Agenda

- Purpose of Market Trials

- Market Trials Dates

- In-scope applications

- Market Trials phases

- Support for Market Participants during Market Trials

- What should Market Participants do to prepare for Market Trials?

Purpose of Market Trials

Objective: for Market Participants (MPs) to confirm that certain functionality of individual tools and interfaces are working as intended.

MPs will confirm that they can successfully:

- submit normal and standing bids and offers in the Energy Market Interface (EMI) and/or through MIM web services,

- receive and respond to dispatch instructions and commitment notifications in the Dispatch Service graphical user interface (GUI) and/or through Dispatch Service web services,

- receive and download reports from the IESO Reports site and/or through their own API systems, and

- submit the new Fuel Compensation Settlement Form in Online IESO.

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In Scope Applications

Market Information Management (MIM) (via web services)

IESO Reports Site (via GUI)

IESO Reports Site (via web services)

Energy Market Interface (EMI) (via GUI)

Dispatch Service (via GUI)

Market Participant User or API System

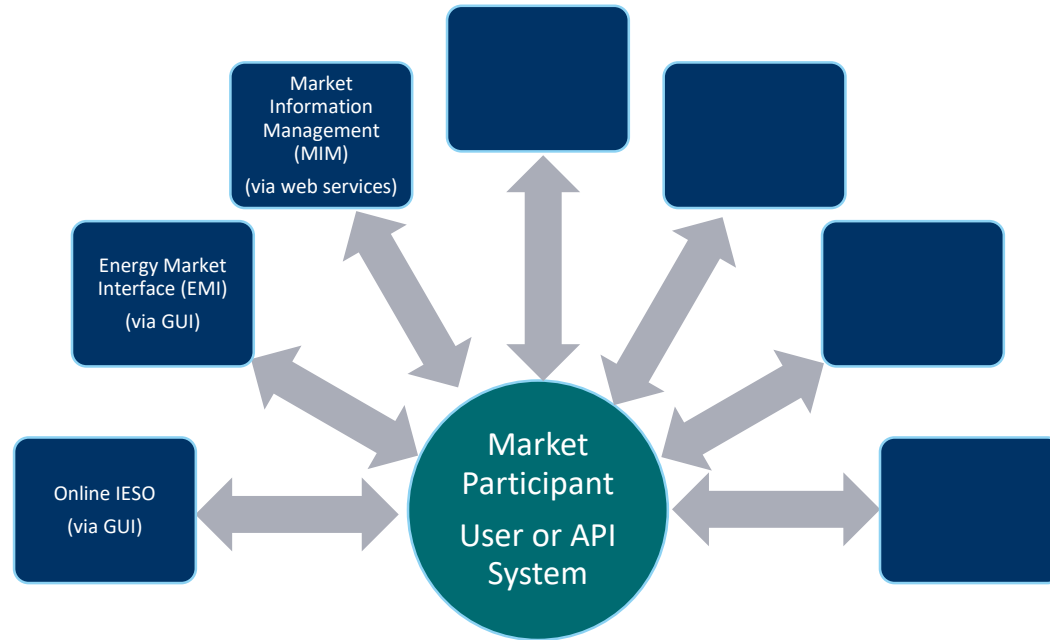Online IESO (via GUI)

Dispatch Service (via web service)

Note: The Outage Coordination and Scheduling System (OCSS) or CROW is not in scope for Market Trials but will be included as part of End-to-End Testing.

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Availability of Systems During Market Trials

Market Trials Phase   Availability of Systems

Market Trials Phase 1

Availability of Systems During Market Trials (cont.)

Market Trials Phase   Availability of Systems

Market Trials Phase 2

Availability of Systems During Market Trials (cont.)

