

Balancing Authority of Northern California

Regular Meeting of the Commissioners of BANC

2:00 P.M.

Wednesday, October 28, 2020

Telephonic Meeting Only

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 **October 28, 2020 at 2:00 p.m. The meeting will be telephonic only.**

The following information is being provided as the forum by which members of the public may observe the meeting and offer public comment:

Phone number: 1-408-418-9388

Meeting number (access code): 126 481 8283

WebEx Meeting Link:

<https://braunblaisingsmithwynne.my.webex.com/braunblaisingsmithwynne.my/j.php?MTID=m1232b377322262b4321faf428c4c472a>

AGENDA

- 1 Call to Order.**
- 2 Matters subsequent to posting the Agenda.**
- 3 Public Comment** – any member of the public may address the Commissioners concerning any matter on the agenda.
- 4 Consent Agenda.**
 - A. Minutes of the Regular Commission Meeting & Strategic Planning Session held on September 30, 2020.
 - B. BANC Operator Report (September).
 - C. Compliance Officer Report (October).
 - D. PC Committee Chair Report (October).
 - E. General Manager’s Report and Strategic Initiatives Update.
- 5 Regular Agenda Items – Discussion and Possible Action.**
 - A. Heatwave Update.
 - B. EIM/EDAM Update.
 - i. Consider and Possibly Approve Resolution 20-10-20 *Approval of Balancing Authority of Northern California Energy Imbalance Market Business Practices for BANC EIM Phase 2 Operations.*
 - C. Consider and Possibly Approve Resolution 20-10-21 *Acknowledgement and Acceptance of BANC PC Area 2020 Transmission Planning Assessment.*
 - D. Strategic Planning Issues.
 - i. Discuss Draft Business Case for BANC OASIS.
 - ii. Discuss Draft 2020-21 Strategic Initiatives.
- 6 Adjournment.**

Accessible Public Meetings - Upon request, BANC will provide written agenda materials in appropriate alternative formats, or disability-related modification or accommodation, including auxiliary aids or services, to enable individuals with disabilities to participate in public meetings. Please send a written request, including your name, mailing address, phone number and brief description of the requested materials and preferred alternative format or auxiliary aid or service at least 3 days before the meeting. Requests should be sent to: Kris Kirkegaard, 555 Capitol Mall, Suite 570, Sacramento, CA 95814 or to kirkegaard@braunlegal.com.

Balancing Authority of Northern California

Consent Agenda Items

- A. Minutes of the September 30, 2020 BANC Regular Meeting.**
- B. BANC Operator Report (September).**
- C. Compliance Officer Report (October).**
- D. PC Committee Chair Report (October).**
- E. General Manager's Report and Strategic Initiatives Update.**

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

September 30, 2020

On this date, a Regular Meeting of the Commissioners of the Balancing Authority of Northern California (BANC) and Strategic Planning Session was held telephonically.

Representatives Present:

Member Agency	Commissioner
Modesto Irrigation District (MID)	Martin Caballero
City of Redding	Dan Beans, Chair
City of Roseville	Michelle Bertolino
Sacramento Municipal Utility District (SMUD)	Arlen Orchard
City of Shasta Lake	James Takehara
Trinity Public Utilities District (TPUD)	Paul Hauser

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

1. Call to Order: Mr. Shetler reviewed attendance and confirmed that a quorum was present. Chair Beans called the meeting to order at 2:01 p.m.
2. Matters Subsequent to Posting the Agenda: Mr. Braun informed the Commission that closed session had been removed from the agenda due to a current lack of incremental information.
3. Public Comment: Chair Beans invited comments from the public and none were given.
4. Consent Agenda: Mr. Orchard moved, Ms. Bertolino seconded, and the participating Commissioners unanimously approved the Consent Agenda items comprised of: (A) Minutes of the Regular Commission Meeting & Strategic Planning Session held on August 26, 2020; (B) BANC Operator Report for August; (C) Compliance Officer Report for September; (D) PC Committee Chair Report for September; and (E) General Manager's Report and Strategic Initiatives Update.
5. Regular Agenda Items – Discussion and Possible Action:
 - A. Mr. Shetler informed the Commission that Dan Beans had completed his first annual term as Chairperson, as he was appointed in July of 2019. As the JPA allows for two consecutive terms per the JPA, Ms. Bertolino nominated Dan Beans for a second term, Mr. Orchard seconded the nomination. Mr. Braun clarified that no additional formal action was required, as Mr. Beans was eligible to continue in his position as BANC Chairperson for a second term.

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BALANCING AUTHORITY OF NORTHERN CALIFORNIA (BANC)

- B. Mr. Hauser moved, Ms. Bertolino seconded, and the Commissioners voted unanimously in favor of Resolution 20-09-18 *Resolution Commending and Thanking Arlen Orchard for His Service to the Balancing Authority of Northern California*.
- C. Mr. Braun explained that, after a biennial review of BANC's Conflict of Interest Code, it has been determined that minor changes are required, that authorization to so inform the Fair Political Practices Commission was needed, and that BANC management and counsel would bring back a revised code for Commission consideration at a later date. Mr. Hauser moved, Mr. Bertolino seconded, and a roll call vote was taken. All Commissioners voted unanimously in favor of Resolution 20-09-21 *Authorization to Notify the Fair Political Practices Commission of BANC's Intent to Amend its Conflict of Interest Code*.
- D. Mr. Shetler provided an update with respect to the August/Labor Day Weekend heatwave. BANC was able to get through the heatwave without load shed or rotating outages within the BANC footprint. In addition, BANC was able to provide support to CAISO. Finally, he thanked BANC members for their responsiveness to BANC's request for public support for conservation. Some concerns have been raised, however, and there is a resulting desire to further understand CAISO's export curtailment process. A 'lessons learned' session is planned for the October Resource Committee.
- E. Mr. Shetler noted that SMUD continues to see benefits from EIM participation. Regarding EIM Phase 2, the go-live date is scheduled for March 25, 2020, concurrent with TID. The remaining three entities scheduled to begin EIM participation will go live on April 1, 2020. All major activities are generally on track. One area of concern is the Resource Sufficiency/Flex Ramp Test. Ongoing discussions with respect to this issue include a 6-month Grace Period to fully define the issue and the development of options around a possible enabling agreement to share flex resources among BANC participants. It is likely that a policy decision from the Commission will be required at a future point in time. One other challenge relates to the collateral posting required by CAISO and WAPA's legal ability to do so. A potential work-around is in process, and if not otherwise resolved, WAPA's share will need to be reallocated among the remaining participants.

The EIM Business Practices and Settlements Allocation manual are expected to be brought to an upcoming Commission meeting for action. In addition, action on metering policy, risk policy, an amendment to the BANC/SMUD EIM Services Agreement and amendments to individual entity EIM Participation Agreements are anticipated before the end of the year.

The CAISO EDAM stakeholder initiative has seen some slippage to its schedule. Comments on Bundle 1 have been delayed to November 12th as a result of COVID impacts and the need to understand potential impacts related to the August and Labor Day weekend heatwave events. Delays to EDAM implementation are expected, with the go-live date likely pushed to the 2024 timeframe.

Mr. Braun provided a Governance/GRC update. A revised straw proposal is expected late November/early December, although this date may slip.

Mr. Shetler briefly reviewed key points related to the draft business case for a BANC OASIS, which was first discussed at the August Strategic Planning meeting. He highlighted potential benefits, which were outlined on pp. 25-26 of the packet, potential impacts and risks, which start on p. 29, and the high-level cost summary and timelines,

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BALANCING AUTHORITY OF NORTHERN CALIFORNIA (BANC)

found on p. 32. The informal recommendation was to proceed with a detailed cost/benefit analysis for future Commission evaluation, include as a 2021 strategic initiative and provide a budget estimate for 2021; no action was requested of the Commission at this time. The Commissioners briefly discussed the impact of layoffs and whether any 'clawback' provisions existed, noting that this was likely a question for their own internal general counsel, in addition to potential impacts to WAPA. Mr. Shetler committed to additional follow-up with WAPA and Silicon Valley Power, in addition to coming back to the Commission with more information before the end of the year.

- F. Mr. Shetler stated that draft 2020/2021 Strategic Planning Issues were included in the packet and requested that any comments or questions be directed to him, as he intends to seek approval at the next meeting. In the 2019/20 Initiatives, an item related to development of a GM Transition Plan was included. At this time, given the current GM commitment to continue supporting BANC through EDAM development, it was suggested that a transition plan has been developed but can be filed for now and updated as appropriate at a future point in time.

The Commission adjourned at 2:57 p.m.

Minutes approved on October 28, 2020.

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 September 2020

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
 - 5 of 30 days with instances of USF mitigation procedure utilized
 - 4 days on Path 66
 - No operational impact on BANC
- BAAL Operation:
 - Maximum duration of BAAL exceedance: 13 Minutes
 - Number of BAAL exceedance >10 minutes: 1
 - BAAL violation (BAAL exceedance >30 minutes): None
- Frequency Response (FR) Performance – Quarterly Metric:
 - 2020 Frequency Response Obligation (FRO): -14.7 MW/0.1 Hz
 - Q2 Frequency Response Measure (FRM): -23.0 MW/0.1 Hz
 - Q2 Number of Under-Performed Events: 1 out of 4
 - Q1~Q2 Frequency Response Measure (FRM): -29.4 MW/0.1 Hz
 - Q1~Q2 Number of Under-Performed Events: 1 out of 8

Monthly Notes:

- No additional notes or impacts for September 2020

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

October 2020

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.
- The next periodic self-log submittal deadline is January 31st.

BANC MCRC:

- The next BANC MCRC meeting is scheduled to be held at 10:00 AM on Monday, October 26, 2020 via webinar.

PC Committee Chair Report

BANC Commission Meeting

October 2020

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 continue to work toward demonstrating compliance with PC-related NERC reliability standards:
 - FAC-010-3 System Operating Limits Methodology for the Planning Horizon – SMUD staff met with MID staff to discuss the upcoming change to the methodology. Updated methodology for PC Participant review was sent out on October 1st. Comments were due by October 15th. FAC-010-3 was finalized and notification was sent out on October 15th.
 - FAC-013-2 Near-Term Transfer Capability for the Planning Horizon – Comments and updates to the final draft were incorporated, and the finalized report was sent out on October 9th.
 - FAC-014-2 Establish and Communicate SOLs – Staff met with MID to discuss the application of the BANC PC FAC-010-3 methodology for BANC PC FAC-014 assessment. Comments and updates to the draft are being processed, and the updated final draft report will be sent out this month for PC Participant review and comment.
 - PRC-012-2 Remedial Action Schemes – Staff is currently performing a technical evaluation of each RAS at SMUD and Roseville areas required by the NERC standard once every five full calendar years. The Effective Date of PRC-012-2 is January 1, 2021.
 - TPL-001-4 - Transmission System Planning Performance – The finalized report was sent to BANC PC committee members who have approved the report. Will seek BANC Commission acceptance at the October meeting.

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

	PC Standard	Estimated % Complete	Notes
1	FAC-002-2 Interconnection Studies	70%	There are 3 materially modifying transmission facilities projects within BANC area this year.
2	FAC-010-3 SOL Methodology for Planning Horizon	100%	An updated draft for PC participant review was sent out for review on 10/1/2020. Comments was due by 10/15/2020.
3	FAC-013-2 Transfer Capability for Near-Term Planning Horizon	100%	Comments and updates to the final draft were processed and the finalized report document was sent out on 10/9/2020.
4	FAC-014-2 Establish and Communicate SOLs	90%	Comments and updates to the draft are being processed, and the updated final draft report will be sent out this month for PC Participant review and comment.
5	IRO-017-1 Outage Coordination		Will send out 2020 annual assessment report in October following BANC Commission acceptance.
6	MOD-031-2 Demand and Energy Data	100%	2020 Loads and Resources supplement Data Request III sent to WECC end of March.
7	MOD-032-1 Data for Power System Modeling & Analysis		Ongoing activity.
8	MOD-033-1 System Model Validation		Data request received August, 2020.
9	PRC-006-3 Underfrequency Load Shedding	100%	BANC PC Participant data was submitted to the WECC UFLSWG SILTP group. A revised study report from the latest study cycle is expected to be available soon from WECC UFLSWG.
10	PRC-010-2 Undervoltage Load Shedding	100%	Study has been completed. The report was finalized on 12/30/19.

	PC Standard	Estimated % Complete	Notes
11	PRC-012-2 Remedial Action Schemes	70%	New standard to be effective 1/1/2021. Study Plan was finalized on 4/10/2020. Working on performing studies for each RAS scheme.
12	PRC-023-4 Transmission Relay Loadability	100%	Finalized report was sent to PC Participants on 7/31/2020.
13	PRC-026-1 Relay Performance During Stable Power Swings	100%	Report will be finalized after WECC issues the new 2020 WECC Underfrequency Load Shedding Program Assessment Report to be incorporated into the BANC 2020 PRC-026-1 report.
14	TPL-001-4 Transmission System Planning Performance	95%	BANC PC Committee members have approved.
15	TPL-007-4 R1 GMD	100%	<p>The draft Agreement was sent to Members to review on 5/31/2020. Conference call on 6/4/2020 with the BANC's members to discuss the changes in Vulnerabilities Assessment Responsibilities Agreement for the new version of TPL-007-4.</p> <p>The final TPL-007-4 R1 "the Vulnerabilities Assessment Responsibilities Agreement" has been approved and posted in the BANC Members Only website on 6/15/2020.</p>

GM Report

BANC Commission Meeting

October 28, 2020

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, 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. On April 1, 2020, both SRP and Seattle City Light went live with EIM. Feedback is that the transitions were smooth with no major issues. Both LADWP and BANC – Phase 2 are on track for go-live 2021, with LADWP on 4/1/21 and BANC – Phase 2 on 3/25/21. We have also been using this forum to discuss potential 2020 heat wave impacts on EIM and EDAM design.

POU Western Markets Initiative

BANC continues to participate in this effort, which is being coordinated by APPA. The group will be stepping back and will take on a less formal role with occasional update conference calls. Our last meeting was a webinar on August 11th which focused on the latest issues with EIM, EDAM, and the WEIS proposed by SPP.

Coronavirus Restrictions

With the increased restrictions on public gatherings and travel, BANC has moved to remote meeting attendance, both for our own internal member meetings as well as outside meetings for the foreseeable future. We will maintain this approach until public health authorities advise the restrictions can be relaxed. In addition, the BANC BA Operator (SMUD) has instituted measures to reduce coronavirus risks, including stay at home for most employees with only essential staff working at the offices.

August and Labor Day Weekend Heat Wave

The Joint Agencies (CPUC, CEC, and CAISO) have issued their root cause report from the August 2020 heat wave incidents. Their conclusion is that there was no single root cause for the rotating outages, but rather several contributing factors, including:

1. The climate change-induced extreme heat storm across the western U.S. resulted in the demand for electricity exceeding the existing electricity resource planning targets. The existing resource planning processes are not designed to fully address an extreme heat storm like the one experienced in mid-August.
2. In transitioning to a reliable, clean and affordable resource mix, resource planning targets have not kept pace to lead to sufficient resources that can be relied upon to meet demand in the early evening hours. This makes balancing demand and supply more challenging. These challenges were amplified by the extreme heat storm.
3. Some practices in the day-ahead energy market exacerbated the supply challenges under highly stressed conditions.

There is also a recommendation that the agencies conduct a state-wide summer assessment on resource adequacy for 2021. It is not clear how this will impact the POU's in California. Staff will be reaching out to the other POU BAs and the CAISO on how we should proceed. In addition, BANC efforts will be focused through the Resource Committee.

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. CAISO quarterly benefit reports continue to show that BANC/SMUD is seeing benefits from the EIM participation, with the 2nd Quarter 2020 report showing gross benefits of \$9.17 million.

With respect to BANC EIM Phase 2 effort, staff is coordinating with the Phase 2 participants and Utilicast to move forward with implementation. We have reached a tentative agreement on the use of WAPA transmission for EIM. Discussions continue on metering, Resource Sufficiency/Flex Ramp test approach, CAISO Department of Market Monitoring default energy bids, individual participant software testing, and training. We have worked with CAISO to resolve some of the unique issues associated with the BANC structure, which currently all seem to meet our needs. In addition, we have finalized an initial draft BANC EIM Business Practices that WAPA has referenced as part of their current OATT and Rates processes. We have completed the legal review of the Business Practices and are looking to bring the final version back to the EIM Committee for final review and to the Commission for

approval in October. The settlements allocation manual is in final review and editing and will be brought back to the EIM Committee for final review and to the Commission for approval in November.

The issue of how to handle the Resource Sufficiency test (Balance and Flex Ramp tests) for EIM Phase 2 is being discussed by Staff at the EIM Committee level. The goal is to have an approach that can be brought to the Commission at its November meeting.

EDAM Participation

The EDAM Feasibility Assessment is complete. The CAISO issued an initial EDAM issues white paper on October 10, 2019 and held a stakeholder webinar on October 17. The CAISO requested comments on the issues white paper by November 22, with the EDAM Entities filing joint comments and BANC also filing supporting comments. It is expected that the CAISO will use 2020 and 2021 to conduct the formal stakeholder process, including development of a straw proposal for EDAM, followed by tariff filings at FERC. The CAISO is currently estimating that the earliest EDAM implementation would be in 2023 with a go live in spring 2024. The EDAM Entities (including BANC) were active participants in the first EDAM public stakeholder workshop on February 11-12, 2020. Stakeholder comments have been submitted and the EDAM Entities are in the process of digesting the comments to determine our approach going forward. The CAISO issued the initial Bundle 1 straw proposal on July 20th. The CAISO also held a stakeholder meeting on July 27th & 29th, which BANC attended. Comments were originally due on September 10th but have been delayed twice due to both the COVID-19 impacts and as a result of the August heat wave issues. The current due date is now November 12. The EIM Entities are in the process of developing comments on the straw proposal. The EIM Entities also have continued to do outreach to the CA PTOs. In parallel, the EIM Entities are evaluating the impacts seen on EIM market operations from the August heat wave to see how these might impact EDAM design. We expect to be kicking off more detailed discussions both internally and with the CAISO to understand the heat wave impacts, what changes to EIM might be required, and how these might impact an EDAM design.

The EIM Governance Review Committee (GRC) issued its straw proposal on July 31, 2020. The recommendations are consistent with positions that BANC has supported in both the EIM group and POU group. BANC joined in comments filed on August 28 by both the EIM Entities and POU group, which were mainly supportive of the GRC proposal.

WAPA:

Market Engagement

We have included WAPA-SNR in our EIM Phase 2 planning efforts and WAPA-SNR is an active participant. As noted above, the main discussions with WAPA-SNR have

been around the approach for use of WAPA-SNR transmission in EIM and how the deviation band will be handled in EIM. Also, as noted above, we are working proactively with WAPA-SNR to assist them in their OATT and Rates processes for EIM.

WAPA-SNR and BANC have initiated routine calls with NCPA to help facilitate discussions on joint issues.

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. The SLTP developers (DATC) have completed the open season on the additional capacity for the project. We will keep the Commission informed as more information becomes available.

WECC

WECC Board Meetings

The last MAC and Board meetings were held on September 10-11, 2020, via webinar rather than in person due to COVID-19 concerns. This was also WECC's Annual Meeting. I was unable to attend due to conflicts on my calendar, but I provided BANC's vote on Board and MAC elections in advance.

