Market Renewal Program (MRP): Cutover Test Plan

Version 1.0 March 2025



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1. Introduction

In response to stakeholder feedback and to prepare for the launch of the renewed market on May 1, 2025, the IESO is offering a cutover test that involves Market Participants and the IESO.

This test is intended to:

- verify that internal and external participants can follow and execute the cutover sequence of activities in the prescribed time as outlined in Table 3-1 of the <u>MRP Readiness Plan for the</u> <u>Market Renewal Launch</u>, and
- ensure that the IESO can transition from its legacy systems to the new and updated systems without significant issues.

This test plan references information in Version 2.0 of the MRP Readiness Plan for the Market Renewal Launch, which is an evolving document. The schedule and activities that are noted in this test plan are subject to change prior to the actual cutover in production.

Note: This test is highly recommended for Market Participants who own dispatchable resources.

1.1 In Scope

The cutover test will only cover the cutover sequence for the real-time market (RTM).

During this test, Market Participants will be able to verify that:

- they can successfully connect to the new pre-production URLs for the renewed Energy Market Interface (EMI), renewed Market Information Management (MIM) system, and renewed Dispatch Service system in the allotted time described under the MRP Readiness Plan for the Market Renewal Launch,
- they can understand and follow the email communications that will be sent from the IESO,
- they can send dispatch data to the new MRP applications,
- they can receive and respond to dispatch instructions from the new MRP applications, and
- they can receive key operational reports during the cutover test.

1.2 Out of Scope and Limitations

The cutover test will not include the following for Market Participants:

- activities that involve the cutover sequence for the day-ahead market (DAM),
- rollback sequence to the real-time market,
- evaluating the day-ahead market results,

- posting of notifications on the Advisory Notices page,
- manual dispatches and administrative pricing when the legacy market dispatch engines and systems are stopped,
- verifying changes to the Outage Coordination and Scheduling System (OCSS) in Production,
- verifying changes to Market Participant Prudential System (including the ability for participants to see their updated prudential support obligations),
- verifying changes to settlement statement and data files,
- verifying changes to the IESO public website,
- verifying their ability to register as a virtual trader, and
- verifying their ability to be authorized as a price responsive load (PRL) in the renewed market.

Due to the short duration of this test, some reports may be scheduled outside this window and will therefore not be published. Refer to *Appendix A* for the full list of reports that will be generated during this test.

To verify that systems are running successfully in this exercise, Market Participant testers will receive dispatch instructions and commitment notifications for resources that are determined to be the most economical by the Dispatch Scheduling and Optimization (DSO) system. The IESO cannot guarantee that all resources of active testers will receive dispatches or commitments during this test.

2. Key Dates

This test is scheduled to run from March 31, 2025 to April 2, 2025.

The IESO will be hosting a walkthrough of the cutover test on **March 21, 2025** to help prepare volunteer testers and to address questions from participants. Those who expressed interest in participating for this test will receive a registration link to an MS Teams event on March 17, 2025.

A wrap-up meeting, including lessons learned from this test, will be scheduled on **April 11, 2025**. MRP contacts will be notified via email when the registration link to this session becomes available on the <u>Implementation Engagement</u> section of the MRP webpage.

3. Prerequisites

Below is a list of activities that Market Participants are expected to have completed prior to participating in the IESO's Cutover Test on March 31, 2025:

- Review the latest version of the <u>MRP Readiness Plan for Market Renewal Launch</u>. This
 document provides a comprehensive roadmap for the Market Transition, described in the
 pre-launch preparation milestones, activities, and actions, as well as the specific cutover
 steps before, during, and after the Market Renewal Launch window.
- Review and validate their registration data in Production Online IESO.
- Those using an Application Programming Interface (API) should ensure that their internal system(s) have been updated based on the technical specifications and schemas that were published for MIM, Dispatch Service, and IESO reports.
- Participants should review their user and API accounts in Production to ensure that they have proper access to EMI, MIM and/or Dispatch Service. The recommended contact roles are identified in the <u>List of Online IESO Contact Roles Needed for Market Participant Testing</u>.
- Participants should review their user and API accounts in Sandbox to ensure that they have proper access to EMI, MIM, and the IESO Reports Site. The recommended contact roles are identified in the List of Online IESO Contact Roles Needed for Market Participant Testing.
- Market Participants who volunteered to take part in the IESO's cutover test should complete
 the Pre-Production Connectivity Test. This test is scheduled to run from March 17, 2025 to
 March 28, 2025. Refer to the Market Renewal Program (MRP): Pre-Production Connectivity
 Testing Plan (External) for more details.

