

Balancing Authority of Northern California

Regular Meeting of the Commissioners of BANC

2:00 P.M.

Wednesday, April 25, 2018

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 **April 25, 2018 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 February 21, 2018.
 - B. BANC Operator's Reports (February and March).
 - C. Compliance Officer's Reports (March and April).
 - D. PC Committee Chair's Reports (March and April).
 - E. General Manager's Report and Strategic Initiatives Update.
- 5 Regular Agenda Items – Discussion and Possible Action.**
 - A. BANC Audited Financials.
 - B. Consider and Possibly Approve Resolution 18-04-17 *Accepting and Adopting the BANC Member Participation Percentages for 2018.*
 - C. EIM implementation Update.
 - D. Consider and Possibly Approve Resolution 18-04-18 *Revised Annual Budget for 2018.*
 - E. Update on BANC IRP Review.
 - F. Update on BANC EIM Financial Risk Policies.
 - G. Consider and Possibly Approve Resolution 18-04-19 *Approving Energy Imbalance Market Meter Procedures, Meter Standards and Specified Delegation to the BANC General Manager.*
 - H. Consider and Possibly Approve Resolution 18-04-20 *Authorization of Contract for Services Related to Energy Imbalance Market and Possible Enhanced Day Ahead Market Design Matters.*
- 6 Closed Session:** Conference with legal counsel in anticipation of litigation pursuant to subdivision (c) of Cal. Gov't Code § 54956.9; two cases.
- 7 Adjournment.**

Balancing Authority of Northern California

Consent Agenda Items

- A. Minutes of the February 21, 2018 BANC Regular Meeting.**
- B. BANC Operator's Reports (February and March).**
- C. Compliance Officer's Reports (March and April).**
- D. PC Committee Chair's Reports (March and April).**
- 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)

February 21, 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:

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

Agency	Liaison
Western Area Power Administration	Kevin Howard

1. Call to Order: Chair Salyer called the meeting to order at 2:02 p.m.
2. Matters Subsequent to Posting the Agenda: Mr. Shetler indicated that he had no additional matters but would include some additional content under the General Manager's Report (Item 4E; no action requested).
3. Public Comment: Chair Salyer invited comments from the public and none were given.
4. Consent Agenda: Mr. Shetler stated that planning and agenda development was underway for the 2018 Strategic Planning Session, which is tentatively planned for May 23. Mr. Shetler also informed the Commission that he and BANC legal staff were planning a follow-up FERC visit in March, which may impact the planned March Commission meeting.

Mr. Hauser moved, Mr. Lau seconded, and the participating Commissioners unanimously approved the Consent Agenda items comprised of the: (A) Minutes of the Regular Commission Meeting held on January 24, 2018; (B) BANC Operator's Report; (C) Compliance Officer's Report; (D) PC Committee Chair's Report; and (E) General Manager's Report and Strategic Initiatives Update.

5. Regular Agenda Items:
 - A. Mr. Shetler provided an EIM Implementation Update, including the status of the EMS upgrade, which is on track for a fall 2018 go-live date; the hiring process for new EIM Operator positions (interviews complete, with internal and external candidates considered); routine project meetings with CAISO, including the first quarterly CEO update on February 8; BANC EIM Oversight Committee initial discussions on cost allocation (implementation and O&M); and EIM EDAM enhancements. With regard to EIM EDAM, discussion has ensued among EIM Entities regarding several issues

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

including governance and the incentivization of transmission, among others. Further discussions on this topic are planned for the upcoming BANC Strategic Planning Meeting.

Mr. Shetler also touched on the in-process EIM Phase 2 evaluation. The SMUD proposal for Phase 2 support has been discussed with the Phase 2 participants, and WAPA-SNR is evaluating their possible role within Phase 2.

- B. Mr. Shetler provided an update on the BANC IRP Review. Navigant has provided initial concepts and results to the Resource Committee, with a draft final report expected in March. This, too, will be a topic of discussion at the upcoming BANC Strategic Planning Meeting.

6. Closed Session:

- A. The Commission retired to closed session for conference with legal counsel pursuant to subdivision (c) of Cal. Gov't Code § 54956.9; one case.

After returning to open session, Mr. Braun reported that during closed session, the Commission authorized the General Manager to proceed with a notice of withdrawal from Peak RC effective December 31, 2019, to coordinate that withdrawal with affected TOPs within the BANC footprint, and to enter into a non-binding arrangement and associated documents to provision RC services from the CAISO.

The meeting was adjourned at 3:18 p.m.

Minutes approved on April 25, 2018.

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 February 2018

Operations:

- BA Operations: Normal
- Significant BA Issues: None
- NWPP
 - 0 contingency requiring activation of NWPP
 - 0 MW average generation lost
 - 0 MW maximum generation lost
 - All recoveries within 0 minutes
- USF
 - 15 of 28 days with instances of USF mitigation procedure utilized
 - 15 days on Path 66
 - No operational impact on BANC
- BAAL Operation:
 - Number of BAAL exceedance >10 minutes: 0
 - Maximum duration of BAAL exceedance: 9 minutes
 - BAAL violation (BAAL exceedance >30 minutes): None
- COI Actual Flow Greater Than TTC: 91.0 Hours

Monthly Notes:

- No additional notes or impacts for February 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

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

TO: BANC Commission

RE: BANC Operator Report for March 2018

Operations:

- BA Operations: Normal
- Significant BA Issues: None
- NWPP
 - 0 contingency requiring activation of NWPP
 - 0 MW average generation lost
 - 0 MW maximum generation lost
 - All recoveries within 0 minutes
- USF
 - 6 of 31 days with instances of USF mitigation procedure utilized
 - 6 days on Path 66
 - No operational impact on BANC
- BAAL Operation:
 - Number of BAAL exceedance >10 minutes: 4
 - Maximum duration of BAAL exceedance: 12 minutes
 - BAAL violation (BAAL exceedance >30 minutes): None
- COI Actual Flow Greater Than TTC: 26.7 Hours

Monthly Notes:

- No additional notes or impacts for March 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

March 2018

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.
- A compliance review pertaining to the Balancing Authority ACE Limit calculation methodology confirmed that all standard requirements reviewed are being met.

BANC MCRC:

- The next Member Compliance Review Committee (MCRC) teleconference will be held at 10:00 AM on Monday, March 19, 2018. Compliance staff will provide a supplemental Internal Controls Evaluation Program overview for member use and reference.
- Annual Self-Certification statements were submitted to WECC on March 1, 2018. As expected, BANC certified 100% compliance for all NERC Reliability Standards and requirements subject to Self-Certification.

Compliance Officer's Report

BANC Commission

April 2018

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.
- A compliance review pertaining to the Balancing Authority ACE Limit calculation methodology confirmed that all standard requirements reviewed are being met. A final report is in progress.

BANC MCRC:

- The next Member Compliance Review Committee (MCRC) teleconference will be held at 10:00 AM on Monday, April 23, 2018.
- The quarterly self-logged compliance issues spreadsheet is due to WECC by May 1, 2018. BANC will submit an attestation letter that there were no issues identified during the reporting period.

BANC PC Committee Chair's Report

March 2018

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 Grid Planning staff continued working on the 2018 Planning Assessment. Staff, along with the other PC Participants, is reviewing the system models that will be used for the assessment before performing studies. These system models, which were downloaded from the CAISO website, had a number of significant modeling errors. After discussing the errors with the CAISO, staff realized there may be issues with the CAISO Non-Disclosure Agreement (NDA) staff executed in order to access and use the CAISO system models. These issues are largely related to NDA version changes and SMUD's expanded use of data for providing broader PC services. Staff is working with SMUD and BANC legal staff to resolve any potential issues regarding the CAISO NDA and will provide further updates.

BANC PC Committee Chair's Report

April 2018

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 Grid Planning staff continued working on the 2018 Planning Assessment. All system models were reviewed by the PC Participants and approved for use in the assessment. Staff also finalized a major review of all relevant contingencies. Staff is now beginning to run all of the steady-state and stability simulations required by the NERC transmission planning reliability standard (TPL-001-4).
- In an effort to resolve a number of issues regarding the use of CAISO system models for BANC reliability studies and the associated Non-Disclosure Agreement (NDA), Grid Planning staff, along with BANC and SMUD legal staff, will meet with representatives from CAISO's Legal Department during the last week of April. As noted in last month's report, these issues are largely related to NDA version changes and SMUD's expanded use of data for providing broader PC services.

GM Report

BANC Commission Meeting

April 25, 2018

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:

TID

We continue to be open to discussions with TID regarding potential joint efforts on EIM participation. TID provided feedback that they have been given authority to work with BANC on potential EIM participation and possible joint use of the SMUD/BANC EMS. Prior feedback from TID is that they wanted to see if the actual benefits for SMUD in Phase 1 of BANC EIM match the forecast before they commit to moving forward with EIM participation. However, TID did seek a rough estimate of what joining the BANC EIM might cost for their planning purposes. We had a meeting with TID staff on January 12, 2018, to discuss various options for BANC and TID to work together in the future. These included the potential for TID to join BANC and/or to work with BANC on EIM participation. Follow-up discussions indicate that TID is still interested in working jointly with BANC and also with SMUD regarding joint EMS.

LADWP/Seattle City Light/SRP

Dialogue continues with these entities regarding EIM participation. LADWP received approval from the City Council in May 2017 to participate in EIM. They are still shooting for a Spring 2019 go-live date, though there are strong indications this could slip to Spring 2020. Seattle City Light received approval in November 2016 from the City Council to proceed with participation in EIM. SCL has recently announced that they will slip implementation to spring of 2020. SRP management received approval from its Board in February 2017 to participate in EIM and made its formal announcement in early May. They are currently forecasting "go-live" in spring 2020. 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. The CAISO also announced in early June 2017 that Powerex would be joining the EIM. The POU group is still trying to understand what this means and exactly how they will be participating. Several meetings have been held to better understand the impacts of Powerex participation in the EIM. In addition,

we are collaborating with the other POU's on joint language to use in the EIM 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 POU's in the ever-changing power markets in the West. The group also conducted an update conference call on April 16, 2018. The next in-person meeting is planned for Salt Lake City on May 4, 2018.

South San Joaquin Irrigation District (SSJID)

SSJID is in the process of evaluating which California BA they should join once they become a LSE. They have had some preliminary discussions with BANC on what would be involved in joining BANC. In addition, SSJID has contacted BANC regarding working with other BANC members to help secure resources to meet RA requirements should they join BANC.

Market Initiatives:

FRSG

BANC continues to work with the NWPP on a joint effort for meeting the new frequency reserve requirements of NERC BAL-003, which was phased-in late 2016. Implementation results continue to look good.

EIM Participation

The CAISO filed the BANC Implementation Agreement with FERC on 3/24/17. BANC did file at FERC in support of approval of the agreement. FERC issued a letter order on 5/18/17 accepting the CAISO filing for BANC EIM participation. BANC has initiated the efforts for registering with the CAISO as the BANC EIM Entity and SC for the EIM project. In addition, BANC is working with the Treasurer to identify the processes and approvals needed to obtain counterparty financial status with the CAISO. It is anticipated that some approvals by the Commission will be required during the 1st Quarter to meet the schedule for implementation.

Utilicast finalized the system "gap" analysis on technologies to identify any additional areas needed for supporting EIM implementation. Results of the system "gap" analysis were presented on June 29, 2017. No major areas of concern were identified. Utilicast stated that the BANC/SMUD team is the best prepared for EIM participation of any entity they have evaluated. Utilicast completed a process "gap"

analysis, with a report provided on October 3, 2017. This analysis also concluded that there are no major areas of concern.

