation with the General Manager, the EIM Committee may adopt a charter and/or procedures in furtherance of its internal administration.

11 EIM PROJECT WORK

It is expected that there will be multiple phases of EIM Project Work to be conducted by the Parties, including, but not limited to, the scoping and contracting aspects of the project, the RFP/RFO processes and implementation and testing of EIM systems, up to and until parallel testing with the CAISO. The Scope of EIM Project Work shall be developed by the EIM Committee under the direction of the General Manager, on an agreed upon schedule in coordination with the schedule developed between BANC and the CAISO contained in the BANC EIM Implementation Agreement.

12 BANC VIOLATIONS OF RELIABILITY STANDARDS ARISING FROM EIM PARTICIPATION

12.1 Violations

Any potential or actual violations of Reliability Standards applicable to the BANC Balancing Authority which are the result of a failure related to BANC, acting as the EIM Entity, or the EIM Participant's, or the EIM Participants', participation in the EIM, shall be addressed in accordance with the processes and procedures adopted in the Internal Compliance Program Charter and the BANC Member Agreement; provided, however, any Financial Penalties, as described in Section 12.2.1 of this Agreement, associated with violation(s) of Reliability Standards applicable to the BANC Balancing Authority arising directly as the result of EIM-related activities of BANC, as the EIM Entity, or the EIM Participant(s), shall be allocated, to the extent such Party or Parties are not legally proscribed from paying Financial Penalties, such costs shall be allocated to the EIM Participant(s) directly responsible for the activity or activities that gave rise to the violation(s), or, if no EIM Participant(s) are directly responsible for the activity or activities that gave rise to the violation(s), Financial Penalties shall be allocated to EIM Participants based on their EIM Participation Percentages as set forth in Exhibit A to this Agreement, as

that Exhibit may be amended from time-to-time. Any Party which cannot legally pay such costs will remain responsible for any Compliance Costs, as described in Section 12.2.2 of this Agreement, as may be prescribed by a Compliance Enforcement Authority.

12.2 Payment of Final Costs

12.2.1 Financial Penalties. Final costs associated with this Section 12 shall be paid by the EIM Participant(s) within thirty (30) days of a written request by BANC. Such request shall be in accordance with Section 24 (Notices) of this Agreement. Final costs are those monies which are required to be paid by BANC to NERC based upon a confirmed and final penalty amount in accordance with the NERC Rules of Procedure.

12.2.2 Compliance Costs. A mitigation plan or any regulatory directive(s) issued by a Compliance Enforcement Authority associated with this Section 12 shall be followed by the Parties in accordance with that plan or directive; however, the compliance costs incurred by the Parties based upon the mitigation plan or directive shall be the sole responsibility of the EIM Participant(s). BANC shall provide the EIM Participant(s) with an itemization of costs under this Section 12.2.2 as part of BANC's written request to the EIM Participant(s) for payment. Such request shall be in accordance with Section 24 (Notices) of this Agreement.

13 CONFLICT BETWEEN EIM PARTICIPATION AGREEMENT AND OTHER BANC AGREEMENTS

Nothing in this Agreement is intended to alter or amend other BANC agreements or program documents, including, but not limited to, the Joint Exercise of Powers Agreement, the Balancing Authority Operation Services Agreement, the Member Agreement, the NWPP Reserve Sharing Group Agreement, the Internal Compliance Program Charter, the Member Compliance Review Committee Charter, the Planning Coordinator Services Agreement, or the Planning Coordinator Participation Agreement (BANC Agreement(s)). To the extent a conflict arises between a BANC Agreement and this Agreement, the BANC Agreement(s) shall prevail; however, reasonable efforts should be made to reconcile the matter among EIM Participant(s) and BANC. Notwithstanding the foregoing, penalties allocated to BANC due to BANC violations of Reliability Standards arising from EIM Participation will be addressed in accordance with this Agreement and not the Member Agreement.

14 DISPUTE RESOLUTION

Except as provided in Section 10.6 (EIM Committee Actions or Decision), any dispute arising between the Parties regarding performance of their obligations under this Agreement shall be resolved according to the following procedures:

14.1 Informal Settlement

The Parties shall attempt in good faith to resolve any dispute arising out of or relating to this Agreement promptly by negotiations between BANC and an executive of the EIM Participant(s), or, in the event there is more than one EIM Participant, BANC and an executive of each of the EIM Participants. Any Party may give the other Party, or Parties, written notice of any dispute, and within twenty (20) calendar days after delivery of such notice, the executives shall meet at a mutually acceptable time and place and thereafter as often as they reasonably deem necessary to exchange information and to attempt to resolve the dispute. If the matter has not been resolved within sixty (60) calendar days of the first meeting, any of the Parties may initiate a mediation of the controversy in accordance with Section 14.2.

14.2 Mediation

Prior to initiation of litigation, disputing Parties shall initiate a mediation of the controversy. All negotiations, settlement conferences, compromise discussions, and any mediation conducted pursuant to this clause are non-binding, confidential, and shall be treated as compromise and settlement negotiations. Included in such mediation shall be negotiations including executive level management of each of the disputing Parties.

14.3 Retained Rights Under Law and Equity

Absent resolution of any dispute through mediation, each Party retains all rights in a court of law or equity to enforce its rights under this Agreement.

14.4 Continuing Performance Obligations

While a dispute, controversy, or claim is pending, each Party will continue to perform its respective obligations under the Agreement, unless such Party is otherwise entitled to terminate the Agreement in accordance with the terms hereof.

15 AMENDMENT

Except as specified in Appendix 1 and Exhibits A through D, which shall be amended in accordance with the terms set forth therein, this Agreement may only be amended or otherwise modified with the written agreement of the Parties.

16 ASSIGNMENT

This Agreement may be assigned by a Party only with the written consent of the other Parties, which consent shall not be unreasonably withheld.

17 CONFIDENTIALITY

17.1 Treatment of Confidential Information

The Parties recognize and agree that for the purposes of their respective roles in the EIM, complying with the Reliability Standards, and responding to any report or notice of potential violation, the Parties may receive information from each other that has been marked as Confidential Information. Except as set forth herein, the Parties agree to keep in confidence and not to copy, disclose, or distribute any Confidential Information or any part thereof, without the prior written permission of the Party that produced the information.

17.2 Required Disclosure of Confidential Information

As provided in the CMEP, or as required by subpoena, request under the California Public Records Act (PRA), the Freedom of Information Act (FOIA), or other legal or regulatory processes, the Parties may be required to disclose Confidential Information so designated by another Party. Compliance with that subpoena, request under the PRA, FOIA, or other legal or regulatory process shall not constitute a breach of this Agreement. If any Party is required to disclose any Confidential Information so designated by any other Party, the disclosing Party shall notify the other Party in writing as promptly as feasible so that the other Party may, if it so chooses and at its own expense, challenge the disclosure or seek a protective order. The disclosing Party shall reasonably cooperate in resolving the dispute.

17.3 Third Parties

Except as set forth herein, each Party shall keep Confidential Information in confidence and shall not disclose such information or otherwise make it available, in any form or manner, to any other person or entity other than its employees, consultants, sub-contractors, sub-contractors' employees, attorneys, and agents without the prior written consent of the Party that produced the information. Each Party will cause each of its employees, contractors, sub-contractors, sub-contractors' employees, attorneys, and agents who will have access to Confidential Information, if any, to acknowledge that they have read this Agreement and agree to abide by all of its terms regarding use and disclosure of Confidential Information. For purposes of this Agreement, Confidential Information may also be shared with the EIM Operator in accordance with the terms of the agreements between each of the Parties and the EIM Operator.

17.4 FERC Jurisdiction

Nothing in this Agreement shall be meant to imply or cede jurisdiction to FERC, NERC, and other regulatory or Compliance Enforcement Authority entities having no or limited jurisdiction over the Parties. FERC, NERC, and other regulatory or Compliance Enforcement Authority entities have limited jurisdiction over the Parties and, by executing this Agreement, no Party is waiving or conceding any defenses it has to assert jurisdictional defenses, including, but not limited to, sovereign immunity, intergovernmental immunities, or lack of subject matter jurisdiction.

18 INDEMNIFICATION

Notwithstanding anything herein to the contrary, BANC shall indemnify, defend, and hold EIM Participants (including their governing bodies, officers, employees, assigns, and agents) harmless from and against any and all claims, demands, liabilities imposed for injury (as defined by Government Code Section 810.8), losses, costs, expenses, penalties, suits, judgments, or damages, arising in whole or in part, directly or indirectly, from performance or non-performance of EIM Participant Obligations set forth in Section 7 of this Agreement.

19 GOVERNING LAW

19.1 Non-Federal EIM Participants

The rights and obligations of the non-federal EIM Participants and the interpretation and performance of this Agreement shall be governed by the laws of the State of California.

19.2 Federal EIM Participants

Interpretation of this Agreement, and performance and enforcement thereof with regard to federal EIM Participants, shall be determined in accordance with Federal law, as if performed wholly within the State of California.

20 HEADINGS

The descriptive headings of the various Articles and Sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement.

21 SEVERABILITY

If any term, covenant, or condition of this Agreement, or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest, by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby but shall remain in full force and effect, and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such determination unless a court or governmental agency of competent jurisdiction holds that such provision is not separable from all other provisions of this Agreement.

22 LIMITATION ON LIABILITY

Except for costs for violation(s) of Reliability Standards incurred pursuant to Section 12 of this Agreement, or EIM Participant Costs in accordance with Section 8 of this Agreement, no Party to this Agreement shall be liable to any other Party for any direct, indirect, special, incidental, exemplary, or consequential damages, claims, liabilities, costs or expenses (including attorneys fees and court costs) arising from tort or the performance or non-performance of its obligations under this Agreement regardless of the cause, including intentional action, willful action, gross or ordinary negligence, or an Uncontrollable Force (as defined in Section 25 of this Agreement).

23 NO THIRD PARTY BENEFICIARIES

This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

24 NOTICES

Any notice, demand, or request in accordance with this Agreement shall be in writing and shall be deemed properly served, given, or made if delivered in person or sent by first class United States mail, postage prepaid, by electronic facsimile confirmed by the recipient, electronic mail confirmed by the recipient, or by prepaid commercial courier service to a Party via its representative or alternate representative at the address set forth in Appendix 1, unless otherwise provided in this Agreement. Any Party may at any time change the designation or address of a person specified in Appendix 1 upon written notice to the other Parties. Such a change to Appendix 1 shall not constitute an amendment to this Agreement.

25 UNCONTROLLABLE FORCE

No Party shall be considered to be in default in respect to any obligation hereunder if prevented from fulfilling such obligation by reason of an Uncontrollable Force. The term "Uncontrollable Force" for the purpose of this Agreement shall mean any cause beyond the control of the Party affected, including but not limited to flood, earthquake, storm, lightning, fire, epidemic, war, riot, civil disturbance, labor disturbance, sabotage, and restraint by court or public authority, which Uncontrollable Force by exercise of due diligence and foresight, such Party could not reasonably have been expected to avoid. Any Party rendered unable to fulfill any obligation by reason of Uncontrollable Force shall exercise commercially reasonable efforts to remove such inability with all reasonable dispatch.

26 WAIVER

The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party. Any waiver at any time by a Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, or duty of this Agreement. Any waivers at any time by any Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement.

27 NO DEDICATION OF FACILITIES

Any undertaking by a Party under any provision of this Agreement is rendered strictly as an accommodation and shall not constitute the dedication of its Electric System or any portion thereof by the undertaking Party to the public, to any other Party, or to any third party, and any such undertaking by a Party shall cease upon the termination of such Party's obligations under this Agreement. The Electric System of a Party shall at all times be, and remain, in the exclusive ownership, possession, and control of that Party, and nothing in this Agreement shall be construed to give any other Party any right of ownership, possession, or control of such Electric System.

28 MULTIPLE COUNTERPARTS

This Agreement may be executed in two or more counterparts, each of which is deemed an original, but all constitute one and the same instrument.

29 FEDERAL CONTRACT PROVISIONS

29.1 COVENANT AGAINST CONTINGENCY FEES

The Parties warrant that no person or selling agency has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Parties for the purpose of securing business. For breach or violation of this warranty, WAPA shall have the right to annul this Agreement without liability or in its discretion to deduct from the price or consideration the full amount of such commission, percentage, brokerage, or contingent fee.

29.2 CONTINGENT UPON APPROPRIATIONS

Where activities provided for in this Agreement extend beyond the current fiscal year, continued expenditures by WAPA are contingent upon Congress making the necessary appropriations required for the continued performance of WAPA's obligations under this Agreement. In case such appropriation is not made, Parties hereby release WAPA from its obligations and from all liability due to the failure of Congress to make such appropriation.

29.3 CONTRACT WORK HOURS AND SAFETY STANDARDS

This Agreement, to the extent that it is of a character specified in Section 103 of the Contract Work Hours and Safety Standards Act, 40 U.S.C.A. § 3701, is subject to the provisions of the Act, 40 U.S.C.A. §§ 3701-3708, and to regulations promulgated by the Secretary of Labor pursuant to the Act.

