

**Balancing Authority of Northern California**

# Regular Meeting of the Commissioners of BANC

**2:00 P.M.**

**Wednesday, January 23, 2019**

**915 L Street, Suite 1480**

**Sacramento, CA 95814**

# 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 **January 23, 2019 at 2:00 p.m.**, at **915 L Street, Suite 1480, Sacramento, CA 95814.**

### 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 held on November 14, 2018.
  - B. BANC Operator's Reports (November and December).
  - C. Compliance Officer's Reports (December and January).
  - D. PC Committee Chair's Reports (December and January).
  - E. General Manager's Report and Strategic Initiatives Update.
- 5 Regular Agenda Items – Discussion and Possible Action.**
  - A. EIM Implementation/EDAM Update.
    - i. BANC EIM Phase 1 Bilateral Trading Guidelines.
    - ii. Consider and Possibly Approve Resolution 19-01-15 *Approval of BANC EIM Cost Allocation for Phase 2 Participation.*
    - iii. Consider and Possibly Approve Resolution 19-01-14 *Authorization of Contract for Services Related to BANC EIM Phase 2, EIM Phase 1 Support/Analysis, and EDAM Support.*
    - iv. EIM Phase 2 Preparation Efforts.
    - v. EIM Governance Update.
    - vi. EDAM Update.
  - B. RC Services update
- 6 Closed Session:** Conference with legal counsel in anticipation of litigation pursuant to subdivision (c) of Cal. Gov't Code § 54956.9; one case.
- 7 Adjournment.**

## **Balancing Authority of Northern California**

# Consent Agenda Items

- A. Minutes of the November 14, 2018 BANC Regular Meeting.**
- B. BANC Operator's Reports (November and December).**
- C. Compliance Officer's Reports (December and January).**
- D. PC Committee Chair's Reports (December and January).**
- 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)

November 14, 2018

On this date, a Regular Meeting of the Commissioners of the Balancing Authority of Northern California (BANC) was held at 35 Iron Point Circle, Suite 225, Folsom, CA 95630.

Representatives Present:

<b>Member Agency</b>	<b>Commissioner</b>
Modesto Irrigation District	Greg Salyer, Chair
City of Redding	Dan Beans
City of Roseville	Michelle Bertolino
Sacramento Municipal Utility District	Arlen Orchard
City of Shasta Lake	James Takehara
Trinity Public Utilities District	Absent

<b>Agency</b>	<b>Liaison</b>
Western Area Power Administration	Dawn Roth Lindell Sonja Anderson Ray Ward

1. Call to Order: Chair Salyer called the meeting to order at 2:02 p.m.
2. Matters Subsequent to Posting the Agenda: None.
3. Public Comment: Chair Salyer invited comments from the public and none were given.
4. Consent Agenda: Mr. Orchard moved, Mr. Takehara seconded, and the participating Commissioners unanimously approved the Consent Agenda items comprised of: (A) Minutes of the Regular Commission Meeting held on September 19, 2018. (B) BANC Operator's Reports for September and October; (C) Compliance Officer's Reports for October and November; (D) PC Committee Chair's Report for October and November; and (E) General Manager's Report and Strategic Initiatives Update.

5. Regular Agenda Items:

A. EIM Implementation/EDAM Update

Mr. Shetler provided a brief overview of Phase 1 Implementation, a brief discussion on Phase 2, including a budget discussion, and the status of the Extended Day Ahead Market (EDAM) and gearing up for a potential feasibility assessment. With regard to Phase 1, all required software is on site and in final testing. FERC approved the EIM Entity Agreement on October 18, 2018. Joint integration testing with CAISO is complete. Day-in-the-life testing was initiated on November 1<sup>st</sup>, Market Simulation starts December 3<sup>rd</sup>, and Parallel Operations begins February 1<sup>st</sup>. All is on track for the April 3<sup>rd</sup> go-live.

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

Officer Certification is underway, and BANC is in the process of meeting the Minimum Participation requirements, including financial security/collateral requirements.

Mr. Shetler reviewed CAISO Security & Collateral requirements; BANC will provide a combined total of \$1.5 million. The Commission will be asked to amend the 2018 budget and approve this later in the agenda. EIM Phase 1 implementation expenditures are currently projected to come within 3% of plan.

On Phase 2, there is basic agreement with CAISO with regard to how it would be handled. The intent is to schedule a joint meeting with Phase 2 BANC members and CAISO in early 2019. Current BANC thinking and recommendations from the CAISO are that all Phase 2 BANC members implement at the same time, rather than separately. The 2019 BANC budget, which will be discussed later, includes Phase 2 preparation estimates. A gap analysis is planned for early summer, following Phase 1 implementation, with procedure/process development and a Phase 2 implementation estimate to follow. Mr. Shetler plans to have dialogue with Utilicast around continued utilization of the same consultant for Phase 2. A decision on Phase 2 and which entities will participate will need to be made no later than early fall for an April 2021 go-live.

A draft market design for EDAM has been essentially finalized by the EIM Entities, with a planned feasibility assessment (by E3 & the Brattle Group) to occur between December of 2018 and June of 2019. The assessment will include a gross benefits analysis of the market and an optional high-level, non-public gross allocation of benefits to each EDAM participant. Entities also have the option to engage the consultants for a more detailed, individual assessment. CAISO could launch a formal stakeholder process in the second half of 2019, dependent upon the results of the assessment, with an estimated go-live date of late 2021 to early 2022. The Commission will be asked to act on moving forward with the feasibility assessment later in the agenda. Mr. Orchard asked whether it was anticipated that all entities would go live on the same date or whether it would be phased like EIM, and Mr. Shetler responded that the concept is that all would go at once.

- i. Mr. Shetler reviewed the proposed budget adjustment to the 2018 BANC budget, which did not originally include the minimum security and collateral deposits for EIM Phase 1. Other minor adjustments were made, but this is the primary driver for the change; overall, the total budget is minimally impacted. Mr. Braun asked whether any additional any additional discussion was required before voting on Resolutions 18-11-03, 18-11-05, and 18-11-06 prior to voting on them; none was required. Mr. Beans moved, Ms. Bertolino seconded, and the participating Commissioners unanimously approved Resolution 18-11-03 *Approval of Revised 2018 Annual Budget for BANC*.
  - ii. Mr. Beans moved, Ms. Bertolino seconded, and the participating Commissioners unanimously approved 18-11-05 *Authorization for CAISO Financial Security and Collateral Posting in Furtherance of the EIM Entity SC Certification*.
- B. Mr. Beans moved, Ms. Bertolino seconded, and the participating Commissioners unanimously approved Resolution 18-11-06 *Authorization of Contract for Services Related to EDAM Feasibility Assessment*.
- C. Mr. Braun reminded the Commission of the action taken in the last closed session with regard to the General Manager's review and provided an overview of proposed changes to the attached agreement. Mr. Orchard moved, Ms. Bertolino seconded, and the participating Commissioners unanimously approved Resolution 18-11-02 *Approval of*

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

*Amended Management Services Agreement Between BANC and Adirondack Power Consulting, LLC.*

