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**DIRECTIVE 052**

**MARKET TEST PLAN**

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## 1. Introduction

This Market Test Plan provides a description of the processes and testing materials that will be used for testing systems to be implemented by market participants on June 1, 2008, to support the successful implementation of v1.0 of *Directive 052: Standards for Requesting and Exchanging Site-Specific Historic Usage Information for Retail Electricity and Natural Gas Markets*

### 1.1. Purpose

This Market Test Plan provides direction to distributors under the jurisdiction of the EUB, and other market participants who choose to participate in testing, of the processes, procedures and testing requirements to be followed to complete market testing and to ensure successful implementation of the directive.

The main objective of this document is to provide the mechanism and criteria for evaluating a market participant's ability to create and process files and transactions that adhere to defined standards as stated in the directive.

### 1.2. Intended Audience

This market test plan is primarily intended for all market participants involved in system development, testing and deployment activities to achieve full compliance with the requirements of Directive 052.

### 1.3. Approach

This market test plan was developed in consultation with various market stakeholders, but mainly:

- ATCO Electric
- ATCO Gas
- ENMAX Power
- EPCOR Distribution and Transmission
- FortisAlberta

As of June 1, 2008, all distributors under the jurisdiction of the EUB must transact with market participants requesting site-specific historic usage information according to the requirements of Directive 052. To facilitate successful implementation of systems compliant with Directive 052 standards, the EUB will coordinate a market testing effort for distributors and other market participants who choose to participate.

To expedite the test planning process, this test plan has been developed based on the success of the Tariff Billing Code (TBC) testing effort and incorporates lessons learned from previous TBC test phases to improve testing processes.

The Market Test Plan approach is as follows:

1. Discrete business requirements are to be extracted from *Directive 052* published on July 20, 2007 and updated based on market agreed amendments to the directive up to September, 18, 2007. These business requirements will form the basis of the Market Test Plan test requirements.
2. Test scenarios will be created to test a specific business requirement or function of a market participant's system. Individual test scenarios map directly to one or more business requirements.

3. Logical groupings of test scenarios will be packaged into individual test cases. Within each test case, one or more functional test scenarios form test sequences used to test a single or multi-function process.
4. A test schedule will be produced based on market participant compliance plans and stakeholder input to establish the testing schedule for execution of this Market Test Plan.
5. Standardized test data will be developed by each distributor to reflect their production system(s) and process inputs and outputs to support execution of published test cases.

## 1.4. Scope Definition

This Market Test Plan covers the process flow as outlined in Section 3.1 (Historic Usage Information Process Flow) as it relates to the historic usage file and the associated RFU transaction as outlined in Section 4 (Information Exchange) of the directive.

### 1.4.1. In Scope

The following items are in scope for this market test plan:

- The electronic files and transactions as stated in Section 4 (Information Exchange) of *Directive 052*
- Positive and negative historic usage file responses based on the available responses to Request for Usage (RFU) transactions as per Table A3 (Response Reason Codes) of in Appendix A of the directive.

### 1.4.2. Out of Scope

The following items are not in scope for this market test plan, but should be conducted by each market participant system and process owner prior to system implementation:

- Unit, integration, function, stress, or performance tests necessary to confirm the correctness, robustness or effectiveness of the market participants systems used to produce, transmit, receive, and process files compliant with the directive.
- Tests necessary to determine the robustness or effectiveness of a market participant's market transport mechanism (currently DropChute).
- Tests necessary to determine the security of a market participant's system(s).

## 1.5. Assumptions

The following assumptions have been made in the creation of this test plan:

- Regulated market participants (limited to distributors of electricity and/or natural gas) participating in the Alberta electricity and natural gas markets will adhere in full with this document for testing processes and guidelines.
- The test plan is designed to test the standard files, transactions, and business processes related to the production or processing of a historic usage file (HUF) which distributors and requesting parties must exchange.
- In addition to testing outlined in this test plan each market participant will perform unit, integration, stress and performance testing, where deemed necessary.

