Business Requirements Specification

Revisions to Price Correction Requirements

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## Disclaimer

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This document may be further modified based on the conclusion of the ISO stakeholder process for developing necessary tariff language and the tariff amendment proceeding at the Federal Energy Regulatory Commission.
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1. Introduction

1.1 Purpose

The purpose of this document is to capture and record a description of what the Users and Business Stakeholders of the project wish to obtain by providing high-level business requirements. This document establishes the basis for the agreement between the initiators and implementers of the project. The information in this document serves as input to determining the scope of Information Systems projects and to all Business Process Modeling and System Requirements Specifications efforts.

These requirements will serve as the initial set of business unit requirements for the appropriate software application/systems development effort. It is understood that additional requirements and systems analysis may produce “To Be” Business Process Models, System Requirements Specifications, and Use Cases to serve as the set of requirements documents used by the development teams to buy, modify, or build the necessary software and hardware systems. The Business Unit(s) involved in the project will have an opportunity to review and approve all requirements documentation produced.

The ISO plans to revise the day-ahead market timeline and three of the ISO’s price correction processes to streamline and refine the ISO’s price correction processes. Specifically, Management proposes to: 1) adjust the closing time of inter-scheduling coordinator trades; 2) revise the time horizon for price corrections; 3) clarify the types of processing and publication issues that may require changes in posted prices beyond the typical time horizon; and 4) provide additional communications regarding price corrections. The proposed changes will improve the accuracy and certainty of ISO market prices.
2. Details of Business Need/Problem

2.1 Description

<table>
<thead>
<tr>
<th>Business Opportunity/Problem Statement:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What: The ISO has gained three years of market experience since it last evaluated its price corrections procedures. With this additional market experience and through a stakeholder process conducted over the last three months, Management has identified specific refinements to the price corrections processes that will increase the accuracy and certainty of market prices.</td>
</tr>
<tr>
<td>When: 2013 to on-going</td>
</tr>
<tr>
<td>Why do we have this opportunity/problem:</td>
</tr>
<tr>
<td>Who does this opportunity/problem impact:</td>
</tr>
</tbody>
</table>
3. Business Process Impacts

3.1 High Level Business Process

3.1.1 Description

The Revisions to Price Correction Requirements initiative impacts the following existing business process diagram:

- Manage Price Corrections
- Manage Price Validations
- MQS Application Flow
- Manage Market Quality System (MQS LII)
- Perform Market Reporting
- Billing & Settlements

3.2 Description

Specific impacts on these business processes that the Commitment Cost Refinements 2012 team has identified to date are as follows:

**Manage Price Corrections**: Need to update the document to reflect some gaps in the existing process. Also, need to incorporate the new T+5B and T+3B timeframe.

**Manage Price Validations**: Need to adjust validation process to the new timelines of T+5B and T+3B.

**MQS Application Flow**: Depicts the new Price Correction timeframe and the MQS Data Processing Run/MQS Payload publishing.

**Manage Market Quality System (MQS LII)**: Automatic Process runs and data pushes to market needs to be documented. Impacts to publishing of price corrections to CMRI/OASIS.

**Perform Market Reporting**: Timeline change (T+3B & T+5B)

**Billing & Settlements**: Timeline change (T+3B & T+5B)
3.3 Justification

The ISO FERC Electric Tariff (ISO Tariff) section 35.3 and section 8 of the BPM for Market Operations set forth the scope, process, and time horizon for price corrections. The intent of the price correction process is to ensure appropriate and accurate inputs are used in settlements as well as to ensure prices accurately reflect system conditions. The ISO corrects invalid prices pursuant to a set of requirements defined in the tariff, by either recalculating prices or selecting replacement prices from similar market intervals. The goal of the price correction is to produce prices that are as close as possible to the prices that should have resulted under the terms of the ISO tariff provisions had there been no issue. Under the current ISO tariff provisions, prices can be corrected due to:

i) a data input error

ii) a hardware/software failure

iii) an inconsistency with the tariff.

At the start of its new market design in 2009, the ISO set the time horizon for price corrections at eight days. In 2010, the ISO conducted a stakeholder process to review its price correction rules and processes. Out of that stakeholder process, the ISO proposed to reduce the price correction time horizon to five calendar days, with certain exceptions to accommodate processing and publication issues outside of that time frame.

The ISO committed to continuously review its price correction processes and results and consider further changes as necessary over time. Given the importance of producing correct prices and the need to weigh that against price certainty, and in light of its experiences over the past four years of market experience, the ISO is initiating this to make improvements in the price correction rules, requirements, and to streamline and clarify the scope and time horizon for price corrections.
4. Business Requirements

The sections below describe the Business Processes and the associated Business Requirements involved in the project. These may represent high level functional, non-functional, reporting and/or infrastructure requirements. These business requirements directly relate to the high level scope items determined for the project.