- D. Mr. Shetler presented an overview of the proposed 2019 BANC budget as outlined in the packet. Representatives from WAPA asked about how any changes that they would need to make related to Phase 2 would be addressed. Mr. Shetler indicated that this would be addressed within the gap analysis. It was agreed previously that Phase 2 implementation costs would be addressed through a future budget adjustment. Mr. Orchard moved, Mr. Beans seconded, and the participating Commissioners unanimously approved Resolution 18-11-04 *Approval of 2019 Annual Budget for BANC*.
- E. Chair Salyer requested that the Commission consider moving up to five meetings to Sacramento, as there are only three currently scheduled in Folsom (Iron Point Circle) with both TANC and MSR meetings preceding the BANC Commission meeting. Mr. Orchard suggested settling on six in Folsom and six at 915 L Street. Mr. Shetler then suggested moving January and October from Folsom to 915 L Street to achieve the even split. Mr. Braun restated the list of meetings that would be held in Folsom at Iron Point Circle and those that would be held at 915 L Street with the suggested changes. Mr. Beans then moved, Mr. Orchard seconded, and the participating Commissioners unanimously approved Resolution 18-11-01 *Resolution Setting the Regular Meeting Dates for 2019*.
- F. Mr. Joseph Gillette presented on the BANC PC Area 2018 Ten-Year Transmission Planning Assessment, including the PC participants, an overview of the reliability standard, study inputs, analyses performed, performance criteria, and study results. Ms. Bertolino moved, Mr. Beans seconded, and the participating Commissioners unanimously approved Resolution 18-11-07 *Acknowledgement and Acceptance of BANC PC Area 2018 Transmission Planning Assessment*.
- G. Mr. Shetler provided an RC Services transition update, including information regarding the two RC Transition Coordination Group tracks (Track 1 is RC-RC-Transition & Track 2 is Peak Wind-down) and BANC's transition to CAISO RC services. In Track 1, RC footprints have essentially been defined, allowing RCs to make decisions on the transfer of processes and tools and defining seams issues. Issues for follow-up include multiple go-live dates and the possibility for consolidation, long-term vs. short-term responsibility for tools, and identification of seams issues. In Track 2, the 2019 budget and staff retention plan was approved, with a noted concern about staff retention & unplanned reductions. The wind-down plan is being finalized, and the technology transition, including the identification of tools to be retired or transitioned (and to which RC). BANC is active in the CAISO RC Steering Committee, for which procedures and a charter have been approved. The CAISO RC tariff has been submitted, with an expected mid-November approval. BANC is preparing to submit the RCSA Information Request, and RCSA execution is currently forecasted for December. BANC is expected to go live with CAISO as their RC on July 1, 2019.
6. Closed Session:
- A. The Commission retired to closed session for conference with legal counsel in anticipation of litigation pursuant to subdivision (c) of Cal. Gov't Code § 54956.9; one case.

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

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

The meeting was adjourned at 4:00 p.m.

Minutes approved on January 23, 2019.

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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 November 2018

## Operations:

- BA Operations: Normal
- Significant BA Issues: None
- NWPP Reserve Energy Activations
  - 0 contingencies requiring activation of NWPP
  - 0 MW average generation lost
  - 0 MW maximum generation lost
  - Generating unit(s) and date(s) affected: None
- USF
  - 2 of 30 days with instances of USF mitigation procedure utilized
    - 1 day on Path 66
  - No operational impact on BANC
- BAAL Operation:
  - Maximum duration of BAAL exceedance: 4 minutes
  - Number of BAAL exceedance >10 minutes: None
  - BAAL violation (BAAL exceedance >30 minutes): None

## Monthly Notes:

- No additional notes or impacts for November 2018

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



# BALANCING AUTHORITY OF NORTHERN CALIFORNIA

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**TO:** BANC Commission

**RE:** BANC Operator Report for December 2018

## Operations:

- BA Operations: Normal
- Significant BA Issues: None
- NWPP Reserve Energy Activations
  - 0 contingencies requiring activation of NWPP
  - 0 MW average generation lost
  - 0 MW maximum generation lost
  - Generating unit(s) and date(s) affected: None
- USF
  - 5 of 31 days with instances of USF mitigation procedure utilized
    - 0 days on Path 66
  - No operational impact on BANC
- BAAL Operation:
  - Maximum duration of BAAL exceedance: 1 minute
  - Number of BAAL exceedance >10 minutes: None
  - BAAL violation (BAAL exceedance >30 minutes): None

## Monthly Notes:

- No additional notes or impacts for December 2018

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's Report

## BANC Commission

### December, 2018

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The following summarizes routine issues for the Commission's information and consideration. Any major issues or action items will be identified separately a future 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.
- Staff conducted an event review following an AT&T outage that occurred on October 8, 2018, resulting in ICCP data transfers being interrupted for an extended period of time, impacting the flow of BA-to-BA interchange information. BANC responses and processes in place during this data interruption remained in compliance with applicable NERC Reliability Standards, and BES reliability was maintained throughout the duration of the event.
- BANC's Inherent Risk Assessment survey is due to be submitted to WECC by February 18, 2019 as part of the scoping activities leading up to BANC's 2019 Combo Audit (scheduled to be held September 3, 2019 -September 13, 2019).

#### **BANC MCRC:**

- The next BANC MCRC teleconference is scheduled to be held at 10:00 AM on Monday, January 28, 2019.

# Compliance Officer's Report

## BANC Commission

### January 2019

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

#### **BA Compliance Issues:**

- No significant operational Balancing Authority compliance events occurred.
- All required BA compliance reports and operating data were submitted to WECC.
- BANC's Inherent Risk Assessment (IRA) survey is currently on track for submittal to WECC by the February 18, 2019 due date. The IRA will be used to develop a specific Compliance Oversight Plan (COP) that identifies a list of NERC Standards and requirements that WECC plans to focus on during the upcoming audit, scheduled for September 3-19, 2019. Following are the key Compliance Audit Activities and due dates for your reference:
  - BANC Inherent Risk Assessment Survey submittal **February 18, 2019**
  - BANC Self-Certification Statement submittal **March 1, 2019**
  - Internal Controls Evaluation information submittal **May 20, 2019**
  - Notice of Audit and Audit Packet sent to BANC **June 5, 2019**
  - Pre-Audit Questions sent to BANC **July 5, 2019**
  - Pre-Audit Conference Call **July 25, 2019 1:00 PM PST**
  - All requested evidence, RSAWs, Program and Procedure Documents, etc. due to WECC **August 5, 2019**
  - Objections to Audit Team Members **August 19, 2019**
  - Offsite Audit **September 3 – 6, 2019**
  - Onsite Audit **September 9 – 13, 2019**

#### **BANC MCRC:**

- The next MCRC teleconference will be held at 10:00 AM on Monday, January 28, 2019.

# BANC PC Committee Chair's Report

## December 2018

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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:**

- Staff are finalizing their documentation of the PRC-026-1 NERC Reliability Standard. This standard covers Relay Performance during Stable Power Swings. When this documentation is finalized, staff will have completed all compliance obligations for the year.
- Staff is planning to hold a kick-off meeting for the TPL-001-4 Standard in January. A doodle invite will be sent out to determine the best date and time.

# BANC PC Committee Chair's Report

## January 2019

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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:**

- Staff began working on a study plan for the 2019 BANC PC Ten-Year Assessment. Once finalized in January, staff will schedule a kick-off meeting with the BANC PC Participants to review and discuss the input assumptions. Brett Kelly, SMUD staff, will be the sole engineer responsible for all TPL-001-4 studies this year and will lead the kick-off meeting.
- Staff is developing a graphic that will visually explain the Planning Coordinator (PC) and Transmission Planner (TP) relationship between BANC and SMUD and between SMUD and the other BANC PC Participants.

# GM Report

## BANC Commission Meeting

### January 23, 2019

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

#### **Outreach Efforts:**

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

#### **LADWP/Seattle City Light/SRP**

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

#### **POU Western Markets Initiative**

BANC continues to participate in this effort, which is being coordinated by APPA. The group continues to evaluate how best to represent the POUs in the ever-changing power markets in the West. The last conference call was held on January 14, 2019, and we are discussing a schedule for a face-to-face meeting late 1<sup>st</sup> – early 2<sup>nd</sup> Quarter. We have agreed to cut back on the number of conference calls and face-to-face meetings until there is a clearer understanding on where regionalization might be heading.

#### **North American Electric Reliability Corporation (NERC)**

Due to engagement on the Peak RC transition issues, I have had some interface with NERC regarding this issue. I am planning on attending the NERC Board Meeting in Los Angeles on February 6-7, 2019, since the RC transition is an item of discussion and the meeting is relatively close.

## **Market Initiatives:**

### **EIM Participation**

The BANC EIM Phase 1 effort is moving forward on schedule with no major issues. All of the software updates have been delivered and testing is completed. We have resolved the issues around EIM agreements and at this stage all agreements have been executed. We have completed Day-in-the-Life preparation and testing and started Market Simulation the week of December 3. BANC/SMUD was the first EIM Entity to pass all of the Structured Scenarios with 100% success on the first try. Parallel Operations will be initiated in February 1st and we are on schedule to meet our go-live date of April 3rd.

The BANC EIM Oversight Committee has agreed upon an approach for cost allocation for Phase 2, which was presented to the Commission in draft form at the July 2018 meeting. A final proposal was discussed at the January Resource Committee Meeting and will be presented to the Commission for approval at the January 2019 meeting.