Market Trials Phase | **Availability of Systems**

Market Trials Phase 3

Market Trials Schedule

Activity	In-Scope Applications	Start Date and End Date
Kick-off Meeting for Market Trials Phase 1		July 9, 2024
Market Trials Phase 1	EMI, MIM, and Online IESO	July 16 to August 13, 2024
Kick-off Meeting for Market Trials Phase 2		August 7, 2024
Market Trials Phase 2	EMI, MIM, and IESO Reports	August 14, 2024 to September 11, 2024
Kick-off Meeting for Market Trials Phase 3		September 4, 2024
Market Trials Phase 3	EMI, MIM, Dispatch Service, and IESO Reports	September 12, 2024 to October 23, 2024
Wrap-up Meeting for Market Trials		November 6, 2024

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Virtual Traders during Market Trials

- If Market Participants wish to participate as a Virtual Trader during Market Trials, they should send an email to market.renewal@ieso.ca by **June 28, 2024**.

- The IESO will manually update the participation type of these Market Participants to enable them to test functionality that is specific for Virtual Traders in EMI/MIM.

- Market Participants who express interest in becoming a Virtual Trader should register for this new participation type in Production after the updated registration system is launched on November 11th.

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Price Responsive Loads (PRLs) during Market Trials

- MPs who wish to participate as a PRL during Market Trials should send an email to market.renewal@ieso.ca by **June 28, 2024**.

- MPs will work with the IESO to set up appropriate access and change their resource type to enable them to access EMI/MIM. The IESO will reach out to relevant MPs to facilitate these changes at the start of Market Trials Phase 1.

- Once the IESO and MPs complete the registration process for PRLs, these MPs will be able to test as a PRL in EMI/MIM during Market Trials.

- Market Participants who express interest in becoming PRL should register for this new resource type in Production after the updated registration system is launched on November 11th. Refer to the considerations outlined in the April 25th stakeholder engagement presentation when submitting this change.

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Overview of Market Trials Phase 1

In Scope Applications: EMI, MIM, and Online IESO

Dates: July 16, 2024 until August 13, 2024

During this phase, Market Participants will have test cases to confirm that they can successfully push and pull data from the following systems:

- *EMI and MIM:* Market Participant users and API systems will verify that they can submit, update, cancel, and query dispatch data through the GUI and through web services.

- *Online IESO:* Market Participant users will verify that they can access and submit the new Fuel Cost Compensation Form in Online IESO.

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Market Trials Phase 1 – Testing EMI and MIM

Application: EMI and MIM

Input Data:

- MPs will be able to submit, update, cancel, and query for normal and standing dispatch data they submit in the EMI GUI and through MIM web services via their API systems.

Expectation for Market Participants:

- MPs will receive confirmation in the EMI GUI that valid dispatch data was submitted successfully, and invalid dispatch data was rejected by the system.

- MPs will receive confirmation in their MIM response files that valid dispatch data was submitted successfully, and invalid dispatch data was rejected by the system.

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Market Trials Phase 1 – Testing EMI and MIM (cont.)

Application: EMI and MIM

<u>Expectations for Market Participants:</u>

- MPs can only submit dispatch data for the set of active resources from Production as of May 31, 2024.

- Dispatch data will be validated using the resource's registration configuration. The registration parameters, including non-financial reference level values, in Online IESO Sandbox will show how these resources are currently configured.

- MPs will be able to execute test cases related to the submission of Daily Dispatch Data (DDD), Real-Time Energy Market (RTEM) Dispatch Data, Forebay Dispatch Data, Operating Reserve (OR) Dispatch Data and Schedules Dispatch Data.

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Market Trials Phase 1 – Testing Online IESO

Application: Online IESO (Fuel Cost Compensation Form only)

Input Data:

- MPs with Generator Offer Guarantee (GOG) eligible resources will submit the required data to perform functional testing on the new settlement form in Online IESO Sandbox.

- The *Fuel Cost Compensation Form* is for MPs who have GOG-eligible resources to recover the cost of fuel incurred to meet the day-ahead operational commitment or pre-dispatch operational commitment that it may not otherwise be able to recover from the IESO-administered market due to instructions from the IESO.

- For more information on fuel cost eligibility, refer to Market Rules Ch. 9 s.4.11.2.

