



AUC Rule 021: Settlement System Code (Version 2.1) Implementation Test Plan

Final

September 23, 2011

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1.0 Introduction

On November 24, 2010, the Alberta Utilities Commission (AUC) approved AUC Rule 021: *Settlement System Code Rules*, Version 2.1 (Rule 021), with an effective date of January 1, 2011. Because the approved changes involve system changes, market participants were given until November 1, 2011, to implement the required changes.

The AUC has been requested by the market participants to develop a test plan. In order to ensure a successful implementation of the required changes and related transactions, the AUC developed this Implementation Test Plan (Plan). The Plan provides a description of the testing approach and associated processes and materials that will be used for testing enhancements to market participant systems and processes to support the modified Rule 021 transactions.

2.0 Scope definition

This Plan covers changes to transactions as well as processing of these transactions in accordance with a market agreed-upon test schedule using defined test cases and test data. The following changes are included in the Plan:

- Rule 021 Section 5.3 Post-Final Adjustment Mechanism (PFAM)
- Rule 021 Section 9.6.6.1 Retailer Specific Adjustment (RSA) – Process Rules
- The addition of the PFAM Adjustment Reason Code field and the Zone ID field to the RSA transaction¹
- The addition of the Zone ID field to both the Retailer Adjustment to Market transaction (RAM) and Transmission Administrator Adjustment transaction (TAA)²
- The process clarifications agreed upon in AUC Rule 021 SSC Working Group meetings.

2.1 In scope

The following items are in scope for this Plan:

1. The addition of new fields for RSA, RAM, TAA transactions according to stated format.
2. The testing of the correct production of RSAs for changes agreed upon by industry for the case when an error is identified for a site post-final after a material error had previously been identified post-final for which RSAs were created. For this case, those RSAs are not cancelled and replaced, but new RSAs are created taking into account the net effect of the previous RSAs (whether those RSAs were marked as eligible for financial adjustment or not).³
3. Testing of the production of RSAs for the correct application of the proposed wording changes for Section 5.3.5.3 (a)(i) and (ii). For both subsections, the phrase "... the date the data is corrected and the adjustment is processed" will be replaced by "...the date the RSA will be published to market."⁴

¹ July 7, 2011 – "AUC Rule 021 Settlement System Code" email - email sent out to industry by which the AUC committed to stakeholders that these changes are to take place November 1, 2011.

² July 7, 2011 – "AUC Rule 021 Settlement System Code" email - email sent out to industry by which the AUC committed to stakeholders that these changes are to take place November 1, 2011.

³ May 25, 2011 – SSC Working Group Meeting, May 25 Meeting Summary, Section 3 PFAM Implementation.

⁴ April 27, 2011 – SSC Working Group Meeting, April 27 Meeting Summary, Section 3 PFAM adjustment timing.

4. The production of a summary statement for financial adjustments prepared by the Alberta Electric System Operator (AESO) by using actual pool prices applied to consumption amount adjusted through the RSA transaction set.

2.2 Out of scope

The following items are not in scope for this Plan:

1. The testing that the load settlement agent (LSA) correctly monitors its settlement system for changes to the data affecting periods already final settled.
2. The testing of the materiality of an error identified post-final.
3. The data transfer mechanism (i.e. DropChute).
4. The transactions' delivery timing.
5. Testing participants' internal systems and processes used to produce, transmit, receive and process settlement transactions.
6. Storage and backup.

2.3 Assumptions

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

1. The Plan is not intended to exercise every conceivable market condition; however, it will cover the common, high-impact market conditions, as well as market conditions that are expected to cause problems.
2. The 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.
3. Testing participants will abide by the published test schedule for executing the Plan. Where a testing participant is unable to abide by the test schedule, notification in writing to the AUC must be provided.

3.0 Test plan

3.1 Overview

This Plan, along with the AUC coordination and monitoring of the testing activities will assist in determining market participants' ability to create and process the required modified transactions and will assist in the successful implementation of the settlement transactions.

The market participants for the test scenarios are LSAs, retailers or the relevant billing agencies and the AESO.