- The test plan is not intended to exercise every conceivable market condition or situation; however, it will cover the common market conditions as well as market conditions that are expected to cause problems.
- The test plan cannot anticipate limitations within each market participant's system(s) (including test environments). As a result, it is strongly recommended that market participants perform additional testing of their own systems.
- Each market participant has assembled, or is able to assemble, a test team with the requisite skills to develop and execute test activities outlined in this test plan.
- Distributors under the jurisdiction of the EUB will abide by the published test schedule for executing the market test plan. Where a distributor is unable to abide by the test schedule, notification in writing to the EUB must be provided.

## 2. Test Plan

### 2.1. Overview

Testing has been organized into two test phases:

- **Distributor Stand-alone Testing** – Each distributor performs testing of their internal systems using mock-up and/or production test data to evaluate their ability to produce and process files and transactions related to processing of an RFU and subsequent production of a compliant HUF. Testing by distributors during this phase of testing will be performed independently of testing being performed by retailers and other requesting parties.
- **Retailer Stand-alone Testing** – Each retailer and other requesting party choosing to participate in the test program performs testing of their internal systems using standardized test data produced by each distributor to evaluate their ability to produce and process files and transactions compliant with Directive 052. Testing by requesting parties during this phase of testing is performed independently of testing being performed by distributors. This phase of testing requires that distributors have successfully completed distributor stand-alone testing and have generated test data to support stand-alone testing of retailers and other requesting parties.

The scope of testing as defined by each regulated distributor must correlate to that distributor's Compliance Plan for version 1.0 of *Directive 052* (as well as any revisions to that document), and approved exemptions.

### 2.2. Distributor Stand-Alone Testing

#### 2.2.1. Objective

Distributor stand-alone testing is designed to evaluate a distributor's ability to produce and process compliant transactions related to the production and processing of a historic usage file using mock-up and/or production test data. Successful completion of this test phase will provide the distributor, requesting parties, and the EUB with a level of assurance that the distributor has successfully met the stand-alone testing exit criteria (as described in Section 5.2.2).

#### 2.2.2. Description

Testing during this phase is performed independently of retailer testing. Standard test cases will be established for the execution of distributor stand-alone testing that will organize test scenarios (derived

directly from business requirements stated in *Directive 052*) into sequences. These sequences are focused on testing business and system processes that are frequently executed and/or may cause major problems during market operations.

Execution of all distributor stand-alone test cases will exercise all aspects of historic usage files and request for usage transactions as described in Table 4-1 of Section 4 (Information Exchange) of the directive.

Due to the peculiarities in distributors' systems, test scripts (defined in this document as detailed steps necessary to execute a test sequence within a test case) will not be defined for distributor stand-alone test cases. Distributors will be expected to create these detailed test scripts from test sequence descriptions to support execution of each test case.

To support the execution of distributor stand-alone testing, each distributor must create test data, or extract test data from their production environment, that accurately reflects that distributor's system input and business processes for each test case.

## **2.3. Retailer Stand-Alone Testing**

### **2.3.1. Objective**

Retailer stand-alone testing is designed to evaluate a retailer/ other requesting party's ability to produce compliant Request for Usage transactions and process Historic Usage Files compliant with Directive 052. Successful completion of this test phase will provide the retailer/other requesting party, distributors, and the EUB with a level of assurance that the retailer/other requesting party has successfully met the retailer stand-alone testing exit criteria (as described in Section 5.3.2).

### **2.3.2. Description**

Testing during this phase is performed independently of distributor testing; however, the retailer/other requesting party is dependent on the successful completion of distributor stand-alone testing for obtaining test data to be used as input into the execution of individual test cases.

Standard test cases will be established for the execution of retailer party stand-alone testing that organize test scenarios (derived directly from business requirements stated in *Directive 052*) into sequences and map directly to distributor test case sequences. The retailer test case sequences are focused on testing business and system processes that are frequently executed and/or may cause major problems during market operations.

Execution of all relevant retailer stand-alone test cases will exercise all aspects of creating and processing historic usage files and transactions as described in Table 4-1 of Section 4 (Information Exchange) of the directive.

Due to the peculiarities in retailer/other requesting party systems, test scripts (defined in this document as detailed steps necessary to execute a test sequence within a test case) have not been defined for retailer stand-alone test cases. Retailers/other requesting parties are expected to create these detailed test scripts from the test sequence descriptions to support execution of each test case.