29.4 EQUAL OPPORTUNITY EMPLOYMENT PRACTICES

Section 202 of Executive Order No. 11246, 30 Fed. Reg. 12319 (1965), as amended by Executive Order No. 12086, 43 Fed. Reg. 46501 (1978), as amended or supplemented, which provides, among other things, that Parties will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin, is incorporated herein by reference the same as if the specific language had been written into this Agreement, except that Indian Tribes and tribal organizations may apply Indian preference to the extent permitted by Federal Law.

29.5 USE OF CONVICT LABOR

Parties agrees not to employ any person undergoing sentence of imprisonment in the performance of this Agreement, except as provided by 18 U.S.C. § 3622 (c) (2) and Executive Order 11755, December 29, 1973.

30 SIGNATURE CLAUSE

The signatories to this Agreement represent that they have been appropriately authorized to enter into this Agreement on behalf of the Party for whom they sign.

IN WITNESS THEREOF, the Parties have executed this Agreement and it is effective as of the Effective Date set forth in Section 4.1.

Balancing Authority of Northern California

By:	
Name:	
Title:	
Date:	

Sacramento Municipal Utility District

By:	
Name:	
Title:	
Date:	

Modesto Irrigation District

By:	
Name:	
Title:	
Date:	

City of Redding

By:	
Name:	
Title:	
Date:	

City of Roseville

By:	
Name:	
Title:	
Date:	

**United States of America
Department of Energy
Western Area Power Administration
Central Valley Project, California**

By:	
Name:	
Title:	
Date:	

Appendix 1 – Notices

Balancing Authority of Northern California

Name of Primary Representative:	James R. Shetler
Title:	General Manager
Company:	Balancing Authority of Northern California
Address:	P.O. Box 15830, MS D109
City/State/Zip Code:	Sacramento, CA 95852-1830
Email Address:	jimshetler@thebanc.org
Phone:	(916) 870-3774
Fax:	

Name of Alternative Representative:	Charles A. Braun
Title:	General Counsel
Company:	Braun Blaising Smith Wynne, P.C.
Address:	915 L Street, Suite 1480
City/State/Zip Code:	Sacramento, CA 95814
Email Address:	braun@braunlegal.com
Phone:	916-326-5812
Fax:	916-330-4337

Sacramento Municipal Utility District

Name of Primary Representative:	
Title:	
Company:	
Address:	
City/State/Zip Code:	
Email Address:	
Phone:	
Fax:	

Name of Alternative Representative:	
Title:	
Company:	
Address:	
City/State/Zip Code:	
Email Address:	
Phone:	
Fax:	

Modesto Irrigation District

Name of Primary Representative:	
Title:	
Company:	
Address:	
City/State/Zip Code:	
Email Address:	
Phone:	
Fax:	

Name of Alternative Representative:	
Title:	
Company:	
Address:	
City/State/Zip Code:	
Email Address:	
Phone:	
Fax:	

City of Redding

Name of Primary Representative:	
Title:	
Company:	
Address:	
City/State/Zip Code:	
Email Address:	
Phone:	
Fax:	

Name of Alternative Representative:	
Title:	
Company:	
Address:	
City/State/Zip Code:	
Email Address:	
Phone:	
Fax:	

City of Roseville

Name of Primary Representative:	
Title:	
Company:	
Address:	
City/State/Zip Code:	
Email Address:	
Phone:	
Fax:	

Name of Alternative Representative:	
Title:	
Company:	
Address:	
City/State/Zip Code:	
Email Address:	
Phone:	
Fax:	

United States Department of Energy Western Area Power Administration Central Valley Project, California

Name of Primary Representative:	
Title:	
Company:	
Address:	
City/State/Zip Code:	
Email Address:	
Phone:	
Fax:	

Name of Alternative Representative:	
Title:	
Company:	
Address:	
City/State/Zip Code:	
Email Address:	
Phone:	
Fax:	

EXHIBIT A: EIM Participation Percentages

EIM Phase 2 Participation Percentages¹

ENTITY	2017 NEL	Tier 1	Tier 2	Tier 3
SMUD	11,598,647	63.5%	0	0
MID	2,623,552	14.4%	39.4%	56.2%
WAPA-SNR	1,987,830	10.9%	29.8%	0
Roseville	1,249,280	6.8%	18.8%	26.7%
Redding	798,841	4.4%	12.0%	17.1%
TOTAL	18,258,150	100.0%	6,659,503 100.0%	4,671,673 100.0%

Amendments

This Exhibit A may be amended as determined by the BANC Commission; however, allocation adjustments to WAPA shall require WAPA's written consent. Should WAPA disagree to the change its allocation, the remaining parties to this Agreement may make adjustments to the non-WAPA allocations, subject to Commission approval. Any amendment to this Exhibit A shall be in writing and transmitted to all Parties to this Agreement within seven (7) business days of the version change contained in the document Version History.

Any changes will be reflected through a change in the Version History. Minor, non-substantive changes will be reflected in 1/10th increments to the Version History (e.g., 1.1, 1.2, etc.).

Version History

VERSION	CHANGE	BY	DATE
1.0	Initial Version	Commission	02/22/2017
2.0	Phase 2 Version	Commission	8/21/2019

¹ Details and background are provided in the accompanying document entitled "EIM Phase 2 Cost Allocation Methodology."

ATTACHMENT TO EXHIBIT A: EIM Phase 2 Cost Allocation Methodology

BACKGROUND

As part of the original BANC EIM evaluation in 2016, BANC, its members, and WAPA-SNR discussed how to allocate the costs of EIM participation among the EIM participants should other entities elect to join SMUD in future EIM phases. During those discussions, several options were discussed, including²:

- Load ratio share
- Gross benefits
- EIM volume.

After discussing these options, BANC, its members, and WAPA-SNR agreed to use the load ratio share (i.e., net energy load, or “NEL”) approach for EIM cost allocation. The parties felt most comfortable with the basis for the calculations and were familiar with this approach since it is used for allocating most other costs for BANC. The entities did agree that the issue of EIM cost allocation should be revisited after the entities gain experience with EIM participation.

PROPOSED EIM Phase 2 Cost Allocation

As noted above, the BANC EIM participants agreed upon using the load ratio share approach for allocating EIM costs among the participants. Based upon expected participant decisions, it is anticipated that the following entities will be joining SMUD in a Phase 2 of EIM:

- Modesto Irrigation District
- City of Redding
- City of Roseville
- WAPA-SNR.

In developing the methodology, 2017 load data was used for calculating the load ratio shares.

² More details of the cost allocation options discussed are contained in BANC EIM Evaluation Report, dated December 2016

Also, in looking at cost allocation for EIM Phase 2, it needs to be recognized that different costs will be paid for by different groups of participants. Therefore, in developing the cost allocation methodology, several options were considered as follows:

ENTITY	2017 NEL	Tier 1	Tier 2	Tier 3
SMUD	11,598,647	63.5%	0	0
MID	2,623,552	14.4%	39.4%	56.2%
WAPA-SNR	1,987,830	10.9%	29.8%	0
Roseville	1,249,280	6.8%	18.8%	26.7%
Redding	798,841	4.4%	12.0%	17.1%
TOTAL	18,258,150	100.0%	6,659,503 100.0%	4,671,673 100.0%

The various allocation tiers are defined as follows:

- **Tier 1:** All five (5) EIM participants will be paying the costs (e.g. – ongoing EIM costs post-Phase 2 go-live)
- **Tier 2:** The four (4) Phase 2 participants will be paying the costs (e.g. – EIM Phase 2 implementation costs)
- **Tier 3:** The three (3) current BANC member EIM Phase 2 participants will be paying the costs, but WAPA-SNR will do so under a separate cost sharing agreement with BANC (i.e., due to the unique issues identified by Utilicast in its gap analysis for WAPA-SNR EIM implementation, dedicated Utilicast implementation resources are being directed to WAPA-SNR. The other BANC EIM Phase 2 participants will use a common Utilicast consulting team. These directed tasks are therefore to be paid by WAPA-SNR alone under a separate cost sharing agreement with BANC, and the other BANC EIM Phase 2 participants will pay their share of the remaining Utilicast costs based on their respective load ratio share).

EXHIBIT B: BANC EIM Phase 2 Model

Purpose

To provide a description of the planned functional approach for implementing the Balancing Authority of Northern California (BANC) Energy Imbalance Market (EIM) Phase 2 and the relative roles and responsibilities of the California Independent System Operator (CAISO), BANC, its EIM participating members and the Western Area Power Administration – Sierra Nevada Region (WAPA-SNR).³ It is recognized that there may be some modifications to this approach based upon the gap analyses performed on behalf of the EIM participating members and WAPA-SNR and on issues identified during Phase 2 implementation that are mutually agreed upon by BANC and the EIM Phase 2 parties.

Functional Approach

The functional approach for handling BANC EIM Phase 2 participation will rely on leveraging the existing BANC EIM Entity/Sacramento Municipal Utility District (SMUD) EIM Services Provider arrangement that was developed for BANC EIM Phase 1. The intent is to have BANC/SMUD be the primary interface between the EIM Market Operator (CAISO) and BANC for EIM Entity functions. Each of the BANC EIM Participants (and WAPA-SNR/USBR if they elect to participate) will have a direct contractual relationship with the CAISO/EIM Market Operator as EIM Participating Resources. Market dispatch signals through the CAISO's Automated Dispatch System (ADS) will flow from the CAISO to the respective entity's real-time operation's systems via the SMUD/BANC Energy Management System (EMS)⁴. In addition, BANC/SMUD will provide necessary EIM data/information required to ensure sub-BAA operations to WAPA-SNR.

Figures 1 and 2 provide a schematic flow for the EIM Phase 2 options:

- Figure 1 – Option 1: EIM Phase 2 Functionality without WAPA-SNR in EIM
- Figure 2 – Option 2: EIM Phase 2 Functionality with WAPA-SNR in EIM

³ WAPA-SNR is not a formal BANC member but participates in most BANC activities. Further discussions regarding a more formalized role for WAPA-SNR are intended as issues are addressed through BANC EIM Phase 2 implementation process.

BANC and WAPA-SNR will also coordinate closely with the United States Bureau of Reclamation (USBR) due to the integrated nature of USBR generation within the WAPA-SNR footprint and within the BANC Balancing Authority Area (BAA).

⁴ Phase 2 participants have the option of obtaining dispatch DOTs directly from the CAISO ADS system via a self-created/self-supported interface application.

It is recognized that under each of these options, the goal is to preserve the existing BAA and sub-BAA relationships between BANC and SMUD and BANC and WAPA-SNR and to preserve the existing contractual arrangements.⁵ Because EIM is a market function, there are no changes to the existing reliability compliance responsibilities of the participants.

In discussions among the EIM participating members, WAPA-SNR, and the CAISO, it is recognized that Option 2 provides the best arrangement for interfacing the unique BANC arrangement with the CAISO and will require fewer special arrangements than Option 1. *Therefore, Option 2 has been selected as the BANC EIM Phase 2 Model.*

Roles and Responsibilities

The following outlines the roles and responsibilities for participation in BANC EIM Phase 2:

EIM Operator – CAISO

- Load forecast for each EIM BAA
 - Individual load forecasts and settlement points (ELAP) for each entity (Modesto, Redding, Roseville, WAPA-SNR)
 - Non-conforming loads (i.e. – irrigation pumping loads) will require input from USBR and other EIM participants as appropriate
- Resource plan feasibility
 - Includes evaluating resource sufficiency (RS) tests (balancing, bid capacity, flex ramp, and transmission feasibility)
- Run the EIM
- Settling EIM charges through the particular Scheduling Coordinator (SC) (i.e., EIM Entity SC and EIM Participating Resource SC)

EIM Entity – BANC BAA (Supported by BANC EIM Services Provider [SMUD] and EIM Entity SC [SMUD])

- Manage/Update BANC EIM Participant PRSC Base Schedules between T-55 and T-40 minutes
- Manage/Submit Day Ahead EIM Resource Plan interchange schedules for the BANC BA.
- Manage/Submit EIM interchange Base Schedules for the BANC BA
- Current operating characteristics (Note: The vast majority of this data will be obtained by the BANC EIM Entity through participant data submittals to the CAISO)
 - Outages (Both planned and unplanned)
 - Meter/telemetry

⁵ It has been recognized that some contractual changes may be required to BANC member contracts with WAPA-SNR to enable EIM participation. These changes are anticipated to be minor and are not expected to disrupt the benefits of the existing contractual relationships.

