

March 15, 2018

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Re: California Independent System Operator Corporation

**Filing of Second Amendment to Adjacent Balancing Authority
Operating Agreement**

Docket No. ER18-____-000

Dear Secretary Bose:

The California Independent System Operator Corporation (“CAISO”) submits to the Commission for filing and acceptance an amendment to the Adjacent Balancing Authority Operating Agreement (“ABAOA”) between the CAISO and the Arizona Public Service Company (“APS”).¹ The purpose of this amendment to the ABAOA is to implement a new interconnection point between the CAISO’s and APS’s balancing authority area boundary, at the Delaney 500 kV Switchyard, which was contemplated as part of the CAISO competitive solicitation approval of the Delaney-Colorado River 500 kV transmission project.² In addition, the amendment allows the CAISO balancing authority area to occupy a portion of the Delaney Switchyard to the extent required for CAISO generator interconnection purposes.

The CAISO requests that the Commission accept the second amendment to the ABAOA contained in this filing effective as of May 15, 2018. This will allow the planning and design of the Ten West Link transmission project from the Delaney 500 kV Switchyard to the Colorado River 500 kV Substation transmission interconnection to proceed on schedule and for cost certainty of

¹ The CAISO submits this filing pursuant to Section 205 of the Federal Power Act, 16 U.S.C. § 824d, and Part 35 of the Commission’s regulations, 18 C.F.R. Part 35.

² The CAISO conducted this competitive solicitation because, in its 2013-2014 transmission planning process, the CAISO identified an economically-driven need for this transmission project.

new generation interconnections at the Delaney 500 kV Switchyard, particularly those that are currently in the CAISO's generation interconnection process.

I. The ABAOA

The ABAOA sets forth the rates, terms, and conditions on which the CAISO and APS, as balancing authorities registered with NERC, operate the interconnections between their balancing authority areas and provide emergency assistance as required by the applicable NERC reliability standards.³ The ABAOA also contains provisions that address the interconnecting transmission lines, scheduling, and settlement of transactions that use the transmission lines.

The ABAOA was first amended on May 21, 2015, to implement a new configuration at the North Gila 500 kV Switchyard as a result of the new Hassyampa-North Gila 500 kV transmission line interconnection at the North Gila 500 kV Switchyard, which changed the balancing authority area boundaries at the North Gila 500 kV Switchyard.⁴

II. The Amended ABAOA

The second amendment to the ABAOA makes minor editorial changes in Schedule A to the Willow Beach interconnection and the North Gila 500 kV Switchyard interconnection. The main change in the second amendment is the addition of a new interconnection at the Delaney 500 kV Switchyard.

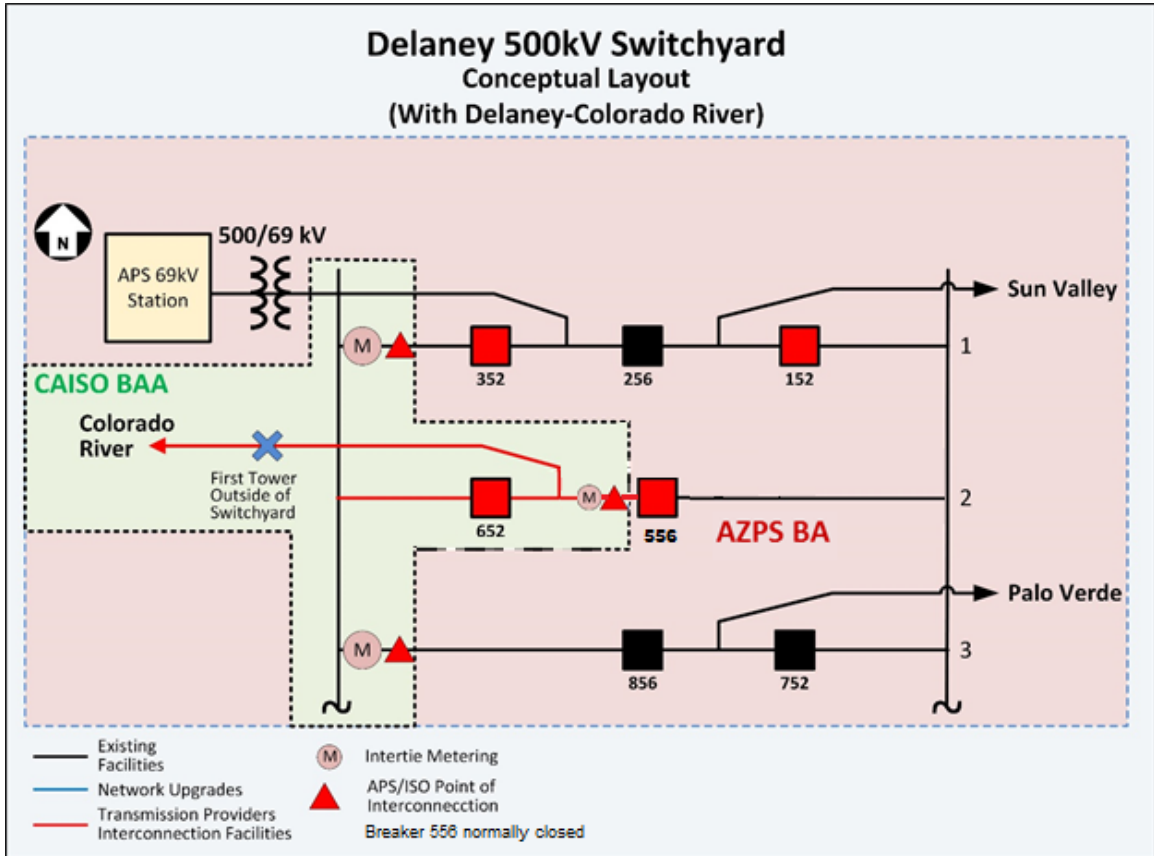
The Ten West Link line is being developed through the CAISO's competitive transmission solicitation process to connect APS's Delaney 500 kV Switchyard to the CAISO's Colorado River 500 kV Substation. In addition, similar to the configuration at the North Gila 500 kV Switchyard, APS and CAISO will allow the two balancing authority areas into the switchyard based on the Ten West Link interconnection and anticipated future generation interconnections at the Delaney 500 kV Switchyard. Absent the CAISO balancing authority area extending inside the Delaney 500 kV Switchyard, new generation interconnection requests in the Delaney area to the CAISO balancing authority area would be required to loop-in a separate new substation into the Ten West Link transmission project. This amendment avoids the building of an additional substation to accommodate such generator interconnections and saves millions of dollars for the generation facilities that ultimately connect in the Delaney 500 kV Switchyard. Having the CAISO balancing authority area occupying part of the Delaney 500 kV Switchyard allows projects that want to be directly connected to

³ See NERC reliability standard EOP-001 (requiring an agreement for emergency assistance among neighboring balancing authorities).

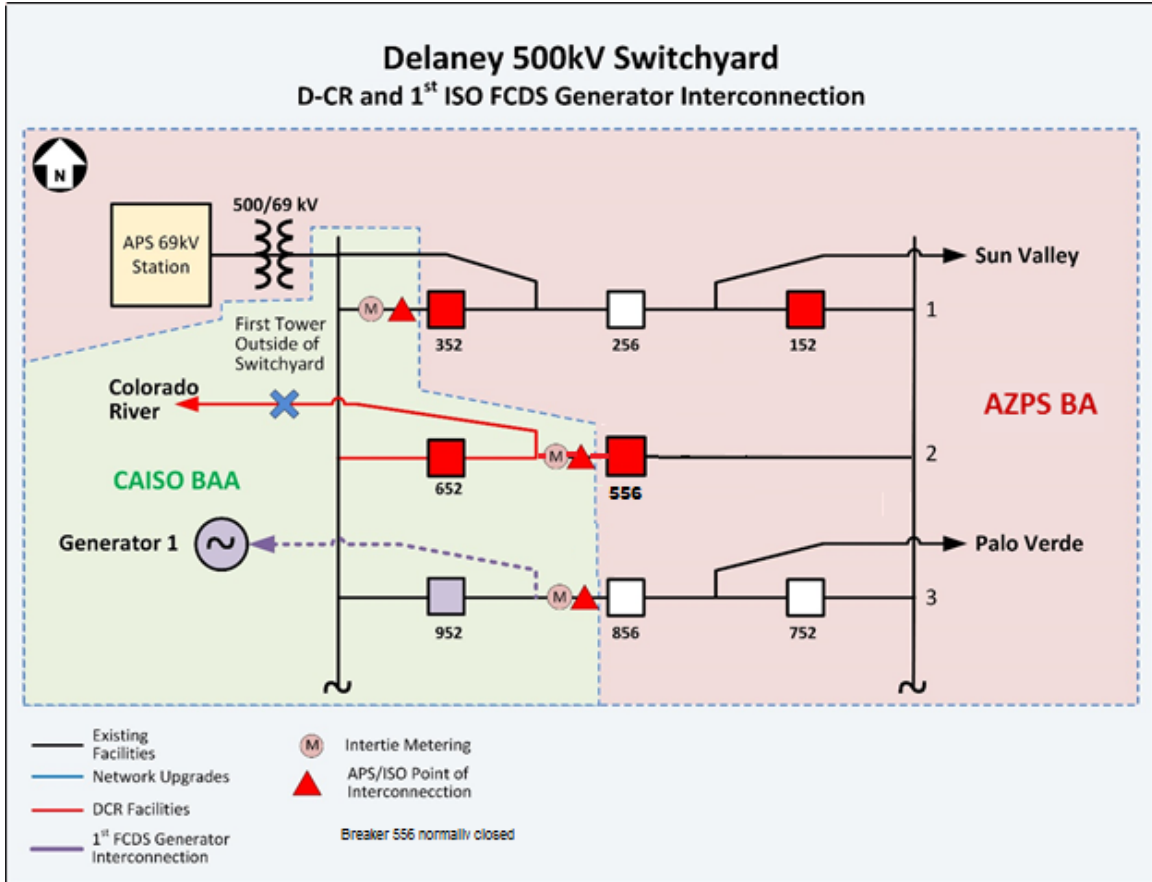
⁴ See Letter Order dated July 16, 2015; Docket No. ER15-1765-000 (accepting the amendment effective May 22, 2015).

the CAISO controlled grid the opportunity to do so at a reasonable cost.

The initial configuration at the Delaney 500 kV Switchyard will be the Ten West Link transmission project as follows:



When new generators request interconnection at the Delaney 500 kV Switchyard and desire to be located in the CAISO balancing authority area, the configuration will be as follows:



The amendment to the ABAOA contained in this filing reflects the implementation of both the Ten West Link interconnection and new generator interconnects at the Delaney 500 kV Switchyard. The configurations will be executed by the CAISO and APS, first upon interconnection of the Delaney-Colorado River 500 kV transmission project and subsequently upon the interconnection of generating facilities located in the CAISO balancing authority area. These balancing authority area interconnections reflect the agreement of the relevant parties. To the best of the CAISO’s knowledge, no entity objects to these arrangements.

III. Effective Date

The CAISO requests that the Commission accept the second amendment to the ABAOA effective as of May 15, 2018, to allow APS and Ten West Link to design and develop the transmission interconnection. At the same time, this will allow the CAISO to notify existing generator interconnection customers that a

separate substation outside of the Delaney 500 kV Switchyard does not need to be built.

IV. Attachments

In addition to this transmittal letter, the following attachments support the instant filing:

- | | |
|--------------|--|
| Attachment A | a clean version of CAISO Rate Schedule No. 78, incorporating the second amendment thereto; |
| Attachment B | a document in red-line format showing the amendment to the ABAOA; and |
| Attachment C | The agreement between the CAISO and APS to amend the ABAOA as shown in this filing. |

V. Service

The CAISO has served copies of this filing upon APS, San Diego Gas & Electric Company, Southern California Edison Company, the California Public Utilities Commission, and the California Energy Commission. In addition, the filing has been served upon all CAISO scheduling coordinators and has been posted on the CAISO website.

VI. Correspondence

Pursuant to the Commission's Rules and Regulations,⁵ the CAISO requests that all correspondence, pleadings, and other communications concerning this filing be served upon the following:

John C. Anders
Assistant General Counsel
California Independent System
Operator Corporation
250 Outcropping Way
Folsom, CA 95630
Tel: (916) 608-7287
Fax: (916) 608-7222
E-mail: janders@caiso.com

⁵ 18 C.F.R. § 203(b)(3).

VII. Conclusion

The CAISO respectfully requests that the Commission accept this filing of an amended ABAOA effective as May 15, 2018. Please contact the undersigned with any questions regarding this filing.

Respectfully submitted,

By: /s/ John C. Anders

Roger E. Collanton
General Counsel
Burton A. Gross
Deputy General Counsel
John C. Anders
Assistant General Counsel
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Attorneys for the California Independent
System Operator Corporation

Attachment A – Clean Tariff Records

Second Amendment to Adjacent Balancing Authority Operating Agreement

Arizona Public Service Company

California Independent System Operator Corporation

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

AND

ARIZONA PUBLIC SERVICE COMPANY

ADJACENT BALANCING AUTHORITY OPERATING AGREEMENT

Proposed Effective Date: May 15, 2018
Version Number: 2.0.0

ADJACENT BALANCING AUTHORITY OPERATING AGREEMENT

Executed by

ARIZONA PUBLIC SERVICE COMPANY

and

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

This Adjacent Balancing Authority Operating Agreement, (“Agreement”) dated as of March 6, 2018, is between the Arizona Public Service Company having its registered and principal executive office at 400 North 5th Street, Phoenix, Arizona 85004-3902 (“APS”) and the California Independent System Operator Corporation (“CAISO”), a California nonprofit public benefit corporation having a principal executive office located at 250 Outcropping Way, Folsom California 95630. Each is referred to herein as a “Party” and collectively as the “Parties.”