In discussions with WECC, they have stated that they are initiating an event assessment of the recent August heat wave and CAISO load shedding incidents, with an initial assessment report due in December 2020.

NWPP

Resource Adequacy Project

In light of the concerns raised last year regarding resource adequacy (RA) for the PNW entities, NWPP initiated a formal project to develop an RA program for the region. As a NWPP member, BANC has been providing funding for the initial phases of this effort. NWPP updated the participants on June 25th regarding the scope, schedule, and budget for the next phase of this effort (Phase 2B). Staff continues to engage in the Phase 2B effort, with active participation on the project design working groups and steering committee.

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 announcement that the project will be downsized from two to one tunnel, CDWR has withdrawn the current applications and will be submitting revised environmental documentation. SMUD reported that CDWR has approached them regarding the revised environmental review, which will be performed during 2020.

SB100 Implementation

As part of SB100, the CPUC, CEC, and CARB (Joint Agencies) are required to collaborate with the California BAs to develop a quadrennial report on the status of achieving the goals of SB100. The initial report is due 1/1/21. The four POU BAs (BANC, IID, LADWP, and TID) are collaborating on positions and responses. In addition, we have done outreach to the CAISO, Pacificorp, NV Energy, and WAPA BA’s in California to determine if there is benefit to all BAs coordinating on this effort. BANC filed comments with the agencies on 12/2/19. BANC stated that it supported the long-term goals of the State regarding GHG reductions. However, we also cautioned that the transition from the current mix of resources to the long-term resource mix needs to be done in an orderly manner to ensure that grid reliability and affordability can be maintained for the benefit of the end-use consumers. We also supported a “net zero” carbon approach to meeting the goals, at least on an interim basis. I attended the SB100 workshop on 2/24/2020 and participated on a BA reliability panel. Subsequent to the workshop, staff worked with the other POU BAs (LADWP, IID, and TID) regarding comments to the Joint Agencies. The Joint Agencies held an outreach meeting with the California BAs on August 25 to brief the BAs on the results of the Agencies initial analysis. This was followed by a public workshop on September 2. BANC coordinated with the POU BAs via CMUA and filed joint comments on September 15. We are now waiting on the draft report so that we can review and comment.

Western Electricity Industry Leaders (WEIL) Group

The WEIL group has done outreach to the Western Governors’ Association with a request to hold discussions on how to better coordinate electricity policy in the West. Based upon these discussions, the Western Governors and WEIL have agreed to make use of the Center for a New Energy Economy (CNEE), which is headed by former CO Governor Ritter, to facilitate further dialogue. The group has agreed to focus discussions around three topics:

- State clean electricity goals and GHG accounting
- Reliability/resource adequacy
- Transmission planning and development.

The goal is to have a set of actionable recommendations that can be presented to the December Western Governors meeting. Staff is monitoring these discussions and is actively participating in the reliability/RA and transmission planning and development work groups.

Due to the retirement of the CAISO CEO and the departure of the BPA Administrator, WEIL finds itself without leadership. BANC's General Manager was requested to provide interim coordination of the upcoming October meeting of WEIL, where a discussion of how to fill the leadership void will be discussed. At this meeting the WEIL group requested the BANC General Manager to continue providing coordination for the next year.

Strategic Initiatives

An update of the 2019/2020 Strategic Initiatives and a draft of the 2020/2021 Strategic Initiatives are attached to this report.

BANC 2019/2020 Strategic Plan - Routine Initiatives - October 2020 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	Ongoing	Draft plan discussed with Commission. Finalized at Sept. Meeting
3 Medium		Organizational Issues: ~ Develop BANC procedures & processes as appropriate	Jim Shetler/BBSW	4th Qtr. 2020	Draft of business practices under final review. Ops Guidelines being drafted.
4 Medium	OUTREACH	Engage in industry forums (WECC, Peak, NWPPA, etc.)	Jim Shetler	Ongoing	Attend RC West, WECC Board, WEIL, & NWPP Exec. Forum meetings
5 Medium		Coordinate with other POU BAs (Ca and regionally)	Jim Shetler	Ongoing	Coordinating with SCL, SRP, LADWP, TP, & TID on EIM
6 Medium		Outreach to regulatory and legislative bodies on key issues	Jim Shetler/BBSW	Ongoing as Necessary	Participating in WEIL group outreach to West governors
7 Medium	ASSETS	Evaluate joint options for resource needs for BA	Resource Committee	4th Qtr. 2020	On hold for this year
8 Low	MEMBER SERVICES	Identify and outreach to potential new BANC members	Jim Shetler	Ongoing	Discussions with WAPA-SNR

BANC 2019/2020 Strategic Plan - Focused Initiatives - October 2020 Update

No./Priority	Focus Area	Initiative	Responsibility	Target Due Date	Status
9 High	INDEPENDENCE	Manage implementation of EIM Phase 2 participation effort	Jim Shetler/SMUD	3/25/21	Routine EIM Committee meetings being held
10 High		Manage EIM Phase 1	Jim Shetler/SMUD	Ongoing	2nd Qtr. CAISO benefits show BANC/SMUD = \$9.17M
11 High		EDAM evaluation effort ~ CAISO Stakeholder Process ~ CAISO Tariff Development	Jim Shetler/BBSW Jim Shetler/BBSW	3rd Qtr. 2020 1st Qtr. 2021	Coordinating with EDAM SC
12 Medium	OUTREACH	Evaluate opportunities to engage other entities in market development	Jim Shetler	Ongoing	Coordinating with SCL, SRP, LADWP, TID, & Tacoma
13 Medium		Regional Policy Issues: Monitor/ weigh-in where appropriate	Jim Shetler/Commission	Ongoing	Participating in WEIL group outreach to West governors
14 High		Regionalization: ~Monitor CAISO GRC effort	Jim Shetler/BBSW	3rd Qtr. 2020	Filed supporting comments on straw proposal
15 High		Coordinate with BAs on SB100 collaboration effort	Jim Shetler/BBSW	12/31/20	Participated in 9/2/20 work shop. Filed comments on 9/15/20.
16 Medium	ASSETS	Evaluate resource criteria for BANC long-term needs	Jim S./Res. Com.	4th Qtr. 2020	Holding discussions at Resource Committee. On hold for this year.
17 Medium	MEMBER SERVICES	Evaluate possible support to participants for EIM	Jim S.	4th Qtr. 2020	Finalized software EIM procurement options

Balancing Authority of Northern California

Agenda Item 5B

1. **Balancing Authority of Northern California Energy Imbalance Market Business Practices.**
2. ***Resolution 20-10-20 Approval of Balancing Authority of Northern California Energy Imbalance Market Business Practices for BANC EIM Phase 2 Operations.***

Braun Blaising Smith Wynne, P.C.

Attorneys at Law

10/20/2020

To: BANC Commission
From: BANC Counsel
RE: Approval of BANC EIM Phase 2 Business Practices

BANC staff and Counsel are seeking Commission approval of the attached Balancing Authority of Northern California (BANC) Energy Imbalance Market (EIM) Business Practices (BP) for BANC EIM Phase 2 operations. The BP is intended to provide detailed descriptions of the business relationship between the EIM Entity/BANC, EIM Participants, and BANC EIM Transmission Providers within the EIM Entity footprint. More specifically, the BP addresses day-to-day business activities, roles, and responsibilities related to BANC EIM operations. The BP represents a significant collaborative effort between BANC, the Western Area Power Administration – Sierra Nevada Region (WAPA), and BANC members through the EIM Committee and the BANC Legal Committee.

For most EIM Entities, a portion of what is contained in the BP is provided in their Open Access Transmission Tariffs (OATT). For BANC, which is not a transmission service provider (TSP) and therefore does not have an OATT, we were required to make a distinction between those functions retained by the EIM Entity Balancing Authority Area (BAA) and that of the TSP, leaving those TSP functions to be addressed more specifically in the TSP OATTs and/or other transmission arrangements. Under Phase 1 of EIM within BANC, this was unnecessary, since the only participant was the Sacramento Municipal Utility District (SMUD), which had its own OATT. However, with respect to Phase 2, it is necessary to provide a clear set of business rules for each EIM Participant.¹ The BP provides these rules and is intended to work in concert with the provisions of the BANC agreements implementing EIM in the BANC BAA, OATTs for TSPs inside of BANC,² other transmission arrangements internal to BANC, and the California Independent System Operator (CAISO)/Market Operator (MO) Tariff.

The BP addresses three key constituent roles: the EIM Entity (BP Section 5.1); the EIM Participant (BP Section 5.2); and, the BANC EIM Transmission Provider (BP Section 5.3). The first two are pretty clearly understood. BANC is the EIM Entity and all of the entities inside of the EIM Entity footprint that have signed the EIM Participation Agreement are EIM Participants. The BANC EIM Transmission Provider is:

[A]n entity which provides transmission services to an EIM Participant either through an OATT or an Existing Agreement, or other contractual arrangement that facilitates the use

¹ An EIM Participant is an entity which has entered an EIM Participation Agreement with BANC. For Phase 2, EIM Participants are the Cities of Redding and Roseville, the Modesto Irrigation District, SMUD and WAPA.

² At EIM Phase 2 start-up, the only OATTs of EIM Participants are those of SMUD and WAPA.

of an EIM Participant's transmission system for EIM transactions. A BANC EIM Transmission Provider may or may not be an EIM Participant.

Currently, there are two BANC EIM Transmission Providers, SMUD and WAPA. This could expand over time.

It is recognized that the business activities, roles, and responsibilities related to BANC EIM operations will evolve as the EIM Entity and EIM Participants gain market experience and the market changes over time. Therefore, the BP must also be able to adapt and change as necessary to address either unanticipated conditions or other circumstances. Thus, ease of amendment and revision is intended, subject to the amendment process adopted in Section 14:

This BP, including its Attachments and Appendices, shall be initially coordinated with the BANC EIM Transmission Providers (which are also EIM Participants) and approved by the Commission. Subsequent amendments to this BP, Attachments and Appendices, may be made by the General Manager upon the unanimous concurrence by the EIM Committee, unless specified otherwise in the individual Attachments and/or Appendices. Such amendments and changes shall be coordinated with BANC EIM Transmission Providers to ensure alignment with Applicable OATTs, and contractual arrangements for use of an EIM Participant's transmission system, as reasonable, and to resolve any disputes between the EIM Entity and BANC EIM Transmission Providers that may arise from proposed changes to this BP. Absent unanimous concurrence by the EIM Committee with the General Manager, amendments to this BP must be approved by the Commission. Amendments and changes to this BP shall be reflected in updates to the Version History set forth in Appendix 2 (Version History) in accordance with the process prescribed in that appendix. (Emphasis added.)

Of note, while some technical elements of the BP will not require Commission approval, elements directly related to cost allocation, unless extremely minor, will require such approval. For example, Attachment A, which is still being developed and will likely be available for Commission review in November or December, relates to the detailed settlement of all EIM payments and charges. While something of a stand-alone document, this BANC EIM Settlements Allocation Manual (Manual) will be incorporated into the BP. As noted, the Manual, which is undergoing final review, will come to the Commission for approval at a future meeting.

One significant policy matter omitted from the BP was the decision, through months of deliberation with WAPA and other EIM Participants, to exclude the ability of so-called "EIM Non-Participating Resources" (NPRs) from existing with the BANC EIM footprint. NPRs are entities without any direct relationship with the CAISO/MO. They become solely the settlement and scheduling responsibility of the EIM Entity. For example, this could be a third party merchant wind plant within the BANC BAA. The concern is that an NPR could create a significant imbalance liability to EIM Participants with little to no way to control that risk. It was determined that all resources within BANC should be EIM Participating Resources (PRs), to ensure cost accountability. To the extent an EIM Participant does not want to bid that PR into the EIM, it can simply choose not to do so. Thus, the NPR option was deemed as an unnecessary, complex and risky option to allow within BANC. Moreover, there is no perceived

need to allow for NPRs. This could always change in the future, but that issue can be addressed should it become necessary.

Another issue addressed in the BP involves the addition of new PRs. This could be either by the addition of a PR by an existing EIM Participant or a third party seeking to participate in EIM within BANC. This is directly addressed in BP Section 4.3. The BP requires that any new “third party” PR demonstrate a level of certainty through a BANC PR application process prior to allowing that entity to enter into an EIM Participation Agreement, which would give them a seat at the table on the EIM Committee. Upon approval of the application, that prospective PR would be able to negotiate an EIM Participation Agreement. However, any prospective new EIM Participant, as a signatory to the EIM Participation Agreement, will require the approval of the Commission.

The BP also contains extensive dispute resolution provisions in Section 12. These can arise in a variety of combinations, including between the EIM Entity/BANC and EIM Participants and/or BANC EIM Transmission Provider. In this case, disputes will be addressed in accordance with the dispute resolution provisions in Section 14 of the EIM Participation Agreement, which requires informal settlement “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,” followed by mediation and, if that too fails, “any and all rights in a court of law or equity to enforce its rights under this Agreement.”

Of final note, there are many references in the BP to the development of guidelines and/or protocols to provide more prescriptive elements of various processes within BANC, for example, in the handling of outage data exchanges with the MO under BP Section 8. While BANC, as the EIM Entity, remains ultimately responsible to the CAISO/MO for the provision of certain forms of data exchanges, in some instances this may be addressed by the EIM Participant for efficiency. To avoid confusion, BANC and EIM Participants are developing practical “how to documents” to clarify these exchanges, as well as other processes too detailed to be included. Indeed, some of these processes will need to be very fluid as BANC and EIM Participants gain a better understanding as to how best to execute these various processes and exchanges after we gain some experience.

We therefore request Commission approval of the BP in its substantially final form.

Balancing Authority of Northern California

Energy Imbalance Market

Business Practices

Version 1.0_For BANC Commission Approval

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Energy Imbalance Market

1. General Provision - Purpose and Effective Date of BANC EIM Business Practices

The purpose of these Business Practices (BP) is to provide detailed descriptions of the business relationship between the Energy Imbalance Market (EIM) Entity, EIM Participants, and BANC EIM Transmission Providers within the EIM Entity footprint. It is intended to contain sufficient details to address day-to-day business activities, roles, and responsibilities related to BANC EIM operations. However, it is recognized that these business activities, roles, and responsibilities related to BANC EIM operations will evolve as the EIM Entity and EIM Participants gain market experience and the market evolves. Therefore, these BPs must also be able to adapt and change as necessary to address either unanticipated conditions or other circumstances. Thus, ease of amendment and revision is intended, subject to the amendment process adopted herein.

This BP should be read in conjunction with the BANC EIM Participation Agreement (EIM PA), the Market Operator (MO) Tariff, the Applicable Open Access Transmission Tariff (Applicable OATT) of BANC EIM Transmission Providers, Existing Agreements and any prescribed guidelines or protocols of the EIM Entity as adopted by the EIM Committee and provided to EIM Participants.

This BP shall work in concert with the provisions of the BANC agreements implementing EIM in the BANC Balancing Authority Area (BAA), Applicable OATTs, and the MO Tariff implementing the EIM to support operation of the EIM. To the extent that this BP is inconsistent with a provision in these other agreements, Applicable OATTs, or Existing Agreements, BANC shall work with EIM Participant(s) and BANC EIM Transmission Provider(s) to attempt to reconcile any conflicts. To the extent such conflicts cannot be reconciled within a reasonable time (as determined by the circumstances), such conflict shall be addressed in accordance with the Dispute Resolution process set forth in this BP.

This BP shall be in effect for as long as BANC implements the EIM and until all final settlements are reconciled in accordance with this BP and the EIM PA.

This BP shall apply to EIM Participants, BANC EIM Transmission Providers, and/or any EIM Participating Resources within the EIM Entity footprint.

2. Definitions

[The following key definitions have been added to this DRAFT version to provide clarification and facilitate the ongoing development process. Additional definitions are expected to be added in subsequent versions, and further clarifications to those listed below are also expected.]

Capitalized terms not defined herein shall have the definitions used in the MO Tariff, Applicable OATTs or the EIM PA.

- 2.1 **Applicable Open Access Transmission Tariff (Applicable OATT)** shall mean the applicable Open Access Transmission Tariff of a BANC EIM Transmission Provider. Upon the Approval Date of Version 1.0 of this BP (contained in the Version History, Appendix 2, herein), there are two Applicable OATTs: that of WAPA and that of SMUD.
- 2.2 **BANC EIM Settlement Allocation Manual** shall mean the detailed manual defining all of the charges and calculations used to calculate the EIM Participant's EIM settlements, as that document may be amended from time-to-time. The BANC EIM Settlements Allocation Manual is found in Attachment A (BANC EIM Settlement Allocation Manual) to this BP.
- 2.3 **BANC EIM Transmission Provider** shall mean an entity which provides transmission services to an EIM Participant either through an OATT or an Existing Agreement, or other contractual arrangement that facilitates the use of an EIM Participant's transmission system for EIM transactions. A BANC EIM Transmission Provider may or may not be an EIM Participant.
- 2.4 **BANC BAA Transmission System** shall mean the collection of transmission facilities inside the BANC BAA used for EIM participation by EIM Participants.
- 2.5 **Base Schedule(s)** shall have the same meaning as "EIM Base Schedule(s)," as used in the MO Tariff.
- 2.6 **Business Practice (BP)** shall mean this document, as it may be amended from time-to-time.
- 2.7 **CAISO** shall mean the California Independent System Operator, which currently serves as the EIM Market Operator.
- 2.8 **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.
- 2.9 **Commission** shall mean the "BANC Commission," as established in the BANC Joint Powers Agreement, as that agreement may be amended from time-to-time.
- 2.10 **EIM Committee** shall mean the administrative committee established and described in the BANC EIM Participation Agreement.
- 2.11 **EIM Entity** shall have the meaning set forth in the CAISO Tariff, as that tariff shall be amended from time-to-time.
- 2.12 **EIM Entity Scheduling Coordinator** shall mean the entity selected by the BANC EIM Entity who is certified by the MO and who enters into the MO's EIM Entity Scheduling Coordinator Agreement.
- 2.13 **EIM Optimization** shall mean the CAISO process whereby it runs its market software to determine the most efficient EIM solution, taking into account all resources and loads available for EIM dispatch/redispach and while honoring system constraints. The EIM Optimization produces pricing and dispatch instructions for each EIM pricing interval.