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Market Trials Phase 1 – Testing Online IESO (cont.)

Application: Online IESO (Fuel Cost Compensation Form only)

Expectations for Market Participants:

- MPs can access, enter data, and submit the **new** *Fuel Cost Compensation Form* in Online IESO Sandbox.

- The IESO Settlements team will not verify the quality of the data being submitted in the *Fuel Cost Compensation Form*.

- MPs will verify that they are able to receive confirmation in Online IESO that their *Fuel Cost Compensation Form* has been submitted successfully.

- Existing settlement forms in Online IESO will be out of scope during this test phase.

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Registration Forms in Online IESO

Registration forms will be available in Online IESO Sandbox for exploratory testing only:

- Registration as a Virtual Trader

- Registration as a Price Responsive Load (PRL)*****

- Market Control Entity (MCE) form

- Form to view and/or update Reference Levels and Reference Quantities

- Form(s) to submit and/or update registration parameters for specific resource types

MPs will be able to submit the above registration forms. However, the IESO will **not** process and complete the workflows that have been initiated by MPs during this test phase. MPs will be able to update their user and system accounts, similarly to connectivity testing, to ensure access to information & systems to support other test activities.

* Except where requests were received by June 28, 2024 for PRL configuration

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Overview of Market Trials Phase 2

In Scope Applications: EMI, MIM, and IESO Reports

Dates: August 14, 2024 until September 11, 2024

During this phase, Market Participants will have test cases to confirm that they can successfully push and pull data from the following systems:

- *EMI and MIM:* Market Participant users and API systems will continue to verify that they can submit, update, cancel, and query dispatch data through the GUI and through web services.

- *IESO Reports:* Market Participants will verify that they can download a subset of reports through the GUI and using their API Systems. The IESO will provide a list of reports that will be part of this test phase in its Market Trials Test Plan.

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Market Trials Phase 2 – Testing EMI and MIM

Application: EMI and MIM

- Market Participants can continue to perform functional testing in EMI and through MIM web services during Market Trials Phase 2. The test cases they will use in this test phase will be the same set provided in Market Trials Phase 1.

- Please refer to slides entitled, "Market Trials Phase 1 – Testing EMI and MIM" to review what data will be used in this application, as well as expectations and IT system conditions for Market Participants.

- If Market Participants completed all EMI and MIM test cases by the end of Market Trials Phase 1 and they do not have outstanding issues that require re-testing, Market Participants are not required to re-execute these test cases in Market Trials Phase 2.

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Market Trials Phase 2 – IESO Reports

Application: IESO Reports

Input Data:

- The market and system reports in this test phase will be generated using IESO-determined standing bids and offers. This data will be shared with MPs at the start of Market Trials Phase 2.

Expectations for Market Participants:

- The test cases will verify that MPs are able to receive, view, and download select reports from the IESO Reports Site.

- MPs with an API system will have the opportunity to perform syntactic and semantic checks on these reports.

- Reports will be generated as per their publishing frequency (i.e., interval, hourly, daily). Some annual reports may not be available due to data availability and the scheduled run-time.

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Market Trials Phase 2 – IESO Reports (cont.)

Application: IESO Reports

Expectations for Market Participants:

- The same set of standing bids and offers will be used to generate all the reports in this test phase.

- A list of reports that are in scope for testing will be provided in the Appendix section of the MRP Market Trials Test Plan (to be published by the end of June 2024).

- Settlement reports, statements, and data files for each Market Participant will not be available during Market Trials. This will be available during End-to-End Testing.

- The market and system reports will reflect all registered resources of the Market Participant from Production as of May 31, 2024. The IESO however cannot guarantee specific outcomes in these reports (i.e., all resources with non-zero schedules/commitment).

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Market Trials Phase 2 – IESO Reports (cont.)

Application: IESO Reports

<u>Expectations for Market Participants:</u>

- IESO-determined reference levels for dispatchable resources will be used to generate the reports in this test phase. These reference levels are not outputs of the reference level consultations with Market Participants. The reference levels that will be used to create these operational reports will be consistent with the relevant technology type of these resource.

