



California ISO

Draft Fall 2020 Release Implementation Plan

Version 2.0

October 15, 2020

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Revisions

Date	Version	Description	Author
09/01/2020	0.1	Initial for Fall 2020 Release	Trang Vo
09/29/2020	1.0	Modify OASIS schedule, modify ADS Replacement schedule, add ADS details, update status of deployments and activations	Trang Vo
10/15/2020	2.0	Include additional ADS details – Please refer to appendix	Trang Vo

Introduction

Executive Summary

In the Fall 2020 Release, the California ISO will deploy numerous system changes from various projects and other efforts. The intent of this document is to provide market participants with a description of the timeline and activities for the Fall 2020 Release.

Project Descriptions

The Fall 2020 Release includes changes to support the following projects.

Commitment Cost Enhancements Tariff Clarifications

The Commitment Cost Enhancements Tariff clarifications project is focused on the use of limited, conditionally available resources and run-of-river resources and to clearly reflect these clarifications in the CAISO tariff. This policy covers bidding obligations, notification of outage requirements to the ISO and Resource Adequacy Availability Incentive Mechanism (RAAIM) obligation to the resource type discussed in this initiative. The principle driver in the Commitment Costs Enhancements Tariff Clarifications policy is to allow for expanded market participation from all use-limited resources including the hydro fleet.

Note: The Tariff language will be filed for July 1, 2020 effective date, however, the software implementation will be in Fall 2020. As a result, any differences will be re-settled after implementation.

More information can be found under Fall 2020 release on the Release Planning page at <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

Energy Storage and Distributed Energy Resources Phase 3B

The energy storage and distributed energy resource (ESDER) initiative aims to identify and mitigate barriers that hinder effective market participation of storage and distributed energy resources. The presence of renewables and storage continues to increase and evolve, and therefore so does the integration of these resources into the CAISO markets. The multi-phase ESDER initiative allows these resources to participate more efficiently, thus allowing for more robust market solutions while reducing carbon emissions.

More information can be found under Fall 2020 release on the Release Planning page at <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

FERC Order 841 – Requested Adjustments

In November 2019, FERC responded to CAISO's compliance filing for FERC Order 841. FERC generally accepted the filing, but took exception to certain proposed provisions.

In response to FERC's directives, the CAISO has responded with a further compliance filing on January 21, 2020 to address three (3) issues as noted below.

1. Reflecting storage resources' physical and operational characteristics in the CAISO tariff
2. Lowering the minimum capacity requirements for storage resources to provide ancillary services from 500 kW to 100 kW
3. Ensuring that the CAISO's metering practices allow for storage resources to participate in the retail and wholesale markets

As a result of the further compliance filing, this new FERC 841 – Requested Adjustments Project has been initiated.

Note that the scope of this Project is separate and apart from the scope and implementation of the previous FERC 841 – NGR Model Project which was implemented in 2019.

All of the above is subject to change based on FERC's review of the CAISO's further compliance filing.

More information can be found under Fall 2020 release on the Release Planning page at <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

Automated Dispatch System (ADS) Replacement

Since 2014, some market advances have not completely made their way to ADS and the product is being enhanced in this project to catch up with several of the market advances. Also, technology-based upgrades are being made to enhance application security, improve operational efficiencies and establish a technology infrastructure that will support evolving market requirements.

In addition, functional improvements are included that assist both Market Participants and CAISO operations in more effectively managing the dispatch and operation of resources operating in the CAISO market. These improvements involve automation of current manual/verbal processes and enhanced displays of data and instructions provided through ADS.

More information can be found under Fall 2020 release on the Release Planning page at <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

Dispatch Operating Target Tariff Clarifications

Currently, Eligible Intermittent Resources (EIRs) are not consistently following their dispatch operating target (DOT) when certain system conditions persist (overgeneration). When a resource doesn't follow their DOT, it can pose an operational risk in areas where transmission is constrained. As more EIRs are introduced to the CAISO balancing area, this will pose a greater risk. This project will allow EIRs to automate their responses to operational instructions that require the resource not to exceed their DOT. This enhancement will improve reliability during stressed system conditions

More information can be found under Fall 2020 release on the Release Planning page at <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

Excess Behind the Meter Production

This project addresses the approach to integrating a new measurement type into Settlements and adjusting the reliability related charges.