To support the execution of retailer stand-alone testing, distributor stand-alone test cases that relate to the production and processing of a historic usage file will map directly to retailer stand-alone test cases. Each distributor will publish standard test data to the EUB that accurately reflects that distributor's system output and business processes for each test case. Requesting parties will utilize the published standard test data as input for the execution of a given test case.

## **2.4. Test Materials**

### **2.4.1. Test Case Documentation**

Standard test cases will be established for the execution of distributor and retailer stand-alone testing. Each test case contains one or more test case sequences describing the specific conditions under which a particular feature or function of a market participant's system must be tested, as well as, the expected results following execution of that sequence. The test cases required for distributor stand-alone testing and retailer stand-alone testing will be obtained by downloading the *Distributor Stand-Alone Test Case Set* and *Retailer Stand-Alone Test Case Set*, respectively, from the EUB's website.

Recognizing differences in market participants' business processes, systems and compliance plans, individual market participants may approach execution of a given test case, or sequence within that test case, in a different manner, or it may not apply. Where exceptions are necessary, regulated distributors must notify the EUB of the exception. These exceptions will be maintained by the EUB and published on the EUB's website during the testing process.

### **2.4.2. Test Data**

Market participants will create test data to support the execution of stand-alone test cases that accurately reflect their system and business process input and output. Test data generated by a distributor that will be used as input into the execution of retailer stand-alone testing and must be published to the EUB for review and validation prior to the beginning of retailer stand-alone testing. Please refer to Section 4 for detailed information on the test data management process.

## **2.5. Test Tools**

Market participants are strongly encouraged to implement test tools to assist with execution of the market test plan. These tools can include, but are not limited to: test automation, data management, test case management, and defect management.

## **2.6. Test Schedule**

The EUB will create and publish a test schedule outlining the timing of testing activities to be performed by market participants involved in Directive 052 testing. This schedule is highly dependent upon the adherence of market participants to their development schedule as stated in their individual compliance plans. The EUB will publish this schedule, as well as any amendments to the schedule, on the EUB's website at least 30 days in advance of the beginning of distributor stand-alone testing.

## **2.7. Directive 052 Change Control**

Issues may arise and observations may occur during testing that are deemed significant but must be dealt with outside of the test program. In instances where an adjustment to *Directive 052* is required, a change request must be submitted through the Change Management Process as outlined in the *Directive 052 Change Control Plan*.

## **2.8. Test Issue Reporting and Resolution**

All market participants involved in the execution of this test plan are expected to report issues experienced during testing using a standard issue template (to be issued by the EUB prior to testing) to the following individuals via email:

- Fino Tiberi ([fino.tiberi@eub.ca](mailto:fino.tiberi@eub.ca))
- Joe MacKinnon ([joseph.mackinnon@bearingpoint.com](mailto:joseph.mackinnon@bearingpoint.com))

The EUB will schedule weekly conference calls with members of the Testing Working Group to discuss and resolve issues relating to testing and to mitigate delays in the testing schedule.

### 3. Test environment

#### 3.1. Overview

Each market participant executing this market test plan must establish a test environment that accurately reflects that organization's production environment for creating and processing files and transactions compliant with Directive 052 to support stand-alone testing.

##### 3.1.1. Stand-alone Testing Test Environment

To support stand-alone testing, market participants must establish a dedicated test environment(s) that meets the following minimum requirements:

- a) Accurately reflects their respective production environment, excepting the volume of data that can be processed
- b) Integrates with other systems or processes that are required for creating, transmitting, receiving, or processing files and transactions compliant with Directive 052 (i.e. settlement system, DropChute, etc.)
- c) Can be restored to a previous state in the event the environment is compromised

#### 3.2. Test Environment Management

It is the responsibility of each market participant to maintain the abovementioned test environment, ensure appropriate backups and restores are performed, and ensure that code releases and/or data loads are performed during periods where these activities will not interfere with daily operations, test activities and/or test results.