- Market Participants will be able to view the calculated reference level values that will be used per resource through the relevant MP-confidential reports that will be generated during this test phase.

- A job aid will be provided for Market Participants to outline how the file-folder structure will change in the IESO Reports site.

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Overview of Market Trials Phase 3

In Scope Applications: EMI, MIM, IESO Reports, and Dispatch Service

Dates: September 12, 2024 until October 23, 2024

During this phase, Market Participants will have test cases to confirm that they can successfully push and pull data from the following systems:

- *EMI and MIM:* MP users and API systems will continue to verify that they can submit, update, cancel, and query dispatch data through the GUI and through web services.

- *IESO Reports:* MPs will continue verify that they can download a subset of reports through the GUI and using their API Systems.

- *Dispatch Service:* MPs will test and confirm that they are able to receive, view, and interact with dispatch instructions from the GUI and through their API systems.

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Market Trials Phase 3 – Testing EMI and MIM

Application: EMI and MIM

- Market Participants can continue to perform functional testing in EMI and through MIM web services during Market Trials Phase 3. The test cases they will use in this test phase will be the same set provided in Market Trials Phase 1.

- Please refer to slides 14 and 15 (Market Trials Phase 1 – Testing EMI and MIM) to review what data will be used in this application, as well as expectations and IT system conditions for Market Participants.

- If Market Participants completed all EMI and MIM test cases by the end of Market Trials Phase 2 and they do not have outstanding issues that require re-testing, Market Participants required to re-execute these test cases in Market Trials Phase 3.

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Market Trials Phase 3 – Testing IESO Reports

Application: IESO Reports

- Market Participants can continue to perform functional testing of the market and system reports that are available from the IESO Reports site during Market Trials Phase 3. The test cases they will use in this test phase will be the same set provided in Market Trials Phase 2.

- Please refer to slides entitled, "Market Trials Phase 2 – IESO Reports" to review what data will be used in these reports, as well as expectations and IT system conditions for Market Participants.

- If Market Participants completed all test cases for IESO Reports by the end of Market Trials Phase 2 and they do not have outstanding issues that require re-testing, Market Participants are not required to re-execute these test cases in Market Trials Phase 3.

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Market Trials Phase 3 – Testing Dispatch Service

Application: Dispatch Service

Input Data:

- Dispatch instructions will be generated using IESO-determined standing bids and offers. This data will be shared with MPs at the start of Market Trials Phase 3.

Expectations for Market Participants:

- During this phase, Market Participants will confirm if they are able to view, receive, and respond to dispatch instructions and commitment notifications from Dispatch Service.

- Market Participants will receive dispatch instructions every 5 minutes as scheduled.

- Only registered resources of the Market Participant from Production as of May 31, 2024 will be able to receive dispatch instructions from the Dispatch Service application.

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Testing of Settlement Statement and Data Files

- The Settlement Statement and Data File Format Specification will be available by the end of June to assist Market Participants in applying the necessary changes in their API systems to process settlement files.

- Market Participants will be provided with generic sample settlement statement and data files in Q4 2024. These files will be posted on the Settlement Reference Materials section of the Market Renewal webpage.

- Testing of MP-specific settlement statement and data files will be available in End-to-End Testing.

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Resources to Help with Market Trials

- The MRP Market Trials Test Plan will be posted on the [Market Participant Testing](#) webpage by the end of June 2024.

- The test cases, issue log, and other supporting files for Market Trials testing will be available on the [Market Participant Testing](#) webpage prior to July 16, 2024.

- To support MPs during Market Trials, the updated EMI and MIM Participant Guide, Dispatch Service Participant Tool Guide, and Guide to Settlement Claims and Data Submissions via Online IESO will be available on the [Participant Tool Training](#) web page by the end of June 2024.