More information can be found under Fall 2020 release on the Release Planning page at <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

Market Settlement Timeline Transformation

The CAISO proposes to change its market settlement timeline to reduce market participant financial exposure by producing initial settlement statements that will more closely approximate the final settlement, and allow sufficient time for the CAISO and market participants to resolve disputes.

The CAISO's current settlement timeline is compressed, which places potentially avoidable burdens on the CAISO and market participants. The compressed timeline causes the CAISO to publish initial statements of lower financial quality and to sometimes delay the publication of its settlement statements. These inefficiencies impact market participants because they must bear a financial burden of varying magnitude for many business days.

The CAISO and market participants also devote a large level of effort to correct data, re-calculate, process, and validate relatively small financial adjustments associated with optional re-calculations long after the settlement trade date has passed.

To resolve these issues, the CAISO proposes to calculate and publish two settlement statements within 70 business days after a trade date and re-align the due dates for settlement quality meter data.

- The CAISO proposes to consume available settlement quality meter data seven business days after a trade date and publish the initial statement nine business days after a trade date, allowing the CAISO to incorporate price corrections and quality meter data into its initial settlement statement.
- The CAISO proposes to accept final meter data 52 business days after a trade date and publish the last required settlement statement 70 business days after a trade date.

Under certain defined circumstances, the CAISO proposes to re-calculate and publish three settlement statements between 70 business days after a trade date and 24 months after a trade date, reducing the normal settlement life cycle from 36 months to 24 months.

- The CAISO proposes to optionally re-calculate and publish settlement statements 11 months after a trade date, 21 months after a trade date, and 24 months after a trade date.

More information can be found under Fall 2020 release on the Release Planning page at <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>

Deployment Strategy

Deployment Schedule Overview

The system changes will be implemented in a phased manner. The systems changes will be deployed/activated according to the following drops and dates.

Description	Deployment
DRRS	September 15, 2020
Master File	September 22, 2020
CIRA	September 28, 2020
Call: Technical User Group	September 29, 2020
Settlements	September 29, 2020
MRI-S	September 29, 2020
OASIS	October 5, 2020
ADS – Refer to appendix	October 20-21, 2020
Bridge: ADS Replacement – Refer to appendix	October 20 & 21, 2020

The strategy of spreading the deployment over time is in the interest of minimizing impact on resources and is consistent with deployment strategies implemented during previous major deployments. Some of these deployments will require brief outages. See *Deployment Times, Outages, and Market Participant Actions* section of this document for times and durations for each application.

The technical details for these system changes can be found on the Developer site at: <https://developer.caiso.com/>.

Web Services

Refer to the Developer site for details about specific URLs:

- <https://developer.caiso.com/>

DRRS APIs

DRRS Interface Specification & Artifacts: <https://developer.caiso.com/pages/application.aspx?app=DRRS>

Service	Project	Availability as of this Deployment
SubmitDRLocations_DRRSv2_AP	ESDER3B	Modification
SubmitDRLocations_DRRSv2_DocAttach_AP		
SubmitDRRegistrations_DRRSv2_AP	ESDER3B	Modification
SubmitDRRegistrations_DRRSv2_DocAttach_AP		
RetrieveDRLocations_DRRSv2_AP	ESDER3B	Modification
RetrieveDRLocations_DRRSv2_DocAttach_AP		
SubmitDRLocations_DRRSv2_AP	ESDER3B	Modification
SubmitDRLocations_DRRSv2_DocAttach_AP		

MF APIs

MF Interface Specification & Artifacts: <https://developer.caiso.com/pages/application.aspx?app=MFRD>

Service	Project	Availability as of this Deployment
RetrieveGeneratorRDT_MFRDv5	ESDER3B FERC841	Modification
RetrieveGeneratorRDT_MFRDv5_DocAttach	CCETC	
SubmitGeneratorRDT_MFRDv5	ESDER3B FERC841	Modification
SubmitGeneratorRDT_MFRDv5_DocAttach	CCETC	

MRI-S

MRI-S Interface Specification & Artifacts: <https://developer.caiso.com/pages/application.aspx?app=MRI-S>

OASIS APIs

OASIS Interface Specification & Artifacts:
<https://developer.caiso.com/pages/application.aspx?app=OASIS>

ADS

ADS Interface Specification & Artifacts: <https://developer.caiso.com/pages/application.aspx?app=ADS>

Deployment and Activation Timeline

The Fall 2020 Release is scheduled for deployment across multiple dates. Each deployment may incur outages of varying lengths to specific systems. The table below highlights the systems that will be impacted by each deployment and provides relevant details for market participants.