### 4. Test Data Management Process

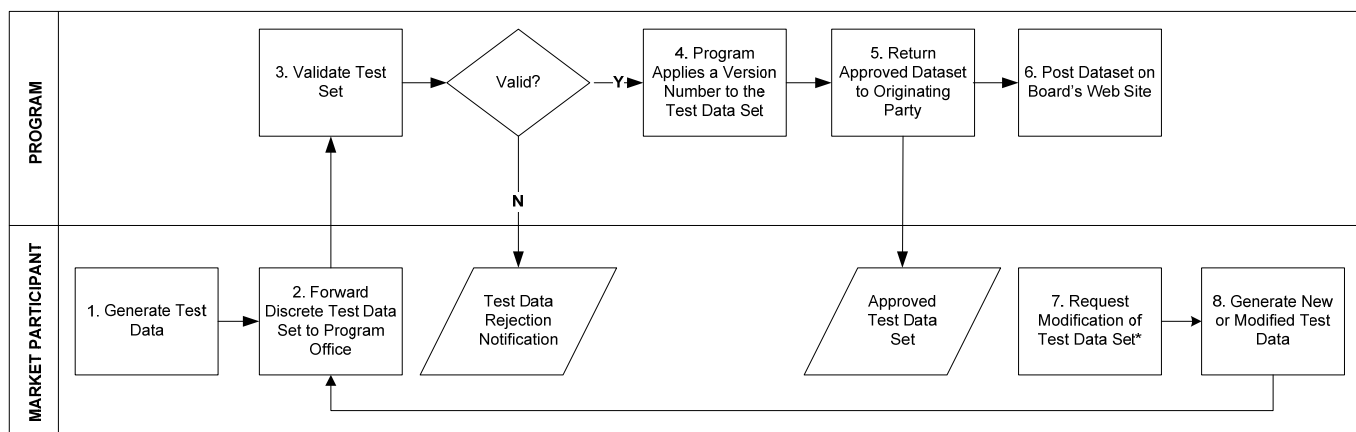
The test data management process, applicable to stand-alone testing, defines the production and management of test data and applies to the following:

- Expected results produced by a distributor to support distributor stand-alone testing
- Actual results generated by a distributor following execution of a given test sequence during distributor stand-alone testing
- Standardized test data produced by a distributor to support a give test sequence for retailer stand-alone testing.
- Expected results produced by a retailer or other requesting party to support retailer stand-alone testing

Test data generated for the execution of the stand-alone testing phases will be used by market participants and the EUB to evaluate compliance of a market participant's implemented system.

In order to accurately track the publication of test data, and any requested modifications, it is necessary to apply a common process for all market participants involved.

#### 4.1. Process



\* A modification to test data may be requested prior to or following the execution of a test case.

#### *Test Data Management Process*

The following steps outline the test data management process:

1. Market participant generates a test data set to be used as:
  - a. Input into the execution of a specific test case or test case sequence
  - b. Actual results following execution of a given test case sequence

The above data sets must consist of all relevant requests for usage transactions and/or historic usage files, SSC transactions, and/or data from other feeder systems to support validation of that data set.

2. Market participant sends the test data set to the EUB via email or CD.
3. EUB validates the test data set using a mix of automated tools and manual processes to determine adherence to Directive 052 standards and adherence to the specific test case or test sequence, and either accepts or rejects the test data set. Working papers prepared during this validation will be maintained for reference. Assuming market participants provide stand-alone test data sets to the EUB for validation in a staggered manner, the EUB expects to provide feedback to a market participant within 3 business days of receipt of the data set. Where a market participant provides a complete data set to the EUB following execution of all required test cases, the EUB expects to provide feedback to a market participant within 5 – 10 business days of receipt of the data set.
4. If the EUB approves the test data set, a version number will be applied to the test data set, otherwise a test data rejection notification will be provided to the originating party via email.
5. EUB returns the approved test data set to the originating market participant via email or CD.
6. EUB posts test data sets that have been sanitized and approved for use in Retailer Stand-alone testing to the EUB's web site to enable requesting parties to download the test data set required for the execution of a specific test case.