Recitals

A) Each Party is a member of the Western Electricity Coordinating Council (“WECC”), an organization whose members are located in the Western Interconnection as defined in the WECC Bylaws and is registered with WECC as a Balancing Authority pursuant to the North American Electric Reliability Corporation (“NERC”) Reliability Functional Model and Registry Criteria.

B) Federal Energy Regulatory Commission (“FERC”) approved mandatory NERC Reliability Standards for the Bulk-Power Systems of North America include Standard EOP-001 which provides that each Balancing Authority is required to develop, maintain, and implement a set of plans to mitigate operating emergencies, and to coordinate such plans with other Balancing Authorities. EOP-001, which may be revised from time to time, directs Balancing Authorities to have operating agreements in place with adjacent Balancing Authorities that, at a minimum, contain provisions for emergency assistance, including provisions to obtain emergency assistance from remote Balancing Authorities.

C) The Parties are adjacent Balancing Authorities by virtue of their transmission systems being interconnected at one or more points. The CAISO has responsibilities as a Balancing Authority and operates the CAISO Balancing Authority Area. APS has responsibilities as a Balancing Authority and operates the AZPS Balancing Authority Area.

D) [Not Used.]

E) The Parties intend by this Agreement to identify each Party’s responsibility to the other under the Requirements of EOP-001 by recognizing the continuing commitment of each Party to the other to cooperate to mitigate operating emergencies.

Therefore, the Parties mutually agree as follows:

1. Definitions

1.1 NERC Definitions

1.1.1 Except as defined in Section 1.2 or as otherwise defined in this Agreement, terms and expressions used in this Agreement shall have the same meanings as those contained in the NERC Glossary of Terms Used in Reliability Standards.

1.2 Specific Definitions

1.2.1 CAISO Tariff: CAISO operating agreement and tariff as amended from time to time.

1.2.2 Grid Management Charge: The CAISO monthly charge on all Scheduling Coordinators approved by FERC provides for the recovery of the CAISO's costs listed in Section 11.22.2 through the service charges described in Section 11.22.2.5 of the CAISO Tariff. The charges that comprise the Grid Management Charge consist of: 1) the Market Services Charge, 2) the System Operations Charge, 3) the CRR Services Charge, 4) the TOR Charge, 5) the Bid Segment Fee, 6) the CRR Transaction Fee, 7) the Inter-Scheduling Coordinator Trade Transaction Fee and 8) the Scheduling Coordinator ID Charge.

1.2.3 Scheduling Coordinator: An entity certified by the CAISO for the purposes of undertaking the functions of: submitting bids and self-schedules for energy, generation, transmission losses, and ancillary services; coordinating generation; tracking, billing, and settling trades with other Scheduling Coordinators; submitting forecast information; paying the CAISO's charges; and ensuring compliance with CAISO protocols.

2. Term and Termination

2.1 This Agreement shall be effective as of the date of execution, provided that the provisions of Schedules A and B shall not be effective until the later of: (1) the date of execution, or (2) the date this Agreement is accepted for filing and made effective by FERC pursuant to a filing with FERC by the CAISO (the "Effective Date") without any material modification or condition that is unacceptable to either Party in that Party's sole discretion. If any material modification or condition is ordered by FERC that is unacceptable to a Party, such Party shall communicate its lack of consent to such modification or condition to the other Party within ten (10) business days after the date on which FERC issues its order, and the Parties shall use best efforts to negotiate mutually acceptable revisions to this Agreement to address the modification or condition. Upon the occurrence of the Effective Date, this Agreement shall remain in effect until terminated by either Party upon thirty (30) days advance written notice to the other Party or upon written consent of both Parties. The CAISO shall file a notice of

termination with FERC as soon as practicable but no later than thirty (30) days after its issuance or receipt of such advance written notice of termination or the date of the Parties' written consent. Termination will be effective upon acceptance of the notice of termination by FERC; provided, however, APS will cease both to provide and to take any service under this Agreement as of: (i) thirty (30) days after issuance or receipt of an advance written notice of termination, or (ii) the date of the Parties' written consent, regardless of any action or inaction by FERC with respect to any application by the CAISO to terminate this Agreement.

3. Responsibilities of the Parties

3.1 The Parties agree to cooperate to mitigate any operating emergencies by adhering to: (1) the mandatory NERC Reliability Standards and WECC Regional Reliability Standards which relate to emergency operations, as may be amended from time to time, and (2) the directives of the applicable Reliability Coordinator ("Reliability Coordinator").

3.2 To the extent possible, and in accordance with NERC mandatory Reliability Standards, each Party ("Delivering Party") shall assist the other Party ("Receiving Party") in an operating emergency by delivering emergency assistance to the requesting Receiving Party, including emergency capacity or energy transfers from such Delivering Party's Balancing Authority Area or from other remote Balancing Authorities over available transmission capacity, in accordance with Schedule B to this Agreement. Arrangements for deliveries of emergency capacity or energy transfers shall be through normal operating channels in accordance with EOP-001. Such emergency assistance shall be provided at the sole discretion of the entity supplying it and shall be recallable without advance notice as required to meet reliability requirements.

4. Coordination and Communication

4.1 In the event of an operating emergency that affects or may affect the reliable operation of interconnected transmission facilities, each Party shall coordinate its actions with the other Party, as such Party deems necessary or as directed by the appropriate Reliability Coordinator(s), to preserve or restore the interconnected transmission system to stable operations and to preserve or restore reliable, safe, and efficient service as quickly as practicable. The Parties shall, without delay, individually notify the appropriate Reliability Coordinator(s) as to the nature and extent of the operating emergency.

4.2 Each Party operates and maintains, or provides for operation and maintenance of a 24-hour, 7-day control center with real-time scheduling and control functions. The appropriate control center staff shall be responsible for operational communications and shall have sufficient authority to commit and bind that Party on decisions relating to emergency operations. The Parties agree to exchange operational contact information for insuring reliable communication in a format to be agreed to by the Parties and completed as of the effective date of this Agreement.

5. Interconnection Points

5.1 The Parties are adjacent Balancing Authorities, and are interconnected at the points specified in Schedule A to this Agreement. In the event that new interconnection points are added, or existing points are modified or eliminated, Schedule A will be amended as necessary, to reflect any such changes that are mutually agreed upon by both Parties in a written agreement.

5.2 Schedule A is included for the sole purpose of identifying those interconnection points that result in the Parties being adjacent Balancing Authorities. This Agreement is not intended to act as an interconnection agreement between the Parties.

6. Miscellaneous Provisions

6.1 Exchange of Information and Confidentiality: When a Party (“Providing Party”) provides information to the other Party (“Receiving Party”) under this Agreement and marks such information as privileged or confidential commercial or financial information, critical energy infrastructure information, or trade secret information, the Receiving Party shall treat such information as confidential and protected from disclosure to the extent permitted by law. The Receiving Party shall promptly notify the Providing Party in writing of any request to release such information. The Parties agree to use such information only for purposes of performing each Party’s obligations under this Agreement. The provisions of this Section 6.1 shall survive the termination of this Agreement.

6.2 Amendment: The Parties may amend or modify this Agreement only by written agreement. In the event the mandatory NERC Reliability Standards including EOP-001 are revised or replaced, the Parties agree to abide by any such revisions and shall meet to discuss and determine whether such change will affect the terms and conditions of this Agreement and whether a modification or replacement of the Agreement is needed. An amendment that is subject to FERC approval shall not take effect until FERC has accepted such amendment for filing and has made it effective without any material modification or condition that is unacceptable to either Party in that Party’s sole discretion. If any material modification or condition is ordered by FERC that is unacceptable to a Party, such Party shall communicate its lack of consent to such modification or condition to the other Party within ten (10) business days after the date on which FERC issues its order, and the Parties shall use best efforts to negotiate mutually acceptable revisions to this Agreement to address the modification or condition. Revisions to Schedules other than with regard to the contact information in Schedule C shall be processed as an amendment to this Agreement.

6.3 Assignment and Successors: Neither this Agreement nor any rights or responsibilities under this Agreement may be assigned by either Party to a third party without the written consent of the other Party, and such consent will not be unreasonably delayed, conditioned, or withheld. Subject to the preceding sentence, this Agreement is binding upon and will inure to the benefit of the Parties and their

successors in interest.

6.4 Notices: Any notice, demand, or request which may be given to or made upon either Party regarding this Agreement shall be made in writing and shall be deemed properly served, given, or made: (a) upon delivery if delivered in person, (b) five (5) days after deposit in the mail if sent by first class United States mail, postage prepaid, (c) upon receipt of confirmation by return facsimile if sent by facsimile, or (d) upon delivery if delivered by prepaid commercial courier service. A Party must update the information in Schedule C of this Agreement relating to its address as that information changes. Such updates to Schedule C shall not constitute an amendment to this Agreement.

6.5 Governing Law and Forum: This Agreement shall be deemed to be a contract made under and for all purposes shall be governed by and construed in accordance with the laws of the State of California, except that if a dispute concerns the operation of transmission lines or facilities, the law of the state where the transmission lines or facilities are located will control. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement shall be brought in any of the following forums, as appropriate: a court of the State of California or any federal court of the United States of America located in the State of California or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission. No provision of this Agreement shall be deemed to waive the right of any Party to protest, or challenge in any manner, whether this Agreement, or any action or proceeding arising under or relating to this Agreement, is subject to the jurisdiction of the Federal Energy Regulatory Commission.

6.6 No Warranties or Representations; Disclaimer: All information, including confidential information, provided by the Providing Party under this Agreement carries no warranty or representation of any kind, either express or implied. The Receiving Party receives the information "as is" and with all faults, errors, defects, inaccuracies, and omissions. The Providing Party makes no representations or warranties whatsoever with respect to the availability, timeliness, accuracy, reliability, or suitability of any information. The Receiving Party disclaims and waives all rights and remedies that it may otherwise have with respect to all warranties and liabilities of the Providing Party, expressed or implied, arising by law or otherwise, with respect to any faults, errors, defects, inaccuracies or omissions in, or availability, timeliness, reliability, or suitability of the information. Each Party assumes any and all risk and responsibility for selection and use of, and reliance on, any information provided under this Agreement.

6.7 Liability: The Parties' duties and standard of care with respect to each other, and the benefits and rights conferred on each other, shall be no greater than as explicitly stated herein. Neither Party, its directors, officers, employees, nor agents, shall be liable to the other Party for any loss, damage, claim, cost, charge, or expense, whether direct, indirect, or consequential, arising from the Party's performance or nonperformance under this Agreement, except for a Party's gross negligence or willful misconduct subject to applicable law. Except as otherwise expressly provided herein,

nothing in this Agreement shall be construed or deemed to confer any right or benefit on, or to create any duty to, or standard of care with reference to any third party, or any liability or obligation, contractual or otherwise, on the part of either Party.

6.8 Waivers: Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or matter arising in connection with this Agreement. Any delay short of the statutory period of limitations, in asserting or enforcing any right under this Agreement, shall not constitute or be deemed a waiver of such right.

6.9 Authority: Each individual signing this Agreement certifies that the Party represented has duly authorized such individual to sign, bind, and obligate such Party.

Accepted and agreed to by:

**California Independent System
Operator Corporation**

By: _____
Name: _____
Title: _____
Date: _____

Arizona Public Service Company

By: _____
Name: Ted Geisler
Title: Director, Transmission Operations &
Maintenance
Date: _____

Schedule A

ADJACENT BALANCING AUTHORITY INTERCONNECTION POINTS [Sections 5.1, 5.2 and 6.4]

The Interconnection between CAISO and APS is made up of two Interconnection points. These Interconnection points run normally closed.

- **Willow Beach on the Eldorado – Willow Beach – Moenkopi 500 kV Line**

This Interconnection is comprised of one 500 kV line that connects the APS Moenkopi Substation north of Flagstaff in central northern Arizona, with the Southern California Edison (SCE) attended Eldorado Substation near Boulder City, Nevada.

Transmission Operator Point of Interconnection:	Willow Beach (located in the middle of the Colorado River)
Transmission Owner (TO):	SCE and APS
TOs Point of Change of Ownership:	Willow Beach (located in the middle of the Colorado River)
CAISO & APS Balancing Authority Area Point of Interconnect:	Willow Beach (located in the middle of the Colorado River)
Roles and Responsibilities:	<p>The CAISO is the Balancing Authority West of the Balancing Authority Point of Interconnection.</p> <p>Under the NERC Coordinated Functional Registration between CAISO and SCE, CAISO and SCE are the TOP of the line West of the Transmission Operator Point of Interconnection.</p> <p>AZPS is the TOP of the line East of the Transmission Operator Point of Interconnection.</p> <p>AZPS is the Balancing Authority East of the Balancing Authority Point of Interconnection.</p>
Metering Point:	Eldorado – Willow Beach – Moenkopi 500 kV line termination at the Eldorado Switchyard.

- **North Gila Switchyard Interconnection**

This Interconnection is comprised of three points within the North Gila 500kV Switchyard that connect the CAISO and APS Balancing Authority Areas.

Transmission Operator Point of Interconnection:

First tower East of the Colorado River on the Imperial Valley-North Gila 500 kV.

