

The Role of Regional Coordinated Centers in Security and Market facilitation towards the Green Transition

Yannis Kabouris

President & CEO, SEleNe CC – Southeast Electricity Network Coordination Center

IENE 26th National Conference “Energy & Development 2022”
Athens 22-23 November 2022



The Integration of Electricity Market in EU

- ▶ Environmental targets, RES exploitation and Integration of an Internal Electricity Market consist the main and stable policy lines for Europe lasting for 3 decades; EU is the **pioneer in decarbonization** to mitigate climate change
- ▶ Harmonization of legislation through energy policy “Packages” (Regulations adopted by the European Parliament);
- ▶ Specific targets for Emissions, Renewables, Energy conservation and Interconnectors have been set;
- ▶ Common market structure (**Target Model**) to allow for Market coupling – the crucial role of interconnectors;
- ▶ High degree of harmonization already (Grid Codes, Market rules, common capacity auctions etc.);
- ▶ **Increased risks due to high RES, market behavior, bulk power transfers etc.; crucial technical challenges**
- ▶ **The 3rd package led to market coupling in all EU and started to treat security as a global manner;**
- ▶ The **Clean Energy Package (CEP)** is the next important implementation.
- ▶ The role of TSOs and RCCs in the current crisis circumstances

Basic Legislation

02

Regulation 943

- SORs and RCCs
- The *new* RCC tasks and their methodologies

CACM

- CCRs
- Capacity Calculation

SOGL

- Coordinated Security Analysis (CSA)
- Short-term adequacy (STA)
- Outage planning coordination (OPC)
- Common Grid Model (CGM) creation

NCER

- Consistency assessment of defence plans and restoration plans

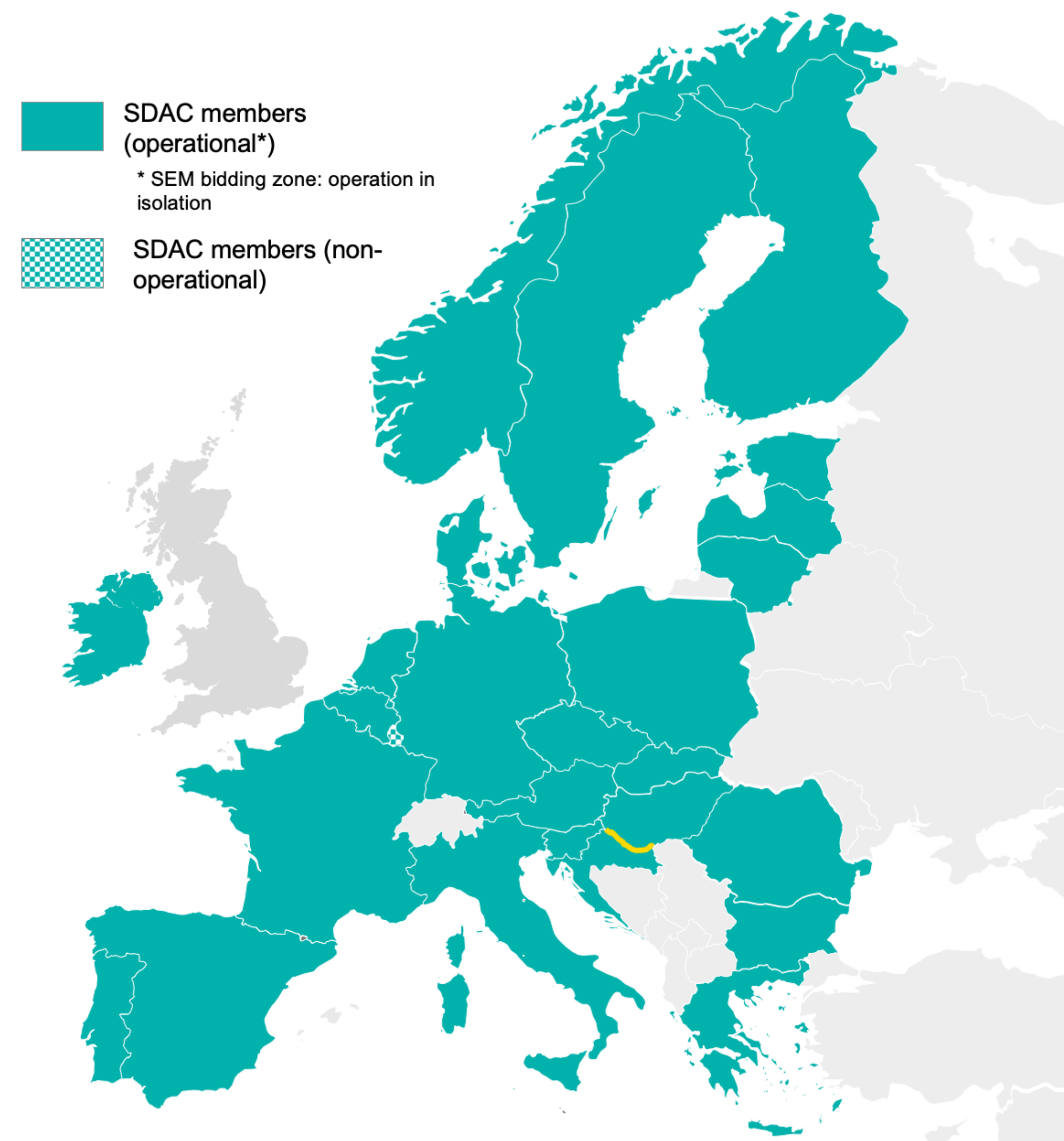
EBGL(Electricity Balancing Guide Lines)

