

MARCH 4, 2025

Market Renewal Program (MRP): End-to-End Testing Q&A Session #3 with Market Participants

Cynthia Sidalak

Senior Advisor, Market Participant Readiness

Agenda

- Objective of the Q&A Session
- Status of Test Scenarios and Potential Issues
- IESO's Classification for Submitted Issues
- Update on Reports during End-to-End Testing
- Status update on outstanding common issues that were presented during Q&A Sessions #1 and #2

Agenda (cont.)

- Common issues reported during Weeks 5 and 6 of End-to-End Testing
- Week 7 of End-to-End Testing
- Weeks 8 to 10 of End-to-End Testing
- Q&A Session
- Next Steps

Objectives of the Q&A Sessions

- To review the status and resolution of issues that have been reported during End-to-End Testing
- To address common questions participants are raising
- To provide participants the opportunity to ask general questions they may have about MRP testing

Current Status of End-to-End Testing

- The IESO has published most of the missing reports from the initial weeks of testing
- Most critical and high defects have been resolved and remaining are expected to be resolved by March 10
- Just over half of the test scenarios have been successfully executed by at least one market participant
- Many scenarios and reported issues are waiting for Market Participants to re-test and inform the IESO of the result
- Market Participants are encouraged to continue to report any potential issues to the IESO as soon as possible

Execution Status

A test scenario's execution status is considered **Passed** when:

- all test cases within that test scenario have been successfully executed by at least one market participant

Overall Status

A test scenario's overall status is considered **In Progress** when:

- 1 or more participant submitted issues are under investigation (an issue could be a question, a problem on the participant's side, a revision required in IESO documentation or a defect in IESO systems);
- 1 or more issues are pending a retest by 1 or more market participants; or
- participants are waiting for settlement statements (preliminary settlement statements issued 6 business days after the trade date in end-to-end testing).

A test scenario's overall status is considered **Complete** when:

- the execution status is marked "passed," and
- no issues under investigation or retests pending.

Status of Test Scenarios as of Feb 26, 2025

| Test Scenario No. | Execution Status | Overall Status | Notes |
|---|------------------|----------------|--|
| TS01 - Financial Reference Level (FRL) Change Request | Passed | In Progress | <ul style="list-style-type: none"> 7 reported issues have been resolved and are waiting on market participants to retest 1 issue is pending additional information from the tester 4 reported issues are currently being investigated |
| TS02 – DAM Failure | Passed | In Progress | <ul style="list-style-type: none"> 1 reported issue has been resolved and are waiting on market participants to retest |
| TS04 - Notice of Disagreement (NOD) | Passed | In Progress | <ul style="list-style-type: none"> 1 issue is pending additional information from the tester 1 reported issue is currently being investigated |
| TS05 - Make-Whole Payment (MWP) | | In Progress | <ul style="list-style-type: none"> 1 issue has been resolved and is waiting on the market participant to retest |

Status of Test Scenarios as of Feb 26, 2025 (cont.)

| Test Scenario No. | Execution Status Overall Status | | Notes |
|--|---------------------------------|-------------|---|
| TS07 - Market Power Mitigation (MPM) | In Progress | | <ul style="list-style-type: none"> 2 issue are currently being investigated Test is still in progress and is pending market participant analysis of settlement statements |
| TS08 - Intertie Curtailment | In Progress | | <ul style="list-style-type: none"> No activity logged in qTest. This is a new scenario for Week 6 of End-to-End Testing. |
| TS09 - Fuel Cost Compensation Form | Passed | In Progress | <ul style="list-style-type: none"> 2 reported issues have been resolved and are waiting on market participants to retest |
| TS11 - 1-Day Advance Approval Outage | Passed | Complete | <ul style="list-style-type: none"> No issues were identified |
| TS12 - Hourly Demand Response (HDR) Activation | Passed | In Progress | <ul style="list-style-type: none"> 1 issue is currently being investigated 1 reported issue has been resolved and is waiting on the market participant to retest 1 issue is pending additional information from the tester |

Status of Test Scenarios as of Feb 26, 2025 (cont.)

| Test Scenario No. | Execution Status | Overall Status | Notes |
|--|------------------|----------------|--|
| TS13 - Operating Reserve (OR) Activation | Passed | In Progress | <ul style="list-style-type: none">1 reported issue has been resolved and is waiting on the market participant to retest2 issues are currently being investigated. |
| TS14 – OR Shortfall | Passed | Complete | <ul style="list-style-type: none">No issues were identified. |
| TS16 – GOG Commitment Terminated by the IESO | | In Progress | <ul style="list-style-type: none">Test is still in progress and is pending market participant analysis of settlement statements |
| TS17 - GOG Commitment Advancement and Extensions | | In Progress | <ul style="list-style-type: none">1 reported issue is being investigated |