- 2.14 **EIM Participant** shall mean an entity which has executed the EIM Participation Agreement with BANC.
- 2.15 **EIM Participation Agreement (EIM PA)** shall mean the agreement between BANC, as the EIM Entity, and each EIM Participant, which that establishes respective rights, obligations, and procedures related to EIM participation within the BANC BAA, as that agreement may be amended from time-to-time.
- 2.16 **EIM Transfer Capability** shall mean the transmission capacity available for EIM Transfers between the [BANC] EIM Entity Balancing Authority Area and other participating EIM Entity Balancing Authority Areas, as determined by BANC EIM Transmission Providers and communicated to the EIM Entity.
- 2.17 **Energy Imbalance Market (EIM)** shall have the meaning set forth in the CAISO Tariff, as that tariff shall be amended from time-to-time.
- 2.18 **Existing Agreement(s)** shall mean any pre-EIM agreements still in force and effect among any EIM Participant material to that EIM Participant's ability to transact in EIM.
- 2.19 **FERC** shall mean the "Federal Energy Regulatory Commission," or its successor.
- 2.20 **Imbalance Energy** shall mean the deviation of supply or demand from the EIM Base Schedule, positive or negative, as measured by Fifteen Minute Market Schedules, Real-Time Dispatch, metered generation, metered load, or real-time Interchange or Intrachange schedules.
- 2.21 **Interchange** shall mean the E-Tagged energy transfers from, to, or through BAAs not including EIM Transfers.
- 2.22 **Intrachange** shall mean the E-Tagged energy transfers within the BANC BAA, not including real-time actual energy flows associated with EIM Dispatch Instructions.
- 2.23 **Manual Dispatch** shall mean operating order issued by the EIM Entity or a BANC EIM Transmission Provider to a Transmission Customer with an EIM Participating Resource, outside of the EIM Optimization, when necessary to address reliability or operational issues on the EIM Transmission Provider's system or BANC EIM Entity BAA that the EIM is not able to address through economic dispatch and congestion management.
- 2.24 **Market Operator (MO)** shall mean the entity responsible for operation, administration, settlement, and oversight of the EIM. The CAISO is the current Market Operator of the Western Energy Imbalance Market.
- 2.25 **Market Operator Tariff (MO Tariff)** shall mean the CAISO Tariff, as such tariff may be modified from time to time. The primary MO Tariff sections are found in Section 29 of the CAISO Tariff.
- 2.26 **NERC** shall mean the "North American Electric Reliability Corporation," or its successor.

2.27 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.

2.28 WECC shall mean the “Western Electricity Coordinating Council,” or its successor.

3. Registration of EIM Participating Resources

Entities within the BANC BAA which own or control one or multiple resources are required to register their resources to become BANC EIM Participating Resources. An entity within the BANC BAA that is not a signatory to the EIM PA must make a request to the EIM Entity to become an EIM Participant (Requestor) concurrent with a request to register a BANC EIM Participating Resource, as described under Section 4.3.1 (Request to Become a BANC EIM Participating Resource). To become an EIM Participant an entity must enter into an EIM PA with BANC and/or any successor or additional agreement(s).

A Requestor seeking to register EIM Participating Resources and an EIM Participant with EIM Participating Resources must:

- (1) Meet the requirements specified in Section 4 (BANC EIM Participating Resource Requirements) of this BP, as these BPs may be amended from time to time and any requirements set forth in the MO Tariff;
- (2) Become or retain a MO-certified EIM Participating Resource Scheduling Coordinator;
- (3) Follow the application and certification process specified in this BP and any successor or additional agreement(s) and/or guidelines or protocols as determined solely by BANC. It shall be the obligation of the Requestor or EIM Participant to make such a request from the EIM Entity and to negotiate any necessary changes in the EIM PA directly with the EIM Entity; and
- (4) Meet all requirements prescribed under the Applicable OATT or Existing Agreements.

4. BANC EIM Participating Resource Requirements

4.1 Internal Resources - Transmission Rights

Dispatchable resources owned or controlled by Requestors or EIM Participants and located within the metered boundaries of the EIM Entity BAA are required to become EIM Participating Resources, unless agreed to otherwise in writing between the EIM Entity and the Requestor or EIM Participant. The Requestor or EIM Participant that owns or controls the resource(s) must have associated transmission rights based on its Transmission Owner status or rights obtained through an Existing Agreement or the Applicable OATT.

4.2 Resources External to BANC’s BAA

4.2.1 Use of Pseudo-Ties

Subject to agreements with other impacted BAAs, BANC EIM Transmission

Providers or EIM Participants, a resource owned or controlled by a Requestor or EIM Participant that is not physically located inside the metered boundaries of the EIM Entity BAA may operate as a Pseudo-Tie resource within the EIM Entity BAA; however, the Pseudo-Tie resource must participate as an EIM Participating Resource. In order to do so, the Requestor or EIM Participant must: (1) obtain a written agreement from BANC specifying the roles and obligations of the parties entering into this agreement; (2) arrange firm transmission over any third-party transmission systems to the EIM Entity BAA intertie boundary equal to the amount of energy that will be Dynamically Transferred through a Pseudo-Tie into the EIM Entity BAA, consistent with a written agreement with BANC; (3) secure transmission service in accordance with the Applicable OATT, or under Existing Agreements, or other contractual arrangements that facilitate the use of an EIM Participant's transmission system for EIM transactions, as approved by the BANC EIM Transmission Provider; and (4) enter into any further agreement(s), if deemed necessary by any BANC EIM Transmission Provider, or as provided in any applicable business practices, guidelines, protocols or other requirements.

4.2.2 Pseudo-Tie Costs

Pseudo-Tie implementation costs shall be allocated in a manner specified in a written agreement with BANC in addition to any Applicable OATT, Existing Agreement, or other agreements as may be required by the BANC EIM Transmission Provider.

4.3 Request and Certification of BANC EIM Participating Resources

This section should be read in conjunction with the EIM PA and any other requirements as prescribed by BANC, as well as Applicable OATT(s), including business practices and guidelines or protocols, and the MO Tariff.

4.3.1 Request to Become a BANC EIM Participating Resource

4.3.1.1 To register a resource to become an EIM Participating Resource, a Requestor must become an EIM Participant by entering into an EIM PA with BANC and/or any successor or additional agreement(s) and meet any requirements prescribed in this BP and/or any additional guidelines or protocols prescribed and provided by BANC, the MO Tariff and the Applicable OATT.

4.3.1.1.1 An entity which is not currently an EIM Participant must make application in accordance with Section 4.3.2 (Processing the Request to Become an EIM Participant with an EIM Participating Resource) of this BP.

4.3.1.1.2 An entity which is an EIM Participant and which has

existing BANC EIM Participating Resources may add a new BANC EIM Participating Resource by meeting the applicable requirements under Section 4.3.3 (Confirmation Notice) and 4.3.4 (Notice and Obligation to Report a Change in Information) of this BP.

4.3.1.2 At the time of application, any EIM Participating Resource applicant must elect to perform the duties of a CAISO Metered Entity or Scheduling Coordinator Metered Entity, consistent with the MO's requirements, as applicable, in addition to meeting any requirements prescribed in the MO Tariff for becoming an EIM Participating Resource, including those requirements pertaining to telemetry and metering requirements.

4.3.2 Processing the Request to Become an EIM Participant with an EIM Participating Resource

An entity not currently a signatory to the EIM PA and with no EIM Participating Resource must make a written request to the EIM Entity to become an EIM Participant with EIM Participating Resource(s) by sending a written request in accordance with Appendix 1 (Notices) to this BP, directed to the BANC General Manager. Such request shall provide a full description of the Requestor's proposed EIM Participating Resource(s), including, at a minimum the: (a) type of resource (e.g., Combustion Turbine, Wind, etc.); (b) nameplate capacity of the resource; (c) point of interconnection; (d) applicable BANC EIM Transmission Provider and transmission rights (actual or proposed) to be used in support of the EIM Participating Resource(s); (e) Host BANC sub-Balancing Authority (SBA)¹; and, (f) Host Balancing Authority of the EIM Participating Resource(s), if the Host Balancing Authority is different than BANC.

Such request will also require the Requestor to enter into an EIM PA with BANC to become an EIM Participant. The EIM Entity shall enter into negotiations with the Requestor to execute an EIM PA, but not prior to a decision as to whether to accept the request to register an EIM Participating Resource and a decision by the Requestor to proceed.

The BANC General Manager, in consultation with the EIM Committee, may develop a written scope of work, list of technical requirements, associated milestones and costs, as deemed appropriate by BANC, required for the Requestor to become an EIM Participant with EIM Participating Resource(s). This written scope of work, list of technical requirements, associated milestones and costs shall form the basis of a letter of agreement between the EIM Entity and the Requestor, which shall be reviewed by the EIM Committee and

¹ For purposes of this BP, BANC hosts two SBAs, that of the Sacramento Municipal Utility District and that of the Western Area Power Administration – Sierra Nevada Region.

approved by the Commission. Such Requestor shall be responsible for any coordination, transmission service or interconnection requirements under the Applicable OATT.

If the EIM Entity denies the request it shall send notification stating the grounds for the denial to the Requestor and shall provide guidance as to how the Requestor may cure the grounds for the denial. If the request is denied, the Requestor may resubmit the request in accordance with any BANC guidelines or protocols in place at the time of the resubmitted request. In the absence of BANC guidelines or protocols, resubmission shall be made in writing to the BANC General Manager to the address set forth in Appendix 1 (Notices) to this BP.

If the EIM Entity accepts the request and the Requestor affirms its intent to proceed, the EIM Entity will finalize and execute a letter of agreement with the Requestor, as approved by the Commission. BANC and the Requestor shall also negotiate and execute an EIM PA, as modified solely at the discretion of BANC. The EIM PA must be reviewed by the EIM Committee and approved by the Commission.

4.3.3 Confirmation Notice

Upon successful negotiation and approval by the Commission of the EIM PA with the new EIM Participant, and written acknowledgement by the EIM Entity of the EIM Participating Resource's eligibility to participate in the EIM, participation shall occur once the EIM Participant has demonstrated, and the MO or BANC EIM Transmission Provider have confirmed, as appropriate, that the EIM Participant has:

- (1) Met the MO's criteria to become an EIM Participating Resource and executed the MO's pro forma EIM Participating Resource Agreement;
- (2) Qualified to become or retained the services of a MO-certified EIM Participating Resource Scheduling Coordinator;
- (3) Met the necessary metering requirements of this BP, the BANC EIM Transmission Provider, and Section 29.10 of the MO Tariff, and the EIM Participating Resource Scheduling Coordinator has executed the MO's *pro forma* Meter Service Agreement for Scheduling Coordinators;
- (4) Met communication and data requirements of this BP, the BANC EIM Transmission Provider, and Section 29.6 of the MO Tariff, and the operator of the plant(s) has the ability to receive and implement Dispatch Instructions every five minutes from the MO; and
- (5) Obtained written confirmation from the BANC EIM Transmission Provider that transmission service has been obtained in accordance with

the Applicable OATT, or through an Existing Agreement associated with the EIM Participating Resource.

Upon receiving notice from the MO and BANC EIM Transmission Provider of the completion of the enumerated requirements by the EIM Participant, the EIM Entity shall provide notice to the EIM Participant with an EIM Participating Resource, the BANC EIM Transmission Provider, and the MO that the EIM Participating Resource is confirmed and therefore eligible to participate in the EIM.

For the avoidance of doubt, no newly-approved EIM Participant with EIM Participating Resources can commence operations within the BANC EIM footprint until it can operate in EIM as an EIM Participating Resource.

4.3.4 Notice and Obligation to Report a Change in Information

Each EIM Participant with a BANC EIM Participating Resource has an ongoing obligation to inform the EIM Entity and the BANC EIM Transmission Provider (if applicable) of any changes to any of the information submitted as part of the application process under this BP.

This information includes, but is not limited to:

- (1) Any change in the BANC EIM Participating Resource Scheduling Coordinator representing the resource;
- (2) Any change in the ownership or control of the resource;
- (3) Any change to the physical characteristics of the resource required to be reported to the MO in accordance with Section 29.4(c)(4)(C) of the MO Tariff;
- (4) Any addition of a new BANC EIM Participating Resource; and
- (5) If the MO terminates the participation of the EIM Participating Resource in the EIM, the EIM Participant has terminated the EIM Participating Resource's participation in the EIM, or the EIM Participant has lost eligibility under the Applicable OATT or an Existing Agreement, such matters shall be immediately brought to the attention of the EIM Committee and addressed in consultation with the Commission and General Counsel.

5. Roles and Responsibilities

5.1 *EIM Entity and the EIM Entity Scheduling Coordinator*

5.1.1 Responsibilities

5.1.1.1 Identification of EIM Entity Scheduling Coordinator

BANC can serve as the EIM Entity Scheduling Coordinator or retain a

third party to perform such role. If BANC does not serve as the EIM Entity Scheduling Coordinator, BANC shall communicate to the EIM Entity Scheduling Coordinator any information required by the EIM Entity Scheduling Coordinator to fulfill its responsibilities in the EIM.

The EIM Entity Scheduling Coordinator shall coordinate and facilitate the EIM in accordance with the requirements of the MO Tariff. The EIM Entity Scheduling Coordinator must meet the certification requirements of the MO and enter into any necessary MO agreements.

5.1.1.2 Processing EIM Participating Resource Applications

The EIM Entity shall be responsible for facilitating requests by EIM Participants seeking authorization to participate in the EIM with resources as EIM Participating Resources in accordance with Section 4.3 (Request and Certification of BANC EIM Participating Resources) of this BP.

5.1.1.3 Determination of EIM Implementation Decisions for EIM Entity BAA

The EIM Entity is solely responsible for making any decisions with respect to EIM participation that the MO requires of EIM Entities. The EIM Entity, however, will coordinate with the BANC EIM Transmission Providers to the extent practicable. The EIM Entity has made the following determinations:

- (1) Eligibility Requirements for EIM Participating Resources: Eligibility requirements are set forth in Section 4 (BANC EIM Participating Resource Requirements) of this BP.
- (2) Load Aggregation Points: There shall be one LAP for the EIM Entity BAA and there will be a Custom Load Aggregation Point (CLAP) for each EIM Participant with Load.
- (3) MO Load Forecast(s): The EIM Entity shall utilize the MO load forecast(s) but shall retain the right to provide the load forecast(s) to the MO in accordance with the MO Tariff.
- (4) MO Metering Agreements: The EIM Entity and all EIM Participants with EIM Participating Resources shall have the option to elect to be Scheduling Coordinator Metered Entities or CAISO Metered Entities in accordance with Section 29.10 of the MO Tariff.
- (5) EIM Transfer Capability: The EIM Entity coordinates with BANC EIM Transmission Providers to determine appropriate implementation methodologies for establishing EIM Transfer capability within the BANC EIM footprint.

5.1.1.4 EIM Entity Adopted Guidelines and/or Protocols

The EIM Entity may establish and revise, as necessary, guidelines or protocols to facilitate implementation and operation of the EIM within the EIM Entity BAA. The guidelines or protocols shall be discussed and developed in consultation with the EIM Committee, and with BANC EIM Transmission Providers to ensure alignment with their Applicable OATs, contractual arrangements to facilitate use of an EIM Participant's transmission system for EIM transactions, business practices and procedures, as practicable. The guidelines or protocols shall either be added as an attachment to these BPs or otherwise made available to BANC EIM Transmission Providers and EIM Participants in a manner satisfactory to the EIM Committee.

5.1.1.5 Determination to Take Corrective Actions by the EIM Entity

The EIM Entity may take corrective actions in BANC's BAA in accordance with the requirements of Section 11 (Market Contingencies) of this BP. The EIM Entity shall ensure coordination with any BANC EIM Transmission Provider(s) in any corrective action required on the BANC EIM Transmission Provider's systems. Such coordination may be established in guidelines or protocols between the EIM Entity and BANC EIM Transmission Provider(s).

5.1.1.6 Determination to Permanently Terminate Participation in the EIM by the EIM Entity

The EIM Entity, in accordance with the requirements of Section 4.4 (Termination of this Agreement) of the EIM PA and Section 11 (Market Contingencies) of this BP, and in its sole and absolute discretion, may permanently terminate its participation in the EIM by providing notice of termination to the MO pursuant to applicable agreements and to EIM Participants and BANC EIM Transmission Providers, as applicable. Such decision to terminate by the EIM Entity shall be pursuant to Commission approval.

5.1.2 Responsibilities of the EIM Entity to Provide or Ensure the Provision of Required Information

For the avoidance of doubt, the EIM Entity is ultimately responsible to the MO for the provision of all data under this section; however, the EIM Entity, in consultation with EIM Participants and BANC EIM Transmission Providers, may adopt guidelines or protocols for data exchanges which maximize efficiencies of such exchanges with the MO. Thus, the EIM Entity shall either directly provide data to the MO or, as agreed, ensure the provision of data directly to the MO from an EIM Participant or a BANC EIM Transmission Provider as such data is required by the MO under the terms of its tariff and/or business practice manuals, as that relates to the EIM Entity.

5.1.2.1 Provide Modeling Data to the MO

The EIM Entity shall provide, or ensure the provision of, information to the MO, associated with transmission facilities within BANC's BAA, including, but not limited to, network constraints and associated limits that must be observed in BANC's BAA network and interties with other BAAs. The EIM Entity shall establish and maintain EIM operating guidelines or protocols, with such guidelines or protocols to be coordinated with BANC EIM Transmission Providers, to ensure the most effective and timely communication of modeling data to the MO.

5.1.2.2 Provide Outage Data to the MO

The EIM Entity is responsible for providing Outage data for the BANC BAA to the MO. The EIM Entity shall establish and maintain EIM operating guidelines or protocols, with such guidelines or protocols to be coordinated with EIM Participants and BANC EIM Transmission Providers, to ensure the most effective and timely communication of Outage data to the MO. Thus, the EIM Entity shall either directly provide Outage data to MO or, as agreed, ensure the provision of Outage data directly to MO from an EIM Participant or a BANC EIM Transmission Provider as such data is required by the MO under the terms of its tariff and/or business practice manuals, as that relates to the EIM Entity.

5.1.2.3 Provision of Meter Data

The EIM Entity shall ensure, and the EIM Participant shall submit, load, resource, and Interchange meter data to the MO in accordance with the format and timeframes required in the MO Tariff.

The EIM Entity may establish and maintain EIM operating guidelines or protocols, with such guidelines or protocols to be coordinated with EIM Participants and BANC EIM Transmission Providers, to ensure the most effective and timely submission of meter data to the MO.

5.1.3 Day-to-Day EIM Operations

5.1.3.1 Submission of Base Schedule and Resource Plans

In accordance with Section 5.1.2 (Responsibilities of the EIM Entity to Provide or Ensure the Provision of Required Information) of this BP, the EIM Entity is responsible for ensuring the provision of the data required by the MO in accordance with Section 29.34 of the MO Tariff, including but not limited to: (1) hourly EIM Interchange Base Schedules; and (2) Resource Plans.

5.1.3.2 Communication of Manual Dispatch Information

The EIM Entity may issue Manual Dispatches in accordance with Section 7.3.2 (Manual Dispatch) of this BP. The EIM Entity shall ensure the MO is informed of any Manual Dispatch within the BANC BAA, including those initiated by BANC EIM Transmission Providers, by providing adjustment information for the affected resources in accordance with Section 29.34 of the MO Tariff. The EIM Entity and any BANC EIM Transmission Provider shall coordinate such communications with the MO through an operating procedure or other protocol to ensure the most effective and timely communication.

5.1.3.3 Confirmation of EIM Transfers

The MO shall calculate, and the EIM Entity shall confirm, actual values for Dynamic Schedules reflecting EIM Transfers to the MO within 60 minutes after completion of the Operating Hour to ensure the E-Tag author will be able to update these values in accordance with WECC policies and industry standards through an update to the E-Tag. If WECC policies and industry standards are modified such that the 60 minute time frame set forth in the preceding sentence is no longer sufficient to enable compliance with the WECC policies and industry standards, the BANC EIM Transmission Provider shall make any necessary adjustments to remain compliant with such industry standards and policy changes.

5.1.4 Credit and Collateral Requirements Imposed on the EIM Entity by the MO

It is the responsibility of the EIM Entity to ensure that all credit and collateral requirements imposed on the EIM Entity by the MO in accordance with the MO Tariff are passed through by the EIM Entity to EIM Participants or the BANC EIM Transmission Provider, to the extent permitted by applicable law, in accordance with Section 5.2.5 (Credit and Collateral Requirements Related to EIM Participants) of this BP. EIM Participants are required to use reasonable efforts to meet any timelines imposed by the MO Tariff in response to any credit and collateral requirements.