- Transmission capacity available for EIM transfers – i.e., Energy Transfer System Resources, or “ETSRs”
- Market resource sufficiency tests performed at the BAA level
 - Balancing, flex ramp, and bid range capacity
 - Need to develop allocation methodology among the BANC Participating Resources
- Settlements – through EIM Entity SC
 - All BANC EIM participant load imbalance
 - BANC EIM participant Non-participating resources imbalance
 - Interchange Schedule Imbalance
 - Other BANC EIM Entity fee, offset, and uplift charges
 - Need to develop allocation methodology

EIM Participating Resources (Supported by EIM Participating Resource SC)

- Phase 2 EIM Participating Resources
 - SMUD
 - Modesto Irrigation District (MID)
 - City of Redding (Redding)
 - City of Roseville (Roseville)
 - WAPA-SNR/USBR Central Valley Project (CVP)
 - Calpine-Sutter Generator (To be determined)
- Manage/Submit Day Ahead EIM Generator Resource Plans for the EIM Participant-area
- Manage/Submit EIM Bids for the EIM Participant’s Participating Resources
- Manage/Submit EIM Participating Resource Generator Base Schedules at T-75 and T-55 minutes for EIM Participant’s generators
 - Assure EIM Participant-area Base Schedules and Bids pass EIM Sufficiency Tests at T-75 and T-55 minutes
- Settlement of EIM Participant’s Participating Resource SC EIM Resources

Non-participating Resources (Possibly some or all of CVP)

- Do not submit bids in EIM
- Need to provide input to EIM Entity for Base Schedule and Resource Plan
- Subject to EIM Entity imbalance charges/payments based on deviations from the Base Schedules provided to the EIM Entity
- Recommend for all Resources to be designated as Participating Resources even if they do not expect to bid (Note: During EIM implementation each Participating Resource will need to decide how to handle the resources within their respective footprints, including solar, small, and distribution level resources with respect to Participating or Non-Participating)

Other Issues

As part of the discussions, other issues that need to be addressed during implementation include:

1. Deviation Band (Contract arrangement between WAPA-SNR and MID/Redding/Roseville).
 - a. BANC EIM Participants want to preserve this real-time balancing capability.
 - b. BANC EIM Participants will continue to require real-time AGC balancing and the associated Regulation Up/Down reserves in an EIM paradigm.
 - c. The Deviation MW calculation will be analyzed to determine if a change is required to account for EIM redispatch of EIM Participants' generators.⁶
2. EIM hourly Sufficiency Test
 - a. Defined and executed by CAISO at the BANC BA level.
 - b. EIM Participants will each be required to provide EIM capacity so that BANC collectively passes the EIM Sufficiency Tests.
 - c. EIM Participants with no generation on-line may need to make an arrangement with other BANC members that have generation on-line to meet their portion of the total BANC EIM Sufficiency capacity MW requirements.
3. BANC EIM Entity Settlement Charge allocations; allocation invoicing to EIM Participants; and EIM Participant payment schedule for allocations.
4. Treatment of EIM dynamic transfers between sub-BAs within BANC, and between LSE's within the WAPA Sub-BA
5. Ensuring all appropriate technical and operational information and data will be provided to WAPA-SNR that will allow it to operate its sub-BA.

The Parties will mutually resolve these issues and recognize that to resolve these issues it may be necessary to make modifications to this Exhibit B or this Contract, as mutually agreed to.

⁶ I.e., Due to CAISO EIM timelines, CAISO EIM dispatches would have already occurred prior to WAPA-SNR dispatches under the Deviation Band, which should result in less regulation and imbalance energy required from WAPA-SNR/USBR resources.

Figure 1 - Option 1: EIM Phase 2 Functionality without WAPA-SNR in EIM

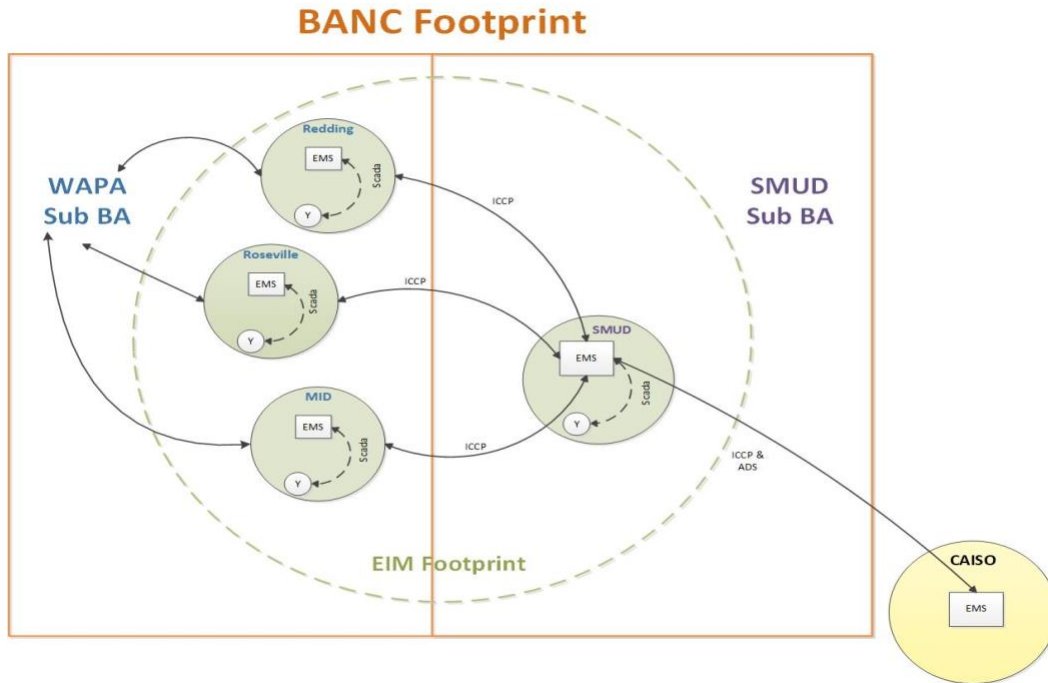
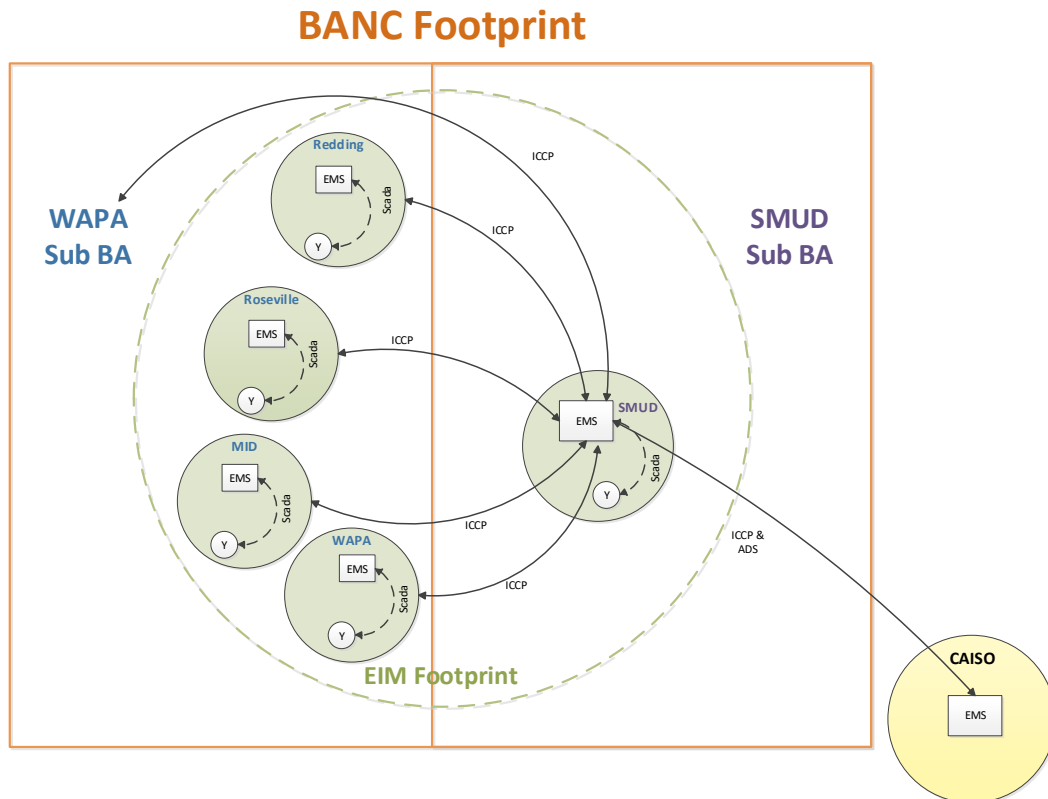


Figure 2 - Option 2: EIM Phase 2 Functionality with WAPA-SNR in EIM



Amendments

This Exhibit B may only be amended with written consent of all Parties and approval of the BANC Commission. Any amendment to this Exhibit B shall be in writing and transmitted to all Parties to this Agreement within seven (7) business days of the version change contained in the document Version History.

Any changes will be reflected through a change in the Version History. Minor, non-substantive changes will be reflected in 1/10th increments to the Version History (e.g., 1.1, 1.2, etc.).

Version History

VERSION	CHANGE	BY	DATE
1.0	Initial Version	Commission	DATE

EXHIBIT C: BANC Phase 2 EIM Implementation Agreement

(To Be Added Upon Execution by BANC and CAISO)

EXHIBIT D: BANC Phase 2 EIM Entity Agreement

(To Be Added Upon Execution by BANC and CAISO)

Balancing Authority of Northern California

Agenda Item 6B

1. **Resolution 19-08-09 *Acceptance of Proposed EIM Phase 2 Implementation Budget Estimate.***
2. **Attachment A to Resolution 19-08-09 *EIM Phase 2 Implementation Budget Estimate – August 2019.***

**Balancing Authority of Northern California
Resolution 19-08-09**

ACCEPTANCE OF PROPOSED EIM PHASE 2 IMPLEMENTATION BUDGET ESTIMATE

WHEREAS, the Balancing Authority of Northern California ("BANC") Joint Powers Agreement ("JPA") Section 11.4 describes both the responsibilities and the non-delegable duties of the BANC Commission which include approving an annual budget and approving assessments to each Member; and

WHEREAS, BANC has determined using a phased approach through a BANC EIM Project would allow BANC and its members to proceed with participation in the Energy Imbalance Market ("EIM") based on the individual preference and needs, with the Sacramento Municipal Utility District being the first BANC Member to participate in EIM Phase 1; and

WHEREAS, certain BANC members, namely the Modesto Irrigation District, the City of Redding, and the City of Roseville, along with the Western Area Power Administration – Sierra Nevada Region ("WAPA-SNR"), have determined to join in EIM Phase 2, subject to final entity approval; and

WHEREAS, the General Manager worked together with staff to develop a draft budget for EIM Phase 2 Implementation; and

WHEREAS, the General Manager worked together with staff and WAPA-SNR to develop a BANC-WAPA-SNR EIM Funding Agreement, whereby WAPA-SNR will fund its share of the EIM Phase 2 Implementation costs, should it elect to join.

NOW, THEREFORE, BE IT RESOLVED that the Commissioners of the Balancing Authority of Northern California hereby: accept the Proposed EIM Phase 2 Implementation Budget Estimate, attached hereto as Attachment A, with follow up approval of budget authorizations to be considered in separate resolutions for the applicable BANC budget cycle.

PASSED AND ADOPTED by the Commissioners of the Balancing Authority of Northern California this 21st day of August, 2019, by the following vote:

		Aye	No	Abstain	Absent
Modesto ID	Greg Salyer				
City of Redding	Dan Beans				
City of Roseville	Michelle Bertolino				
City of Shasta Lake	James Takehara				
SMUD	Arlen Orchard				
TPUD	Paul Hauser				

Dan Beans
Chair

Attest by: C. Anthony Braun
Secretary

EIM Phase 2 Implementation Budget Estimate – August 2019

BACKGROUND

Now that the evaluation of BANC EIM Phase 2 has been completed for BANC and the Phase 2 Participants and it is anticipated that the entities will approve proceeding with implementation, the Commission will be asked to approve a new participating agreement with a budget estimate for EIM Phase 2 Implementation.

PROPOSED BUDGET ESTIMATE

The Commission did authorize expenditures as part of the 2019 Budget for an EIM Phase 2 Preparation effort (PA-6: EIM Phase 2 Preparation) in the total amount of \$255,000. This effort will be essentially completed with the delivery of the EIM Phase 2 recommendation at the August Commission meeting. Based upon the EIM Phase 2 gap analyses work performed by Utilicast, discussions with BANC legal counsel (BBSW), and the BANC EIM Operator (SMUD), staff, working with the EIM Phase 2 Working Group, has developed a budget forecast for EIM Phase 2 Implementation. The total budget estimate for the implementation effort is attached to this report as a proposed new participation agreement: PA-7: EIM Phase 2 Implementation. Based upon this evaluation, the overall 18-19 month implementation effort is estimated to be \$3,706,642.50, which includes a 10% contingency. This would be allocated in accordance with the agreed upon cost allocation methodology. The cost allocation for the Phase 2 participants is also shown in the attached PA-7.

Attachment A to Resolution 19-08-09

1. Participation Agreement 7 (PA-7) – EIM Phase 2 Implementation
 - a. Assumptions
 - i. BANC participates in the EIM as the EIM Entity for the BANC footprint
 - ii. Participating Resources for Phase 2 include MID, Redding, Roseville, and WAPA-SNR (representing the CVP generating resources owned by Bureau of Reclamation). SMUD will also continue to participate in EIM under Phase 1 during Phase 2 Implementation and all EIM participants will participate when Phase 2 goes live in April 2021
 - iii. EIM Phase 2 program development from September 2019 to spring 2021, with go-live for Phase 2 EIM in April 2021
 - iv. Costs allocated to the EIM participants in accordance with the agreed upon cost allocation methodology
 - b. Estimated costs for the 18-19 month effort under PA-7 for implementation based upon estimates provided from Utilicast gap analyses and discussions with BANC legal counsel (BBSW) and BANC EIM operator (SMUD). This includes a 10% contingency.