Status of Test Scenarios as of Feb 26, 2025 (cont.)

| Test Scenario No. | Execution Status | Overall Status | Notes |
|---|------------------|----------------|--|
| TS18 - GOG Commitment withdrawn by MP with more than 4 hours advance notice | | In Progress | <ul style="list-style-type: none"> 1 reported issue has been resolved and is waiting on the market participant to retest |
| TS19 - GOG Commitment withdrawn by MP with less than 4 hours advance notice | Passed | Complete | <ul style="list-style-type: none"> No issues were identified. |
| TS20 – GOG Commitment Performance Failure | | In Progress | <ul style="list-style-type: none"> Test is still in progress and is pending market participant analysis of settlement statements |
| TS21 - SEAL Constraint | Passed | In Progress | <ul style="list-style-type: none"> 1 reported issue is being investigated |
| TS22 - MPM Global Threshold | | In Progress | <ul style="list-style-type: none"> 1 issue is currently being investigated 3 reported issues have been resolved and is waiting on the market participant to retest |

Status of Test Scenarios as of Feb 26, 2025 (cont.)

| Test Scenario No. | Execution Status | Overall Status | Notes |
|--------------------------------------|------------------|----------------|--|
| TS23 – Major Outage – EW Tie Binding | | In Progress | <ul style="list-style-type: none">1 issue is pending additional information from the tester.Test is still in progress and is pending market participant analysis of settlement statements |
| TS24 – OR Clawback | Passed | In Progress | <ul style="list-style-type: none">2 issues are pending additional information from the tester.1 issue is currently being investigated |
| TS26 – Capacity Flag – Import/Export | | In Progress | <ul style="list-style-type: none">No activity logged in qTest yet. New for Week 6. |

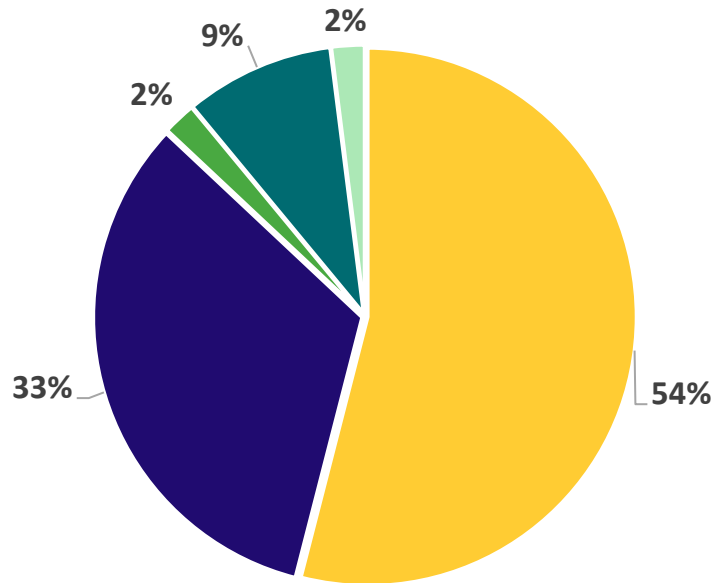
Current Status of Potential Issues in End-to-End Testing

| Issue Status | Number of Issues |
|---|------------------|
| Being Investigated by the IESO | 46 |
| Ready to be Re-tested by the Market Participant | 93 |
| Waiting on additional information from the Market Participant | 16 |
| Closed | 143 |
| Total Number of Issues (as of Feb 26, 2025) | 298 |

The types of issues being reported include (but are not limited to):

- system issues that are corrected by the IESO and/or its application vendors,
- clarifying questions on the process or market rules in effect,
- updates required to the IESO's training documentation and supporting materials for testing,
- updates to the test scenario documents or test steps
- access-related issues for user and/or API accounts, and
- current system issues/enhancements that are out of scope for testing under MRP.