BANC and SMUD have met to discuss the initial outline of scope of services for the BANC/SMUD EIM Services Agreement. BBSW has finalized a formal agreement and BANC and SMUD have agreed upon initial funding levels. The Commission at its January 2018 meeting approved the agreement. The BANC EIM Oversight Committee is now starting to address the question of cost allocation.

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. We have outlined the scope of the problem, have held discussions with the CAISO to better understand the limitations on SMUD in EIM, and are shooting to return to the Commission late 2018 with some preliminary recommendations on how to proceed.

BANC and TANC continue to hold discussions with the CAISO regarding IBAA relief. As a result of these discussions, the CAISO has initiated evaluating options for BANC/TANC consideration. We will update the Commission when these options are fully defined.

The CAISO has also announced the intent to allow EIM entities to participate in the Day-ahead Market. The details of how this will work will be discussed during the coming year, with the intent to have the enhancements in place in 2020. The EIM entities have initiated discussions among themselves and with the CAISO regarding the key issues that will need to be addressed for potential participation in the day-ahead market.

WAPA:

Market Engagement

We are working with WAPA on integrating them in to the EIM implementation discussions. This includes EIM Phase 2 discussions with WAPA, MID, Redding, and Roseville. Based upon these discussions, the group has developed a set of “principles” for a possible Phase 2. In addition, the group has contracted with GridSME for additional evaluation work for a possible Phase 2. GridSME issued its preliminary report in early August and a revision in early September. The Phase 2 group has reviewed this report. In addition, SMUD has offered some concepts around moving forward with a possible Phase 2, which the group reviewed in December 2017. We are having follow-up discussions with WAPA-SNR regarding their role in Phase 2. The goal is to have a concept by early 2018 of how we would like to see Phase 2 proceed.

In addition, Redding has requested that a separate task, which would be solely funded by Redding, be initiated with GridSME to evaluate the effort necessary for Redding to become a scheduling coordinator (SC). Based upon discussions with

BBSW, we have determined that this task can be initiated under the current delegations to the General Manager. This effort has been completed.

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. We are anticipating some follow-on meetings with WAPA-SNR, DWR, and CAISO as this project progresses.

Peak Reliability:

Aliso Canyon

Peak/CAISO/LADWP/SCE have finalized assessments for summer 2017. Public meetings were scheduled to start the process for determining if Aliso Canyon can “restart”. Indications are that public opposition to restart of Aliso Canyon will be strong. At this stage, it is assumed that Aliso Canyon will not be available for use this summer, though there might be a possibility for “emergency” use. 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 Interest in Overseeing Congestion Management for Western Interconnection

Peak provided more clarification on this concept at the December 2016 Board meeting. The focus is on assisting the BAs and TOPs along with Peak in using the new Enhanced Curtailment Calculator (ECC) tool to better manage congestion in the Interconnection. Peak made it clear that they only intended to retain their role from a reliability perspective and **would not** perform economic re-dispatch functions. We continue to work with Peak staff on better defining Peak’s role in congestion management in the future.

Peak/PJM Connex Partnership

Peak and PJM Connex have completed their business case for both development of a new market and for core RC services. Their business case has been posted on the Peak website. Peak is holding meetings with interested parties to determine if there is enough interest to proceed with a more formal market development effort and to determine which entities might be staying with Peak as their Reliability Coordinator (RC).

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. In addition, BANC and the TOPs have entered in to non-binding letters of intent to evaluate RC services from the CAISO. This effort has formally kicked off.

WECC

Electricity/Natural Gas Reliability Interface

WECC initiated its natural gas/electricity interface study in September 2017. Based upon further discussions with WECC, I have been asked to participate on the executive oversight committee for this effort. The status of this effort was discussed at the February 2018, WEIL meeting in San Diego, which I attended. This was discussed at the WECC Board meeting on 3/6-7/18 in Salt Lake City. The next update will be provided at the WEIL meeting in early May 2018. WECC is working with the WEIL members to determine how best to communicate the results of this study, which should be completed by spring this year.

WECC Board Meetings

The WECC Board will be meeting on April 30, 2018, in Portland, OR, to discuss the reliability issues that are facing the Western Interconnection

WECC CEO Search

WECC CEO Jim Robb has taken the position as NERC CEO effective early April. WECC has initiated a search effort for a new CEO.

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. We have received feedback that CDWR intends to use SMUD for transmission service at the north end of the project and WAPA for the south end, but are still awaiting a formal announcement of their decision. CDWR is also waiting on formal decisions by the water contractors to fund the project. A follow-up meeting with CAISO, WAPA-SNR, CDWR, and us was held on 11/9/17 to discuss how load will be served for this project.

Strategic Initiatives:

Refer to the 2017/2018 Strategic Initiatives update, which is attached to this report. Note that this update reflects the additional initiatives agreed upon at the June 2017 Strategic Planning Session.

BANC and BBSW are working to define the agenda for the planned BANC Strategic Planning session, which has been moved to July 25, 2018.

BANC 2017/2018 Strategic Plan - Routine/Ongoing Initiatives - April 2018 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 Medium		Develop BANC "101" Training presentation	Jim Shetler/BBSW	4th Qtr. 2017	COMPLETED
4 Low		Organizational Issues: ~Issue committee rosters ~Update website	Jim Shetler/BBSW Jim Shetler/BBSW	3rd Qtr. 2017 1st Qtr. 2018	COMPLETED ~Completion 2nd Qtr 2018
5 Medium	OUTREACH	Engage in industry forums (WECC, Peak, NWPPA, etc.)	Jim Shetler	Ongoing	Continue attending Peak & WECC Board meetings & NWPP Exec. Forum
6 Medium		Coordinate with other POU BAs (Ca and regionally)	Jim Shetler	Ongoing	Coordinating with SCL, SRP, LADWP, & TID on EIM
7 Medium		Outreach to regulatory and legislative bodies on key issues	Jim Shetler/BBSW	Ongoing	~ FERC staff/Commissioner meetings 3/20/18
8 Medium	ASSETS	Identify and implement efforts to improve BANC member asset optimization & renewable integration	Resource Committee	2nd Qtr. 2018	~Data collection complete ~Developed scenarios & evaluation plan. Work will extend in to 2018.
9 Low	MEMBER SERVICES	Identify and outreach to potential new BANC members	Jim Shetler	Ongoing	~Continue follow-on discussions with TID on EIM. Mtg on 1/12/2018 ~Discussions with SSJID on joining BANC

BANC 2017/2018 Strategic Plan - Focused Initiatives - April 2018 Update

No./Priority	Focus Area	Initiative	Responsibility	Target Due Date	Status
10 High	INDEPENDENCE	Manage implementation of EIM participation effort	Jim Shetler	No earlier than Spring 2019	~ Finalizing EIM Services Agreement. ~ Addressing Bilateral trading issue ~ Addressing EIM data sharing issue ~ Initiated market support contract with EnergyGPS
11 Medium	OUTREACH	Evaluate opportunities to engage other entities in market development	Jim Shetler	4th Qtr. 2017	~ Continue coordination w/ LA, SCL, SRP ~ Continue TID discussions
12 High		Regional Policy Issues: Monitor/weigh-in where appropriate	Jim Shetler/Commission	Ongoing	
13 Medium		Regionalization: ~Monitor CAISO governance ~ Develop white paper on BA consolidation	Jim Shetler/BBSW Jim Shetler/BBSW	Ongoing 1st Qtr. 2018	~COMPLETED
14 Medium		Monitor MWTG & Peak impacts & alternatives	Jim Shetler	Ongoing	~Engaged w/ Funding Parties on next steps for RC
15 Medium	ASSETS	Develop BANC footprint "IRP" focused on VERs firming & renewables.	Resource Committee	1st Qtr. 2018	~Developed scenarios & evaluation plan. Work will extend in to 2018.
16 High	MEMBER SERVICES	Implement PA/PC project to be fully compliant	Jim Shetler/SMUD	Dec-17	COMPLETED

Balancing Authority of Northern California

Agenda Item 5A

- 1. BANC Audited Financials.**

**BALANCING AUTHORITY OF
NORTHERN CALIFORNIA**

Sacramento, California

COMMUNICATION TO THOSE CHARGED
WITH GOVERNANCE AND MANAGEMENT

As of and for the Year Ended December 31, 2017

BALANCING AUTHORITY OF NORTHERN CALIFORNIA

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REQUIRED COMMUNICATIONS BY THE AUDITOR TO THOSE CHARGED WITH GOVERNANCE

To the Commissioners
Balancing Authority of Northern California
Sacramento, CA

Thank you for using Baker Tilly Virchow Krause, LLP as your auditor. We have completed our audit of the financial statements of the Balancing Authority of Northern California for the years ended December 31, 2017 and 2016, and have issued our report thereon dated February 16, 2018. This letter presents communications required by our professional standards.

***OUR RESPONSIBILITY UNDER AUDITING STANDARDS GENERALLY ACCEPTED
IN THE UNITED STATES OF AMERICA***

The objective of a financial statement audit is the expression of an opinion on the financial statements. We conducted the audit in accordance with auditing standards generally accepted in the United States of America. These standards require that we plan and perform our audit to obtain reasonable, rather than absolute, assurance about whether the financial statements prepared by management with your oversight are free of material misstatement, whether caused by error or fraud. Our audit included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit does not relieve management or those charged with governance of their responsibilities.

As part of the audit we obtained an understanding of the entity and its environment, including internal control, sufficient to assess the risks of material misstatement of the financial statements and to design the nature, timing and extent of further audit procedures. The audit was not designed to provide assurance on internal control or to identify deficiencies in internal control.

OTHER INFORMATION IN DOCUMENTS CONTAINING AUDITED FINANCIAL STATEMENTS

Our responsibility does not extend beyond the audited financial statements identified in this report. We do not have any obligation to and have not performed any procedures to corroborate other information contained in client prepared documents, such as official statements related to debt issues.

PLANNED SCOPE AND TIMING OF THE AUDIT

We performed the audit according to the planned scope and timing previously communicated to you at the presentation of the 2016 audit report.

QUALITATIVE ASPECTS OF THE ENTITY'S SIGNIFICANT ACCOUNTING PRACTICES

Accounting Policies

Management is responsible for the selection and use of appropriate accounting policies. In accordance with the terms of our engagement letter, we will advise management about the appropriateness of accounting policies and their application. The significant accounting policies used by the Balancing Authority of Northern California are described in Note 2 to the financial statements.

We noted no transactions entered into by the Balancing Authority of Northern California during the year that were both significant and unusual, and of which, under professional standards, we are required to inform you, or transactions for which there is a lack of authoritative guidance or consensus.

QUALITATIVE ASPECTS OF THE ENTITY'S SIGNIFICANT ACCOUNTING PRACTICES (cont.)

Accounting Estimates

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. There were no significant sensitive estimates.

Financial Statement Disclosures

The disclosures in the financial statements are neutral, consistent, and clear.

DIFFICULTIES ENCOUNTERED IN PERFORMING THE AUDIT

We encountered no significant difficulties in dealing with management in performing our audit.

CORRECTED AND UNCORRECTED MISSTATEMENTS

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management.

There were no such misstatements identified.

DISAGREEMENTS WITH MANAGEMENT

For purposes of this letter, professional standards define a disagreement with management as a matter, whether or not resolved to our satisfaction, concerning a financial accounting, reporting, or auditing matter that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

CONSULTATIONS WITH OTHER INDEPENDENT ACCOUNTANTS

In some cases, management may decide to consult with other accountants about auditing and accounting matters. If a consultation involves application of an accounting principle to the governmental unit's financial statements or a determination of the type of auditors' opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

MANAGEMENT REPRESENTATIONS

We have requested certain representations from management that are included in the management representation letter. This letter follows this required communication.