CAISO & APS Balancing Authority Area Points of Interconnect:

As depicted on Figure 1 below:

1. South of Bay/Breaker #8
2. South of Bay/Breaker #5
3. South of Bay/Breaker #3

Transmission Owners:

1. APS, SDGE, & IID share ownership rights in the Hassayampa-Hoodoo Wash-North Gila 500kV line (ATS/HANG1) and a portion of the North Gila 500 kV Switchyard.
2. APS & IID share ownership rights in the Hassayampa-North Gila 500kV line (HANG2) and a portion of the North Gila 500 kV Switchyard.
3. SDGE & IID share ownership rights in the North Gila-Imperial Valley 500kV line.

Roles and Responsibilities:

As depicted on Figure 1 below, the CAISO is the Balancing Authority for the North Bus and Bays/Breakers #3, #5, #6, #8, and #9 at the North Gila 500 kV Switchyard and the Hassayampa-Hoodoo Wash-North Gila 500kV line (ATS/HANG1).

As depicted on Figure 1 below, AZPS is the Balancing Authority for the South Bus and Bays/Breakers #1, #2, #4, and #7 at the North Gila 500 kV Switchyard and the Hassayampa-North Gila 500 kV line (HANG2).

Under the NERC Coordinated Functional Registration between CAISO and SDGE, CAISO and SDGE are the TOP for all facilities West of the Transmission Operator Point of Interconnection.

AZPS is the TOP for all facilities East of the Transmission Operator Point of Interconnection

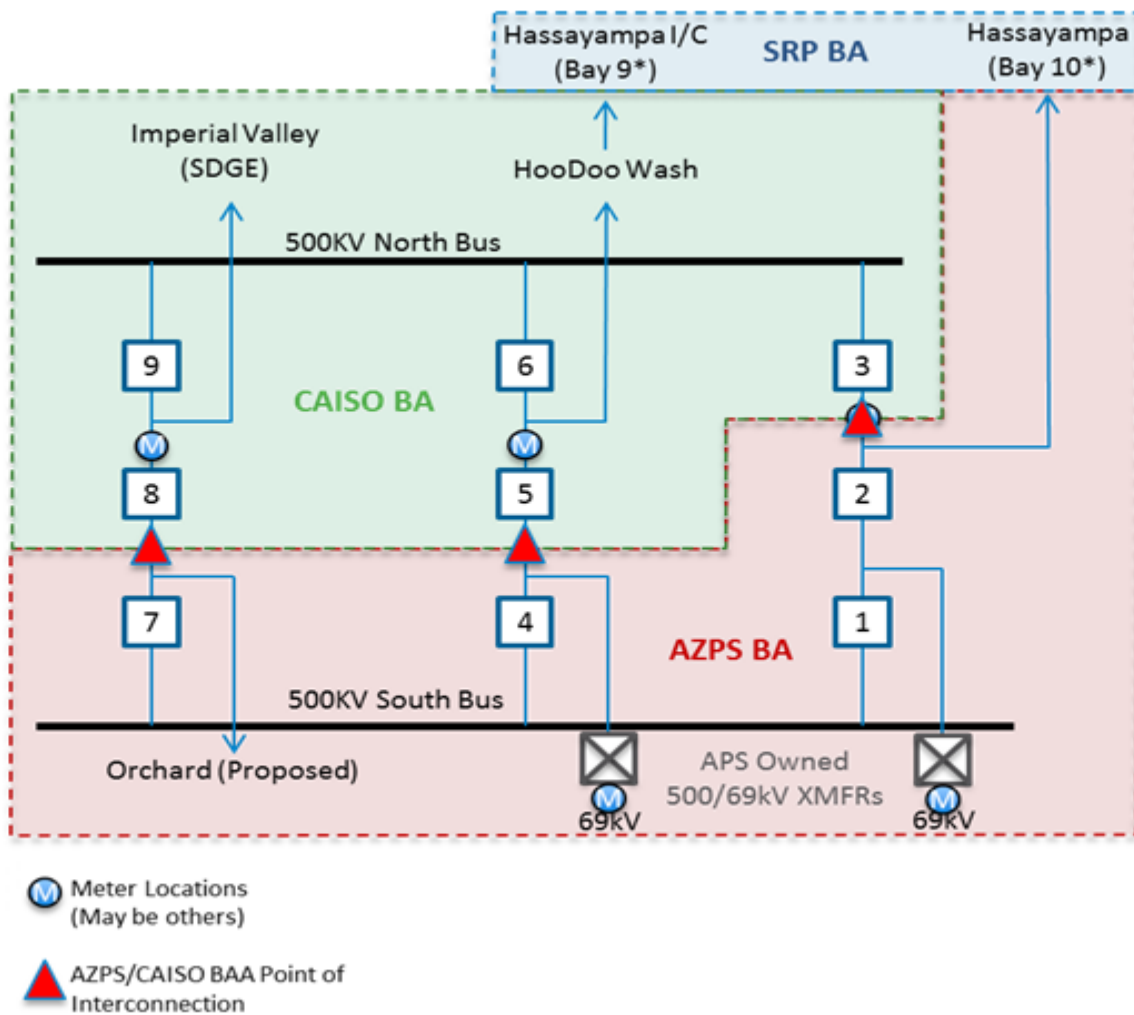
to the Hassayampa switchyard. APS as Transmission Operator shall abide by those certain NERC operating standards.

Metering Points:

As depicted on the one-line diagram below:

1. North of Bay/Breaker #8
2. North of Bay/Breaker #5
3. South of Bay/Breaker #3

Figure 1: One-Line Diagram for North Gila Switchyard:



Delaney Switchyard Interconnection

This Interconnection is comprised of multiple points within the Delaney 500kV Switchyard that connect the CAISO and AZPS Balancing Authority Areas. The Parties intend to

connect Ten West Link's Delaney-Colorado River 500 kV transmission line to the west bus of the Delaney Switchyard with metering and disconnect switches (Figure 2). Generating facilities that request interconnection to the CAISO Balancing Authority Area would be processed by both the CAISO and AZPS as a connection to the west bus and the metering and disconnect switches would be modified accordingly (Figure 3). The obligations of the generating facility to follow Operating Instructions from either AZPS or CAISO would be included in a four-party generator interconnection agreement that would be filed for acceptance by FERC.

Transmission Operator Point of Interconnection:

Ten West Link's point of interconnection is the first tower outside the Delaney 500 kV Switchyard on the Delaney – Colorado River 500 kV transmission line.

It is the intention that the Transmission Operator Point for future generator interconnection projects wishing to be interconnected to the CAISO BAA will be the first tower outside of the Delaney 500 kV Switchyard.

CAISO & APS Balancing Authority Area Points of Interconnection:

As depicted in Figure 2 below

1. West of Breaker #352
2. West of Breaker #856
3. West of Breaker #556

Transmission Owners:

1. APS and Central Arizona Water Conservation District (CAWCD) share ownership rights in the Delaney – Sun Valley 500 kV transmission line and the Delaney Switchyard.
2. Ten West Link owns the Delaney – Colorado River 500 kV transmission line.
3. APS and CAWCD share ownership rights in the Delaney – Palo Verde 500 kV transmission line.
4. APS owns the Delaney 500 / 69 kV transformer

Roles and Responsibilities:

As depicted on Figure 2 below, the CAISO is the Balancing Authority for the West Bus and for future interconnection projects requesting interconnection into the CAISO BAA at

Delaney. More specifically, CAISO AZPS agree to define each future interconnection requests received for the Delaney 500 kV Switchyard.

As depicted in Figure 2 below, initially the CAISO is the Balancing Authority for Breaker 652 and the west bus.

Also as depicted in Figure 2 below, AZPS is the Balancing Authority for the East Bus and Bay #1 including Breakers 352, 256 and 152, for the APS 69kV Station, and the Delaney – Sun Valley 500 kV line, and Bay #3 including Breakers 856 and 752 for the AXPS Delaney – Palo Verde 500 kV transmission lines.

Also as depicted in Figure 2 below, AZPS is the Balancing Authority for Breaker 556 and the east bus.

Under the NERC Coordinated Functional Registration between CAISO and Ten West Link, CAISO and Ten West Link are the TOP for all facilities West of the Transmission Operator Point of Interconnection (the first tower outside the Delaney 500 kV Switchyard).

AZPS is the TOP for all facilities East of the Transmission Operator Point of Interconnection to, and including, the Delaney 500 kV Switchyard. AZPS as TOP shall abide by those certain NERC operating standards.

Balancing Area Metering Points:

As depicted on Figure 2 below:

1. West of Breaker #352
2. West of Breaker #856
3. West of Breaker #556

One-Line Diagrams for Delaney Switchyard:

Figure 2: Initial configuration

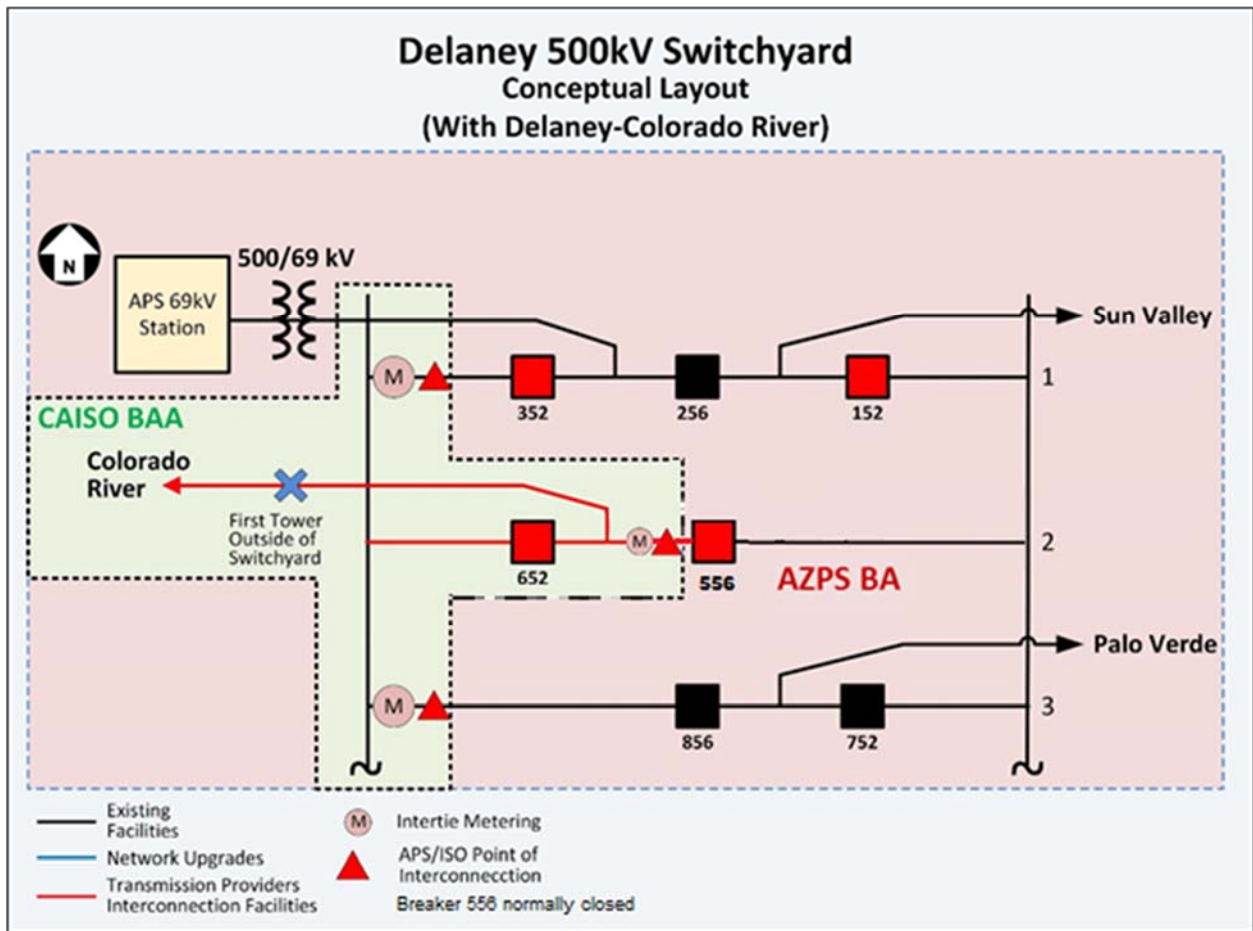
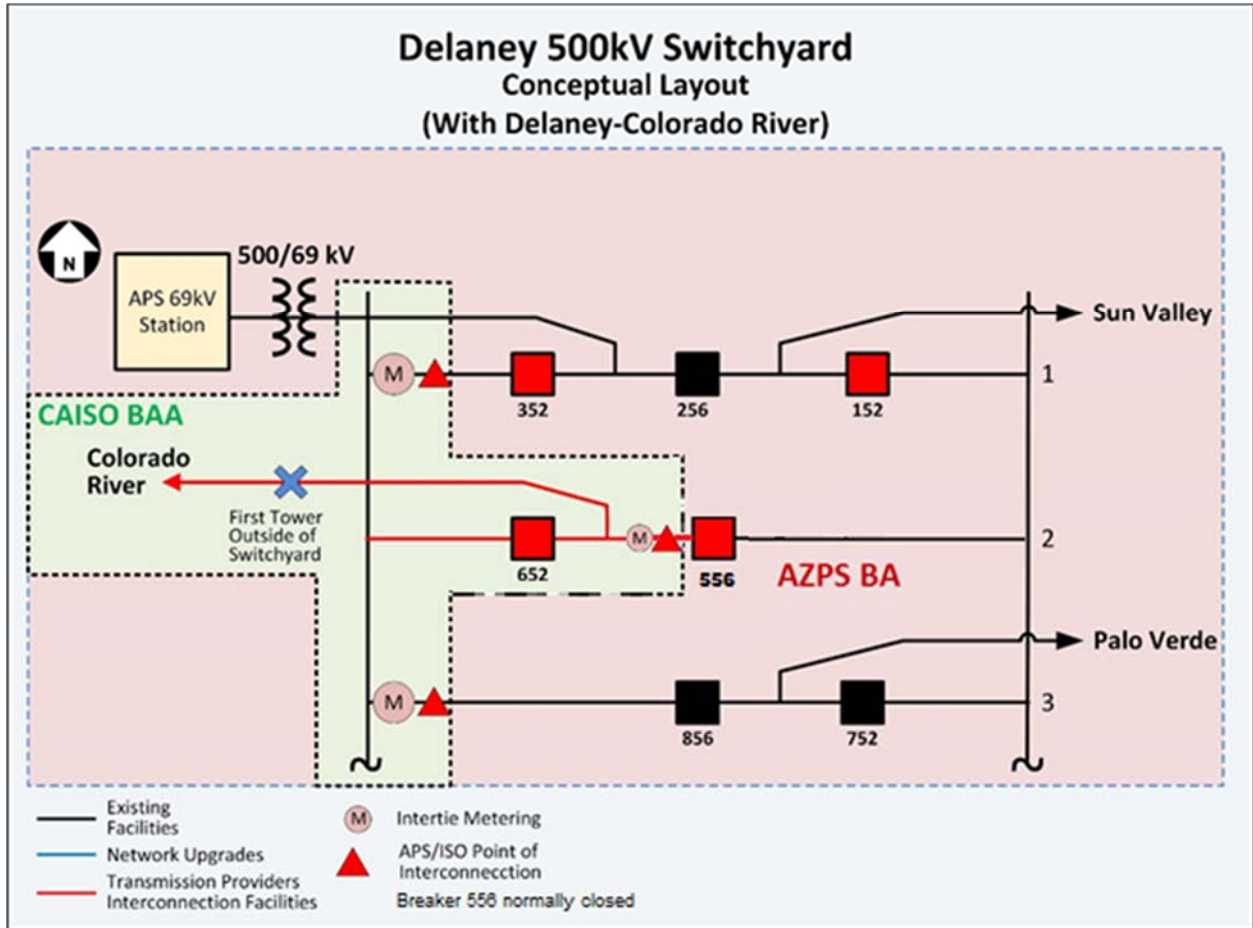