BANC, SMUD, and the other members continue to discuss the issue of internal bilateral trading within the BANC footprint once SMUD participates in EIM in 2019. SMUD has drafted a set of proposed “guidelines”, which the BANC EIM Oversight Committee has reviewed and offered concurrence. The “guidelines” were discussed at the January Resource Committee Meeting, with the intent to also discuss them at the January 2019 Commission Meeting.

BANC and TANC continue to hold discussions with the CAISO regarding IBAA relief. At this stage the CAISO is holding firm on the need for IBAA but has acknowledged that when any of the BANC entities join EIM, there will not be a need for IBAA for that entity in the future.

The CAISO has also announced the intent to allow EIM entities to participate in an extended Day-ahead Market (EDAM). Based upon the discussions among the EIM entities and the CAISO, we have agreed to perform a feasibility assessment of the proposed market design. The feasibility assessment was initiated in December 2018 and is planned for completion in June 2019. It is expected that if an EDAM looks feasible the CAISO would use the second half of 2019 to conduct a formal stakeholder process followed by tariff filings at FERC. An EDAM go-live is currently estimated to be in the late 2021-early 2022 timeframe.

## **WAPA:**

### **Market Engagement**

We are continuing to work with WAPA on integrating them in to the EIM implementation discussions. Based upon the comments at the November

Commission meeting, BANC/SMUD met with WAPA regarding the proposed EIM Phase 2 concept. We verified agreement with WAPA-SNR regarding their role in a potential Phase 2. We have also held preliminary discussions with the CAISO on the SMUD Phase 2 concepts and received initial, favorable response. The goal is to have this finalized with the CAISO by the 1<sup>st</sup> Quarter of 2019. BANC staff has developed an EIM Phase 2 Preparation Plan for 2019, which was discussed at the January Resource Committee Meeting and will be presented to the Commission in January.

### **San Luis Transmission Project**

WAPA-SNR has announced its intent to work with the Bureau of Reclamation and CDWR to construct the SLTP. BANC met with WAPA and the other parties to fully understand the implications of having this new transmission project in the BANC BA/WAPA-SNR sub-BA. There is a possibility that the DWR may also consider bringing some of the State Water Project in to the BANC through participation in the SLTP. We are participating in follow-up meetings with WAPA-SNR, DWR, and the State Water Contractors on this project.

## **Peak Reliability:**

### **Aliso Canyon**

Though partial injection of gas in to the fields has begun, the Governor has also requested that shutdown of the field within 10 years be evaluated.

### **Peak/PJM Connex Partnership**

On July 18, 2018, Peak announced that it had terminated its partnership with PJM Connex as part of Peak's decision to wind down operations. There is a possibility that PJM Connex may still pursue market development in the West on its own.

### **RC Services Alternatives**

BANC and the three TOPs (SMUD, MID, and WAPA-SNR) in the BANC footprint submitted in late March their revocable notices of withdrawal from Peak. BANC has executed the CAISO RC Services Agreement. We have confirmed with the CAISO that the BANC footprint will move to the CAISO for RC services by July 1, 2019.

On July 18, 2018, Peak unilaterally made the decision to wind down its operations based upon the informal feedback it had been receiving from the Funding Parties. BANC is working with the other Funding Parties to coordinate on the wind down and closure efforts for Peak.

### **Peak MAC and Board Meetings**

The next quarterly meeting of the Peak MAC and Board is scheduled for February 5, 2019, in Portland. I will attend these meetings in my roles as both the BANC executive sponsor and as the Peak MAC Chair.

## **WECC**

### **Electricity/Natural Gas Reliability Interface**

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

### **WECC Board Meetings**

I attended the WECC MAC and Board meetings on December 4-5, 2018, in Salt Lake City, UT, as BANC's executive sponsor to WECC.

### **RC Services for the West**

WECC and NERC are focused on the RC transition in the West and view it as a major reliability issue for the coming year. WECC/NERC are gearing up for the certification effort for the new RCs. They have determined that Peak will not require a formal recertification on each of the four RC transitions in 2019. WECC has posted a map on its website that shows the basic boundaries of the future four RC's in the Western Interconnection in 2019.

### **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.

### **Strategic Initiatives:**

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

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

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

BANC 2018/2019 Strategic Plan - Focused Initiatives - January 2019 Update

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

## Balancing Authority of Northern California

# Agenda Item 5A

- 1. Guidelines on Bilateral Trading within the Balancing Authority of Northern California Balancing Authority Area After Implementation of Phase 1**
- 2. Resolution 19-01-15 *Approval of BANC EIM Cost Allocation for Phase 2 Participation.***
- 3. White Paper: BANC EIM Cost Allocation Methodology for Phase 2 Participation.**
- 4. Resolution 19-01-14 *Authorization of Contract for Services Related to BANC EIM Phase 2, EIM Phase 1 Support/Analysis, and EDAM Support.***
- 5. Utilicast Proposal.**

# Braun Blaising Smith Wynne, P.C.

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Attorneys at Law

January 16, 2019

TO: BANC Commission

FROM: BANC Counsel

**RE: BANC EIM Phase 1 Bilateral Trading Guidelines**

The Balancing Authority of Northern California (BANC) is scheduled to go live as an Energy Imbalance Market (EIM) Entity on April 3, 2019. During its initial EIM implementation, referred to as “BANC EIM Phase 1” (Phase 1), the only EIM participant within the BANC EIM Entity footprint will be the Sacramento Municipal Utility District (SMUD).

Because SMUD is an active bilateral counter-party within the BANC balancing authority area, there were concerns raised as to how this might impact the ability of individual BANC Members and the Western Area Power Administration – Sierra Nevada Region (WAPA) to continue bilateral trading with SMUD, particularly with respect to the EIM timelines. Specifically, because EIM timelines affecting binding base schedules by which imbalances will be measured occur prior to the close of the Western Electricity Coordinating Council (WECC) energy tagging (e-Tag) timelines of time (T) minus 20 minutes or “T-20,”<sup>1</sup> there were concerns expressed as to how these trades still might be conducted with SMUD as the counterparty. This issue was explored in more detail in accompanying document entitled “Guidelines on Bilateral Trading within the Balancing Authority of Northern California Balancing Authority Area After Implementation of Phase 1 of the California Independent System Operator’s Energy Imbalance Market” (Guidelines). The summary response is that, once we reach certain market timelines (well before today’s T-20), these trades cannot be conducted without impacting EIM base schedules and thereby creating an imbalance energy settlement for which SMUD, under Phase 1 of EIM within BANC, will be solely responsible.

The Guidelines provide a description and summary of the implications of trading with SMUD as a bilateral counterparty through the various time stages within the EIM runs. Concurrence with these Guidelines has been received from both the EIM Oversight and Resource Committees. They are being provided to the Commission for informational purposes only.

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<sup>1</sup> In the time descriptions, “T” represents the actual flow hour, thus T minus 20 (or any time expressed in minutes), is an indication of time *prior to* the start of the flow hour. Thus, T-20 means 20 minutes prior to/in advance of the flow hour; T-75 means 75 minutes before the flow hour, etc.

**Guidelines on Bilateral Trading  
within the Balancing Authority of Northern California Balancing Authority Area  
After Implementation of Phase 1  
of the California Independent System Operator’s Energy Imbalance Market**

**Overview**

These Guidelines describe the background and process for bilateral trading within the footprint of the Balancing Authority of Northern California (BANC) balancing authority area (BAA) after BANC implements Phase 1 of its participation in the California Independent System Operator’s (CAISO) Energy Imbalance Market (EIM). Of important note, this document establishes guidelines only, given the current unknowns around EIM operations and trading in a post-EIM go-live environment. Thus, these guidelines may undergo revisions after some market experience develops. It is also expected that there will be an internal review by SMUD and BANC within the first six months of EIM operations (October – November 2019) to determine whether revisions are necessary. Any such revisions will be vetted with the Resource Committee and provided on an informational basis to the BANC Commission.

BANC will go live as an EIM Entity on April 3, 2019. During its initial EIM implementation, referred to as “Phase 1,” the only EIM participant within the BANC EIM Entity footprint will be the Sacramento Municipal Utility District (SMUD). Because SMUD is an active bilateral counterparty within the BANC BAA, questions have been raised as to how bilateral trades might continue to occur once EIM operations commence. Specifically, because EIM timelines affecting binding base schedules by which imbalances will be measured occur prior to the close of the Western Electricity Coordinating Council (WECC) energy tagging (e-Tag) timelines of time (T) minus 20 minutes or “T-20,”<sup>1</sup> there were concerns expressed as to how these trades still might be conducted with SMUD as the counterparty. The summary response is that they cannot be conducted without impacting EIM base schedules and thereby creating an imbalance energy settlement for which SMUD, under Phase 1 of EIM within BANC, will be solely responsible.