INDEPENDENCE

We are not aware of any relationships between Baker Tilly Virchow Krause, LLP and the Balancing Authority of Northern California that, in our professional judgment, may reasonably be thought to bear on our independence.

Relating to our audit of the financial statements of Balancing Authority of Northern California for the year ended December 31, 2017, Baker Tilly Virchow Krause, LLP hereby confirms that we are, in our professional judgment, independent with respect to the Balancing Authority of Northern California in accordance with the Code of Professional Conduct issued by the American Institute of Certified Public Accountants. We provided no services to the Balancing Authority of Northern California other than audit services provided in connection with the audit of the current year's financial statements.

OTHER AUDIT FINDINGS OR ISSUES

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the Balancing Authority of Northern California's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

OTHER MATTERS

We applied certain limited procedures to the required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements and other knowledge we obtained during our audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance of the RSI.

RESTRICTION ON USE

This information is intended solely for the use of the Balancing Authority of Northern California and management and is not intended to be, and should not be, used by anyone other than these specified parties.

We welcome the opportunity to discuss the information included in this letter and any other matters. Thank you for allowing us to serve you.

Baker Tilly Virchow Krause, LLP

Madison, Wisconsin
February 16, 2018

MANAGEMENT REPRESENTATIONS



BALANCING AUTHORITY OF NORTHERN CALIFORNIA

RELIABILITY • COLLABORATION • SUSTAINABILITY

February 16, 2018

Baker Tilly Virchow Krause, LLP
Ten Terrace Court
P.O. Box 7398
Madison, WI 53707-7398

Dear Baker Tilly Virchow Krause, LLP:

We are providing this letter in connection with your audit of the financial statements of Balancing Authority of Northern California (the Agency) as of December 31, 2017 and 2016 and for the years then ended for the purpose of expressing an opinion as to whether the financial statements present fairly, in all material respects, the financial position, results of operations, cash flows of the Agency in conformity with accounting principles generally accepted in the United States of America. We confirm that we are responsible for the fair presentation of the previously mentioned financial statements in conformity with accounting principles generally accepted in the United States of America. We are also responsible for adopting sound accounting policies, establishing and maintaining internal control over financial reporting, and preventing and detecting fraud.

Certain representations in this letter are described as being limited to matters that are material. Items are considered material, regardless of size, if they involve an omission or misstatement of accounting information that, in the light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would be changed or influenced by the omission or misstatement. An omission or misstatement that is monetarily small in amount could be considered material as a result of qualitative factors.

We confirm, to the best of our knowledge and belief, the following representations made to you during your audit.

Financial Statements

1. We have fulfilled our responsibilities, as set out in the terms of the audit engagement letter.
2. The financial statements referred to above are fairly presented in conformity with accounting principles generally accepted in the United States of America and include all properly classified funds and other financial information of the primary government and all component units required by accounting principles generally accepted in the United States of America to be included in the financial reporting entity.
3. We acknowledge our responsibility for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.
4. We acknowledge our responsibility for the design, implementation, and maintenance of internal control to prevent and detect fraud.

A JOINT POWERS AUTHORITY BETWEEN

Modesto Irrigation District, City of Redding, City of Roseville, Trinity Public Utilities District,
City of Shasta Lake and Sacramento Municipal Utility District

6001 S STREET, MS D109, SACRAMENTO, CA 95852-1830

WWW.THEBANC.ORG

5. All events subsequent to the date of the financial statements and for which accounting principles generally accepted in the United States of America require adjustment or disclosure have been adjusted or disclosed. No other events, including instances of noncompliance, have occurred subsequent to the balance sheet date and through the date of this letter that would require adjustment to or disclosure in the aforementioned financial statements.
6. All material transactions have been recorded in the accounting records and are reflected in the financial statements.
7. The effects of all known actual or possible litigation, claims, and assessments have been accounted for and disclosed in accordance with accounting principles generally accepted in the United States of America.

Information Provided

8. We have provided you with:
 - a. Access to all information, of which we are aware, that is relevant to the preparation and fair presentation of the financial statements, such as financial records and related data, documentation, and other matters.
 - b. Additional information that you have requested from us for the purpose of the audit.
 - c. Unrestricted access to persons within the entity from whom you determined it necessary to obtain audit evidence.
 - d. Minutes of the meetings of the Agency or summaries of actions of recent meetings for which minutes have not yet been prepared.
9. We have disclosed to you results of our assessment of the risk that the financial statements may be materially misstated as a result of fraud.
10. We have no knowledge of any fraud or suspected fraud that affects the entity and involves:
 - a. Management,
 - b. Employees who have significant roles in internal control, or
 - c. Others where the fraud could have a material effect on the financial statements.
11. We have no knowledge of any allegations of fraud or suspected fraud affecting the entity received in communications from employees, former employees, regulators, or others.
12. We have no knowledge of known instances of noncompliance or suspected noncompliance with provisions of laws, regulations, contracts, or grant agreements, or abuse, whose effects should be considered when preparing financial statements.
13. There are no known related parties or related party relationships and transactions of which we are aware.

Other

14. There have been no communications from regulatory agencies concerning noncompliance with, or deficiencies in, financial reporting practices.
15. We have a process to track the status of audit findings and recommendations.

16. We are responsible for compliance with federal, state, and local laws, regulations, and provisions of contracts and grant agreements applicable to us, including tax or debt limits, debt contracts, and IRS arbitrage regulations; and we have identified and disclosed to you all federal, state, and local laws, regulations and provisions of contracts and grant agreements that we believe have a direct and material effect on the determination of financial statement amounts or other financial data significant to the audit objectives, including legal and contractual provisions for reporting specific activities in separate funds.
17. There are no:
- a. Violations or possible violations of budget ordinances, federal, state, and local laws or regulations (including those pertaining to adopting, approving and amending budgets), provisions of contracts and grant agreements, tax or debt limits, and any related debt covenants whose effects should be considered for disclosure in the financial statements or as a basis for recording a loss contingency, or for reporting on noncompliance, except those already disclosed in the financial statement, if any.
 - b. Other liabilities or gain or loss contingencies that are required to be accrued or disclosed by accounting principles generally accepted in the United States of America.
18. The Agency has satisfactory title to all owned assets, and there are no liens or encumbrances on such assets nor has any asset been pledged as collateral.
19. The Agency has complied with all aspects of contractual agreements that would have a material effect on the financial statement in the event of noncompliance.
20. Components of net position (net investment in capital assets; restricted; and unrestricted) and equity amounts are properly classified and, if applicable, approved.
21. Deposits are properly classified as to risk, and are properly valued. Collateralization agreements with financial institutions, if any, have been properly disclosed.

Sincerely,

Balancing Authority of Northern California

Signed:


Jim Shetler, General Manager

Signed:


Noreen Roche-Carter, Treasurer

Signed:


Sandra Moorman, Controller

**BALANCING AUTHORITY OF NORTHERN CALIFORNIA
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INDEPENDENT AUDITORS' REPORT

To the Commissioners
Balancing Authority of Northern California
Sacramento, California

We have audited the accompanying financial statements of the Balancing Authority of Northern California as of and for the years ended December 31, 2017 and 2016, and the related notes to the financial statements, as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Balancing Authority of Northern California's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the test utility's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Balancing Authority of Northern California as of December 31, 2017 and 2016, and the changes in financial position and cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matter

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis as listed in the table of contents be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Baker Tilly Virchow Krause, LLP

Madison, Wisconsin
February 16, 2018

**BALANCING AUTHORITY OF NORTHERN CALIFORNIA
MANAGEMENT'S DISCUSSION AND ANALYSIS
(UNAUDITED)**

Using this Financial Report

This annual financial report for Balancing Authority of Northern California (Agency) consists of management's discussion and analysis and the financial statements, including notes to the financial statements. The basic Financial Statements consist of the Statements of Net Position, the Statements of Revenues, Expenses and Changes in Net Position and the Statements of Cash Flows.

The Agency's accounting records are maintained in accordance with Generally Accepted Accounting Principles for proprietary funds as prescribed by the Governmental Accounting Standards Board. The Agency's accounting records generally follow the Uniform System of Accounts for Public Utilities and Licensees prescribed by the Federal Energy Regulatory Commission (FERC).

Overview of the Financial Statements

The following discussion and analysis of the financial performance of the Agency provides an overview of the financial activities for the years ended December 31, 2017 and 2016. This discussion and analysis should be read in conjunction with the Agency's financial statements and accompanying notes, which follow this section.

The Statements of Net Position provide information about the nature and amount of resources and obligations at a specific point in time.

The Statements of Revenues, Expenses and Changes in Net Position report all of the Agency's revenues and expenses during the periods indicated.

The Statements of Cash Flows report the cash provided and used by operating activities, as well as other cash sources such as investment income and debt financing, and other cash uses such as payments for debt service and capital additions.

The Notes to Financial Statements provide additional detailed information to support the financial statements.

Nature of Operations

The Agency is a joint powers authority consisting of the following California publicly owned utilities: the Sacramento Municipal Utility District (SMUD), the Modesto Irrigation District, the City of Redding, the City of Roseville, the Trinity Public Utilities District, and the City of Shasta Lake (collectively, Members). The Agency performs FERC approved Balancing Authority Area (BAA) reliability functions that are overseen by North American Electric Reliability Corporation, nationally, and by Western Electricity Coordinating Council (WECC) in the West. The Agency also has the ability to acquire, construct, maintain, operate and finance projects for the Agency and for the benefit of any one or more of the Members. The Agency has no employees. The Agency has a contract with an industry professional to serve as the general manager. The Agency also has a contract with a legal firm to provide legal services for the Agency. An Agency Member, SMUD, serves as the Treasurer and Controller, Compliance Officer, and BAA Operator.

Operational Highlights

The Agency continues to support the Members' desire to have the BAA provide a strong base for maintaining their independence and ability for self-determination. In 2017, the Agency's Commission provided strategic direction for this goal with a focus on initiatives in the areas of:

- *Independence*
- *Assets*
- *Outreach*
- *Customer Services*

In the area of *Independence*, the Agency has been proactive at ensuring BAA operations are maintained in full compliance with industry standards. This has been accomplished through the proactive use of the Agency's Operations Committee and Member Compliance Review Committee. The Agency, through its compliance group, has been proactive in taking a risk-based approach to evaluating operational incidents, including near miss lessons-learned. The Agency has been actively engaged in evaluating market alternatives for its Members. This included the Northwest Power Pool (NWPP) market evaluation efforts. With the termination of the NWPP effort in late 2015, the Agency formally evaluated participation in the California Independent System Operator Corporation (CAISO) Energy Imbalance Market (EIM). This evaluation resulted in a decision for the Agency to become an EIM entity and allow phased-in participation by its Members. SMUD has decided to be the first Member to become a Participating Resource Provider. The Agency has executed an EIM Implementation Agreement with the CAISO and is currently forecasting EIM go-live for the spring of 2019. The Members are totally responsible for expenses related to EIM activities. The Agency serves as a pass through entity paying EIM expenses on behalf of the Members and collecting the same amount from the Members.

Regarding *Assets*, the Agency has finalized the arrangement with its BAA Operator, which is also a registered transmission operator, to determine relative responsibilities for funding facility assets. The Agency has started funding its fair share of these assets. The Agency also worked with the BAA Operator and WECC to finalize compliance responsibilities for any joint violations that might be imposed on the Agency and the BAA Operator. The Agency has hired an outside consultant to develop a consolidated and integrated resource plan view for the Agency's footprint, which should be completed in early 2018. This will assist the Agency in determining any operational impacts to the BAA with increased intermittent resources and potential assets that may be needed to manage the increased intermittency.