CATEGORY	BANC TOTAL F/C	2019	2020	2021
Utilicast Support	\$1,494,675.00	\$324,675.00	\$936,000.00	\$234,000.00
SMUD PM Support	\$275,000.00	\$58,000.00	\$174,000.00	\$43,000.00
Legal Support	\$200,000.00	\$42,000.00	\$126,000.00	\$32,000.00
SW Upgrades	\$1,200,000.00	\$250,000.00	\$700,000.00	\$250,000.00
CAISO Impl. Fees	\$200,000.00	\$33,000.00	\$134,000.00	\$33,000.00
Sub-total	\$3,369,675.00	\$707,675.00	\$2,070,000.00	\$592,000.00
10% Contingency	\$336,967.50	\$70,767.50	\$207,000.00	\$59,200.00
TOTAL	\$3,706,642.50	\$778,442.50	\$2,277,000.00	\$651,200.00

Attachment A to Resolution 19-08-09

- c. Estimated total cost allocation for PA-7: EIM Phase 2 Implementation
(including 10% contingency)

IMPLEMENTATION CATEGORY	COST ESTIMATE	MID	REDDING	ROSEVILLE	WAPA
Utilicast Support	\$1,494,675.00	\$418,507.35	\$127,339.43	\$198,828.23	\$750,000.00
Software Upgrades	\$1,200,000.00	\$472,800.00	\$144,000.00	\$225,600.00	\$357,600.00
SMUD PM Support	\$275,000.00	\$108,350.00	\$33,000.00	\$51,700.00	\$81,950.00
Legal Support	\$200,000.00	\$78,800.00	\$24,000.00	\$37,600.00	\$59,600.00
CAISO Implementation Fees	\$200,000.00	\$78,800.00	\$24,000.00	\$37,600.00	\$59,600.00
Total Estimate	\$3,369,675.00	\$1,157,257.35	\$352,339.43	\$551,328.23	\$1,308,750.00
Contingency @~10%	\$336,967.50	\$115,725.74	\$35,233.94	\$55,132.82	\$130,875.00
TOTAL	\$3,706,642.50	\$1,272,983.09	\$387,573.37	\$606,461.05	\$1,439,625.00

Balancing Authority of Northern California

Agenda Item 6C

1. **Resolution 19-08-10 *Approval of Revised 2019 Annual Budget for BANC.***
2. **Attachment A to Resolution 19-08-10 *2019 BANC Budget – August 2019 Revision - EIM Phase 2 Implementation.***

**Balancing Authority of Northern California
Resolution 19-08-10**

APPROVAL OF REVISED 2019 ANNUAL BUDGET FOR BANC

WHEREAS, the Balancing Authority of Northern California ("BANC") Joint Powers Agreement ("JPA") Section 11.4 describes both the responsibilities and the non-delegable duties of the BANC Commission which include approving an annual budget and approving assessments to each Member; and

WHEREAS, JPA Section 12 provides that the BANC Commission may assess each Member for its respective Participation Percentage share of funds required to carry out BANC's purposes as specified in the annual budget; and

WHEREAS, BANC Resolution 12-02-03 established a process whereby Member assessments shall be required no less than two times per year; and

WHEREAS, the General Manager worked together with staff to develop a revised budget as a result of changes in costs related to the anticipated approval of BANC EIM Phase 2 and related implementation costs; and

WHEREAS, the General Manager worked together with staff and WAPA-SNR to develop a BANC-WAPA-SNR EIM Funding Agreement, whereby WAPA-SNR will fund its share of the EIM Phase 2 Implementation costs, should it elect to join; and

WHEREAS, the General Manager has prepared a final version for consideration and possible adoption by the Commission.

NOW, THEREFORE, BE IT RESOLVED that the Commissioners of the Balancing Authority of Northern California hereby:

1. Approve the amended 2019 Annual Budget for BANC in the form attached hereto as Attachment A.
2. Directs the BANC Treasurer to assess each BANC Member in accordance with Resolution 12-02-03.

PASSED AND ADOPTED by the Commissioners of the Balancing Authority of Northern California this 21st day of August, 2019, by the following vote:

		Aye	No	Abstain	Absent
Modesto ID	Greg Salyer				
City of Redding	Dan Beans				
City of Roseville	Michelle Bertolino				
City of Shasta Lake	James Takehara				
SMUD	Arlen Orchard				
TPUD	Paul Hauser				

Dan Beans
Chair

Attest by: C. Anthony Braun
Secretary

2019 BANC Budget

August 2019 Revision

EIM Phase 2 Implementation

BACKGROUND

As was agreed upon when the 2019 BANC Budget was developed and approved last year, no estimate was provided for EIM Phase 2 implementation. It was agreed that if entities decided to proceed with an EIM Phase 2 a budget adjustment would be approved at that time. Now that the evaluation of BANC EIM Phase 2 has been completed for BANC and the Phase 2 Participants and it is anticipated that the entities will approve proceeding with implementation, the Commission will be asked to approve an amendment to the 2019 BANC Budget which will add a new participating agreement with a budget estimate for EIM Phase 2 Implementation.

IMPACT ON 2019 BUDGET

As noted above, the Commission did not authorize expenditures for EIM Phase 2 implementation in the 2019 Budget. The Commission did authorize expenditures for an EIM Phase 2 Preparation effort (PA-6: EIM Phase 2 Preparation) in the total amount of \$255,000. This effort will be essentially completed with the delivery of the EIM Phase 2 recommendation at the August Commission meeting. Based upon the EIM Phase 2 gap analyses work performed by Utilicast, discussions with BANC legal counsel (BBSW), and the BANC EIM Operator (SMUD), we have developed a budget forecast for EIM Phase 2 Implementation. The total budget estimate for the ~18-19 month implementation effort will be provided in a separate submittal.

Attached to this report is a budget estimate for the 2019 portion of a new participation agreement: PA-7: EIM Phase 2 Implementation. Based upon this evaluation, the overall 2019 Budget increases in the amount of \$778,442.50, which includes a 10% contingency. This would be allocated in accordance with the agreed upon cost allocation methodology. The cost allocation for 2019 for the Phase 2 participants is also shown in the attached PA-7. Also attached is a revised 2019 Member Assessment based upon the addition of PA-7.

Attachment A to Resolution 19-08-10

1. Participation Agreement 7 (PA-7) – EIM Phase 2 Implementation (2019)
 - a. Assumptions
 - i. BANC participates in the EIM as the EIM Entity for the BANC footprint
 - ii. Participating Resources for Phase 2 include MID, Redding, Roseville, and WAPA-SNR (representing the CVP generating resources owned by Bureau of Reclamation). SMUD will also continue to participate in EIM under Phase 1 during Phase 2 Implementation and all EIM participants will participate when Phase 2 goes live in April 2021
 - iii. EIM Phase 2 program development from 9/2019 to spring 2021, with go-live for Phase 2 EIM in April 2021
 - iv. Costs allocated to the EIM participants in accordance with the agreed upon cost allocation methodology
 - b. Estimated costs under PA-7 for implementation based upon estimates provided from Utilicast gap analyses and discussions with BANC legal counsel (BBSW) and BANC EIM operator (SMUD).

IMPLEMENTATION CATEGORY	COST ESTIMATE	MID	REDDING	ROSEVILLE	WAPA
Utilicast Support	\$324,675.00	\$89,737.35	\$27,304.43	\$42,633.23	\$165,000.00
Software Upgrades	\$250,000.00	\$98,500.00	\$30,000.00	\$47,000.00	\$74,500.00
SMUD PM Support	\$58,000.00	\$22,852.00	\$6,960.00	\$10,904.00	\$17,284.00
Legal Support	\$42,000.00	\$16,548.00	\$5,040.00	\$7,896.00	\$12,516.00
CAISO Implementation Fees	\$33,000.00	\$13,002.00	\$3,960.00	\$6,204.00	\$9,834.00
Total Estimate	\$707,675.00	\$240,639.35	\$73,264.43	\$114,637.23	\$279,134.00
Contingency @~10%	\$70,767.50	\$24,063.94	\$7,326.44	\$11,463.72	\$27,913.40
TOTAL for 2019	\$778,442.50	\$264,703.29	\$80,590.87	\$126,100.95	\$307,047.40

Attachment A to Resolution 19-08-10

2. 2019 BANC Member Assessments (Revised)

MEMBER	BASE BUDGET	PA-1: PA/PC	PA-2: PEAK	PA-3: EIM Impl.	PA-4: EDAM	PA-5: EIM Part.	PA-6: Ph2 Prep	PA-7: Ph2 Imp	MEMBER TOTAL
SMUD	\$1,588,678.94	\$155,000.00	\$-	\$810,000.00	\$320,000.00	\$2,677,937.00	\$35,050.00	\$-	\$5,586,665.94
MID	\$380,549.36	\$93,000.00	\$-	\$-	\$-	\$-	\$62,475.00	\$264,703.29	\$800,727.65
ROSEVILLE	\$181,104.81	\$32,550.00	\$109,340.00	\$-	\$-	\$-	\$50,650.00	\$126,100.95	\$499,745.76
REDDING	\$114,623.30	\$29,450.00	\$68,899.00	\$-	\$-	\$-	\$46,825.00	\$80,590.87	\$340,388.17
SHASTA LAKE	\$27,509.59	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$27,509.59
TPUD	\$25,000.00	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$25,000.00
BANC TOTAL	\$2,317,466.00	\$310,000.00	\$178,239.00	\$810,000.00	\$320,000.00	\$2,677,937.00	\$195,000.00	\$471,395.11	\$7,280,037.11
WASN	\$-	\$-	\$-	\$-	\$-	\$-	\$60,000.00	\$307,047.40	\$367,047.40
GRAND TOTAL	\$2,317,466.00	\$310,000.00	\$178,239.00	\$810,000.00	\$320,000.00	\$2,677,937.00	\$255,000.00	\$778,442.51	\$7,647,084.51

Balancing Authority of Northern California

Agenda Item 6D

1. ***Resolution 19-08-14 Authorization of the General Manager to Enter into Negotiations for a BANC EIM Phase 2 Implementation Agreement with the California Independent System Operator.***

Braun Blaising Smith Wynne, P.C.

Attorneys at Law

8/14/2019

To: BANC Commission

From: BANC Counsel

RE: Authorization of the General Manager to Enter into Negotiations for a BANC EIM Phase 2 Implementation Agreement with the California Independent System Operator

On February 22, 2017, the Commission approved the Energy Imbalance Market (EIM) Implementation Agreement (IA) between the Balancing Authority of Northern California (BANC) and the California Independent System Operator (CAISO) by Resolution 17-02-02 for BANC EIM Phase 1 – wherein the Sacramento Municipal Utility District was the sole BANC EIM participant.¹ This agreement was subsequently approved by the Federal Energy Regulatory Commission (FERC)² and formed the basis for the BANC Phase 1 EIM implementation project.

Should the Commission approve that BANC proceed to EIM Phase 2, whereby it will expand EIM participation within the BANC footprint to also include the Cities of Redding and Roseville, along with the Modesto Irrigation District and the Western Area Power Administration – Sierra Nevada Region, BANC will be required to either negotiate a new IA or amend BANC's existing IA (more likely the latter). This new or amended IA, as was the case with the existing IA, will be filed by the CAISO with FERC, since it is not a pro forma agreement.

Therefore, we are requesting that the Commission also authorize the General Manager to enter into negotiations with the CAISO for a Phase 2 IA. Any agreement will be thoroughly vetted with BANC EIM participants and will also require Commission approval.

¹ The IA is the agreement between the CAISO and the proposed EIM Entity, which establishes the EIM implementation conditions, timelines and milestones, as well as the obligation to compensate the CAISO for the EIM Entity's share of the costs of system changes, software costs, and other configuration activities related to implementation.

² *California Independent System Operator Corp.*, FERC Docket No. ER18-2360-000, approved by Letter Order, October 18, 2018.