These Guidelines outline the critical timelines and describe the impact/liability for bilateral trades conducted after final base schedules become financially binding. They also briefly describe those transactions, which are unaffected by the implementation of Phase 1 of EIM within the BANC BAA.

As noted, the WECC e-tag deadline is at T-20. Today, entities within the BANC BAA can respond to commercial requests for bilateral purchases and sales within and outside of BANC until this T-20 deadline. This has proven useful at times to address forecast errors or other matters impacting resource availability. Under EIM, this timeline is cut to, at its furthest (discussed further below), T-40 for transactions involving SMUD as the counterparty, which signifies the

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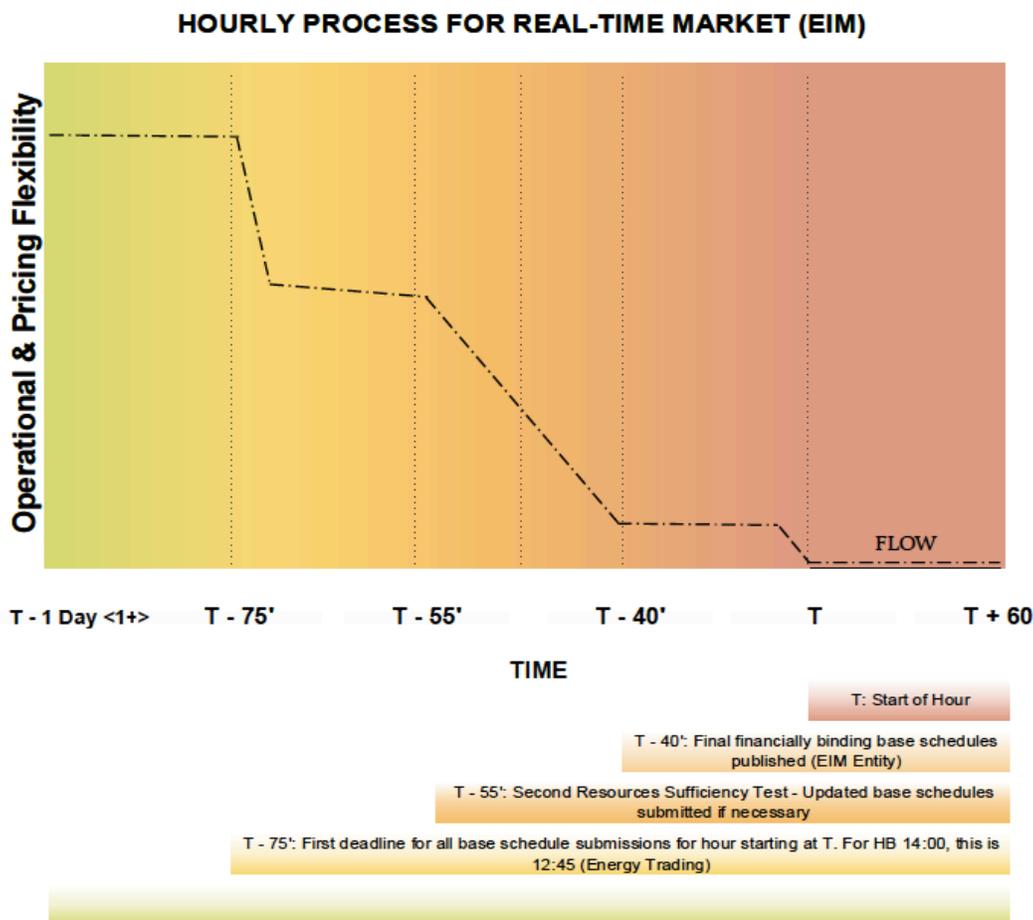
<sup>1</sup> In the time descriptions, “T” represents the actual flow hour, thus T minus 20 (or any time expressed in minutes), is an indication of time *prior to* the start of the flow hour. Thus, T-20 means 20 minutes prior to/in advance of the flow hour; T-75 means 75 minutes before the flow hour, etc.

final opportunity for the EIM Entity (BANC) to adjust its base schedule. Any changes inside of this T-40 cutoff, will result in imbalances and an EIM settlement.<sup>2</sup>

Initial concerns were raised by BANC members and the Western Area Power Administration – Sierra Nevada Region (WAPA), who are not participating in Phase 1 of EIM, as to the loss of this intra-hour flexibility under EIM. For this, BANC underwent a review of the frequency of such transactions within the T-40 to T-20 window to ascertain how many of these trades were occurring. The results surprisingly showed very few, and of the few that were occurring, many of these could have been done prior to T-40. Thus, overall, the impact of moving to the EIM timeframe would likely have less impact than initially thought.<sup>3</sup> Nevertheless, SMUD was tasked with outlining the issue and providing some guidance to the other entities within the BANC BAA.

### EIM Timelines

The critical EIM timelines are illustrated below in Figure 1.



<sup>2</sup> It bears repeating that SMUD is the sole EIM participant within the BANC EIM Entity footprint for Phase 1. Thus, only bilateral transactions with SMUD as the counterparty will impact the BANC EIM base schedule. Therefore, any other transactions, both inside and outside of the BANC BAA, can still occur as they do currently.

<sup>3</sup> The review was conducted by SMUD's Energy Trading group and the results were discussed with the BANC Resource Committee.

In summary, the first critical time element is T-75, when the EIM Entity Scheduling Coordinator submits or modifies its base schedule with the CAISO. For Hour-Beginning (HB) 1400 HRS, for example, the base schedule must be submitted by 1245 HRS. While this is the first deadline, the final timeline for SMUD, as the EIM Participating Resource, to independently adjust its schedule is T-55. After T-55 (1305 HRS), the EIM Participating Resource Entity (SMUD Merchant) can no longer make any direct changes. Any further changes can only be entered by the EIM Entity, and this should occur to address a more critical, non-economic situation within the BANC BAA.<sup>4</sup> This is also the time where the CAISO will perform its Resource Sufficiency Test, which the EIM Entity must pass in order to participate in EIM for the hour represented by “T.” The EIM Entity can make any final adjustments to its EIM base schedule up until T-40 (1320 HRS), whereby financially binding base schedules for the EIM Entity are settled. Any changes beyond T-40 will register as uninstructed imbalances (positive or negative) and will result in an EIM settlement. For this reason, any bilateral trades conducted by SMUD between T-40 and T-20 will have an EIM Market settlement impact. Thus, in summary, bilateral trades:

- Before T-75 (e.g., T- 1 Day): No Impact and changes can be made by either BANC (EIM Entity) or SMUD (EIM Participating Resource Entity)
- Between T-75 and T-55: No Impact and changes can be made by either BANC (EIM Entity) or SMUD (EIM Participating Resource Entity)
- Between T-55 and T-40: No impact but changes can only be made by BANC (EIM Entity) (for limited purposes)
- Between T-40 and T-20: Imbalance created and an EIM Settlement

### **Post-EIM Bilateral Process and Settlement**

**Up to T-55.**<sup>5</sup> As noted, Phase 1 of EIM implementation within the BANC EIM Entity footprint only involves SMUD. Therefore, any other bilateral trades among non-participating BANC members, WAPA, or with counterparties outside of the BANC BAA are not impacted. To the extent SMUD is a counterparty, all bilateral trades outside of a non-economic, bilateral transaction should be conducted prior to T-55.<sup>6</sup>

**T-55 to T-40.** Trades within the BANC BAA with SMUD as the counterparty between T-55 and T-40, which can only be updated with the CAISO by the EIM Entity and not SMUD Merchant, should only be conducted for critical, non-economic reasons. Any such trades can only be done with the approval of the EIM Entity Services Provider within sufficient time to meet the T-40 deadline for the EIM Entity to adjust its base schedule with the CAISO.<sup>7</sup> Because the trade can

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<sup>4</sup> While SMUD is the only EIM participant this is less of a concern, but if other resources participate, the BANC EIM Entity should not make adjustments for economic interests only, because this could become burdensome and inefficient.