5.1.5 Settlement of MO Charges and Payments

The EIM Entity shall be responsible for financial settlement of all charges and payments allocated by the MO to the EIM Entity. The EIM Entity shall allocate EIM charges and payments in accordance with Attachment A (BANC EIM Settlement Allocation Manual) to this BP, as applicable.

5.1.6 Dispute Resolution with the MO

The EIM Entity shall manage dispute resolution with the MO for the EIM Entity

settlement statements consistent with Section 29.13 of the MO Tariff and Section 12 (EIM Disputes) of this BP. EIM Participants with EIM Participating Resources shall manage dispute resolution with the MO for any settlement statements they receive directly from the MO.

5.2 EIM Participant Responsibilities

Certain EIM Participants are also BANC EIM Transmission Providers, whose additional responsibilities are those set forth in Section 5.3 (BANC EIM Transmission Provider Responsibilities) of this BP. Such EIM Participants may choose coordinate under this dual role to ensure efficiency and avoid the duplication of responsibilities performed under this Section.

5.2.1 Initial Registration Data

5.2.1.1 EIM Participants with an EIM Participating Resource

An EIM Participant with an EIM Participating Resource shall provide the EIM Entity with the data necessary to meet the requirements established by the MO to register all resources with the MO as required by Section 29.4(e)(4)(D) of the MO Tariff.

5.2.2 Responsibility to Update Required Data

5.2.2.1 EIM Participants with a BANC EIM Participating Resource

Each EIM Participant with an EIM Participating Resource has an ongoing obligation to inform the MO and EIM Entity of any changes to any of the information submitted by the EIM Participant provided under Section 5.2.1 (Initial Registration Data) of this BP that reflects changes in operating characteristics as required by Section 29.4(e)(4)(D) of the MO Tariff.

5.2.3 Outages

EIM Participants with EIM Participating Resources shall be required to provide planned and unplanned outage information for their resources in accordance with Section 8 (Outages) of this BP and applicable guidelines or protocols.

5.2.4 Submission of EIM Participant Base Schedule

Every EIM Participant shall submit their resource Base Schedule(s) to the MO. This submission must balance the EIM Participant's resource Base Schedules, Interchange, Intrachange, and anticipated load each hour. The submissions shall be in the format and within the timing requirements established by the MO and the EIM Entity as required in Section 5.2.4.4 (Timing for the Submission of EIM Participant Interchange and Intrachange Base Schedules Submission for EIM Participants with Resources or Load in the EIM Entity BAA) of this BP.

5.2.4.1 EIM Participants with a BANC EIM Participating Resource in the BANC BAA

An EIM Participant is not required to submit a Base Schedule for:

- (1) Non-dispatchable resources located in the EIM Entity BAA; or
- (2) behind-the-meter generation which is not contained in the MO's network model.

Each BANC EIM Participating Resource Scheduling Coordinator shall provide to the EIM Entity access to:

- (3) the energy bid range data of the respective resources it represents that are participating in the EIM; and
- (4) Dispatch Operating Target data of the respective resources it represents that are participating in the EIM.
- (5) Access to the MO Master File (as defined in the MO Tariff).

5.2.4.2 EIM Participants with Load and Load Aggregation Points

As set forth in Section 5.2.4 (Submission of EIM Participant Base Schedule) of this BP, an EIM Participant is required to submit resource Base Schedules on all resources which balance to the EIM Participant's EIM Load Forecast, Interchange and Intrachange, as applicable.

For purposes of settling Imbalance Energy pursuant to this BP, the EIM Entity shall calculate the EIM Participant load Base Schedule as the EIM Participating Resource Base Schedules net of its Interchange and net of its Intrachange, and net of expected system losses, as applicable. Any settlement is allocated in accordance with Attachment A (BANC EIM Settlement Allocation Manual) to this BP.

The EIM Participant shall coordinate with the EIM Entity and the MO to determine appropriate Load Aggregation Points.

5.2.4.3 EIM Participants with Interchange or Intrachange

The EIM Participant shall submit to the EIM Entity all Interchange Base Schedules, which the EIM Entity shall provide to the MO on the EIM Participant's behalf.

For purposes of settling Imbalance Energy for Interchange and Intrachange, the EIM Entity will calculate the Interchange and Intrachange Base Schedule component as the schedules presented to EIM Entity at T-57 minutes. Any settlement is allocated in accordance with Attachment A (BANC EIM Settlement Allocation Manual) to this BP.

5.2.4.4 Timing for the Submission of EIM Participant Interchange and Intrachange Base Schedules Submission for EIM Participants with Resources or Load in the EIM Entity BAA

5.2.4.4.1 Preliminary Submission of EIM Participant Interchange and Intrachange Base Schedules by EIM Participant with Resources or Load in the EIM Entity BAA

EIM Participants shall submit Interchange and Intrachange Schedules up to 7 days prior to each Operating Day (“T - 7 days”). EIM Participants may modify the proposed Interchange and Intrachange Base Schedules at any time.

5.2.4.4.2 Final Submissions of EIM Participant Base Schedules

EIM Participants shall submit Interchange and Intrachange schedules at any time but no later than 57 minutes prior to each Operating Hour (“T-57”). EIM Participants may modify Interchange and Intrachange Base Schedules up to and until 57 minutes prior to the Operating Hour (“T-57”). As of 57 minutes prior to each Operating Hour (“T-57”), the EIM Participant Base Schedule data for the Operating Hour will be considered financially binding.

5.2.5 Credit and Collateral Requirements Related to EIM Participants

Each EIM Participant shall be responsible to meet the credit and collateral requirements imposed on the EIM Entity by the MO in accordance with the MO Tariff, inclusive of timelines thereto, as set forth in Section 5.1.4 (Credit and Collateral Requirements Imposed on the EIM Entity by the MO) of this BP, to the extent permitted by applicable law.

5.2.6 EIM Resource Plan

The EIM Participant shall support the EIM Entity in the submission of a day ahead EIM Resource Plan in accordance with Section 29.34(e) of the MO Tariff. The EIM Entity will coordinate with EIM Participants on the manner which best supports this requirement.

5.2.6.1 EIM Resource Plan Components

- (1) Participating Resources – EIM Participant with a PR submits generation resource plan directly to the MO.
- (2) Interchange schedules – the EIM Entity submits all interchange schedules currently known directly to the MO.
- (3) Load Forecast – Provided by MO. No submission required.

5.2.7 Resource Sufficiency

It is the obligation of each EIM Participant serving load inside of the EIM Entity BAA to be resource sufficient (balancing of its relevant forecasted load with its supply) and to not intentionally lean on other EIM Participants or the broader EIM for its Energy Imbalance needs. Therefore, each EIM Participant is responsible to ensure it has sufficient resources in each EIM interval in order for the EIM Entity to pass the MO EIM Resource Sufficiency tests in accordance with the MO Tariff. EIM Participants which fail to meet this obligation will be allocated costs associated with such failure in accordance with Attachment A (BANC EIM Settlement Allocation Manual) to this BP.

5.2.8 Metering for EIM Participants

The EIM Participant, shall be responsible for the provision to the MO of timely and accurate meter data in compliance with applicable metering procedures/protocols for EIM Participants in accordance with BANC metering standards and, if applicable, metering standards of EIM Participant's Transmission Provider.

5.2.9 Termination by an EIM Participant

The EIM Participant, in accordance with the requirements of Section 4.3 (Termination by EIM Participants) of the EIM PA, may terminate its participation in EIM by providing at least one (1) year advance notice prior to such termination, as set forth in the EIM PA. Notwithstanding the foregoing, any EIM Participant which is an EIM Participating Resource and/or an EIM Participating Resource Scheduling Coordinator is solely responsible for meeting any of its termination obligations set forth in the MO Tariff.

5.3 *BANC EIM Transmission Provider Responsibilities*

BANC EIM Transmission Providers may include both EIM Participants and non-EIM Participants. All BANC EIM Transmission Providers are responsible for the following:

5.3.1 Eligibility Requirements

To ensure consistency with its tariff, if applicable, and to ensure the reliability of its system, the BANC EIM Transmission Provider may set any eligibility requirements for resources within the BANC EIM Transmission Provider's system. Such eligibility requirements shall be consistent with this BP and the MO Tariff and shall be coordinated with the EIM Entity to ensure consistency with this BP to the extent practicable.

5.3.2 Determination of EIM Transfer Capability

BANC EIM Transmission Providers shall provide the EIM Entity with amounts of transmission capacity on the BANC EIM Transmission Provider's system available for EIM Transfers consistent with the Applicable OATT and Section

6.2 (Provision of EIM Transfer Capability) of this BP.

5.3.3 Communication of Manual Dispatch Information

A BANC EIM Transmission Provider may take corrective actions within its transmission system, including issuing a Manual Dispatch to an EIM Participant with a BANC EIM Participating Resource in the BANC EIM Transmission Provider's transmission system, outside of the EIM Optimization to address reliability or operational issues in the BANC EIM Transmission Provider's transmission system, or due to disruption of EIM operations.

The BANC EIM Transmission Provider shall inform the EIM Entity of a Manual Dispatch within its transmission system as soon as possible, and in accordance with EIM Entity guidelines or protocols consistent with Section 5.1.3.2 (Communication of Manual Dispatch Information) of this BP.

The BANC EIM Transmission Provider and the EIM Entity shall follow the communication processes set forth in Section 5.1 (EIM Entity and the EIM Entity Scheduling Coordinator), Section 7.3 (Management of Contingencies and Emergencies – Normal and Emergency Conditions) or Section 11.3 (Management of Contingencies and Emergencies – Market Contingencies) of this BP, related to any corrective actions or Manual Dispatches taken by the BANC EIM Transmission Provider to preserve the reliability of its system. The EIM Entity and the BANC EIM Transmission Provider may adopt additional written communication guidelines or protocols outside of this BP to ensure reliable operations of the BANC BAA and to proper communication of events impacting EIM operations with the MO.

5.3.4 Providing Modeling Data

A BANC EIM Transmission Provider shall provide all relevant modeling data for its Transmission System in accordance with the guidelines or protocols for system modeling within the BANC BAA.

5.3.5 Providing Outage Data

A BANC EIM Transmission Provider shall provide all relevant planned and unplanned outage data to the MO for transmission facilities within its transmission system in accordance with Section 8 (Outages) of this BP, and applicable guidelines or protocols.

5.3.6 Providing Meter Data

A BANC EIM Transmission Provider shall ensure that all relevant meter data is provided in accordance with the requirements related to EIM Participants.

5.3.7 Ensuring Consistency Between its OATT and the EIM Entity BP and the MO Tariff

The BANC EIM Transmission Provider remains fully responsible for the development of its OATT, contractual arrangements to facilitate use of an EIM

Participant's transmission system for EIM transactions, business practices, operating procedures, guidelines or protocols related to the operation of EIM in its system. The BANC EIM Transmission Provider shall coordinate with the EIM Entity to ensure consistency between its OATT, contractual arrangements to facilitate use of an EIM Participant's transmission system for EIM transactions, business practices, operating procedures, guidelines or protocols related to the operation of EIM in its system.

To the extent a conflict arises between any provision of the BANC EIM Transmission Provider's OATT or contractual arrangements to facilitate use of an EIM Participant's transmission system for EIM transactions, and any provision of the EIM Entity's business practices, operating procedures, guidelines or protocols related to the operation of EIM in its system such disputes will be addressed in accordance with Section 12 (EIM Disputes) of this BP.

6. Facilitation of Transmission Operations

BANC is not a Transmission Service Provider; however, as the EIM Entity, BANC is responsible for ensuring the MO is provided with available EIM Transfer Capability for the BANC BAA in accordance with this section. EIM Transfer Capability is determined by BANC EIM Transmission Providers in accordance with the Applicable OATT and communicated to the EIM Entity.

6.1 *Provision to MO of Information Regarding Real-Time Status of the BANC BAA Transmission System*

The EIM Entity provides the MO the following information:

- (1) real time data for the BANC BAA Transmission System and interties; and
- (2) any changes to transmission capacity and the BANC BAA Transmission System due to operational circumstances.

6.2 *Provision of EIM Transfer Capability*

6.2.1 Available Transfer Capability

The EIM Entity shall facilitate the provision of transmission capacity for EIM Transfers by ensuring the MO is provided with information about the amounts available for EIM Transfers utilizing Available Transfer Capability (ATC) as determined by BANC EIM Transmission Providers.

The provision of EIM Transfer capability using ATC shall be implemented by 40 minutes prior to the Operating Hour ("T-40"). BANC EIM Transmission Providers shall create an E-Tag, with an OASIS identification reservation number(s) created for EIM Transfers utilizing ATC, and shall also include the EIM Entity, MO, all transmission providers, and path operators associated with

the OASIS identification reservation number(s) identified in the E-Tag. The amount of ATC will be based upon the lower of the amount of ATC calculated by each EIM Entity at that interface. The ATC associated with the submitted E-Tag shall be available for the EIM, subject to approval of the E-Tag by all required E-Tag approval entities.

7. System Operations Under Normal and Emergency Conditions

7.1 Compliance with Reliability Standards

Participation in the EIM shall not modify, change, or otherwise alter the manner in which the EIM Entity, BANC EIM Transmission Providers, or EIM Participants operate their resources and/or transmission systems for purposes of reliability, consistent with applicable Reliability Standards, including adjustments.

Participation in the EIM shall not modify, change, or otherwise alter the obligations of the EIM Entity, BANC EIM Transmission Providers, or EIM Participants to comply with applicable Reliability Standards.

The EIM Entity, acting dually as Balancing Authority for the BANC BAA, shall remain responsible for:

- (1) ensuring appropriate operating reserves and for its obligations pursuant to any reserve sharing group agreements;
- (2) NERC and WECC responsibilities including, but not limited to, informing the Reliability Coordinator of issues within BANC's BAA;
- (3) ensuring the processing of E-Tags and managing schedule curtailments at the interties; and
- (4) monitoring and managing real-time flows within system operating limits on all transmission facilities within the EIM Entity BAA, including coordination with BANC EIM Transmission Providers for monitoring and management of facilities within the BANC EIM Transmission Provider's system. If requested by a BANC EIM Transmission Provider, the EIM Entity will provide additional information or data related to EIM operation as it may relate to facilities of the BANC EIM Transmission Provider.

7.2 Good Utility Practice

The EIM Entity, BANC EIM Transmission Providers, and EIM Participants shall comply with Good Utility Practice with respect to this BP, Applicable OATTs, Existing Agreements, and the MO Tariff.

7.3 Management of Contingencies and Emergencies

7.3.1 EIM Disruption

If the MO declares an EIM disruption in accordance with Section 29.7(j) of the MO Tariff, the EIM Entity shall notify BANC EIM Transmission Providers, and in accordance with Section 29.7(j)(4) of the MO Tariff, ensure the MO is promptly informed of actions taken within the BANC BAA in response to the EIM disruption by providing adjustment information, updates to E-Tags, transmission limit adjustments, or Outage and de-rate information, as applicable. The EIM Entity and any BANC EIM Transmission Provider shall coordinate such communications with the MO through an operating procedure or other protocol to ensure the most effective and timely communication consistent with Section 5.3.3 (Communication of Manual Dispatch Information) of this BP.

7.3.2 Manual Dispatch

The EIM Entity may issue a Manual Dispatch to an EIM Participant with a BANC EIM Participating Resource in the BANC EIM footprint outside of the EIM Optimization to address reliability or operational issues in the BANC BAA. The EIM Entity coordinates with BANC EIM Transmission Providers prior to issuing Manual Dispatch instructions for resources within the BANC EIM Transmission Provider's transmission system. The EIM Entity also receives and processes Manual Dispatch information communicated to the EIM Entity from BANC EIM Transmission Providers for Manual Dispatches that are issued within the BANC EIM Transmission Providers' system in accordance with Section 5.3.3 (Communication of Manual Dispatch Information.)

The EIM Entity informs the Market Operator of any manual dispatch within the BANC BAA in accordance with BANC operating procedures or other guidelines or protocols of the EIM Entity. The EIM Entity and any BANC EIM Transmission Provider shall coordinate such communications with the MO through an operating procedure or other protocol to ensure the most effective and timely communication consistent with Section 5.3.5 (Providing Outage Data) of this BP.

8. Outages

For the avoidance of doubt, the EIM Entity is ultimately responsible to the MO for the provision of all Outage data under this section; however, for purposes of efficiency, it has been agreed upon among EIM Participants, BANC EIM Transmission Providers and the EIM Entity that the primary interfaces with the MO for the provision of such data, unless agreed to otherwise between the EIM Entity and EIM Participants and BANC EIM Transmission Providers, shall be the EIM Participants and BANC EIM Transmission Providers. The EIM Entity, in consultation with EIM Participants, including BANC EIM Transmission Providers, may adopt guidelines or protocols in support of such exchanges with the MO. The originator of the Outage data is responsible for updates and changes to the Outage data regardless if the change is due to

resource availability or a reliability issue.

8.1 *BANC Transmission Outages*

8.1.1 *Planned Transmission Outages and Known Derates*

The EIM Entity shall ensure the submission of Outage data regarding planned transmission outages and known derates to the MO's outage management system (OMS) in accordance with Section 29.9(b) of the MO Tariff.

Notwithstanding the foregoing, and unless agreed to otherwise, the BANC EIM Transmission Providers, or EIM Participants that are also Transmission Owners inside the EIM Entity BAA, as applicable, shall remain responsible for the actual submission to the MO of all Outage data required in this section. The EIM Entity's outage management integrates with the MO OMS.

8.1.2 *Unplanned Transmission Outages*

The EIM Entity shall ensure the submission of information as soon as possible regarding unplanned transmission outages or derates to the MO's OMS in accordance with Section 29.9(e) of the MO Tariff.

Notwithstanding the foregoing, and unless agreed to otherwise, the BANC EIM Transmission Providers, or EIM Participants that are also Transmission Owners inside the EIM Entity BAA, as applicable, shall remain responsible for the actual submission to the MO of all Outage data required in this section.

8.2 *BANC EIM Participating Resource Outages*

8.2.1 *Planned BANC EIM Participating Resource Outages and Known Derates*

BANC EIM Participating Resource Scheduling Coordinators shall submit information regarding planned resource outages and known derates directly to the MO and communicate this information back to the EIM Entity, as well as providing any updates, on an ongoing basis, related to such relevant system changes impacting EIM Participating Resource availability. Planned outages and known derates shall be reported to the MO and communicated back to the EIM Entity. The BANC EIM Participating Resource Scheduling Coordinator shall submit this Outage data to the MO's OMS in accordance with Section 29.9(c) of the MO Tariff and communicate this information back to the EIM Entity. BANC EIM Participating Resource Scheduling Coordinators shall update the submittal if there are changes to the resource outage plan.

8.2.2 *Unplanned BANC EIM Participating Resource Outages or Derates*

In the event of an unplanned outage required to be reported under Section 29.9(e) of the MO Tariff, the BANC EIM Participating Resource Scheduling Coordinator is responsible for notifying the MO and communicating this information back to the EIM Entity of required changes. The BANC EIM

Participating Resource Scheduling Coordinator shall submit this information to the MO's OMS and shall communicate this submission of information to the EIM Entity.