Figure 3: Intended configuration of Delaney if generating facilities request interconnection to the CAISO Balancing Authority Area



The Parties will determine at the time of the generator interconnection request if this is still the best configuration given then current system topology and good utility practice.

REVENUE METERING AND TELEMETRY AT INTERCONNECTION POINTS

APS and CAISO metering shall meet any metering standards mutually agreed upon by the Parties for the purpose of operating their adjacent Balancing Authority Areas. APS and the CAISO shall be entitled to witness testing of the involved interconnection metering. Any change or modification to such metering equipment by APS, the CAISO or any other entity shall be coordinated between the Parties. APS shall allow daily, once a day, read-only access by the CAISO to direct poll revenue data from the interconnection revenue metering in five (5) minute intervals at the metering points identified in this Schedule A. The CAISO shall allow daily, once a day, read-only access by the APS to direct poll revenue data from the interconnection revenue metering in five (5) minute intervals at the metering points identified in this Schedule A. APS and the CAISO shall maintain arrangements that ensure that both Parties shall have access to the same real-time data from the points identified in this Schedule A between their Balancing Authority Area interconnections for the purpose of complying with NERC reliability standards. The Parties understand that each Party wants to obtain MW and MVAR data from interconnection metering, which may include RTUs, at the points identified in this Schedule A between their Balancing Authority Area interconnections. The Parties agree to allow each other to directly poll real-time data from metering at the interconnection substations under the other Party's Balancing Authority Area. In the event that a second communication port of the RTU is not available for direct polling by a Party, the Party shall have the option to provide a RTU to the substation owner for the purpose of establishing a communication port available for direct polling by such Party.

Schedule B

EMERGENCY CAPACITY AND ENERGY [Sections 3.2 and 6.2]

In accordance with EOP-001 the Parties will, to the extent possible, assist each other in an emergency by scheduling energy and/or capacity. Such emergency assistance will be available at the sole discretion of the Party supplying it and will be recallable without advance notice as required to meet reliability requirements. The Parties will agree upon and log MW values, start, and end times, ramp rates and times, and integrated values for any emergency assistance provided.

The emergency assistance will be provided by a Party will be for system reliability. Such emergency assistance may be estimated prior to delivery and finalized in the settlement process.

The price paid for CAISO emergency assistance will be at the CAISO market price for the energy and/or capacity sold, plus all applicable charges, as specified in the CAISO Tariff provisions for emergency assistance. Such price may be estimated prior to delivery and finalized in the settlement process. Payment to the CAISO for emergency assistance provided by CAISO will be made by the Scheduling Coordinator representing APS, in accordance with the settlement process, billing cycle, and payment timeline set forth in the CAISO Tariff.

The price paid for APS emergency assistance will be at the price specified by APS. In the event APS does not specify the price for energy or capacity at the time of the request for emergency assistance and no other settlement price is established prior to the delivery of the emergency assistance, the default settlement price shall be the CAISO market price, plus all other applicable charges, as specified or as otherwise established in the CAISO Tariff for emergency assistance. If the default settlement price does not compensate APS for the value of the emergency assistance delivered to the CAISO, APS shall have the opportunity to justify a higher settlement price in accordance with the CAISO Tariff provisions for emergency assistance. Payment to APS for emergency assistance provided by APS will be made to the Scheduling Coordinator representing APS, in accordance with the settlement process, billing cycle, and payment timeline set forth in the CAISO Tariff.

Nothing in this Agreement shall obligate APS to be bound by CAISO Tariff provisions unless expressly provided for.

Schedule C

CONTACTS FOR NOTICES [Sections 6.2 and 6.4]

CAISO:

Name of Primary Representative: Regulatory Contracts
Title: N/A
Address: 250 Outcropping Way
City/State/Zip Code: Folsom, CA 95630
Email Address: Regulatorycontracts@caiso.com
Phone: (916) 608-7027
Fax No.: (916) 608-7292

Name of Alternate Representative: Christopher J. Sibley
Title: Manager, Regulatory Contracts
Address: 250 Outcropping Way
City/State/Zip Code: Folsom, CA 95630
Email Address: csibley@caiso.com
Phone: (916) 608-7030
Fax No.: (916) 608-7292

APS:

Name of Primary Representative: Interconnect Development
Title: N/A
Address: 400 North 5th Street
City/State/Zip Code: Phoenix, Arizona 85004
Email Address: N/A
Phone: N/A
Fax No.: N/A

Name of Alternate Representative: Joseph Wilhelm
Title: Leader, Interconnect Development
Address: 400 North 5th Street
City/State/Zip Code: Phoenix, Arizona 85004
Email Address: joseph.wilhelm@aps.com
Phone: (602) 371-5735
Fax No.: N/A

Attachment B – Marked Tariff Records

Second Amendment to Adjacent Balancing Authority Operating Agreement

Arizona Public Service Company

California Independent System Operator Corporation

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

AND

ARIZONA PUBLIC SERVICE COMPANY

ADJACENT BALANCING AUTHORITY OPERATING AGREEMENT

Proposed Effective Date: ~~July 23, 2015~~ May 15, 2018
Version Number: 24.0.0

ADJACENT BALANCING AUTHORITY OPERATING AGREEMENT

Executed by

ARIZONA PUBLIC SERVICE COMPANY

and

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

This Adjacent Balancing Authority Operating Agreement, ("Agreement") dated as of May 19 March 6, 20185, is between the Arizona Public Service Company having its registered and principal executive office at 400 North 5th Street, Phoenix, Arizona 85004-3902 ("APS") and the California Independent System Operator Corporation ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at 250 Outcropping Way, Folsom California 95630. Each is referred to herein as a "Party" and collectively as the "Parties."

Recitals

- A) Each Party is a member of the Western Electricity Coordinating Council ("WECC"), an organization whose members are located in the Western Interconnection as defined in the WECC Bylaws and is registered with WECC as a Balancing Authority pursuant to the North American Electric Reliability Corporation ("NERC") Reliability Functional Model and Registry Criteria.
- B) Federal Energy Regulatory Commission ("FERC") approved mandatory NERC Reliability Standards for the Bulk-Power Systems of North America include Standard EOP-001 which provides that each Balancing Authority is required to develop, maintain, and implement a set of plans to mitigate operating emergencies, and to coordinate such plans with other Balancing Authorities. EOP-001, which may be revised from time to time, directs Balancing Authorities to have operating agreements in place with adjacent Balancing Authorities that, at a minimum, contain provisions for emergency assistance, including provisions to obtain emergency assistance from remote Balancing Authorities.
- C) The Parties are adjacent Balancing Authorities by virtue of their transmission systems being interconnected at one or more points. The CAISO has responsibilities as a Balancing Authority and operates the CAISO Balancing Authority Area. APS has responsibilities as a Balancing Authority and operates the AZPS Balancing Authority Area.
- D) [Not Used.]
- E) The Parties intend by this Agreement to identify each Party's responsibility to the other under the Requirements of EOP-001 by recognizing the continuing commitment of each Party to the other to cooperate to mitigate operating emergencies.

Therefore, the Parties mutually agree as follows:

1. Definitions

1.1 NERC Definitions

1.1.1 Except as defined in Section 1.2 or as otherwise defined in this Agreement, terms and expressions used in this Agreement shall have the same meanings as those contained in the NERC Glossary of Terms Used in Reliability Standards.

1.2 Specific Definitions

1.2.1 CAISO Tariff: CAISO operating agreement and tariff as amended from time to time.

1.2.2 Grid Management Charge: The CAISO monthly charge on all Scheduling Coordinators approved by FERC provides for the recovery of the CAISO's costs listed in Section 11.22.2 through the service charges described in Section 11.22.2.5 of the CAISO Tariff. The charges that comprise the Grid Management Charge consist of: 1) the Market Services Charge, 2) the System Operations Charge, 3) the CRR Services Charge, 4) the TOR Charge, 5) the Bid Segment Fee, 6) the CRR Transaction Fee, 7) the Inter-Scheduling Coordinator Trade Transaction Fee and 8) the Scheduling Coordinator ID Charge.

1.2.3 Scheduling Coordinator: An entity certified by the CAISO for the purposes of undertaking the functions of: submitting bids and self-schedules for energy, generation, transmission losses, and ancillary services; coordinating generation; tracking, billing, and settling trades with other Scheduling Coordinators; submitting forecast information; paying the CAISO's charges; and ensuring compliance with CAISO protocols.

2. Term and Termination

2.1 This Agreement shall be effective as of the date of execution, provided that the provisions of Schedules A and B shall not be effective until the later of: (1) the date of execution, or (2) the date this Agreement is accepted for filing and made effective by FERC pursuant to a filing with FERC by the CAISO (the "Effective Date") without any material modification or condition that is unacceptable to either Party in that Party's sole discretion. If any material modification or condition is ordered by FERC that is unacceptable to a Party, such Party shall communicate its lack of consent to such modification or condition to the other Party within ten (10) business days after the date on which FERC issues its order, and the Parties shall use best efforts to negotiate mutually acceptable revisions to this Agreement to address the modification or condition. Upon the occurrence of the Effective Date, this Agreement shall remain in effect until terminated by either Party upon thirty (30) days advance written notice to the other Party or upon written consent of both Parties. The CAISO shall file a notice of

termination with FERC as soon as practicable but no later than thirty (30) days after its issuance or receipt of such advance written notice of termination or the date of the Parties' written consent. Termination will be effective upon acceptance of the notice of termination by FERC; provided, however, APS will cease both to provide and to take any service under this Agreement as of: (i) thirty (30) days after issuance or receipt of an advance written notice of termination, or (ii) the date of the Parties' written consent, regardless of any action or inaction by FERC with respect to any application by the CAISO to terminate this Agreement.

3. Responsibilities of the Parties

3.1 The Parties agree to cooperate to mitigate any operating emergencies by adhering to: (1) the mandatory NERC Reliability Standards and WECC Regional Reliability Standards which relate to emergency operations, as may be amended from time to time, and (2) the directives of the applicable Reliability Coordinator ("Reliability Coordinator").

3.2 To the extent possible, and in accordance with NERC mandatory Reliability Standards, each Party ("Delivering Party") shall assist the other Party ("Receiving Party") in an operating emergency by delivering emergency assistance to the requesting Receiving Party, including emergency capacity or energy transfers from such Delivering Party's Balancing Authority Area or from other remote Balancing Authorities over available transmission capacity, in accordance with Schedule B to this Agreement. Arrangements for deliveries of emergency capacity or energy transfers shall be through normal operating channels in accordance with EOP-001. Such emergency assistance shall be provided at the sole discretion of the entity supplying it and shall be recallable without advance notice as required to meet reliability requirements.

4. Coordination and Communication

4.1 In the event of an operating emergency that affects or may affect the reliable operation of interconnected transmission facilities, each Party shall coordinate its actions with the other Party, as such Party deems necessary or as directed by the appropriate Reliability Coordinator(s), to preserve or restore the interconnected transmission system to stable operations and to preserve or restore reliable, safe, and efficient service as quickly as practicable. The Parties shall, without delay, individually notify the appropriate Reliability Coordinator(s) as to the nature and extent of the operating emergency.