<sup>5</sup> While we note the CAISO timelines in this section, there must be sufficient time (buffer) to allow the internal trades to be implemented and submitted to the CAISO. It is proposed for EIM startup that this be a minimum of five (5) minutes prior to the trade deadline. For example, T-60 (i.e., T-55 – 5 minutes = T-60) to permit the transaction to be completed and submitted by T-55.

<sup>6</sup> Due to processing timelines, SMUD Merchant will not consider a transaction if requested after T-60.

<sup>7</sup> Due to processing timelines, SMUD Merchant will not be able to consider a transaction if requested after T-50.

be added into the final base schedule, there are no settlement obligations outside of the bilateral price between SMUD and the counterparty within BANC.

**T-40 to T-20.** Trades exercised within the BANC BAA after T-40, and with SMUD as the counterparty, will result in an imbalance energy settlement to be charged to the EIM Entity and thereby, under Phase 1, to SMUD. These transactions should only be considered in extreme situations and should be rare in nature. If SMUD must respond to a counterparty request for a bilateral exchange within the T-40 to T-20 window, the counterparty making such a request shall repay SMUD in accordance with the following:

- Real-time LMP for the relevant imbalance interval related to the bilateral transaction; plus
- \$1 per megawatt hour (MWh) administrative adder<sup>8</sup>

Trades between SMUD and its counterparty shall be conducted pursuant to the WSPP Agreement, as modified by this procedure.<sup>9</sup>

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<sup>8</sup> This adder has been established for go-live; however, it is subject to adjustment by SMUD to ensure revenue sufficiency. Any adjustment will be addressed with the Resource Committee.

<sup>9</sup> Note that if post T-40 trades occur frequently enough, resource sufficiency requirements (capacity and flex), which are based on historical behavior, will potentially be increased. This could require SMUD and/or BANC to adjust its policy regarding such trades.

# Braun Blaising Smith Wynne, P.C.

Attorneys at Law

January 15, 2019

TO: BANC Commission

FROM: BANC Counsel

**RE: Approval of BANC EIM Cost Allocation for Phase 2 Participation**

When the Balancing Authority of Northern California (BANC) decided to proceed with participation in the California Independent System Operator Energy Imbalance Market (EIM) with only one BANC Member, the Sacramento Municipal Utility District (SMUD), referred to as "BANC EIM Phase 1," (Phase 1) it was agreed that:

1. The development costs for setup of BANC as an EIM Entity would be tracked; and
2. A methodology would be developed for any future BANC Member participants in EIM to reimburse SMUD for their fair share of the BANC EIM Entity development costs; and
3. Future BANC Member EIM Participants would pay their fair share of ongoing EIM Entity operational costs.
4. A methodology for developing Phase 2 only costs would need to be developed.

BANC EIM Phase 2 (Phase 2), which generally refers to the incremental participation by other BANC members and/or the Western Area Power Administration – Sierra Nevada Region (WAPA), is poised to move forward with a subset of BANC members, including the City of Redding, the City of Roseville, and the Modesto Irrigation District (MID) (collectively the "Phase 2 Parties"). WAPA will participate in Phase 2 activities, given its relationship to the Phase 2 Parties, but is not currently intending to participate in EIM during this phase. As such, recommendations regarding the methodology for EIM cost allocation have been developed.

Attached is a white paper detailing those discussions and recommendations. Several cost allocation methodologies were considered and tangential issues were discussed by the EIM Oversight Committee.<sup>1</sup> In summary, the following recommendations are before the BANC Commission for consideration and approval (see accompanying white paper for additional details):

1. Adopt the Retail Sales (load ratio share) methodology for cost allocation for both reimbursements of initial BANC EIM Entity development costs and ongoing BANC EIM Entity operational costs.
2. Use final percentages as if all four members will participate whether all Phase 2 members implement at the same time or not.

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<sup>1</sup> The EIM Oversight Committee includes representatives from SMUD, WAPA, MID and the BANC GM.

3. For development costs associated with a fixed lifetime asset, the costs will be amortized over the expected life, with the percentage share starting the year a Phase 2 member joins.
4. Phase 2 participants will have the option of reimbursing the BANC EIM Entity development costs either as a one-time, lump-sum payment or in installment payments to be made over the Phase 2 implementation period (~18 months).
5. Ongoing BANC EIM Entity operational costs will be included in the BANC budget.
6. BANC will revisit the cost allocation methodology no sooner than one year after go-live of BANC EIM Phase 2.
7. Use the Retail Sales (load ratio share) methodology for Phase 2 participants to allocate Phase 2 only costs. The allocation percentages are as follows:
  - a. MID = 56.3%
  - b. Roseville = 26.6%
  - c. Redding = 17.1%

The attached white paper has been reviewed by BANC Members on the EIM Oversight and Resource Committees. At this time, the Commission is requested to approve the BANC EIM Cost Allocation Methodology for Phase 2 Participation by resolution.

**Balancing Authority of Northern California  
Resolution 19-01-15**

**APPROVAL OF BANC EIM COST ALLOCATION FOR PHASE 2 PARTICIPATION**

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

WHEREAS, BANC has determined to join the Energy Imbalance Market ("EIM") operated by the California Independent System Operator through a phased approach; and

WHEREAS, the Sacramento Municipal Utility District ("SMUD"), as the sole participant in Phase 1, incurred certain EIM development costs which SMUD and BANC have carefully tracked, and which constitute investments which are necessary to implement EIM and which will directly benefit other BANC Members who decide to participate in EIM; and

WHEREAS, these development costs and the proposed EIM Phase 2 allocation methodology for future BANC EIM participants have been reviewed and agreed upon by both the EIM Oversight Committee and Resource Committee.

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

Approve the attached white paper, "BANC EIM Cost Allocation Methodology for Phase 2 Participation," along with the following proposal for cost allocation described therein:

1. Adopt the Retail Sales (load ratio share) methodology for cost allocation for both reimbursements of initial BANC EIM Entity development costs and ongoing BANC EIM Entity operational costs.
2. Use final percentages as if all four members will participate whether all Phase 2 members implement at the same time or not.
3. For development costs associated with a fixed lifetime asset, the costs will be amortized over the expected life, with the percentage share starting the year a Phase 2 member joins.
4. Phase 2 participants will have the option of reimbursing the BANC EIM Entity development costs either as a one-time, lump-sum payment or in installment payments to be made over the Phase 2 implementation period (~18 months).
5. Ongoing BANC EIM Entity operational costs will be included in the BANC budget.
6. BANC will revisit the cost allocation methodology no sooner than one year after go-live of BANC EIM Phase 2.
7. Use the Retail Sales (load ratio share) methodology for Phase 2 participants to allocate Phase 2 only costs. The allocation percentages are as follows:
  - a. MID = 56.3%
  - b. Roseville = 26.6%
  - c. Redding = 17.1%

**Balancing Authority of Northern California  
Resolution 19-01-15**

PASSED AND ADOPTED by the Commissioners of the Balancing Authority of Northern California this 23<sup>rd</sup> day of January 2019, by the following vote:

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

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Greg Salyer  
Chair

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Attest by: C. Anthony Braun  
Secretary

# **WHITE PAPER**

## **BANC EIM Cost Allocation Methodology for Phase 2 Participation**

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### **Background**

In 2016 BANC decided to proceed with participation in the CAISO Energy Imbalance Market (EIM). At the time of this decision, only one BANC member, the Sacramento Municipal Utility District (SMUD), was ready to proceed with EIM participation. The other EIM eligible BANC members (Modesto Irrigation District, City of Redding and City of Roseville)<sup>1</sup> were not ready to make a commitment to move forward at that time. However, as part of the decision to proceed, it was agreed that the development costs for setup of BANC as an EIM Entity would be tracked and a methodology would be developed for any future BANC member participants in EIM to reimburse SMUD for their fair share of the BANC EIM entity development costs and for future BANC member EIM participants to pay their fair share of ongoing EIM Entity operational costs. In addition, the allocation of Phase 2 only costs among the Phase 2 participants was also discussed. The purpose of this white paper is to document the discussions and recommendations made regarding the methodology for EIM cost allocation.