**Balancing Authority of Northern California
Resolution 19-08-14**

**AUTHORIZATION OF THE GENERAL MANAGER TO ENTER INTO NEGOTIATIONS
FOR A BANC EIM PHASE 2 IMPLEMENTATION AGREEMENT
WITH THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR**

WHEREAS, the Balancing Authority of Northern California ("BANC") was created by a Joint Powers Agreement ("JPA") to, among other things, acquire, construct, maintain, operate, and finance Projects; and

WHEREAS, BANC, its members, the Western Area Power Administration – Sierra Nevada Region ("WAPA-SNR"), and contracted consultants evaluated participation in the California Independent System Operator ("CAISO") Energy Imbalance Market ("EIM"); and

WHEREAS, based upon this evaluation, BANC and its members and WAPA-SNR, have concluded that the EIM does support meeting BANC's strategic principles with an indicative net benefit for BANC overall and individually for those entities that were evaluated; and

WHEREAS, certain BANC members, namely the Modesto Irrigation District, the City of Redding, and the City of Roseville, along with the Western Area Power Administration – Sierra Nevada Region, have determined to join in EIM Phase 2, subject to final entity approval; and

WHEREAS, in order to effectuate Phase 2, BANC must enter into an EIM Implementation Agreement ("IA") with the CAISO to set forth the terms, conditions and milestones for participating in EIM; and

WHEREAS, BANC and the CAISO must commence negotiations as soon as practicable to develop an IA for BANC EIM Phase 2 implementation;

NOW, THEREFORE, BE IT RESOLVED that the Commissioners of the Balancing Authority of Northern California hereby:

1. Authorize the General Manager to enter into IA negotiations with the CAISO in furtherance of Phase 2 implementation; and
2. Instruct the General Manager to confer with the EIM Committee over its terms; and
3. Require the General Manager to bring the agreed upon IA back to the Commission for final Approval prior to execution.

**Balancing Authority of Northern California
Resolution 19-08-14**

PASSED AND ADOPTED by the Commissioners of the Balancing Authority of Northern California
this 21st day of August 2019, by the following vote:

		Aye	No	Abstain	Absent
Modesto ID	Greg Salyer				
City of Redding	Dan Beans				
City of Roseville	Michelle Bertolino				
City of Shasta Lake	James Takahara				
SMUD	Arlen Orchard				
TPUD	Paul Hauser				

Dan Beans
Chair

Attest by: C. Anthony Braun
Secretary

Balancing Authority of Northern California

Agenda Item 6E

1. **Resolution 19-08-11 *Authorization of Amendment to Utilicast Contract for Services Related to Phase 2 of Energy Imbalance market to Include Task 3.***
2. **Exhibit A – Scope of Work to Consulting Services Agreement between the Balancing Authority of Northern California and Utilicast LLC.**
3. **Exhibit B – Fee Schedule to Consulting Services Agreement between the Balancing Authority of Northern California and Utilicast LLC.**

Braun Blaising Smith Wynne, P.C.

Attorneys at Law

8/11/19

To: BANC Commission

From: BANC Counsel

RE: Authorization of Amendment to Utilicast Contract for Services Related to Phase 2 of Energy Imbalance Market to Include Task 3

In January of 2019, the BANC Commission authorized the General Manager to enter into a contract with Utilicast, who was subsequently engaged to provide consulting services related to participation in the Energy Imbalance market (EIM) and the proposed Enhanced Day Ahead Market (EDAM). “BANC EIM Phase 1” (Phase 1) refers to the development and deployment of EIM within the BANC footprint, with the Sacramento Municipal Utility District (SMUD) as the sole participant. “BANC EIM Phase 2” (Phase 2) generally refers to the incremental participation by other BANC members and/or the Western Area Power Administration – Sierra Nevada Region (WAPA-SNR).

The proposed work was divided into four (4) discreet tasks, and only authorization for tasks 1, 2 and 4 was requested and approved:

- Task #1: BANC/SMUD EIM Phase 2 Post Go-Live Support and Analysis
- Task #2: BANC EIM Phase 2 System and Process Gap Analysis and Implementation Plan
- **Task #3: BANC EIM Phase 2 Project Implementation and Project Management support**
- Task #4: CAISO Extended Day Ahead Market (EDAM) Support for BANC/SMUD

Task 3 was not approved, as it related to Phase 2 implementation.

Following execution of the contract with Utilicast, WAPA-SNR determined that they, too, would like to have an EIM Gap Analysis performed for their footprint to determine what might be required for them to participate in BANC EIM Phase 2. The United States Bureau of Reclamation (USBR) also participated in this analysis, given the integration of USBR generation within WAPA-SNR operations. As a result, Utilicast was asked to provide a revised contract proposal to include WAPA-SNR and USBR resources in the EIM Phase 2 Gap Analysis (Task #2b), which was approved at the May 15, 2019 BANC Commission Meeting.

As noted, Task 3 involves activities related to EIM Phase 2 implementation and is therefore dependent upon a decision by Phase 2 participants to proceed with EIM implementation. It was also therefore made subject to separate BANC Commission Approval and the results of the gap analyses under Task 2. Given the decisions currently before the

Commission, and pending final approvals from EIM Phase 2 participants, amendments to the Scope of Work for the Utilicast contract are required to add Task 3 and revise the associated Fee Schedule. Attached hereto are those documents. Based upon the gap analyses, Task 3 has been broken down into Task 3a (estimated at \$654,675.00) for BANC member support and Task 3b (estimated at \$750,000) for focused support for WAPA-SNR. We are also suggesting adding ~\$90,000.00 in contingency funds to bring the total for Task 3 to \$1,495,000. This will result in a total contract amount of \$1,747,405.

We are requesting approval of an amended Utilicast contract to reflect the addition of this Scope of Work and associated Fee Schedule, in substantially final form.

Upon BANC Commission approval of Task 3 and finalization thereof, written approval shall be provided to Consultant by the BANC General Manager to commence work in accordance with the Fee Schedule provided Exhibit B to this Agreement.

The Commission is being asked to authorize BANC staff to do the following:

1. Approve Task 3, allowing Utilicast to proceed with BANC EIM Phase 2 Project Implementation and Project Management Support.

**Balancing Authority of Northern California
Resolution 19-08-11**

**AUTHORIZATION OF AMENDMENT TO UTILICAST CONTRACT FOR SERVICES RELATED TO
PHASE 2 OF ENERGY IMBALANCE MARKET TO INCLUDE TASK 3**

WHEREAS, BANC has entered into a contract with Utilicast to evaluate and review implementation issues that may arise due to participation in the Energy Imbalance Market ("EIM") or the proposed Extended Day Ahead Market ("EDAM"); and

WHEREAS, BANC, its members, and contracted consultants performed a net benefit evaluation of participation in the California Independent System Operator ("CAISO") Energy Imbalance Market ("EIM"); and

WHEREAS, based upon this evaluation, BANC and its members have concluded that the EIM does support meeting BANC's strategic principles with an indicative net benefit for BANC overall and individually for those entities that were evaluated; and

WHEREAS, BANC has determined using a phased approach through a BANC EIM Project would allow BANC and the Sacramento Municipal Utility District ("SMUD") to proceed with participation in the EIM under Phase 1 while other members further considered EIM participation; and

WHEREAS, certain BANC members, namely the Modesto Irrigation District, the City of Redding, and the City of Roseville, along with the Western Area Power Administration – Sierra Nevada Region, have determined to join in EIM Phase 2 subject to final entity approval; and

WHEREAS the BANC General Manager's delegated contracting authority is limited to \$25,000;

NOW THEREFORE, BE IT RESOLVED that the Commissioners of the Balancing Authority of Northern California hereby authorize the General Manager to enter into an amended contract with Utilicast for an amount not to exceed \$1,747,405, including revised Task 3 in the amount of \$1,495,000, which includes associated expenses and a contingency.

PASSED AND ADOPTED by the Commissioners of the Balancing Authority of Northern California this 21st day of August 2019, by the following vote:

		Aye	No	Abstain	Absent
Modesto ID	Greg Salyer				
City of Redding	Dan Beans				
City of Roseville	Michelle Bertolino				
City of Shasta Lake	James Takehara				
SMUD	Arlen Orchard				
TPUD	Paul Hauser				

Dan Beans
Chair

Attest by: C. Anthony Braun
Secretary

Exhibit A

Scope of Work

Task Descriptions & Assumptions

Task #1: BANC/SMUD EIM Phase 1 Post Go-Live Support and Analysis

- This task will be completed in the period between May 1, 2019 and approximately August 31, 2019.
- This task is estimated to require 180 hours to complete.
- Consultant will provide ongoing, post go-live support and analysis for the BANC EIM Phase I Implementation project.
- Consultant will provide day-to-day subject matter expertise, and expert analysis of BANC EIM Entity's and SMUD Participating Resource Entity's EIM Market participation and results.
- Consultant will analyze and support resolution of issues which are observed by the consultant and/or assigned by the BANC/SMUD EIM Project leadership team.

Task #2a: BANC EIM Phase 2 Gap Analysis and Implementation Plan: BANC Members

- This task will be completed in the period between May 1, 2019 and August 31, 2019.
- This task is estimated to require 540 hours to complete.
- Consultant will perform an analysis of each BANC EIM candidate's current state versus the desired EIM end-state, across software/telemetry systems, staffing, and business processes.
- Consultant will work with BANC Member teams to clearly identify and define the functional gaps and requirements for EIM.
- Consultant will present identified gaps with options and recommendations for closure. The gap closure options will include making maximum effective use of existing BANC Member systems (including SMUD's), processes, and staff.
- Consultant will deliver an "EIM Gap Analysis Report," which will identify critical gaps and how they can best be addressed in the BANC Phase 2 EIM Implementation Project. The EIM Gap Analysis Report deliverable for each BANC EIM candidate will include a review of at least the following areas for system and/or business process gaps:
 - Full Network Model
 - Merchant Generation/Trading Base Schedule and EIM Energy Bid Submissions
 - Outage Management
 - EIM Entity Intertie Schedule Creation, Management, and Submission
 - EIM Entity Desk and Situational awareness, Training & Testing
 - Generation Dispatch, EMS, and CAISO ADS system integration
 - CAISO EIM Metering
 - Demand & Variable Energy Resource Forecasting
 - EIM Market Settlement and Billing
 - Open Access Transmission Tariff (OATT) Update for EIM Market Participation
 - User/Staff Training and Software System Testing
 - ICCP data provision/integration
 - Transmission paths for EIM participation
 - Existing Contracts
- Consultant will gather input from interviews with BANC Member management, subject matter experts, (SMEs) and key personnel.

- Consultant will leverage BANC/SMUD Phase 1 EIM Implementation Project experience and the BANC/SMUD Phase 1 System and Process Gap Analysis Reports delivered in that project.
- Consultant will include an initial assessment of requirements for Western Area Power Administration – Sierra Nevada Region (WAPA-SNR) EIM process enabling support.
- Consultant will analyze the BANC BAA 'big picture' options - how best to organize and implement the expanded Phase 2 BANC EIM Entity to take advantage of the BANC scale; maintain accountability for balancing at the sub-BAA level; and produce greatest benefits to EIM members.
- Consultant will deliver a BANC EIM Phase 2 Implementation Plan and Schedule which incorporates the EIM Gap Analysis Report findings; the CAISO's EIM Implementation Plan/Schedule; any required EIM software additions or extensions; and existing SMUD sub-BAA EIM participation into a coherent, executable plan.

Task #2b: BANC EIM Phase 2 Gap Analysis: Western Area Power Administration – Sierra Nevada Region (WAPA-SNR)

- This task will be completed in the period between May 1, 2019 and August 31, 2019. It will be executed/supported in parallel with Task #1 and #2a.
- This task is estimated to require 280 hours to complete:
 - 240 hours to assess WAPA-SNR systems, staffing, and capabilities against EIM requirements. Roughly 3 weeks on-site plus 3 weeks analysis and write-up.
 - 40 hours to include WAPA-SNR in the larger BANC-EIM 'big picture' participation options. Could include: discussions with other BANC EIM candidates; discussion with WAPA-SNR; discussion with CAISO SMEs; and discussions with SMUD SMEs.
- Consultant will perform an analysis of WAPA-SNR current state versus the desired EIM end-state, across software/telemetry systems, staffing, and business processes.
- Consultant will work with WAPA-SNR staff to clearly identify and define the functional gaps and requirements for EIM.
- Consultant will present identified gaps with options and recommendations for closure. The gap closure options will include making maximum effective use of existing BANC and WAPA-SNR systems (including SMUD's systems), processes, and staff.
- Consultant will deliver an "EIM Phase 2 Gap Analysis Report," which will identify critical gaps and how they can best be addressed in the BANC Phase 2 EIM Implementation Project. The EIM Phase 2 Gap Analysis Report deliverable for WAPA-SNR will include a review of at least the following areas for system and/or business process gaps:
 - Full Network Model
 - Merchant Generation/Trading Base Schedule and EIM Energy Bid Submissions
 - Outage Management
 - EIM Entity Intertie Schedule Creation, Management, and Submission
 - EIM Entity Desk and Situational awareness, Training & Testing
 - Generation Dispatch, EMS, and CAISO ADS system integration
 - CAISO EIM Metering
 - Demand & Variable Energy Resource Forecasting
 - EIM Market Settlement and Billing/Finance process
 - Open Access Transmission Tariff (OATT) Update for EIM Market Participation
 - User/Staff Training and Software System Testing
 - ICCP data provision/integration
 - Transmission paths for EIM participation
 - Existing Contracts
 - EIM Software/Systems

- The final BANC “EIM Phase 2 Gap Analysis Report” will present the EIM implementation gaps for WAPA-SNR and will include a written discussion of the options for bringing multiple BANC Members (inclusive of WAPA-SNR) into a coherent BANC EIM Entity, including a recommendation for project structure.
- Consultant will gather input from interviews with WAPA-SNR management, SMEs, and key personnel.
- Consultant will leverage BANC/SMUD Phase 1 EIM Implementation Project experience and the BANC/SMUD Phase 1 System and Process Gap Analysis Reports delivered in that project.
- Consultant will analyze the BANC BAA 'big picture' options - how best to organize and implement the expanded Phase 2 BANC EIM Entity to take advantage of the BANC scale; maintain accountability for balancing at the sub-BAA level; and produce greatest benefits to EIM members (inclusive of WAPA-SNR).
- Consultant will include WAPA-SNR tasks and goals in the BANC EIM Phase 2 Implementation Plan and Schedule identified above in Task #2a, which incorporates the EIM Gap Analysis Report findings; the CAISO’s EIM Implementation Plan/Schedule; any required EIM software additions or extensions; and existing SMUD sub-BAA EIM participation into a coherent, executable plan.
- To accommodate this additional scope and meet the overall task timeline, Utilicast may utilize an additional consultant to support the services provided in Tasks #2a and #2b.