The following table summarizes the participants' responsibilities, input, expected results and output for the testing:

Testing Participants	Responsibilities	Input	Expected Results	Output
AUC	<ul style="list-style-type: none"> • Define testing scenarios 	<ul style="list-style-type: none"> • Rules changes 	<ul style="list-style-type: none"> • Market agreed-upon test cases 	<ul style="list-style-type: none"> • Test scenarios
	<ul style="list-style-type: none"> • Validate the test data created by testing participants 	<ul style="list-style-type: none"> • Test outputs from LSA and 	<ul style="list-style-type: none"> • Evaluation of whether testing was successful 	<ul style="list-style-type: none"> • Validated test outputs • Pass/Fail decision

Testing Participants	Responsibilities	Input	Expected Results	Output
	<ul style="list-style-type: none"> Post the validated test data on the AUC website for participants to download Review test results reports submitted by testing participants 	<p>AESO</p> <ul style="list-style-type: none"> Test results reports 		
LSA	<ul style="list-style-type: none"> Execute AUC defined scenarios Report test results to AUC Produce test data to support retailer and AESO stand-alone testing Validate that transactions and systems are compliant with requirements 	<ul style="list-style-type: none"> Defined scenarios Input data available in test system 	<ul style="list-style-type: none"> Transactions created in accordance with defined scenarios Test data to support retailer stand-alone testing and AESO stand-alone testing 	<ul style="list-style-type: none"> RSAs TAAAs RAMs
AESO	<ul style="list-style-type: none"> Execute AUC defined scenarios Report test results to the AUC Validate that transactions and systems are compliant with requirements 	<ul style="list-style-type: none"> Defined scenarios LSA test outputs 	<ul style="list-style-type: none"> Successful compliance testing Test data to support retailer stand-alone testing 	<ul style="list-style-type: none"> Identification of instances of non-compliance Summary statement for financial adjustments to retailers based on actual pool prices
Retailer/ billing agent	<ul style="list-style-type: none"> Execute AUC defined scenarios Report test results to AUC Validate that transactions and systems are compliant with requirements 	<ul style="list-style-type: none"> Defined scenarios LSA test outputs AESO test outputs 	<ul style="list-style-type: none"> Successful processing of LSA test outputs Successful reconciliation of LSA outputs to AESO outputs using consumption from RSAs and actual pool prices 	<ul style="list-style-type: none"> Test results report to AUC

3.2 LSA stand-alone testing

3.2.1 Objective

LSA stand-alone testing is designed to evaluate an LSA's ability to produce and process Rule 021 compliant transactions related to the production and processing of the settlement transactions using mock-up and/or production test data. Successful completion of this test phase, by passing all testing requirements, will provide the LSA, the retailers/billing agents, the AESO and the AUC with a level of assurance that the LSA will be ready for the changes to be implemented November 1, 2011.

3.2.2 Description

Standard test cases consisting of one or more test scenarios have been established for the execution of LSA stand-alone testing. These scenarios are focused on testing business and system processes that are frequently executed and/or may cause problems during live market operations.

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

3.3 Retailer stand-alone testing

3.3.1 Objective

Retailer stand-alone testing is designed to evaluate a retailer's (or billing agent's) ability to produce and process Rule 021 compliant transactions related to the production and processing of settlement transactions using standard test data. Successful completion of this test phase, by passing all testing requirements, will provide the LSA, the retailers/billing agents, the AESO and the AUC with a level of assurance that the retailer/billing agent will be ready for the changes to be implemented November 1, 2011.

3.3.2 Description

Standard test cases consisting of one or more scenarios have been established for the execution of retailer stand-alone testing. Where possible, retailer test scenarios map directly to the LSA test case scenarios and the AESO test case scenarios. The retailer test scenarios are focused on testing business and system processes that are frequently executed and/or may cause problems during live market operations.

To support the execution of retailer stand-alone testing, each LSA and the AESO will publish standard test data to the AUC that accurately reflects their system output and business processes for each test case. Retailers will utilize the published standard test data as an input for the execution of a given test case.

3.4 AESO stand-alone testing

3.4.1 Objective

AESO stand-alone testing is designed to evaluate the AESO's ability to process Rule 021 compliant transactions related to the production and processing of settlement transactions using standard test data. Successful completion of this test phase, by passing all testing requirements, will provide the LSA, the retailers/billing agents, the AESO and the AUC with a level of assurance that the AESO will be ready for the changes to be implemented November 1, 2011.