### **Discussion**

As part of its role, the BANC EIM Oversight Committee took the lead to develop a cost allocation methodology. During its discussions, the EIM Oversight Committee considered several cost allocation methodologies, including:

- Ratio of retail sales (i.e. – load ratio share)
- Ratio of gross benefits (initially from E3 study; going forward based upon CAISO estimated gross benefits)
- Blended retail sales/gross benefits ratios
- Ratio of EIM volume (volume of MWHs participating in the EIM; initially from E3 study; going forward based upon actual EIM participating volumes).

Table 1 – EIM Cost Allocation Options, provides a summary comparison of the ratios for cost allocation for each methodology. In reviewing the options the EIM Oversight Committee agreed that there were advantages and disadvantages to each option, including:

- Ratio of retail sales

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<sup>1</sup> BANC members City of Shasta Lake and Trinity Public Utilities District are not able to participate in the EIM due to having no resources to bid in to the market.

- Pros
  - Easy to calculate
  - Comfort level - basis for much of current BANC cost allocation
- Cons
  - May not be an adequate representation of the share of value that members receive from EIM participation
- Ratio of gross benefits
  - Pros
    - May be a better representation of the share of value that members receive from EIM participation
  - Cons
    - Concern about the accuracy of the estimated benefits value
- Blended retail sales/gross benefits ratios
  - Pros
    - Better estimate of representation of the share of value that members receive from EIM participation
    - A compromise on the range of potential cost allocations
  - Cons
    - Still concern about the accuracy of the estimated benefits value
- Ratio of EIM Volume
  - Pros
    - May be a better representation of the share of value that members receive from EIM participation
    - Should be easy to obtain going forward
  - Cons
    - E3 estimated value may not be an accurate representation
    - External decisions on real time participation in EIM may result in swings in individual participation and therefore cost allocations

Other issues discussed included:

- How to handle allocation of costs for fixed life assets when a new participant joins in mid-term of the asset life.
- Whether a new participant would be expected to reimburse for the BANC EIM development costs in a lump sum payment or with installment payments over time.

## Recommendations

Based upon the discussions on the issues identified above, the EIM Oversight Committee makes the following recommendations to the BANC Commission for consideration and approval:

1. Adopt the Retail Sales (load ratio share) methodology for cost allocation for both reimbursements of initial BANC EIM Entity development costs and on-going BANC EIM Entity operational costs. (Table 2 provides an initial

estimate of the allocation of development costs based upon the forecasted estimate from the BANC EIM study and Table 3 provides an initial estimate of allocation of ongoing costs based upon the costs included in the BANC/SMUD EIM Operations Agreement).

2. Use final percentages as if all four members will participate whether all Phase 2 members implement at the same time or not. This will eliminate multiple reallocations of costs.
3. For development costs associated with a fixed lifetime asset, costs will be amortized over the expected life with percentage share starting at year Phase 2 member joins.
4. Phase 2 participants will have the option of reimbursing the BANC EIM Entity development costs either as a one-time, lump-sum payment or in installment payments to be made over the Phase 2 implementation period (~18 months).
5. Ongoing BANC EIM Entity operational costs will be included in the BANC budget.
6. Revisit the cost allocation methodology no sooner than one year after go-live of BANC EIM Phase 2.
7. Use the Retail Sales (load ratio share) methodology for Phase 2 participants to allocate Phase 2 only costs. The allocation percentages are as follows:
  - a. MID = 56.3%
  - b. Roseville = 26.6%
  - c. Redding = 17.1%

## Table 1 – EIM Cost Allocation Options

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Entity	Retail Sales	Gross Benefit	Blended RS/GS	EIM Volume
SMUD	70%	56%	63%	74%
MID	17%	23%	20%	14%
Roseville	8%	13%	10.5%	8%
Redding	5%	8%	6.5%	4%

**Table 2 – BANC EIM Implementation  
Cost Allocation - \$4.32M**

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<b>Entity</b>	<b>Retail Sales</b>	<b>Gross Benefit</b>	<b>Blended RS/GS</b>	<b>EIM Volume</b>
SMUD	\$3.02M	\$2.42M	\$2.72M	\$3.20M
MID	\$0.73M	\$0.99M	\$0.87M	\$0.60M
Roseville	\$0.35M	\$0.56M	\$0.45M	\$0.35M
Redding	\$0.22M	\$0.35M	\$0.28M	\$0.17M

**Table 3 - BANC EIM Ongoing Cost  
Allocation - \$2.4M**

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<b>Entity</b>	<b>Retail Sales</b>	<b>Gross Benefit</b>	<b>Blended RS/GS</b>	<b>EIM Volume</b>
SMUD	\$1.68M	\$1.34M	\$1.51M	\$1.78M
MID	\$0.41M	\$0.55M	\$0.48M	\$0.34M
Roseville	\$0.19M	\$0.32M	\$0.25M	\$0.19M
Redding	\$0.12M	\$0.19M	\$0.16M	\$0.09M

# Braun Blaising Smith Wynne, P.C.

Attorneys at Law

January 14, 2019

TO: BANC Commission

FROM: BANC Counsel

**RE: Authorization of Contract for Services Related to Phase 2 of Energy Imbalance Market, EIM Phase 1 Support/Analysis, and EDAM Support**

In prior discussions with the Commission, the BANC General Manager has indicated the intent to engage consulting services associated with current and anticipated market design issues that may arise due to participation in the Energy Imbalance Market (EIM) and the proposed Enhanced Day Ahead Market (EDAM). “BANC EIM Phase 1” (Phase 1) refers to the development and deployment of EIM within the BANC footprint, with the Sacramento Municipal Utility District (SMUD) as the sole participant.

“BANC EIM Phase 2” (Phase 2) generally refers to the incremental participation by other BANC members and/or the Western Area Power Administration – Sierra Nevada Region (WAPA). Discussion among BANC members and WAPA, however, have generally narrowed the likely participation to a narrower set of BANC members, including the City of Redding, the City of Roseville and the Modesto Irrigation District (collectively the “Phase 2 Parties”). WAPA will participate in Phase 2 activities, given its relationship to the Phase 2 Parties but is not currently intending to participate in EIM during this phase. BANC EIM Phase 2 is looking at a likely deployment in the Spring of 2021.

In order to ensure consulting services are in place to support post-Phase 1 deployment, to commence the study process on behalf of the Phase 2 Parties, and to enhance support for the EDAM feasibility study and stakeholder design, the General Manager requested a proposal from Utilicast, a provider of consulting services to the energy and utilities industry, applicable to this scope of work. Attached to Resolution 19-01-14 *Authorization of Contract for Services Related to BANC EIM Phase 2, EIM Phase 1 Support/Analysis, and EDAM Support* is that proposal. In response, Utilicast has divided the proposed work into four (4) discreet tasks. These include the following:

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

Of the four tasks listed above, we are only seeking authoriation for tasks 1, 2 and 4 at this time. While Task 4 is not EIM-related (i.e., EDAM support), it is tied directly to EIM Entities and its impact on BANC members could be significant. Becasue it is in its formulative stages and highly technical, it is essential for BANC's participation to have some degree of outside technical support. We will address Task 3 (i.e., Project Implementation and Project Management support) should any or all of the Phase 2 Parties choose to proceed toward EIM implementation.

The General Manager's delegated contracting authority is limited to \$25,000. However, it is the judgment of the General Manager and BANC Counsel that it is possible, and indeed likely, that desired consulting services for the above-described tasks, will exceed this delegated authority. As such, the General Manager is requesting Commission approval and authorization to engage Utilicast up to a total expenditure of \$220,000, with specific task orders to be determined by the General Manager but anticipated to align with Tasks 1, 2 and 4, above. This amount is within the current 2019 budget approved by the Commission.

This authorization is limited to this contract, and the General Manager is not seeking broader delegations at this time.