ACER Regulation

- Processes for adopting decisions

Market Coupling: A major step for market integration

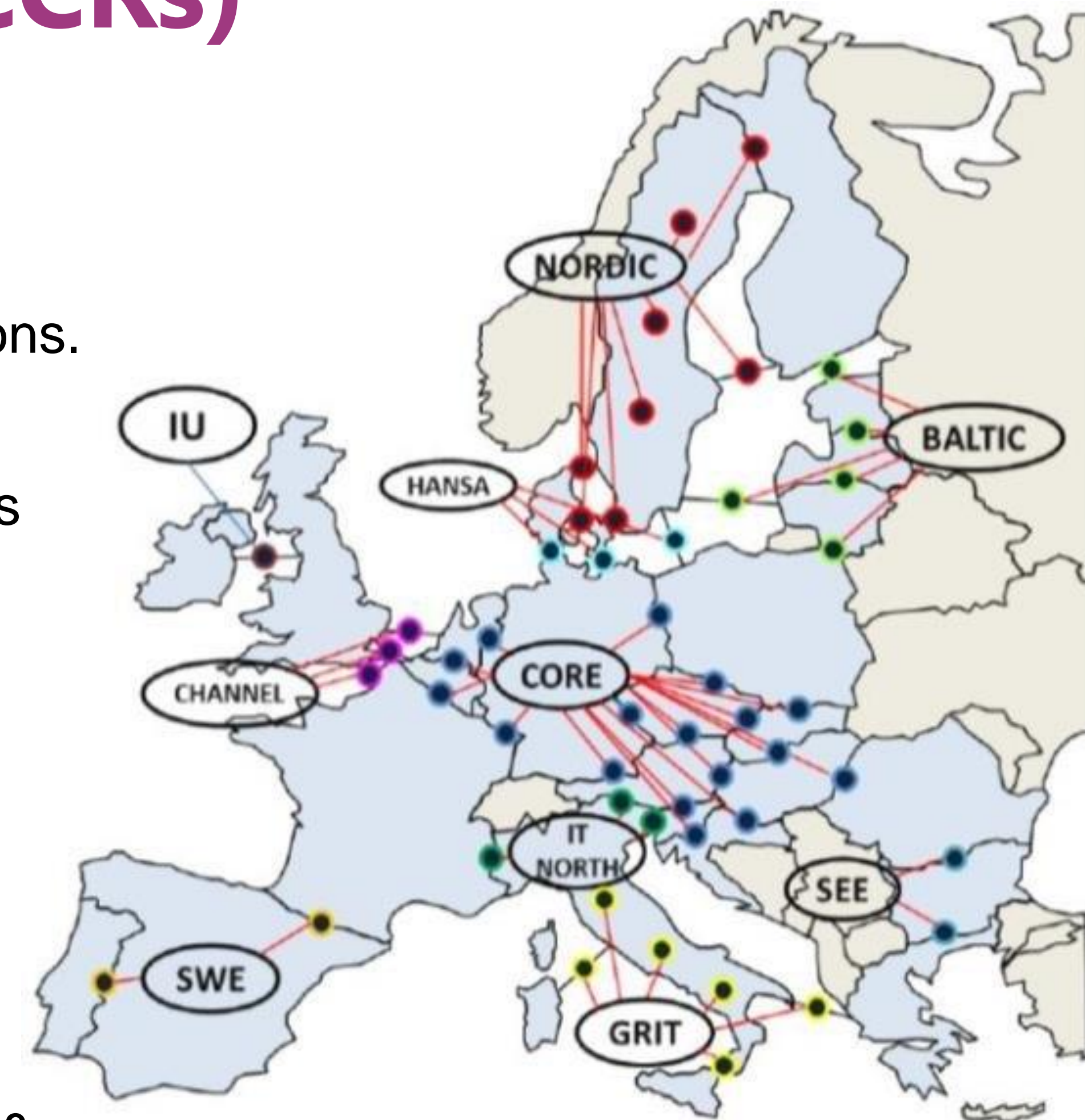
- Target: Use the cheapest generation across the continent → A unique price on wholesale markets.
- Pan-European algorithm to solve the market
- Interconnectors set limits in the integration
- By today more than 98% of borders in EU are coupled. Common algorithm (euphemia) for the market for all EU territory so that to maximize social welfare at Pan European level;
- Necessary to know in advance the NTCs of the interconnectors;



Bidding Zones (BZ) and Capacity Calculation Regions (CCRs)

04

- Markets coupled through the interconnectors;
- **Bidding zones:** geographical areas with no systematic congestions. One TSO may consist of more than one BZ (e.g., Italy);
- **Capacity Calculation regions** are defined by the interconnectors connecting two bidding zones. Need to calculate prior to the operation day the secure transfer limit;
- CCRs have been officially recognized by ACER in EU territory;
- The calculation of the transfer capacities is crucial for the market operation;
- Common methodologies per CCR: NTC or flow based;
- Capacity calculations per year/ month/ day to estimate the ATCs & NTCs.