4.2 Each Party operates and maintains, or provides for operation and maintenance of a 24-hour, 7-day control center with real-time scheduling and control functions. The appropriate control center staff shall be responsible for operational communications and shall have sufficient authority to commit and bind that Party on decisions relating to emergency operations. The Parties agree to exchange operational contact information for insuring reliable communication in a format to be agreed to by the Parties and completed as of the effective date of this Agreement.

5. Interconnection Points

5.1 The Parties are adjacent Balancing Authorities, and are interconnected at the points specified in Schedule A to this Agreement. In the event that new interconnection points are added, or existing points are modified or eliminated, Schedule A will be amended as necessary, to reflect any such changes that are mutually agreed upon by both Parties in a written agreement.

5.2 Schedule A is included for the sole purpose of identifying those interconnection points that result in the Parties being adjacent Balancing Authorities. This Agreement is not intended to act as an interconnection agreement between the Parties.

6. Miscellaneous Provisions

6.1 Exchange of Information and Confidentiality: When a Party (“Providing Party”) provides information to the other Party (“Receiving Party”) under this Agreement and marks such information as privileged or confidential commercial or financial information, critical energy infrastructure information, or trade secret information, the Receiving Party shall treat such information as confidential and protected from disclosure to the extent permitted by law. The Receiving Party shall promptly notify the Providing Party in writing of any request to release such information. The Parties agree to use such information only for purposes of performing each Party’s obligations under this Agreement. The provisions of this Section 6.1 shall survive the termination of this Agreement.

6.2 Amendment: The Parties may amend or modify this Agreement only by written agreement. In the event the mandatory NERC Reliability Standards including EOP-001 are revised or replaced, the Parties agree to abide by any such revisions and shall meet to discuss and determine whether such change will affect the terms and conditions of this Agreement and whether a modification or replacement of the Agreement is needed. An amendment that is subject to FERC approval shall not take effect until FERC has accepted such amendment for filing and has made it effective without any material modification or condition that is unacceptable to either Party in that Party’s sole discretion. If any material modification or condition is ordered by FERC that is unacceptable to a Party, such Party shall communicate its lack of consent to such modification or condition to the other Party within ten (10) business days after the date on which FERC issues its order, and the Parties shall use best efforts to negotiate mutually acceptable revisions to this Agreement to address the modification or condition. Revisions to Schedules other than with regard to the contact information in Schedule C shall be processed as an amendment to this Agreement.

6.3 Assignment and Successors: Neither this Agreement nor any rights or responsibilities under this Agreement may be assigned by either Party to a third party without the written consent of the other Party, and such consent will not be unreasonably delayed, conditioned, or withheld. Subject to the preceding sentence, this Agreement is binding upon and will inure to the benefit of the Parties and their

successors in interest.

6.4 Notices: Any notice, demand, or request which may be given to or made upon either Party regarding this Agreement shall be made in writing and shall be deemed properly served, given, or made: (a) upon delivery if delivered in person, (b) five (5) days after deposit in the mail if sent by first class United States mail, postage prepaid, (c) upon receipt of confirmation by return facsimile if sent by facsimile, or (d) upon delivery if delivered by prepaid commercial courier service. A Party must update the information in Schedule C of this Agreement relating to its address as that information changes. Such updates to Schedule C shall not constitute an amendment to this Agreement.

6.5 Governing Law and Forum: This Agreement shall be deemed to be a contract made under and for all purposes shall be governed by and construed in accordance with the laws of the State of California, except that if a dispute concerns the operation of transmission lines or facilities, the law of the state where the transmission lines or facilities are located will control. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement shall be brought in any of the following forums, as appropriate: a court of the State of California or any federal court of the United States of America located in the State of California or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission. No provision of this Agreement shall be deemed to waive the right of any Party to protest, or challenge in any manner, whether this Agreement, or any action or proceeding arising under or relating to this Agreement, is subject to the jurisdiction of the Federal Energy Regulatory Commission.

6.6 No Warranties or Representations; Disclaimer: All information, including confidential information, provided by the Providing Party under this Agreement carries no warranty or representation of any kind, either express or implied. The Receiving Party receives the information "as is" and with all faults, errors, defects, inaccuracies, and omissions. The Providing Party makes no representations or warranties whatsoever with respect to the availability, timeliness, accuracy, reliability, or suitability of any information. The Receiving Party disclaims and waives all rights and remedies that it may otherwise have with respect to all warranties and liabilities of the Providing Party, expressed or implied, arising by law or otherwise, with respect to any faults, errors, defects, inaccuracies or omissions in, or availability, timeliness, reliability, or suitability of the information. Each Party assumes any and all risk and responsibility for selection and use of, and reliance on, any information provided under this Agreement.

6.7 Liability: The Parties' duties and standard of care with respect to each other, and the benefits and rights conferred on each other, shall be no greater than as explicitly stated herein. Neither Party, its directors, officers, employees, nor agents, shall be liable to the other Party for any loss, damage, claim, cost, charge, or expense, whether direct, indirect, or consequential, arising from the Party's performance or nonperformance under this Agreement, except for a Party's gross negligence or willful misconduct subject to applicable law. Except as otherwise expressly provided herein,

nothing in this Agreement shall be construed or deemed to confer any right or benefit on, or to create any duty to, or standard of care with reference to any third party, or any liability or obligation, contractual or otherwise, on the part of either Party.

6.8 Waivers: Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or matter arising in connection with this Agreement. Any delay short of the statutory period of limitations, in asserting or enforcing any right under this Agreement, shall not constitute or be deemed a waiver of such right.

6.9 Authority: Each individual signing this Agreement certifies that the Party represented has duly authorized such individual to sign, bind, and obligate such Party.

Accepted and agreed to by:

**California Independent System
Operator Corporation**

By: _____
Name: _____
Title: _____
Date: _____

Arizona Public Service Company

By: _____
Name: Ted Geisler
Title: Director, Transmission Operations &
Maintenance
Date: _____

Schedule A

ADJACENT BALANCING AUTHORITY INTERCONNECTION POINTS [Sections 5.1, 5.2 and 6.4]

The Interconnection between CAISO and APS is made up of two Interconnection points. These Interconnection points run normally closed.

- **Willow Beach on the Eldorado – Willow Beach – Moenkopi 500 kV Line**

This Interconnection is comprised of one 500 kV line that connects the APS Moenkopi Substation north of Flagstaff in central northern Arizona, with the Southern California Edison (SCE) attended Eldorado Substation near Boulder City, Nevada.

Transmission Operator Point of Interconnection:

Willow Beach (located in the Mmiddle of the Colorado River)

Transmission Owner (TO):

~~Southern California Edison Company (SCE)~~ and APS

TOs Point of Change of Ownership:

Willow Beach (located in the Mmiddle of the Colorado River)

CAISO & APS Balancing Authority Area Point of Interconnect:

Willow Beach (located in the Mmiddle of the Colorado River)

Roles and Responsibilities:

The CAISO is the Balancing Authority West of the Balancing Authority Point of Interconnection.

Under the NERC Coordinated Functional Registration between CAISO and SCE, CAISO and SCE are the TOP of the line West of the Transmission Operator Point of Interconnection.

AZPS is the TOP of the line East of the Transmission Operator Point of Interconnection.

AZPS is the Balancing Authority East of the Balancing Authority Point of Interconnection.

Metering Point:

Eldorado -- Willow Beach -- Moenkopi 500 kV line termination at the Eldorado Switchyard.

- **North Gila Switchyard Interconnection**

This Interconnection is comprised of three points within the North Gila 500kV Switchyard that connect the CAISO and APS Balancing Authority Areas.

Transmission Operator Point of Interconnection:

First tower East of the Colorado River on the Imperial Valley-North Gila 500 kV.

CAISO & APS Balancing Authority Area Points of Interconnect:

As depicted on Figure 1 the one-line diagram below:

1. South of Bay/Breaker #8
2. South of Bay/Breaker #5
3. South of Bay/Breaker #3

Transmission Owners:

1.-1. APS, SDGE, & IID share ownership rights in the Hassayampa-Hoodoo Wash-North Gila 500kV line (ATS/HANG1) and a portion of the North Gila 500 kV Switchyard.

2. APS & IID share ownership rights in the Hassayampa-North Gila 500kV line (HANG2) and a portion of the North Gila 500 kV Switchyard.

3. SDGE & IID share ownership rights in the North Gila-Imperial Valley 500kV line.

Roles and Responsibilities:

As depicted on Figure 1 the one-line diagram below, the CAISO is the Balancing Authority for the North Bus and Bays/Breakers #3, #5, #6, #8, and #9 at the North Gila 500 kV Switchyard and the Hassayampa-Hoodoo Wash-North Gila 500kV line (ATS/HANG1).

As depicted on the one-line diagram Figure 1 below, AZPS is the Balancing Authority for the South Bus and Bays/Breakers #1, #2, #4, and #7 at the North Gila 500 kV Switchyard and the Hassayampa-North Gila 500 kV line (HANG2).

Under the NERC Coordinated Functional Registration between CAISO and SDGE, CAISO and SDGE are the TOP for all facilities West of the Transmission Operator Point of Interconnection.

AZPS is the TOP for all facilities East of the

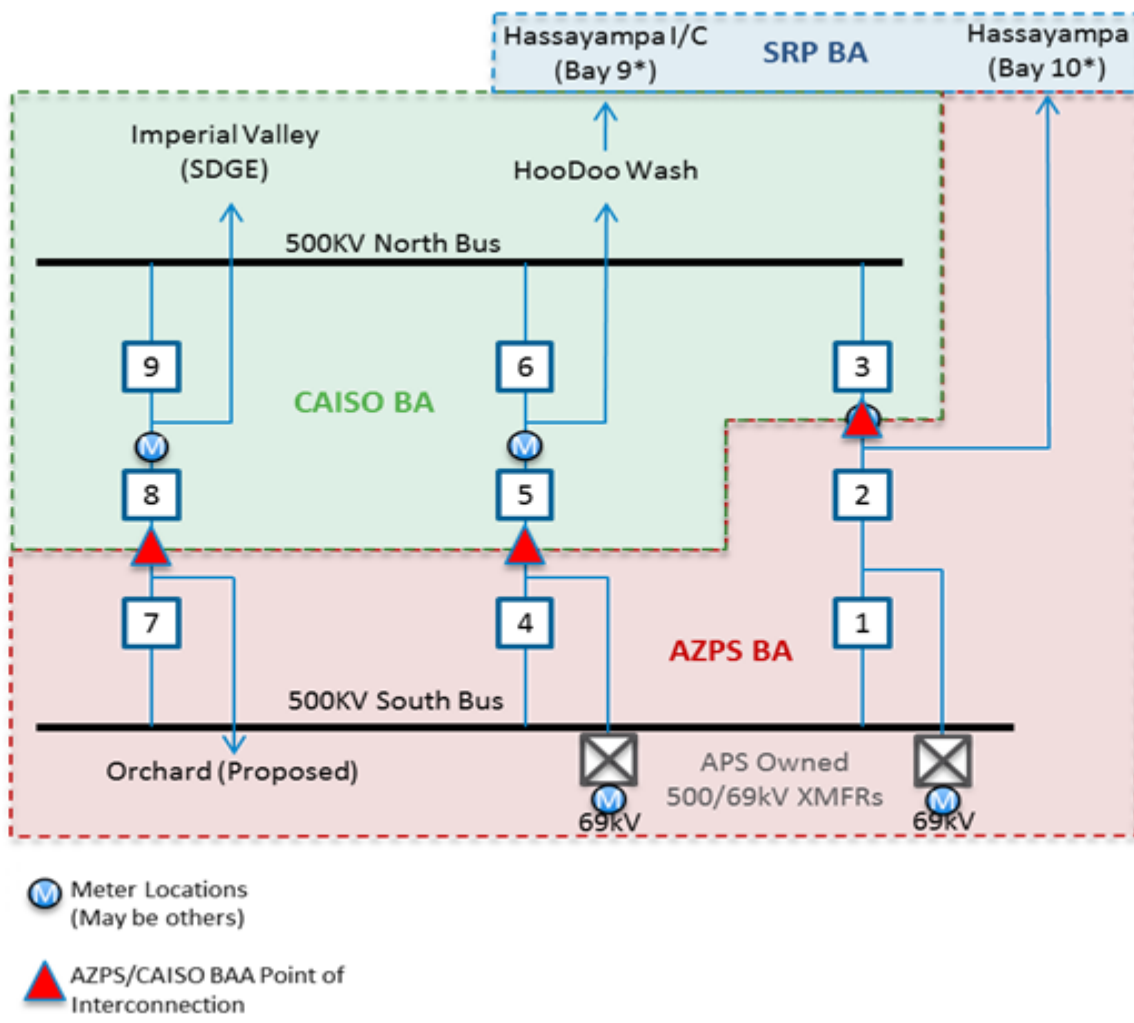
Transmission Operator Point of Interconnection to the Hassayampa switchyard. APS as Transmission Operator shall abide by those certain NERC operating standards.