Deployment Timeline

Date	Deployment Information	Status
07/01/2020 (Retroactive)	Activation of CCETC	Complete
09/15/2020	DRRS	Complete
09/22/2020	Master File	Complete
09/28/2020	CIRA	Complete
09/29/2020	Settlements	Complete
09/29/2020	MRI-S	Complete
10/05/2020	OASIS	Complete
10/01/2020	Activation of ESDER3B	Complete
10/01/2020	Activation of FERC841	Complete
10/20/2020	ADS Phase 1	On-Track
10/21/2020	ADS Phase 2	On-Track
01/01/2021	Activation of MSTT	On-Track
01/01/2021	Activation of EBTMP	On-Track
02/01/2021	ADS Cutover – Refer to appendix	On-Track
02/01/2021	Activation of DOTTC	On-Track

Deployment Times, Outages, and Market Participant Actions

DRRS – September 15, 2020

System	Deployment Time	Outage	MP Action
DRRS	2:00 PM to 4:00 PM	DRRS UI/API Unavailable	N/A

All times are Pacific

Master File – September 22, 2020

System	Deployment Time	Outage	MP Action
Master File	9:00 AM to 4:00 PM	Brief interruption for MF UI/API	None

All times are Pacific

CIRA – September 28, 2020

System	Deployment Time	Outage	MP Action
CIRA	1:00 PM to 4:00 PM	Brief interruption for CIRA UI/API	N/A

All times are Pacific

Settlements – September 29, 2020

System	Deployment Time	Outage	MP Action
Settlements	9:00 AM to 12:00 PM	No outage anticipated	N/A

All times are Pacific

MRI-S – September 29, 2020

System	Deployment Time	Outage	MP Action
MRI-S	9:00 AM to 12:00 PM	Brief interruption for MRI-S UI/API	N/A

All times are Pacific

OASIS – October 5, 2020

System	Deployment Time	Outage	MP Action
OASIS	1:00 PM to 5:00 PM	Brief interruption for OASIS UI/API	N/A

All times are Pacific

ADS – October 20, 2020

System	Deployment Time	Outage	MP Action
ADS Phase 1	10:30 AM to 12:30 PM	11:15 AM to 11:40 AM	<i>Participate on customer bridge</i> <i>Refer to Appendix</i>

All times are Pacific

ADS – October 21, 2020

System	Deployment Time	Outage	MP Action
ADS Phase 2	10:30 AM to 12:30 PM	11:15 AM to 11:40 AM	<i>Participate on customer bridge</i> <i>Refer to Appendix</i>

All times are Pacific

Communication and Support

Below is the Fall 2020 Release communication schedule:

Description	Method	Frequency
Fall 2020 Release Implementation Market Simulation Call	By phone: call 1-866-528-2256 or International 1-216-706-7052, access code: 202 249 0 By web: join web conference at https://caiso.webex.com/meet/MarketSim , meeting number: 962 067 710 Related information: http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx	Twice Weekly
Release Users Group (RUG)	By phone: call 1-866-528-2256, access code: 291 426 5 By web: join web conference at https://caiso.webex.com/meet/RUG , meeting number: 960 941 245 Related information: http://www.caiso.com/informed/Pages/MeetingsEvents/UserGroupsRecurringMeetings/Default.aspx#RUG	Every Other Week
Technical Users Group (TUG)	By phone: call 1- 866-528-2256, access code: 3895889 By web: join web conference at https://caiso.webex.com/meet/CAISO-TUG , meeting number: 966 010 353 Related information: http://www.caiso.com/informed/Pages/MeetingsEvents/UserGroupsRecurringMeetings/Default.aspx#TUG	Every Other Week
ADS Transition Bridge	By phone: call 1- 866-528-2256, access code: 1465216 Refer to appendix	10/20/2020 08:30 – 17:00 PT & 10/20/2020 08:30 – 17:00 PT

Implementation Plan Contact Information

- ISO Market Simulation Coordination at marketsim@caiso.com
- CIDI

Routine Issues and Support

All normal support processes should be followed for support functions. The ISO Help Desk can be reached at (916) 351-2309.

