California ISO

EDAM Onboarding Overview

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REVISION HISTORY

VERSION NO. (Must match header)	DATE	REVISED BY	DESCRIPTION
0.1	06/16/2023	Joanne Alai	Initial draft
1.0	06/26/2023	Joanne Alai	Incorporated input from Track Leads.
1.1	07/20/2023	Joanne Alai	Updated after input received from PacifiCorp
1.2	8/23/2023	Joanne Alai	Updated so that it could be used generically for all current and future EDAM onboarding entities.
2.0	01/09/2024	Jen Mancke	Updated to reflect additional changes based on PacifiCorp Onboarding feedback.
2.1	03/11/2024	Joanne Alai	Updated Timeline to include additional parallel operations weeks, and go-live prep weeks. Final review before publication.
2.2	07/31/2024	Joanne Alai	Updated to standardize the project team
2.3	1/2/2025	Amy Marluke	Final review & edits for clarity and to remove entity specific information.

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1.0   Purpose

The purpose of this document is to provide entities with a high-level overview of the activities expected as part of Extended Day Ahead Market (EDAM) Onboarding process. A summary is provided for each track below; the details for all track items will be provided and discussed in the track meetings. This document also identifies key deliverables and general timing to ensure a successful EDAM implementation. The EDAM Onboarding timeline begins once the EDAM Implementation Agreement has been submitted to FERC and is based upon an 18-month timeline. However, entities may engage earlier if agreed to by both parties.

Timeframes indicated in this document for deliverables are considered targets that may be adjusted if agreed to by both parties, depending on the onboarding entity's specific activities and needs. Deliverable target dates are noted as Target go-live date minus a number of months (T-N) with T-0 being the activation date month, and T-18 being the first month after execution of the Implementation Agreement. The timelines detailed in this document are all based upon an 18-month Onboarding duration and may be adjusted as agreed upon between the entity and the ISO. Precise dates will be defined by the Project Management Team at initiation of Onboarding. These dates will be communicated and tracked through biweekly status reporting.
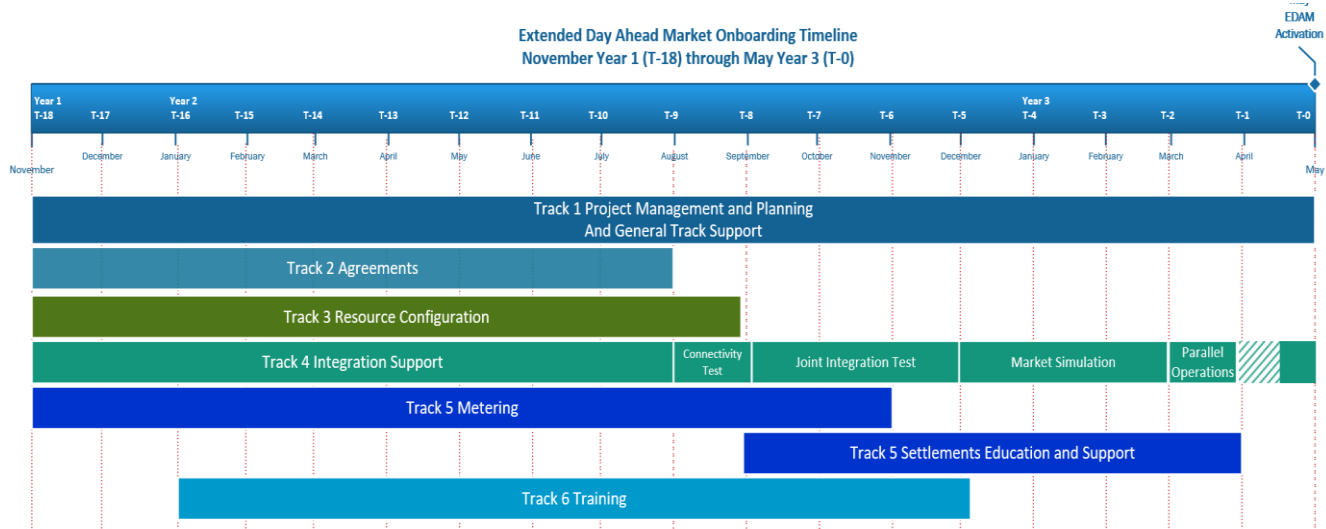

Figure 1 EDAM Onboarding Timeline (T-18 through T-0)

All onboarding EDAM entities are expected to have an understanding of WEIM operations. The Western Energy Imbalance public website provides documentation and training that will be beneficial as a refresher for onboarding EDAM entities: https://www.westerneim.com/Pages/JoinEIM.aspx

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2.0   EDAM Onboarding Tracks

ISO EDAM onboarding requires coordination across multiple ISO and EDAM entity subject matter experts. There are six separate tracks. Each have their own scope, deliverables, milestones, meeting structures, and workshops to ensure the EDAM implementation and activation are successful.