Metering Points:

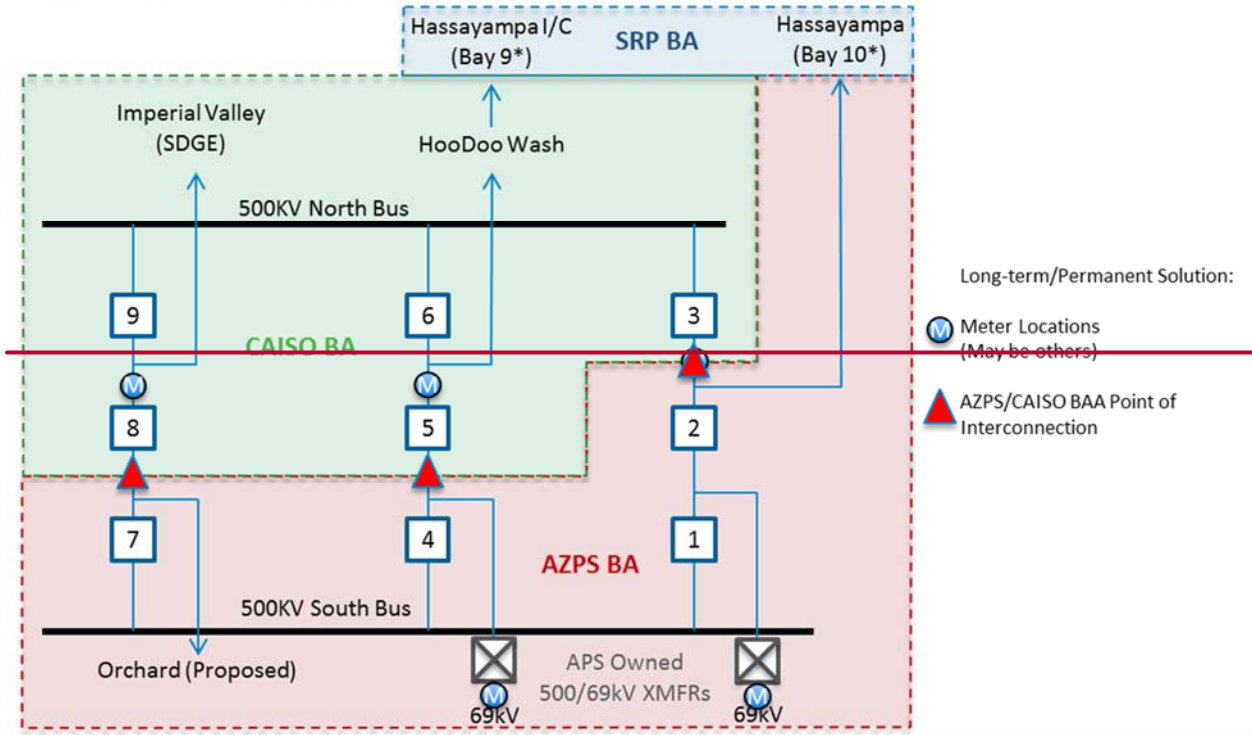
As depicted on the one-line diagram below:

1. North of Bay/Breaker #8
2. North of Bay/Breaker #5
3. South of Bay/Breaker #3

Figure 1: One-Line Diagram for North Gila Switchyard:



Long-Term/Permanent Proposed BA AREA Solution:



Delaney Switchyard Interconnection

This Interconnection is comprised of multiple points within the Delaney 500kV Switchyard that connect the CAISO and AZPS Balancing Authority Areas. The Parties intend to connect Ten West Link’s Delaney-Colorado River 500 kV transmission line to the west bus of the Delaney Switchyard with metering and disconnect switches (Figure 2). Generating facilities that request interconnection to the CAISO Balancing Authority Area would be processed by both the CAISO and AZPS as a connection to the west bus and the metering and disconnect switches would be modified accordingly (Figure 3). The obligations of the generating facility to follow Operating Instructions from either AZPS or CAISO would be included in a four-party generator interconnection agreement that would be filed for acceptance by FERC.

Transmission Operator Point of Interconnection:

Ten West Link’s point of interconnection is the first tower outside the Delaney 500 kV Switchyard on the Delaney – Colorado River 500 kV transmission line.

It is the intention that the Transmission Operator Point for future generator interconnection projects wishing to be interconnected to the CAISO BAA will be the first tower outside of the Delaney 500 kV Switchyard.

**CAISO & APS Balancing Authority
Area Points of Interconnection:**

As depicted in Figure 2 below

1. West of Breaker #352
2. West of Breaker #856
3. West of Breaker #556

Transmission Owners:

1. APS and Central Arizona Water Conservation District (CAWCD) share ownership rights in the Delaney – Sun Valley 500 kV transmission line and the Delaney Switchyard.
2. Ten West Link owns the Delaney – Colorado River 500 kV transmission line.
3. APS and CAWCD share ownership rights in the Delaney – Palo Verde 500 kV transmission line.
4. APS owns the Delaney 500 / 69 kV transformer

Roles and Responsibilities:

As depicted on Figure 2 below, the CAISO is the Balancing Authority for the West Bus and for future interconnection projects requesting interconnection into the CAISO BAA at Delaney. More specifically, CAISO AZPS agree to define each future interconnection requests received for the Delaney 500 kV Switchyard.

As depicted in Figure 2 below, initially the CAISO is the Balancing Authority for Breaker 652 and the west bus.

Also as depicted in Figure 2 below, AZPS is the Balancing Authority for the East Bus and Bay #1 including Breakers 352, 256 and 152, for the APS 69kV Station, and the Delaney – Sun Valley 500 kV line, and Bay #3 including Breakers 856 and 752 for the AXPS Delaney – Palo Verde 500 kV transmission lines.

Also as depicted in Figure 2 below, AZPS is the Balancing Authority for Breaker 556 and the east bus.

Under the NERC Coordinated Functional Registration between CAISO and Ten West Link, CAISO and Ten West Link are the TOP for all facilities West of the Transmission Operator Point of Interconnection (the first tower outside the Delaney 500 kV Switchyard).

AZPS is the TOP for all facilities East of the Transmission Operator Point of Interconnection to, and including, the Delaney 500 kV Switchyard. AZPS as TOP shall abide by those certain NERC operating standards.

Balancing Area Metering Points:

As depicted on Figure 2 below:

1. West of Breaker #352
2. West of Breaker #856
3. West of Breaker #556

One-Line Diagrams for Delaney Switchyard:

Figure 2: Initial configuration

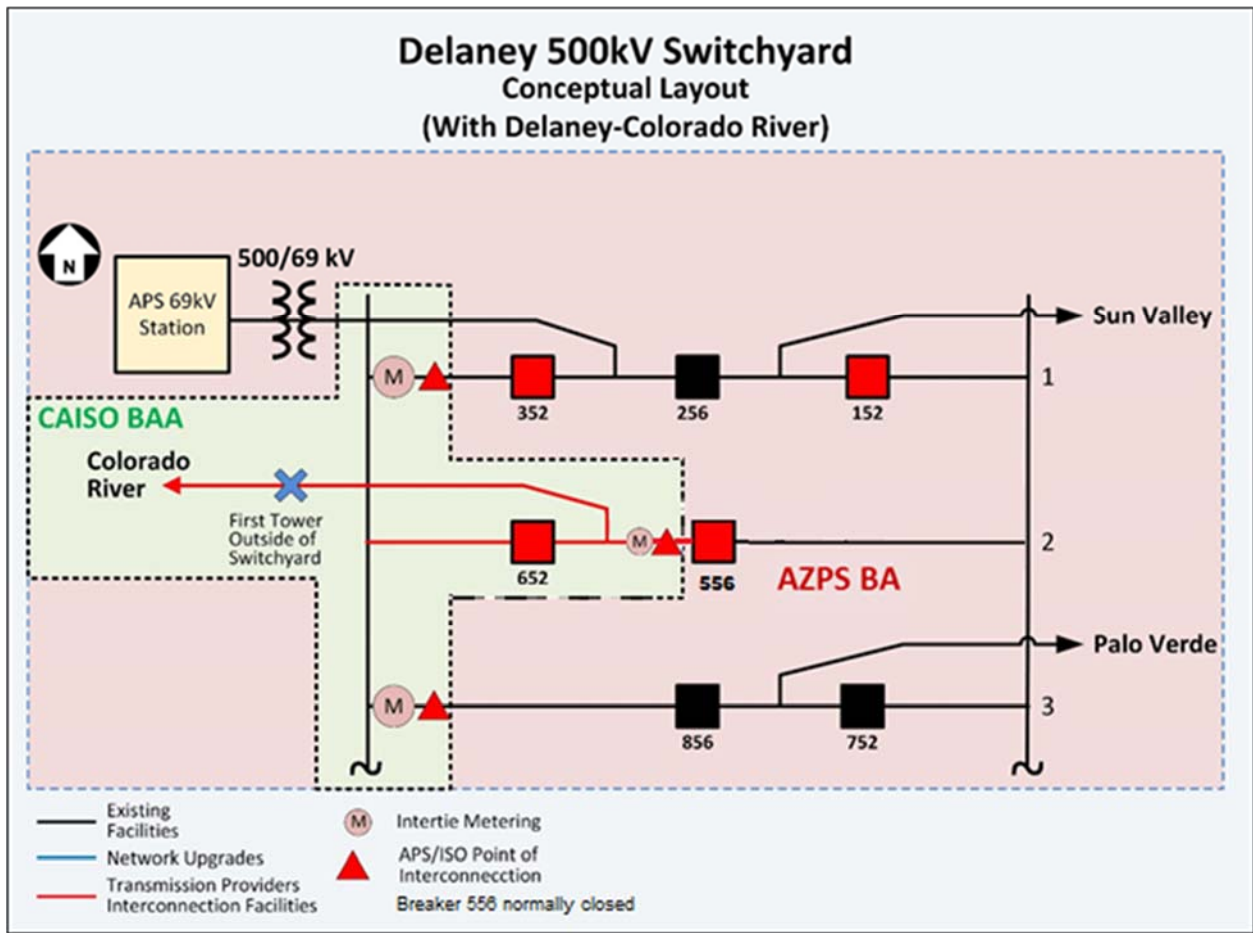
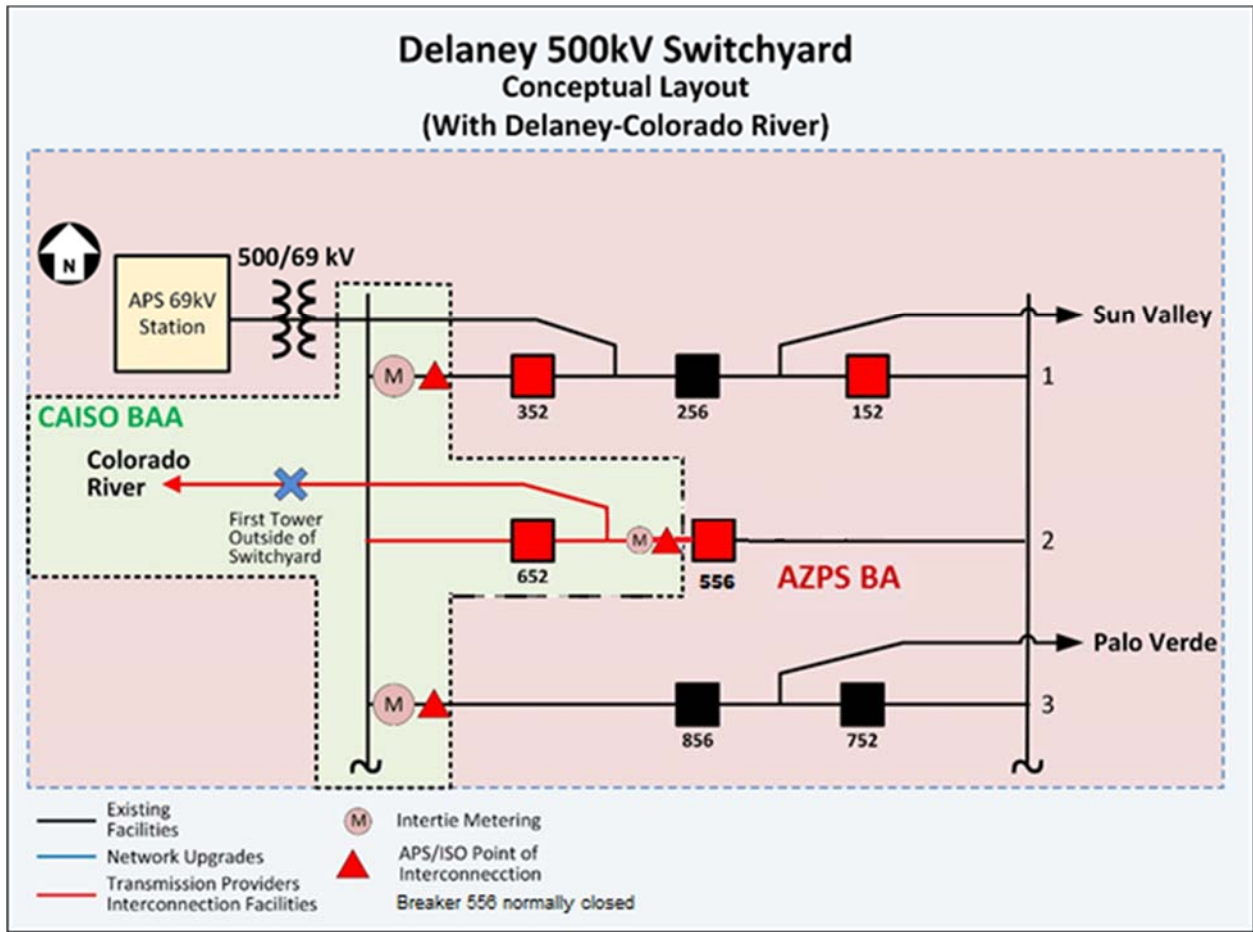


Figure 3: Intended configuration of Delaney if generating facilities request interconnection to the CAISO Balancing Authority Area



The Parties will determine at the time of the generator interconnection request if this is still the best configuration given then current system topology and good utility practice.