**Balancing Authority of Northern California  
Resolution 19-01-14**

**AUTHORIZATION OF CONTRACT FOR SERVICES RELATED TO BANC EIM PHASE 2, EIM  
PHASE 1 SUPPORT/ANALYSIS, AND EDAM SUPPORT**

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

WHEREAS, BANC has been seeking assistance in evaluating and reviewing current anticipated market design issues that may arise due to participation in the Energy Imbalance Market ("EIM") or the proposed Extended Day Ahead Market ("EDAM"); and

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

WHEREAS, BANC EIM Phase 1 has an anticipated go-live date of April 3, 2019; and

WHEREAS, three additional BANC Members - the City of Roseville, the City of Redding, and the Modesto Irrigation District – are considering entry into the CAISO EIM market in April of 2021, referred to as BANC EIM Phase 2; and

WHEREAS, BANC needs additional analysis performed on behalf of its three additional BANC Members - the City of Roseville, the City of Redding, and the Modesto Irrigation District – to determine the feasibility and costs of their participation in BANC EIM Phase 2; and

WHEREAS, BANC has, in coordination with other EIM Entities, engaged The Brattle Group and Energy + Environmental Economics (E3) to perform to consider the benefits and feasibility of participating in a proposed Enhanced Day Ahead Market ("EDAM") that would extend Day Ahead Market functionality to the EIM footprint; and

WHEREAS, BANC requires additional subject matter expertise in their evaluation of EDAM; and

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

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

Authorize the General Manager to enter into a contract with Utilicast for an amount not to exceed \$220,000, with specific task orders to be determined by the General Manager but anticipated to align with Tasks #1, 2, and 4 of the attached proposal.

**Balancing Authority of Northern California  
Resolution 19-01-14**

PASSED AND ADOPTED by the Commissioners of the Balancing Authority of Northern California this 23<sup>rd</sup> day of January 2019, by the following vote:

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

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Greg Salyer  
Chair

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Attest by: C. Anthony Braun  
Secretary



January 7, 2019

Mr. Jim Shetler  
General Manager  
The Balancing Area of Northern California  
P.O. Box 15830 / MS D109  
Sacramento, CA 95852-1830

Dear Jim -

Utilicast understands that the Balancing Area of Northern California (BANC) is seeking professional consulting support from Utilicast for four tasks related to their entry into the California Independent System Operator (CAISO) Energy Imbalance Market (EIM). In April 2019, one BANC Member, the Sacramento Municipal Utility District (SMUD), will enter the CAISO EIM Market. That implementation project is referred to as "BANC EIM Phase Implementation." Three additional BANC Members, the City of Roseville, the City of Redding, and Modesto Irrigation District, are considering entry into the CAISO EIM Market in April 2021 (referred to as "BANC EIM Phase II Implementation"). The support we have discussed is expected to aid in the post-go-live BANC EIM Phase I Implementation; and prepare, plan, and execute the BANC EIM Phase II Implementation.

I have attached a proposal document to support your request. The following consulting tasks are outlined in that proposal:

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

Utilicast is uniquely well qualified to deliver the outlined support services. Utilicast offers strategic and tactical consulting services to the utility industry. Utilicast's market consulting footprint spans four continents with more than one hundred consultants and over seventy utility clients. Our consultants have been deeply involved in the design, build, launch, and operations of all North American ISO/RTO Markets, including the California ISO and Western EIM. Our proposed consultant, Jeff Fruit, has gained tremendous insight to BANC and SMUD electric operations through his tenure as consulting lead for the BANC/SMUD EIM Phase I



implementation. In that role, over a 24-month period, Mr. Fruit provided full-time Project Management and Subject Matter Expertise to support, direct, and execute all aspects of the project from planning through system selection, modeling, system implementation, vendor management, CAISO management, testing, training, market simulation, production analysis, and post go-live support.

We appreciate your consideration of Utilicast for this project. I look forward to discussing this proposal with you at your convenience.

Sincerely,

A handwritten signature in black ink, appearing to read "David Luedtke", is positioned above the typed name.

David Luedtke  
President  
Utilicast, LLC



The Balancing Area of Northern California (BANC) is seeking professional consulting support from Utilicast (Consultant) for four (4) tasks related to their entry into the California Independent System Operator (CAISO) Energy Imbalance Market (EIM). In April 2019, one BANC Member, the Sacramento Municipal Utility District (SMUD), will enter the CAISO EIM Market. That implementation project is referred to as “BANC EIM Phase I Implementation.” Three additional BANC Members, the City of Roseville (Roseville), the City of Redding (REU), and Modesto Irrigation District (MID), are considering entry into the CAISO EIM Market in April 2021 (referred to as “BANC EIM Phase II Implementation”). The support requested by BANC is expected to aid in the post-go-live BANC EIM Phase I Implementation; and prepare, plan, and execute the BANC EIM Phase II Implementation.

The following consulting tasks are outlined in this proposal:

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

The sections below describe each task in further detail, define requirements for executing the tasks and associated deliverables, and provide an estimate of the required consulting hours for each task. At the end of this proposal is a cost estimate for the four tasks. Immediately below are short introductions to Utilicast and our proposed consultant which demonstrate our qualifications and unique fit for delivery of the tasks in this proposal.

### **Overview of Utilicast**

Utilicast offers strategic and tactical consulting services to the utility industry. Utilicast’s market-consulting footprint spans four continents with more than one hundred consultants and over seventy utility clients. Our consultants have been deeply involved in the design, build, launch, and operations of all North American ISO/RTO Markets, including the California ISO and Western EIM. We deliver a powerful combination of experience, management, and subject matter expertise in the areas of market design, regulatory affairs, compliance, power system operations, technical integration, and system implementation.

Utilicast has extensive experience in integrating utilities into the Western EIM. Utilicast has served as overall Program Manager and System Integrator for the successful Western EIM implementation efforts at Arizona Public Service (APS), Portland General Electric (PGE), and Idaho Power Company (IPC). Utilicast is currently supporting Sacramento Municipal Utility District’s (SMUD’s) successful, on-time, on budget EIM Implementation which is expected to go live on April 3, 2019. We are currently performing similar roles for year 2020 EIM candidates Seattle City Light (SCL), the Los Angeles Department of Water and Power (LADWP), and Salt River Project (SRP).

In these roles, the Utilicast consultants have partnered with client Business Leads to support, direct, and execute all aspects of the project from planning through system selection, modeling, system implementation, vendor management, CAISO management, testing, training, market simulation, production analysis, and post go-live support.



## Overview of Consultant

Utilicast proposes our consultant Jeff Fruit to deliver the tasks described in this proposal document. Mr. Fruit has gained tremendous insight to BANC and SMUD electric operations through his tenure as consulting lead for the BANC/SMUD EIM Phase I implementation. In that role, over a 24-month period, Mr. Fruit provided full-time Project Management and Subject Matter Expertise to support, direct, and execute all aspects of the project from planning through system selection, modeling, system implementation, vendor management, CAISO management, testing, training, market simulation, production analysis, and post go-live support. He will be able to leverage the knowledge gained, and SMUD business/operations relationships, to make the BANC EIM Phase II Implementation project as efficient as possible. Prior to joining the SMUD EIM project, Mr. Fruit supported Arizona Public Service (APS) and Idaho Power Corporation (IPC) in their EIM Implementation projects.

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

Consultant will provide on-going, post go-live support and analysis for the BANC EIM Phase I Implementation project. The consultant will provide day-to-day subject matter expertise, and expert analysis of BANC EIM Entity’s, and SMUD Participating Resource Entity’s EIM Market participation and results. Consultant will analyze and support resolution of issues which are observed by the consultant and/or assigned by the BANC/SMUD EIM Project leadership team.

This Task #1 is expected to require 180 consulting hours to complete. This task will be completed in the period between May 1, 2019 and approximately August 31, 2019. It will be executed/supported in parallel with Task #2 (below). During this period where the two tasks overlap work will be split approximately 75% to Task #2; and 25% to this Task #1.

Consultant	Start	End	Total Hours
Task #1 - Jeff Fruit (SME + PM Support)	5/1/2019	8/31/2019	180

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

Utilicast consultant(s) will perform an analysis of each BANC EIM candidate’s current state versus the desired EIM end-state, across software/telemetry systems, staffing, and business processes. Consultant will work with BANC Member teams to clearly identify and define the functional gaps and requirements for EIM. Identified gaps will be presented with options and recommendations for closure. The gap closure options will include making maximum effective use of existing BANC Member systems (including SMUD’s), processes, and staff. The output of this analysis will be referred to as the “EIM Gap Analysis Report”, which will identify critical gaps and how they can best be addressed in the BANC Phase II EIM Implementation Project.