- Track 1 Planning and Project Management
- Track 2 Policy, Legal, Contracts, and Access
- Track 3 Resource Configuration
- Track 4 Systems Integration and testing
- Track 5 Metering and Settlements
- Track 6 Training and Readiness

2.1   Track 1 Planning and Project Management

Project management activities will commence once the EDAM Implementation Agreement is executed. Meetings may continue for up to a month after EDAM activation to allow for an easy transition into a production support model. Project planning is an integral part of project management and is a joint effort between ISO and the EDAM entity project management teams. The project management teams will meet regularly to review the progress of all onboarding tracks, discuss project risks and issues, and determine mitigation plans.

The table below summarizes project roles, responsibilities, and main deliverables for this track with target deadlines. Templates for all shared documentation will be available on an EDAM entity specific Kiteworks site to be set up by the ISO EDAM Project Manager. https://kiteworks.caiso.com/ or a mutually agreed upon secure file sharing site.

2.1.1   ISO EDAM Onboarding Team

The ISO project management team will include the following members. Team members may vary.

Role	Description
Executive Sponsor	EDAM Executive Sponsor ensures EDAM project and onboarding goals align with the overall company strategic objectives.
Enterprise Program Management Office (EPMO) oversight	Ensures EDAM Onboarding aligns with the Market Portfolio objectives.
Project Management Office (PMO) oversight	Oversight of EDAM Project implementation and new EDAM entity Onboarding.
Project Oversight	Ensures necessary ISO resources are available to successfully complete the onboarding activities.
Program Manager	Responsible for the EDAM onboarding process and reporting progress toward success metrics to the program sponsor.

Role	Description
Onboarding Project Manager and Track 1 Lead	Day-to-day project management activities for EDAM onboarding and oversight of all onboarding tracks.
Track 2 Policy Lead	Review issues that come up that may impact policy decisions that are either in process or already made.
Track 2 Legal Lead	Provide legal consultation with regards to contracts between ISO and the EDAM onboarding entity.
Track 2 Contracts and Access Lead	Track progress against the EDAM entity Agreement plan, ensuring the customer is clear on what is needed, and by when. Develop a roles matrix, and educate the EDAM entity on roles needed for EDAM. Setup EDAM entity User Access Administrators (UAAs) and support with access issues.
Track 3 Resource Configuration Lead	Overall responsibility for leading track 3 meetings and ensuring all track deliverables are complete. Educate onboarding entity on resource configuration requirements to ensure they are set up per EDAM entity expectations. Resolve track related questions and concerns.
Track 3 Network Model Lead	Supports the EDAM entity in making decisions regarding possible network model changes, if it is determined they are needed.
Track 3 Forecasting Lead	Overall responsibility for supporting entity in questions and decision making related to forecasting.
Track 4 System Integration and Testing Lead	Overall responsibility for leading track 4 meetings and ensuring all track deliverables are complete. Provide education and guidance around all system integrations and testing processes. Resolve track related questions and concerns.
Track 5 Settlements Lead	Overall responsibility for leading the settlement portion of the track 5 meetings and ensuring all settlement related deliverables are complete. Provide education and guidance around the ISO settlement processes and applications. Resolve settlement related questions and concerns.

Role	Description
Track 5 Metering Lead	Overall responsibility for leading the metering portion of the track 5 meetings and ensuring all track deliverables are complete.
	Provide education and guidance around the ISO metering processes and applications.
	Resolve metering related questions and concerns.
Track 6 Training and Readiness Leads	Responsible for providing the EDAM entity with a training plan and ensuring that training plan is met so that all EDAM entity staff are ready to support the EDAM market during testing, Parallel Operations, and Production.
	This will include both ISO led training and train the trainer sessions.
Track 6 Training Lead	Supports the Track 6 Training and readiness lead.
Stakeholder Engagement	Responsible for ensuring the new EDAM entity is aware of and participates in future stakeholder engagement activities.
Customer Experience	Responsible for ensuring all EDAM entity issues are addressed during Parallel Operations, and they are familiar with customer support processes once they are active in the EDAM.

A comprehensive list of the ISO project team along for each specific onboarding will be developed for both teams in the Team Roster document stored on the onboarding entity's shared Kiteworks site.

2.1.2   Onboarding Status Reporting and Control Meetings

The project status and control meetings are details in the communication plan deliverable. These will be managed in Track 1 throughout the implementation where the project management team will be responsible for developing the agenda and presentations, and scheduling and controlling the meetings. All presentations and deliverables identified in the various tracks will be stored in the secure file sharing site, available to both the EDAM entity and ISO teams. Status reports and meeting minutes are stored in the ISO's EDAM Onboarding Entity OneNote and distributed to all via email.

Reporting	Description	Owner	Frequency
Project Leadership Review Meetings	Meetings with EDAM Project Delivery Leadership team via phone conference and WebEx when needed.	Joint	Monthly, Quarterly, or as needed

Reporting	Description	Owner	Frequency
Track Project Meetings – multiple tracks	Working and status meetings to evaluate and facilitate project implementation progress for Tracks 1 through 6.	Joint	Weekly or bi-weekly
Status Reports	Written reports provided to both ISO and EDAM entity project teams and management with an overall project update and a detailed progress update on each track.	Joint	Bi-weekly

2.1.3   Track 1 Deliverables

The following deliverables are required and monitored in Track 1.