3.4.2 Description

Standard test cases consisting of one or more test scenarios have been established for the execution of AESO stand-alone testing. Where possible, these scenarios map directly to the LSA test case scenarios. The AESO test scenarios are focused on testing business and system processes that are frequently executed and/or may cause problems during live market operations.

To support the execution of AESO stand-alone testing, each LSA will publish standard test data to the AUC that accurately reflects that LSA's system output and business processes for each test case. The AESO will utilize the published standard test data of the LSAs as input for the execution of a given test case.

3.5 Test environment management

Each market participant executing this Plan may need to establish a test environment that accurately reflects that organization's production environment for creating and processing settlement compliant transactions to support stand-alone testing. Participants are encouraged to do so.

Participants are expected to take appropriate actions to ensure backup and be able to restore the test data. In addition, it is a participant's responsibility to ensure data creation and loading are performed during the testing periods where these activities will not interfere with normal daily system operations. Testing participants are responsible for using the correct version of test data in their test system(s).

4.0 Testing timelines

The AUC surveyed participants regarding an appropriate testing schedule. The following table details the timelines and parties involved:

Date	Actions
September 16, 2011	AUC issues the draft Plan and the test scenarios to industry for comment.
September 21, 2011	Industry comments due for the draft Plan and the test scenarios.
September 23, 2011	AUC finalizes the Plan.
September 23, 2011	AUC to post all test scenarios on its website for participants to use for testing.
September 23 to October 27, 2011	LSA to execute AUC defined test scenarios and produce test data set to support retailer stand-alone testing and the AESO stand-alone testing. LSAs to send test data to AUC by no later than October 7, 2011.
	AUC to validate and evaluate each LSA's test data set in accordance with the transaction standards of the Rule 021 and the defined scenarios.
	AUC to post the validated test data set on the AUC website for retailers and the AESO to use, by October 14, 2011.

Date	Actions
	The AESO to execute AUC defined test scenario using validated LSA's test data to support the retailer stand-alone testing and identify instances of LSA non-compliance. The AESO to notify AUC of the test results by no later than October 21, 2011.
	AUC to validate and evaluate AESO test data sets in accordance with the transaction standards of the Rule 021 and the defined scenarios. AUC to post the validated test data sets on the AUC website for retailers to use by October 24, 2011.
	Retailers to execute AUC defined test scenarios using validated LSA and AESO test data. Retailers to notify AUC of the test results by no later than October 27, 2011.
October 28, 2011	AUC to post the test results on the AUC website.

5.0 Test support

5.1 AUC test support

The AUC will provide support to participants during each phase of testing. For questions, concerns or disputes relating to test data, testing participants are encouraged to contact the testing participant responsible for the generation of that data, prior to engaging the AUC. The roles, responsibilities and contact information of AUC personnel are provided in the table below.

Role	Contact Name	Test Related Responsibilities	Contact Information
Testing Coordinator	Will Chow	Oversight, evaluation, and escalation	Email: william.chow@auc.ab.ca Phone: 403-592-4496
Testing Coordinator	Anne Glass	Oversight, evaluation, and escalation	Email: anne.glass@auc.ab.ca Phone: 403-592-4389
Testing Coordinator	Maria Baitoiu	Oversight, evaluation, and escalation	Email: maria.baitoiu@auc.ab.ca Phone: 403-592-4460

5.2 Participants' test support

The AUC has requested participants to provide information regarding their main contact person for the testing phase. It is anticipated that the main contact person will be responsible

for dealing with all issues related to the testing, and he/she will relate all issues within his/her organization. The contact information of the testing participants is provided in the table below.

Company	Contact Name	Contact Information
AESO	Mike Choboter	Email: Mike.Choboter@aeso.ca Phone: 403-539-2783
ATCO Electric	Juanito De Jesus Enrique Nino	Email: Juanito.deJesus@atcoelectric.com Phone: 780-420-8986 Email: Enrique.Nino@atcoelectric.com Phone: 780-420-5521
FortisAlberta Inc.	Wayne Schultz	Email: Wayne.Schultz@fortisalberta.com Phone: 403-514-4060
Just Energy	Suzette Sondag	Email: ssondag@ista-na.com Phone: 713-403-8728

6.0 Test cases

All the test cases will be detailed in a separate document that will also be published on the AUC website. The intent is that, in case changes to the test cases are required, this Plan need not be changed.