

Assurance Approach

For the
TIBCO EMS upgrade Market Change

Prepared by: Version 1 Retail Market Electricity Assurance Team
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Version Control

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26/02/2025	V0.2	J McKnight	Review Updates

Circulation List

Organisation	Reason
RMDS	Review
CRU	Approval
IGG	Approval

Reference Documents

Title	Description	Owner
Project Plan	Document defining the steps, timeline, tasks, resources, and strategy for executing the TIBCO EMS upgrade project	ESB Networks

1. INTRODUCTION

This document outlines the approach that Version 1 (the Assurance Body) will apply when providing Assurance for the TIBCO EMS upgrade project 2025. The project scope, steps and timeline are outlined within the ESB Networks Project plan (document attached). This approach is following the Market Change Assurance Approach process as detailed in the Market Change Assurance Strategy (September 2023).

1.1. Summary of changes being introduced by the TIBCO EMS upgrade

Currently ESB Networks use a TIBCO application to provide Market Message communications between market participants within the Retail Electricity Market. The solution consists of a TIBCO hub which sends and receives messages on behalf of ESB Networks. Large / Small Suppliers (and other Market Participants e.g. Eirgrid the TSO) have locally installed 'EMMA' solutions based on the TIBCO technology stack. This allows them to exchange their respective messages with ESB Networks centralised TIBCO hub.

The market messages flowing between the DSO (ESB Networks) and Market Participants are aligned with market operations such as registrations, change of tenancy, consumption information, meter changes etc. Schema Version 14 is the current baseline which these messages adhere to.

Software Element	Current		Target	
	Version	Hotfix	Version	Hotfix
Business Works (BW)	5.15.0	Hotfix 3	5.15.1	Hotfix 2
Business Connect (BC)	7.3.0	NA	7.4.0	Hotfix 3
Administrator	5.12.0	Hotfix 1	5.12.4	Hotfix 1
TRA	5.12.1	Hotfix 1	5.12.4	Hotfix 2
EZComm	6.3.0	Hotfix 1	6.3.0	Hotfix 2
BC Palette	6.3.0	NA	6.5.0	NA
EMS	8.6.0	NA	10.3.0	Hotfix 1,2,4 & 7
Hawk	6.2.1	Hotfix 4	6.3.1	NA
RV	8.5.0	NA	8.7.0	Hotfix 2

Table 1 - TIBCO software elements being upgraded including current and target versions

ESB Networks are undertaking a project to upgrade various software components on the TIBCO servers (running the EMMA solutions) from the current version to the new upgraded (target) version. The changes are mainly to ensure the existing solution does not breach end of life support. Message types and contents will remain the same as well as the flow from SAP through the HUB and out to Market Participants (and vice versa).

2. OBJECTIVES

2.1. The focus and objective of this Assurance Approach

The overall focus of assurance is to provide confidence in the continued operability of the retail electricity market following cut over after the changes have been made to the TIBCO Upgrade, in addition all market participants are aware of the changes.

More precisely this assurance work includes:

- Inspection of programme records, that the changes due to the TIBCO Upgrade project have been designed, developed, tested, and shown to fully support the retail market;
- Provide confidence that the introduction of the new changes will not detrimentally impact the retail market in a material way.

2.2. The guiding principles of this Assurance Approach

The guiding principles underpinning this Assurance Approach can be condensed into the following;

- Assurance activities should not place an unnecessary burden on market participants;
- Assurance process must be appropriate to the change being implemented;
- Market assurance should be evidence based;
- There should be transparency on the activities being performed; and
- The approach and outcomes provide confidence for the CRU and Market to proceed with the implementation of the release into production.

The Assurance Body is providing assurance that the market will not be negatively impacted by the TIBCO EMS Upgrade market change.

3. ASSURANCE APPROACH

3.1. Summary of our Approach to Assurance

The assurance approach contains seven distinct stages, which typically occur in sequence. It should be noted however depending on the level of change being introduced by the release, the depth of probing may differ for certain stages and some stages may not be required.