9. EIM Settlements and Billing

Attachment A (BANC EIM Settlement Allocation Manual) to this BP shall include information on the specific charges applicable to EIM settlement passed through by the EIM Entity to EIM Participants and BANC EIM Transmission Providers. The EIM Entity shall remain revenue neutral in all EIM payments and charges and shall allocate all payments and charges in accordance with Attachment A to this BP.

9.1 *MO Tax Liabilities*

Any charges to the EIM Entity pursuant to Section 29.22(a) of the MO Tariff for MO tax liability as a result of the EIM shall be sub-allocated to those EIM Participants triggering the tax liability.

9.2 *EIM Transmission Service Charges*

The EIM Entity is not a Transmission Provider or Transmission Owner at this time. However, for the avoidance of doubt and for purposes of EIM operations within the EIM Entity footprint, unless subsequently imposed by the MO as part of the MO Tariff, the EIM Entity and the BANC EIM Transmission Providers have agreed that there shall be no incremental transmission charge assessed for transmission use related to the EIM assessed by an EIM Participant. The EIM Entity and the EIM Participants will discuss any future EIM transmission charges imposed by a BANC EIM Transmission Provider with the EIM Committee in order to evaluate and address issues that could impact participation in the EIM under the MO Tariff.

9.3 *EIM Payment Calendar*

Pursuant to Section 29.11(1) of the MO Tariff, the EIM Entity shall be subject to the MO's payment calendar for issuing settlement statements, exchanging invoice funds, submitting meter data, and submitting settlement disputes to the MO. The EIM Entity shall process all payments and charges in accordance with Attachment A (BANC EIM Settlement Allocation Manual) to this BP, and Disputes process in Section 12 (EIM Disputes) of this BP.

9.4 *EIM Residual Balancing Account*

To the extent that MO EIM-related charges or payments to the EIM Entity are not captured elsewhere in this Tariff, or this section, those charges or payments shall be placed in an interest-bearing account, with interest accruing until BANC develops an allocation methodology.

9.5 *Market Validation and Price Correction*

If the MO modifies the EIM Entity settlement statement in accordance with the MO's

market validation and price correction procedures in the MO Tariff, the EIM Entity reserves the right to make corresponding or similar changes to the charges and payments sub-allocated under this BP.

10. Compliance

10.1 Provision of Data

An EIM Participant with EIM Participating Resources is responsible for complying with information requests they receive directly from the EIM market monitor or regulatory authorities concerning EIM activities.

An EIM Participant with EIM Participating Resources must provide the EIM Entity with all data necessary to respond to information requests received by the EIM Entity from the MO, the EIM market monitor, or regulatory authorities concerning EIM activities.

If the EIM Entity is required by applicable laws or regulations, or in the course of administrative or judicial proceedings, to disclose information concerning EIM activities that is otherwise required to be maintained in confidence, the EIM Entity may disclose such information; provided, however, that upon the EIM Entity learning of the disclosure requirement and, if possible, prior to making such disclosure, the EIM Entity shall notify any EIM Participant (“Affected Party”) of the requirement and the terms thereof, providing a reasonable time for the Affected Party to be able to respond to such disclosure requirement. The Affected Party can, at its sole discretion and own cost, direct any challenge to or defense against the disclosure requirement. The EIM Entity shall cooperate with the Affected Party to obtain proprietary or confidential treatment of confidential information by the person to whom such information is disclosed prior to any such disclosure. It is acknowledged that the EIM Entity and EIM Participants may be subject to federal or state public disclosure laws.

The EIM Entity shall treat all EIM Participant data and information provided to it as market-sensitive and confidential, unless the EIM Entity is otherwise allowed or required to disclose.

10.2 Rules of Conduct

These rules of conduct are intended to provide fair notice of the conduct expected and to provide an environment in which all parties may participate in the EIM on a fair and equal basis.

All EIM Participants must:

- (1) Comply with Dispatch Instructions and operating orders of the EIM Entity or applicable BANC EIM Transmission Provider in accordance with Good Utility Practice. If some limitation prevents the EIM Participant from fulfilling the action requested by the MO, the EIM Entity, or the BANC EIM Transmission Provider, the EIM Participant must immediately and directly communicate the nature of any such limitation to the EIM Entity and, if applicable, the BANC EIM Transmission Provider;

- (2) Submit bids for resources that are reasonably expected to both be and remain available and capable of performing at the levels specified in the bid, based on all information that is known or reasonably should have been known at the time of submission;
- (3) Notify the MO, EIM Entity, and/or BANC EIM Transmission Provider, as applicable, of outages in accordance with Section 8 (Outages) of this BP;
- (4) Provide complete, accurate, and timely meter data in accordance with the metering and communication requirements of this BP, and Applicable OATTs, and maintain responsibility to ensure the accuracy of such data communicated by any customer-owned metering or communications systems. To the extent such information is not accurate or timely, the EIM Participant shall be responsible for any consequence on settlement and billing; and
- (5) Provide information to the EIM Entity, including the information requested in Sections 5.2.1 (Initial Registration Data), 5.2.2 (Responsibility to Update Required Data), 5.2.3 (Outages), 5.2.4 (Submission of EIM Participant Base Schedule) and 10.1 (Provision of Data) of this BP, by the applicable deadlines.

10.3 Enforcement

The EIM Entity may refer a violation of Section 10.2 (Rules of Conduct) of this BP to the EIM Committee, its Commission and/or its General Counsel and/or the MO for further action.

11. Market Contingencies

11.1 Temporary Suspension by the MO or by the EIM Entity

In the event that the MO implements a temporary suspension (“Suspension Period”) in accordance with Section 29.1 (d)(1) of the MO Tariff, including the actions identified in Section 29.1 (d)(5), the EIM Entity shall notify BANC EIM Transmission Providers and EIM Participants as soon as practicable and ensure any additional coordination deemed necessary with BANC EIM Transmission Providers. The EIM Entity shall settle all market and non-market energy charges in the most efficient manner as prescribed by BANC as approved by the EIM Committee. Once transition from Market Operations to the Suspension Period is completed, it is expected that there will not be any charges imposed by the MO. EIM Participants will still be subject to paying their allocated share of ongoing BANC EIM costs required by the EIM Participation Agreement or these BPs during the Suspension Period. This shall continue until the temporary suspension is no longer in effect or, if the MO determines to extend the suspension, for a period of time sufficient to process termination of the EIM Entity’s participation in the EIM in accordance with Section 29.1(d)(2) of the MO Tariff.

In the event that the EIM Entity implements a temporary suspension, the same process shall apply.

11.2 Termination of Participation in EIM by the EIM Entity

If the EIM Entity, after approval by the Commission, submits a notice of termination of its participation in the EIM to the MO in accordance with Section 3.2.2 (Termination by the EIM Entity) of the Amended and Restated EIM Entity Agreement between the CAISO and BANC and Section 5.1.1.6 (Determination to Permanently Terminate Participation in the EIM by the EIM Entity) of this BP, in order to mitigate price exposure during the 180-day period between submission of the notice and the termination effective date, the EIM Entity will confirm with the MO that EIM Transfers shall cease on Day 1 of the notice of termination by the EIM Entity, and the EIM Entity is switched by the MO to “non-EIM Entity” on Day 2, in accordance with the MO Tariff and CAISO Business Practice Manual for EIM [11.4.1].

As such, this will ensure, as soon as practicable and in accordance with the MO obligations:

- (1) EIM Transfers will cease with the EIM Entity and the EIM Entity Balancing Authority Area will be separated the EIM operation; and
- (2) There will be a suspension of the settlement of EIM charges with respect to the EIM Entity.

If the EIM Entity takes action under this Section 11.2 (Termination of Participation in EIM by the EIM Entity) of this BP, the EIM Entity shall notify the MO, EIM Participants and BANC EIM Transmission Providers and shall develop a wind down process in consultation with the EIM Committee and approved by the Commission.

Notwithstanding the forgoing, EIM Participants and BANC EIM Transmission Providers shall remain obligated for any charges imposed by the MO on the EIM Entity subsequent to such notice of termination and for their allocated share of ongoing BANC EIM costs during the wind down period in accordance with Section 4.5 (Surviving Obligations) of the EIM PA.

11.3 Management of Contingencies and Emergencies

The EIM Entity may declare a temporary contingency and invoke corrective actions for the EIM when in its judgment:

- (1) operational circumstances (including a failure of the EIM to produce feasible results in BANC’s BAA) have caused or are in danger of causing an abnormal system condition in the BANC BAA that requires immediate action to prevent loss of load, equipment damage, or tripping system elements that might result in cascading outages, or to restore system operation to meet the applicable Reliability Standards and reliability criteria established by NERC and WECC; or
- (2) communications between the MO and the EIM Entity are disrupted and prevent the EIM Entity, the EIM Entity Scheduling Coordinator, or a BANC EIM Participating Resource Scheduling Coordinator from accessing MO systems to

submit or receive information.

The EIM Entity also takes corrective action for the EIM based on notice of need for corrective action received from BANC EIM Transmission Providers in accordance with Applicable OATTs. The EIM Entity will coordinate with BANC EIM Transmission Providers and may jointly develop guidelines or protocols to address such actions.

11.3.1 Corrective Actions for Temporary Contingencies

If either of the above temporary contingencies occurs, the EIM Entity may invoke the following corrective actions by making an affirmative request to the MO that the MO immediately, or as soon as practicable:

- (1) prevent EIM Transfers and separate the EIM Entity's BAA from operation of the EIM in the EIM Area; and/or
- (2) suspend settlement of EIM charges with respect to the EIM Entity.

When corrective action under Section 11.3.1 (2) of this BP is implemented or if the MO Tariff requires the use of temporary schedules to set an administrative price, imbalance services shall defer to the provisions of the BANC EIM Transmission Provider's Applicable OATT.

If the EIM Entity takes action under this Section 11.3 (Management of Contingencies and Emergencies), the EIM Entity shall notify the MO, BANC EIM Transmission Providers, and EIM Participants. The EIM Entity, BANC EIM Transmission Providers, and the MO shall cooperate to resolve the temporary contingency event and restore full EIM operations as soon as is practicable.

Notwithstanding the forgoing, EIM Participants shall remain obligated for any charges imposed by the MO on the EIM Entity during any such suspension and/or contingency as may be imposed under the MO Tariff. The EIM Entity will coordinate with BANC EIM Transmission Providers and may jointly develop guidelines and/or protocols to address such actions.

12. EIM Disputes

12.1 *Disputes between the EIM Entity and an EIM Participant or BANC EIM Transmission Provider Related to Allocation of Charges or Payments from the MO*

To the extent a dispute arises between the EIM Entity and an EIM Participant or BANC EIM Transmission Provider regarding the EIM Entity's implementation of this BP's provisions regarding the manner in which the EIM Entity allocates charges or payments from the MO, the parties shall follow the dispute resolution procedures in this Section 12.

12.2 *Disputes between the MO and EIM Participating Resource Scheduling Coordinators Related to EIM Charges and Payments Directly With the MO*

Disputes involving settlement statements between the MO and EIM Participating Resource Scheduling Coordinators shall be resolved directly between the EIM Participating Resource Scheduling Coordinator and the MO in accordance with the dispute resolution process outlined in the MO Tariff. An EIM Participant with an EIM Participating Resource may choose to inform the EIM Entity if it raises a dispute with the MO, if that dispute may reasonably be expected to impact other EIM Participants or the EIM Entity.

12.3 *Disputes between the MO and the EIM Entity*

The EIM Entity may raise disputes with the MO regarding the settlement statements it receives from the MO in accordance with the process specified in the MO Tariff.

12.4 *Disputes Regarding MO Charges or Payments to the EIM Entity Raised by EIM Participants or BANC EIM Transmission Providers*

To the extent a dispute arises regarding a MO charge or a MO payment to the EIM Entity that is subsequently charged or paid by the EIM Entity to an EIM Participant or BANC EIM Transmission Provider, and such EIM Participant or EIM Transmission Provider wishes to raise a dispute with the MO, the EIM Entity shall file a dispute on behalf of such EIM Participant or BANC EIM Transmission Provider in accordance with the MO Tariff and work with the EIM Participant or BANC EIM Transmission Provider to resolve the dispute pursuant to the process specified in the MO Tariff.

12.5 *Disputes among and between the EIM Entity and EIM Participants or BANC EIM Transmission Providers*

Any disputes between the EIM Entity, EIM Participants, and BANC EIM Transmission Providers, and/or between such parties, arising through participation in EIM shall be addressed in accordance with the Dispute Resolution procedures set forth in Section 14 of the EIM PA.

13. Attachments and Appendices Incorporated by Reference

All Attachments and Appendices hereto are made part of this BP and are hereby incorporated by reference.

14. Amendments

This BP, including its Attachments and Appendices, shall be initially coordinated with the BANC EIM Transmission Providers (which are also EIM Participants) and approved by the Commission. Subsequent amendments to this BP, Attachments and Appendices, may be made by the General Manager upon the unanimous concurrence by the EIM Committee, unless specified otherwise in the individual Attachments and/or Appendices. Such amendments and changes shall be coordinated with BANC EIM Transmission Providers to ensure alignment with Applicable OATTs, and contractual arrangements for use of an EIM Participant's transmission

system, as reasonable, and to resolve any disputes between the EIM Entity and BANC EIM Transmission Providers that may arise from proposed changes to this BP. Absent unanimous concurrence by the EIM Committee with the General Manager, amendments to this BP must be approved by the Commission. Amendments and changes to this BP shall be reflected in updates to the Version History set forth in Appendix 2 (Version History) in accordance with the process prescribed in that appendix.

APPROVAL DRAFT

Attachment A: BANC EIM Settlement Allocation Manual

[To be inserted in a future version]

APPROVAL DRAFT

Appendix 1: Notices

[To be inserted in a future version]

Amendments

Updates to this Appendix 1 (Notices) can be made at any time, as required, by the General Manager. Such changes will constitute a “minor” revision with respect to an update to Appendix 2 (Version History) of this BP.

APPROVAL DRAFT

Appendix 2: Version History

Balancing Authority of Northern California Business Practice			
Version	Issue Date	Approved	Remarks
1.0	10/28/2020		BANC Commission Approval

Amendments

Updates to this Appendix 2 (Version History) shall be made upon any amendments to this BP, Attachments or Appendices subsequent to such amendments. Minor changes, as determined by BANC counsel, to this BP, Attachments or Appendices shall only require a change to numbering after the decimal point (i.e., 1.1 to 1.2, etc.) to this Version History. Significant changes, as determined by BANC counsel, to this BP, Attachments or Appendices shall be reflected in the numeral before the decimal point (i.e., 1.0 to 2.0, etc.) of this Version History. The revised BP shall be posted on the BANC Website.

**Balancing Authority of Northern California
Resolution 20-10-20**

**APPROVAL OF BALANCING AUTHORITY OF NORTHERN CALIFORNIA ENERGY
IMBALANCE MARKET BUSINESS PRACTICES FOR BANC EIM PHASE 2 OPERATIONS**

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

WHEREAS, BANC proposes to become the Energy Imbalance Market (“EIM”) Entity for the BANC EIM footprint; and

WHEREAS, BANC EIM Phase 1 successfully commenced operating in April of 2019; and

WHEREAS, subsequent to the operation of BANC EIM Phase 1, the Modesto Irrigation District, the City of Redding, the City of Roseville and the Western Area Power Administration – Sierra Nevada Region (“WAPA”) determined that they desired to participate in EIM along with SMUD, referred to as “BANC EIM Phase 2”; and

WHEREAS, the participating members of BANC and WAPA have collaborated via the EIM Committee and Legal Committees to develop Business Practices that will provide detailed descriptions of the business relationship between the EIM Entity/BANC, EIM Participants, and BANC EIM Transmission Providers within the EIM Entity footprint; and

WHEREAS, these Business Practices for BANC EIM Phase 2 have been developed to address the day-to-day business activities, roles, and responsibilities related to BANC EIM Operations.

NOW THEREFORE, BE IT RESOLVED that the Commissioners of the Balancing Authority of Northern California hereby approve these Business Practices, in substantially final form to that provided to the Commission;

PASSED AND ADOPTED by the Commissioners of the Balancing Authority of Northern California this 28th day of October 2020, by the following vote:

		Aye	No	Abstain	Absent
Modesto ID	James McFall				
City of Redding	Dan Beans				
City of Roseville	Michelle Bertolino				
City of Shasta Lake	James Takehara				
SMUD	Paul Lau				
TPUD	Paul Hauser				

Dan Beans
Chair

Attest by: C. Anthony Braun
Secretary

Balancing Authority of Northern California

Agenda Item 5C

1. **BANC PC Area 2020 Transmission Planning Assessment.**
2. **Resolution 20-10-21 *Acknowledgment and Acceptance of BANC PC Area 2020 Transmission Planning Assessment.***

Braun Blaising Smith Wynne, P.C.

Attorneys at Law

10/21/20

To: BANC Commission

From: BANC Counsel

RE: Acknowledgement and Acceptance of BANC PC Area 2020 Transmission Planning Assessment

Included in the Commission packet for the October 28, 2020 Balancing Authority of Northern California (BANC) Commission meeting is the BANC Planning Coordinator (PC) Area 2020 Transmission Planning Assessment.¹ This document was produced by the Sacramento Municipal Utility District (SMUD), which serves as the BANC PC Services Provider, which received approval from each member of the BANC Planning Committee the week of October 5, 2020. The performance of the BANC PC Area's portion of the Bulk Electric System (BES) was assessed in order to demonstrate that all of the performance requirements specified in the North American Electric Reliability Corporation (NERC) Reliability Standard TPL-001-4 (Transmission System Planning Performance) were met for years 2021 through 2030 (planning years one through ten).

A number of studies were performed to assess BES performance under various scenarios. The Assessment did not identify any system deficiencies or criteria violations for the BANC PC portion of the BES. This assessment demonstrates BANC's compliance with the NERC TPL-001-4 Reliability Standard, the WECC TPL-001-WECC-CRT-3.2 Transmission System Performance Criterion, and the BANC PC Participant's respective voltage criteria.

Compliance with NERC Reliability Standard TPL-001-4 is one of several that must be met by the BANC PC, and the Commission is requested to acknowledge receipt and accept the BANC PC Area 2020 Transmission Planning Assessment by resolution.²

¹ Entities included in the BANC PC Area include: the Modesto Irrigation District, Redding Electric Utility, Roseville Electric and SMUD. The City of Shasta Lake and the Trinity Public Utilities District are part of the Western Area Power Administration – Sierra Nevada Region PC Area.

² Refer to BANC PC Committee Chair's Report for October 2020 for more information regarding the status of all PC-related NERC reliability standards.



Balancing Authority of Northern California

**BANC PC Area
2020 TPL-001-4 Assessment**

September 11th, 2020

Final

Executive Summary

An assessment was performed to demonstrate that the Balancing Authority of Northern California (BANC) Planning Coordinator (PC) portion of the Bulk Electric System (BES) meets the performance requirements specified in the TPL-001-4 NERC Reliability Standard for the years 2021 through 2030 (planning years one through ten).

Analyses were performed for steady state and stability to assess the BES performance following various NERC Category P0-P7 contingencies and extreme events as well as sensitivity studies. A spare equipment unavailability analysis was conducted with NERC Categories P0, P1 and P2 contingencies. The short circuit analysis of interrupting capability was supported by current and qualified past studies from each BANC PC Participant, whereas the steady state and stability analyses were supported by current studies.