7. Conditional – Market participant requests one or more modifications to a test data set as a result of an error found in that test data set.
8. Conditional – If Step 7 occurs and the request is valid, the originator of the data set generates a new test data set.
9. Conditional – If Step 8 occurs, steps 2 through 6 are repeated.

## **4.2. Roles and Responsibilities**

### **4.2.1. Distributors**

To support the test data management process, a distributor must:

- Generate test data as input into the execution of test cases used in distributor stand-alone testing. Market participant systems being modified or developed to comply with Directive 052 requirements each have unique data requirements for executing stand-alone test cases. Therefore, it is necessary for each distributor to create the supporting test data sets for the required test cases.
- Standardize approved test data for use by requesting parties in the execution of retailer stand-alone test cases. Test data generated by a distributor to support retailer stand-alone testing must be retailer non-specific (i.e. Recipient ID in HUF header record = 999999999) and data relating a customer to a site must be converted into non-identifiable information to support the Code of Conduct requirements (i.e. fictitious Site IDs must be used).
- Publish standard test data to support retailer or other requesting party execution of stand-alone testing to the EUB for validation and approval.
- Notify the EUB of required modifications and/or augmentations to approved test data, where necessary.

### **4.2.2. Requesting Parties**

To support the test data management process, the EUB recommends retailers and other requesting parties:

- Download approved test data specific to a distributor from the EUB's web site, where necessary, prior to the execution of a specific test case.
- Generate test data as input into the execution of test cases that do not require processing of a historic usage file. Retailer and requesting party systems being modified or developed to comply with *Directive 052* requirements may have unique data requirements for executing one or more stand-alone test cases. Therefore, it is necessary for each retailer or other requesting party to create the supporting test data sets for these test cases.
- Generate test data to serve as expected results for comparing and evaluating the output of a given test case against.

### **4.2.3. EUB**

To support the market testing test data management process, the EUB will:

- Collaborate with the market participant that generated the test data set, as well as the market participant(s) utilizing the test data set, to validate and either approve or reject the test data set.

- Version test data sets that have been received from market participants and subsequently validated and approved.
- Publish approved test data sets to support stand-alone testing to the market participant that generated the data.
- Publish approved distributor test data sets to support retailer stand-alone testing on the EUB's web site.

### 4.3. Test Data

A test data set is comprised of data constructed in a format specified in the directive, in the case of directive compliant files or transactions, or in a format that can be recognized by a market participant's system, in the case of input data that is not specified in the directive. Test data sets will include all relevant input, output, and/or reference data to historic usage information such as relevant SSC transactions, and at a distributor's discretion, internal transactions for providing additional clarity to retailers.

In both cases, test data will be generated and/or extracted to support stand-alone testing, introducing discrepancies by manipulating system generated files, where required, to meet the objectives of a specific test case.

The following general requirements must be adhered to for the generation of test data used to support stand-alone testing:

- Test data must be produced in comma-delimited (.CSV) format, to comply with file or transaction format requirements of the *Directive 052* and the *SSC*, as well as for efficient upload into market participants' systems.
- Test data created to support files or transactions compliant with Directive 052 must be transaction specific, meaning that the data set will be formatted as specified in Appendix A, Universal Electronic Transaction Standards, and comply with the production rules specified in Section 4(Information Exchange) of the directive, except in instances where a specific change is requested in order to exercise a specific sequence within a test case.
- The naming convention used to name the test data set, as well as test data files within that test data set, must adhere to the naming convention stated in Section 4.3.3.

#### 4.3.1. Distributor Stand-alone Test Data

A distributor is required to generate test data to support each distributor stand-alone test case and test sequence within a test case. This includes the generation of test data to serve as input into the execution of a test case. It is also recommended the distributor generate test data to serve as expected results for comparison to output generated from the execution of a given test case.

Test data generated by distributors must adhere to the following minimum requirements:

- Test data must accurately reflect a distributor's production input and output data as of the expected transition date (i.e. must adhere to the same format and rules of relevant *SSC* transactions, *Directive 052* transactions, or other required inputs, except where manual manipulation of the test data is required in order to test negative results).
- A copy of production data or mock up data may be used to execute a particular test sequence provided the data in its existing state, or following manual manipulation, accurately represents the data required to execute a given test sequence.