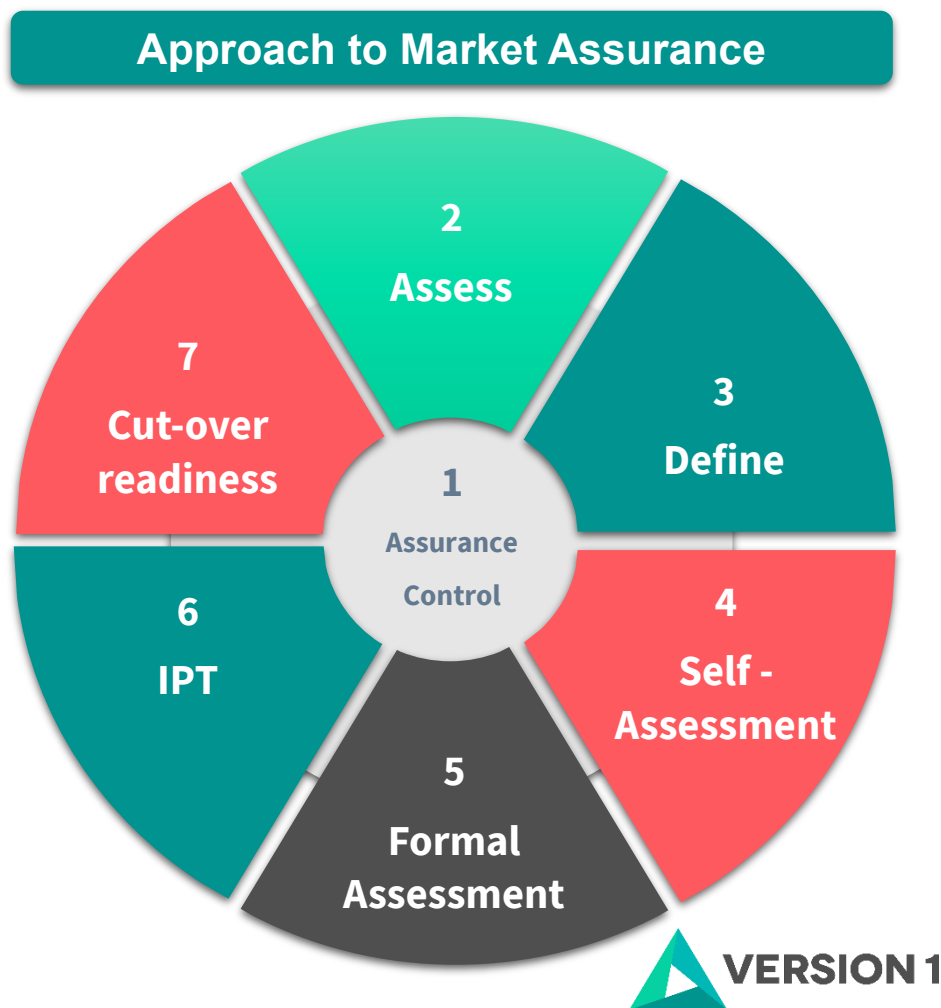


Figure 1 - Outline approach to Market Assurance

The key stages of the approach are as follows:

1. **Assurance control** - the overall project governance that the Assurance Body will follow including plans, communication strategy and reporting back to Market Participants and CRU either through step completion documentation, meetings, IGG presentations or an ad-hoc targeted intervention.
2. **Assess** - the approach to reviewing the market change documentation (i.e. Project Initiation Document), assessing the effective impact on the market, and assessing our Assurance Approach techniques that will be required.
3. **Define** - defining our Assurance approach for the TIBCO EMS Upgrade market change for approval by the CRU and IGG through the creation of the Assurance Approach document.

4. **Self-assessment Market Participant questionnaire** - the primary stage of the Assurance Approach impacting Market Participants. A Market Participant questionnaire is completed and returned to the Assurance Body together with evidence (where requested) in support of their response. The Self-Assessment approach is similar to a maturity model where responses are assessed against our expected results. The Assurance Body will then assign an overall risk score against the quality of the result. The Assurance Body may follow up with a meeting with Suppliers should there be any issues with their response. This stage is not applicable for this Assurance Approach as outlined in section 3.2.2.
5. **Formal Assessment** - is typically focused on the ESB Networks project. However, this stage could also impact a Market Participant Supplier who did not meet the required exit criteria from the Self-Assessment. This stage primarily comprises:
 - a. Deeper investigation of the responses to the Self-Assessment questionnaire especially where a higher risk has been identified; and
 - b. Additional areas of focus on the core elements of the system development project lifecycle.

A formal assessment will involve a meeting with the Assurance Body and the development of a formal outcome report. This stage can also encompass Integration Test Assessment (ITA) that is focused on assessing the evidence provided on completion of the internal & integration testing scenarios. With the prime objective of verifying that Market Participants have carried out satisfactory testing of their systems and processes.

6. **Interparticipant Testing (IPT)** - IPT provides an opportunity for market testing in a simulated live environment. IPT is seeking to ensure the changes made between the ESB Networks and Market Participant Suppliers are working as expected before they are released into production. Essentially, this is the final opportunity for the market to test the changes made to their systems. Noting no changes proposed between the ESBN Hub and SAP-ISU will not be applicable for this Assurance Approach.
7. **Cutover readiness** - focused on the ability and confidence to proceed the change being introduced, the Go-Live or the cut-over. This stage also seeks to gain confidence in the post go-live support model and contingency plans. From a Market Participant perspective, a self-declaration will be returned to the Assurance Body showing the confidence and approval of the Market Participants ability to proceed with the market change being implemented.