Task #3a: BANC EIM Phase 2 Project Implementation and Project Management Support¹

- This task will be completed in the period between September 1, 2019 and April 30, 2021 (87 Weeks).
- This task is estimated to require 3,045 hours to complete. Consultant is expected to require an average of 35 hours per week to successfully deliver this project.
- Consultant will assist in developing a detailed project plan (including cost and schedule estimate, and project organization).
- Consultant will maintain and manage the project plan and schedule,
- Consultant will advise the leadership team on project issues.
- Consultant will support the leadership team during project meetings for both in-house and CAISO discussions.
- Consultant will also act as EIM/CAISO Market Subject Matter Expert for the implementation project.
- Consultant will leverage previous EIM Implementation experiences, and the Consultant network to address questions and issues as they arise.
- Consultant will ensure issues are resolved timely.
- Consultant will work with the assigned BANC Member staff and SMEs in executing the EIM Implementation Project.
- Consultant is responsible for delivering these key project tasks:

¹ This Task 3 is subject to separate BANC Commission Approval and dependent upon a decision by Phase 2 Participants to proceed with EIM implementation. Initial development of this Task 3 did not contemplate WAPA-SNR participation in the BANC EIM Phase 2, except in its facilitative role for interconnected BANC Members. However, given WAPA-SNR’s recent decision to have the Consultant perform a separate WAPA-SNR gap study (Task 2b, above), this Task 3 will need to be revised to address a potential inclusion of WAPA-SNR as part of the Phase 2 implementation. Based on this change in scope, Consultant has determined that it is necessary to gain further information via their Task 2b (BANC EIM Phase 2 Gap Analysis: Western Area Power Administration – Sierra Nevada Region) efforts before providing a revised Task 3 estimate (likely, the Task 3 revisions will be addressed like Task 2 by being broken into two separate tasks – i.e., Task3a and Task 3b). Furthermore, should WAPA-SNR proceed, not only will a separate Task 3 need to be developed for WAPA-SNR implementation, Task 3 may also need revisions regarding the estimates related to BANC Member implementation, since this implementation will no doubt be impacted by a parallel WAPA-SNR implementation. Upon BANC Commission approval of Task 3, written approval shall be provided to Consultant by the BANC General Manager to commence work in accordance with the Fee Schedule provided Exhibit B to this Agreement.

- Institute a formal review and reporting process that ensures that the project team has regular meetings and that results are reported to BANC General Manager and any other key stakeholders on a regular basis.
- Establish a communication process and knowledge repository where key project documents are maintained and available to the project team members.
- Create and maintain a detailed project plan.
 - Consultant will extend the BANC EIM Phase 2 Implementation Plan and Schedule created in Task #1 above to manage the project's schedule, deliverables, and key dates. Using deliverables for similar sized utilities as a guide, the consultant will work with BANC Member staff to create a custom-tailored project plan that includes all the elements critical to EIM implementation with special consideration given to following CAISO's published guidelines and milestones.
- Consultant will create and execute a risk and issue management plan.
- Consultant will create and manage an EIM Market change management process.

Task #3b: BANC EIM Phase 2 EIM Project Management Support and Subject Matter Expert assigned to WAPA-SNR

- This task will be completed in the period between September 1, 2019 and December 31, 2020 (64 Weeks).
- This task is estimated to require 2,240 hours to complete. Consultant is expected to require an average of 35 hours per week to successfully deliver this project.
- Consultant will work with the assigned WAPA-SNR staff and in executing the EIM Implementation Project. Consultant will work to ensure the overall BANC Phase 2 EIM Implementation Project is successful while focusing their efforts on the WAPA-SNR portions of that implementation.
 - Consultant will ensure BANC Members' and WAPA-SNR BANC Phase 2 project remains inside the prescribed scope parameters; and will report to the WAPA leadership and BANC Program Mangers any instances where the scope will be potentially exceeded.
 - Consultant will ensure BANC Members' and WAPA-SNR BANC Phase 2 project adheres to the prescribed project schedule; and will report to the WAPA-SNR leadership and BANC Program Mangers any instances where the schedule will be potentially exceeded.
 - Consultant will support the creation and provide reviews of software requirements, software designs, software test plans, and software test cases.
 - Consultant will support the review, update, and creation of existing and new business processes and procedures as required for the success of BANC Phase 2 implementation.
 - Consultant will create whitepapers and meeting notes documentation as needed to ensure and share common understanding of issue resolution and decisions.
- Consultant will focus their efforts on the WAPA-SNR portion of the EIM Implementation Project but will make themselves available to support the overall BANC Phase 2 Implementation and any BANC EIM Members when necessary.
- Consultant will support the EIM Phase 2 Program Manager in developing a detailed project plan (including cost and schedule estimate, and project organization).
- Consultant will support the maintenance and management the project plan and schedule.
- Consultant will advise the EIM Phase 2 Program Manager, WAPA-SNR leadership, and BANC leadership team on project issues.
- Consultant will support the EIM Phase 2 Program Manager, WAPA-SNR leadership, and BANC leadership team during project meetings for both in-house and CAISO discussions.
- Consultant will act as an EIM/CAISO Market Subject Matter Expert for the implementation project.
- Consultant will leverage previous CAISO experiences, their relationship with CAISO staff, and their consultant network to address questions and issues as they arise.

- Consultant will ensure issues are resolved timely.
- Consultant is responsible for delivering these key project tasks:
 - Support the review and reporting process that is established for the BANC Phase 2 project.
 - Support the regular meetings of the BANC Phase 2 Project teams at WAPA-SNR; and support the regular reporting of outcomes and issues to WAPA-SNR leadership, BANC General Manager, and any other key stakeholders on a regular basis.
 - Support the BANC Phase 2 communication process and knowledge repository where key project documents are maintained and available to the project team members.
 - Consultant will support the creation and management of the BANC Phase 2 risk and issue management plan.
 - Consultant will support the creation and management of the an EIM Market change management process.

Task #4: Extended Day Ahead Market (EDAM) Support for BANC/SMUD

- Consultant believes this task can be completed successfully on a part-time, as needed, basis, during the period between May 1, 2019 and approximately April 30, 2020.
- This task is estimated to require 120 hours to complete.
- Consultant will provide EIM and CAISO Market subject matter expertise for the BANC Members in their evaluation of the CAISO's EDAM.
- Consultant will also provide an implementation assessment of impacts to the BANC/SMUD organizations if the BANC EIM members decide to move forward with the EDAM implementation.
- Consultant understands that support for this Task 4 is primarily required during the EDAM feasibility study phase, and the EDAM Stakeholder design phase.

Assumptions

- The BANC Phase 2 EIM Implementation project is a priority for BANC. The leadership team and BANC EIM members will provide resources and support to the project as needed to ensure its success and will empower and delegate appropriate authority to the BANC and Consultant project leads be able to assign work, direct resources, and make daily project decisions.
- BANC Phase 2 EIM Implementation includes four potential EIM additions: Roseville, REU, MID and WAPA-SNR.
- Consultant will assist in the definition and design of interfaces, but BANC Members and WAPA-SNR will develop interfaces to integrate legacy systems with the EIM systems. Consultant can provide development services if needed, but costs for this support are not included in this Scope of Work.
- BANC Members and WAPA-SNR have internal Training and Organizational Change Management (OCM) teams which will manage knowledge transfer long term. Consultant will provide support for training content and has included a limited amount of OCM support. Consultant can provide additional support if needed, but costs for this support are not included in this Scope of Work.
- BANC Members and WAPA-SNR will be responsible for physical construction at generation stations and transmission substations. Consultant will work with assigned BANC Project Managers to coordinate and integrate schedules and provide EIM related information. Consultant does not provide construction services.
- BANC General Manager, BANC Member and WAPA-SNR staff will provide timely reviews of Consultant work products so as not to hinder project timelines.
- BANC Members and WAPA-SNR will provide an appropriate workspace and access for Consultant(s) when working onsite. This includes a desk, chair, phone and internet. Additionally, unescorted badge access, extended hours / 24-hour access, CIP access when appropriate, and corporate network access for SharePoint, email, conference room reservation, etc. will be provided. Consultant will complete training,

background checks, execute Non-Disclosure Agreements, or other use agreements, as requested, to obtain this access and agrees to comply with BANC Member and WAPA-SNR policies and procedures.

- Consultant assumes BANC EIM candidate members will assign capable Project Manager(s) to support Consultant and Consultant shall ensure BANC Project Manager(s) are kept apprised of the ongoing schedule and timelines.
 - BANC EIM candidate Project Managers will be responsible for managing and assuring timely execution/delivery of EIM Phase 2 deliverables for their companies.
- Consultant assumes BANC Members and WAPA-SNR, including SMUD and WAPA-SNR Business SMEs will be providing most of the implementation staffing and additional subject matter expertise for the EIM Implementation and ongoing operations.

Exhibit B Fee Schedule

As-Needed Utilicast Subject Matter Expertise (SME) Allowance

- Consultant will provide 800 hours of “as-needed” EIM Operations, Modeling, and Technical SME support.
- These hours allow for the inclusion of specialized Consultant Subject Matter Experts to be utilized across all tasks above if needed.
- The hours will only be utilized if a need for expertise is required, and the expertise is outside of the assigned consultant’s knowledge area.
- These hours would require approval by the BANC General Manager prior to any billable work being done.

Total Statement of Work Fees

The fees associated with this Scope of Work are provided in the Fee Schedule below.

FEE SCHEDULE					
Task	Start	End	Total Hours	Rate	Total \$
Task #1: BANC/SMUD EIM Phase 1 Post Go-Live Support and Analysis	5/1/2019	7/12/2019	180	\$215/hr	\$38,700
Task #2a: BANC EIM Phase 2 Gap Analysis and Implementation Plan	5/1/2019	8/31/2019	540	\$215/hr	\$116,100
Task #2b: BANC EIM Phase 2 Gap Analysis: WAPA-SNR	Execution of this agreement	8/31/2019	280	\$215/hr	\$60,200
Task #3a ² : BANC EIM Phase 2 Project Implementation and Project Management Support	9/1/2019	4/30/2021	3,045	\$215/hr	\$654,675
Task #3b ² : BANC EIM Phase 2 Project Management and Subject Matter Expert Support	9/1/2019	12/31/2020	2,240	\$215/hr	\$481,600
Task #4: EIM Day Ahead Market (EDAM) Support for BANC/SMUD	5/1/2019	4/30/2020	120	\$215/hr	\$25,800
TOTALS³			6,405		\$1,377,075

As-Needed Market/Operations Subject Matter Expert Support	5/1/2019	4/30/2021	800	\$215/hr	\$172,000
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² This task is subject to BANC Commission Approval and dependent upon a decision by Phase 2 Participants to proceed with EIM implementation. Upon BANC Commission approval, written approval shall be provided to Consultant by the BANC General Manager to commence work under this Task.

Travel Expenses

Travel expenses are anticipated to be about 10% of fees but may vary based on the time of year and frequency of travel. Consultant will be reimbursed as follows:

- Travel Expenses will be reimbursed at cost of actual coach class air travel, lodging, ground transportation (rental car, cab, Uber) and incidentals (parking, tolls). Personal car mileage reimbursed at the current federal mileage rate at the time of travel.
- Meals & Incidentals – When traveling at BANC’s request, Consultant resources will be reimbursed the current US General Services Administration (GSA) Per Diem rate for Meals and Incidentals for the city in which work is performed. This is anticipated to be primarily Sacramento, CA, Folsom, CA, Redding, CA and Modesto, CA, but could include other locations.
- Receipts – Receipts will be provided for expenses over \$25 except for mileage and the Meals & Incidentals Per Diem, which will be at the current rates described above in lieu of receipts.

Notice to BANC When Consultant Reaches Eighty (80) Percent of Individual Task Fee Total

Consultant shall provide notice to BANC when eighty (80) percent of the total is reached in any task set forth in this Fee Schedule. Such notice may be delivered to the BANC General Manager via email communication as follows: jimshetler@thebanc.org.

Consultant shall use reasonable efforts to confirm receipt of said notice with the BANC General Manager (e.g., request for return email confirmation).