In the area of *Outreach*, the Agency has been reaching out to the appropriate state and federal agencies regarding its BAA role. The Agency has been proactive in its engagement with WECC and the reliability coordinator, Peak Reliability (Peak). This includes involvement with such issues as data sharing and alternative funding for Peak. The Agency has also been proactive in reaching out to other Publicly Owned Utilities BAAs in the West, engaging in the EIM Regional Issues Forum, and in CAISO regionalization discussions.

Regarding *Customer Services*, the Agency has worked with its Members to take on the role of planning coordinator (PC) for a part of the Agency's footprint. The Agency has contracted with SMUD to provide the PC services for participating Members. The initial study work was completed in 2017 and the Agency will be fully compliant as a PC by January 1, 2018, for those Members that have elected to take PC service.

FINANCIAL POSITION

Statements of Net Position Summary (Dollars in thousands)

	December 31,			Change			
	2017	2016	2015	2017 vs. 2016		2016 vs. 2015	
Assets							
Current assets	\$ 2,092	\$ 1,594	\$ 824	\$ 498	31.2%	\$ 770	93.4%
Total assets	<u>\$ 2,092</u>	<u>\$ 1,594</u>	<u>\$ 824</u>	<u>\$ 498</u>	31.2%	<u>\$ 770</u>	93.4%
Liabilities							
Current liabilities	\$ 2,092	\$ 1,594	\$ 824	\$ 498	31.2%	\$ 770	93.4%
Total liabilities	<u>2,092</u>	<u>1,594</u>	<u>824</u>	<u>498</u>	31.2%	<u>770</u>	93.4%
Net position							
Unrestricted	-0-	-0-	-0-	-0-	0.0%	-0-	0.0%
Total net position	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	0.0%	<u>-0-</u>	0.0%
Total liabilities and net position	<u>\$ 2,092</u>	<u>\$ 1,594</u>	<u>\$ 824</u>	<u>\$ 498</u>	31.2%	<u>\$ 770</u>	93.4%

2017 Compared to 2016

ASSETS

Current Assets increased by \$498 thousand primarily due to Account Receivables from Members for EIM expenses, partially offset by cash used to pay EIM expenses.

LIABILITIES

Current Liabilities increased by \$498 thousand primarily due to higher balances in Accounts Payable for EIM expenses.

2016 Compared to 2015

ASSETS

Current Assets increased by \$770 thousand primarily due to cash contributed by Members, partially offset by cash used to pay operating expenses.

LIABILITIES

Current Liabilities increased by \$770 thousand primarily due to the increase in Advances from Members due to cash contributed by Members, partially offset by cash used to pay for operating expenses, and lower Accounts Payable.

RESULTS OF OPERATIONS

Summary of Revenues, Expenses and Changes in Net Position

(Dollars in thousands)

	December 31,			Change			
	2017	2016	2015	2017 vs. 2016		2016 vs. 2015	
Operating revenues	\$ 1,840	\$ 2,017	\$ 1,977	\$ (177)	-8.8%	\$ 40	2.0%
Operating expenses	(1,840)	(2,017)	(1,977)	177	8.8%	(40)	-2.0%
Operating income	-0-	-0-	-0-	-0-	0.0%	-0-	0.0%
Change in net position	-0-	-0-	-0-	-0-	0.0%	-0-	0.0%
Net position - beginning of year	-0-	-0-	-0-	-0-	0.0%	-0-	0.0%
Net position - end of year	<u>\$ -0-</u>	<u>\$ -0-</u>	<u>\$ -0-</u>	<u>\$ -0-</u>	0.0%	<u>\$ -0-</u>	0.0%

2017 Compared to 2016

Operating Revenues decreased by \$177 thousand primarily due to lower billings to Members to cover lower operating expenses.

Operating Expenses decreased by \$177 thousand primarily due to lower payments for operations related to the Agency's market investigation activities.

2016 Compared to 2015

Operating Revenues increased by \$41 thousand primarily due to higher billings to Members to cover higher operating expenses.

Operating Expenses increased by \$41 thousand primarily due to higher payments for operations related to the Agency's market investigation activities.

**BALANCING AUTHORITY OF NORTHERN CALIFORNIA
STATEMENTS OF NET POSITION**

	December 31,	
	2017	2016
ASSETS		
CURRENT ASSETS		
Unrestricted cash	\$ 1,208,753	\$ 1,594,137
Receivable from Members	883,291	-0-
Total current assets	2,092,044	1,594,137
TOTAL ASSETS	\$ 2,092,044	\$ 1,594,137
LIABILITIES AND NET POSITION		
CURRENT LIABILITIES		
Accounts payable	\$ 402,853	\$ 73,843
Advances from Members	1,689,191	1,520,294
Total current liabilities	2,092,044	1,594,137
TOTAL LIABILITIES	2,092,044	1,594,137
NET POSITION		
Unrestricted	-0-	-0-
TOTAL NET POSITION	-0-	-0-
CONTINGENCIES (Note 3)		
TOTAL LIABILITIES AND NET POSITION	\$ 2,092,044	\$ 1,594,137

The accompanying notes are an integral part of these financial statements.

BALANCING AUTHORITY OF NORTHERN CALIFORNIA
STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

	Years Ended December 31,	
	2017	2016
OPERATING REVENUES		
Member revenues	\$ 1,840,103	\$ 2,017,472
Total operating revenues	1,840,103	2,017,472
OPERATING EXPENSES		
Operations	213,414	166,671
Administrative and general	1,626,689	1,850,801
Total operating expenses	1,840,103	2,017,472
OPERATING INCOME	-0-	-0-
CHANGE IN NET POSITION	-0-	-0-
NET POSITION - BEGINNING OF YEAR	-0-	-0-
NET POSITION - END OF YEAR	\$ -0-	\$ -0-

The accompanying notes are an integral part of these financial statements.

**BALANCING AUTHORITY OF NORTHERN CALIFORNIA
STATEMENTS OF CASH FLOWS**

	Years Ended December 31,	
	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES		
Receipts from Members	\$ 2,495,275	\$ 2,920,220
Payments to vendors	(2,880,659)	(2,150,310)
Net cash (used in) provided by operating activities	(385,384)	769,910
Net (decrease) increase in cash	(385,384)	769,910
Cash - beginning of the year	1,594,137	824,227
Cash - end of the year	\$ 1,208,753	\$ 1,594,137
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES		
Operating income	\$ -0-	\$ -0-
Adjustments to reconcile operating income to net cash provided by operating activities:		
Changes in operating assets and liabilities:		
Receivable from Members	(883,291)	-0-
Accounts payable	329,010	(20,618)
Advances from Members	168,897	790,528
Net cash (used in) provided by operating activities	\$ (385,384)	\$ 769,910

The accompanying notes are an integral part of these financial statements.

**BALANCING AUTHORITY OF NORTHERN CALIFORNIA
NOTES TO FINANCIAL STATEMENTS**

NOTE 1. ORGANIZATION AND OPERATIONS

The Balancing Authority of Northern California (Agency) is a joint powers authority (JPA) consisting of the following California publicly owned utilities: the Sacramento Municipal Utility District (SMUD), the Modesto Irrigation District, the City of Redding, the City of Roseville, the Trinity Public Utilities District, and the City of Shasta Lake (collectively, Members). The Agency performs Federal Energy Regulatory Commission approved Balancing Authority Area (BAA) reliability functions that are overseen by the North American Electric Reliability Corporation, nationally, and by the Western Electricity Coordinating Council in the West. The Agency also has the ability to acquire, construct, maintain, operate and finance projects for the Agency and for the benefit of any one or more of the Members.

The Agency has no employees. The Agency has a contract with an industry professional to serve as the general manager. An Agency Member, SMUD, serves as the Treasurer and Controller, Compliance Officer, and BAA Operator.

The Agency's Commission is comprised of one commissioner from each Member. The Members pay its participation percentage share of the costs associated with the operation of the Agency, with a minimum cost share of \$25 thousand per calendar year. The participation percentage of each Member is based on their proportional share of the annual retail load from the previous calendar year.

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Method of Accounting. The accounting records of the Agency are maintained in accordance with Generally Accepted Accounting Principles for proprietary funds as prescribed by the Governmental Accounting Standards Board (GASB). The Agency's accounting records generally follow the Uniform System of Accounts for Public Utilities and Licensees prescribed by the Federal Energy Regulatory Commission. The financial statements are reported using the economic resources measurement focus and the accrual basis of accounting. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows.

Use of Estimates. The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. Actual results could differ from those estimates.

Cash and Cash Equivalents. Cash and cash equivalents include all debt instruments purchased with an original maturity of 90 days or less.

Custodial Credit Risk. This is the risk that in the event of the failure of a depository financial institution or counterparty to a transaction, the Agency's deposits may not be returned or the Agency will not be able to recover the value of its deposits, investments or collateral securities that are in the possession of another party. The Agency does not have a deposit policy for custodial credit risk. At December 31, 2017 and 2016, \$1.0 million and \$1.3 million of the Agency's bank balance were uninsured, respectively.

Receivable from Member. The Agency records as a Receivable from Member the costs incurred related to the Energy Imbalance Market activities.

Advances from Members. Members provide cash to the Agency in advance for operations costs. These advances are recognized as operating revenue as expenses are incurred.

Net Position. The Agency classifies its net position as unrestricted.

Operating Revenues. The Agency invoices its Members for their respective participation percentage in accordance with the JPA agreement.

Operating Expenses. Operating expenses include the operations and administrative expenses of the Agency.

Subsequent Events. Subsequent events for the Agency have been evaluated through February 16, 2018, which is the date that the financial statements were available to be issued.

Reclassifications. Certain amounts in 2016 financial statements have been reclassified in order to conform to the 2017 presentation.

Recent Accounting Pronouncements. In January 2017, GASB issued SGAS No. 84, *“Fiduciary Activities”* (GASB No. 84). This statement establishes standards of accounting and financial reporting for fiduciary activities. GASB No. 84 establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. An activity meeting the criteria should be reported in a fiduciary fund in the basic financial statements. Governments with activities meeting the criteria should present a statement of fiduciary net position and a statement of changes in fiduciary net position. The statement of fiduciary net position reports the assets, deferred outflows of resources, liabilities, deferred inflows of resources, and fiduciary net position of the fiduciary activities. The statement of changes in fiduciary net position reports the additions to and deductions from the fiduciary fund(s). This statement also provides for the recognition of a liability to the beneficiaries in a fiduciary fund when an event has occurred that compels the government to disburse fiduciary resources. This statement is effective for the Agency in 2020. The Agency is currently assessing the financial statement impact of adopting this statement but does not expect it to be material.

In March 2017, GASB issued SGAS No. 85, *“Omnibus 2017”* (GASB No. 85). GASB No. 85 addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits). This statement is effective for the Agency in 2018. The Agency is currently assessing the financial statement impact of adopting this statement but does not expect it to be material.

In May 2017, GASB issued SGAS No. 86, *“Certain Debt Extinguishment Issues”* (GASB No. 86). The primary objective of this statement is to improve consistency in accounting and financial reporting for in-substance defeasance of debt by providing guidance for transactions in which cash and other monetary assets acquired with only existing resources (resources other than the proceeds of refunding debt) are placed in an irrevocable trust for the sole purpose of extinguishing debt. GASB No. 86 also improves accounting and financial reporting for prepaid insurance on debt that is extinguished and notes to financial statements for debt that is defeased in substance. This statement is effective for the Agency in 2018. The Agency is currently assessing the financial statement impact of adopting this statement but does not expect it to be material.