4. IESO Support during the Cutover Test

Unlike other tests that were offered under the Market Renewal Program, this cutover test will be performed live with Market Participants and IESO staff. qTest and Issue Log Templates will not be used during this exercise.

If issues are identified between March 31, 2025 to April 2, 2025, the following communication channels and protocols will be in place:

- 1. If the incident occurs between 8:00 AM EPT to 5:00 PM EPT, Market Participants will contact Customer Relations via email (customer.relations@ieso.ca).
- 2. If the incident occurs outside regular business hours, Market Participants should contact the IESO using the Market Renewal mailbox (market.renewal@ieso.ca), and copy the IESO Customer Relations mailbox, to request support and a representative will be in contact as soon as possible for time-sensitive issues.

When reporting issues to the IESO, please use the following prefix in the subject line: "MRP Cutover Test".

The IESO will triage the issue accordingly. If the issue is related to:

- Access to the renewed EMI, the renewed MIM system, and/or the renewed Dispatch Service system during the cutover: The participant will work directly with Customer Relations to identify what roles and/or permissions may be missing from their user and/or API accounts. These issues are typically resolved through proper user maintenance and will require the administration of the participant's Applicant's Representative(s).
- Unsuccessful connectivity to the new or updated systems despite proper access: These issues
 will be escalated to the IESO IT team(s) for further investigation and may require a
 connectivity call with participants if the reported behaviour impacts several testers.
- Unsuccessful submission of dispatch data to the new EMI/MIM systems: These issues will be
 escalated to several IESO team(s) for further investigation if the reported behaviour is
 consistent and impacts a handful of testers.
- Participants not receiving automated dispatch instructions from the new Dispatch Service system: These issues will be escalated to several IESO team(s) for further investigation if the reported behaviour is consistent and impacts a handful of testers.
- Missing and/or data inconsistencies in operational reports: These issues will be escalated to several IESO team(s) for further investigation. Priority will be evaluated based on the nature of the issue and if the report impedes the participant's ability to continue with the cutover test.

The IESO may not be able to resolve issues with participant connectivity during the test. Open issues will be reviewed after the cutover test and to resolve critical defects that may impact operations and reliability of the market prior to MRP Go-Live.

5. IESO Communication during the Cutover Test

In the absence of a Sandbox environment for the IESO public website, the IESO will be utilizing email as its primary channel for delivering general messages to participants during the cutover test. These email touchpoints are identified in <u>Section 6: Sequence of Cutover Testing Activities</u>.

Emails will only be delivered to MRP contacts and active testers who volunteered for this cutover exercise. Business Advisors from the IESO will reach out to those volunteer testers, starting on March 17, 2025, to confirm their contact details. The messages in these notifications will be similar to the content that the IESO plans to include in its advisory notices but may include slight differences, such as the date or time of specific events.

As noted in <u>Section 4: IESO Support during the Cutover Test</u>, this test is intended to simulate how the IESO will perform its cutover to the renewed market in Production. Participants will not be using qTest or Issue Log Templates to notify the IESO of issues they encounter during the test. Instead, Market Participants are expected to report their issues to Customer Relations during business hours or to the Market Renewal mailbox outside regular business hours so that issues encountered can be triaged accordingly. Participants should not contact the IESO's Control Room to inform them of testing-related issues during this exercise.