#	Deliverables	Description	Owner	Target Date
1.1	Project Kickoff	The project kickoff should take place shortly after the Implementation Agreement is signed and includes all identified ISO & Entity project team members. The intent is to: - review the overall onboarding process, including tracks and deliverables, - establish expectations, - define communication forums, and - outline operational guidelines, including points of contact, questions log, file sharing via Kiteworks, and other tools	Joint	T-18
1.1	Project Implementation Plan	Document created by the ISO team that provides general guidelines regarding EDAM implementation including agreed upon project timeline, milestones, processes, payment structure, and communications plans. This document is specifically identified as a deliverable in the Implementation Agreement and requires ISO and EDAM entity project management signatures and a formal change control process if deliverables and/or dates are changed.	ISO	T-16

#	Deliverables	Description	Owner	Target Date
1.2	Joint Onboarding Schedule	The joint project schedule is in Microsoft Project format, listing the EDAM project interrelated milestones, activities, and deliverables with intended start and finish dates. This schedule will be reviewed and updated regularly by both project managers.	Joint	T-16
1.3	Project Implementation Timeline	Visio diagram with a graphical representation of all tracks and key planned activities of the EDAM implementation leading to Go-Live	ISO	T-16
1.4	Project Issues/Risks Tracker	Excel spreadsheet that will be used by both project managers to track project-wide issues and risks.	Joint	T-16
1.5	Project Team Roster	Excel spreadsheet with names, titles, and contact details of the project implementation teams from both ISO and the EDAM entity.	Joint	T-16
1.6	EDAM Entity Assessment	Document completed by the EDAM entity to provide ISO with upfront information that will assist in the planning and support throughout the EDAM implementation.	EDAM entity	T-16
1.7	Readiness Criteria Worksheet	Worksheet that defines the specific criteria that must be met before the ISO and the EDAM entity agree they are ready for EDAM activation. This includes measurable elements that are documented in the tariff and specific thresholds documented in the BPM. Tracking completion of the criteria will begin during Joint Integration Testing and will continue until 30 days prior to activation, when the readiness criteria must be completed and filed with FERC, per the tariff.	Joint	T-8
1.8	Readiness Criteria Evidence	The ISO and EDAM entity will provide documented evidence that the specific readiness criteria has been met. Evidence will start being collected during Joint Integration Testing.	Joint	Starting T-8

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#	Deliverables	Description	Owner	Target Date
1.9	Readiness Criteria Dashboard	A documented status of each readiness criteria to be distributed to stakeholders. This status dashboard will be published on www.caiso.com once during Market Simulation and again once the criteria is complete during Parallel Operations.	Joint	Starting T-5
1.10	Parallel Operations EDAM Activation Plan	Document that provides an overview of activities required by both the EDAM entity and the ISO as they transition from Market Simulation in the Map Stage environment to Parallel Operations in the Stage environment. This should be provided to the EDAM entity for review approximately 2 Months before Parallel Operations begins.	Joint	T-4
1.11	EDAM Activation Plan	Document that provides an overview of activities required by both the EDAM entity and the ISO as they transition from Parallel Operations in the Stage environment to the Production environment. This should be provided to the EDAM entity for review approximately 2 Months before the production activation date.	Joint	T-2

2.2   Track 2 Policy, Legal, Contracts, and Access

The primary objective of Track 2 is to ensure all required agreements are executed per the schedule laid out in the Agreement Plan and to support the onboarding entity in provisioning access to all necessary individuals and applications for EDAM testing in the multiple environments, MAP Stage, Stage, and Production. In this track, the ISO policy team will also provide any necessary support to the EDAM entity with their policy interpretation and OATT filings.

The Implementation Agreement spells out the EDAM entity Implementation fee structure. Specifically, the cost will be based on the ISO cost of service. The actual cost to onboard an EDAM entity will vary depending on the size, complexity and length of Onboarding. Typical Onboarding range is expected to be between $1,200,000 – 2,000,000. A $300,000 deposit will be collected up front, upon signing of the Implementation Agreement. If the deposit exceeds the actual cost incurred, the ISO will refund the excess amount including any interest accrued on the remaining deposit. If the actual cost exceeds the deposit, additional deposits in $300,000 increments will be required.

Each EDAM transmission service provider customer with firm point-to-point or network transmission service rights will need to be represented by a scheduling coordinator. Many of these customers already do business with the ISO and this is not an issue (e.g., Powerex or the merchant function of

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most EDAM entities), but there will definitely be others that do not. This will increase, potentially significantly, the need to process scheduling coordinator applications, training, and certification as part of the onboarding process.

The following deliverables are required and monitored in Track 2. NOTE: These are high-level target timelines summarized to provide an overview of the process. For actual dates for completion of agreements, reference the EDAM Agreement Checklist.