REVENUE METERING AND TELEMETRY AT INTERCONNECTION POINTS

APS and CAISO metering shall meet any metering standards mutually agreed upon by the Parties for the purpose of operating their adjacent Balancing Authority Areas. APS and the CAISO shall be entitled to witness testing of the involved interconnection metering. Any change or modification to such metering equipment by APS, the CAISO or any other entity shall be coordinated between the Parties. APS shall allow daily, once a day, read-only access by the CAISO to direct poll revenue data from the interconnection revenue metering in five (5) minute intervals at the metering points identified in this Schedule A. The CAISO shall allow daily, once a day, read-only access by the APS to direct poll revenue data from the interconnection revenue metering in five (5) minute intervals at the metering points identified in this Schedule A. APS and the CAISO shall maintain arrangements that ensure that both Parties shall have access to the same real-time data from the points identified in this Schedule A between their Balancing Authority Area interconnections for the purpose of complying with NERC reliability standards. The Parties understand that each Party wants to obtain MW and MVAR data from interconnection metering, which may include RTUs, at the points identified in this Schedule A between their Balancing Authority Area interconnections. The Parties agree to allow each other to directly poll real-time data from metering at the interconnection substations under the other Party's Balancing Authority Area. In the event that a second communication port of the RTU is not available for direct polling by a Party, the Party shall have the option to provide a RTU to the substation owner for the purpose of establishing a communication port available for direct polling by such Party.

Schedule B

EMERGENCY CAPACITY AND ENERGY [Sections 3.2 and 6.2]

In accordance with EOP-001 the Parties will, to the extent possible, assist each other in an emergency by scheduling energy and/or capacity. Such emergency assistance will be available at the sole discretion of the Party supplying it and will be recallable without advance notice as required to meet reliability requirements. The Parties will agree upon and log MW values, start, and end times, ramp rates and times, and integrated values for any emergency assistance provided.

The emergency assistance will be provided by a Party will be for system reliability. Such emergency assistance may be estimated prior to delivery and finalized in the settlement process.

The price paid for CAISO emergency assistance will be at the CAISO market price for the energy and/or capacity sold, plus all applicable charges, as specified in the CAISO Tariff provisions for emergency assistance. Such price may be estimated prior to delivery and finalized in the settlement process. Payment to the CAISO for emergency assistance provided by CAISO will be made by the Scheduling Coordinator representing APS, in accordance with the settlement process, billing cycle, and payment timeline set forth in the CAISO Tariff.

The price paid for APS emergency assistance will be at the price specified by APS. In the event APS does not specify the price for energy or capacity at the time of the request for emergency assistance and no other settlement price is established prior to the delivery of the emergency assistance, the default settlement price shall be the CAISO market price, plus all other applicable charges, as specified or as otherwise established in the CAISO Tariff for emergency assistance. If the default settlement price does not compensate APS for the value of the emergency assistance delivered to the CAISO, APS shall have the opportunity to justify a higher settlement price in accordance with the CAISO Tariff provisions for emergency assistance. Payment to APS for emergency assistance provided by APS will be made to the Scheduling Coordinator representing APS, in accordance with the settlement process, billing cycle, and payment timeline set forth in the CAISO Tariff.

Nothing in this Agreement shall obligate APS to be bound by CAISO Tariff provisions unless expressly provided for.

Schedule C

CONTACTS FOR NOTICES [Sections 6.2 and 6.4]

CAISO:

Name of Primary Representative: Regulatory Contracts
Title: N/A
Address: 250 Outcropping Way
City/State/Zip Code: Folsom, CA 95630
Email Address: Regulatorycontracts@caiso.com
Phone: (916) 608-7027
Fax No.: (916) 608-7292

Name of Alternate Representative: Christopher J. Sibley
Title: Manager, Regulatory Contracts
Address: 250 Outcropping Way
City/State/Zip Code: Folsom, CA 95630
Email Address: csibley@caiso.com
Phone: (916) 608-7030
Fax No.: (916) 608-7292

APS:

Name of Primary Representative: Interconnect Development
Title: N/A
Address: 400 North 5th Street
City/State/Zip Code: Phoenix, Arizona 85004
Email Address: N/A
Phone: N/A
Fax No.: N/A

Name of Alternate Representative: Joseph Wilhelm
Title: Leader, Interconnect Development
Address: 400 North 5th Street
City/State/Zip Code: Phoenix, Arizona 85004
Email Address: joseph.wilhelm@aps.com
Phone: (602) 371-5735
Fax No.: N/A

Attachment C – Agreement to Amend
Second Amendment to Adjacent Balancing Authority Operating Agreement
Arizona Public Service Company
California Independent System Operator Corporation



**CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION
AND
ARIZONA PUBLIC SERVICE COMPANY**

**SECOND AMENDMENT
TO THE
ADJACENT BALANCING AUTHORITY OPERATING AGREEMENT**

This Second Amendment is dated this 6 day of March, 2018, and is entered into, by and between:

(1) **Arizona Public Service Company** having its registered and principal executive office at 400 North 5th Street, Phoenix, Arizona 85004-3902 (“APS”),

and

(2) **California Independent System Operator Corporation** (“CAISO”), a California nonprofit public benefit corporation having a principal executive office located at 250 Outcropping Way, Folsom, California 95630.

APS and the CAISO are hereinafter referred to as the “Parties.”

Whereas:

- A.** The Parties are signatories to an Adjacent Balancing Authority Area Operating Agreement dated May 19, 2015 (the “Agreement”), which was filed with Federal Energy Regulatory Commission (“FERC”) dated May 15, 2015, concurrent with the First Amendment.
- B.** The Parties desire to amend the Agreement to reflect the addition of the Delaney Switchyard and a change to the Balancing Authority Area boundary between APS and CAISO, once the Delaney – Colorado River Transmission project is completed.
- C.** Once any Generating Facility is built that desires to be in the CAISO Balancing Authority Area, the Agreement will be amended as depicted in Schedule A, Figure 2 to reflect the new Balancing Authority Area boundary between APS and CAISO.
- D.** The Parties desire further to clarify the Schedule A to incorporate the change in naming of the Balancing Authority Area boundary from “Middle of the Colorado River” to “Willow Beach”.



- E. In all other respects, the Parties intend that the Agreement remain in full force and effect in accordance with its terms.

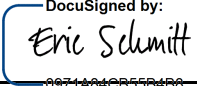
NOW THEREFORE, **THE PARTIES AGREE** as follows:

1. **Effective Date.** This Second Amendment shall be effective on the date made effective by FERC.
2. **Termination.** This Second Amendment shall remain in full force and effect until the termination of the Agreement.
3. **Second Amendment to the Agreement.** The Agreement shall be amended as follows:
 - 3.1 Schedule A specifying the "Adjacent Balancing Authority Interconnection Points" is deleted in its entirety and the Schedule A attached to this Second Amendment is substituted in its place.
4. This Second Amendment constitutes the complete and final agreement of the Parties with respect to the purpose of this Second Amendment as described in the Recitals hereto and supersedes all prior understandings, whether written or oral, with respect to such subject matter.
5. Except as expressly modified in this Second Amendment, the Agreement shall remain in full force and effect in accordance with its terms, and the unmodified provisions of the Agreement shall apply to any new rights and/or obligations established by this Second Amendment.
6. This Second Amendment may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same agreement.




IN WITNESS WHEREOF, the Parties have caused this Second Amendment to be duly executed by and through their respective authorized representatives as of the date hereinabove written.

California Independent System Operator Corporation

By:  _____
Name: Eric Schmitt _____
Title: VP, Operations _____
Date: 2/28/2018 _____

Arizona Public Service Company

By:  _____
Name: Sarah Kist _____
Title: Director, Transmission Operations and Maintenance _____
Date: 3/6/2018 _____



Schedule A

ADJACENT BALANCING AUTHORITY INTERCONNECTION POINTS [Sections 5.1, 5.2 and 6.4]

The Interconnection between CAISO and APS is made up of three Interconnection points. These Interconnection points run normally closed.

- **Willow Beach on the Eldorado – Willow Beach – Moenkopi 500 kV Line**

This Interconnection is comprised of one 500 kV line that connects the APS Moenkopi Substation north of Flagstaff in central northern Arizona, with the Southern California Edison (SCE) attended Eldorado Substation near Boulder City, Nevada.

Transmission Operator Point of Interconnection:	Willow Beach (located at the middle of the Colorado River)
Transmission Owner (TO):	SCE and APS
TOs Point of Change of Ownership:	Willow Beach (located at the middle of the Colorado River)
CAISO & APS Balancing Authority Area Point of Interconnect:	Willow Beach (located at the middle of the Colorado River)
Roles and Responsibilities:	<p>The CAISO is the Balancing Authority West of the Balancing Authority Point of Interconnection.</p> <p>Under the NERC Coordinated Functional Registration between CAISO and SCE, CAISO and SCE are the TOP of the line West of the Transmission Operator Point of Interconnection.</p> <p>AZPS is the TOP of the line East of the Transmission Operator Point of Interconnection.</p> <p>AZPS is the Balancing Authority East of the Balancing Authority Point of Interconnection.</p>
Metering Point:	Eldorado – Willow Beach – Moenkopi 500 kV line termination at the Eldorado Switchyard.



- **North Gila Switchyard Interconnection**

This Interconnection is comprised of three points within the North Gila 500kV Switchyard that connect the CAISO and APS Balancing Authority Areas.

Transmission Operator Point of Interconnection:

First tower East of the Colorado River on the Imperial Valley-North Gila 500 kV.

CAISO & APS Balancing Authority Area Points of Interconnect:

As depicted on Figure 1 below:

1. South of Bay/Breaker #8
2. South of Bay/Breaker #5
3. South of Bay/Breaker #3

Transmission Owners:

1. APS, SDGE, & IID share ownership rights in the Hassayampa-Hoodoo Wash-North Gila 500kV line (ATS/HANG1) and a portion of the North Gila 500 kV Switchyard.
2. APS & IID share ownership rights in the Hassayampa-North Gila 500kV line (HANG2) and a portion of the North Gila 500 kV Switchyard.
3. SDGE & IID share ownership rights in the North Gila-Imperial Valley 500kV line.

Roles and Responsibilities:

As depicted on Figure 1 below, the CAISO is the Balancing Authority for the North Bus and Bays/Breakers #3, #5, #6, #8, and #9 at the North Gila 500kV Switchyard and the Hassayampa-Hoodoo Wash-North Gila 500kV line (ATS/HANG1).

As depicted on Figure 1 below, AZPS is the Balancing Authority for the South Bus and Bays/Breakers #1, #2, #4, and #7 at the North Gila 500kV Switchyard and the Hassayampa-North Gila 500 kV line (HANG2).

Under the NERC Coordinated Functional Registration between CAISO and SDGE, CAISO and SDGE are the TOP for all facilities West of the Transmission Operator Point of Interconnection.

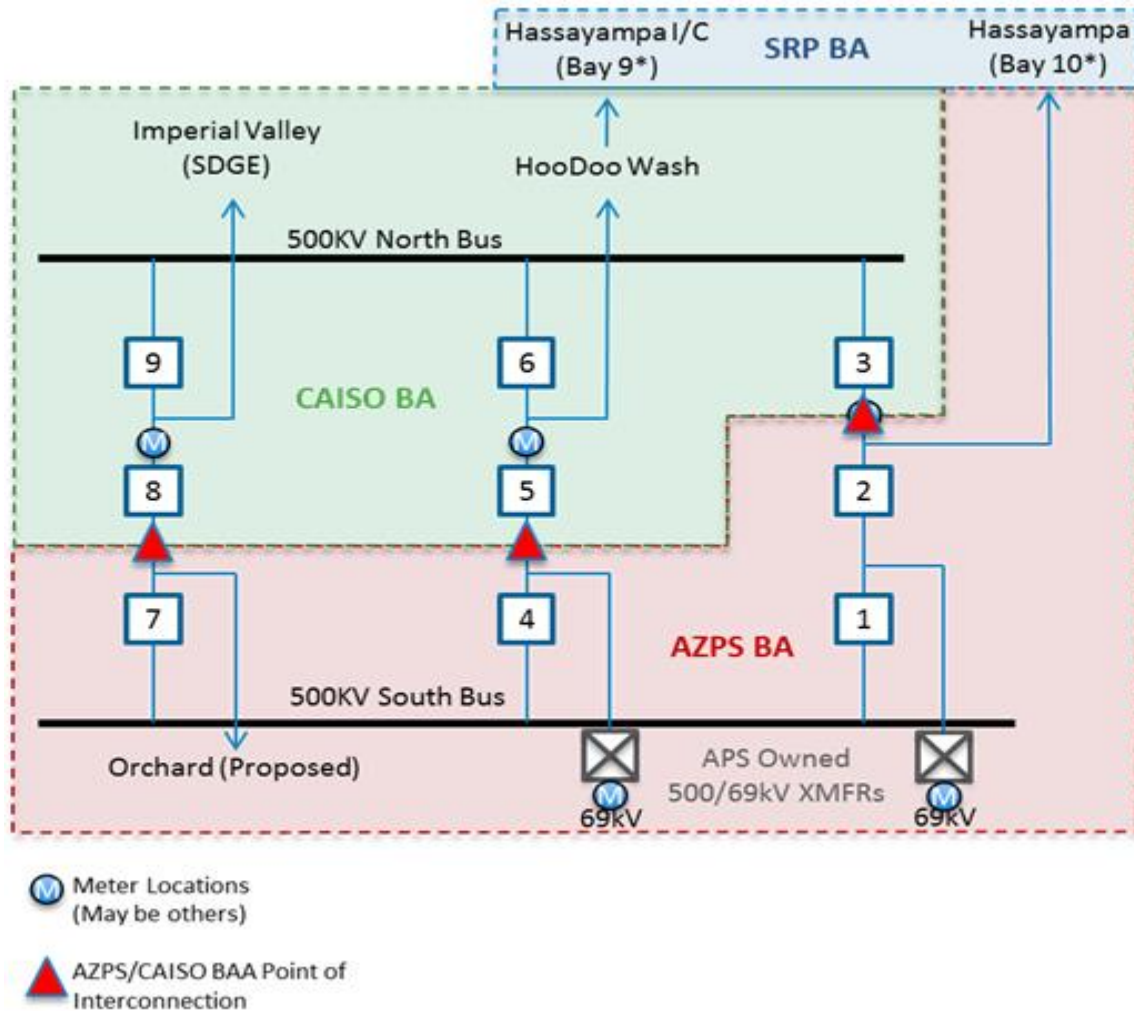
AZPS is the TOP for all facilities East of the Transmission Operator Point of Interconnection and up to the Hassayampa switchyard. APS as Transmission Operator shall abide by those certain NERC operating standards.