In June 2017, GASB issued SGAS No. 87, “**Leases**” (GASB No. 87). The objective of this statement is to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. GASB No. 87 requires recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under GASB No. 87, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. The lease liability should be measured at the present value of payments expected to be made during the lease term. As payments are made the lease liability is reduced and an outflow of resources (interest expense) is recognized for the interest on the liability. The lease asset should be amortized in a systematic and rational manner over the shorter of the lease term or the useful life of the underlying asset. The lease receivable should be measured at the present value of the lease payments expected to be received during the lease term. Any payments received are first allocated to accrued interest receivable and then to lease receivable. The deferred inflow of resources should be recognized as inflows of resources (revenue) in a systematic and rational manner over the term of the lease. The lessor should not derecognize the asset underlying the lease. A lease is defined as a contract that conveys control of the right to use another entity’s nonfinancial asset (the underlying asset) as specified in the contract for a period of time in an exchange or exchange-like transaction. Examples of nonfinancial assets include buildings, land, vehicles, and equipment. Any contract that meets this definition should be accounted for under the leases guidance, unless specifically excluded in this statement. The lease term is defined as the period during which a lessee has a noncancellable right to use an underlying asset, plus the following periods, if applicable. A short-term lease is defined as a lease that, at the commencement of the lease term, has a maximum possible term under the lease contract of 12 months (or less), including any options to extend, regardless of their probability of being exercised. Lessees and lessors should recognize short-term lease payments as outflows of resources (expenses) or inflows of resources (revenues), respectively, based on the payment provisions of the lease contract. This statement is effective for the Agency in 2021. The Agency is currently assessing the financial statement impact of adopting this statement.

NOTE 3. CONTINGENCIES

General Contingencies. In the normal course of operations, the Agency may be party to various claims, disputes and litigation. There are no such matters pending. Thus, there are no such actions that could have a material adverse impact on the Agency's financial position or results of operations.

Balancing Authority of Northern California

Agenda Item 5B

1. **Resolution 18-04-17 *Accepting and Adopting the BANC Member Participation Percentages for 2018.***
2. **Attachment A to Resolution 18-04-17.**

**Balancing Authority of Northern California
Resolution 18-04-17**

**ACCEPTING AND ADOPTING THE BANC MEMBER
PARTICIPATION PERCENTAGES FOR 2018**

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

1. Accept the 2018 Participation Percentages, attached hereto as Exhibit A, to be effective January 1, 2018.

PASSED AND ADOPTED by the Commissioners of the Balancing Authority of Northern California this 25th day of April, 2018, 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				

Greg Salyer
Chair

Attest by: C. Anthony Braun
Secretary

Attachment A to Resolution 18-04-17

2018 (based on 2016 numbers)

Member	2016 Retail Sales	2016 Retail Sales %	Rounded for 2018	Final for 2017	Diff	Final for 2018
MID	2503	16.53%	16.50%	16.50%	0.00%	16.50%
Redding	743	4.91%	5.00%	5.00%	0.00%	5.00%
Roseville	1179	7.78%	7.80%	7.80%	0.00%	7.80%
SMUD	10421	68.80%	69.00%	68.80%	0.20%	68.80%
Trinity	104	0.69%	0.70%	0.70%	0.00%	0.70%
Shasta	196	1.29%	1.30%	1.20%	0.10%	1.20%
	15146	100.0%	100.30%	100.00%		100.00%

Conclusion for 2018: because there is no change of more than 0.2% in any Member's share from the 2017 participation percentage, there is no need to revise the participation percentage for 2018.

Balancing Authority of Northern California

Agenda Item 5D

1. Resolution 18-04-18 *Revised Annual Budget for 2018.*
2. Attachment A to Resolution 18-04-18.

**Balancing Authority of Northern California
Resolution 18-04-18**

REVISED ANNUAL BUDGET FOR 2018

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

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

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

WHEREAS, the General Manager worked together with staff to develop a revised budget as a result of changes in assumptions related to EIM Phase 1 Implementation and ongoing discussions regarding Enhanced Day Ahead Market ("EDAM") participation by the Energy Imbalance Market ("EIM") entities; and

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

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

1. Approve the Revised 2018 Annual Budget for BANC in the form attached hereto as Exhibit A.
2. Directs the BANC Treasurer to assess each BANC Member in accordance with Resolution 12-02-03.

PASSED AND ADOPTED by the Commissioners of the Balancing Authority of Northern California this 25th day of April, 2018, 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				

Greg Salyer
Chair

Attest by: C. Anthony Braun
Secretary

2018 Revised BANC Budget

BACKGROUND

When the 2018 BANC Budget was developed and later approved by the Commission, the discussions on the enhanced day-ahead market (EDAM) participation by the EIM entities had not yet been finalized. Based upon discussions in late 2017 and early 2018, the CAISO and the EIM entities agreed to proceed with developing the scope of an EDAM proposal. This effort has been initiated with coordination efforts between BANC and SMUD as the most likely initial players within the BANC footprint in any EDAM that might be initiated. In addition, as we have proceeded with EIM Phase 1 Implementation, we have realized that there are some changes in assumptions that could reduce the estimate for 2018 and therefore free-up budget money that could be used for EDAM.

IMPACT ON 2018 BUDGET

The Commission did not specifically authorize dollars towards EDAM evaluation in the 2018 Budget. However, there were sufficient “contingency” dollars in the PA-3 EIM Implementation to cover the efforts to date. Now that we have both a better understanding of the expected EDAM effort for 2018 and a clearer picture of expected expenditures for 2018 EIM implementation, staff believes it is appropriate to provide an update on the 2018 Budget and seek Commission approval of the planned revised budget. Attached to this report are the following:

1. Revised 2018 Budget for PA-3: EIM Implementation
2. Proposed 2018 Budget for a new PA-4: EDAM Evaluation
3. Revised 2018 Budget member assessments.

Based upon this evaluation, staff is **not** seeking an increase in the overall 2018 Budget and believes that we can manage both the EIM implementation and the EDAM evaluation within the original authorization. Staff will be presenting the revised budget proposal in more detail at the Commission meeting and seeking Commission approval of the 2018 Revised Budget.

Attachment A to Resolution 18-04-18

1. **Revised** Project Agreement #3 (PA-3) – EIM Participation (Phase 1)
 - a. Assumptions
 - i. BANC participates in the EIM as an EIM Entity
 - ii. SMUD is only Participating Resource
 - iii. EIM program development in 2017 and 2018
 - iv. BANC go live with Phase 1 EIM in April 2019
 - v. Costs allocated to SMUD as the sole Phase 1 participant.
 - vi. No Phase 2 participation until Spring 2020 at earliest
 - b. **Revised** estimated costs under PA-3 for second year of implementation based upon estimates provided from GridSME evaluation for BANC and current work effort, including addition of market consultation support.

IMPLEMENTATION CATEGORY	COST ESTIMATE	REVISED ESTIMATE
Personnel - EIM Desk - 5	\$1,500,000.00	\$1,125,000.00
Personnel - Stakeholder Efforts	\$100,000.00	\$100,000.00
Personnel - Settlements	\$30,000.00	\$30,000.00
Training	\$70,000.00	\$70,000.00
Software Upgrades	\$400,000.00	\$400,000.00
Utilicast Support	\$500,000.00	\$500,000.00
Network Model Maint.		
Project Management	\$84,000.00	\$84,000.00
Integration Development		
Consultant Support		\$25,000.00
Legal Support	\$120,000.00	\$120,000.00
CAISO Implementation Fees	\$180,000.00	\$180,000.00
Total Estimate	\$2,984,000.00	\$2,634,000.00
Contingency	\$300,000.00	\$155,000.00
TOTAL for 2018	\$3,284,000.00	\$2,789,000.00

Attachment A to Resolution 18-04-18

2. Project Agreement #4 (PA-4) – EDAM Evaluation
- a. Assumptions
 - i. BANC participates in the EDAM as an EIM Entity
 - ii. SMUD is only Participating Resource
 - iii. EDAM program development in 2018, including cost/benefit analysis
 - iv. Formal CAISO stakeholder process in 2019
 - v. EDAM “go-live” no earlier than 2021
 - vi. Costs allocated to SMUD as the sole initial EDAM participant.
 - b. Estimated costs for EDAM under PA-4 are initial estimates based upon discussions among the EIM entities, CAISO, and BANC staff

IMPLEMENTATION CATEGORY	COST ESTIMATE
Energy GPS Support	\$75,000.00
Legal Support	\$120,000.00
Cost/Benefit Analysis	\$200,000.00
Total Estimate	\$395,000.00
Contingency	\$100,000.00
TOTAL for 2018	\$495,000.00

Attachment A to Resolution 18-04-18

3. 2018 BANC Member Assessments

MEMBER	2018 BASE BUDGET	PA-1: PA/PC	PA-2: PEAK	PA-3: EIM	PA-4: EDAM	MEMBER TOTAL
SMUD	\$1,341,714.00	\$125,000.00	\$-	\$2,789,000.00	\$495,000.00	\$4,255,714.00
MID	\$321,552.00	\$75,000.00	\$-	\$-	\$-	\$396,552.00
ROSEVILLE	\$153,120.00	\$26,250.00	\$68,828.00	\$-	\$-	\$248,198.00
REDDING	\$97,614.00	\$23,750.00	\$43,372.00	\$-	\$-	\$164,736.00
SHASTA LAKE	\$25,000.00	\$-	\$-	\$-	\$-	\$25,000.00
TPUD	\$25,000.00	\$-	\$-	\$-	\$-	\$25,000.00
BANC TOTAL	\$1,964,000.00	\$250,000.00	\$112,200.00	\$2,789,000.00	\$495,000.00	\$5,610,200.00
WASN	\$-	\$-	\$-	\$-	\$-	\$-
GRAND TOTAL	\$1,964,000.00	\$250,000.00	\$112,200.00	\$2,789,000.00	\$495,000.00	\$5,610,200.00

Balancing Authority of Northern California

Agenda Item 5G

1. **Resolution 18-04-19 *Approving Energy Imbalance Market Meter Procedures, Meter Standards and Specified Delegation to the BANC General Manager.***
2. **Attachment A to Resolution 18-04-19.**
3. **Attachment B to Resolution 18-04-19.**

Braun Blaising Smith Wynne, P.C.

Attorneys at Law

April 19, 2018

TO: BANC Commission

FROM: BANC Counsel

RE: LRA Approval of Balancing Authority of Northern California Energy Imbalance Market Meter Procedures and Meter Standards and Specified Delegation to the BANC General Manager

Introduction

In this memorandum, we describe the processes and procedures that have been developed by staff and counsel to support the Balancing Authority of Northern California's (BANC) proposed entry as a California Independent System Operator (CAISO) Scheduling Coordinator (SC) in the CAISO Energy Imbalance Market (EIM). These procedures are necessary for BANC to perform the metering function for the BANC EIM Entity footprint in accordance with the CAISO Tariff. Specifically, as explained in more detail below, we are seeking the following Commission actions:

1. As the Local Regulatory Authority (LRA)¹ for the BANC EIM Entity footprint, approval of the LRA Procedures set forth in Attachment A to Resolution 18-04-19 *Approving Energy Imbalance Market Meter Procedures, Meter Standards and Specified Delegation to the BANC General Manager*;
2. As the LRA for the BANC EIM Entity footprint, approval of the Meter Standards and meters detailed in Attachment B to Resolution 18-04-19 *Approving Energy Imbalance Market Meter Procedures, Meter Standards and Specified Delegation to the BANC General Manager*; and
3. Delegate specified authority to the BANC General Manager to make any future changes to the Meter Standards deemed necessary, as requested by the EIM Service Provider.

