EIRGRID_2015 Functional Document Template (21

Demonstration of Amber, Red & Blue Alerts Procedure

[Insert Unit Name & Three Letter Code]

Version 0.1

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# Document Version History

EirGrid template version 0.2, drafted 17 July 2017.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Document Version History** | | | | |
| **Version** | **Date** | **Comment** | **Name** | **Company** |
| 0.1 | dd/mm/yyyy | First submission for review/approval |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

# Introduction

**The unit shall highlight any changes made to this document or approval will be void.**

The Unit shall submit the latest version of this test procedure template as published on the EirGrid website[[1]](#footnote-2).

All yellow sections shall be filled in before the test procedure shall be approved. All grey sections shall be filled in during testing. If any test requirements or steps are unclear, or if there is an issue with meeting any requirements or carrying out any steps, please contact [generator\_testing@eirgrid.com](mailto:generator_testing@eirgrid.com).

On the day of testing, suitably qualified technical personnel are required on site to assist in undertaking the tests. The personnel shall have the ability to:

1. Set up and disconnect the control system and instrumentation as required;
2. Ability to fully understand the Unit’s function and its relationship to the System;
3. Liaise with NCC as required.

The availability of personnel at NCC will be necessary in order to initiate the necessary instructions for the test. NCC will determine:

1. If network conditions allow the testing to proceed.
2. Which tests will be carried out?
3. When the tests will be carried out.

This test can be conducted with the Unit on-line or off-line.

On completion of this test, the Unit shall submit the following to [generator\_testing@eirgrid.com](mailto:generator_testing@eirgrid.com):

|  |  |
| --- | --- |
| **Submission** | **Timeline** |
| A scanned copy of the test procedure, as completed and signed on site on the day of testing | 1 working day |
| Test report | 10 working days |

# Abbreviations

NCC National Control Centre

MW Mega Watt

TSO Transmission System Operator

# Unit DATA

|  |  |
| --- | --- |
| Unit Test Coordinator | Unit to Specify Name, Company and contact details. |
| Unit name | Unit to Specify |
| Unit connection point | Unit to Specify |
| Unit connection voltage | Unit to Specify |
| Registered Capacity | Unit to Specify |
| Contracted MEC | Unit to Specify |
| Installed Plant | Unit to Specify |

# Grid Code References

|  |  |
| --- | --- |
| Grid Code Version: | Unit to specify |

OC8.4.2 **Operational Tests** required by the **TSO** from time to time shall include, but shall not be limited to the following:

(iii) Testing of standing procedures for **System Emergency Conditions** and **Alert** conditions

OC9.4.1 In the event of a **System Emergency Condition** or imminent shortfall of MW capacity, the **TSO** may issue any of several **Alerts** to the Generator, key **Transmission Stations, Distribution Control Centres** and **Demand Side Unit Operators**. These **Alerts** may include an **Amber Alert**, **Red Alert** or **Blue Alert**,

OC9.4.2 **Alerts** will normally (except in the case of a failure of the **Electronic Alert System** when it will be given verbally) be transmitted to the **User** via the **Electronic Alert System**. The **Alert** shall cause an alarm in the receiving location, which must be acknowledged by the **User** in accordance with their **Alert** procedures. or other **Alerts** as may be agreed from time to time.

OC9.4.3.1 An **Amber Alert** may be issued when a single **Event** would give rise to a reasonable possibility of failure to meet the **Power System Demand**, or of **Frequency** or **Voltage** departing significantly from normal, as per CC.8.2.1(a) and CC.8.3.1(a), or if multiple **Events** are probable due to prevailing weather conditions.

OC9.4.4.1 A **Red Alert** may be issued when, other than as provided for in OC10, the **Frequency** or **Voltage** has deviated significantly from normal, or **User's Demand** has been disconnected, or, in the period immediately ahead there is a high probability of failing to meet the **Power System Demand** or to maintain normal **Voltage**.