For all analyses performed, there were no system deficiencies or criteria violations identified for the BANC PC portion of the BES. Furthermore, cascading was not identified for any of the extreme events evaluated. As such, there were no corrective action plans developed per this assessment.

The assessment demonstrates BANC PC's compliance with the NERC TPL-001-4 Reliability Standard, the WECC TPL-001-WECC-CRT-3.2 Transmission System Performance Criterion, and the BANC PC participant's respective voltage criteria.

Appendix A documents the TPL-001-4 requirements and the associated sections in this assessment that demonstrated compliance.

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Terms

BA	Balancing Authority
BANC	Balancing Authority of Northern California
MID	Modesto Irrigation District
NERC	North American Electric Reliability Corporation
PC	Planning Coordinator
PC Participants	SMUD, MID, RE, and REU
RE	Roseville Electric
REU	Redding Electric Utility
SMUD	Sacramento Municipal Utility District
TP	Transmission Planner
WECC	Western Electricity Coordinating Council

1 Introduction

The Balancing Authority of Northern California (BANC) is a Joint Powers Authority (JPA) consisting of the Sacramento Municipal Utility District (SMUD), Modesto Irrigation District (MID), Roseville Electric (RE), Redding Electric Utility (REU), Trinity Public Utilities District, and the City of Shasta Lake Utilities. BANC assumed the Balancing Authority (BA) responsibilities on May 1, 2011, with SMUD providing the BA operator services on a contract basis.

On January 1, 2017, BANC registered as the NERC Planning Coordinator (PC) for four of its members with a goal of fully complying with all PC-related reliability standards by January 1, 2018. The four BANC members that are in the BANC PC area are SMUD, MID, RE, and REU (individually “PC Participants” and collectively “PC Participants”). The City of Shasta Lake and Trinity Public Utility District are BANC members but are not PC Participants¹. BANC and SMUD entered into an agreement wherein SMUD provides PC services to BANC on a contract basis.

An assessment was performed for the BANC PC² portion of the Bulk Electric System (BES) in 2020 to demonstrate that it meets all performance and other requirements specified in the TPL-001-4 NERC Reliability Standard [1] for the years 2021 through 2030 (planning years one through ten).

This report documents the assessment and is structured as follows:

- Section 2 provides the scope of this assessment.
- Section 3 provides the assumptions used in this assessment.
- Section 4 provides the analyses performed for this assessment.
- Section 5 provides the results of this assessment.

Appendix A documents the TPL-001-4 requirements and the associated sections in this assessment that demonstrated compliance.

2 Study Scope

The BANC PC annual assessment measured the BES performance at the BANC PC Participant area for the years 2021 through 2030 (planning years one through ten) with the specific goal of demonstrating compliance with the TPL-001-4 NERC Reliability Standard. As such, the assessment was comprised of the following analyses:

- Steady state analysis
- Stability analysis

¹ The Western Area Power Administration – Sierra Nevada Region (WAPA-SNR) is also inside the BANC BA, but it is not a member of the BANC JPA. However, WAPA-SNR is an active participant in BANC activities. Additionally, WAPA-SNR is a registered PC and will serve as the PC for the Trinity Public Utilities District and the City of Shasta Lake. Thus, all BANC members are covered under either the BANC or WAPA-SNR PC registrations.

² BANC PC annual assessment includes performing an assessment for SMUD’s non-BES 115 kV elements and WAPA’s – SNR portion of the BES to insure reliable operation across the BANC PC area. The results of these studies are available to BANC members and upon request to entities with an NDA.

- Sensitivity analysis
- Spare equipment unavailability analysis
- Short circuit analysis

2.1 Steady State Analysis

A steady state analysis shall assess the system performance at peak load in the near-term and long-term transmission planning horizons. The steady-state performance shall be assessed in the near-term horizon using peak load cases that model year two (2022) and year five (2025). The long-term horizon shall be assessed using a peak load case for year ten (2030) as it represents the furthest out year of the long-term planning horizon, helping to identify potential future issues that may require significant lead time to adequately address and resolve.

In addition, the system performance at off-peak shall be assessed for one of the five years. Year two (2022) was selected for the spring off-peak load study scenario.

2.2 Stability Analysis

A stability analysis shall be performed to assess the system performance in the near-term planning and long-term planning horizon. The peak and off-peak cases for year two (2022) shall be used in the assessment for the near-term analysis and the peak case for year ten (2030) shall be used for the long-term analysis.

2.3 Sensitivity Study Scenarios

Sensitivity cases shall be used to assess the impact of changes to the basic assumptions used in the model. The sensitivity analysis shall vary one or more of the following conditions by a sufficient amount to stress the system within a range of credible conditions that demonstrate a measurable change in System response:

- Real and reactive forecasted Load.
- Expected transfers.
- Expected in service dates of new or modified transmission facilities.
- Reactive resource capability.
- Generation additions, retirements, or other dispatch scenarios.
- Controllable loads and demand side management.
- Duration or timing of known transmission outages.

A 1-in-10 year load forecast for the BANC PC area increased by 5% shall be used as the sensitivity study scenario to assess the near-term transmission planning horizon portion of the steady state analysis for the summer peak years 2022 and 2025. For the spring off-peak year of 2022, a reduced generation dispatch, and an extended transmission outage scenario were selected. A stability sensitivity analysis of the summer peak and spring off peak for the year 2022 was performed.

2.4 Spare Equipment Unavailability Study Scenarios

An entity’s spare equipment strategy could result in the unavailability of major transmission equipment that has a lead time of one year or more. The impact of possible equipment unavailability on system performance was studied for P0, P1, and P2 categories. BANC PC performed an assessment of its members spare equipment strategies for major transmission equipment that has a potential lead time of one year or more. The spare equipment strategies for REU showed that REU’s Airport 230/115 kV transformer could be out of service for one year or more. Studies were performed with this facility out of service to assess the impact on system performance for the possible unavailability.

BANC PC’s assessment of the SMUD, MID and RE systems found no major transmission equipment with a lead time of one year or more.

2.5 Short Circuit Analysis

A short circuit analysis shall be used to assess the near-term transmission planning horizon using peak generation and determine whether circuit breakers have the interrupting capability for faults that they will be expected to interrupt. The short circuit analysis uses the system short circuit model with any planned generation and transmission facilities in service which could impact the study area.

2.6 Summary of Study Years and Scenarios

Table 2.1 below summarizes the various types of analyses and study scenarios which were performed as part of transmission system planning assessment, and the study years that were selected for each analysis.

Table 2.1 – Study scenarios and years performed in this assessment

Analysis	Scenario	Near-term horizon year					Long-term horizon year				
		1 2022	2 '22	3 '23	4 '24	5 '25	6 '26	7 '27	8 '28	9 '29	10 '30
Steady state	Peak	-	X	-	-	X	-	-	-	-	X
	Off-peak	-	X	-	-	-	-	-	-	-	-
Stability	Peak	-	X	-	-	-	-	-	-	-	X
	Off-peak	-	X	-	-	-	-	-	-	-	-
Spare equipment unavailability	Peak	-	X	-	-	-	-	-	-	-	-
	Off-peak	-	-	-	-	-	-	-	-	-	-
Steady state sensitivity	Peak	-	X	-	-	X	-	-	-	-	-
	Off-peak	-	X	-	-	-	-	-	-	-	-
Stability sensitivity	Peak	-	X	-	-	-	-	-	-	-	-
	Off-peak	-	X	-	-	-	-	-	-	-	-

	Scenario	Near-term horizon year					Long-term horizon year				
		1 2022	2 '22	3 '23	4 '24	5 '25	6 '26	7 '27	8 '28	9 '29	10 '30
Analysis	Scenario										
Short circuit ³	Peak	Years vary dependent upon each PC Participant.									

3 Study Assumptions

The study assumptions used in this assessment are detailed in the sections that follow.

3.1 System Model Representations

This assessment utilized system models maintained by the PC for the BES portion and non-BES portion of the BANC PC area. These system models were developed in accordance with NERC Reliability Standard MOD-032-1 and were submitted to the WECC for use in the compilation of base cases for various study years and scenarios.

All cases used are developed from WECC approved base cases for this assessment; these cases, are listed in Table 3.1 below. Each study case was updated to reflect the system operating conditions, including the load forecasts and generation dispatch levels, provided by each BANC PC Participant for the year and scenario studied.

Table 3.1 - WECC base cases that were used in the assessment

Study Year	Scenario	WECC Base Case	WECC DYD File
2022	Summer Peak	20HS3a	20HS31
2022	Heavy Spring	20HSP1a	20HSP11
2025	Summer Peak	25HS2a	25HS21
2030	Summer Peak	30HS1a	30HS11

Assumptions and modifications for the cases are further described in the subsections below. These models use data consistent with that provided in accordance with all relevant modeling data reliability standards and are supplemented with data from other sources as necessary.

3.1.1 Existing Facilities

The system models used in this assessment represented all existing facilities.

3.1.2 Extended Duration Outages

The system models used in this assessment did not represent any known outages of generation or transmission facilities with a duration of at least six months because there are no such known outages.

³ The short circuit analysis performed for different years within the Near-Term Planning Horizon was dependent upon the data submitted by the BANC PC Participants.

3.1.3 New Planned Facilities and Changes to Existing Facilities

The system models used in this assessment represented all new planned facilities and changes to existing facilities. See Appendix B for details of the new planned facilities and changes to existing facilities

3.1.4 Real and Reactive Load Forecasts

The system models used in this assessment represented the most recent real power load forecasts and power factor from each BANC PC Participant. A 1-in-10 peak load forecast was used in the assessment for the summer peak study scenarios and typical off-peak loads were used for the spring off-peak scenario. A 1-in-10 peak load forecast increased by an additional 5% was used for the sensitivity analysis. Off-peak sensitivity was performed using a reduced generation dispatch, and an extended transmission outage scenario was selected. Table 3.2 below summarizes the load forecast data for all BANC PC Participants.

Table 3.2 – Load demand forecasts

PC Participant	Scenario	Real Power (MW)			Power Factor
		2022	2025	2030	
SMUD	1-in-10 Summer Peak	3143	3175	3224	0.983 lag
	Heavy Spring Off-Peak	1831	-	-	0.99 lag
MID	1-in-10 Summer Peak	707	710	717	0.969 lag
	Heavy Spring Off-Peak	412	-	-	
REU	1-in-10 Summer Peak	248	242	241	0.977 lag
	Heavy Spring Off-Peak	145	-	-	
RE	1-in-10 Summer Peak	392	407	414	0.985 lag
	Heavy Spring Off-Peak	229	-	-	

3.1.5 Firm Transmission Service

Firm transmission service was not defined in this assessment since BANC PC members have no commitments to provide firm transmission service. With no such commitments, BANC PC has no applicability to TPL-001-4 Table 1 requirements for “interruption of firm transmission service allowed.”

3.1.6 Resources Required for Load

The system models used in this assessment represented the supply side resources and their projected dispatches for the peak and off-peak load conditions as summarized in Table 3.3.

The system models did not represent demand side resources in this assessment. This assessment did represent demand side load response utilizing the WECC approved composite load model.

Table 3.3 –Supply-side resources and associated dispatch for the peak and off-peak scenarios

PC Participant	Type	Plant	Real power dispatch (MW)			
			Peak Year			Off-Peak
			2	5	10	2
SMUD	Thermal	Cosumnes Power Plant	560	560	560	510
		Campbell Soup	163	163	163	0
		Procter & Gamble	165	165	165	45
		Carson Ice	90	90	90	32
		McClellan	65	65	65	0
		UCD Med Center	25	25	25	10
		Total	1068	1068	1068	597
	Hydro	Loon Lake	25	25	25	0
		Robbs Peak	20	20	20	0
		Jones Fork	10	10	10	0
		Union Valley	44	44	44	40
		Jaybird	132	132	132	66
		Camino	90	90	90	50
		White Rock	228	228	228	100
	Total	549	549	549	256	
	Solar	Solar Shares	90	90	90	150
MID	Thermal	Woodland	103	135	111	111
		McClure	0	0	0	0
		Ripon	0	0	0	0
	Hydro	Don Pedro	40	45	45	45
	Solar	McHenry	24	24	24	20
REU	Thermal	Redding	137	137	137	49
RE	Thermal	Roseville Energy Park	150	150	150	80
		Roseville Peakers	0	0	0	0
Total			2,161	2,198	2,174	1,259

4 Analyses

This assessment included steady state, transient stability and short circuit analyses, which are described in the sections that follow. All simulations performed for the steady state and transient stability portion of this assessment were performed using the General Electric Positive Sequence Load Flow (PSLF). Short circuit studies were performed using Aspen One Liner, CAPE and GE PSLF. These software programs are widely used throughout the WECC.

4.1 Steady State Analysis

A steady state analysis was performed as part of this assessment to determine whether the BANC PC portion of the BES meets the performance requirements specified in the TPL-001-4 NERC Reliability Standard for the years 2021 through 2030 (planning years one through ten). The analysis was also performed to assess the impact of extreme events identified in TPL-001-4 table 1. This analysis was supported by current studies.

4.1.1 Peak Load Years

This assessment included a steady state analysis of peak loads for planning years two, five, and ten (i.e. 2022, 2025, and 2030) to span the near-term and long-term planning horizons. Years two (2022) and five (2025) were selected for inclusion in this assessment since they bookend the near-term planning horizon. Year one was not selected since the summer peak load for year one will be less than one year away when this report is finalized. Year ten of 2030 was selected for inclusion because it encompasses all approved projects for the long-term planning horizon.

4.1.2 Off-peak Load Years

This assessment included a steady state analysis of off-peak loads for planning year two (2022). Off-peak load is generally defined by BANC PC as spring with light system load of about 60% of peak, or as uniquely defined by an individual BANC PC participant for their own system, with voltages higher than normal, and generation at a minimum. The off-peak load used in this assessment was determined using engineering judgment and/or historical off-peak spring load data as provided by each BANC PC Participant.

4.1.3 Extended Duration Outages

As noted in Section 3.2.2 above, there was no known generation or transmission facility outage with a duration of at least six months. As such, this assessment did not include a steady state analysis of P1 events from Table 1 in TPL-001-4 with any known extended duration outages.

4.1.4 Sensitivity Analysis

This assessment included two sensitivity analyses on three scenarios to demonstrate the impact of changes to basic assumptions used in the system models to the steady state reliability. Sensitivity cases for the peak and off-peak load cases were developed by varying the certain conditions in such a way as to stress the system within a range of credible conditions that demonstrated a measurable change in system response.

A sensitivity analysis was performed on the 2022 and 2025 peak load years by using the 1-in-10 peak load forecast and further stressing the system by increasing the load by an additional 5%. The load power factors in the sensitivity cases were assumed to remain the same.

A sensitivity analysis was also performed on the 2022 off-peak load year by assuming one scenario with two different types of outages. One for SMUD, RE and REU in which the power output from the largest generation plant in each participant area was off-line, which would result in an increase in system imports and a decrease in online spinning generation. The other for MID requested the sensitivity of the Westley – Parker and Westley – Walnut 230 kV lines. The outage was studied to assess the impact on reliability with the temporary loss of import capability. Table 4.1 lists the scenarios for each BANC PC Participant in the sensitivity study base cases.

Table 4.1 – Spring off-peak sensitivity scenarios

PC Participant	Element	Scenario	
		Off-Peak	Off-Peak Sensitivity

SMUD	Cosumnes Power Plant	596 MW	0 MW
MID	Westley – Parker and Westley – Walnut 230 kV lines	In service	Out of service
REU	Redding Power Plant	107 MW	0 MW
RE	Roseville Power Plant	150 MW	0 MW

4.1.5 Spare Equipment Unavailability Analysis

The respective spare equipment strategies of the BANC PC Participants could result in the unavailability of the following major transmission equipment for one year or more:

- Airport 230/115 kV transformer

BANC PC’s spare equipment unavailability analysis found no major transmission equipment that could result in unavailability for one year or more, due to long lead time for MID, SMUD and RE.

A steady state analysis was performed for the 2022 peak load case to assess the impact of the possible unavailability of the long lead time equipment listed above. The steady state analysis included the evaluation of the P0, P1, and P2 category contingencies identified in Table 1 of TPL-001-4.

4.1.6 Contingencies Studied

The steady state analysis was performed using a comprehensive list of contingencies based on Table 1 of TPL-001-4. In addition, extreme events in Table 1 of TPL-001-4 were identified and included in this analysis. The rationale for selecting the contingencies for the steady state analysis was based on creating a comprehensive list to cover all scenarios listed in NERC TPL-001-4 Table 1 using engineering judgment, past studies, and knowledge of the BANC PC areas and surrounding portions of the BES. A summary of the types of contingencies included in the steady state analysis is shown in Table 4.2 below.

All contingencies simulated the removal of all elements that the protection system and other automatic controls are expected to disconnect without operator intervention. Generators with post-contingency steady state bus voltages outside the specified ranges provided by each BANC PC Participant were investigated to determine if the generators should be manually tripped to reflect actual protection equipment settings and generator limits. Transmission elements that were overloaded, were also investigated to see if they should be manually tripped to reflect actual protection equipment settings.

Devices designed to provide steady state control of electrical system quantities, such as phase-shifting transformers, load tap changing transformers, switched capacitors and inductors, were assumed to respond to any contingency after the post-transient contingency analysis time frames of one to three minutes. Therefore, the post-transient solution methodology was utilized, which disabled the adjustment of transmission devices such as phase-shifting transformers, load tap changing transformers, switched capacitors and inductors.

To comply with the TPL-001-4, R3.4, contingencies used in this analysis were coordinated with all adjacent PC's and TP's to ensure that contingencies on adjacent systems that may impact the BANC PC portion of the BES were included in this assessment.

Table 4.2 – Contingencies Studied in this Assessment (where applicable)

Contingencies	Description
P0 (No contingency)	All Elements in Service
P1 (Single Contingency)	<ul style="list-style-type: none"> • Loss of one generator (P1.1) • Loss of one transmission circuit (P1.2) • Loss of one transformer (P1.3) • Loss of one shunt or SVC/STATCOM device (P1.4) • Loss of a single pole of DC lines (P1.5)
P2 (Single Contingency)	<ul style="list-style-type: none"> • Loss of one transmission circuit without a fault (P2.1) • Loss of one bus section (P2.2) • Loss of one breaker (internal fault) (non-bus-tie-breaker) (P2.3) • Loss of one breaker (internal fault) (bus-tie-breaker) (P2.4)
P3 (Multiple Contingency)	Loss of a generator unit followed by system adjustments and the loss of the followings: <ul style="list-style-type: none"> • Loss of one transmission circuit (P1.2) • Loss of one transformer (P1.3) • Loss of one shunt or SVC/STATCOM device (P1.4)
P4 (Multiple Contingency)	Loss of multiple elements caused by a study breaker attempting to clear a fault on one of the following: <ul style="list-style-type: none"> • Loss of one generator (P4.1) • Loss of one transmission circuit (P4.2) • Loss of one transformer (P4.3) • Loss of one shunt device (P4.4) • Loss of one bus section (P4.5) • Loss of a bus-tie-breaker (P4.6)
P5 (Multiple Contingency)	Contingencies with delayed fault clearing due to the failure of a non-redundant relay protecting the faulted element to operate as designed for one of the following: <ul style="list-style-type: none"> • Loss of one generator (P5.1) • Loss of one transmission circuit (P5.2) • Loss of one transformer (P5.3) • Loss of one shunt device (P5.4) • Loss of one bus section (P5.5)
P6 (Multiple Contingency)	Loss of two or more (non-generator unit) elements with system adjustment between them, which produce the more severe system results
P7 (Multiple Contingency)	Loss of a common structure as follows: <ul style="list-style-type: none"> • Any two adjacent circuits on common structure (P7.1) • Loss of a bipolar DC lines (P7.2)

Contingencies	Description
Extreme	Local area or wide area events affecting the Transmission System <ul style="list-style-type: none"> • Loss of all Transmission lines on a common Right-of-Way • Loss of a substation • Loss of major gas pipeline • Loss of all generating units at a generating station • 3 phase fault with delayed clearing for two adjacent circuits

4.1.7 Performance Requirements

The steady state analysis results for category P0 through P7 contingencies were evaluated against the performance requirements in Table 1 of TPL-001-4.