Type of Issues being reported by Market Participants as of February 26, 2025



- System Issues that are corrected by the IESO and/or its application vendors
- Clarifying questions on the process or market rules in effect
- Updates required to the IESO's training documentation and supporting materials for testing
- Access-related issues for user and/or API accounts
- Current system issues/enhancements that are out of scope of testing under MRP

IESO's Classification for Submitted Issues

| Priority | Description |
|----------|--|
| Critical | The defect will result in the failure of IESO's software system and will prevent the IESO from executing the applicable business process. The defect must be resolved prior to MRP Go-Live. |
| High | The defect will result in the failure of a functional component of IESO's software system and no workarounds exist. A workaround needs to be developed that will have a material impact on the IESO's business process(es). The defect should be resolved prior to MRP Go-Live. |
| Medium | The defect will result in the failure of a functional component of IESO system(s). However, a workaround exists that will yield a desired result, and it does not have a material impact on the IESO's business process(es). The IESO will target to resolve the defect prior to MRP Go-Live. If this target cannot be achieved, the IESO will communicate to Market Participants if and/or when the defect will be resolved in a future deployment. |
| Low | The defect <u>does</u> not result in the failure of a functional component and does not affect the execution of IESO's business process. The IESO will communicate to Market Participants if the defect will be resolved in a future deployment or rationale on why the defect will not be resolved. |

Update on Reports during End-to-End Testing

- To assist stakeholders in completing their testing the IESO has published as many of the in-scope reports that were not published during the first 5 weeks of End-to-End Testing as possible
- Missing reports have now been published where the data was available, some reports could not be created due to missing data
- A list of delayed reports that have now been published will be provided in the [Frequently Asked Questions \(FAQs\) for End-to-End Testing](#) document published by Wednesday March 5
- All historical settlement statements have been published

Update on Reports during End-to-End Testing (cont.)

The IESO has published the following reports if they were missed previously:

- Day-Ahead Schedule Report
- Day-Ahead Hourly Energy LMP Report
- Day-Ahead Hourly Virtual Zonal Energy Price Report
- Day-Ahead Hourly Ontario Zonal Energy Price Report
- Day-Ahead Hourly Operating Reserve LMP Report
- Day-Ahead Hourly Intertie Energy LMP Report
- Day-Ahead Hourly Intertie Operating Reserve LMP Report
- Day-Ahead Totals Report
- Day-Ahead Commitments Reports
- Realtime 5-Min Virtual Zonal Energy Price
- Realtime 5-min Intertie Energy LMP
- Realtime 5-min Intertie Operating Reserve LMP
- Realtime 5-min Ontario Zonal Energy Price
- Realtime 5-min Operating Reserve LMP
- Realtime Totals Report
- Realtime Energy Dispatch Report
- Realtime Energy and Operating Reserve Dispatch
- Realtime Operating Reserve Dispatch
- Realtime 5-min Energy LMP

Update on Real-time Reports

In many instances, the real-time reports were missing because it was an 'autofill' interval. In these instances, the reports are identical to the previous interval.

The IESO has republished these reports to help with End-to-end testing.

In the future, when these reports are not issued the MP should assume the outcome of the previous interval applies.

These real-time reports may be published within 4 business days where administrative pricing occurs for the interval.

- Realtime 5-Min Virtual Zonal Energy Price
- Realtime 5-min Intertie Energy LMP
- Realtime 5-min Intertie Operating Reserve LMP
- Realtime 5-min Ontario Zonal Energy Price
- Realtime 5-min Operating Reserve LMP
- Realtime Totals Report
- Realtime Energy Dispatch Report
- Realtime Energy and Operating Reserve Dispatch
- Realtime Operating Reserve Dispatch
- Realtime 5-min Energy LMP




Status update on outstanding common issues reported during Q&A Session #1



Test Scenario 12 – Hourly Demand Response – HDR Activation

Common Issues Reported for Test Scenario 12


| Reported Issue | IESO Priority Ranking | Issue status |
|---|-----------------------|--|
| Charge Type CT1103 is being seen in the settlement statements for HDR resources | High | <ul style="list-style-type: none">• Charge Type CT1103 is not applicable for HDR resources.• The IESO has deployed a fix to ensure that Charge Type 1103 will not appear in future settlement statements for HDR resources.• All settlement statements issued on and after February 18th will reflect the correct settlement amounts. The IESO will provide corrections for trade dates January 22nd – January 30th on the Resettlement Statement on March 14th. |