#	Deliverables	Description	Owner	Target Date
2.1	EDAM Implementation Agreement	Pro Forma agreement defined in the ISO tariff that defines the terms of the EDAM implementation.	Joint	T-18
2.2	EDAM Agreement Checklist	Checklist of required agreements and actions that must be completed before the agreement can be executed, along with timeline and dependencies.	ISO	T-17
2.3	Scheduling Coordinator (SC) Agreement	Optional, as determined by the Onboarding Entity. Can be used to set up an SC for an EDAM LSE. Setting up an SC is expected to take about 120 days. Information on the process and timing for creating a scheduling coordinator agreement can be found in the ISO Scheduling Coordinator Business Practice Manual (BPM): Link to the ISO Scheduling Coordinator Business Practice Manual	Joint	T-11
2.4	Role Matrix	A detailed view of all EDAM entity roles and the access they will need to perform the various tasks supporting the market.	ISO	T-11
2.5	Role Matrix Training	Education and support for the new EDAM entity to ensure their User Access Administrators (UAAs) can properly provision access to all EDAM entity users.	ISO	T-10
2.6	User Access	The UAAs will provision access to the MAP Stage environment before the start of Joint Integrated testing, Stage before the start of Parallel Operations, and Production before activation.	Joint	T-9

#	Deliverables	Description	Owner	Target Date
2.7	EDAM Load Serving Entity (LSE) Agreement	A minimum of one Load Serving Entity (LSE) Agreement per BAA is required. The EDAM LSE must be represented by an existing Scheduling Coordinator (SC), likely the same legal entity as the WEIM entity, but there may be others that can be used. The SC used for the LSE may not be an EDAM entity SC unless the EDAM entity SC is subject to the FERC standards of conduct.	Joint	T-11
2.8	EDAM Transmission Service Provider (TSP) Agreement	A minimum of one Transmission Service Provider Agreement per BAA is required. This will likely be the same legal entity as the WEIM entity, but there may be others. The EDAM entity is not required to have a Scheduling Coordinator (SC). It will be represented by the EDAM entity SC, as it ensures a single point of contact for EDAM operations, etcetera.	Joint	T-11
2.9	EDAM Addendum to EIM Entity Agreement	EDAM entity is a BA that is already participating as a WEIM Entity. This will be the same legal entity as the entity that executes the EDAM Implementation Agreement. Addendum must be executed **no later than ninety (90) days before the EDAM entity Implementation Date**. The EDAM entity is required to have a Scheduling Coordinator (SC), which will be documented via the Addendum to WEIM Entity Scheduling Coordinator (SC) Agreement. The EDAM entity may terminate the addendum to WEIM Entity Agreement and revert to participating only in the WEIM as a WEIM Entity.	Joint	T-11

#	Deliverables	Description	Owner	Target Date
2.10	EDAM Addendum to EIM Participating Resource Scheduling Coordinator Agreement	A Scheduling Coordinator (SC) may represent more than one EDAM resource or a Market Participant other than an EDAM resource if it enters into a Scheduling Coordinator Agreement with regard to the Market Participant. An EDAM resource SC may not also be an EDAM entity SC unless it meets the qualifications in Section 33 of the ISO tariff.	Joint	T-11
2.11	EDAM Addendum to EIM Participating Resource Agreement	Executed by the owner or operator of each resource in the EDAM entity BAA (EDAM Resource). The physical resource facility (EDAM Resource Facility) must be listed in the Agreement. Required to have a SC, which will be documented via the Addendum to WEIM Participating Resource Scheduling Coordinator Agreement. May terminate Addendum to WEIM Participating Resource Agreement and revert to participating only in the WEIM as a WEIM Participating Resource.	Joint	T-11
2.12	EDAM Addendum to EIM Entity Scheduling Coordinator Agreement	An SC Agreement representing EDAM entity. SC may represent a Market Participant other than the WEIM Entity, if it enters into a Scheduling Coordinator Agreement with regard to the Market Participant. EDAM entity SC may not also be an EDAM Resource SC unless it meets the qualifications in Section 33 of tariff.	Joint	T-11
2.13	Optional Agreement: Convergence Bidding Entity Agreement	This is an optional agreement and not required to complete EDAM onboarding. http://www.caiso.com/Documents/RegistrationForm_ConvergenceBiddingEntityAgreement.doc	Joint	N/A

#	Deliverables	Description	Owner	Target Date
2.14	Optional Agreement: Meter Service Agreement Scheduling Coordinator	Confirm MSASC is on file. If on file, this is not needed. http://www.caiso.com/Documents/MeterServiceAgreement_SchedulingCoordinatorsInformationRequestSheet.doc	Joint	N/A

2.3   Track 3 Resource Configuration

The primary objective in this track is to ensure that all resources are accurately defined and configured in the ISO Master File and network model. Proper resource configuration is required before beginning Joint Integration testing. Delays may impact entry into the testing environments and the EDAM activation date. Track 3 also includes configuration required for load and variable energy resources (VER) forecasting.

The Master File is the data repository used for many applications at the ISO including data that describes supply and demand facilities connected to the ISO grid. This database must be updated to reflect changes necessary for the FNM to accurately reflect the grid and the facilities connected to the grid. As an existing WEIM entity, the onboarding EDAM entity will submit changes to the Master File with the RDTs as they do today. However, additional data fields will be added to one or both of the templates.

Before the Start of Joint Integration Testing: Master File and network model resource configuration does not need to be 100% complete and production accurate. It must to be good enough for the EDAM entity to complete all their integration tests. The level of completeness is determined by the EDAM entity. Changes will very likely be identified during Integration Testing and any required changes must be coordinated with the ISO Track 3 Leads.