These performance requirements can be summarized as:

- The system shall remain stable.
- Cascading and uncontrolled islanding shall not occur.
- Applicable facility ratings shall not be exceeded.
- Steady state voltages and post-contingency voltage deviations shall be within acceptable limits as established by BANC PC Participants.
- Non-consequential load loss is not allowed for category P1, P2.1, and P3 contingencies.

For the steady state analysis, each BANC PC Participant defined the acceptable limits for steady state voltages and voltage deviations as listed in the Table 4.3 below.

Table 4.3 – Steady State Voltage Criteria

System	Nominal Voltage	Normal Conditions		Contingency Conditions		Voltage Deviation (P1 & P2.1 only)
		Vmin (pu)	Vmax (pu)	Vmin (pu)	Vmax (pu)	
SMUD	230 kV	0.95	1.05	0.90 ⁴	1.05	≤ 8%
MID	230 kV	0.95	1.05	0.90	1.10	≤ 8%
MID	115 kV	0.95	1.05	0.90	1.10	≤ 8%
RE	230 kV	0.95	1.05	0.90	1.10	≤ 8%
REU	115 kV	0.974	1.078	0.948	1.078	≤ 8%

The results for the extreme contingencies were assessed for their impact to the system. If the results showed cascading caused by the occurrence of an extreme event, an evaluation of possible actions designed to reduce the likelihood or mitigate the consequences and adverse impacts of the events was conducted.

⁴ SMUD 230 kV buses that have a UVLS scheme associated with it are limited to Vmin of 0.948 PU, these buses include; Carmichael, Elk Grove, Elverta, Foothill, Hurley, Orangevale and Pocket.

4.2 Short Circuit Analysis

A short circuit analysis addressing the near-term transmission planning horizon was included in this assessment to determine whether circuit breakers have adequate interrupting capability for faults that they will be expected to interrupt.

This analysis was supported by past studies performed by SMUD, MID, REU, and RE. The past studies are qualified since they met the following criteria:

- The past studies are less than five calendar years old.
- No material changes have occurred since the past studies were performed.

The years studied covered the near-term planning horizon and are listed in Table 4.4.

Table 4.4 - Years Studied for Short Circuit Analysis

System	Study Year	Year Studied	Material Changes to System
SMUD	Year 1	2021	No
	Year 5	2025	No
MID	Year 1	2021	No
	Year 5	2025	No
REU	Year 1	2016	No
	Year 5	2016	No
RE	Year 1	2017	No
	Year 5	2017	No

4.2.1 Simulation Software

The short circuit studies provided by SMUD, REU and RE were performed with the ASPEN One Liner and CAPE software programs. MID utilized the GE PSLF software program.

These software programs are widely used throughout the WECC.

4.2.2 Rating Criteria

The criteria used in the short circuit analysis are based on industry standards developed and approved by the Institute of Electrical and Electronics Engineers in references [2] and [3].

4.3 Stability Analysis

A stability analysis was performed as part of this assessment to assess the transient stability performance of the BANC PC area in the near-term planning horizon. This analysis was supported by current studies.

Although there are no planned material generation additions or changes in the long-term horizon for the BANC PC, the year ten (2030) case was studied to assess potential impacts from neighboring systems.

4.3.1 Peak Load Years

This assessment included a stability analysis of the 2022 peak load year in the near-term planning horizon and year 2030 peak load year in the long-term planning horizon.

The rationale for selecting year two (2022) and year ten (2030) is the same rationale described in Section 4.1.1. Previous study experience has shown that the heavy summer scenario is generally the most critical scenario for transient stability studies. The WECC composite load models, which better represents the dynamic behavior of system loads, were used in this assessment.

4.3.2 Off-peak Load Years

This assessment included a stability analysis of the 2022 off-peak load condition in the near-term planning horizon.

4.3.3 Sensitivity Analysis

Like the steady state sensitivity analysis, two stability sensitivity analyses were performed to demonstrate the impact of changes to basic assumptions used in the system models to the stability of the system.

A sensitivity analysis was performed on the 2022 peak load year by using the 1-in-10 peak load forecast and stressing it by increasing the load by an additional 5%. The load power factors in the sensitivity cases were assumed to remain the same.

A sensitivity analysis was also performed on the 2022 off-peak load year by assuming the power output from the largest generator plant was offline, or main import lines were offline for each BANC PC Participant. The scenarios chosen can be found in Table 4.1.

4.3.4 Long-Term Planning Horizon

Although there are no planned material generation changes in the long-term planning horizon for the BANC PC, the 2030 heavy summer case was studied for potential impacts from any future generation additions external to BANC PC which could have a potential impact on the reliability of the BANC PC area.

4.3.5 Contingencies Studied

A stability analysis was performed based on the contingencies listed in Table 1 of TPL-001-4. Those planning events in Table 1 of TPL-001-4 that were expected to produce more severe stability impacts on the BANC PC portion of the BES were identified and included in this assessment. Extreme events were also identified and included in the analysis.

A summary of the types of stability contingencies evaluated in the stability analysis are shown in Table 4.2. The rationale for selecting the contingencies for the stability analysis was based on creating a comprehensive list to cover all scenarios listed in NERC TPL-001-4 Table 1 based on engineering judgment, past studies, and knowledge of the BANC PC area and surrounding portions of the BES.

All contingencies simulated the removal of all elements that the protection system and other automatic controls are expected to disconnect without operator intervention. Generators were

tripped with the generator under-voltage tripping indicated by the generator protection models, which are included in the WECC approved dynamic models if simulations showed generator bus voltages or high side of the generator step-up voltages below the ride-through voltage limitations specified in the PRC-024-2 NERC Reliability Standard. Transmission lines and transformers were tripped using the WECC approved generic relay models when transient swings showed the potential to cause protection system operation as defined under PRC-026-1⁵.

All existing devices that are designed to provide dynamic control of electrical system quantities were simulated. These devices include generator exciter control, power system stabilizers, static VAR compensators, power flow controllers, and DC Transmission controllers. The dynamic data used in the stability simulations included (but were not limited to) the modeling of generator governors, exciters, power system stabilizers, and other automatic control equipment.

The contingencies used in the transient stability analysis were coordinated with all adjacent PC's and TP's to ensure that contingencies on adjacent systems which may impact the BANC PC area were included in this assessment.

4.3.6 Performance requirements

The stability analysis results for category P0 through P7 contingencies included in this analysis were evaluated against the performance requirements in Table 1 of TPL-001-4. These performance requirements can be summarized as:

- The system shall remain stable.
- Cascading and uncontrolled islanding shall not occur.
- Transient voltage response shall be within acceptable limits as established by the PC and the TP.
- Non-consequential load loss is not allowed for category P1, P2.1, and P3 contingencies on the BANC PC portion of BES.
- For P1 events, no generating unit shall pull out of synchronism.
- For P2 through P7 events, generators that pull out of synchronism shall not cause apparent impedance swings that trip transmission system elements other than the generator unit and its directly connected facilities.
- For P1 through P7 events, power oscillations shall exhibit acceptable damping as established by the PC and the TP.

The results for the extreme contingencies were assessed for their impact to the system based on the above criteria. If the results showed cascading caused by the occurrence of an extreme event, an evaluation of possible actions designed to reduce the likelihood or mitigate the consequences and adverse impacts of the events was conducted.

⁵ Models used to insure relay performance during stable power swings were GE PSLF models: zonedef (zone definition for WECC distance relay model), distrel (WECC distance relay), zmetra (apparent impedance recorder), lnrelscan (line relay scanning model), lofscan (loss-of-field scanning model), and oosscan (out-of-step scanning model).

The criteria in WR1 of *WECC Criterion TPL-001-WECC-CRT-3.2 Transmission System Planning Performance* were used to assess the transient stability performance of the system. These criteria are as follows:

- For all P1 through P7 events, voltages shall recover to 80 percent voltage of the pre-contingency voltage within 20 seconds of the initiating event for each applicable BES bus serving load.
- For all P1 through P7 events, following fault clearing and voltage recovery above 80 percent, voltage at each applicable BES bus serving load shall neither dip below 70 percent of pre-contingency voltage for more than 30 cycles nor remain below 80 percent of pre-contingency voltage for more than two seconds.

The criterion for acceptable damping for power oscillations, which was adopted from WR1.6 in *WECC Criterion TPL-001-WECC-CRT-3.2 Transmission System Planning Performance*, was that all oscillations must show positive damping within 30 seconds after the start of the event. Oscillations that did not meet this criterion were deemed unstable.

The criteria used to identify system instability are as follows:

- Cascading – The uncontrolled successive loss of system elements triggered by an incident at any location and which results in widespread electric service interruption that cannot be restrained from sequentially spreading beyond an area predetermined by studies.
- Voltage instability – The violation of any of the low voltage criteria defined herein at any BES bus.
- Uncontrolled islanding – The unplanned and uncontrolled splitting of the power system into two or more islands. Severe disturbances may cause uncontrolled separation by causing a group of generators in one area to swing against a group of generators in a different area of the power system.

Simulations that resulted in cascading, voltage instability, or uncontrolled islanding were deemed unstable.

5 Study Results

The results of the steady state, short circuit, and stability analyses are described in the sections that follow for the BANC PC⁶ area.

5.1 Steady State

The steady state analysis did not identify any performance deficiencies for the Category P0 to P7 contingencies that were evaluated. As such, there were no corrective action plans resulting from the steady state analysis.

⁶ BANC PC annual assessment includes performing an assessment for SMUD's non-BES 115 kV elements and WAPA's – SNR portion of the BES to insure reliable operation across the BANC PC area. The results of these studies are available to BANC members and upon request to entities with an NDA.

A summary of the steady state study results can be referenced in Appendix C.

5.1.1 Impact of Extreme Contingencies

The steady state analysis identified thermal overloads and voltage criteria violations for certain extreme contingencies. As these are by nature very low probability events and because cascading was not identified, corrective action plans were not developed to mitigate these contingencies.

A summary of the steady state study results for extreme contingencies can be referenced in Appendix C.

5.1.2 Sensitivity Analysis

The sensitivity analyses did not identify any performance deficiencies for the Category P0 to P7 contingencies that were evaluated.

A summary of the steady state sensitivity study results can be referenced in Appendix D.

5.1.3 Spare Equipment Unavailability Analysis

The results of the spare equipment unavailability analysis showed no performance deficiencies. As such, there are no recommendations for the spare equipment strategy.

5.2 Short Circuit

The short circuit analysis showed that all circuit breakers in the BANC PC area have adequate short circuit current interrupting capabilities and no corrective action plans are necessary to meet the performance requirements. A list of elements that exceeded 80% of their rated fault duty is provided in Appendix F. These elements will be reviewed in future assessments due to their high interrupting duties.

The interrupting capabilities are listed in References [4] to [8].

5.3 Stability

The stability analysis for the 2022 peak and off-peak cases did not identify any system deficiencies for the Category P1 to P7 contingencies that were simulated. All stability performance criteria were met, and no corrective action plans are necessary to meet the performance requirements.

See Appendix E for sample stability plots. Additional plots are available upon request.

5.3.1 Sensitivity Analysis

The peak load and off-peak load stability sensitivity analyses did not identify any stability performance deficiencies. All performance criteria were met.

5.3.2 Impact of Extreme Contingencies

The stability analysis did not identify any cascading or uncontrolled islanding.

References

- [1] *Transmission System Planning Performance Requirements*. NERC Reliability Standard TPL-001-4. May 7, 2014.
- [2] *IEEE Application Guide for AC High-Voltage Circuit Breakers Rating on a Symmetrical Current Basis*. IEEE Std. C37.010-1999 (R2005).
- [3] *IEEE Standard Rating Structure for AC High-Voltage Circuit Breakers*. IEEE Std. C37.04-1999.
- [4] *Assessment of Interruption Capability of 230 kV Circuit Breaker*. Sacramento Municipal Utility District. November 6, 2015.
- [5] *Assessment of Interruption Capability of 230 kV Circuit Breaker Addendum*. Sacramento Municipal Utility District. December 18, 2015.
- [6] *2016 System Impedance Diagram & Fault Duties*. Redding Electric Utility. September 28, 2016.
- [7] *MID BES Circuit Breaker Capacity Ratings and Maximum Available Fault Current for 2017 TPL Assessment*. Modesto Irrigation District. September 15, 2017.
- [8] *2017 Fault Level-CB Breaking Capability Limits*. Roseville Electric. September 6, 2017.

Appendix A. TPL-001-4 Requirement Matrix

The table below lists the TPL-001-4 requirements and the associated sections in this assessment that demonstrated compliance.

Table A.1 – Compliance requirements and their corresponding sections and pages

Requirement	Section	Page
R1	3.1	4
R1.1	-	-
R1.1.1	3.1.1	4
R1.1.2	3.1.2	5
R1.1.3	3.1.3	5
R1.1.4	3.1.4	5
R1.1.5	3.1.5	5
R1.1.6	3.1.6	6
R2	-	-
R2.1	4.1	6
R2.1.1	4.1.1	7
R2.1.2	4.1.2	7
R2.1.3	4.1.3	7
R2.1.4	4.1.4	7
R2.1.5	4.1.5	8
R2.2	4.1.1	7
R2.2.1	4.1.1	7
R2.3	4.2, 5.2	11,15
R2.4	4.3	11
R2.4.1	4.3.1	12
R2.4.2	4.3.2	12
R2.4.3	4.3.3	12
R2.5	4.3.4	12
R2.6	4.2	10
R2.6.1	4.2	10
R2.6.2	4.2	10
R2.7	5	14
R2.7.1	5	14
R2.7.2	5	14
R2.7.3	5	14
R2.7.4	5	14
R2.8	5.2	15
R2.8.1	5.2	15
R2.8.2	5.2	15
R3	4.1	7
R3.1	4.1.6	8
R3.2	4.1.6	8
R3.3	4.1.6	8
R3.3.1	4.1.6	8
R3.3.1.1	4.1.6	8
R3.3.1.2	4.1.6	8

Table A.1 continued

Requirement	Section	Page
R3.3.2	4.1.6	8
R3.4	4.1.6	8
R3.4.1	4.1.6	8
R3.5	4.1.6	8
R4	4.3.5	12
R4.1	4.3.5	12
R4.1.1	4.3.6	13
R4.1.2	4.3.6	13
R4.1.3	4.3.6	13
R4.2	4.3.6	13
R4.3	4.3.6	13
R4.3.1	4.3.6	13
R4.3.1.1	4.3.6	13
R4.3.1.2	4.3.6	13
R4.3.1.3	4.3.6	13
R4.3.2	4.3.6	13
R4.4	4.3.6	13
R4.4.1	4.3.6	13
R4.5	4.3.6	13
R5	4.3.6	13
R6	4.3.6	13
R7	1	1
R8	-	-
R8.1	-	-

Appendix B. Planned Projects

Table B.1 – Planned facilities and changes to existing facilities

PC Participant	Project Name	Project Description	Project Status	Expected In-Service Date
SMUD	Hurley - Procter 230 kV Line Reconductoring	Reconductor the Hurley-Procter 230-kV line with a higher ampacity conductor.	Approved	Summer 2021
	Hurley 230 kV bus-tie breaker	Split Hurley 230 kV bus with bus-tie breaker so that bus faults do not take out the entire bus.	Approved	Summer2023
	Hurley – Natomas 230 kV Rating Increase	Mitigate clearance issues on the line to increase the summer emergency rating	Approved	Summer 2021
	Rancho Seco Solar Shares II	160-MW solar PV project at Rancho Seco 230 kV.	Approved	Fall 2020

Appendix C. Steady State Analysis Results

The thermal and voltage results for the peak and off-peak steady state results are listed below.

Table C.1 – The 1-in-10 peak load steady state results

PC Participant	Category	Contingency	Affected Facility	Facility Rating	2022	2025	2030
SMUD	Extreme	Loss of all lines south of Elk Grove 230 kV station	Campbell Soup-Hedge 230 kV line	1,396 Amps	119%	136%	142%
			Campbell Soup- Pocket 230 kV	1,442 Amps	90%	104%	110%
	Extreme	Loss of all lines north of Procter 230 kV station	Folsom-Lake 230 kV line	856 Amps	<90%	111%	110%
			Folsom-Orangevale 230 kV line	856 Amps	94%	107%	109%
MID	Extreme	Westley East Bus outage	Warnerville-Standiford 115 kV line #7	918 Amps	112%	114%	115%
			Warnerville – Standiford 115 kV line #8	918 Amps	112%	114%	115%
	Extreme	Loss of Westley-Parker, Westley-Walnut, and Westley-Rosemore #1 & #2 230 kV lines	Warnerville-Standiford 115 kV #7 line	917 Amps	110%	112%	113%
			Warnerville-Standiford 115 kV #8 line	917 Amps	112%	114%	115%
REU	Extreme	Loss of Keswick-Airport, Flanagan-Keswick, Keswick-Olinda, and Keswick-O'Banion 230 kV lines	Keswick-Eureka 115 kV line	798 Amps	171%	193%	193%
			Keswick-Beltline 115 kV line	798 Amps	148%	163%	162%
			Beltline-College View 115 kV line	999 Amps	<100%	109%	110%
			Eureka Way-Oregon 115 kV line	899 Amps	144%	164%	164%
			Moore-Waldon 115 kV line	592 Amps	180%	209%	209%

PC Participant	Category	Contingency	Affected Facility	Facility Rating	2022	2025	2030
			Oregon-Waldon 115 kV line	592 Amps	206%	236%	236%

Table C.2 – The Spring off-peak load steady state results

PC Participant	Category	Contingency	Affected Facility	Facility Rating	2022
REU	Extreme	Loss of Keswick-Airport, Flanagan-Keswick, Keswick-Olinda, and Keswick-O'Banion 230 kV lines	Keswick-Eureka 115 kV line	798 Amps	162%
			Keswick-Beltline 115 kV line	798 Amps	136%
			Beltline-College View 115 kV line	999 Amps	105%
			Eureka Way-Oregon 115 kV line	899 Amps	139%
			Moore-Waldon 115 kV line	592 Amps	188%
			Oregon-Waldon 115 kV line	592 Amps	204%