Other Issues Reported during Week 1 and 2 of End-to-End Testing

Other Issues Reported during Weeks 1 and 2 of End-to-End Testing

| Reported Issue | IESO Priority Ranking | Issue status |
|---|-----------------------|--|
| Pre-dispatch and some Real-Time Reports were not being published | High | <ul style="list-style-type: none">The IESO has resolved the issue for over-midnight reporting in the <i>Predispatch Intertie and GOG Extensions Report</i> in HE 22 (10 pm publication). |
| No data is being published in the <i>Ontario Real-Time 5-Minute Zonal Demand Report</i> | High | <ul style="list-style-type: none">The IESO has resolved this issue on February 18th. |




Status update on outstanding common issues reported during Weeks 3 and 4 of End-to-End Testing



Scenario 1 – Financial Reference Level (FRL) Change Request

Common Issues Reported for Test Scenario 1

| Reported Issue | IESO Priority Ranking | Issue status |
|--|-----------------------|--|
| When Market Participants submit the Service Price adder or Alternate Fuel Cost prices, it specifies CAD but it does not specify the unit of measurement. | Low | <ul style="list-style-type: none">• The IESO is still working on the enhancement and will inform Market Participants when this has been completed.• The Quick Take: How to Submit Temporary Reference Level Change Requests for End-to-End Testing will be updated with this enhancement. |



Other Issues Reported during Week 3 and 4 of End-to-End Testing

Other Issues Reported during Week 3 and 4

| Reported Issue | IESO Priority Ranking | Issue status |
|---|-----------------------|---|
| The <i>Day-Ahead Market Dynamic Constrained Areas Report</i> have not been published since January 24, 2025 | High | <ul style="list-style-type: none">This has been fixed, Market Participants who reported this issue have been informed via qTest to re-test. |
| The <i>Day-Ahead Schedule Report</i> do not show the mitigation values in the report. | High | <ul style="list-style-type: none">The IESO has resolved the issue and will monitor future reports. |
| The amount of energy being reported during ramping hours on the <i>Day-Ahead Schedule Report</i> does not match with what the Market Participants submitted | High | <ul style="list-style-type: none">This has been fixed, Market Participants who reported this issue have been informed via qTest to re-test. |

Other Issues Reported during Week 3 and 4 (cont.)


| Reported Issue | IESO Priority Ranking | Issue status |
|---|-----------------------|---|
| <i>Day-Ahead Commitments Report</i> not being published for Market Participants on various dates | High | <ul style="list-style-type: none">The IESO has resolved the issue and has republished all impacted reports. |
| <i>Day-Ahead Market Operating Reserve Offer Report</i> not being published for Market Participants for certain hours on various dates | High | <ul style="list-style-type: none">The IESO has resolved the issue and has republished all impacted reports. |
| <i>Realtime Energy and Operating Reserve Dispatch</i> not being published for Market Participants for certain hours on various dates | High | <ul style="list-style-type: none">The IESO has resolved the issue and has republished all impacted reports. |

Other Issues Reported during Week 3 and 4 (cont.)

| Reported Issue | IESO Priority Ranking | Issue status |
|---|-----------------------|--|
| <i>Realtime Intertie Energy LMP Report</i> are not being published for certain hours on various dates | High | <ul style="list-style-type: none">The IESO has resolved the issue and has republished all impacted reports. |
| It takes Market Participants a long time to download files in the Sandbox IESO Confidential site | Medium | <ul style="list-style-type: none">The IESO has determined that this is an intermittent issue. The IESO has communicated to Market Participants that if they experience this issue again to contact the IESO. |

Other Issues Reported during Week 3 and 4 (cont.)

| Reported Issue | IESO Priority Ranking | Issue status |
|--|-----------------------|---|
| There is a discrepancy on the amount of energy Market Participants offered for their resources as opposed to what is reported on the <i>Predispatch Schedules Report</i> | Medium | <ul style="list-style-type: none">This has been fixed, Market Participants who reported this issue have been informed via qTest to re-test. |



Common issues reported during Weeks 5 and 6 of End-to-End Testing

Low System Demand in the Sandbox Environment

- The IESO changed the base conditions in the Sandbox Environment to low system demand to facilitate test scenarios for Week 6.
- The changes required to update the conditions took place starting on **February 20 at 20:00 EST** through **February 23 at 24:00 EST**.
- Market Participants were able to access the applications and receive operational reports and settlements but Market Participants may notice missing or unrealistic data for the February 20th to 23th trade dates.
- The February 23th DAM continued to run for the February 24th trade date.
- Market Participants are not required to submit data issues they identify in their reports and/or settlements during this time frame.