- A control set of sites must be created to support distributor stand-alone testing and must include as many sites as necessary to test the various combinations of site attributes and metering characteristics for a specific distributor. The control set of sites must also consist of sites for which historic usage information is unavailable for a requested period, available for a portion of the period, and available for more than the requested period. In addition, the control set of sites must also be large enough to support the replacement of a site where challenges with that site are encountered.
- Sites used in stand-alone testing should also take into account any other circumstances that experience has shown should require special attention by the distributor.

#### 4.3.2. Retailer Stand-alone Test Data

A distributor is required to generate test data to support each retailer stand-alone test case, and test sequence within a test case, that relates to the processing of a historic usage file. Distributors must use the EUB validated and approved test data generated during the execution of distributor stand-alone testing as the basis for generating test data to support requesting parties in the execution of their stand-alone test cases. In order for all requesting parties to utilize the test data generated by a distributor, a distributor must adhere to the following minimum requirements when producing test data to support retailer stand-alone test data:

- The test data must accurately reflect historic usage data generated from that distributor's production environment as of the expected implementation date.
- The test data must be retailer non-specific (i.e. Retailer ID = 999999999) and data relating a customer to a site must be converted into non-identifiable information to comply with the Code of Conduct requirements.
- Test data will include the request for usage transaction and the resulting historic usage file generated by a distributor to support a retailer's execution of a given test sequence.

In addition, a distributor must publish a test case relationship map using the *Test Case Relationship Map Template* that will be published on the EUB's website to map retailer stand-alone test case sequences to each applicable site within that distributor's control set of sites used to support retailer stand-alone testing.

#### 4.3.3. Test Data Set Naming Convention

All test data files generated by distributors that are required to execute a particular test case/test case sequence must be compiled within a ZIP (.zip) file adhering to the following naming convention:

TestCaseNo\_TestCaseSequenceNo\_MarketParticipant\_YYYYMMDD.zip

where,

TestCaseNo:	six character alpha-numeric code identifying the test case (e.g., R10_D01)
TestCaseSequenceNo:	two digit code identifying the test case sequence within a test case (e.g. 01, 02, etc.).
MarketParticipant:	ID of the Distributor (i.e., Distributor ID of the distributor responsible for creating the test data set.
YYYYMMDD:	Date the file was created (e.g., 20041202)

Test data files provided within the ZIP (.zip) file must be given file names that adhere to the applicable file naming convention as stated in *Directive 052* or the *SSC* for that particular file type.

#### 4.4. Approval

##### 4.4.1. Stand-alone Testing

Test data generated by a distributor for a specific stand-alone test case may be submitted to the EUB for review, validation and approval prior to using that test data as input into, or as expected results for comparing the output data generated from, the execution of a given test case.

Distributors must submit the actual results from the execution of a given stand-alone test case, including all of the supporting files, transactions, and other data related to the execution of that test case, to the EUB for validation.

#### 4.5. Version Control

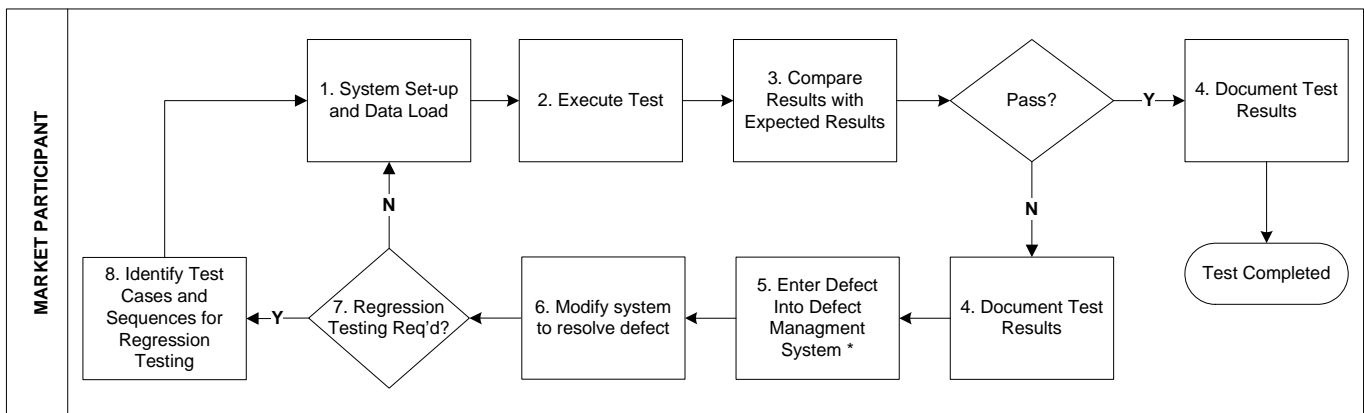
Test data, following validation and approval by the EUB, will be versioned and stored on a server maintained by the EUB prior to posting to the EUB’s web site.

