

## Market Simulation – Fall 2021 Release

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## Agenda

- Fall 2021 Release MAP Stage Availability
- Fall 2021 Release Market Simulation Initiatives & Timelines
- Initiatives
  - Energy storage and distributed energy resources phase 4 implementation
  - Short-long start definitions
- Next Steps



## Fall 2021 Release MAP Stage Availability

- Refer to MAP Stage portal <u>https://portalmap.caiso.com</u> for system availability information
- Current MAP Stage Scheduled Maintenance
  - None
- Upcoming MAP Stage Scheduled Maintenance
   Friday 10/29: Infrastructure Maintenance
- MAP Stage Weekly Maintenance Window
   Friday



# Fall 2021 Release Market Simulation Initiatives & Timelines

| Fall 2021 Release Initiatives   | <u>Start</u><br>Date | <u>Start Date</u><br>(Trade Date) | End Date | Structured<br>Simulation Start<br>(Trade Date) |
|---|----------------------|-----------------------------------|----------|--|
| Fall 2021 Release Market Simulation                                     | 08/30/21             | 09/07/21                          |          | 09/07/21                                       |
| Energy storage and distributed energy resources phase 4 –implementation |                      | 09/21                             | 10/22    | 09/23, 09/28, 09/30<br>10/19, 10/20            |
| Short-long start definitions  |                      | 10/26                             |          | NA   |

#### Market Simulation Plan:

http://www.caiso.com/Documents/MarketSimulationPlan-Fall2021Release.pdf



#### **Market Simulation Initiatives**

- Energy storage and distributed energy resources phase 4 implementation
  - Timeline : September 21 October 22
  - **Structured** : September 23,28,30 and October 19, 20

(Added 10/6, 10/13,10/19 and 10/20 as additional dates if required for testing)

- Business Requirements Specification -<u>http://www.caiso.com/Documents/BusinessRequirementsSpecification-EnergyStorageandDistributedEnergyResourcesPhase4.pdf</u>
- Structured Scenarios document –
   <a href="http://www.caiso.com/Documents/MarketSimulationStructuredScenarios-EnergyStorageandDistributedEnergyResourcesPhase4.pdf">http://www.caiso.com/Documents/MarketSimulationStructuredScenarios-EnergyStorageandDistributedEnergyResourcesPhase4.pdf</a>

#### • Short-long start definitions (Start Oct 26)

 Business Requirements Specification -<u>http://www.caiso.com/Documents/BusinessRequirementsSpecificationv11-Short-LongStartDefinitions.pdf</u>





• The next teleconference is scheduled on Oct 25 at 2 PM



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Reference Slides



#### **ISO Market Simulation Support**

- Hours: Monday thru Friday 0900-1800 PDT
- ISO's 24x7 Service Desk: (916) 351-2309 (Connectivity – UI or API)
- Email: <u>MarketSim@caiso.com</u>



## Fall 2021 Release Communication Plan

#### Schedule

| Monday             | Tuesday     | Thursday               |
|--------------------|-------------|------------------------|
| August 30          | September 7 | August 26              |
| September 13,20,27 |             | September 2,9,16,23,30 |

#### Connection Information

#### Web Conference Information

- Web Address: <u>https://caiso.webex.com/meet/MarketSim</u>
- Meeting Number: 962 067 710
- Audio connection instructions will be available after connecting to the web conference. When prompted, select "Call me" and enter the phone number you will use during the call. You will be called by the conference shortly.

#### - Conference Call Information

- Dial-in Number:
  - 1-844-517-1271 (Toll Free)
  - 1-682-268-6591
- Access Code: 962 067 710



#### Fall 2021 Release MAP Stage Connectivity Testing

• Timeline : Aug 30 – Sept 06



#### Fall 2021 Release - Market Simulation Overview

| Wk | Date       | ISO                       | Market Participants     |
|----|------------|---------------------------|-------------------------|
| 1  | 8/30-9/06  | Mkt Sim Readiness Testing | Connectivity            |
| 2  | 9/07-10/01 |                           | Structured Scenarios    |
| 3  | 9/08-10/01 |                           | Unstructured Simulation |

| Calendar<br>Day | Day       | CMRI<br>T+1B  | Submit Meter Data<br>by T+2B 10:00 for<br>Initial | Publish Initial Statement<br>T+58 | Submit Meter Data<br>by T+5B 18:00 for<br>Recalc | Publish Recalc Statement<br>T+8B | Publish Market Invoice |
|-----------------|-----------|---------------|---|-----------------------------------|--|----------------------------------|------------------------|
|                 |           |               | T+9B  | T+9B                              | T+70B  | T+70B                            |                        |
| 30-Aug-21       | Monday    |               |   |                                   |  |                                  |                        |
| 31-Aug-21       | Tuesday   |               |   |                                   |  |                                  |                        |
| 01-Sep-21       | Wednesday | 31-Aug        |   |                                   |  |                                  |                        |
| 02-Sep-21       | Thursday  |               | 31-Aug  |                                   |  |                                  |                        |
| 03-Sep-21       | Friday    | 2-Sep         |   |                                   |  |                                  |                        |
| 04-Sep-21       | Saturday  |               |   |                                   |  |                                  |                        |
| 05-Sep-21       | Sunday    |               |   |                                   |  |                                  |                        |
| 06-Sep-21       | Monday    | CAISO Holiday |   |                                   |  |                                  |                        |
| 07-Sep-21       | Tuesday   |               | 2-Sep   |                                   |  |                                  |                        |
| 08-Sep-21       | Wednesday | 7-Sep         |   | 31-Aug                            | 31-Aug   |                                  |                        |
| 09-Sep-21       | Thursday  |               |   | Monthly Initial 31-Aug            |  |                                  | Daily Initial 31-Aug   |
|                 |           |               | 7-Sep   |                                   |  |                                  | Monthly Initial 31-Aug |
| 10-Sep-21       | Friday    | 9-Sep         |   | 2-Sep                             | 2-Sep  |                                  |                        |

