Consultation on the Proposed IU Coordinated Security Analysis Methodology

Introduction

This is a consultation on the Ireland-UK (IU) Coordinated Security Analysis Methodology (CSAM) required under Article 76 of the EU Regulation 2017/1485 of 2 August 2017 establishing a guideline on electricity system operation, commonly known as the System Operation Guidelines (SOGL) [1]. It has been developed by the IU Capacity Calculation Region (CCR) which comprises of EirGrid, SONI, and National Grid ESO as Transmission System Operators (TSOs) and Coreso as Regional Security Coordinator (RSC).

Background

Part III Title 2 – 'Operational Security Analysis of the SOGL' sets obligations on all TSOs to carry out Coordinated Security Analysis (CSA) using the Common Grid Models (CGM) defined elsewhere in the SOGL. TSOs are required to appoint Regional Security Coordinators (RSCs) and to delegate defined security coordination tasks to the RSC.

Article 75 of the SOGL requires that all TSOs submit a proposal for the all-TSO tasks necessary to standardise the delivery of CSA across Europe. The final proposal of all TSOs' entitled 'Methodology for coordinating operational security analysis' (CSAM) [2] was approved by ACER on 19 July 2019.

Article 76 of the SOGL requires all CCRs to develop a more detailed proposal addressing the implementation of the all-TSOs CSAM at a local level and to obtain approval from their relevant regulatory authorities. The IU CCR intends to submit the IU CSAM to CRU in Ireland, UR in Northern Ireland and Ofgem in GB by 19 December 2019.

Implementation of this methodology is contingent on approval from CRU, UR and Ofgem as well as other dependencies such as the full CGM being implemented. The SOGL requires the regulatory authorities to approve or issue a request for amendment with six months of submission.

Scope

The IU CSAM applies to the onshore TSOs within the IU CCR. The impacted TSOs are:
- EirGrid: TSO for the electricity transmission system in Ireland
- SONI: TSO for the electricity transmission system in Northern Ireland
- NGESO: TSO for the electricity transmission system operator for GB

The IU TSOs have appointed Coreso as the RSC for the IU CCR, and Coreso is assigned regional security coordination duties in the IU CSAM.

Overview of the proposal

The IU CSAM establishes the methodology to execute coordinated security analysis in the IU area. The roles and responsibilities of the three TSOs and the RSC are specified in the IU CSAM.

The IU CSAM mandates a day ahead (DA) CSA process, and at least three subsequent intraday (ID) CSA studies.

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[1] SOGL can be found at https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1503656386035&uri=CELEX:32017R1485

[2] CSAM can be found at
https://www.acer.europa.eu/Media/News/Pages/ACER-adopts-decision-on-coordinated-security-analysis-in-electricity.aspx

The CSA process requires the three TSOs to make input data submissions to the RSC. These submissions include:

- An Individual Grid Model (IGM) containing:
  - An up to date model of the transmission system;
  - The most recent demand forecast; and
  - The most recent generation forecast.
- Available remedial actions within the control area, being the actions available to the TSOs to address operational security violations.
- Any additional system constraints to be respected in the CSA process.
- The most recent set of contingencies for use in the CSA.
- A set of the secured and scanned network elements which are to be monitored and managed during the CSA study process.

A single IGM is submitted for the all-island transmission system operated by SONI and EirGrid.

The RSC then carries out a validation of the submitted files and merges the models to form a CGM for the IU region. This CGM is then used to execute a CSA study for the region by the RSC.

Based on the results of the study, the RSC identifies any remedial actions necessary to address operational violations and submits them to the TSOs for acceptance. The agreed remedial actions are instructed by the TSO in accordance with their agreement.

The process includes provision for additional CSA studies, and for direct TSO-TSO coordination to address short term variations to the planned conditions.

Individual TSOs have the right to reject proposed remedial actions, and this process sets an obligation to provide reasons for rejection and establishes an obligation to work to provide an alternative to rejected remedial actions.

Impact on Existing Processes
This methodology is complementary to the existing all-island operating protocols between EirGird and SONI designed to maintain secure operating conditions on the electricity transmission system, and these will continue unchanged.

The IU CSAM is complementary to and consistent with the IU Redispatch and Countertrading RD & CT Methodology and associated cost management arrangements[3], the existing RD and CT arrangements are not impacted by this proposal.

Where generation is re-dispatched to address security violations on the all-island system then the cost of these actions will be settled in the I-SEM under existing provisions for redespatch of energy to manage system constraints.

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[3] IU RD&CT can be found at https://docstore.entsoe.eu/Documents/nc-tasks/EBGL/CACM_A35.1_CCR%20IU%20RD%20and%20CT%20Methodology%20Proposal%20V3%20Update.pdf