# nationalgrid

## **Emergency and Restoration (E&R)**

## Fact Sheet

### Background

The Network Code on Emergency and Restoration (E&R) is a key factor for ensuring security and continuity of electricity supply across Europe, as it deals with the procedures and remedial actions to be applied in the Emergency, Blackout and Restoration states. This involves preparation of system defence, system restoration and re-synchronisation plans in advance, dealing with information exchange, procedures for operating when a system enters into one of these states and ad-hoc analysis of the incidents.

E&R sits alongside the Transmission System Operation Guideline (TSOG) which sets out harmonised rules on system operation. TSOG identifies different critical system states (normal state, alert state, emergency state, blackout state and restoration). The E&R code in turn requires the development of a common set of minimum requirements and principles for the procedures and actions to be carried out specifically when in the emergency, blackout and restoration states.

**System Defence Plan** will specify the conditions under which the system defence plan is activated, instructions to be issued by the TSO and the measures subject to real-time consultation or coordination with the identified parties.

**Restoration Plan** will consist of the technical and organisational measures necessary for the restoration of the system back to normal state.

Market Interactions This section of the code requires each TSO to develop a proposal for rules concerning the suspension and restoration of market activities.

### This matters...

#### ...to whom

E&R applies to TSOs, DSOs, Generators, Defence Service Providers, Restoration Service Providers, Balance Responsible Parties, Balancing Service Providers and Nominated Electricity Market Operators ('NEMO').

#### ...when

E&R was adopted by Member States at the Cross Border Committee meeting in October 2016 and is estimated to enter info force around June 2017. The obligations with in the code will be delivered over the following years. The obligation timescales range from one to five years following entry into force.

#### ...how

The System Defence and Restoration plans are likely to impact the Grid Code, Distribution Code and the Market Interaction requirements are likely to impact the Balancing and Settlement Code (BSC). Any resulting modifications to GB codes will be identified and consulted on in the normal fashion.

Date	Action
October 2016	E&R Code adopted following positive vote at Cross Border Committee
February 2017	Industry workgroup formed to progress GB Implementation
Sep 2017*	Estimated Entry into Force (EIF)
Sep 2018*	System Defence Plan Developed (draft goes out for consultation Jan 2018)
(12 months after EIF)	Restoration Plan Developed (draft goes out for consultation Jan 2018)
	Market Suspension Rules Developed (no change required to GC or BSC)
Sep 2019*	System Defence Plan Implemented
(24 months after EIF)	Restoration Plan Implemented
Sep 2022*	Communications, Tools and Facilities
(5 years after EIF)	Define Compliance Testing Plan

#### **Implementation Timescales** (\* estimated)

#### Need more information? Email europeancodes.electricity@nationalgrid.com