As a follow-up to participant-reported issues, the IESO may contact participants through the following channels:

- If the issue can be quickly resolved by providing specific advice or guidance to the participant, the IESO will notify the tester of the recommended solution via email.
- If the issue is time-sensitive and needs to be escalated to other IESO subject matter experts,
 a Teams call may be arranged to help the participant and the IESO troubleshoot and resolve
 the issue as soon as possible.
- If the issue requires additional time to be investigated and cannot be resolved during the cutover exercise, the IESO will:
 - follow up with the participant via email on what must be done to resolve the issue after the test, or
 - \circ provide a status update on the April 11th webinar if the issue impacts market participants globally.

If Market Participants have concerns or questions regarding the cutover test plan, they should submit an email to Customer Relations prior to the scheduled exercise.

6. Sequence of Cutover Testing Activities

Note: The date/times that are listed in the table below are estimates. The duration and/or start time of specific steps may be delayed if unexpected issues are encountered during the cutover exercise.

Date	Time (EST)	Step	Description	Communication Channel	Expectation for Participants
March 31, 2025		Launch Start Decision		Contact(s) of Volunteer Testers	The IESO will confirm and notify Market Participants of its decision to start the launch of the renewed market. The message in the email sent to those participating in this test will be similar to what Market Participants will receive during the actual transition and cutover Production, as well as text that will be posted on the Advisories and Notices section of the IESO website. Market Participants should: Verify that they can receive and are able to understand the information provided in these emails.

		 Declaration that the Day-Ahead Market (DAM) will not run for the trade dates of April 1 and April 2, 2025. The IESO will declare a DAM "failure" per Chapter 0.7 of the Market Rules, section 4.3.2. Notice that for a short period (approximately 		 If they do not receive an email from the IESO by 9:00 AM EST or have general questions, volunteer testers should contact IESO Customer Relations.
		one hour) following successful launch of the Real-Time Market systems on the morning of April 1, 2025, the IESO will be sending dispatch signals to all units, not just changes to dispatches.		
		Declaration that the <i>legacy</i> market Day-Ahead Commitment Process (DACP) will be cancelled on March 31 for April 1, 2025.		
		 Details regarding when <i>legacy</i> dispatch engines will be stopped. A reminder of when services and applications will be unavailable during the market transition. 		
March 31, 2025	to start submitting dispatch data to renewed market systems	(EMI), including API access, will be enabled. Market Participants can begin submitting dispatch data to the renewed Market Information Management (MIM) system at this time. Market Participants must submit identical maximum bid/offer quantities per hour in both the legacy market and renewed market for April 1.	Email to MRP and IT Contact(s) of Volunteer Testers	 Werify that they can access the legacy EMI and MIM systems using their Sandbox user and/or API accounts. Verify that they can access the renewed EMI and MIM systems
		New market dispatch data parameters must not reduce available capacity below the values submitted in the legacy market.		using their Production user and/or API accounts.

			Energy Trader Market Participants must submit identical hourly data for April 1 in both the legacy and renewed market systems.		If they encounter issues, they should contact IESO Customer Relations.
March 31, 2025	09:00 – 21:59	the legacy market and renewed market systems	Market Participants must submit dispatch data that covers the period from March 31 and April 1, 2025, in the legacy market systems. This dispatch data will not be able to be updated after 21:59 on March 31. The IESO will monitor dispatch data submissions from 09:00 EST on March 31 until the first pre-dispatch run of the renewed market, addressing any discrepancies and applying the reason code "IESO Adjusted" where necessary. Market Participants should monitor/query their data during this period.	N/A	 Market Participants will: Submit their bids and offers for the legacy market through the Sandbox EMI/MIM system for the current market. Submit their bids and offers for the renewed market through the Pre-Production EMI/MIM system.
March 31, 2025	17:30	Participant Prudential System (MPPS)	The Market Participant Prudential System (MPPS) will not be available until May 8, 2025. An alternate procedure to monitor prudential will be in effect until then. Please see Chapter 0.2 of the Market Rules, Section B.1.1 for more information.	Email to MRP and IT Contact(s) of Volunteer Testers	This step is informational. No action expected from market participants.
March 31, 2025	18:00	Financial Reference	Real-Time Market Financial Reference Level Values reports will be published at 18:00 EST on March 31 for April 1, 2025.	Email to MRP and IT Contact(s) of Volunteer Testers	Market participants with dispatchable and electricity storage resources will verify that this report is available in their confidential folder under the IESO Reports Sandbox site. If the report is missing or contains data issues, participants should email the Market Renewal mailbox and CC IESO Customer Relations.