Settlements TDs Tue/Thu Maintenance Friday <u>Market Simulation Plan</u> <u>Market Simulation Settlements Calendar</u>



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#### Market Simulation Issue Management

- Submit all issues to the CIDI case management system
- CIDI tickets must have "Functional Environment" = "Market Simulation Fall 2021" to be reviewed by ISO SMEs



#### Market Simulation Registration Details

MP's will need to register their request with the ISO to participate in this simulation via the MarketSim@caiso.com mailbox.

Date of registration : August 24<sup>th</sup>, 2021.

We will do our best to accommodate for late registration



#### Fall 2021 - System Interface Changes

| Project                          | System | API Service Name & Major Version, Artifacts                             | Technical Specifications | MAP-Stage  |
|----------------------------------|--------|---|--------------------------|------------|
|                                  | oystem | RetrieveGeneratorRDT MFRDv5 AP; 20211001                                |                          | init stage |
|                                  |        | RetrieveGeneratorRDT_MFRDv5_DocAttach_AP; 20211001                      |                          |            |
|                                  |        | SubmitGeneratorRDT MFRDv5 AP; 20211001                                  |                          |            |
|                                  |        | SubmitGeneratorRDT_MFRDv5_DocAttach_AP; 20211001                        |                          |            |
|                                  | MF     |   | ✓ 5/27/21                | ✓ 8/30/21  |
|                                  |        | Added the following Resource attributes to GRDT:                        | 0, _ , ,                 | 0,00,21    |
|                                  |        | STORAGE VARIABLE COST   |                          |            |
| ESDER4                           |        | MAX DAILY RUN TIME  |                          |            |
| LODENT                           |        | STORAGE RANK LMPM   |                          |            |
|                                  | SIBR   | SubmitRawBidSet v5  | √ 8/3/21                 | ✓ 9/1/21   |
| -                                | SIBR   | RetrieveCleanBidSet v5  | √ 8/3/21                 | ✓ 9/1/21   |
| -                                | SIBR   | RetrieveCurrentBidResults v5  | √ 8/3/21                 | ✓ 9/1/21   |
| -                                | CMRI   | Update to Default Energy Bid Curves with new Default Bid Type "Storage" | ✓ v5.0.0; 6/4/21         | ✓ 9/21/21  |
| -                                |        | Added new service version for Public bids to introduce                  |                          | · · ·      |
|                                  | OASIS  | new elements.   | ✓ v7.0.0; 6/4/21         | ✓ 9/21/21  |
|                                  |        | RetrieveGeneratorRDT MFRDv5 AP; 20211001                                |                          |            |
|                                  |        | RetrieveGeneratorRDT MFRDv5 DocAttach AP; 20211001                      |                          |            |
|                                  |        | SubmitGeneratorRDT MFRDv5 AP; 20211001                                  |                          |            |
|                                  |        | SubmitGeneratorRDT_MFRDv5_DocAttach_AP; 20211001                        |                          |            |
|                                  |        | /   |                          |            |
| Hybrid Resources P2              | MF     | Added the following Resource attributes to GRDT:                        | ✓ 5/27/21                | ✓ 8/30/21  |
|                                  |        | COMPONENT_ID  |                          |            |
|                                  |        | CO LOCATED  |                          |            |
|                                  |        | FUEL TYPE (Added "HYBD" enum)   |                          |            |
|                                  |        |   |                          |            |
|                                  |        | Added Hybrid Components section in the elements table for GRDT          |                          |            |
|                                  |        | Added new service version for Intertie Constraint Shadow                |                          |            |
|                                  |        | Prices, Interval Intertie Constraint Shadow Prices,                     |                          |            |
|                                  |        | Contingency Dispatch Intertie Constraint Shadow Prices                  |                          |            |
|                                  |        | and MPM Intertie Constraint Shadow Prices reports to                    |                          |            |
|                                  |        | introduce new element.  |                          |            |
|                                  | l .    |   |                          |            |
|                                  |        | Added new service version for below services as there are               |                          |            |
|                                  |        | impacts to Group services due to Intertie Constraint                    |                          |            |
| tertie Shadow Pricing Resolution | OASIS  | Shadow Prices & MPM Intertie Constraint Shadow Prices                   | ✓ v7.0.0; 6/4/21         | ✓ 9/21/21  |
|                                  |        | services. However, there are no element changes to the                  |                          |            |
|                                  |        | artifacts.  |                          |            |
|                                  |        | - Locational Marginal Prices  |                          |            |
|                                  |        | - AS Clearing Prices  |                          |            |
|                                  |        | - Nomogram/Branch Shadow Prices   |                          |            |
|                                  |        | - MPM Intertie Constraint Competitive Paths                             |                          |            |
|                                  |        | - MPM Nomogram/Branch Shadow Prices                                     |                          |            |
|                                  |        | - MPM Nomogram/Branch Competitive Paths                                 |                          |            |

#### **Known Issues**

| S. No. | Design Gap  | Fix Date |
|--------|---|----------|
| 1      | Min EOH SOC for all hours are getting discarded if a RUC generated MSOC is present for any hour | Fixed    |



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