nationalgrid

Transmission System Operator Guideline (TSOG)

Fact Sheet

Background

The Transmission System Operator Guideline (TSOG) sets minimum system security, operational planning and frequency management standards to ensure safe and coordinated system operation across Europe, creating a standardised framework on which regional cooperation including balancing markets can be implemented. TSOG sits alongside the Emergency & Restoration code (E&R) within the 'System Operation' area of the European Network Codes.

The guideline originated from three distinct and separately drafted network codes covering different areas of system operation. The three were combined into one guideline to improve the efficiency of the legislative process.

This matters...

…to whom

TSOG impacts TSOs, generators, Distribution Network Operators and Interconnectors. See main section for how each stakeholder is impacted.

…when

TSOG is expected to enter into force as European law in **July 2017**, with some deliverables required immediately and most due over the **following 2 years**. TSOG received a positive vote at the European Commission and is currently undergoing translation into Member State languages.

…how

GB implementation of TSOG is being coordinated via an industry workgroup established under the Grid Code. The workgroup has mapped requirements from TSOG to current GB frameworks to identify potential impacts and has been assessing the need for any modifications for obligations which go live at entry into force. The group will then prioritise subsequently required GB framework modifications to ensure compliance with TSOG requirements.

The TSOG provisions are mostly based on existing system operation practice in both GB and across Europe. As such, many of the requirements and obligations match current arrangements for system operation. Some new concepts and initiatives are introduced which we anticipate will result in some changes to the Grid Code, Distribution Code and System Security and Quality of Supply Standards (SQSS).

The main sections of TSOG, key concepts and definitions are summarised overleaf.

OS defines common minimum security standards for system operation across Europe due to increased risk of system incident propagation given growing interconnection.

Key concepts & definitions introduced:

Remedial actions – allowable TSO actions to restore/protect operational security,

Contingencies – incidents which could affect operational security,

System states – to be used for alerting other TSOs of current operational status.

OP introduces of common operational planning activities to facilitate exchange of information between TSOs and RSCs given the increased importance of regional issues on system security,

Key concepts & definitions introduced:

Regional Security Coordinators (RSCs) – multi-TSO service providers who will deliver operational services to TSOs taking into account regional interdependencies,

LFC&R provides a framework on which pan-European balancing markets can be built by introducing common concepts for reserves, creating transparency in TSO operational procedures and defining system control quality targets.

Key concepts & definitions introduced:

Operational Agreements – transparent document detailing TSO frequency management policies and procedures;

FCR, FRR and RR – three common families of frequency-related reserves;

Frequency Quality Criteria – legally binding targets for managing the system.

Key changes for GB

Data Exchange. This section details data which shall be exchanged between TSOs, Distribution System Operators (DSOs), transmission and distribution-connected system users. Though roles and responsibilities regarding data exchange are to be defined and agreed by all TSOs, a large amount of flexibility for implementation approach is retained at a GB level. Obligations regarding data exchange go live at **18 months** after entry into force. It is expected that some GB Grid Code changes may be necessary, the scale of which will be determined by the approach taken to application within GB.

Synchronous Area Operational Agreement. This is a new document to be drafted detailing frequency management policies and processes in the GB Synchronous Area. This will contain many methodologies and descriptions needed, e.g. reserve sizing, technical requirements for reserves, use of cross-border processes. Most detail included currently sits in internal business procedures as derived from overarching SQSS requirements. Whilst most content will match current practice, some requirements are new and therefore could result in changes to GB frameworks. Regulatory approval is needed for most content, with proposals needed **12 months** after entry into force with a subsequent period for approval and implementation.

Outage Coordination. A new methodology is required that allows the identification of the Grid Elements and generators whose outages should be coordinated on a regional level. This methodology is subject to Regulatory approval and needs to be submitted **12 months** after entry into force. The role of Regional Security Coordinators in outage coordination and security assessment is also detailed.

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