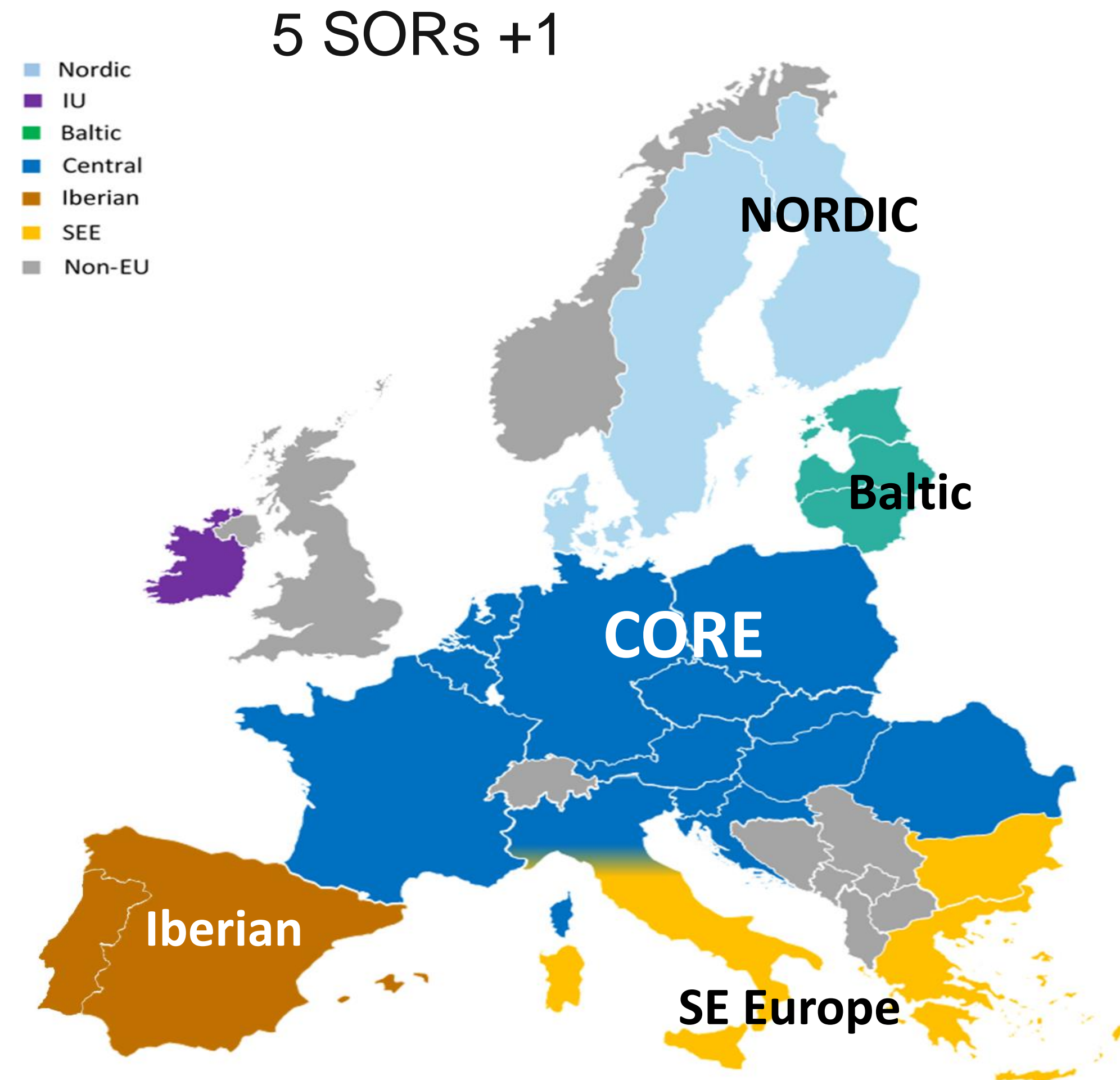
Source: ACE JAO
Joint Allocation Office
SCE CAO
coordinated auction office
in south east europe



From Regional Security Coordinators (RCSs) towards Regional Coordination Centers (RCCs): at a glance

05

- ▶ The Regional Coordination in Europe started with the RSCs which were companies owned by TSOs (established under the 2017/1485 EU Regulation – SOGL).
- ▶ An important step towards “coordinated security” in Europe
- ▶ 5 (+1) Security Operation Regions (SORs) have been established
- ▶ Mission:
 - to perform services for the TSOs under a broader view of the network at the regional level
 - to enhance security under the new challenging environment: facilitation of the European electricity market/ high RES penetration
 - From July 1st 2022 RSCs upgraded to RCCs
 - 6 RCCs in Europe