March 31, 2025		Market Suspension Stop access to <i>legacy</i> dispatch data submission market systems	The IESO will suspend market operations at this time. Market Participants should refer to Chapter 0.7 of the Market Rules, section 13.6 for more information about their responsibilities and obligations. Access to the <i>legacy</i> dispatch data submission market systems will be stopped at this time. The IESO will continue to settle the <i>legacy</i> market.	Email to MRP and IT Contact(s) of Volunteer Testers	Market Participants will need to confirm that they can no longer access the legacy EMI and MIM systems in the Sandbox environment. If access is still available, they should report the issue to the IESO Market Renewal mailbox and CC IESO Customer Relations.
March 31, 2025	22:07 – 22:15	dispatch Report Run	The final pre-dispatch report of the <i>legacy</i> real-time market will run prior to the start of the renewed market.	N/A	Market participants will verify that the final pre-dispatch report for the legacy market is generated and made available via the IESO Reports Sandbox site. If the report is missing or contains data issues, they should report the issue to the IESO Market Renewal mailbox and CC IESO Customer Relations.
March 31, 2025		Stop <i>legacy</i> market dispatch engines and other systems		Email to MRP and IT Contact(s) of Volunteer Testers	This step is informational. No action expected from market participants. During the actual cutover in Production, the IESO would begin to manually send dispatch instructions to participants. Administrative Pricing would also be in effect. Manual dispatch instructions and administrative pricing are out of scope for this cutover exercise and will not be tested.

March 31, 2025	22:50 – 23:30	available	Dispatch engines will be available and online prior to the start of the renewed market. Sequences will start at 23:55 EST for the first run of Pre-Dispatch on April 1.	N/A	This step is informational. No action expected from market participants.
March 31, 2025	22:50 – 23:50	(AGC) constraints are	Legacy AGC constraints are applied in the renewed market and applicable for April 1, 2025, and April 2, 2025.	N/A	This step is informational. No action expected from market participants.
March 31, 2025	23:50	Declaration Envelope (ADE) established for April 1 based on the	The most recent maximum quantity of energy included in the bid or offer submitted before 23:50 EST will be considered the resource's ADE. Refer to Chapter 0.7 of the Market Rules, specifically sections 3.1.11 and 13.2A.2.1, for more information.	N/A	This step is informational. No action expected from market participants.
April 1, 2025	00:02 – 01:36	Real-Time Optimization sequences run	The initial Pre-Dispatch Calculation Engine and Real- Time Optimization sequences are run and validated for April 1, 2025. Once the results are validated by the IESO, they will be published to Market Participants starting HE02.	N/A	This step is informational. No action expected from market participants.
April 1, 2025	01:40	·	are published to Market Participants after they are	Email to MRP and IT Contact(s) of Volunteer Testers	Market participants will verify the results of the pre-dispatch runs by reviewing their pre-dispatch reports from the IESO Reports Sandbox site. If a report is missing or contains data issues, they should report the issue to the IESO Market Renewal mailbox and CC IESO Customer Relations.