¹ As described in the CAISO Tariff, a LRA is: "[t]he state or local governmental authority, or the board of directors of an electric cooperative, responsible for the regulation or oversight of a utility." CAISO Tariff, Appendix A (Master Definition Supplement).

Discussion

As part of its role as the EIM Entity, the BANC will become an CAISO EIM SC in order to submit schedules and perform imbalance settlements within the metered boundary of the BANC EIM footprint.² As described in its Tariff, the CAISO does not accept Settlement Quality Metering Data relating to a SC Metered Entity (i.e., BANC as the (EIM) SC Metered Entity) unless it is produced by metering facilities that are certified in accordance with certification or similar criteria prescribed by the Local Regulatory Authority (LRA). Specifically, Section 10.3.9 of the CAISO Tariff States:

Scheduling Coordinators shall ensure that revenue meters and related Metering Facilities of those Scheduling Coordinator Metered Entities whom they represent *are certified in accordance with any certification criteria prescribed by the relevant Local Regulatory Authority* or, if no such criteria have been prescribed by that Local Regulatory Authority, certified in accordance with this Section 10. Scheduling Coordinators shall upon request of the CAISO supply promptly copies of all certificates issued by the relevant Local Regulatory Authority. (Emphasis added.)

With respect to the BANC EIM Entity, its LRA is the Commission. Thus, for purposes of meter certification related to the BANC EIM Entity footprint, the Commission, as the LRA, has the authority to both prescribe and approve the certification criteria for any revenue meters and metering facilities used by the BANC EIM Entity.

In order to effectuate this approval, BANC counsel has developed procedures for LRA approvals of both metering standards and meters relating to the BANC EIM footprint, both with respect to the (BANC) EIM Entity, where the Commission is the LRA, as well as for any BANC member EIM participants, which will seek individual approval from their own respective LRAs/Boards relating to meters necessary to enable their individual EIM participation (LRA Procedures).³ The LRA Procedures have already been vetted and approved by both the CAISO and the BANC Operating Committee (OC) and are provided as “Attachment A” to to Resolution 18-04-19.⁴ BANC staff and counsel are requesting Commission review and approval of the LRA Procedures contained in Attachment A, in accordance with the accompanying resolution.

In addition, pursuant to the LRA Procedures, BANC staff is proposing Commission certification of the metering standards developed by SMUD, both for purposes of its participation as an EIM Participating Resource and in its role as the EIM Entity Services Provider to BANC (Meter Standards). The Meter Standards, provided as “Attachment B” to to Resolution 18-04-19, establish the technical requirements for certifying the meters to be used for purposes of metering the BANC EIM Entity footprint, as well as for metering SMUD’s EIM Participating Resources.⁵

² BANC will enter two agreements with the CAISO to enable its role as an EIM SC: 1) Meter Services Agreement for Scheduling Coordinators; 2) EIM Entity Scheduling Coordinator Agreement.

³ In Phase 1 of BANC EIM participation, only the Sacramento Municipal Utility District (SMUD) sub-system will be included in the BANC EIM metered footprint and will be participating as a so-called “EIM Participating Resource.”

⁴ In accordance with its review, the OC, through its Chair, has provided an approval letter/memorandum to the Commission, as “Exhibit A” to this memorandum.

⁵ EIM Participating Resources are the resources chosen by the resource owner to supply bids into the EIM.

The Commission, however, is only required, as the LRA for the EIM Entity, to approve the Meter Standards and meters used for the metered boundaries of BANC EIM Entity footprint. Like the LRA Procedures, described above contained in Attachment A to Resolution 18-04-19, the Meter Standards and identified meters have been vetted and approved by both the CAISO and the OC. BANC staff and counsel are therefore also requesting Commission approval of the Meter Standards and meters provided in Attachment B, as set forth in the accompanying resolution.

Finally, given the potential need to revise the Meter Standards and/or to exchange and/or add new meters to the BANC EIM Entity footprint, BANC staff and counsel are further seeking a delegation by the Commission to the BANC General Manager to make any future changes to the Meter Standards deemed necessary, as requested by the EIM Service Provider, with the exception that any substantial changes made to the metering configuration and associated procedures and protocols due to the expansion of the BANC EIM Entity footprint (i.e., through the addition of new BANC EIM participants – i.e., “Phase 2”) would require Commission approval.⁶ This too is described in the accompanying resolution.

⁶ Similarly, the SMUD Board, which is also an LRA, has implicitly delegated these matters to staff as part of the SMUD Board’s approval for SMUD to become a CAISO SC and entering into a Meter Services Agreement.

Exhibit A

Memorandum

To: Balancing Authority of Northern California Commission

From: Mark Willis, BANC OC Chair 

Date: April 17, 2018

Re: BANC OC Recommendation to Approve Meter Standards for BANC EIM Entity

Commissioners,

I am writing this letter to you in my role as the Chair of the Balancing Authority of Northern California (BANC) Operating Committee (OC) to recommend that the Commission approve the Meter Standards, as described further below.

In accordance with Section 1.1 of the proposed "Procedures for Local Regulatory Agency Approval of Energy Imbalance Market Metering Standards for Energy Imbalance Market Entity and Energy Imbalance Market Participating Resource Scheduling Coordinators"¹ (LRA Procedures),² the OC has reviewed the Meter Standards developed by the Energy Imbalance Market (EIM) Services Provider, the Sacramento Municipal Utility District, and has concluded that they meet all the applicable requirements for BANC to perform its metering obligations as an EIM Entity Scheduling Coordinator Metered Entity in the California Independent System Operation Corporation EIM. The OC therefore recommends that the Commission approve the Meter Standards, as required by the LRA Procedures. Should these standards require substantive changes in the future (e.g., due to the addition of a new EIM participant(s) within the BANC EIM footprint), the OC will review these changes and make further recommendations to the Commission.

If you have any questions or concerns, please feel free to raise these with me at the April Commission meeting.

¹ LRA Procedures, Section 1.1 states:

The Balancing Authority of Northern California (BANC) Commission (Commission) is the Local Regulatory Authority (LRA) for the Energy Imbalance Market (EIM) Entity and shall approve, by resolution, metering standards developed by the EIM Services Provider *upon review and recommendation by the Operating Committee*, for its use as the EIM Entity Scheduling Coordinator Metered Entity. The LRA may concurrently approve and thereby "certify" any meters utilized by the EIM Services Provider in support of the EIM Entity which meet the approved metering standards; provided however that such meters have first been reviewed by the Operating Committee. (Emphasis added.)

² The LRA Procedures are currently before the Commission for approval.

**Balancing Authority of Northern California
Resolution 18-04-19**

**RESOLUTION APPROVING ENERGY IMBALANCE MARKET METER PROCEDURES, METER
STANDARDS AND SPECIFIED DELEGATION TO THE BANC GENERAL MANAGER**

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 it will participate in the Energy Imbalance Market ("EIM") operated by the California Independent System Operator Corporation ("CAISO"); and

WHEREAS, as part of its role as an EIM Entity, BANC will become a CAISO Scheduling Coordinator ("SC"); and

WHEREAS, the CAISO Tariff requires Scheduling Coordinators to ensure that revenue meters and related Metering Facilities of SC Metered Entities are certified in accordance with any certification criteria prescribed by the relevant Local Regulatory Authority ("LRA"); and

WHEREAS, the LRA of the BANC EIM Entity is the Commission; and

WHEREAS, the Commission, as the LRA, has the authority to both prescribe and approve the certification criteria for any revenue meters and metering facilities used by the BANC EIM Entity; and

WHEREAS, BANC counsel, in consultation with the EIM Entity Services Provider, the Sacramento Municipal Utility District, has developed procedures for LRA approvals of both metering standards and meters relating to the BANC EIM footprint; and these procedures have already been reviewed by the CAISO and reviewed and approved by the BANC Operating Committee.

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

1. Approve the LRA Procedures Set forth in Attachment A.
2. Approve the Meter Standards and meters detailed in Attachment B, which establish the technical requirements for certifying the meters to be used for purposes of metering the BANC EIM Entity footprint.
3. Delegate specified authority to the BANC General Manager to make any future changes to the Meter Standards deemed necessary, as requested by the EIM Service Provider, with the exception that any substantial changes made to the metering configuration and associated procedures and protocols due to the expansion of the BANC EIM Entity footprint would require Commission approval.

PASSED AND ADOPTED by the Commissioners of the Balancing Authority of Northern California
this 25th day of April 2018, 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				

Greg Salyer
Chair

Attest by: C. Anthony Braun
Secretary

Attachment A to Resolution 18-04-19

**Procedures for Local Regulatory Agency Approval of Energy Imbalance Market Metering Standards for
Energy Imbalance Market Entity and Energy Imbalance Market Participating Resource Scheduling
Coordinators**

1.1 The Balancing Authority of Northern California (BANC) Commission (Commission) is the Local Regulatory Authority (LRA) for the Energy Imbalance Market (EIM) Entity and shall approve, by resolution, metering standards developed by the EIM Services Provider upon review and recommendation by the Operating Committee, for its use as the EIM Entity Scheduling Coordinator Metered Entity. The LRA may concurrently approve and thereby “certify” any meters utilized by the EIM Services Provider in support of the EIM Entity which meet the approved metering standards; provided however that such meters have first been reviewed by the Operating Committee.

1.2 Each EIM Participant, on behalf of its EIM Participating Resource Scheduling Coordinator Metered Entity, whether itself or a third party, is responsible to obtain approval of its metering standards from its own LRA. Prior to obtaining such LRA approval, the metering standards shall be reviewed by the Operating Committee. The LRA may concurrently approve and thereby “certify” any meters utilized by the EIM Participant in support of the EIM Participating Resource Scheduling Coordinator Metered Entity which meet the approved metering standards; provided however that such meters have first been reviewed by the Operating Committee.

1.3 The EIM Entity and the EIM Participant acknowledge that the CAISO retains the right under the CAISO Tariff to seek proof of LRA certification of any meters used for EIM purposes by an EIM Entity or EIM Participating Resource Scheduling Coordinator.

1.4 The EIM Services Provider may, upon request, assist in the development of metering standards for any EIM Participant; however, such assistance may require additional compensation from that EIM Participant. The EIM Service Provider and the EIM Participant may agree on the amount of compensation and establish a separate funding mechanism either directly or through BANC. Such metering standards and certification(s) are to be approved and adopted by the relevant LRA in accordance with the same procedures applied to an EIM Participant herein.

Attachment B to Resolution 18-04-19

SMUD METER STANDARDS

As of 4/2/2018

This document describes SMUD's Meter Standards. These meter standards are met for all Settlement Quality Meter Data (SQMD) metering installs or replacements that SMUD may execute for any new or update to Telemetry/Intertie projects. This is by no means a binding document to install one specific meter manufacturer. This document is intended to define SMUD's meter standards. The SMUD Meter Shop Field Department analyzes many more variables for each project to ensure that not only these standards are met, but that other environment, physical, and logical requirements are met.

TESTING:

- SMUD Meter Shop Field Department tests SQMD meter devices yearly. Additional testing may occur at any time as deemed necessary by the SMUD Meter Shop Field Department.