Appendix for ADS Replacement

Overview

The ADS Go-live will happen in multiple phases:

- Phase 1 – Implementation of the Application Resiliency (Network) Cutover
- Phase 2 – Implementation of the New ADS (WebSDK)
- Phase 3 – Activation of the new features
- Phase 4 – Decommission of the current ADS (Delphi)

This appendix currently focuses on Phase 1 on October 20, 2020, and Phase 2 on October 21, 2020.

The primary objectives of this appendix are to provide information that enables increased coordination, communication and decision-making for issues that arise during the go-live and transition period and to ensure the integrity of the new ADS and minimal to no disruption to users.

Customer Support Bridge – October 20 & 21, 2020

The ISO will provide a Customer Support Bridge to manage, escalate, resolve, and generate reports for issues raised by users. Issues are submitted directly through CIDI, Service Desk or escalated via other means. Customers are invited to call in to this bridge for coordinated deployment and progress updates.

The bridge will be open from 8:30 AM to 5:00 PM PT on October 20 and October 21, 2020.

By phone: call 1- 866-528-2256, access code: 1465216

Mandatory Customer Preparation – Immediately, before Phase1 October 20

The ADS Replacement project has been approved to implement by the Quality Review Board, however there is a pre-requisite and dependency for customers to confirm connectivity. We would like to stress that it is MANDATORY that all organizations ensure that they have tested all three URL's below. The consequence of not doing the test is that your organization may not be able to connect to ADS, current and new, when we cut over. We thank you for your testing efforts done thus far.

URL	Connectivity Success	Unsuccessful
ADS Delphi Client (existing ADS) https://adsws.prod.caiso.com:447	1. California ISO page & “Your session could not be established.”	No California ISO page, blank page
ADS UI https://ads.prod.caiso.com	1. California ISO page & “You have successfully connected to the ADS system” with link to click 2. Clicking link returns “Your session could not be established.”	No California ISO page, blank page
ADS API https://adsws.prod.caiso.com	1. California ISO page & “Your session could not be established.”	No California ISO page, blank page
Comments	“Session could not be established” is expected as application is not yet available, but this message indicates successful connectivity to the network	

- ADS Delphi Client:
 - <https://adsws.prod.caiso.com:447> (At cutover time, <http://adssta.caiso.com> will become a DNS ALIAS to this address, hence this address must be tested).
 - IP Address: 45.42.16.51, 45.42.22.51, port 447
 - Should see “You have successfully connected to the ADS system” but if you see “Session could not be established” this is OK as we are not forwarding to the app yet
- ADSWS API URL:
 - <https://adsws.prod.caiso.com> (This is a new URL, and is an alternate UI to the Delphi Client)
 - IP Address: 45.42.16.51, 45.42.22.51, port 443
 - Should see “You have successfully connected to the ADS system” but if you see “Session could not be established” this is OK as we are not forwarding to the app yet
- ADS UI (WebSDK) URL:
 - <https://ads.prod.caiso.com> (This is a new URL, and we will be retiring the <https://adsws.prod.caiso.com:447> URL next year and asking API users to move to this address)
 - IP Address: 45.42.16.16, 45.42.22.16, port 443
 - Should see “You have successfully connected to the ADS system” Per the previous instructions, we stressed the fact that the test be completed from the system where you plan to use ADS. If you test from home, you may not encounter a firewall issue, which you may encounter when you try to log in from work. Please ensure that you are testing from where ever you are going to use ADS. If you are not able to test from the system where your current ADS runs (due to security concerns or lack of a web browser) please check with your internal network or IT teams who may be able to test on your behalf.

This pre-work is critical to the successful implementation of the ADS Replacement application on Tuesday, October 20 - Wednesday, October 21.