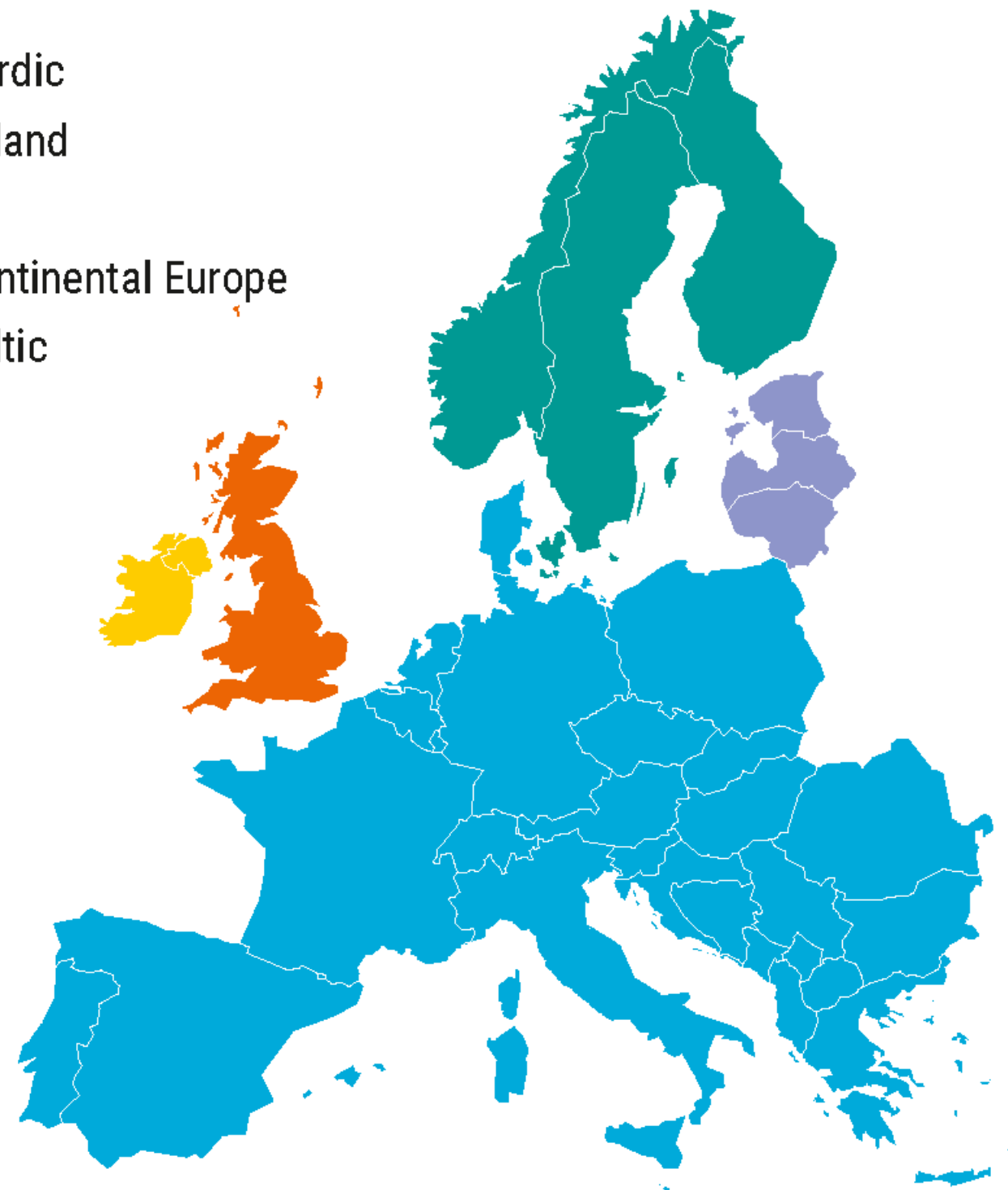


TSOs regional coordination: State of play

