Regional security analyses

Dušan Prešić, Head of Development department
December 11th, 2020
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Introduction – Foundation of SCC

- SEE region was not covered by existing RSC(I)s (TSCNET and CORESO).
- Following the form defined by ENTSO-E’s Policy Paper “Core strategy for TSO Coordination” and European NC/GL, SEE TSOs recognized the need for regional cooperation.
- April 2015: EMS, CGES and NOSBiH established SCC as the first RSC(I) in SEE, based in Belgrade.
- 1st of August 2015: SCC started operational activities.
Introduction – RSC Status

- There are 5 operational Regional Security Coordinators (RSCs) across Europe:
  - Coreso (2008)
  - TSCNET (2008)
  - SCC (2015)
  - Nordic RSC (2016)
  - Baltic RSC (2016)

- From May 2020, SEleNe CC was established in Thessaloniki as the 6th RSC.
Introduction – SCC service users
Services and main activities – 5 RSC functions

- Validation and correction of IGMs, including merging of IGMs into CE SA CGM (IDCF and DACF timeframe)
- Security analysis without Remedial Actions (RAs)
- Coordinated capacity calculation (CCC) for day ahead timeframe (dry run process)
- Short Term Adequacy (STA),
- Outage Planning Coordination (OPC),
- Consistency Check of Power System Defense Plans (NC ER),
- Coordination in Critical Grid Situations (CGS)
Service: Security analyses without RAs
Timeframes: IDCF (3 times per day) and DACF
Input: CGMs merged by SCC, Contingency and Monitoring lists provided by TSOs
Process:
- Simulate disconnection of Contingency in the base case CGM
- Perform load flow calculation on altered CGM
- Check for overload in all Monitoring elements
**Security analysis in SCC – CSA results**

- **Output:** unique report for each TSO service user is provided on local FTP server

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### Security Coordination Centre SCC Ltd. Belgrade

#### N-X security analysis statistics

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Security analysis in SCC – RA function

- From 14th of December 2020 SCC is starting to use new operational tool that has possibility to include RA function in security analysis.
Regional challenges for CSA implementation

- However, regardless of the possibility, security analyses in SCC will remain the same, since on the SEE level there are two main issues:
  - Missing Capacity Calculation Region (CCR) for non-EU TSOs in SEE
  - Missing regional methodology for Coordinated Security Analysis (CSA)

- Close cooperation among all RSCs and TSOs in the region is required in order to overcome these obstacles.
Each CCR is developing regional CSA methodology based on document: *All TSOs’ proposal for a methodology for coordinating operational security analysis in accordance with Article 75 of Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation (a.k.a. CSAm)*

However, that is not the case for WB6 TSOs since there is no formal CCR.

Starting point for regional CSA methodology in WB6 is also CSAm since it:
- covers the coordination of operational security analysis at Pan-European level
- is developed in accordance with Article 75 of SO GL
- is also aligned with CGM methodology and CACM
- applies to all TSOs, RSCs, (C)DSOs and SGUs
CSA methodology – Most important topics

- CSAm covers the following topics:
  - Determination of influencing elements (influence factor determination, identification of observability area elements and external contingencies)
  - Principles of coordination (establishment and sharing of contingency lists, coordinated operational security assessment, coordination of remedial actions, cross-border impact assessment, exchange of results)
  - Management of uncertainties (forecast of intermittent generation and load)
  - Risk assessment
  - Inter-RSC coordination
  - Governance and implementation

- CSAm covers operational security analysis for 3 timeframes: intraday, day-ahead and long term studies (year-ahead up to week-ahead).
CSA process – DA timeframe

High level general scheme for day-ahead CSA process

First CSA run:
- T0=18:00: Input data preparation
- T1=18:30: Consistency check of CSA input data → CGM building process → Regional security assessment → Remedial action optimization → Remedial action coordination
- T2=20:00: Local tools → Regional tools → Pan-European / regional tools

Second CSA run:
- T2i=20:20: Input data preparation
- T3=20:45: Consistency check of CSA input data → CGM building process → Regional security assessment → Remedial action optimization → Remedial action coordination
- T4=21:45: Final remedial action validation session
- Cooperation between RTE-group and SCC
- Goal is to enhance cooperation and coordination among SEE TSOs

There is need for close cooperation between SEE TSOs and RSCs.

RSCs and TSOs are partners and collaborators on the same task of ensuring the highest security of electricity supply standards in Europe.

RSCs are key actors for enabling TSO coordination in Europe and should encourage mutual cooperation.

There are 2 main obstacles in order to fully implement CSA in SEE region:

• Establishment of non-EU CCR in SEE region (in line with EnCS paper “Concept for implementation of the CACM and FCA Regulations in the Energy Community” from July 2020);

• Creation of regional methodology for CSA process.

Conclusion
Security Coordination Centre SCC Ltd. Belgrade
11000 Belgrade, Vojvode Stepe 412
Phone: +381 11 3972 943
+381 11 3972 944
+381 64 6496 694
E-mail: info@scc-rsci.com
Web: www.scc-rsci.com