We would like to ensure that EVERY AVAILABLE USER can connect to the existing ADS and new ADS (user interface and API) systems before the 10/20-10/21 implementation

This connection test must be performed ASAP

EVERY AVAILABLE USER should do steps 1 and 2 below (we say ‘available’ as we understand that some users may be off shift)

Step 3 must be performed if your organization is using the ADS API (regardless of which version of the API you are using)

Please ensure that your IT organization has seen this communication, to ensure that they have whitelisted the new ADS IP addresses.

Even for use of existing ADS API URL and versions (v6 & v7), you will need to whitelist the new ADS API IPs as access to the v6 & v7 will redirect to the new IPs.

	PRODUCTION
API Existing URL	https://ads.caiso.com:447/
API Existing IPs	12.200.60.98 12.200.60.99 12.231.58.98 12.231.58.99
API New Additional IPs	45.42.16.51 45.42.22.51
UI Existing URL	https://ads.caiso.com:447/
UI Existing IP	12.200.60.98 12.200.60.99 12,231.58.98 12.231.58.99
UI New Additional URL	https://ads.prod.caiso.com/
UI New Additional IP	45.42.16.16 45.42.22.16

Steps to test connectivity to Existing ADS and New ADS:

- ADS Delphi Client (existing ADS) From the system(s) where you plan to use the ADS Delphi Client:
 - i. Ensure your firewalls are open outbound to CAISO @ 45.42.16.51 & 45.42.22.51
 - ii. Ensure your CAISO ADS certificate is loaded in your web browser
 - iii. Launch a web browser and go to <https://adsws.prod.caiso.com>

- ADS UI
From the system(s) where you plan to use the new ADS UI:
 - i. Ensure your firewalls are open to CAISO @ 45.42.16.16 & 45.42.22.16
 - ii. Ensure your CAISO ADS certificate is loaded in your web browser
 - iii. Launch a web browser and go to <https://ads.prod.caiso.com>

- ADS API
From the system(s) where you plan to use the ADS API:
 - i. Ensure your firewalls are open to CAISO @ 45.42.16.51 & 45.42.22.51
 - ii. Ensure your CAISO ADS certificate is loaded in your web browser (or API client)
 - iii. Launch a web browser (or API client) and go to <https://adsws.prod.caiso.com>

- Note: For ECN users, you may follow the above steps, but your network devices and firewalls will need a different configuration. Please contact the Service Desk (ServiceDesk@caiso.com, 888-889-0450) for more info.
- Note: When we cut over, the addresses <http://adssta.caiso.com>, and <http://ads.caiso.com> will become DNS Aliases to <http://adsws.prod.caiso.com> (45.42.16.51 & 45.42.22.51). If you have any issues connecting, please follow these steps:
 - Ensure your firewalls are open from the source workstation/servers out to the CAISO IP listed above
 - Ensure the certificate you are testing with is valid, installed in your browser, and allowed for ADS
 - If you still have issues, try with this same certificate to the LEGACY ADS:
<https://adssta.caiso.com:447> and see if your connection works to the LEGACY ADS system

Please contact the Service Desk (ServiceDesk@caiso.com, 888-889-0450), and provide your certificate name and URL you were trying. For any issues, please log a CIDI case or reach out to the CAISO Service Desk (ServiceDesk@caiso.com).

For ECN questions, please submit a CIDI and/or contact Service Desk (ServiceDesk@caiso.com, 888-889-0450)

ADS Cutover – Tips for Preparation

- For users accessing ADS via the internet (not accessing via ECN):
 - Ensure any ADS Delphi or API systems are up and running before the transition. If you report an issue, it will be good to know you were working OK before the transition.
 - Please review the troubleshooting steps below to be prepared to run them as needed.
 - We recommend you have a designated person from your organization on hand to assist with any technical issues (Desk side support, API software support, Network admin). Make sure they are checking the system right at transition time.
 - Note the before / after DNS IP resolution for adssta.caiso.com:
 - adssta.caiso.com BEFORE:
 - **12.231.58.98**
 - **12.231.58.99**
 - **12.200.60.98**
 - **12.200.60.99**
 - adssta.caiso.com AFTER:
 - **45.42.16.51**
 - **45.42.22.51**
 - Ensure your organization is relying on **CAISO PUBLIC DNS** for the IP addresses for adssta.caiso.com, and ads.caiso.com.
 - Do not use hard-coded IP addresses in your system configurations for interfacing with CAISO ADS.
 - **The Legacy ADS service on these IP's will be shut down.**
 - » 12.231.58.98 / port 447
 - » 12.231.58.99 / port 447
 - » 12.200.60.98 / port 447
 - » 12.200.60.99 / port 447
 - Do not use your own custom internal DNS which could return an incorrect IP address for CAISO ADS
 - Do not use /etc/hosts, or Windows hosts files on your servers which could return an incorrect IP for a CAISO ADS
 - When we cut over there may be period of time where your servers have cached the old IP address and will not return the new IP address yet.
 - You may need to manually flush your DNS resolver cache, or allow the TTL to expire (30 seconds)