April 1, 2025	02:00	Automatic Dispatch is	Real-time Optimization results (Real-time (RT) Report)	Email to MRP and IT	Market Participants will verify that
		enabled for HE03 INT	publishing to Market Participants enabled. Resources	Contact(s) of	they can access the Pre-Production
		1	will be automatically dispatched starting HE03 INT 1.	Volunteer Testers	Dispatch Service system using their
		Dool Time Devents			Production user and/or API accounts
		Real-Time Reports			and are able to receive dispatch
		publishing started			instructions from the system itself. If
					they encounter issues, they should
					notify the IESO using the Market
					Renewal mailbox and CC IESO
					Customer Relations.
					Market participants will also verify
					that they can access the new and
					updated real-time reports via the
					IESO Reports Sandbox site. If a
					report is missing or contains data
					issues, participants should notify the
					IESO using the Market Renewal
					mailbox and CC IESO Customer
					Relations.
April 1, 2025	03:00	Automatic Dispatch		N/A	This step is informational. No action
		started for HE03 INT 1			expected from market participants.
April 1, 2025	05:00	Standing Dispatch	Dispatch Data in the new MIM system will be converted	Email to MRP and IT	This step is informational. No action
, , , , , , , , , ,		Data converted	,	Contact(s) of	expected from market participants.
				Volunteer Testers	
			dispatch data.		
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April 1, 2025 – April 2, 2025	renewed market are monitored and evaluated	The IESO will monitor the results of the renewed market and observe the midnight cross-over. The results will act as inputs to the market transition completion decision on April 2, 2025, anticipated to occur at 04:00.	N/A	This step is informational. No action expected from market participants.
April 2, 2025	Participants on the Market Transition completion and end of market suspension	The IESO will notify Market Participants of the decision of Market Transition Completion and end of the market suspension. Refer to Chapter 0.7 of the Market Rules, Section 13.2A.8 for more information. The IESO will issue an advisory notice containing the following information: • Announcing the completion of the Market Transition and the end time of the market suspension.		This step is informational. No action expected from market participants.

7. Known System Issues

The IESO will provide a list of known issues on the week of March 24, 2025. Participants are not required to report these issues during the cutover exercise. Any defects that remain unresolved prior to the May 1st launch date will be noted as part of the April 11, 2025 webinar.

8. Additional Resources

- MRP Readiness Plan for Market Renewal Launch
- Presentation Cutover Testing and Pre-Production Testing
- Recorded Presentation Cutover Testing and Pre-Production Testing
- Market Renewal Program (MRP): Pre-Production Connectivity Testing Plan (External)
- Pre-Production Connectivity Testing: Energy Market Interface (EMI) User Interface (UI) Test
 Cases
- Pre-Production Connectivity Testing: Market Information Management (MIM) Application
 Programming Interface (API) Using MIM Web Services Toolkit (MWT) Test Case
- <u>Pre-Production Connectivity Testing: Market Information Management (MIM) Application</u> Programming Interface (API) using API Tool Test Case
- Pre-Production Connectivity Testing: Dispatch Service (DS) User Interface (UI) Test Cases
- <u>Pre-Production Connectivity Testing: Dispatch Service Application Programming Interface</u>
 (API) <u>Test Case</u>

Appendix A – List of Reports in Scope for the Cutover Test

The following reports are in scope for this cutover test:

Report Name	Folder Name	Public or Confidential
5-Minute Energy and Operating Reserve Schedule	ENGYOPRVRealtimeSchedules5Min	Confidential
5-Minute Energy Schedule	ENGYSchedules5Min	Confidential
5-Minute Operating Reserve Schedule	OPRVSchedules5Min	Confidential
Adequacy Report	Adequacy3	Public
Demand Response Standby	DR-Standby	Confidential
Dispatch Advisory Report	DispAdvisory2	Confidential
Predispatch Commitments Report	PDCommitments	Confidential
Predispatch Daily Energy Limit (DEL) Tracking Report	PredispDEL	Confidential
Predispatch GOG-eligible Unit Inferred State Report	PredispGOGEligibleUIS	Confidential
Predispatch Hourly Energy LMP Report	PredispHourlyEnergyLMP	Public
Predispatch Hourly Intertie Energy LMP	PredispHourlyIntertieLMP	Public
Predispatch Hourly Intertie Operating Reserve LMP	PredispHourlyIntertieORLMP	Public
Predispatch Hourly Ontario Zonal Energy Price Report	PredispHourlyOntarioZonalPrice	Public
Predispatch Hourly Operating Reserve LMP	PredispHourlyORLMP	Public
Predispatch Hourly Virtual Zonal Energy Price	PredispHourlyZonal	Public