ACCURACY AND ANSI STANDARDS:

- ANSI C12.20:2010 Accuracy; class 0.2, CL2 and CL10/CL20
- Minimum Rating: 55 VL–N, 95 VL–L

AUXILLARY POWER:

- Requirement Range: 55 – 530 Volts AC (60 Hz)

CURRENT CLASSES:

- 10 Amp (.01 – 10A)
- 20 Amp (.01 – 20A)

SIZE AND WEIGHT

- S base: 5.5 pounds max
- Switchboard: 11.5 pounds max

OPERATING TEMPERATURE:

- IEC 60068-2-2:1993: –40° to +85°C (–40° to +185°F)
- LCD: –20° to +70°C (–4° to +158°F)

INTEGRATED QUANTITIES:

- Watthours delivered/received, per-phase, polyphase total
- VARhours delivered/received, per-phase, polyphase total
- VAhours delivered/received, per-phase, polyphase total
- Amphours, per-phase (up to 3 phases), polyphase total
- Qhours delivered/received, per-phase, polyphase total

INSTANTANEOUS QUANTITIES

- Watts and VARs delivered, received, or bidirectional per-phase, polyphase
- VA delivered, received, or bidirectional per-phase, polyphase
- Q delivered, received, or bidirectional per-phase, polyphase
- Volts and Volts2 per-phase (up to 3 phases)
- Amps per-phase, polyphase

- PF per-phase, polyphase
- Frequency
- Volts THD per-phase
- Amps THD per-phase

LOAD PROFILE

- Intervals may be configured to be 1, 5, 10, 15, 20, 30, or 60 minutes in length
- Min 12 Channels
- Per Phase and Polyphase

1. Wh Del	16. VA,Volts
2. Wh Rec	17. Amps
3. VARh Del	18. Power Factor
4. VARh Rec	19. Hertz
5. VAh Del	20. Volts-THD
6. VAh Rec	21. Amps-THD
7. VARh per quadrant	22. Pulses
8. Ah	23. Status
9. Qh Del	24. A2
10. Qh Rec	25. V2
11. Avg. W Del	26. A2h
12. Avg. W Rec	27. V2h
13. Avg. VAR Del	28. Q
14. Avg. VAR Rec	29. Qhr
15. Avg. VAR per quadrant	

TEST OUTPUTS

- Type IR LED test pulse output provided through the optical port transmitter; emits bidirectional (delivered or received energy) Wh pulse when meter is in Normal mode, test pulse based on displayed register when in Test mode.

COMMUNICATION PROTOCOLS

- Modbus, DNP3 serial & TCP/IP
- Minimum 2 Form A contact outputs
- Minimum 3 Analog Outputs
- Option for Ethernet port
- Option for Modem
- Option for minimum 2 serial RS-232/485

Exhibit 1: BANC Energy Imbalance Market Meter List

Below is the list of BANC Energy Imbalance Market (EIM) Meters that are registered with the California ISO (CAISO) for BANC's participation in the EIM.

BANC Energy Imbalance Market Meter List

CAISO Resource ID	BANC/ SMUD Meter ID	CAISO Resource Name	Tie/Load	EMS Class
LAKE_SMUD	609943	LAKE - CAISO Tie Meter	Lake-Gold Hill	Interchange
RANCHOSECO_SMUD	335869	RANCHO SECO - CAISO Tie Meter	Rancho Seco - Bellota 1	Interchange
RANCHOSECO_SMUD	336329	RANCHO SECO - CAISO Tie Meter	Rancho Seco - Bellota 2	Interchange
ELVERTA	45441	ELVERTA	Elverta 1	Interchange
ELVERTA	45441	ELVERTA	Elverta 2	Interchange
HURLEY	31204	HURLEY	Elverta - Hurley 1	Interchange
HURLEY	31203	HURLEY	Elverta - Hurley 2	Interchange
HURLEY	31204	HURLEY	Hurley - Tracy 1	Interchange
HURLEY	31203	HURLEY	Hurley - Tracy 2	Interchange
FOLSOM	5809026	FOLSOM	Folsom - Lake	Interchange
FOLSOM	5809025	FOLSOM	Folsom - Orangevale	Interchange
OBANION	626246	OBANION	Elverta - Obanion	Interchange
OBANION	626236	OBANION	Natomas - Obanion	Interchange
BNCS_BAA_LOAD**	N/A	BANC_SMUD_BAA_LOAD	BANC/SMUD EIM BAA Load	<i>Calculated</i>

Column Definitions:

- **CAISO Resource ID** – Unique Meter ID in the CAISO systems
- **BANC/SMUD Meter ID** – Unique Meter ID in SMUD/WAPA systems
- **CAISO Resource Name** – Resource Name in CAISO systems
- **Tie/Load** – Tie or Load that is being measured
- **EMS Class** – Type of meter installation (Interchange or Generator)

**Note: The BAA_LOAD 'meter' is a calculated value equal to the sum of all generation, less net actual interchange, less losses estimate.

Balancing Authority of Northern California

Agenda Item 5H

1. ***Resolution 18-04-20 Authorization of Contract for Services Related to Energy Imbalance Market and Possible Enhanced Day Ahead Market Design Matters .***

Braun Blaising Smith Wynne, P.C.

Attorneys at Law

April 20, 2018

TO: BANC Commission

FROM: BANC Counsel

RE: Authorization of Contract for Services Related to Energy Imbalance Market and Possible Enhanced Day Ahead Market Design Matters

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 or the proposed Enhanced Day Ahead Market. The General Manager has used delegated authority to enter into an agreement with Energy GPS applicable to this scope of work. Attached to Resolution 18-04-20 *Authorization of Contract for Services Related to Energy Imbalance Market and Possible Enhanced Day Ahead Market Design Matters* is an executed version of that agreement.

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 EnergyGPS up to a total expenditure of \$100,000, with specific task orders to be determined by the General Manager but anticipated to be related to EIM and EDAM. This amount is within the current 2018 budget approved by the Commission.

This authorization is limited to this contract, and the General Manager is not seeking broader delegations at this time. Counsel would like the Commission to consider the issue of modifying delegations as a future matter, perhaps in the context of the Strategic Planning meeting.

**Balancing Authority of Northern California
Resolution 18-04-20**

**AUTHORIZATION OF CONTRACT FOR SERVICES RELATED TO ENERGY IMBALANCE MARKET
AND POSSIBLE ENHANCED DAY AHEAD MARKET DESIGN MATTERS**

WHEREAS, members of 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 Enhanced Day Ahead Market ("EDAM"); and

WHEREAS, the BANC General Manager has used delegated authority to enter into an agreement with EnergyGPS Consulting, Inc. applicable to this scope; 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 amend this EnergyGPS Consulting, Inc. contract to an amount not to exceed \$100,000, with specific task orders to be determined by the General Manager but anticipated to be related to EIM and EDAM.

PASSED AND ADOPTED by the Commissioners of the Balancing Authority of Northern California this 25th day of April 2018, 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				

Greg Salyer
Chair

Attest by: C. Anthony Braun
Secretary

PROFESSIONAL SERVICES AGREEMENT

This Agreement is entered into this 19th day of March, 2018 ("Effective Date"), by and between Energy GPS Consulting, LLC, ("Energy GPS"), an Oregon limited liability company, its affiliates and subsidiaries, and the Balancing Authority of Northern California ("Customer"), for professional services and related consulting services ("Services") to be provided to Customer. Each of Energy GPS and Customer is sometimes referred to as a "Party," and together as the "Parties" under this Agreement.

I. CONTENT OF AGREEMENT

This Agreement consists of (a) the main body of text set forth below, and (b) one or more task orders (each a "Task Order," and collectively the "Task Orders") setting out the applicable scope of work, pricing, and other task-specific information applicable to an engagement. In the event of a conflict between the terms of the body of this Agreement and those of a Task Order, the terms of the Task Order will prevail, except in the case of **Sections VII and VIII** below, in which case the terms of **Sections VII and VIII** will prevail.

II. SCOPE OF SERVICES

Each task or project which Energy GPS undertakes on Customer's behalf under this Agreement shall be defined in a separate Task Order signed by the Parties to this Agreement. Each Task Order will be effective upon execution by the last Party to sign, and will thereafter become automatically become a part of this Agreement. Each Task Order shall be consecutively numbered with the year and sequence number (e.g., 2017-001), and include a description of the scope of services to be provided, a description of any deliverables, any milestones or deadlines for completion, the budget, and the method of compensation for the services defined in such Task Order.

III. BILLING AND PAYMENT

Energy GPS shall submit monthly invoices to Customer setting forth the amount due for Services and itemizing amounts due for applicable taxes, if any. If using ACH or wire transfer method of payment, Customer shall submit remittance advice to accounting@energygps.com. Customer shall pay the full amount of such statement within thirty (30) days after receipt. Any sums billed, not disputed as provided below, and unpaid after thirty (30) days from the date of receipt, shall be subject to a late payment charge equal to the lesser of one and one-half (1-1/2) percent of the total sum billed or the maximum rate permitted by law, for each month or fraction thereof past due. In the event Customer, in good faith, disputes Energy GPS' computation of amounts due and owing, Customer will provide Energy GPS with written documentation explaining the disputed amount and describing in detail the factual and legal basis of the dispute. Customer shall pay all charges which are not in dispute in accordance with the payment terms outlined above. Customer will cooperate with Energy GPS to resolve any dispute expeditiously.

IV. INDEPENDENT CONTRACTOR

Energy GPS shall provide the Services to Customer as an independent contractor, not as an employee of Customer. Energy GPS shall not have or claim any right arising from employee status.

V. TERM OF AGREEMENT

- (a) The initial term of this Agreement shall begin on the Effective Date and continue for a period ending on the last day of the calendar month in which the year anniversary of the Effective Date occurs (the "Expiration Date"), unless otherwise terminated as provided herein. Thereafter, this Agreement shall automatically renew starting on the first day of the calendar month following the applicable Expiration Date and ending on the last day of the twelfth calendar month. Unless otherwise specified in a Task Order, Task Orders that have not yet been completed as of the applicable Expiration Date shall remain open, and the terms of this Agreement shall continue to apply to such open Task Orders.
- (b) Notwithstanding any other provision of this Agreement, if Customer desires to allow this Agreement to expire on the applicable Expiration Date, Customer may terminate this Agreement by providing Energy GPS with not less than thirty (30) days' advance written notice before the applicable Expiration Date of intent to terminate the Agreement on such Expiration Date. Open Task Orders shall remain subject to this Agreement.
- (c) Upon termination of this Agreement, Energy GPS shall have no further obligation to provide services to Customer except as described in this **Section V**. If the Agreement is terminated prior to completion of the services to be provided hereunder, Energy GPS shall render a final bill for services to Customer within thirty (30) days after the date of conclusion of services, and Customer shall pay Energy GPS for all fees and expenses incurred prior to the date of termination in accordance with the applicable Task Order.
- (d) Payment obligations shall survive termination of this Agreement. In addition, the obligations contained in the following sections shall also survive termination of this Agreement: **Sections VII** (Liability), **VIII** (Warranty), **XIV** (Attorney's Fees and Costs) and **XVIII** (Confidentiality).

VI. INSURANCE

- (a) Energy GPS will maintain any insurance as required by law and shall maintain a minimum of \$1,000,000.00 of commercial liability insurance.
- (b) Energy GPS shall obtain and thereafter maintain in effect, if available, such additional insurance as may be requested in writing by Customer, the cost of which will be reimbursed by Customer.