ADS Features & Functionality Available on Go-Live

- Enhancements that require different Operator actions under the new client will be disabled until everyone has transitioned to the new client.
 - These enhancements will continue to be tested in MAPStage.
 - During this time, existing procedures will be utilized.
 - These enhancements include:
 - DOTT
 - Unannounced AS TEST

- RTCD Commitment
 - ISO operators will conduct AS testing and issue operating instructions when needed to units using phone call (current process) while these enhancements are de-active in production. ISO operator will follow up with an ED instruction after phone call for AS testing. SCs should continue to respond to AS testing instructions and operating instructions.
- New data for FRU/FRD and FMM inter-ties will be available in the new ADS upon go-live of the ADS replacement
- The Delphi client, and API v6, v7, and v8 will be supported upon go-live of the ADS replacement

ADS Replacement Features on Go-Live	
Available	<ul style="list-style-type: none"> • 5 minute FRU/FRD <i>ç 10/21 with the ADSUI (WEBUI)</i> • 15 min FRU/FRD <i>ç 10/21 with the ADSUI (WEBUI)</i> • 15 Min Energy <i>ç 10/21 with the ADSUI (WEBUI)</i> • Removing Duplicate ED Entries in Instruction Grids. <i>ç 10/14 with the ADSUI (WEBUI)</i> • AIM ACL <i>ç 10/20 with the ADSWS</i> • Operator messages view/download <i>ç 10/14 with the ADSUI (WEBUI)</i> • New columns <i>ç 10/21 with the ADSUI (WEBUI)</i> <ul style="list-style-type: none"> • Previous Supp: similar to RT Prev DOT, will show last binding Supp. • RT Sup Delta: similar to RT DOT Delta, will show difference between RT Supp. Energy and Previous Supp. • Prev Accept DOT • Accept DOT Delta • Current DOT Delta
Disabled	<ul style="list-style-type: none"> • DOTT • Unannounced AS TEST • RTCD Commitment

ADS Cutover – Phase 1 October 20, 2020 & Phase 2 October 21, 2020

ISO received approval from our Quality Review Board for the transition, planned for Oct 20 - Oct 21, and the final decision for the transition will depend on Production connectivity completion. We have added criteria for customers to demonstrate production connectivity for this transition due to the significant infrastructure changes.

The transition has been adjusted to span two phases over two days to implement the infrastructure and network transition during phase 1 and application transition during phase 2.

What to expect:

- Backward compatible: Delphi client and V6 APIs
- Target time is between 10:30AM-12:30PM PDT*
- *ADS interruption will be between 1115-1140 PT to avoid the hourly ramp
- Planning for minimal downtime (10 min); the user interface will disconnect and will need to be restarted on client side
 - During this transition of downtime, SCs should continue to follow the last available DOT until new DOT becomes available.
- There will be a brief interruption to ADSWS (API)
- Users may need to flush DNS and restart Delphi client
- **Market:**
 - Prior to cutover, RTD will send dispatches to all just like today
 - Then the outage starts and ADS will be down for all so no one will receive any dispatches. Everyone will remain at the last DOT sent (so they will stay flat). The expected down time is only around 10 minutes
 - During the outage ISO Operations will use the “**send previous solution**” functionality. This will also keep everyone flat because we just keep sending the previous DOTs
 - Then ADS comes back up. We will continue to stay flat and use previous solution so that DOTs are actually being sent to ADS. Then participants can verify that they are receiving DOTs just like before the outage started
 - Then once we get confirmation that DOTs are being received, then we will stop using the previous solution and we will switch over to using the “**market disconnect**”. Since the market has been flat and using previous solution for a few intervals, we want to make sure that participants are comfortable with the new dispatch instructions that are about to be sent before actually sending them, to avoid any large swings here. This mitigation step will allow ISO Operations and EIM customers to verify their dispatches in BAAOP to decide whether or not to resume with latest market results.
 - Then if everyone is good with the new dispatch instructions, we turn off market disconnect and proceed as normal going forward.