The onboarding entity creates their own test cases to be executed during Joint Integration testing to ensure they are ready for Structured Scenario execution in Market Simulation. During Joint Integration testing, the model needs to allow them to execute and pass all the EDAM entity defined test cases. For example – if the EDAM entity has 10 resource with the same structure in the model, and you have test cases that need to test with this type of resource, you do not necessarily need to have all 10 resources modeled as they need to be in production at this stage to complete the defined test case.

Before the Start of Market Simulation: Master File and network model resource configuration does not need to be 100% complete and production accurate. However, due to the nature of the Market Simulation structured scenarios, it should be as close to production ready as possible. It must to be sufficient to enable the EDAM entity to complete all of their Structured Scenarios through settlement validation. Changes may be identified during Market Simulation and must be coordinated with the ISO Track 3 Leads.

Before the Start of Parallel Operations: Master File and network model resource configuration must be 100% complete and production accurate, as this will be the same configuration used in production. Resource configuration changes that come up during the Parallel Operations period may or may not

be completed before production activation. The decision will depend on the overall impact to the testing and production activation plan.

The EDAM entity merchant team will be the primary group defining the changes to the Master File configuration. Due to the EDAM Entities WEIM participation, no network model changes are required. However, if the onboarding EDAM entity decides to make network model changes, this will be coordinated with the onboarding EDAM entity grid operations network model team. Since the onboarding EDAM entity is a WEIM participant, they will follow the same process for network model changes as they do today in production. Information about the Network Model update process and schedule can be found on the ISO.com public site resource section. A link to the Business Practice Manual can be found on this site, as well. Resources - Western Energy Imbalance Market

The following deliverables are required and monitored in Track 3.

#	Deliverables	Description	Owner	Target Date
3.1	Generation Resource Data Template (GRDT) updates	The Entity completes the GRDT to feed updates to the ISO Master File for all generation resources. Since many resources not participating in WEIM today will be participating in EDAM, the EDAM entity may need to add or modify information for those resources. Changes will be initiated as the entity does today for production changes in WEIM. Changes need to be submitted prior to Joint Integration Testing. The current WEIM GRDT template can be found on the http://www.caiso.com public site resource section. Resources - Western Energy Imbalance Market (westerneim.com)	Entity	T-13
3.2	EDAM Transfer Definition Template Updates	This is a new template being added to support EDAM for configuring contract rights and Day Ahead transfers. The template is completed by the EDAM entity and will feed the Master File. Changes need to be submitted prior to Joint Integration Testing.	Entity	T-13

#	Deliverables	Description	Owner	Target Date
3.3	Historic load data	To support the WEIM implementation, historical load information was provided to the ISO. The historical information on bad days is used to support ISO load forecasting needed to make market decisions. A day is considered a "Bad Day" when the load behavior acts extremely out of the ordinary and may need to be marked as bad in the historical training. Load behavior affected by sudden changes in weather should not be considered as bad. Format for deliverable is a list of days within the historical data submission which are to be noted once inside the ISO system. For onboarding EDAM entities, the ISO recommends evaluating the provided load data for accuracy and possible changes based on the entity's EDAM approach.	Entity	T-7
3.4	Conforming and non-conforming load for load forecasts	All non-conforming load should be removed from the historical load dataset and submitted separately to the ISO. See the ISO Non-Conforming Load FAQ for guidance determining NCLs. This information was provided as part of the WEIM implementation. For onboarding EDAM entities, the ISO recommends evaluating their non-conforming load data list for accuracy and possible changes based on the entity's EDAM approach.	Entity	T-7

#	Deliverables	Description	Owner	Target Date
3.5	JOU/Pseudo Tie updates	The ISO needs to be aware of all Jointly Owned Units (JOUs) and Pseudo Ties associated with the onboarding EDAM entity. A pseudo tie is a virtual tie line between two BAs. This information was provided when the EDAM entity join the WEIM and any changes need to be taken into considering when updating the network model. For onboarding EDAM entities, the ISO recommends evaluating their JOUs and pseudo-ties already submitted for accuracy and possible changes based on the entity's EDAM approach.	Entity	T-7
3.6	Aggregate resource to child resource mapping updates	The Master File identified resource aggregation defined when the entity joined the WEIM. Onboarding EDAM entities aggregation plans may change. If changes are needed, a new aggregate resource to child resource mapping will need to be provided. The ISO will update the Master File to reflect the changes.	Entity	T-7

#	Deliverables	Description	Owner	Target Date
3.7	Full Network Model changes identified (if necessary)	Should not be needed unless the new EDAM entity chooses to redefine resources for EDAM. Before the start of Parallel Operations (March 2025), the network model must be the final production model that will be active when the new EDAM entity activates (May 2025). All network model submissions required for the final production model must be submitted per the network model update timeline (approximately 3 months before production deployment). This model must include all facilities that will be in-service at the time of EDAM activation through the next scheduled FNM update in Production. The EDAM entity is expected to continue to provide ongoing Network Model updates as they do today per the Network Model schedule on the ISO website: http://www.caiso.com > Market Operations > Network and Resource Modeling. Network and Resource Modeling	Entity	T-11

2.4 Track 4 System Integration and Testing

The primary objective of this track is to ensure all integration points between the ISO and the EDAM entity are clearly understood by the EDAM entity and successfully validated.