Appendix D. Steady State Sensitivity Analysis Results

Table D.1 – The 1-in-10 peak load +5% steady state sensitivity results

PC Participant	Category	Contingency	Affected Facility	Facility Rating	2022	2025
SMUD	P7	Elk Grove-Rancho Seco #1 and #2 230 kV line outage (1LG fault at ELK)	Campbell-Hedge 230 kV Line	1,396 Amps	94.5%	105%
MID	Extreme	Loss of Westley-Parker, Westley-Walnut, and Westley-Rosemore #1 & #2 230 kV lines	Warnerville-Standiford 115 kV #7 line	917 Amps	117%	103%
			Warnerville-Standiford 115 kV #8 line	917 Amps	118%	105%
REU	Extreme	Loss of Keswick-Airport, Flanagan-Keswick, Keswick-Olinda, and Keswick-O'Banion 230 kV lines	Keswick-Eureka 115 kV line	798 Amps	172%	195%
			Keswick-Beltline 115 kV line	798 Amps	148%	163%
			Eureka Way-Oregon 115 kV line	899 Amps	144%	165%
			Moore-Waldon 115 kV line	592 Amps	179%	208%
			Oregon-Waldon 115 kV line	592 Amps	205%	236%
			Airport 230/115 kV Transformer #1 and #2	120 MVA	156%	162%

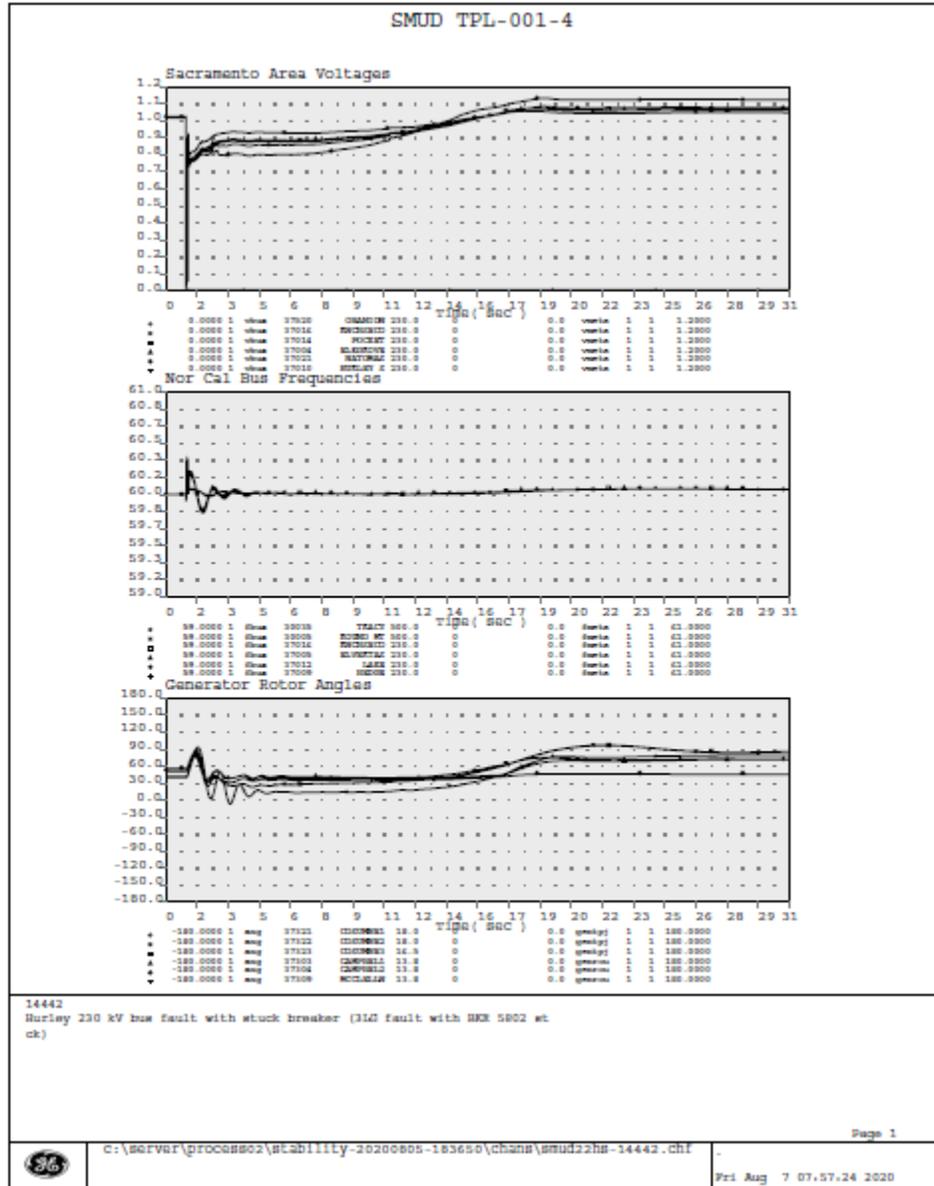
Table D.2 – The off-peak load steady state sensitivity results

PC Participant	Category	Contingency	Affected Facility	Facility Rating (Amps/MVA)	2022 (%)
REU	Extreme	Loss of Keswick-Airport, Flanagan-Keswick, Keswick-Olinda, and Keswick-O'Banion 230 kV lines	Keswick-Eureka 115 kV line	798 Amps	167%

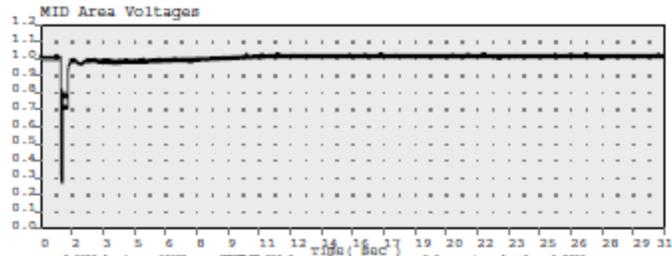
PC Participant	Category	Contingency	Affected Facility	Facility Rating (Amps/MVA)	2022 (%)
			Keswick-Beltline 115 kV line	798 Amps	133%
			Eureka Way-Oregon 115 kV line	899 Amps	144%
			Moore-Waldon 115 kV line	592 Amps	195%
			Oregon-Waldon 115 kV line	592 Amps	211%
			Airport 230/115 kV Transformer #1 and #2	120 MVA	135%

Appendix E. Sample Transient Stability Plots

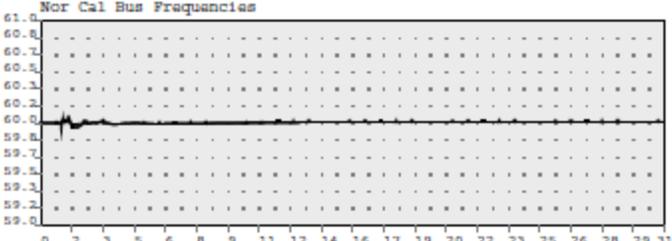
Sample plots for each PC Participant are shown below.



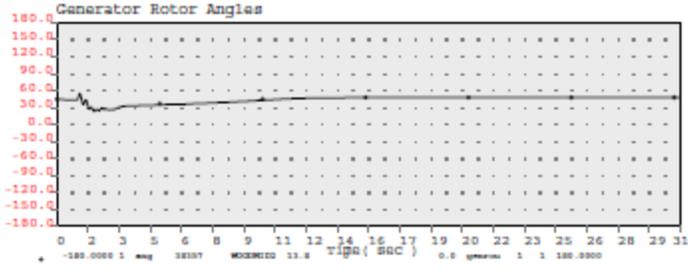
Modesto TPL-001-4



+	0.0000	1	Area	38270	WALLEY 230.0	0	0.0	Series	1	1	1.2000
+	0.0000	1	Area	38287	RODMAN 230.0	0	0.0	Series	1	2	1.2000
+	0.0000	1	Area	38204	PRAC MID 230.0	0	0.0	Series	1	1	1.2000
+	0.0000	1	Area	38210	STANFORD 110.0	0	0.0	Series	1	1	1.2000
+	0.0000	1	Area	38234	MC CLURE 110.0	0	0.0	Series	1	1	1.2000



+	59.0000	1	Area	38010	TRACY 500.0	0	0.0	Series	1	1	61.0000
+	59.0000	1	Area	38008	RODMAN 500.0	0	0.0	Series	1	2	61.0000
+	59.0000	1	Area	38070	WALLEY 230.0	0	0.0	Series	1	1	61.0000
+	59.0000	1	Area	38287	RODMAN 230.0	0	0.0	Series	1	1	61.0000
+	59.0000	1	Area	38210	STANFORD 110.0	0	0.0	Series	1	1	61.0000

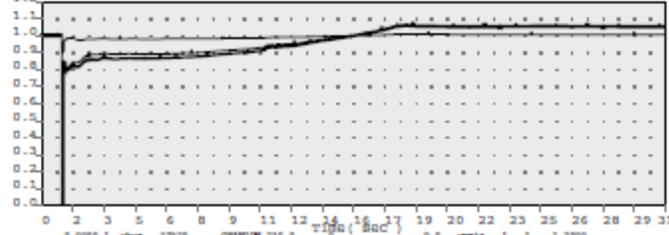


1203
Parker STA - Walnut 230 kV #1 TL outage (15G fault at WAL with BKE 800 stuck)



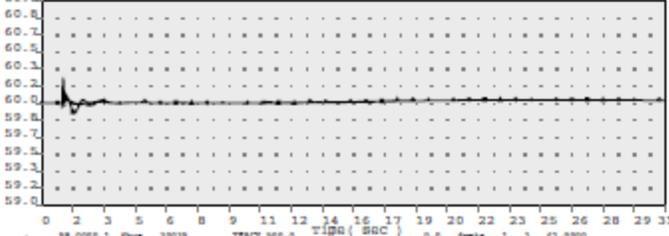
Roseville TPL-001-4

Roseville Area Voltages



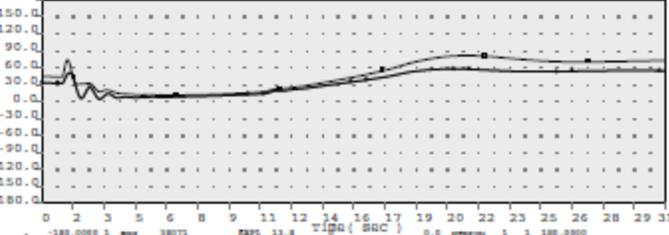
Time (Sec)	Value	Bus	Phase	Angle	Order
0.0000	1.0000	37620	CHANDLER 230.0	0.0	1 1 1.2000
0.0000	1.0000	37627	ROSEVILLE 230.0	0.0	1 1 1.2000
0.0000	1.0000	37628	FIDDYMONT 230.0	0.0	1 1 1.2000
0.0000	1.0000	37648	WELLS 230.0	0.0	1 1 1.2000
0.0000	1.0000	37646	CLYDEMAN 230.0	0.0	1 1 1.2000
0.0000	1.0000	37645	CLYDEMAN 230.0	0.0	1 1 1.2000

Nor Cal Bus Frequencies



Time (Sec)	Value	Bus	Phase	Angle	Order
0.0000	60.0000	30030	TRACY 500.0	0.0	1 1 62.0000
0.0000	60.0000	30028	ROCKWELL 500.0	0.0	1 1 62.0000
0.0000	60.0000	37628	FIDDYMONT 230.0	0.0	1 1 62.0000
0.0000	60.0000	37627	ROSEVILLE 230.0	0.0	1 1 62.0000
0.0000	60.0000	37620	CHANDLER 230.0	0.0	1 1 62.0000
0.0000	60.0000	37646	CLYDEMAN 230.0	0.0	1 1 62.0000

Generator Rotor Angles

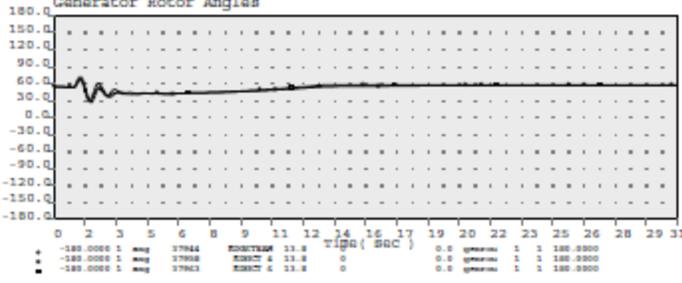
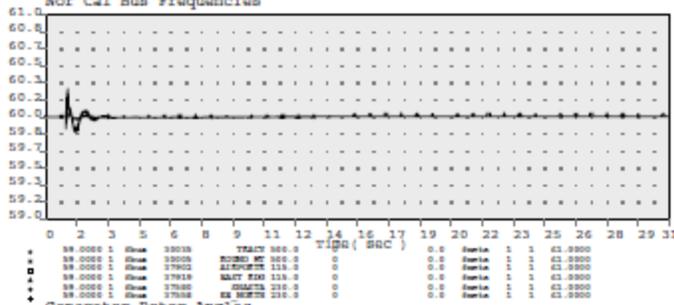
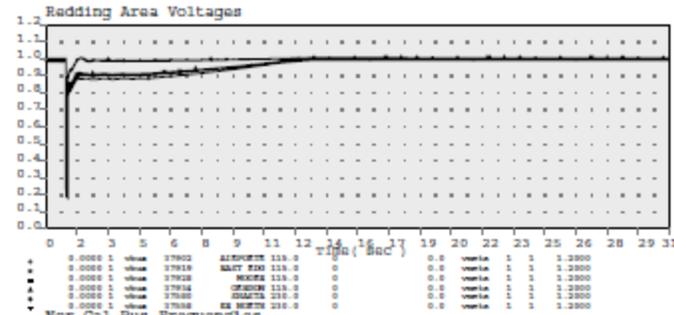


Time (Sec)	Value	Bus	Phase	Angle	Order
-180.0000	1.0000	30071	RRPC 13.8	0.0	1 1 180.0000
-180.0000	1.0000	30079	RRPC 13.8	0.0	2 1 180.0000
-180.0000	1.0000	30080	RRPC 13.8	0.0	3 1 180.0000

117
 Polaris #3 generator outage and Fiddymont-Roseville 230 kV TL outage (3
 G fault at PIT)



Redding TPL-001-4



1333
 AirportW - AirportE 115 kV TL outage and Keswick-Airport 230 kV TL out
 go (3LG fault at AIR)

Appendix F. Sample Short Circuit Results

Table F.1 – List of Short Circuit elements that exceed 80% duty.

PC Participant	Element	Fault Type	Year	Facility Rating (A)	Duty (A)	Duty (%)
SMUD	Hurley CB 5814	2LG	2020	35,369	30,664	86.7
	Hurley CB 5820	2LG	2020	35,369	32,291	91.3
	Hurley CB 5834	2LG	2020	35,369	32,787	92.7
MID	Westley CB 2354	3Ø	2022	40,000	38,098	95.2
	Westley CB 2355	3Ø	2022	40,000	38,098	95.2
	Westley CB 2356	3Ø	2022	40,000	38,098	95.2
	Standiford CB 901	3Ø	2022	25,000	21,127	84.5
	Standiford CB 902	3Ø	2022	25,000	21,127	84.5
Redding	Airport CSW Bank 1	1LG	2016	20,000	16,918	84.6
	Sulphur Creek CSW Bank 1	3Ø	2016	10,000	9,627	96.3
Roseville	N/A					

Appendix G . Version History

Version	Change(s)	By	Date
0.0	Initial draft	Brett Kelly	8/14/2020
1.0	Final Draft	Brett Kelly	9/11/2020

**Balancing Authority of Northern California
Resolution 20-10-21**

ACKNOWLEDGEMENT AND ACCEPTANCE OF BALANCING AUTHORITY OF NORTHERN CALIFORNIA PLANNING COORDINATOR AREA 2020 TRANSMISSION PLANNING ASSESSMENT

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 is the NERC Planning Coordinator (“PC”) for four of its members, including the Sacramento Municipal Utility District, Modesto Irrigation District, Redding Electric Utility, and Roseville Electric; and

WHEREAS, BANC must demonstrate compliance with certain PC-related NERC reliability standards, including TPL-001-4; and

WHEREAS, in order to meet this standard, SMUD, as the PC Services Provider, produced the BANC PC Area 2020 Transmission Planning Assessment (“Assessment”), in which the performance of the BANC PC area was assessed in order to demonstrate that its portion of the Bulk Electric System meets all of the performance requirements specified in the above-mentioned standard for the years 2021 through 2030; and

WHEREAS, the Assessment concludes that no system deficiencies or criteria violations were identified for the BANC PC portion of the Bulk Electric System; and

WHEREAS, each PC Committee member approved the Assessment on or before October 9th.

NOW, THEREFORE, BE IT RESOLVED that the Commissioners of the Balancing Authority of Northern California hereby acknowledge and accept the Assessment.

PASSED AND ADOPTED by the Commissioners of the Balancing Authority of Northern California this 28th day of October, 2020, by the following vote:

		Aye	No	Abstain	Absent
Modesto ID	James McFall				
City of Redding	Dan Beans				
City of Roseville	Michelle Bertolino				
City of Shasta Lake	James Takehara				
SMUD	Paul Lau				
TPUD	Paul Hauser				

Dan Beans
Chair

Attest by: C. Anthony Braun
Secretary

Balancing Authority of Northern California

Agenda Item 5D

- 1. DRAFT BANC 2020-21 Strategic Initiatives.**

BANC 2020/2021 Strategic Plan - Routine Initiatives DRAFT

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		Maintain long-term succession plan and traits for General Manager	Jim Shetler/Commission	Ongoing as Necessary	
3 Medium	OUTREACH	Engage in industry forums (WECC, Peak, NWPPA, etc.)	Jim Shetler	Ongoing	Attend RC West, WECC Board, WEIL, & NWPP Exec. Forum meetings
4 Medium		Coordinate with other POU BAs (Ca and regionally)	Jim Shetler	Ongoing	Coordinating with SCL, SRP, LA, TP, & TID on EIM/EDAM
5 Medium		Outreach to regulatory and legislative bodies on key issues	Jim Shetler/BBSW	Ongoing as Necessary	Participating in WEIL group outreach to West governors
6 Medium		More formal engagement with TID on BA/EIM/EDAM issues	Jim Shetler/BBSW	Ongoing	
7 Medium	ASSETS	Evaluate joint options for resource needs for BA	Resource Committee	4th Qtr. 2021	
8 Low	MEMBER SERVICES	Identify and outreach to potential new BANC members	Jim Shetler	Ongoing	

BANC 2020/2021 Strategic Plan - Focused Initiatives DRAFT

No./Priority	Focus Area	Initiative	Responsibility	Target Due Date	Status
9 High	INDEPENDENCE	Manage implementation of EIM Phase 2 participation effort	Jim Shetler/SMUD	3/25/21	
10 High		Manage EIM Phase 1 & 2	Jim Shetler/SMUD	Ongoing	
11 High		EDAM evaluation effort ~ CAISO Stakeholder Process ~ CAISO Tariff Development	Jim Shetler/BBSW Jim Shetler/BBSW	3rd Qtr. 2021 1st Qtr. 2022	
12 Medium	OUTREACH	Evaluate opportunities to engage other entities in market development	Jim Shetler	Ongoing	Coordinating with SCL, SRP, LADWP, TID, & Tacoma
13 Medium		Regional Policy Issues: Monitor/ weigh-in where appropriate	Jim Shetler/Commission	Ongoing	
14 High		Regionalization: ~Monitor CAISO GRC effort	Jim Shetler/BBSW	4th Qtr. 2021	
15 High		Coordinate with CA BAs on SB100 effort	Jim Shetler/BBSW	12/31/21	
16 Medium	ASSETS	Evaluate resource criteria for BANC long-term needs	Jim S./Res. Com.	4th Qtr. 2021	
17 Medium	MEMBER SERVICES	Evaluate possible support to participants for EIM operations	Jim S.	Ongoing	