OC9.4.5.1 The issuing of a **Blue Alert** other than as provided for in 9.5.4, by the **TSO** signifies that either a **Partial Shutdown** or a **Total Shutdown** of the **Power System** has taken place.

**Glossary:**

|  |  |
| --- | --- |
| **Alert** | A **Red Alert**, an **Amber Alert** or a **Blue Alert** or other Alert warning as agreed pursuant to OC9 (Emergency Control and Power System Restoration) |
| **Amber Alert** | An alert issued by the **TSO** to the **Users** when a single **Event** would give rise to a reasonable possibility of failure to meet the **Power System Demand**, or of **Frequency** or **Voltage** departing significantly from normal or if multiple **Events** are probable due to prevailing weather conditions. |
| **Blue Alert** | An alert issued by the **TSO** signifying that either a **Partial Shutdown** or a **Total Shutdown** of the **Power System** has taken place. |
| **Red Alert** | An **Alert** issued by the **TSO** to the **User** in the circumstances set out in OC9 |

# site Safety requirements

The following is required for the EirGrid witness to attend site:

|  |  |
| --- | --- |
| Personal Protective Equipment Requirements   1. Site Safety boots 2. Hard Hat with chin strap 3. Hi Vis 4. Arc Resistive clothing 5. Safety Glasses 6. Gloves 7. Safe Pass | 1. Yes / No 2. Yes / No 3. Yes / No 4. Yes / No 5. Yes / No 6. Yes / No 7. Yes / No |
| Site Induction requirements | Yes / No  (If Yes, Unit to specify how and when the induction shall be carried out) |
| Any further information | WFPS to specify |

# Test desciption and pre conditions

## Purpose of the Test

The purpose of the test is to ensure that the [Insert unit name] Control Room Alert lamps are consistent with the signals sent from the National Control Centre (NCC), and that the acknowledge buttons function correctly.

## Pass Criteria

Successful completion of this test is determined by the ability of the unit to receive, display and respond appropriately to the Amber, Red and Blue alerts as detailed in Grid Code OC 9.

## Instrumentation and Onsite Data Trending

All of the status indications at the Unit’s Control Room and in NCC shall be recorded manually.

## Initial Conditions

Should “No” be answered to any of the following, contact [generator\_testing@eirgrid.com](mailto:generator_testing@eirgrid.com) and agree next steps in advance of making any corrective actions.

|  |  |
| --- | --- |
| **Conditions** | **Check on day of test** |
| [Neartime@eirgrid.com](mailto:Neartime@eirgrid.com), [EMSservice@eirgrid.com](mailto:EMSservice@eirgrid.com) and [generator\_testing@eirgrid.com](mailto:generator_testing@eirgrid.com) have been notified of the test. | Yes/No |

# Test Steps

## Amber Alert

| **Step No.** | **Action** | **Time** | **Comment** |
| --- | --- | --- | --- |
| 1 | Unit operator contacts NCC and requests permission to begin test. |  |  |
| 2 | Unit operator requests NCC to issue Amber Alert On. |  |  |
| 3 | In the Unit’s Control Room:   1. The Alert Siren activates 2. the Unit’s Alert system shows    1. Amber Alert is On; and    2. is not acknowledged.   Indications to NCC:   1. Amber Alert Indication is On 2. Amber Alert Acknowledge is Normal |  |  |
| 4 | The Unit operator acknowledges the Amber Alert |  |  |
| 5 | In the Unit’s Control Room:   1. The Alert Siren is silenced 2. The Unit’s Alert system shows    1. Amber Alert is On; and    2. is acknowledged   Indications to NCC:   1. Amber Alert Indication is On 2. Amber Alert Acknowledge is Acknowledged |  |  |
| 6 | Unit operator requests NCC to issue Amber Alert Off. |  |  |
| 7 | In the Unit’s Control Room:   1. the Unit’s Alert system shows    1. Amber Alert is Off; and    2. is not reset.   Indications to NCC:   1. Amber Alert Indication is Off 2. Amber Alert Acknowledge is Acknowledged |  |  |
| 8 | The Unit operator resets the Amber Alert |  |  |
| 9 | In the Unit’s Control Room:   1. The Unit’s Alert system shows    1. Amber Alert is Off; and    2. is reset   Indications to NCC:   1. Amber Alert Indication is Off 2. Amber Alert Acknowledge is Normal |  |  |