Common issues reported during Weeks 5 and 6 of End-to-End Testing

| Reported Issue | IESO Priority Ranking | Issue status |
|---|-----------------------|--|
| Charge Types CT1100 is not being included in non-dispatchable generators' settlement statements | Critical | <ul style="list-style-type: none">CT1100 should be included in non-dispatchable generators' settlement statementsThe IESO is currently working on a fix and will communicate to Market Participants when this has been fixed. |
| User is seeing their resources being reported twice in the <i>Dispatch Data Report for Day-Ahead Scheduling Process</i> | High | <ul style="list-style-type: none">The IESO is in the process of resolving the issue and will communicate to Market Participants when this has been fixed. |
| User is receiving an error message when they are submitting OR offers for their resources | High | <ul style="list-style-type: none">This has been fixed, Market Participants who reported this issue have been informed via qTest to re-test. |

Common issues reported during Weeks 5 and 6 of End-to-End Testing (cont.)

| Reported Issue | IESO Priority Ranking | Issue status |
|--|-----------------------|--|
| The field placement for AQEW and AQEI for Charge Type CT 1900 and 1904 in the settlement statement are in the incorrect fields | High | <ul style="list-style-type: none">The AQEW should be in column 24 and AQEI should be in column 25.This issue is currently being investigated by the application vendor. The IESO will communicate to Market Participants once it has been resolved. |
| <i>The Variable Generation Foregone Energy Calculation Inputs</i> Report is not being generated when the settlement statements are published | High | <ul style="list-style-type: none">The IESO is currently investigating this issue and will communicate to Market Participants when this has been fixed. |

Common issues reported during Weeks 5 and 6 of End-to-End Testing (cont.)

| Reported Issue | IESO Priority Ranking | Issue status |
|---|-----------------------|---|
| The <i>Day-ahead Market Operating Reserve Offer Report</i> only shows the hours where the Market Participant has submitted an offer | Medium | <ul style="list-style-type: none">• The <i>Day-Ahead Market Operating Reserve Offer Report</i> should show all hours regardless if a Market Participant submitted an offer.• This issue is currently being investigated by the IESO. |



Week 7 of End-to-End Testing

Week 7 of End-to-End Testing

- End-to-End Testing has been paused from February 28, 2025 to March 7, 2025 to allow the IESO to complete additional preparations.
- The IESO recommends Market Participants do not conduct End-to-End Testing during this period as the systems may not operate as expected.
- End-to-End Testing will resume on March 10, 2025 and continue to run until March 26, 2025.
- The MRP Sandbox environment will continue to be available although system stability cannot be guaranteed.

Week 7 of End-to-End Testing (cont.)

- System and/or application outages may occur without notice and test data could be lost if Market Participants are attempting to conduct tests during this time.
- Reports and Settlement statements will continue to be generated but data may fluctuate or not appear as expected due to IESO activity in the Sandbox environment. Market Participants are asked to not submit issues with the test data that they identify during this week.



Weeks 8 to 10 of End-to-End Testing

Weeks 8 to 10 of End-to-End Testing

For the final three weeks of testing IESO's target is to provide the following:

- All critical/high defects identified by Feb 27 fixed or a workaround identified.
- Communicate status of new high/critical defects within two business days.
- Publishing of all reports required for reconciliation. Occasional system issues may cause delays in publishing. Delayed reports will be published within ~4 business days.
- Occasional instances of other reports not being published. This is aligned with approach in production where transactional reports are not published when a failure occurs.

Weeks 8 to 10 of End-to-End Testing

- To date IESO has been processing changes to registration data for participants, changes required to test specific scenarios, and updating software and infrastructure to fix defects as needed. These types of changes can cause unexpected results and other issues that result in system failures in Sandbox.
- IESO will be limiting changes applied in the Sandbox as follows:
 - No changes applied on March 10-12 and 17-19
 - Scenarios requiring manipulation of inputs by IESO scheduled on the remaining test days
- Please coordinate with IESO in advance to test specific scenarios
- This is to provide participants with a stable testing environment by avoiding unnecessary interruptions or issues that can arise when changes are applied.