Following these key stages, The Assurance Body will then develop a final report for approval by CRU. This report provides an outline of the assurance work performed, resultant outcomes, together with a recommendation regarding the progression to Go-Live and/or Cutover.

3.2. Specific Approach for the ESB Networks TIBCO EMS Upgrade

The Assurance Body conducted a high-level assessment of the market change from this project and defined the extent of assurance activities that would be performed. This assessment was conducted from a meeting with the ESB Networks project team responsible for the project (also attended by RMDS), the TIBCO EMS upgrade project plan and follow up queries.

The changes being made are being managed and conducted by the ESB Networks project team (in conjunction with the Hub Support team) and will be conducted as a repeatable process i.e. not all Suppliers will be upgraded on the same date, they will be staggered over

the course of two weeks. The Assurance Body has deemed that assurance will consist of a review of the Internal and integration testing outcomes for the first Large and first Small Suppliers TIBCO server upgrade, that will be tested prior to cut over. Should the first supplier TIBCO server upgrade be completed without any issues, then no further supplier upgrade test documents will be required to be assessed for the following upgrades given it is a standardised repeatable process. The Assurance Body has been defined the approach on the basis that ESN complete an upgrade of the TIBCO servers every 18-24 months, there are no changes to any of the retail market processes, or the market schema and TIBCO Hub Support team upgrade each suppliers TIBCO / EMMA individually, in conjunction with the central hub.

Any concerns or issues will be raised with ESN Networks and where appropriate the CRU.

3.2.1. Assess and Define stages

This step covers the assess, define and self-assessment stages, from review of documents shared with the assurance body as well as the initial meeting discussions. The required assurance steps have been defined.

Table 2 outlines the assurance steps that will be taken for the NIE Networks TIBCO EMS upgrade market change.

	Control	Assess	Define	Self-Assessment	Formal Assessment	IPT	Go Live Readiness
Overall	Yes	Yes	Yes				
ESN Networks (DSO)				No	Yes	No	No
Large Supplier				No	Yes ¹	No	No
Small Supplier				No	Yes ¹	No	No
Self-Supplier, Export Only, Demand Side Unit, Generator Unit				No	No	No	No

Table 2 - Summary of assurance activities to be performed for the TIBCO EMS Upgrade

3.2.2. Self-Assessment PQ

The Assurance Body deemed it not necessary to complete the Self-Assessment stage, noting ESN complete an upgrade of the TIBCO servers every 18-24 months, there are no changes to any of the retail market processes, or the market schema and ESN (NIE Networks applications team) upgrade each suppliers TIBCO / EMMA individually, in conjunction with the central hub.

3.2.3. Formal Assessment

The Assurance Body has deemed the formal assessment stage will be required for this TIBCO EMS Upgrade project albeit very light in nature. The format will follow a review of the Integrated / internal Test Assessment records and outcomes provided by ESN (via the NIE Networks TIBCO applications team). This is only considered necessary for the first Large and first Small Supplier upgrades (unless that are any issues encountered, where it will be considered whether further supplier testing is required).

¹ Limited to the first large and first small supplier TIBCO servers upgraded

3.2.4. Interparticipant Testing (IPT)

The assurance body deemed it not a requirement to complete the Integration Participant Testing stage for the same reasons noted in sections 3.1 & 3.2.2. In addition, there is a roll back strategy and facility available, should the migration not complete to plan. Noting the upgrade plan is to complete each supplier server upgrade individually, the risk for disruption to the market as a whole is limited.

3.2.5. Final Assurance Outcome report

The Final Assurance Outcome report will outline the assurance activities, assessment findings and any recommendations. The report will be issued for information to the CRU, the Assurance Body will however revert to the CRU should any issues be encountered during the project and assurance assessment.

4. FORMAL ASSESSMENT ASESMENT TECHNIQUES

The project will be conducted in two Phases:

- Phase 1: Test TIBCO server reconfiguration and internal testing (internal test hubs and MP test TIBCO servers / test EMMA).
- Phase 2: Production TIBCO server reconfiguration and internal testing (internal production hubs and MP production TIBCO servers / test EMMA).

A project plan has been produced detailing the necessary steps involved within each testing phase.