The EIM Gap Analysis Report deliverable:

- For each BANC EIM candidate, Consultant will review at least the following areas for system and/or business process gaps:
  - Full Network Model

- Merchant Generation/Trading Base Schedule and EIM Energy Bid Submissions
- Outage Management
- EIM Entity Intertie Schedule Creation, Management, and Submission
- EIM Entity Desk and Situational awareness, Training & Testing
- Generation Dispatch, EMS, and CAISO ADS system integration
- CAISO EIM Metering
- Demand & Variable Energy Resource Forecasting
- EIM Market Settlement and Billing
- Open Access Transmission Tariff (OATT) Update for EIM Market Participation
- User/Staff Training and Software System Testing
- ICCP data provision/integration
- Transmission paths for EIM participation
- Existing Contracts
- Will include gathering input from interviews with BANC Member management, subject matter experts, and key personnel.
- Will leverage BANC/SMUD Phase I EIM Implementation Project experience; and the BANC/SMUD Phase I System and Process Gap Analysis Reports delivered in that project.
- Will include an initial assessment of requirements for Western Area Power Administration – Sierra Nevada Region (WAPA-SNR) EIM process enabling support.
- Will analyze the BANC BAA 'big picture' options - how best to organize and implement the expanded Phase II BANC EIM Entity to take advantage of the BANC scale; maintain accountability for balancing at the sub-BAA level; and produce greatest benefits to EIM members.

The final BANC EIM Phase II Gap Analysis Report will present the EIM implementation gaps for each new BANC EIM candidate separately and identify the considerations for WAPA support of EIM Phase 2. It would also include a discussion of the options for bringing multiple BANC Members into a coherent BANC EIM Entity, including a recommendation for project structure.

Additionally, Consultant will deliver a BANC EIM Phase II Implementation Plan and Schedule which incorporates the EIM Gap Analysis Report findings; the CAISO's EIM Implementation Plan/Schedule; any required EIM software additions or extensions; and existing SMUD sub-BAA EIM participation into a coherent, executable plan.

This task #2 is expected to require a total of 540 hours to complete.

- 360 hours (3 entities x 3 weeks each) current state analysis. Assess systems, staffing, and capabilities against EIM requirements. Roughly one week on-site, plus two weeks analysis and write-up for each new BANC EIM candidate.
- 60 hours 'big picture' options, and WAPA participation discussion/analysis. Could include: discussions with WAPA-SNR; discussions with CAISO SMEs; and discussions with SMUD SMEs.
- 60 hours to write, review, and deliver the final BANC EIM Phase II Gap Analysis Report.
- 60 hours to create, review, and deliver the final BANC EIM Phase II Implementation Plan.



Consultant	Start	End	Total Hours
Task #2 - Jeff Fruit (SME + PM Support)	5/1/2019	8/31/2019	540

This task will be completed in the period between May 1, 2019 and August 31, 2019. It will be executed/supported in parallel with Task #1 (above). During the period where the two tasks overlap work will be split approximately 75% to this Task #2; and 25% to Task #1.

### **Task #3: BANC EIM Phase II Project Implementation and Project Management Support**

Consultant will assist in developing a detailed project plan (including cost and schedule estimate, and project organization), maintaining the project plan and schedule, advising the leadership team on project issues, and supporting the leadership team during project meetings for both in-house and CAISO discussions. BANC will assign Project Manager(s) to support Consultant and Consultant shall ensure BANC Project Manager(s) are kept apprised of the ongoing schedule and timelines.

Consultant will also act as EIM/CAISO Market Subject Matter Expert for the implementation project. Consultant will leverage previous EIM Implementation experiences, and the Consultant network to address questions and issues as they arise. Consultant will ensure issues are resolved timely. BANC Members, including SMUD Business SMEs will be providing most of the implementation staffing and additional subject matter expertise for the EIM Implementation and ongoing operations. The consultant will work with the assigned BANC Member staff and SMEs in executing the EIM Implementation Project.

Consultant is responsible for delivering these key project tasks:

- Institute a formal review and reporting process that ensures that the project team has regular meetings and that results are reported to BANC General Manager and any other key stakeholders on a regular basis.
- Establish a communication process and knowledge repository where key project documents are maintained and available to the project team members.
- Create and maintain a detailed project plan. Utilicast will extend the BANC EIM Phase II Implementation Plan and Schedule created in Task #1 above to manage the project's schedule, deliverables, and key dates. Using deliverables for similar sized utilities as a guide, the consultant will work with BANC Member staff to create a custom-tailored project plan that includes all the elements critical to EIM implementation with special consideration given to following CAISO's published guidelines and milestones.
- If desired, a cost estimate can be obtained from the detailed project plan to assign a cost estimate to each item in the project plan. Consultant can carefully review the cost estimates with BANC General Manager to ensure that these estimates are consistent with previous budgetary expectations. Consultant will build all the necessary spreadsheets and tools for tracking actual and accrued expenses.
- Consultant will create and execute a risk and issue management plan.
- Consultant will create and manage an EIM Market change management process.



This task will be completed in the period between September 1, 2019 and April 30, 2021 (87 Weeks). Consultant is expected to require an average of 35 hours per week over that period to successfully deliver this project, resulting in a total hours estimate for this task of 3,045 hours.

Consultant	Start	End	Total Hours
Task #3 - Jeff Fruit (EIM SME + PM Support)	9/1/2019	4/30/2021	3,045

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

Utilicast consultant will provide EIM and CAISO Market subject matter expertise for the BANC Members in their evaluation of the CAISO’s EDAM. If the BANC EIM members decide to move forward with the EDAM implementation, Consultant will also provide an implementation assessment of impacts to the BANC/SMUD organizations.

The CAISO EDAM design and implementation details are in early stages of development at this time; therefore, this task is difficult to define in terms of consulting hours and duration. The EDAM project has an expected go-live date of late 2021. However, Consultant’s expectation is that support for this Task 4 is primarily required during the EDAM feasibility study phase, and the EDAM Stakeholder design phase. Utilicast believes this task can be completed successfully on a part-time, as needed, basis, during the period between May 1, 2019 and approximately April 30, 2020. Consultant proposes to complete this task within the hours noted below and will not exceed these hours without written approval from BANC General Manager.

Consultant	Start	End	Total Hours
Task #4 - Jeff Fruit (EIM SME + PM Support)	5/1/2019	4/30/2020	120

**As-Needed Utilicast Subject Matter Expertise (SME) Allowance**

Consultant suggests the inclusion of 120 hours of “as-needed” EIM Operations, Modeling, and Technical SME support. These hours allow for the inclusion of specialized Consultant Subject Matter Experts to be utilized across all four tasks above if needed. The hours will only be utilized if a need for expertise is required, and the expertise is outside of the assigned consultant’s knowledge area. These hours would require approval by the BANC General Manager prior to any billable work being done.

Consultant	Start	End	Total Hours
<i>As-Needed Market/Operations Subject Matter Expert Support</i>	<i>5/1/2019</i>	<i>4/30/2021</i>	<i>120</i>



**Total Proposal Cost Estimate**

The cost estimate for this proposal is presented in the table below. Separated from the total costs are the consulting costs for As-Needed Subject Matter Expertise from the Consultant staff not directly assigned to this project. These hours/costs will only occur when a specialized need is identified, and prior written approval is obtained from BANC General Manager.

Task	Start	End	Total Hours	Rate	Total \$
Task #1: BANC/SMUD EIM Phase I Post Go-Live Support and Analysis	5/1/2019	7/12/2019	180	\$215/hr	\$38,700
Task #2: BANC EIM Phase II Gap Analysis and Implementation Plan	5/1/2019	8/31/2019	540	\$215/hr	\$116,100
Task #3: BANC EIM Phase II Project Implementation and Project Management Support	9/1/2019	4/30/2021	3,045	\$215/hr	\$654,675
Task #4: EIM Day Ahead Market (EDAM) Support for BANC/SMUD	5/1/2019	4/30/2020	120	\$215/hr	\$25,800
<b>TOTALS</b>			<b>3,885</b>		<b>\$835,275</b>

<i>As-Needed Market/Operations Subject Matter Expert Support</i>	<i>5/1/2019</i>	<i>4/30/2021</i>	<i>120</i>	<i>\$215/hr</i>	<i>25,800</i>
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**Travel Expenses**

Travel expenses are anticipated to be about 10% of fees but may vary based on the time of year and frequency of travel. Consultant proposes the following expenses reimbursement approach:

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



Task	Total Fees	Rate	Total \$
Travel Expenses Estimate @ 10% of Total Fees	~\$900K	10%	~\$90,000

**Assumptions:**

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