Weeks 8 to 10 of End-to-End Testing

- The proposed testing schedule for weeks 8-10 is based on stakeholder input and designed to provide stable test environment while also facilitating re-testing of scenarios that were not successfully completed in weeks 1-6
- Week 8 will simulate low system demand and weeks 9 and 10 high system demand to enable testing of specific scenarios and reduce the interruptions related to changing the set up for different system demand conditions
- Participants are asked to identify any additional scenarios that are important to completing their testing by end of day March 5

Proposed Schedule for Weeks 8 to 10 of End-to-End Testing

| | March 10, 2025 | March 11, 2025 | March 12, 2025 | March 13, 2025 | March 14, 2025 |
|-------------------------------|----------------|--|--|---|-------------------------------------|
| Week 8 (Low System Demand) | | | | <i>IESO will be changing the Sandbox base conditions to a High System Demand</i> | |
| | | <i>S2- DAM Failure (for trade date March 12)</i> | | | <i>S27 - Resettlement Statement</i> |
| | | | <i>S13-Operating Reserve (OR) Activation</i> | | |
| | | | <i>S11 - 1-Day Advance Approval Outage</i> | | |

Proposed Schedule for Weeks 8 to 10 of End-to-End Testing

| Week 9 (High System Demand) | March 17, 2025 | March 18, 2025 | March 19, 2025 | March 20, 2025 | March 21, 2025 |
|--------------------------------|---|----------------|---|----------------|----------------|
| | <i>IESO will be changing the Sandbox base conditions to a High System Demand</i> | | | | |
| | | | <i>S12 - Hourly Demand Response - HDR Activation</i> | | |
| | | | <i>S21-SEAL Constraint</i> | | |
| | | | <i>S7- Market Power Mitigation (MPM)</i> | | |
| | | | <i>S18-GOG Commitment withdrawn by MP with more than 4 hours advance notice</i> | | |
| | | | <i>S19-GOG Commitment withdrawn by MP with less than 4 hours advance notice</i> | | |

Proposed Schedule for Weeks 8 to 10 of End-to-End Testing

| | March 24, 2024 | March 25, 2024 | March 26, 2024 |
|------------------------------|----------------------------|----------------|----------------|
| Week 10 (High System Demand) | <i>Exploratory Testing</i> | | |

Timeline to submit communication to the IESO during Weeks 8 to 10 of End-to-End Testing

| Scenario | Scenario Date | Deadline for Submission |
|---|-------------------|--|
| S7 – MPM | March 19-March 20 | 2 business days in advance of trade date for DAM submission, 1 business day in advance of trade date for PD submission |
| S11 – 1-Day Advance Approval Outage | March 12 | 2 business days in advance of trade date by 10:00 EST |
| S12 – Hourly Demand Response – HDR Activation | March 19 | 2 days in advance of trade date |
| S13 – OR Activation | March 12 | 1 day in advance of trade date |

Market Participants should refer to Appendix 6 in the [Market Renewal Program \(MRP\): End-to-End Testing Test Plan \(External\)](#) on the information they need to communicate to the IESO via email, and the associated timelines, during End-to-End Testing.

Timeline to submit communication to the IESO during Weeks 8 to 10 of End-to-End Testing (cont.)

| Scenario | Scenario Date | Deadline for Submission |
|--|-------------------|--|
| S18- GOG Commitment withdrawn by MPM with more than 4 hours advance notice | March 19-March 21 | 1 day in advance of trade date |
| S19 – GOG Commitment withdrawn by MP with less than 4 hours advance notice | March 19-March 21 | 1 day in advance of trade date |
| S21- SEAL Constraint | March 19-March 20 | 1 day in advance of trade date for RT-only constraints (2 days if to be included in DAM) |

Market Participants should refer to Appendix 6 in the [Market Renewal Program \(MRP\): End-to-End Testing Test Plan \(External\)](#) on the information they need to communicate to the IESO via email, and the associated timelines, during End-to-End Testing.

Additional Resources

- Updated [Dispatch Service Web Service Design Specifications \(SPEC-154\)](#)
- Updated [Dispatch Notification Service Web Service Design Specifications \(SPEC-155\)](#)
- Updated [Web Based Dispatch Service Guide](#)



Q&A Session

Next Steps

- The last Q&A session will be scheduled on March 18, 2025.
- Emails will be sent in advance from the IESO Market Renewal mailbox notifying when Market Participants can register for the Q&A session.
- This presentation deck will be published on the [Market Participant Testing](#) page at the end of each Q&A meeting.
- Market Participants are reminded to submit their test results and defects using qTest or the Issue Log Templates.
- Contact IESO Customer Relations if you have any questions that are specific to your organization and resources.

Thank You

ieso.ca

1.888.448.7777

customer.relations@ieso.ca

engagement@ieso.ca



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