The ISO EDAM onboarding process includes distinct testing phases to ensure that new integrations are functioning as designed and the market runs successfully for all participants. The testing phases are included in Track 4, except for Parallel Operations, which is a pre-production final testing phase and considered part of the deployment process, not a track.

Map Stage – This is an ISO test environment used by all ISO participants for validating software changes with all systems and usually full data. Results are not usually as clean as in the Stage environment. This environment is for testing functionality, not market performance.

Stage – Stage is a production like environment with data fed from production. Stage is mostly open only to the onboarding entities to avoid impacting the data results. However, testing with other WEIM or EDAM entities may be scheduled, if all parties agree. Operations and merchant staff should both be executing at this point.

Phase	Start Time	Duration	Primary Objective	Where?	Who?
Connectivity Testing	Aug Year 2	2-4 weeks	EDAM entity systems and users are able to access the ISO systems and get through the firewall.	Map Stage	Technical team
Joint Integration Testing	Sep-Nov Year 2	3 months	Integration Test: EDAM entity and ISO verify sending and receiving necessary data to and from the ISO.	Map Stage	Technical team
			Functional Test: After initial integration testing, EDAM entity verifies all systems and payloads function as designed. SME training occurs during this time.	Map Stage	Technical team and business SMEs
Market Simulation	Dec Year 2 –Feb Year 3	3 months	ISO and EDAM entity jointly verify the EDAM & other markets function through to settlements by executing pre-defined structured scenarios.	Map Stage	EDAM entity, ISO, Existing ISO participants and stakeholders

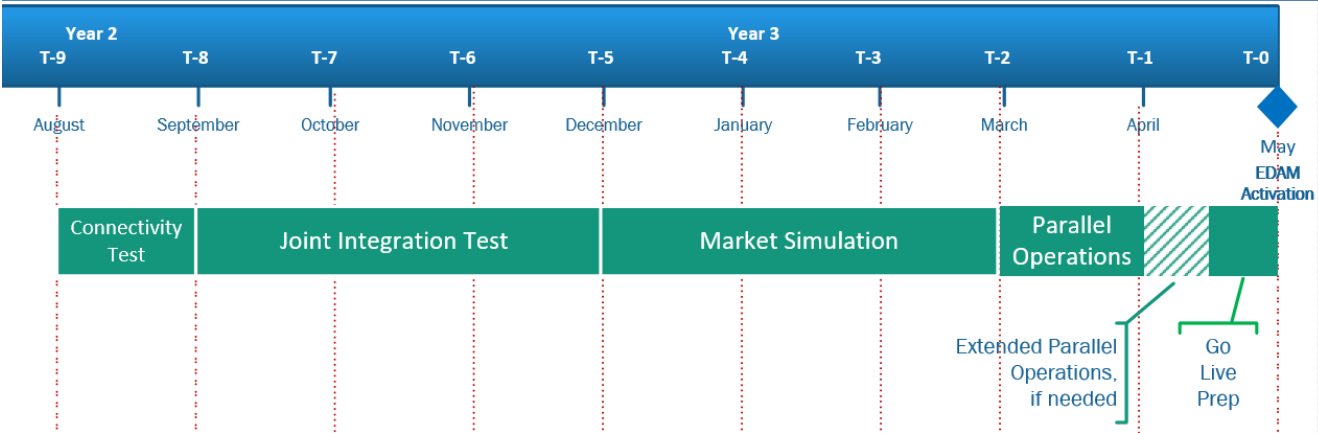| Parallel Operations	Mar Year 3	1 month	Final validation of the EDAM market with production data. Finalize readiness criteria no later than 30 days before activation.	Stage	New EDAM entities and ISO only

Figure 2 Track 4 Testing Timeline

The following deliverables are required and monitored in Track 4.

#	Deliverables	Description	Owner	Target Date
4.1	EDAM Integration Diagram	A pictorial diagram depicting all interfaces between the EDAM entity and the ISO applications.	ISO	T-17
4.2	From/To Integration worksheet (EDAM entity specific)	A detailed spreadsheet listing all interfaces between the onboarding EDAM entity and the ISO along with precise information about the EDAM entity and ISO applications, and a description of the data.	Joint	T-16

#	Deliverables	Description	Owner	Target Date
4.3	EDAM Integration Overview	Early in the onboarding process, the ISO team will provide an overview of all integration points to support the EDAM entity's technical design. This will include details of each integration point and a preview of the testing phases. EDAM entity vendors are key participants. This overview can be delivered iteratively with an initial overview early in the EDAM entities analysis phase with refreshers provide during design, and before each testing phase.	Joint	T-16
4.4	Testing Phase Review	Prior to the start of Integration testing, Market Simulation, and Parallel Operations, the ISO will review the upcoming test phase during the Track 4 meetings, including the objectives, processes, and necessary artifacts. This ensures the EDAM entity is prepared for testing and that all questions and concerns are resolved. These topics can be covered in the regular Track 4 meetings or in a separate meeting, if more time is needed.	Joint	T-9
4.5	Merchant Overview	Informational presentations designed for the EDAM entity merchant end users to discuss topics such as bidding concepts and strategies, Green House Gas (GHG) bidding in SIBR, CMRI OASIS, and Load Forecasts. Since the merchant is a primary attendee of regularly scheduled track 4 meetings, these topics will be covered during regular track 4 meetings.	Joint	T-14
4.6	Market Simulation structured scenario plan	Pre-defined bid-to-bill scenarios are executed with inputs and market conditions controlled by ISO, unless otherwise specified. New EDAM entities will participate in the structured execution and meetings will be scheduled to coordinate execution.	ISO	T-14