Metering Points:

As depicted on the one-line diagram below:

1. North of Bay/Breaker #8
2. North of Bay/Breaker #5
3. South of Bay/Breaker #3

Figure1: One-Line Diagram for North Gila Switchyard:



Delaney Switchyard Interconnection

This Interconnection is comprised of multiple points within the Delaney 500kV Switchyard that connect the CAISO and AZPS Balancing Authority Areas. The Parties intend to connect Ten West Link's Delaney-Colorado River 500 kV transmission line to the west bus of the Delaney Switchyard with metering and disconnect switches (Figure 2). Generating facilities that request interconnection to the CAISO Balancing Authority Area would be processed by both the CAISO and AZPS as a connection to the west bus and the metering and disconnect switches would be modified accordingly (Figure 3). The obligations of the generating facility to follow Operating Instructions from either AZPS or CAISO would be included in a four-party generator interconnection agreement that would be filed for acceptance by FERC.

Transmission Operator Point of Interconnection:

Ten West Link's point of interconnection is the first tower outside the Delaney 500kV Switchyard on the Delaney – Colorado River 500 kV transmission line.

It is the intention that the Transmission Operator Point for future generator interconnection projects wishing to be interconnected to the CAISO BAA will be the first tower outside of the Delaney 500kV Switchyard.

CAISO & APS Balancing Authority Area Points of Interconnection:

As depicted on Figure 2 below

1. West of Breaker #352
2. West of Breaker #856
3. West of Breaker #556

Transmission Owners:

1. APS and Central Arizona Water Conservation District (CAWCD) share ownership rights in the Delaney – Sun Valley 500 kV transmission line and the Delaney Switchyard.
2. Ten West Link owns the Delaney – Colorado River 500 kV transmission line.
3. APS and CAWCD share ownership rights in the Delaney – Palo Verde 500kV transmission line.
4. APS owns the Delaney 500 / 69 kV transformer

Roles and Responsibilities:

As depicted on Figure 2 below, the CAISO is the Balancing Authority for the West Bus and for future interconnection projects requesting interconnection into the CAISO BAA at Delaney. More specifically, CAISO and AZPS agree to define each future interconnection and BAA boundary based on interconnection requests received for the Delaney 500 kV Switchyard.

As depicted on Figure 2 below, initially the CAISO is the Balancing Authority for Breaker 652 and the west bus.

Also as depicted Figure 2 below, AZPS is the Balancing Authority for the East Bus and Bay #1 including Breakers 352, 256 and 152, for the APS 69kV Station, and the Delaney – Sun Valley 500 kV line, and Bay #3 including Breakers 856 and 752 for the AZPS Delaney – Palo Verde 500 kV transmission lines.

Also as depicted on Figure 2 below, AZPS is the Balancing Authority for Breaker 556 and the east bus.

Under the NERC Coordinated Functional Registration between CAISO and Ten West Link, CAISO and Ten West Link are the TOP for all facilities West of the Transmission Operator Point of Interconnection (the first tower outside the Delaney 500 kV Switchyard).

AZPS is the TOP for all facilities East of the Transmission Operator Point of Interconnection to, and including, the Delaney 500 kV Switchyard. AZPS as TOP shall abide by those certain NERC operating standards.

Balancing Area Metering Points:

As depicted on Figure 2 below:

1. West of Breaker #352
2. West of Breaker #856
3. West of Breaker #556

One-Line Diagrams for Delaney Switchyard:

Figure 2: Initial configuration

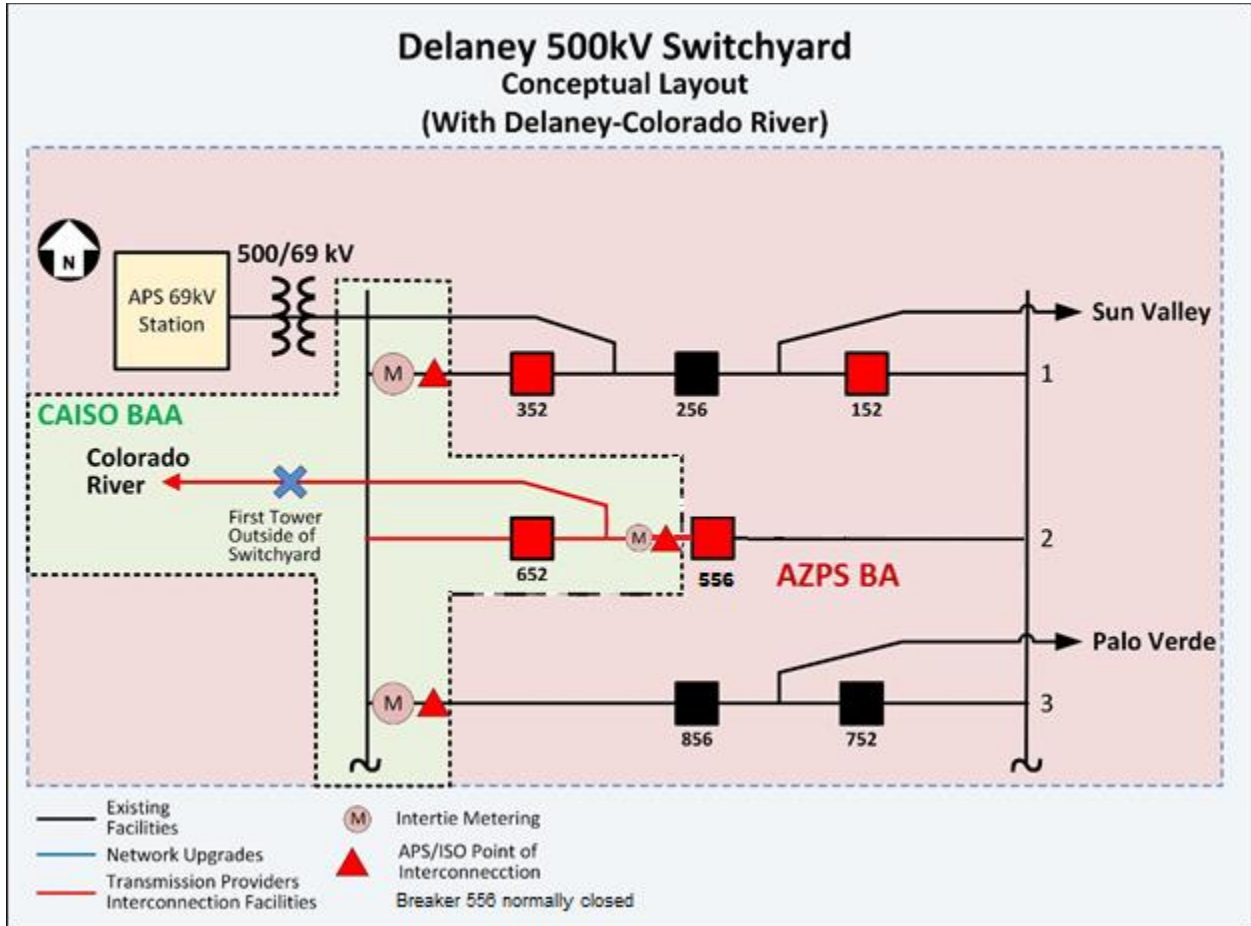
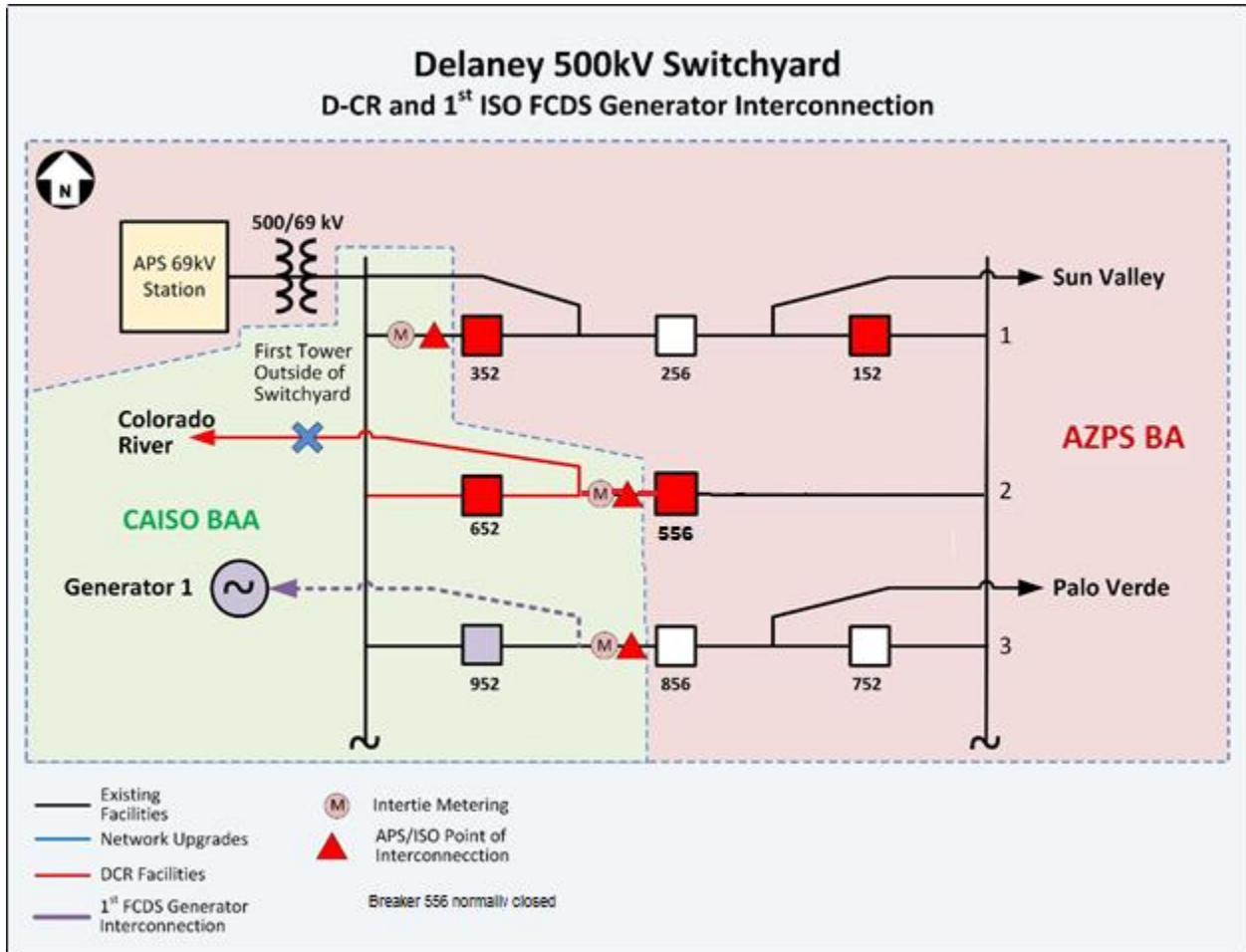


Figure 3: Intended configuration of Delaney if generating facilities request interconnection to the CAISO Balancing Authority Area



The Parties will determine at the time of the generator interconnection request if this is still the best configuration given then current system topology and good utility practice.

REVENUE METERING AND TELEMETRY AT INTERCONNECTION POINTS

APS and CAISO metering shall meet any metering standards mutually agreed upon by the Parties for the purpose of operating their adjacent Balancing Authority Areas. APS and the CAISO shall be entitled to witness testing of the involved interconnection metering. Any change or modification to such metering equipment by APS, the CAISO or any other entity shall be coordinated between the Parties. APS shall allow daily, once a day, read-only access by the CAISO to direct poll revenue data from the interconnection revenue metering in five (5) minute intervals at the metering points identified in this Schedule A. The CAISO shall allow daily, once a day, read-only access by APS to direct poll revenue data from the interconnection revenue metering in five (5) minute intervals at the metering points identified in this Schedule A.

APS and the CAISO shall maintain arrangements that ensure that both Parties shall have access to the same real-time data from the points identified in this Schedule A between their Balancing Authority Area interconnections for the purpose of complying with NERC reliability standards. The Parties understand that each Party wants to obtain MW and MVAR data from interconnection metering, which may include RTUs, at the points identified in this Schedule A between their Balancing Authority Area interconnections. The Parties agree to allow each other to directly poll real-time data from metering at the interconnection substations under the other Party's Balancing Authority Area. In the event that a second communication port of the RTU is not available for direct polling by a Party, the Party shall have the option to provide a RTU to the substation owner for the purpose of establishing a communication port available for direct polling by such Party.