Balancing Authority of Northern California

Agenda Item 6F

1. **Resolution 19-08-12 *Authorization of Additional Amendments to Exhibit C of the Energy Imbalance Market Phase 2 BANC Cost Sharing Agreement with WAPA-SNR* .**
2. **First Amended BANC EIM Phase 2 Gap Analysis and Implementation Funding Agreement for Western Area Power Administration – Sierra Nevada Region’s Participation in the CAISO EIM Market.**
3. **Redline of Exhibit C to Agreement 19-SNR-02253 Scope of Work – EIM Implementation.**

Braun Blaising Smith Wynne, P.C.

Attorneys at Law

8/12/2019

To: BANC Commission

From: BANC Counsel

RE: Authorization of Additional Amendments to Exhibit C of the BANC Cost Sharing Agreement with WAPA-SNR Related to Phase 2 of Energy Imbalance Market

In January of 2019, the Balancing Authority of Northern California (BANC) Commission authorized the General Manager to enter into a contract with Utilicast to provide consulting services related to furthering participation in the Energy Imbalance Market (EIM). As the Commission will recall, “BANC EIM Phase 1” refers to the development and deployment of EIM within the BANC footprint, with the Sacramento Municipal Utility District (SMUD) as the sole participant. “BANC EIM Phase 2” generally refers to the incremental participation by other BANC members and/or the Western Area Power Administration – Sierra Nevada Region (WAPA-SNR).

Following execution of the original BANC EIM Phase 2 contract with Utilicast, WAPA-SNR subsequently determined that it would like to have an EIM Gap Analysis performed, along with the other BANC members. Given the integration of United States Bureau of Reclamation (USBR) generation within WAPA-SNR operations, USBR was also invited to participate in this analysis. Utilicast was therefore asked to provide a revised contract proposal to add WAPA-SNR and USBR resources into the EIM Phase 2 Gap Analysis.

In support of this contract revision, a cost sharing agreement between BANC and WAPA-SNR was drafted to set forth the terms and conditions for WAPA-SNR to reimburse BANC for the costs incurred from adding WAPA-SNR and USBR to the assessment. That contract was approved at the May 2019 BANC Commission meeting.

At the July 2019 Commission meeting, the Commission approved additional revisions to the BANC-WAPA-SNR cost sharing agreement to allow WAPA-SNR to add the costs associated with the potential EIM implementation of WAPA-SNR and USBR into the BANC EIM Entity footprint. These costs are specified in Exhibit C to the BANC-WAPA-SNR cost sharing agreement and generally include support and software costs from SMUD, Utilicast and BBSW support, and WAPA-SNR’s expected share of CAISO implementation costs.

Since July, further budget refinements have been made by WAPA-SNR in discussion with BANC. These additional refinements to the costs contained in Exhibit C are being provided to the Commission in the attached redline. Because they exceed the General Manager’s delegation, we are seeking Commission approval of the changes. No other substantive changes are being made to the body of the agreement approved by the Commission in July. Further refinements to Exhibit C require that BANC and WAPA-SNR develop a work plan to be

approved by WAPA-SNR in writing prior to the commencement of the implementation efforts. We therefore seek approval of the proposed changes to Exhibit C of the BANC-WAPA-SNR cost sharing agreement.

**Balancing Authority of Northern California
Resolution 19-08-12**

**AUTHORIZATION OF ADDITIONAL AMENDMENTS TO EXHIBIT C OF THE ENERGY IMBALANCE
MARKET PHASE 2 BANC COST SHARING AGREEMENT WITH WAPA-SNR**

WHEREAS, the Balancing Authority of Northern California ("BANC") was created by a Joint Powers Agreement ("JPA") to, among other things, acquire, construct, maintain, operate, and finance Projects; and

WHEREAS, BANC has determined using a phased approach through a BANC EIM Project would allow BANC and its members to proceed with participation in the Energy Imbalance Market ("EIM"); and

WHEREAS, BANC has entered into a contract with Utilicast to provide consulting services related to furthering participation in the EIM; and

WHEREAS, the Western Area Power Administration – Sierra Nevada Region ("WAPA-SNR") – is considering participation in EIM Phase 2; and

WHEREAS WAPA-SNR has been added, in addition to the United States Bureau of Reclamation (USBR) due to the integration of generation within WAPA-SNR operations, to the EIM Gap Analysis being performed under the Utilicast agreement via an amendment to the Utilicast agreement; and

WHEREAS, BANC has entered into a cost sharing agreement with WAPA-SNR to set forth the terms and conditions for WAPA-SNR to reimburse BANC for the costs incurred from adding WAPA-SNR and USBR to the Utilicast agreement; and

WHEREAS, the cost sharing agreement between BANC and WAPA-SNR was amended to allow WAPA-SNR to add the costs associated with the potential EIM implementation of WAPA-SNR and USBR into the BANC EIM Entity footprint to the cost sharing agreement; and

WHEREAS, BANC and WAPA-SNR have agreed to revisions to Exhibit C (Scope of Work – EIM Implementation) to that cost sharing agreement that include budget refinements and an additional requirement that BANC and WAPA-SNR develop a work plan to be approved by WAPA-SNR prior to commencement of the implementation efforts; and

WHEREAS the BANC General Manager's delegated contracting authority is limited to \$25,000;

NOW THEREFORE, BE IT RESOLVED that the Commissioners of the Balancing Authority of Northern California hereby approve the revisions to Exhibit C and authorize the General Manager to enter into a revised cost sharing agreement with WAPA-SNR.

**Balancing Authority of Northern California
Resolution 19-08-12**

PASSED AND ADOPTED by the Commissioners of the Balancing Authority of Northern California
this 21st day of August 2019, by the following vote:

		Aye	No	Abstain	Absent
Modesto ID	Greg Salyer				
City of Redding	Dan Beans				
City of Roseville	Michelle Bertolino				
City of Shasta Lake	James Takehara				
SMUD	Arlen Orchard				
TPUD	Paul Hauser				

Dan Beans
Chair

Attest by: C. Anthony Braun
Secretary

**First Amended
BANC EIM Phase 2 Gap Analysis and Implementation Funding Agreement for
Western Area Power Administration – Sierra Nevada Region’s Participation in the
CAISO EIM Market**

This Agreement (“Agreement”) is made this August 21, 2019, between the Balancing Authority of Northern California, (“BANC”); and THE UNITED STATES OF AMERICA, Western Area Power Administration, Department of Energy, Sierra Nevada Region (“WAPA-SNR”), who may be referred to individually as a “Party” or collectively as the “Parties”.

As California and other states in the Western Interconnection have moved to higher renewable portfolio standards and carbon reduction goals, the resulting increase in variable energy resources (“VERs”) has raised the concept of needing more real-time energy management capabilities. This in turn has led to the development of the Energy Imbalance Market (“EIM”) and expansion of the California Independent System Operator Corporation (“CAISO”) Real Time Market.

In response, BANC, certain of its members, and WAPA-SNR, commissioned studies to evaluate the pros and cons of participating in the CAISO EIM markets. Such studies supported the concept of a phased approach to BANC EIM participation, whereby BANC’s largest member, the Sacramento Municipal Utility District (“SMUD”), due to its existing infrastructure and higher net benefits, would participate in Phase 1 and the other BANC members and WAPA-SNR would continue to evaluate their participation after Phase 1.

On August 31, 2016, the BANC Commission approved the phased concept of EIM for BANC and authorized BANC to proceed with becoming an EIM Entity and for SMUD to join as an EIM Participating Resource.

On April 3, 2019, BANC and SMUD commenced operating in the CAISO EIM. Additionally, during this BANC EIM Phase 1 process, certain BANC members, including the Modesto Irrigation District, the City of Redding, and the City of Roseville made decisions to further study their participation in Phase 2 (“EIM Phase 2 BANC Members”). The EIM Phase 2 BANC Members therefore requested that BANC enter an arrangement with Utilicast LLC (“Consultant”) to perform analyses to determine what gaps might exist in order for them to participate along with SMUD in EIM (“EIM Phase 2 Gap Analysis”).

Upon consideration, WAPA-SNR has determined that it, too, would like to have an EIM Gap Analysis performed for its footprint to determine what might be required for it to participate in BANC EIM Phase 2, along with SMUD and the EIM Phase 2 BANC Members.¹

¹ Due to the integrated nature of United States Bureau of Reclamation (Reclamation) generation within the WAPA-SNR portfolio, Reclamation will be consulted in this evaluation; however, Reclamation will be evaluated as part of the WAPA-SNR portfolio.

WAPA-SNR also desires to identify certain costs it may incur should it decide to participate in BANC EIM Phase 2.

The purpose of this Agreement is to set forth the terms and conditions for WAPA-SNR to reimburse BANC for the costs it incurs from the Consultant to perform this EIM Phase 2 Gap Study on WAPA-SNR's behalf and the costs to implement BANC EIM Phase 2, should WAPA-SNR determine to participate.

Upon execution of this Agreement by the Parties, the following provisions will constitute the agreement of the Parties.

1. BANC will conduct an EIM Phase 2 Gap Analysis utilizing Consultant(s). The Consultant(s) shall prepare said EIM Phase 2 Gap Analysis as outlined in the BANC EIM Phase 2 Gap Analysis: Western Area Power Administration – Sierra Nevada Region set forth in Exhibit A ("Scope of Work – Gap Analysis") to this Agreement. WAPA-SNR shall pay BANC WAPA-SNR's share of the study costs in accordance with the Scope of Work and the Fee Schedule set forth in Exhibit B ("Fee Schedule – Gap Analysis") to this Agreement. The Parties will coordinate scope changes and approvals by the Parties of additional expenditures, as necessary. In the event the costs will exceed the amount set forth in the Fee Schedule, BANC must obtain WAPA-SNR's prior written approval. WAPA-SNR will have no obligation to pay for any amounts above what is set forth in the Fee Schedule without its prior written approval.
2. Based upon the EIM Phase 2 Gap Analysis, should WAPA-SNR determine it will proceed with the implementation of BANC EIM Phase 2, it agrees to pay its share of costs in accordance with Exhibit C ("Scope of Work – EIM Implementation").
3. The Parties shall meet on a regular basis to assess the progress of all work described herein.
4. BANC will provide WAPA-SNR with a copy of the final report and associated work product(s).
5. In the case of WAPA-SNR proceeding with BANC EIM Phase 2 implementation, Parties will agree to develop a work plan following the principles contained in Exhibit C of this Agreement, any BANC EIM agreements adopted by the BANC Commission, and the BANC-California Independent System Operator EIM Implementation Agreement for BANC EIM Phase 2.
6. Billing and Payment: BANC shall invoice WAPA-SNR for its share of the costs incurred consistent with this Agreement. Invoices will be detailed in a manner that relates to the cost categories identified in Exhibits B and C. WAPA-SNR shall pay the invoice consistent with the Prompt Payment Act. BANC will invoice WAPA-SNR

after the completion of the EIM study results. BANC will send invoices to
SNRAccountsPayable@wapa.gov.

7. Authorized Representatives: Each Party designates the following representatives who are authorized to act on its behalf with respect to those matters contained in this Agreement, which are the functions and responsibilities of the authorized representatives of the Parties; provided, however, that the respective authorized representatives have no power or authority to alter any of the provisions of this Agreement. Each Party may change the designation of its authorized representatives upon oral notice given to the other, confirmed promptly by written notice.

For BANC:
Balancing Authority of Northern California
Attn: Jim Shetler
P.O. Box 15830
MS D109
Sacramento, CA 95852-1830

For WAPA-SNR:
Western Area Power Administration
Attn: Sonja A. Anderson
114 Parkshore Drive
Folsom, CA 95630

8. Effective Date and Term: This Agreement is effective upon the date written above and shall terminate on December 31, 2021, unless extended by mutual agreement of the Parties in writing.
9. Confidential Information:
 - 9.1 Except as required by law, regulation or order, each Party agrees not to disclose Confidential Information without the other Party's prior written consent. Confidential Information must be marked clearly on each page with a designation such as "CONFIDENTIAL". Confidential Information may be provided by another Party in performance of the Studies. Confidential Information is defined as any information that discloses a Party's trading strategies, any information that will allow the Parties to harm the other Party's financial stability within the CAISO market participation, and any information that discloses a Party's customer information that could harm a Party's customer's financial stability. Confidential Information may be shared among a Party's employees, directors, officers, agents, affiliates, consultants, and legal counsel, (collectively, its "Representatives") where such Representatives have been informed of the confidential nature of the information and the obligations of confidentiality provided in this Agreement; provided that prior to disclosure

to any consultant, such consultants must agree in writing to keep the Confidential Information confidential under terms equivalent to those set forth in this Section 9. As to each Party's respective obligations under this Section 9, Confidential Information does not include any information contained in the Studies or provided by another Party in performance of the Studies which (i) was in that Party's rightful possession prior to its receipt of such information as evidenced by tangible records and without an obligation of confidentiality; (ii) was or becomes generally available to the public other than as a result of a disclosure by that Party in breach of this Agreement; (iii) becomes available to that Party from a source not known by it to be bound by an obligation of confidentiality with respect to such information; or (iv) was or is independently developed by that Party without reliance upon the information.