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How MPs Can Access Market Trials Test Cases

1. **qTest (recommended)**

- This is the IESO's test case management tool that will allow Market Participants to view the test cases for Market Trials, log any issues they may observe, and record their execution and results to be used by the IESO to monitor their testing progress.

2. **Market Trials - Issue Log Template**

- Market Participants can also record their test results manually using an *Issue Log Template*. This file will be available prior to July 16, 2024 on MRP's [Market Participant Testing](#) webpage.

- Market Participant that opt out of using qTest should send their *Issue Log Template* to IESO Customer Relations (customer.relations@ieso.ca) with the subject line "MRP Market Participant Test Results for Market Trials."

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Market Trials Test Cases in qTest

- Test cases that will be loaded in the Market Participant's qTest project folders based on their organization's participation types.

- Market Participants will see test cases for all resource types that are applicable to their registered participation type (for example, a hydroelectric generator will have access to test cases for nuclear generators despite being a hydroelectric generator participant only).

- If they find test cases that are not applicable to their organization, MPs are expected to update the status of these test cases as N/A in qTest.

- If test cases missing from their project folders, MPs should contact IESO Customer Relations (customer.relations@ieso.ca) for further assistance.

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IESO Support During Testing

- If Market Participants have questions related to MRP Market Participant Testing, they can submit an email to customer.relations@ieso.ca.

- Market Participants will be notified of defect resolution and test cases that can be re-executed during the Market Trials window.

- Sandbox systems will be available 24/7. Any questions submitted by Market Participants will be addressed during business hours (Monday to Friday from 9:00 AM EPT to 5:00 PM EPT).

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What should MPs do to prepare for Market Trials?

- Submit the qTest Form of Acknowledgement and Understanding to gain access to qTest.

- Ensure that user and systems accounts in the Sandbox environment have access to the applications that are in scope for Market Trials.

- Review the Market Trials Test Plan that will be posted on the Market Participant Testing webpage by the end of June.

- Review the test cases and other supporting documents on the Market Participant Testing webpage after July 16, 2024.

- Attend the kick-off meeting for each of the test phases of Market Trials. The first kick-off meeting will be on July 9, 2024.

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Thank You

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Appendix A: List of URLs for Applications In Scope

MPs will perform functional testing using the GUI and/or through their API systems. Below are the Sandbox URLs for the applications that are in scope for Market Trials.

Application	New or Existing URL/Address	URL/Address
Online IESO (via GUI)	Existing	https://gateway-sbx.ieso.ca Direct link: https://onlinesandbox.ieso.ca/
Energy Market Interface (EMI) (via GUI)	New	If accessing via IESO Gateway (Sandbox): https://gateway-sbx.ieso.ca Direct link: https://emi-sandboxmrp.ieso.ca/
Energy Market Interface (EMI) (via API or MWT Toolkit)	New	https://webservices-sandboxmrp.ieso.ca/emim
Dispatch Services (via GUI)	New	If accessing via IESO Gateway (Sandbox): https://gateway-sbx.ieso.ca Direct link: https://dispatchui-sandboxmrp.ieso.ca/
Dispatch Services (via API)	New	https://webservices-sandboxmrp.ieso.ca/dispatches

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Appendix A: List of URLs for Applications In Scope (cont.)

MPs will perform functional testing using the GUI and/or through their API systems. Below are the Sandbox URLs for the applications that are in scope for Market Trials.

Application	New or Existing URL/Address	URL/Address
IESO Reports Site to access Public Reports (via GUI)	**New***	https://reports-public-sandbox.ieso.ca
IESO Reports Site to access Confidential Reports (via GUI)	Existing	https://reports-sandbox.ieso.ca
IESO Reports Site to access Public Reports (via API)	**New***	https://reports-public-sandbox.ieso.ca
IESO Reports Site to access Confidential Reports (via API)	**New***	https://reports-sandbox.ieso.ca/api/v1.4/files?idp_id=ieso
IESO Reports Site to access Confidential Reports (via SFTP)	Existing	https://reports-sandbox.ieso.ca

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