2.4.1 Testing Execution

EDAM entity is responsible for developing and executing the testing strategy and test cases during onboarding. The ISO team will work with the EDAM entity to coordinate and schedule the testing cycles and to provide support as needed. The following testing phases will be performed as part of the Onboarding process.

2.4.2 Connectivity Testing

Once a scheduling coordinator ID (SCID) has been assigned to the new the EDAM entity and the necessary scheduling coordinator agreements have been executed, the ISO can issue security certificates and the EDAM entity can begin provisioning access to their testing users. Once users are provisioned, they can conduct initial connectivity testing by pinging each ISO system and verifying that an appropriate response is received. Both system and user access can be verified. This connectivity testing can begin before the Map Stage environment is available, and before the environment is ready for integration testing with the integrated network model and master file. While the user may not be able to access the application at this point due to environment readiness, they will receive a response that indicates that their access is in place and they are through the fire wall.

Processes:

- The User Access Administrators (UAA) are identified in advance. The EDAM entity UAAs will request and approve user access for both system and individual users. At least one primary and one backup UAA are required for both EDAM entity and Merchant sides.
- UAAs need to submit access requests via the AIM system and ensure all users and systems have access before connectivity testing begins.
- Scheduling Coordinator EDAM entity Agreements must be in place, and SCIDs must be assigned.
- The EDAM entity will attempt to access each application and provide a report to the ISO team when their attempts are successful.

EDAM Connectivity Table (MAP Stage, Stage, Prod)

System	UI	API	Notes
ALFS			
ETCC-PLC			
WEBOMS			
CMRI			
Master File			
OASIS		NA	
SFTP Server*			

SIBR			
MRI-S – STLMT			
MRI-S – METER			
MPP		NA	

*access cannot be requested until first settlement statement is published

2.4.3   Joint Integration Testing

Joint Integration Testing is the first opportunity to verify the integration points between the ISO and the new EDAM entity and their vendor, where applicable. This testing phase is mostly a technical testing period with validation focusing on the technical aspects of the integration and ensuring that payloads can be sent and received between the ISO and the EIM entity, and will include basic functional validation by the EDAM entity. Joint Integration testing is primarily an EDAM entity responsibility and begins approximately 8 months before go-live, i.e. September in the year before a May EDAM activation. All required ISO applications and EDAM entity resource modeling will be available in the ISO MAP Stage environment. Three months are allocated for this phase.

Entrance Criteria:

- The ISO has configured the EDAM entity's resource changes into the ISO Master File, and the market model in the MAP Stage.
- The EDAM entity has successfully provisioned the appropriate access to the necessary EDAM applications and individuals in the MAP Stage environment.
- SC Agreements must be executed for all SCIDs being used for testing purposes in the MAP Stage environment.

Exit Criteria:

- The EDAM entity has successfully tested each integration point with the ISO and believes all is working as designed. The EDAM entity and the ISO both confirm that the EDAM entity is ready to successfully execute the planned Structured Scenarios in the EDAM Market.

2.4.4   Market Simulation

The Market Simulation phase of the testing process provides an environment for ALL Market participants, not just the new EDAM entities, to test their systems and procedures before new features are implemented. Market Simulation is conducted in the ISO Map Stage environment. The ISO and the EDAM entity execute specific pre-defined scenarios to ensure that current and new system and market functionality continue to work as designed.

Entrance Criteria:

- Market Simulation begins <u>five months</u> prior to the EDAM entity production activation, allowing time for three months of Market Simulation, one month of Parallel Operations, and one month to prepare for activation.
- All ISO and EDAM entity integrations are functioning and connectivity has been established.

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Exit Criteria:

- All documented structured scenarios executed successfully and validated through settlements. Explanation/mitigation must be provided, approved by ISO, and documented for any variances.

2.4.5 Parallel Operations

Beginning two months before EDAM activation, the ISO will activate a Parallel Operation environment to practice production grade systems integration, as well as market processes and operating procedures in preparation for new EDAM entity activation. The transition to Parallel Operations acts as a dry run of the transition to production. Most of the same steps required to move to Stage will be required to move to Production during activation.

Entrance Criteria:

- All Market Simulation structured scenarios are completed successfully and pass settlement validation.

- The ISO ensures the Stage environment has the most up to date EDAM entity resource model configuration and appropriate production data is streaming to the environment.

- The EDAM entity has provisioned all required testing users for the Stage environment and ensures all applications are pointing to the new environment.

- The Parallel Operation Activation Plan has been provided to the onboarding EDAM entity, reviewed, and all questions resolved.