In the event changes are required to test data that supports a stand-alone test case, the market participant identifying the change, or the market participant that originally created the test data, must notify the EUB of the required modification. If a modification is warranted, the market participant that originally created the test data must submit replacement test data to the EUB for validation and approval. Following approval, the EUB will apply an incremental version number to that test data and repost it to the EUB’s web site.

### 5. Test Execution Guidelines

The following section outlines the test execution guidelines that must be followed prior to, and during, stand-alone testing.

#### 5.1. Test Execution Process



\* Internal to Market Participant

#### *Test Execution Process*

The following steps outline the test execution process:

1. Market participant performs general setup of their systems and populates these systems with input test data to support the execution of the test case.
2. Once systems are prepared and contain the necessary test data, the test is executed.
3. The resulting output of the test is compared to the expected results generated for that test case or sequence.
4. Distributors must report test results for each test case sequence using the *Distributor Stand-alone Test Reporting Template* which will be made available on the EUB's web site.
5. If a sequence within a test case fails, the defect must be identified and tracked via a manual or automated defect management process established by the market participant. Details of the defect must be reported using the test results reporting template mentioned above.
6. Following system modifications to resolve the defect, the market participant must re-test the test case sequence by repeating steps 1 through 5.
7. If system modifications are made to resolve a defect, a market participant must assess the impact to their system(s) and determine if regression testing is required for previously executed test cases and sequences that may have been affected.
8. If regression testing is required, a market participant must identify the test cases and sequences that need to be retested and repeat steps 1 through 5 for each.

Successful conclusion of distributor and retailer stand-alone testing will be evaluated through the transition readiness review process at key milestones agreed to by the marketplace.

## **5.2. Distributor Stand alone Testing**

### **5.2.1. Entrance Criteria**

To be eligible to participate in distributor stand-alone testing a distributor must have achieved the following:

1. A dedicated test environment complying with the requirements stated in Section 3 is in place.
2. System development has been completed and passed internal unit, integration, and function testing.
3. The *Distributor Stand Alone Test Case Set* has been downloaded from the EUB's website.
4. Test scripts have been created to support the sequences within each test case.
5. A copy of production data has been taken on a date to be specified by the EUB.
6. The *Distributor Stand-alone Test Reporting Template* has been downloaded from the EUB's website.

### **5.2.2. Exit Criteria**

To complete distributor stand-alone testing a distributor must have achieved the following:

1. All sequences within the *Distributor Stand Alone Test Case Set* have been executed. This criterion excludes test case sequences that are not applicable to a distributor based on that distributor's approved compliance plan and approved exemptions.

2. All high priority test requirements have passed testing, as evidenced by the market participant's test results and review and approval of these test results by the EUB.
3. Actual results of distributor test cases that serve as input into retailer stand-alone test cases have been standardized and approved by the EUB.

### **5.3. Retailer Stand alone Testing**

#### **5.3.1. Entrance Criteria**

The EUB recommends to retailers/other requesting parties choosing to participate in retailer stand-alone testing that they achieve the following:

1. A dedicated test environment complying with the requirements stated in Section 3 is in place.
2. System development has been completed and passed internal unit, integration, function, stress and performance testing.
3. The *Retailer Stand Alone Test Case Set*, has been downloaded from the EUB's website.
4. Test scripts have been created to execute the sequences within each test case.
5. EUB approved test data generated by each applicable distributor has been downloaded from the EUB's website for the execution of each test case sequence.