Predispatch Intertie Transactions Schedule and GOG Eligible Extensions Report	PredispIntertieSchedGOGExtension	Confidential
Predispatch Number of Starts Tracking	PredispNumStartsTracking	Confidential
Predispatch Pseudo-Unit Computed Values	PredispPSUComputedValues	Confidential
Predispatch Schedules Report	PredispSchedules2	Confidential
Predispatch Security Constraints Report	PredispSecurityConstraints2	Public
Predispatch Totals Report	PredispTotals	Public
Realtime 5-min Energy LMP Report	RealtimeEnergyLMP	Public
Realtime 5-min Intertie Energy LMP Report	RealTimeIntertieLMP	Public
Realtime 5-min Intertie Operating Reserve LMP Report	RealTimeIntertieORLMP	Public
Realtime 5-min Ontario Zonal Energy Price Report	RealtimeOntarioZonalPrice	Public
Realtime 5-min Operating Reserve LMP Report	RealtimeORLMP	Public
Realtime 5-Min Virtual Zonal Energy Price Report	RealtimeZonalEnergyPrices	Public
Real-time Energy and Operating Reserve Dispatch Report	ENGYOPRVRealtimeDispatch	Confidential
Real-time Energy Dispatch Report	ENGYDispatch	Confidential
Real-Time Market Dynamic Constrained Areas	RealtimeConstrainedAreas	Confidential
Realtime Operating Reserve Dispatch Report	OPRVDispatch	Confidential
Real-time Pseudo-Unit Computed Values	RealtimePSUComputedValues	Confidential
Realtime Totals	RealtimeTotals	Public

Appendix B – User and API Accounts for Cutover Testing

The following is a list of accounts that participants will be using and which environments they should access during this cutover test:

Application	Cutover Testing
Energy Market Interface for the renewed market	Production user account(s)
MIM via web services for the renewed market	Production API account(s)
Energy Market Interface for the legacy market	Sandbox user account(s)
MIM via web services for the legacy market	Sandbox API account(s)
Dispatch Service user interface for the renewed market	Production user account(s)
Dispatch Service via web services for the renewed market	Production API account(s)
IESO Reports Site user interface	Sandbox user account(s)
IESO Reports Site via web services	Sandbox API account(s)

Appendix C – Application URLs for Cutover Testing

Market Participants should use the following URLs during the cutover test:

Energy Market Interface

- Pre-Production URL for the renewed market:
 - Via IESO Gateway: https://gateway.ieso.ca/
 - Direct Link: https://emi2.ieso.ca/
- Sandbox URL for the legacy market:
 - Via IESO Gateway: https://gateway-sbx.ieso.ca/
 - Direct Link: https://emisandbox.ieso.ca/
- Production URL for rollback:
 - Via IESO Gateway: https://gateway.ieso.ca/
 - Direct Link: https://emi.ieso.ca/

MIM via web services:

- Pre-Production URL: https://webservices.ieso.ca/mim2
- Sandbox URL: https://webservices-sandbox.ieso.ca/emim
- Production URL for rollback: https://webservices.ieso.ca/emim

Dispatch Service User Interface

- Pre-Production URL for these tests:
 - Via IESO Gateway: https://gateway.ieso.ca/
 - o Direct Link: https://dispatch2.ieso.ca
- Production URL for rollback:
 - Via IESO Gateway: https://gateway.ieso.ca/
 - o Direct Link: https://dispatch.ieso.ca

Dispatch Service via web services:

- Pre-Production URL for these tests: webservices-prod.ieso.ca/dispatches/DispatchService?wsdl
- Production URL for rollback: https://webservices.ieso.ca/dispatches

IESO Reports Site

Sandbox URLs for these tests:

- o IESO Reports Site to access Public Reports (via GUI): https://reports-public-sandbox.ieso.ca
- o IESO Reports Site to access Public and Confidential Reports (via API): https://reports-sandbox.ieso.ca/api/v1.4/files?idp_id=ieso
- o IESO Reports Site to access Public and Confidential Reports (via SFTP): https://reports-sandbox.ieso.ca

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