4.1. Project plan encompassing Test steps

Item	Description	Start	Finish	Responsible
1	Hub Support Team to confirm with TIBCO all component versions to be included as part of the upgrade rollout, and TIBCO to confirm that all component versions are compatible with each other. This will also include all TIBCO released Hot Fixes to fix any vulnerabilities in the current solution.	28th Jan 2025	14th Feb 2025	Hub Support Team
2	The TIBCO Hub and EMMAs are to be included in the upgrade work to be completed by the end of June 2025. The sequence of events will be:	NA	NA	NA
3	The Internal Test Hubs are to be upgraded to the latest component versions, beginning with rolling out the upgrades to the lower-level internal DEV Hub.	3rd March 2025	4th March 2025	Hub Support Team
4	A suite of testing is to be complete to confirm that the upgraded 'new' DEV Hub is compatible to work with the 'old' DEV EMMA.	4th March 2025	7th March 2025	Hub Support Team
5	The 'old' DEV EMMA is then to be upgraded to the latest component versions. A second suite of testing is to be complete to confirm that the upgraded 'new' DEV EMMA is compatible to work with the 'new' DEV Hub.	10th March 2025	14th March 2025	Hub Support Team
6	<p>The rollout of these upgrades to the internal Hubs & EMMAs is to be complete in the following order of the internal Test environments:</p> <p>SIT Hub, followed by SIT EMMA PrePROD Hub, followed by PrePROD EMMA (performance testing also complete to a larger volume) IPT Hub, followed by our internal IPT EMMA</p> <p>All output of the internal testing is to be provided to Version1 prior to rolling out the upgrades to MP's EMMAs. Specifically, evidence of the upgraded IPT</p>	17th March 2025	28th March 2025	Hub Support Team

	Hub working with MP's 'old' EMMAs is to be provided.			
7	Once evidence is approved by Version1, the upgrades can begin to be rolled out to all MP Test EMMAs initially. This will take 2 weeks approx. to complete by the Hub Support Team. All pre-tasks required by MPs are to be complete prior to rollout beginning.	21st April 2025	2nd May 2025	Hub Support Team
8	Two sample MP Test EMMAs are to be tested to ensure the upgrades are working as expected as required by Version1: One which has a backend system, and one which uses Webforms exclusively. This will prove the 'new' EMMAs are compatible with the 'new' IPT Hub.	21st April 2025	21st April 2025	Hub Support Team
9	Once all MP's Test EMMAs upgrades are complete, a week gap is planned to allow MPs to perform any other testing they wish to complete.	5th May 2025	9th May 2025	Hub Support Team
10	Internal call to make 'GO/NO GO' decision to upgrade the Production Hub over the weekend to be made.	8th May 2025	8th May 2025	ESB Networks / Hub Support Team
11	Over the last weekend of this gap-week, the ROI PROD Hub is to be upgraded to the latest components. Any required testing by The Hub Support Team is to be complete.	10th May 2025	11th May 2025	Hub Support Team
12	Upgrades are then rolled out to all MP's PROD EMMAs. Again, this is to take two weeks to complete.	12th May 2025	23rd May 2025	Hub Support Team
13	As part of phased approach, there will be post-go-live checks and monitoring performed for all MP's PROD EMMAs as upgrades are rolled out to ensure that EMMAs are working as expected.	12th May 2025	12th May 2025	Hub Support Team
14	All upgrades are deemed complete, and notification is sent to the market.	26th May 2025	26th May 2025	ESB Networks / RMDS

The upgrade to the Market Participants EMMAs will be conducted in two phases, for each Market Participant on an individual basis. Assurance will be conducted for the first test TIBCO server to be upgraded, on the basis there are no issues or concerns and satisfaction with the ESB Networks test evidence provided, the TIBCO upgrade will then be rolled out across all Market Participants'.

This will be the same format for each Phase. Phase one will be completion and testing of all Market Participants test (non-production) TIBCO servers. Upon completion and satisfaction of a successful upgrade of all the Test TIBCO servers (EMMAs) and the associated test evidence, the project will progress to phase 2 (with the same series of steps to migrate the Production environment EMMA on the principles).

4.2. Test Evidence

The Assurance Body will be provided the outputs of the ESB Networks testing at various stages during the project timeline. The evidence packs that will comprise screenshot evidence of tests conducted, including the various market messages being transmitted satisfactorily. Test outputs will be provided to the Assurance Body at step 6 (ESB central Hub upgrade), step 8 (MP test server) and step 12/13 (MP production server), for both the initial Large and Small Suppliers upgraded.

5. ASSURANCE TIMELINE

The following outlines our proposed Assurance timeline for the TIBCO EMS Upgrade market change.

Assurance activity	Dates
Assurance approach approved by CRU / IGG	5 th March 2025
Step 6 test internal hub upgraded	17 th - 28 th March 2025
Step 7 test TIBCO servers upgraded	21 st April 2025 - 2 nd May 2025
Step 8 internal test evidence assessment	5 th May 2025
Step 12 production TIBCO servers upgraded	12 th -23 rd May 2025
Step 13 internal test evidence assessment	23 rd May 2025
Assurance Assessment Outcome Report issued to CRU for information	30 th May 2025

Table 3 - Assurance timeline for the TIBCO EMS Market upgrade.



Thank you

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