#### **5.3.2. Exit Criteria**

The EUB recommends to retailers/other requesting parties choosing to participate in retailer stand-alone testing that they achieve the following:

1. All sequences within the *Retailer Stand Alone Test Case Set* have been executed.
2. All high priority test requirements have passed testing, as evidenced by the retailer's or other requesting party's test results.

### **5.4. Test Result Reporting**

Regulated distributors executing this market test plan must report to the EUB their stand-alone testing results. The EUB will compile these results to track each distributor's progress. The EUB will not require formal test result reporting from retailers/other requesting parties but may solicit feedback from time to time on progress.

#### **5.4.1. Reporting Template**

Test results must be reported for each test case, and sequence within that test case, using the *Distributor Stand-alone Test Reporting Template* which will be made available on the EUB's website.

When completing the applicable template, a distributor must report on the current status of all test cases/test case sequences that have been executed to date. For example, if test case sequence R10\_D01\_01 was reported in a prior period, this same record, or an update to this record (if the sequence has been re-tested), must be included in the new report.

**5.4.2. Pass/Fail Criteria**

A distributor may only report a ‘Pass’ for a specific test sequence (within a test case) if the actual results generated following executing match the expected results produced prior to the execution of that test sequence. Any deviation of the actual results from the expected results must be reported as a ‘Fail’.

The EUB will acknowledge that a distributor has passed a specific test case if all test case sequences within that test case have a status of ‘Pass’, excepting test sequences that are not applicable to that distributor (test cases that are deemed not applicable by a distributor must correlate to that market participant’s Compliance Plan and approved exemptions)

**5.4.3. Reporting Frequency**

Distributors must report their stand-alone test case execution results to the EUB on a weekly basis. Commencing on the first Friday following the beginning of distributor stand-alone testing, and every Friday thereafter until closure of that phase of testing, each regulated market participant must provide an updated report to the EUB.

**5.5. Test Support**

The EUB will provide test support to all market participants choosing to participate in the execution of this test plan. The roles, responsibilities, and contact information of EUB personnel are provided in the table below.

*EUB Test Support*

Resource	Role	Test Related Responsibilities	Contact Information
Fino Tiberi	Program Director	Oversight, evaluation, and escalation	Email: <a href="mailto:fino.tiberi@gov.ab.ca">fino.tiberi@gov.ab.ca</a> Phone: +1.403.297.3542
Joe MacKinnon	Program Manager, Facilitator and Test Coordinator	Oversight, evaluation, facilitation, and coordination of market testing.	Email: <a href="mailto:joseph.mackinnon@bearingpoint.com">joseph.mackinnon@bearingpoint.com</a> Phone: +1.403.290.2537

For questions, concerns, or disputes related to stand-alone test data, market participants are encouraged to contact the market participant responsible for the generation of that data prior to engaging the EUB.

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## 6. Appendices

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## 6.1. Definitions

### 6.1.1. Test Type Definitions

- **Function testing** refers to system testing of an integrated, black box system against its operational (i.e., functional) requirements.
- **Integration testing** refers to testing related information system components to ensure they perform to specification.
- **Performance testing** refers to testing conducted to evaluate the compliance of a system or component with specified performance requirements. Often this is performed using an automated test tool to simulate large number of users or large amount of data.
- **Stress testing** refers to testing conducted to evaluate a system or component at or beyond the limits of its specified requirements. Often this is performance testing using a very high level of simulated load.
- **Unit testing** refers to the testing of individual units or modules of code. Typically, this type of testing is performed by the developer and verifies that their piece of code achieves its expected outcome(s). Typically, no integration to the larger system occurs for unit testing.

### 6.1.2. Defect Severity Levels

The definition of defect severity levels, as it relates to this market test plan, is as follows:

**Level 1** – the system, or a critical part of the system, does not work.

**Level 2** – the system cannot meet primary business requirements and there is no simple workaround to mend the situation.

**Level 3** – the system can still perform the primary business requirements, does not block the execution of other test cases, and a simple workaround exists to mend the situation.