4.1 Business Process: Manage Price Corrections

4.1.1 Business Requirements

<table>
<thead>
<tr>
<th>ID#</th>
<th>Business Feature</th>
<th>Requirement Type</th>
<th>Potential Application(s) Impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPCR-BRQ001</td>
<td>The ISO shall reduce the time window for price corrections of the day-ahead market to three business days.</td>
<td>Core</td>
<td>MAPP Script</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>OASIS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CMRI</td>
</tr>
<tr>
<td></td>
<td>Business Rule: The ISO currently uses a five calendar day window for the day-ahead market. By using business days it will allow the ISO to more efficiently handle the instances where there are complex price corrections potentially affecting a large volume of prices to validate and, potentially, correct.</td>
<td>Tariff 35.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>BPM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Business Rule: For clarification of all prices subject to price corrections, please refer to section 8 of the Market Operations BPM. The new market types being created under FERC 764 must be covered within this initiative.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Revisions to Price Correction Requirements

### Business Requirements Specification

**Date Created:** 11/15/2013

<table>
<thead>
<tr>
<th>ID#</th>
<th>Business Feature</th>
<th>Requirement Type</th>
<th>Potential Application(s) Impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPCP-BRQ002</td>
<td>The ISO shall change the time window for price corrections of the real-time market to five business days.</td>
<td>Core</td>
<td>MAPP Script, OASIS, CMRI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tariff 35.2</td>
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<td>BPM</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Business Rule:</strong> The ISO currently uses a five calendar day window for the real-time market. By using business days it will allow the ISO to more efficiently handle the instances where there are complex price corrections potentially affecting a large volume of prices to validate and, potentially, correct.</td>
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<td><strong>Business Rule:</strong> For clarification of all prices subject to price corrections, please refer to section 8 of the Market Operations BPM. The new market types being created under FERC 764 must be covered within this initiative.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RPCP-BRQ003</td>
<td>The timing of the weekly price correction report must be changed to align with the timeframe outlined within the tariff and Market Operations BPM.</td>
<td>Tariff</td>
<td>Reporting Requirement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BPM</td>
<td></td>
</tr>
</tbody>
</table>
| RPCP-BRQ004 | The ISO tariff must be enhanced to include a description of the four categories listed below:  
- Volumetric issue  
- Hardware/software issue  
- Business Process issue  
- Complex manual corrections  
The description shall serve to provide visibility into the course of action the ISO will take when the ISO experiences such type of processing and publication issues. | Tariff           | Not applicable                    |
<p>|           |                                                                                 | BPM              |                                   |
| RPCP-BRQ005 | The ISO shall continue to maintain a 20-business day window for processing and publication issues. | Tariff           | Not applicable                    |
|           | <strong>Business Rule:</strong> The 20-business day period is used to report out on publication and processing issues that aren't able to be solved within the T+3B &amp; T+5B price correction timeframe. |                |                                   |</p>
<table>
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<tbody>
<tr>
<td>RPCR-BRQ006</td>
<td>A medium of communication must be used to provide notification of price corrections.</td>
<td>Core</td>
<td>CMRI; OASIS; External Reporting</td>
</tr>
<tr>
<td>RPCR-BRQ007</td>
<td>The medium of communication must be accessible on a 24/7 basis by all market participants. The pre-defined user must have control over the timing, content, and publication of message content also on a 24/7 basis.</td>
<td>Core</td>
<td>CMRI; OASIS; External Reporting</td>
</tr>
<tr>
<td>RPCR-BRQ012</td>
<td>The ISO shall provide details as to the reason for having the price correction, the markets impacted, and the expected time to finalize the posting of corrected prices.</td>
<td>BPM</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>RPCR-BRQ013</td>
<td>The ISO shall provide a notice after the publication results indicating these prices are still subject to validation and potential price correction; this notice shall provide technical details as to the suspect price as practical as possible.</td>
<td>BPM</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>RPCR-BRQ014</td>
<td>If there are no prices flagged during the pre-publication validation, ISO shall not provide any notices. The lack of a notice will indicate that the pre-publication validation has not detected any issues.</td>
<td>BPM</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>RPCR-BRQ015</td>
<td>If the ISO finds an issue that merits a price correction after the publication of the day-ahead results, the ISO must inform the market about such correction as soon as practical within the proposed three business day window.</td>
<td>BPM</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>RPCR-BRQ016</td>
<td>If the ISO does not find any issues after the publication of results and there are, therefore, no price corrections, there will be no notice to the market about this. The lack of notice to the market will indicate the ISO did not pursue any further price correction.</td>
<td>BPM</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>RPCR-BRQ030</td>
<td>History of communications must be stored for 36 months after the original notification publishing.</td>
<td>Core</td>
<td>CMRI; OASIS; External Reporting</td>
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4.2 Business Process: Inter-Scheduling Coordinator (SC) Trades

4.2.1 Business Requirements

<table>
<thead>
<tr>
<th>ID#</th>
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<th>Requirement Type</th>
<th>Potential Application(s) Impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPCR-BRQ008</td>
<td>The ISO shall not implement a flagging of real-time prices subject to validation. The ISO does not intend to flag corrections at an individual level.</td>
<td>Core</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>RPCR-BRQ011</td>
<td>The ISO shall change the closing time for inter-scheduling coordinator trades from 12:00 pm to 11:00 am Pacific Prevailing Time.</td>
<td>Core, Tariff</td>
<td>SIBR</td>
</tr>
</tbody>
</table>