- 9.2 In the event a Party ("Compelled Party") is required by applicable law, including but not limited to the Freedom of Information Act, judicial or regulatory authority to disclose any Confidential Information, such Compelled Party shall, to the extent practicable and to the extent permitted by law, regulation or legal, governmental or regulatory process, promptly notify the other Parties in writing of the existence, terms, and circumstances surrounding such requirement, so that other Parties may seek a protective order or other appropriate remedy, or waive compliance with the terms of this Agreement regarding such Confidential Information. If the Compelled Party is legally required to disclose any Confidential Information, or if the other Party waives compliance with the terms hereof, the Compelled Party will furnish only that portion of the Confidential Information as it reasonably determines, in consultation with legal counsel, that it is legally required to disclose.
- 9.3 The Parties agree that money damages may not be a sufficient remedy for breach of this Agreement as it relates to the release of Confidential Information, and the non-breaching Parties shall be entitled to seek any available remedy, including, but not limited to, injunctive relief or specific performance.
- 9.4 Notwithstanding anything herein to the contrary, the rights and obligations of the Parties under this Section 9 will survive termination of this Agreement. Upon termination of this Agreement, all Confidential Information shall be either returned or destroyed. A Party is not required to immediately remove or destroy Confidential Information stored in electronic backup, provided the Confidential Information on such electronic back up is not used after the termination of this Agreement and the Confidential Information will be removed or destroyed under a Party's normal record retention policies.

10. Entire Agreement: This Agreement, including its attached Exhibit A (Scope of Work – Gap Analysis), Exhibit B (Fee Schedule – Gap Analysis), and Exhibit C (Scope of

Work – EIM Implementation),² constitutes the entire agreement among the Parties and supersedes all previous communications, representations, or agreements, either oral or written, with respect to the subject matter of this Agreement.

11. Amendments: The Parties may amend this Agreement only in a writing signed by the Parties.
12. Relationship Between the Parties: The Parties are separate entities, and nothing in this Agreement shall be construed to create a joint venture, trust, partnership, or other fiduciary or agency relationship among the Parties. The Parties' obligations under this Agreement are several and not joint.
13. Severability: In the event that a provision of this Agreement, in whole or in part, or the application of such provision, is held invalid by any court or administrative body having jurisdiction, all other provisions of this Agreement and their application will remain in force and effect unless such court or administrative body also holds that the provision is not severable from all other provisions of this Agreement.
14. Governing Law: Federal law shall control the obligations and procedures established by this Agreement.
15. Contingent Upon Appropriations and Authorization: Where activities provided for in this Agreement extend beyond the current fiscal year, continued expenditures by the United States are contingent upon Congress making the necessary appropriations required for the continued performance of the United States' obligations under this Agreement. In case such appropriation is not made, BANC hereby releases WAPA-SNR from its contractual obligations and from all liability due to the failure of Congress to make such appropriation.
16. Covenant Against Contingent Fees: BANC warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by BANC for the purpose of securing business. For breach or violation of this warranty, WAPA-SNR shall have the right to annul this Agreement without liability or in its discretion to deduct from the contract price or consideration the full amount of such commission, percentage, brokerage, or contingent fee.

² Exhibit C will only be invoked if WAPA-SNR determines to proceed with EIM implementation.

17. Contract Work Hours and Safety Standards: This Agreement, to the extent that it is of a character specified in Section 103 of the Contract Work Hours and Safety Standards Act (Act), 40 U.S.C. § 3701, as amended or supplemented, is subject to the provisions of the Act, 40 U.S.C. §§ 3701-3708, as amended or supplemented, and to regulations promulgated by the Secretary of Labor pursuant to the Act.
18. Equal Opportunity Employment Practices: Section 202 of Executive Order No. 11246, 30 Fed. Reg. 12319 (1965), as amended by Executive Order No. 12086, 43 Fed. Reg. 46501 (1978), as amended or supplemented, which provides, among other things, that BANC will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin, is incorporated herein by reference the same as if the specific language had been written into this Agreement, except that Indian Tribes and tribal organizations may apply Indian preference to the extent permitted by Federal law.
19. Use of Convict Labor: BANC agrees not to employ any person undergoing sentence of imprisonment in performing this Agreement except as provided by 18 U.S.C. § 3622(c), as amended or supplemented, and Executive Order No. 11755, 39 Fed. Reg. 779 (1973), as amended or supplemented.
20. Execution by Counterparts: The Parties may execute this Agreement in multiple counterparts, each of which is deemed an original and all of which constitute only one agreement. A Party may deliver an executed counterpart of this Agreement by facsimile or e-mail.

The Parties have executed this Agreement as of the date first written above.

BALANCING AUTHORITY OF NORTHERN CALIFORNIA

By _____
Name: James R. Shetler
General Manager

WESTERN AREA POWER ADMINISTRATION

By _____
Name: Sonja A. Anderson
Senior Vice President and
Sierra Nevada Regional Manager

Exhibit A to Agreement 19-SNR-02253
Scope of Work – Gap Analysis

This Exhibit A provides a description of the analyses and studies covered by the Agreement:

Task #2b: BANC EIM Phase 2 Gap Analysis: Western Area Power Administration – Sierra Nevada Region (WAPA-SNR)

- This task will be completed in the period between May 1, 2019 and August 31, 2019. It will be executed/supported in parallel with Task #1 (BANC/SMUD EIM Phase 1 Post Go-Live Support and Analysis) and #2a (BANC EIM Phase 2 Gap Analysis and Implementation Plan: BANC Members)³.
- This task is estimated to require 280 hours to complete:
 - 240 hours to assess WAPA-SNR systems, staffing, and capabilities against EIM requirements. Roughly 3 weeks on-site plus 3 weeks analysis and write-up.
 - 40 hours to include WAPA-SNR in the larger BANC-EIM 'big picture' participation options. Could include: discussions with other BANC EIM candidates; discussion with WAPA-SNR; discussion with CAISO SMEs; and discussions with SMUD SMEs.
- Consultant will perform an analysis of WAPA-SNR current state versus the desired EIM end-state, across software/telemetry systems, staffing, and business processes.
- Consultant will work with WAPA-SNR staff to clearly identify and define the functional gaps and requirements for EIM.
- Consultant will present identified gaps with options and recommendations for closure. The gap closure options will include making maximum effective use of existing BANC and WAPA-SNR systems (including SMUD's systems), processes, and staff.
- Consultant will deliver an "EIM Phase 2 Gap Analysis Report," which will identify critical gaps and how they can best be addressed in the BANC Phase 2 EIM Implementation Project. The EIM Gap Analysis Report deliverable for WAPA-SNR will include a review of at least the following areas for system and/or business process gaps:
 - Full Network Model
 - Merchant Generation/Trading Base Schedule and EIM Energy Bid Submissions
 - Outage Management
 - EIM Entity Intertie Schedule Creation, Management, and Submission
 - EIM Entity Desk and Situational awareness, Training & Testing
 - Generation Dispatch, EMS, and CAISO ADS system integration

³ Task #2a is detailed in full within the Consulting Services Agreement between BANC and Utilicast, executed May 18, 2019.

- CAISO EIM Metering
- Demand & Variable Energy Resource Forecasting
- EIM Market Settlement and Billing/Finance process
- Open Access Transmission Tariff (OATT) Update for EIM Market Participation
- User/Staff Training and Software System Testing
- ICCP data provision/integration
- Transmission paths for EIM participation
- Existing Contracts
- The final BANC "EIM Phase 2 Gap Analysis Report" will present the EIM implementation gaps for WAPA-SNR and will include a written discussion of the options for bringing multiple BANC Members (inclusive of WAPA-SNR) into a coherent BANC EIM Entity, including a recommendation for project structure.
- Consultant will gather input from interviews with WAPA-SNR management, SMEs, and key personnel.
- Consultant will leverage BANC/SMUD Phase 1 EIM Implementation Project experience and the BANC/SMUD Phase 1 System and Process Gap Analysis Reports delivered in that project.
- Consultant will analyze the BANC BAA 'big picture' options - how best to organize and implement the expanded Phase 2 BANC EIM Entity to take advantage of the BANC scale; maintain accountability for balancing at the sub-BAA level; and produce greatest benefits to EIM members (inclusive of WAPA-SNR).
- Consultant will include WAPA-SNR tasks and goals in the BANC EIM Phase 2 Implementation Plan and Schedule identified above in Task #2a⁴, which incorporates the EIM Gap Analysis Report findings; the CAISO's EIM Implementation Plan/Schedule; any required EIM software additions or extensions; and existing SMUD sub-BAA EIM participation into a coherent, executable plan.

To accommodate this additional scope and meet the overall task timeline, Utilicast may utilize an additional consultant to support the services provided in Tasks #2a and #2b.

⁴ For purposes of this Agreement, Task #2a has not been included in full; however, as referenced here, the specific line item referred to under that task states, "Consultant will deliver a BANC EIM Phase 2 Implementation Plan and Schedule which incorporates the EIM Gap Analysis Report findings; the CAISO's EIM Implementation Plan/Schedule; any required EIM software additions or extensions; and existing SMUD sub-BAA EIM participation into a coherent, executable plan."

Exhibit B to Agreement 19-SNR-02253
Fee Schedule – Gap Analysis

FEE SCHEDULE					
Task	Start	End	Total Hours	Rate	Total \$
Task #2b: BANC EIM Phase 2 Gap Analysis: WAPA-SNR	5/1/2019	8/31/2019	280	\$215/hr	\$60,200

Exhibit C to Agreement 19-SNR-02253
Scope of Work – EIM Implementation

This Exhibit C provides a summary description of the EIM implementation efforts that will be conducted for Phase 2 should WAPA-SNR determine to proceed with implementation. The details of EIM Phase 2 Implementation are provided in the EIM Phase 2 Implementation Plan that will be approved by the BANC Commission. Such details will be set forth in a more definitive work plan between BANC and WAPA-SNR, if WAPA-SNR decides to proceed forward with implementation. The following summarizes the breakdown of major EIM Implementation activities and estimated WAPA-SNR costs for each over the ~19 month implementation schedule from September 2019 – March 2021:

• SMUD Support	\$439,550
○ PM Support @ 0.4 FTE	
○ OATI Software Upgrade	
○ Settlement Software Upgrade	
○ Miscellaneous labor support @ 3.0 FTE	
• Utilicast Project Oversight	\$750,000
• CAISO Fees	\$60,000
• Legal Support (BBSW)	\$60,000
• <u>Phase 1 Reimbursement</u>	<u>\$447,000</u>
TOTAL	\$1,756,550
• <u>10% Contingency</u>	<u>\$176,000</u>
TOTAL + Contingency	\$1,932,550

In the event WAPA-SNR determines to proceed with implementation, WAPA-SNR shall notify BANC and WAPA-SNR and BANC, in coordination with the other EIM Phase 2 Participants, shall develop a work plan which includes estimated costs for each implementation activity. If the Parties agree on the work plan, WAPA-SNR shall provide written notice to proceed to BANC. After receiving the written notice to proceed, BANC may begin activities under the work plan and this Exhibit C, to the extent the activities are new and not reflective of costs previously agreed upon and approved by the BANC Commission prior to the execution of this Agreement.

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Exhibit C to AgreementContract 19-SNR-02253
Scope of Work – EIM Implementation

This Exhibit C provides a summary description of the EIM implementation efforts that will be conducted for Phase 2 should WAPA-SNR determine to proceed with implementation. The details of EIM Phase 2 Implementation are provided in the EIM Phase 2 Implementation Plan that will be approved by the BANC Commission. Such details will be set forth in a more definitive work plan between BANC and WAPA-SNR, if WAPA-SNR decides to proceed forward with implementation. The following summarizes the breakdown of major EIM Implementation activities and estimated WAPA-SNR costs for each over the ~19 month implementation schedule from September 2019 – March 2021:

• SMUD Support	<u>\$439,550</u>
\$385,000	
○ PM Support @ 0.4 FTE	
○ OATI Software Upgrade	
○ Settlement Software Upgrade	
○ Miscellaneous labor support @ 3.0 FTE	
• Utilicast Project Oversight	<u>\$750,000</u>
• CAISO Fees	\$60,000
• Legal Support (BBSW)	<u>\$602,000</u>
• Phase 1 Reimbursement	<u>\$447,471,000</u>
TOTAL	<u>\$1,756,550</u>
• 10% Contingency	<u>\$176,444,000</u>
TOTAL + Contingency	<u>\$1,932,550</u>

In the event WAPA-SNR determines to proceed with implementation, WAPA-SNR shall notify BANC and WAPA-SNR and BANC, in coordination with the other EIM Phase 2 Participants, shall develop a work plan which includes estimated costs for each implementation activity. If the Parties agree on the work plan, WAPA-SNR shall provide written notice to proceed to BANC. After receiving the written notice to proceed, BANC may begin activities under the work plan and this Exhibit C, to the extent the activities are new and not reflective of costs previously agreed upon and approved by the BANC Commission prior to the execution of this Agreement.

bcc: N0000, N0010, N8000, N6217, RF OF
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