Phase 1 – October 20, 2020

Planned Time	Action	Task	Team	MP Action / Comments
08:00	Validate	Verify external connectivity to new systems	ISO / MP	Ensure you have tested the new firewalls <ul style="list-style-type: none"> •45.42.16.51/ 45.42.22.51 •45.42.16.16/ 45.42.22.16 For ECN customers, please ensure you can connect
10:30	Validate	Login to current ADS and verify dispatches are coming	ISO / MP	
11:15	Validate	Verify data flowing into ADS	ISO	
11:15	Execute	Final Go/No-Go	ISO	
11:15	Execute	Apply DNS changes	ISO	Close current ADS client connections, Flush DNS Restart ADS Delphi Client
11:15	Validate	Verify you are able to see dispatches	MP / ISO	

*ADS interruption will be between 1115-1140 PT for Phase 1 on 10/13 and Phase 2 on 10/14 to avoid the hourly ramp

Phase 2 – October 21, 2020

Planned Time	Action	Task	Team	MP Action / Comments
10:00	Execute	Install Integration Layer Patches	ISO / MP	Verify external users are able to login to new ADS UI
10:00	Execute	Cut over new ADS Adapter	ISO / MP	
11:15	Validate	Verify access to API v6, v7, v8	ISO / MP	You should be able see v8 now
10:00	Validate	Verify ADS is receiving data from upstream systems	ISO	
10:00	Execute	Open up WEBSDK UI	ISO / MP	UI now available
11:00	Validate	Verify Users successfully logged into ADSUI	ISO	

*ADS interruption will be between 1115-1140 PT for Phase 1 on 10/13 and Phase 2 on 10/14 to avoid the hourly ramp

Cutover Troubleshooting Tips

Question	Answer
adssta.caiso.com does not resolve to the correct IP address for me	<ol style="list-style-type: none"> 1. Ensure you are using the IP address which CAISO public DNS is advertising 2. Ensure you are not using a local hosts file 3. Ensure you are not using a custom DNS solution 4. Flush your DNS resolver cache as needed. For Windows systems, run: <code>ipconfig/flushdns</code> 5. Check an external DNS lookup site, such as: https://www.dnswatch.info/dns/dnslookup?la=en&host=adssta.caiso.com&type=A&submit=Resolve
I cannot connect to ADS after the cutover or roll back (Delphi Client)	<ol style="list-style-type: none"> 1. Ensure your system is not using a hard coded IP address. 2. Run <code>nslookup adssta.caiso.com</code> Note what IP it returns. 3. Flush your DNS resolver cache. Run <code>ipconfig/flushdns</code> Run <code>nslookup adssta.caiso.com</code> again to see if the IP address updated. 4. Allow 30 seconds for the DNS TTL to expire and try again 5. Ensure your source system has firewall access opened up to these IP's / PORT's: <ul style="list-style-type: none"> • 45.42.16.51, port 447 • 45.42.22.51, port 447
I cannot connect to ADS after the cutover or roll back (API Users)	<ol style="list-style-type: none"> 1. Ensure your system is not using a hard coded IP address. 2. Run <code>nslookup adssta.caiso.com</code> Note what IP it returns. 3. Flush your DNS resolver cache. Run <code>ipconfig/flushdns</code> Run <code>nslookup adssta.caiso.com</code> again to see if the IP address updated. 4. Allow 30 seconds for the DNS TTL to expire and try again 5. Ensure your source system has firewall access opened up to these IP's / PORT's: <ul style="list-style-type: none"> • 45.42.16.51, port 447 • 45.42.22.51, port 447

Please join the Customer Support Bridge from 8:30 AM to 5:00 PM PT on October 20 and October 21, 2020; by phone: call 1- 866-528-2256, access code: 1465216.