## Red Alert

| **Step No.** | **Action** | **Time** | **Comment** |
| --- | --- | --- | --- |
| 1 | Unit operator requests NCC to issue Red Alert On. |  |  |
| 2 | In the Unit’s Control Room:   1. The Alert Siren activates 2. the Unit’s Alert system shows    1. Red Alert is On; and    2. is not acknowledged.   Indications to NCC:   1. Red Alert Indication is On 2. Red Alert Acknowledge is Normal |  |  |
| 3 | The Unit operator acknowledges the Red Alert |  |  |
| 4 | In the Unit’s Control Room:   1. The Alert Siren is silenced 2. The Unit’s Alert system shows    1. Red Alert is On; and    2. is acknowledged   Indications to NCC:   1. Red Alert Indication is On 2. Red Alert Acknowledge is Acknowledged |  |  |
| 5 | Unit operator requests NCC to issue Red Alert Off. |  |  |
| 6 | In the Unit’s Control Room:   1. the Unit’s Alert system shows    1. Red Alert is Off; and    2. is not reset.   Indications to NCC:   1. Red Alert Indication is Off 2. Red Alert Acknowledge is Acknowledged |  |  |
| 7 | The Unit operator resets the Red Alert |  |  |
| 8 | In the Unit’s Control Room:   1. The Unit’s Alert system shows    1. Red Alert is Off; and    2. is reset   Indications to NCC:   1. Red Alert Indication is Off 2. Red Alert Acknowledge is Normal |  |  |

## Blue Alert

| **Step No.** | **Action** | **Time** | **Comment** |
| --- | --- | --- | --- |
| 1 | Unit operator requests NCC to issue Blue Alert On. |  |  |
| 2 | In the Unit’s Control Room:   1. The Alert Siren activates 2. the Unit’s Alert system shows    1. Blue Alert is On; and    2. is not acknowledged.   Indications to NCC:   1. Blue Alert Indication is On 2. Blue Alert Acknowledge is Normal |  |  |
| 3 | The Unit operator acknowledges the Blue Alert |  |  |
| 4 | In the Unit’s Control Room:   1. The Alert Siren is silenced 2. The Unit’s Alert system shows    1. Blue Alert is On; and    2. is acknowledged   Indications to NCC:   1. Blue Alert Indication is On 2. Blue Alert Acknowledge is Acknowledged |  |  |
| 5 | Unit operator requests NCC to issue Blue Alert Off. |  |  |
| 6 | In the Unit’s Control Room:   1. the Unit’s Alert system shows    1. Blue Alert is Off; and    2. is not reset.   Indications to NCC:   1. Blue Alert Indication is Off 2. Blue Alert Acknowledge is Acknowledged |  |  |
| 7 | The Unit operator resets the Blue Alert |  |  |
| 8 | In the Unit’s Control Room:   1. The Unit’s Alert system shows    1. Blue Alert is Off; and    2. is reset   Indications to NCC:   1. Blue Alert Indication is Off 2. Blue Alert Acknowledge is Normal |  |  |

## Comments & Signatures

|  |
| --- |
| **Comments:** |
| WFPS Witness signoff that this test has been carried out according to the test procedure, above.  Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| EirGrid Witness signoff that this test has been carried out according to the test procedure, above.  Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. <http://www.eirgridgroup.com/library> [↑](#footnote-ref-2)