

# **EBS Project External EDT & EDL Test Approach**

**Author: Steve Roberts**

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# 1 Introduction

## 1.1 Overview

National Grid is replacing its Balancing Mechanism (BM) System with a new Electricity Balancing System (EBS). Transition from the BM System to EBS is expected to take place in 2013 (Reference 1).

Participants in the Balancing Mechanism submit data to the BM system using EDT and EDL. The subject of this document and its key use is to advise industry software suppliers and participants of the proposals for testing with them.

Neither the EDT nor EDL interface will be functionally changed for EBS, however, there is a requirement to verify the continued operation of both products. EBS Technical and IT issues that may impact market participants and IT suppliers are discussed at the Information Technology sub-group (EBSIT) of the Electricity Balancing System Group (EBSG), itself being a working group under the governance of the Grid Code Review Panel. Terms of reference and other details for EBSIT may be found via the link at reference 2.

At the third EBSIT meeting in June 2012, a discussion was held following a brief presentation of EDL and EDT testing requirements and options by National Grid. This document has been written in response to an action raised on National Grid to distribute to attendees, National Grid's EDL and EDT testing proposals including their rationale.

The document was presented at the September 2012 EBSIT meeting. The revisions at version 2 are the result of the ensuing discussion.

## 1.2 References and Links

- 1) National Grid Electricity Balancing System Webpage  
<http://www.nationalgrid.com/uk/Electricity/Balancing/EBS/>
- 2) EBS IT Subgroup Webpage  
<http://www.nationalgrid.com/uk/Electricity/Codes/gridcode/workinggroups/EBS+IT+Subgroup/>

## 2 Rationale for Testing

EDT and EDL systems need to be tested/re-tested in the event that the components forming the interface to National Grid systems are new or changed materially. In the current case National Grid are providing a new interface with the introduction of EBS triggering a requirement to re-test all of the existing participant EDT and EDL systems.

## 3 Testing Approach for EDL

The purpose of EDL testing is to ensure control points can be sent instructions and submit redeclarations electronically with effect from the commissioning of EBS.

### 1. Type Test with Suppliers

The Type Test with Suppliers will be, essentially a repeat of the Type Test that has been successfully completed against the Balancing Mechanism (BM) system for each version of their application that they expect will be in service at the commissioning of EBS.

The functional aspects of this test will be repeated against an externally-facing EBS test environment. The current Type Test is limited to EDL functionality only so will be expanded to cover non-functional aspects such as failover within an EBS stack and failover to an alternative EBS stack.

## 2. Circuit Connectivity Test

The circuit connectivity test will establish, in a non-invasive manner that each instance of a participant system can communicate, using the specified ports and protocols, with each instance of the EBS system that has production or external testing potential. The majority of this work can be completed by National Grid completing a test plan similar to the current C&WW EDL NATS (Network Access Tests) document on notification that the connectivity has been granted in the client network behind the National Grid router. This may be seen as an extended NATS as it covers the End-2-End connectivity rather than just the National Grid circuit covered by the NATS.

## 3. Market Participant Access Validation

Market Participant Access Validation will attempt to establish that the Market Participant systems are able to form an application level connection with each instance of the EBS system that has production or external testing potential. Once the circuit connectivity testing is completed for all sites, then National Grid will arrange to take short outages of the production EDL service. During these outages National Grid will enable the EDL services on EBS stacks thus allowing EBS to attempt to connect EDL Clients. Arrangements will be made to prevent any data inadvertently submitted to EBS being accepted and National Grid will not issue any instructions via EDL during this test. This test will be deemed successful when the number of EDL Sites that do NOT respond positively is small and the reasons for any issues are known.

## 4 Testing Proposals for EDT

The purpose of EDT testing is to ensure Trading Points can submit PNs to run units, prices to offer them in Balancing Mechanism and so that National Grid is in possession of up-to-date information to balance system.

### 1. Type Test with Suppliers

The Type Test with Suppliers will be, essentially a repeat of the Type Test that has been successfully completed against the Balancing Mechanism (BM) system for each version of their application that they expect will be in service at the commissioning of EBS.

The functional aspects of this test will be repeated against an externally facing EBS test environment. The current Type Test is limited to EDT functionality only so will be expanded to cover non-functional aspects such as failover within an EBS stack and failover to an alternative EBS stack.

### 2. Circuit Connectivity Test

The circuit connectivity test will establish, in a non-invasive manner that each instance of a participant system can communicate, using the specified ports and protocols, with each instance of the EBS system that has production or external testing potential. This work is best completed by a participant representative logged into the EDT server completing a test plan similar to the current C&WW EDT NATS document on notification that the connectivity has been granted in the client network behind the site router. This may be seen as an extended NATS as it covers the End-2-End connectivity rather than just the National Grid circuit covered by the NATS.

### 3. Optional Testing with Trading Points

The potential for connecting participant test EDT systems (like-live) to the National Grid test service is quite limited as only a few Trading Points have this facility that shares the production circuits.

Where this is available it is proposed to execute a thin Business Process Integration Test (BPIT) against the EBS test service.

### 4. Market Participant Access Validation

Market Participant Access Validation will attempt to establish that the Market Participant systems are able to form an application level connection with each instance of the EBS system that has production or external testing potential without involving any form of data transfer.

## 5 Next Steps

National Grid will in due course issue new addresses for the EBS test and production services. Details of the test and pre-production trial arrangements will follow.

## Appendix A: Document Information

**Author:** Steve Roberts

**Distribution:**  
See review form for recommendations.

Name	Position	Reason for Distribution

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2.0	30/Oct/2012	SCR	Updated to incorporated comments received

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