VII. LIABILITY

- (a) Energy GPS shall, to the extent not prohibited by law, indemnify and hold harmless Customer, its directors, officers, partners, agents, and employees from and against any and all third-party liability, claims, demands, damages, losses, and expenses, including but not limited to reasonably documented attorney's fees, for which Customer is determined to be legally liable resulting from negligent acts, errors or omissions by Energy GPS, its directors, officers, partners, agents, and employees in performance of the Services. Liability, claims, demands, damages, losses, or expenses, to the extent resulting from the negligent acts or errors of Customer, its directors, officers, partners, agents, employees, or of others, are excluded from Energy GPS' obligations pursuant to this paragraph.
- (b) Customer shall, to the extent not prohibited by law, indemnify and hold harmless Energy GPS, its directors, officers, partners, agents, and employees from and against any and all third-party liability, claims, demands, damages, losses, and expenses, including but not limited to reasonable documented attorney's fees, for which Energy GPS is determined to be legally liable resulting from negligent acts, errors or omissions by Customer, its directors, officers, partners, agents, and employees, and from any actions undertaken by Energy GPS at the direction of Customer or utilizing data, information, software, or materials provided or specified by Customer. Liability, claims, demands, damages, losses, or expenses, to the extent resulting from the negligent acts or errors of Energy GPS, its directors, officers, partners, agents, employees, or of others, are excluded from Customer's obligations pursuant to this paragraph.
- (c) In the event that Customer changes in any way, or uses in another project or for other purposes which are not contemplated in a Task Order, any of the information or materials developed by Energy GPS pursuant to this Agreement, Energy GPS shall be released from any and all liability relating to such use and Customer shall indemnify and hold harmless Energy GPS, its directors, officers, agents, and employees from and against any and all liability, claims, demands, damages, losses, and expenses, including but not limited to attorney's fees and costs, arising out of such changes or use.
- (d) Except as expressly provided herein, nothing in this Agreement shall be construed to create a duty to, any standard of care with reference to, or any liability in connection with any person not a Party to this Agreement.
- (e) IN NO EVENT SHALL ENERGY GPS BE LIABLE TO CUSTOMER FOR ANY CONSEQUENTIAL, INCIDENTAL OR INDIRECT DAMAGES FOR ANY CAUSE OF ACTION, WHETHER IN CONTRACT OR TORT OR OTHERWISE. INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOST PROFITS OR REVENUES AND LOSS OF BUSINESS OPPORTUNITY, WHETHER OR NOT ENERGY GPS WAS AWARE OR SHOULD HAVE BEEN AWARE OF THE POSSIBILITY OF SUCH DAMAGES.
- (f) IN NO EVENT SHALL CUSTOMER BE LIABLE TO ENERGY GPS FOR ANY CONSEQUENTIAL, INCIDENTAL OR INDIRECT DAMAGES FOR ANY CAUSE OF ACTION, WHETHER IN CONTRACT

OR TORT OR OTHERWISE. INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOST PROFITS OR REVENUES AND LOSS OF BUSINESS OPPORTUNITY, WHETHER OR NOT CUSTOMER WAS AWARE OR SHOULD HAVE BEEN AWARE OF THE POSSIBILITY OF SUCH DAMAGES.

- (g) In no event shall Energy GPS' liability to Customer or its directors, officers, partners, agents, and employees, whether based on contract, indemnity, warranty, tort (including negligence), strict liability, or otherwise, for all losses or damages arising out of, connected with, or resulting from this Agreement, or from the performance or breach thereof, exceed, in any 12-month period ending on the applicable Expiration Date, the aggregate amount of fees received by Energy GPS from Customer during such period. Insurance recoveries, whether from Customer's insurance or Energy GPS' insurance, shall not be included in any such limitation of liability calculation.

VIII. WARRANTY

- (a) Energy GPS warrants to Customer that all of the Services shall be performed in accordance with this Agreement (and the standards of performance set forth herein), in a good and workmanlike manner. The foregoing warranty, and the remedy set forth below, applies to any defect that appears within one (1) year from the date the work giving rise to the claim was performed. Each Party shall notify the other Party promptly after such Party becomes aware of a defect. Energy GPS shall have no liability to Customer under this Agreement (whether based on warranty or otherwise) for any damage or defect to the extent occurring as a result of any act or omission of Customer (including any reports, information, or services provided by Customer). In the case of any damage or defect that occurs as a result of an act or omission of both Customer and Energy GPS, Energy GPS's liability shall be in proportion to its relative responsibility for such damage or defect. Energy GPS does not warranty or guaranty the accuracy or correctness of any information provided by Customer or by any third party. Energy GPS does not make any representations or warranties as to a particular outcome or financial results arising from or associated with Customer's use of the Services.
- (b) The exclusive remedy for any claim based on the failure of or defect in performance of the Services shall be re-performance by Energy GPS of the defective portion of the Services.
- (c) The foregoing warranty is exclusive and in lieu of all other warranties, whether written, oral, implied or statutory. NO IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, COURSE OF DEALING AND USAGE OF TRADE SHALL APPLY.

IX. SUCCESSORS IN INTEREST

This Agreement shall be binding on, and inure to the benefit of, each Party's successors in interest, assigns and legal representatives.

X. WAIVER

Any waiver at any time by either Party of its rights with respect to a default under this Agreement, or with respect to any other matters arising in connection with this Agreement, shall not be deemed a waiver with respect to any subsequent default or other matter.

XI. SEVERAL OBLIGATIONS

The duties, obligations, and liabilities of the Parties are intended to be several and not joint or collective. Nothing contained in this Agreement shall be construed to create an association, trust, partnership, or joint venture or impose a trust or partnership duty, obligation, or liability on or with regard to any Party. Each Party shall be individually and severally liable for its own obligations under this Agreement.

XII. AMENDMENT

All changes or modifications to this Agreement shall be in writing and signed by both Parties.

XIII. GOVERNING LAW

This Agreement shall be construed and interpreted according to, and the rights of the Parties shall be governed by, the laws of the State of California, without regard to any conflicts of laws provisions thereto.

XIV. ATTORNEY'S FEES AND COSTS

If the Parties become involved in litigation arising out of this Agreement or the performance thereof, the prevailing Party or Parties (as determined by the entry of a nonappealable judgment in favor of such Party or Parties) shall be entitled to reimbursement of reasonable documented attorney's fees, costs and expenses, in addition to any other relief to which that Party may be entitled. In the event that collection services are required to collect on outstanding debts associated with services performed under this Agreement, any fees associated with collection shall be included in the outstanding amount. This provision shall be construed as applicable to the entire Agreement.

XV. ENTIRE AGREEMENT

This Agreement constitutes the complete and final expression of the agreement of the Parties and is intended as a complete and exclusive statement of the terms of their agreements and supersedes all prior and contemporaneous offers, promises, representations, negotiations, discussions, communications, and agreements which may have been made in connection with the subject matter hereof.

XVI. SEVERABILITY

If any provision of this Agreement is found or deemed by a court of competent jurisdiction to be invalid or unenforceable, it shall be considered severable from the remainder of this Agreement and shall not cause the remainder to be invalid or unenforceable. In such event, the Parties shall reform this Agreement to replace such stricken provision with a valid and enforceable provision which comes as close as possible to expressing the intention of the stricken provision.

XVII. NOTICES

- (a) Any notice, demand, information, invoice, report, or item otherwise required, authorized, or provided for in this Agreement, unless otherwise specified herein, shall be deemed properly given if delivered in person or sent by United States Mail, First Class postage prepaid, or by email:

To: Energy GPS Consulting, LLC
1215 SE 8th Avenue, Suite #F
Portland, OR 97214
By email: contracts@energygps.com

To Customer: Balancing Authority of Northern California
Attn: James R. Shetler
P.O. Box 15830, MS D109
Sacramento, CA 95852-1830
By email: jimshetler@thebanc.org

- (b) All notices shall be deemed effective upon receipt by the Party to whom such notice is given.

XVIII. CONFIDENTIALITY

During the term of this Agreement, Energy GPS or Customer may disclose information not in the public domain to the other. For purposes of this Section, the Party disclosing such information shall be the "Disclosing Party" and the Party receiving such information shall be the "Receiving Party". Non-public information in any form, which relates to the Disclosing Party and/or its customers and which the Disclosing Party regards as confidential shall be considered Confidential Information.

- (a) For purposes of this Agreement, "Confidential Information" shall mean (i) this Agreement, and (ii) any information or material which is proprietary or confidential to the Disclosing Party whether or not owned or developed by the disclosing Party, which is not generally known by Receiving Party personnel, and which the Receiving Party may obtain knowledge of, through or as a result of the relationship established hereunder with the Disclosing Party, access to the disclosing Party's premises, or communications with the Disclosing Party's employees or independent contractors. Neither Party shall have any obligation under this Agreement with respect to any information that (i) is, at the time of disclosure, or thereafter becomes, part of the public domain through a source other than the Receiving Party in

violation of this Agreement, (ii) is subsequently learned from a third party that, to the knowledge of the Receiving Party, is not under an obligation of confidentiality to the Disclosing Party, (iii) was known to the Receiving Party at the time of disclosure, as can be demonstrated by contemporaneous written evidence, (iv) is generated independently by the Receiving Party without reference to the Confidential Information of the Disclosing Party, as can be demonstrated by contemporaneous written evidence, or (v) is disclosed pursuant to applicable law, regulation, subpoena, other legal process or professional requirements, or in connection with the enforcement of the Receiving Party's rights under this Agreement

- (b) The Receiving Party shall keep confidential all Confidential Information and shall not disclose any portion of the Confidential Information in any manner whatsoever; provided, however, that (i) the Receiving Party may disclose Confidential Information pursuant to prior written consent of the Disclosing Party only to the extent of such consent; (ii) the Receiving Party may disclose Confidential Information to employees, consultants, attorneys, accountants and investment advisors ("Representatives") on a "need to know" basis provided they are advised of the foregoing confidentiality obligations; and (iii) the Receiving Party may make any disclosure required by law, regulation or legal process, in which case the Receiving Party will supply the Disclosing Party written notice in advance of its intent to disclose hereunder. The Receiving Party agrees to be liable solely to Disclosing Party for any breach of this Agreement by any of its Representatives.
- (c) In the event of breach of this Agreement, the Disclosing Party, in addition to any other rights and remedies available, at law or otherwise, may be entitled to an injunction to be issued by a court of competent jurisdiction restraining the Receiving Party and/or its Representatives from committing any violation of this Agreement.
- (d) Obligations under this section shall remain in effect until the earlier of: two years following the date of disclosure, or until such time as the Disclosing Party publicly discloses the Confidential Information or the information otherwise becomes publicly available without breach of this Agreement.

XIX. USE OF MATERIALS DEVELOPED IN OTHER CONTEXTS

Customer hereby acknowledges and agrees that any and all materials used in and developed in performing and rendering the services under this Agreement shall be solely and exclusively owned by Energy GPS and, as such, Energy GPS shall have the absolute right, title and interest in such materials, and to utilize any such materials in any other context or for any other purpose. This provision does not apply to Customer Confidential Information.

XX. PUBLICITY

Either Party may issue press releases or public announcements associated with the Parties' performance under this Agreement.

XXI. HEADINGS

The headings set forth in this Agreement are for the purposes of reference only and do not in any way limit or otherwise affect the meaning or interpretation of any of the terms of this Agreement.

XXII. RULES OF CONSTRUCTION

No rule of construction requiring interpretation against the draftsman shall apply in the interpretation of this Agreement.

XXIII. ASSIGNMENT


Neither Party shall have the right to assign or subcontract any of its obligations or duties under this agreement without the prior written consent of the other Party, which consent shall not be unreasonably withheld or delayed. Notwithstanding the foregoing, either Party may, without the consent of the other Party, assign the agreement to an affiliate or subsidiary or to any person that acquires all or substantially all of the assets of a Party.

XXIV. AUTHORITY

Each individual executing below on behalf of a Party hereby represents and warrants to the other Party that such individual is duly authorized to so execute, and to deliver this Agreement. By its signature below, each individual on behalf of a Party to this Agreement acknowledges and agrees that sufficient allowance has been made for the review of this Agreement by respective counsel.

XXV. SIGNATURE CLAUSE

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

By: 
Name: James R. Shetler
Title: General Manager
Balancing Authority of Northern California

By: 
Name: Timothy Belden
Title: Principal
Energy GPS Consulting, LLC