Exit Criteria:

- The new EDAM entity is participating successfully in the Parallel Operations' Stage environment EDAM market.

- All readiness criteria are complete no later than 30 days before the planned activation date.

2.4.6 Defect Tracking

Once formal testing has commenced, all issues, defects, and questions should be logged in the ISO Customer Inquiry, Dispute, and Information (CIDI) application, which can be launched from the Market Participant Portal (MPP) home page at https://portal.caiso.com. The onboarding PM will regularly monitor tickets to ensure they are assigned to the appropriate resources, and all open CIDI tickets will be reviewed in the Track 4 meetings. As the onboarding process moves to Parallel Operations, the Customer Readiness team will monitor CIDI for the project in preparation for transition to Production.

2.5 Track 5 Metering and Settlements

Metering: All resources entering the EDAM market must be able to submit the meter data in 5 or 15 minute intervals. Any resource(s) that do not meet this requirement will need to self-schedule in the market.

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Settlements: A new EDAM entity will be required to add a number of new and changed charge codes to ensure settlement accuracy in the new market. This track will focus mostly on training and supporting the new EDAM entity to ensure settlements are calculated and interpreted correctly.

The following deliverables are required and monitored in Track 5.

#	Deliverables	Description	Owner	Target Date
5.1	EDAM Settlement Charge Codes	Provide the EDAM entity with all new charge codes and changes to existing charge codes. These will be explained in detail in the EDAM Settlements Overviews.	ISO	T-8
5.2	Transmission Recovery Rates	Provide the EDAM entity with the Transmission Recovery (TR) rates.	ISO	T-8
5.3	EDAM Settlement Overview series	Series of educational presentations and material will be provided during regular track 5 meetings. Ideally, these are provided just prior to the start of Market Simulation so the information for the EDAM entity settlements team is fresh.	ISO	T-8
5.4	Physical Metering Assessment document	The EDAM entity will be required to provide a list of all meters that require changes due to their participation in EDAM. This provides the ISO team with a better understanding of the expected workload to be planned.	EDAM entity	T-16
5.5	Settlement Quality Meter Data (SQMD) Plans	The EDAM entity must provide Settlement Quality Meter Data Plans for all meters that will be changing their meter data interval for EDAM 3 months prior to Market Sim. If no changes are needed, an SQMD plan will not need to be submitted.	EDAM entity	T-8
5.6	SQMD submission process review	The ISO metering team will provide a review of the SQMD Plan and the submission and approval process.	ISO	T-7

2.6   Track 6 Training and Readiness

The ISO will provide EDAM training to ensure the new EDAM entity is ready when the market is activated.

The following deliverables are required and monitored in Track 6.

#	Deliverables	Description	Owner	Target Date
6.1	EDAM Training Plan	ISO trainers will work with the EDAM entity to develop a training plan so the entity is aware of important dates, deliverables, needed resources and important timelines.	Joint	T-16
6.2	Computer Based Training	Self-paced training available to EDAM entity staff. Completion tracking and reporting functionality for EDAM entity available.	ISO	Starting T-16
6.3	Train the Trainer	EDAM entity assigns "designated trainer(s)" who will go through an ISO led instructor-led training. Designated trainers will be responsible for training entity staff.	ISO	T-8
6.4	EDAM Entity Internal Training	EDAM entity designated trainer(s) conduct needed training for all impacted entity staff	EDAM entity	T-8 through T-2

2.7 Track meetings and Kick-off Scheduling

Each EDAM onboarding track will have its own meeting start and frequency. While a meeting frequency is indicated, it may be adjusted according to need. Track kickoff start times will vary and depends on the complexity identified in the EDAM entity Assessment.

Track	Track Description	Frequency
Track 1	Planning and Project Management	Weekly
Track 2	Policy, Legal, Contracts, and Access	Bi-weekly
Track 3	Resource Configurations	Bi-weekly
Track 4	System Integration and Testing	Weekly
Track 5	Metering and Settlements	Weekly
Track 6	Training and Readiness	Weekly

Before their official kick-off, activities for different tracks can be discussed in Track 1 meetings.

3.0 EDAM Key Milestones

Milestone	Completion Criteria	Timeframe
Milestone 1: Implementation Agreement	Implementation Agreement has been made effective in accordance with Section 1 of the Agreement.	September Year 1
Milestone 2: Resource Configuration Approved	The EDAM entity has submitted all resource modeling configurations to ISO for Market Simulation use, and the ISO modeling team has reviewed and approved the submitted changes.	January Year 2
Milestone 3: Begin Joint Integration Testing	The ISO team makes the MAP Stage environment available for the EDAM entity to begin integration and functional testing with minimum data requirements. EDAM entity must complete user provisioning.	September Year 2
Milestone 4: Begin Market Simulation	Market Simulation begins 5 months before EDAM activation. All ISO and EDAM entity integrations must be functional and connectivity established.	December Year 2
Milestone 5: Begin Parallel Operations	Parallel Operations begins 2 months before EDAM activation. ISO will have the Stage environment ready. The EDAM entity must have successfully passed defined Structured Scenarios and provisioned access to users.	March Year 3
Milestone 6: EDAM Activation	Completion of first EDAM entity financially binding EDAM operating date in production.	May Year 3

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