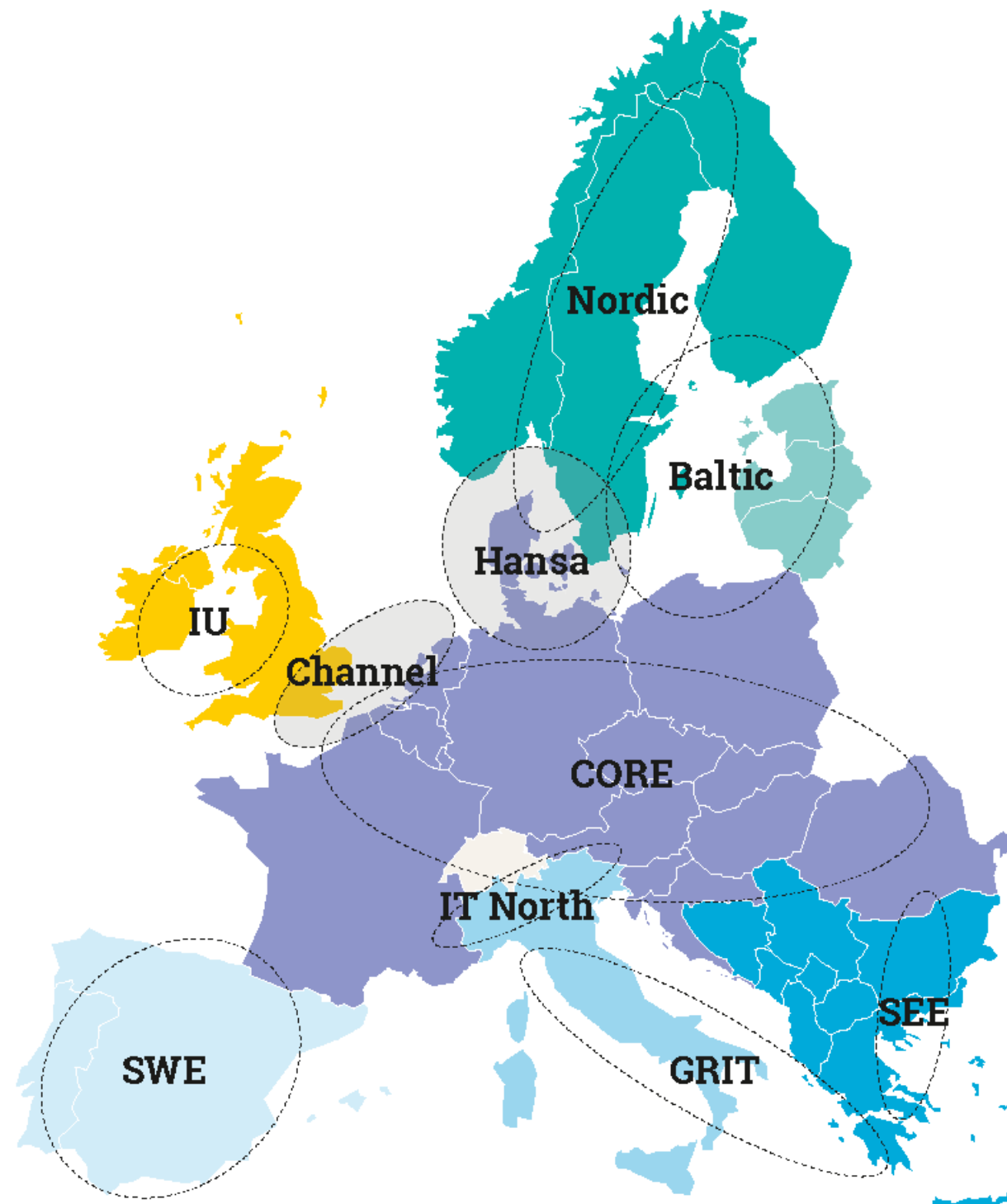
06

5 Synchronous Areas

- Nordic
- Ireland
- UK
- Continental Europe
- Baltic

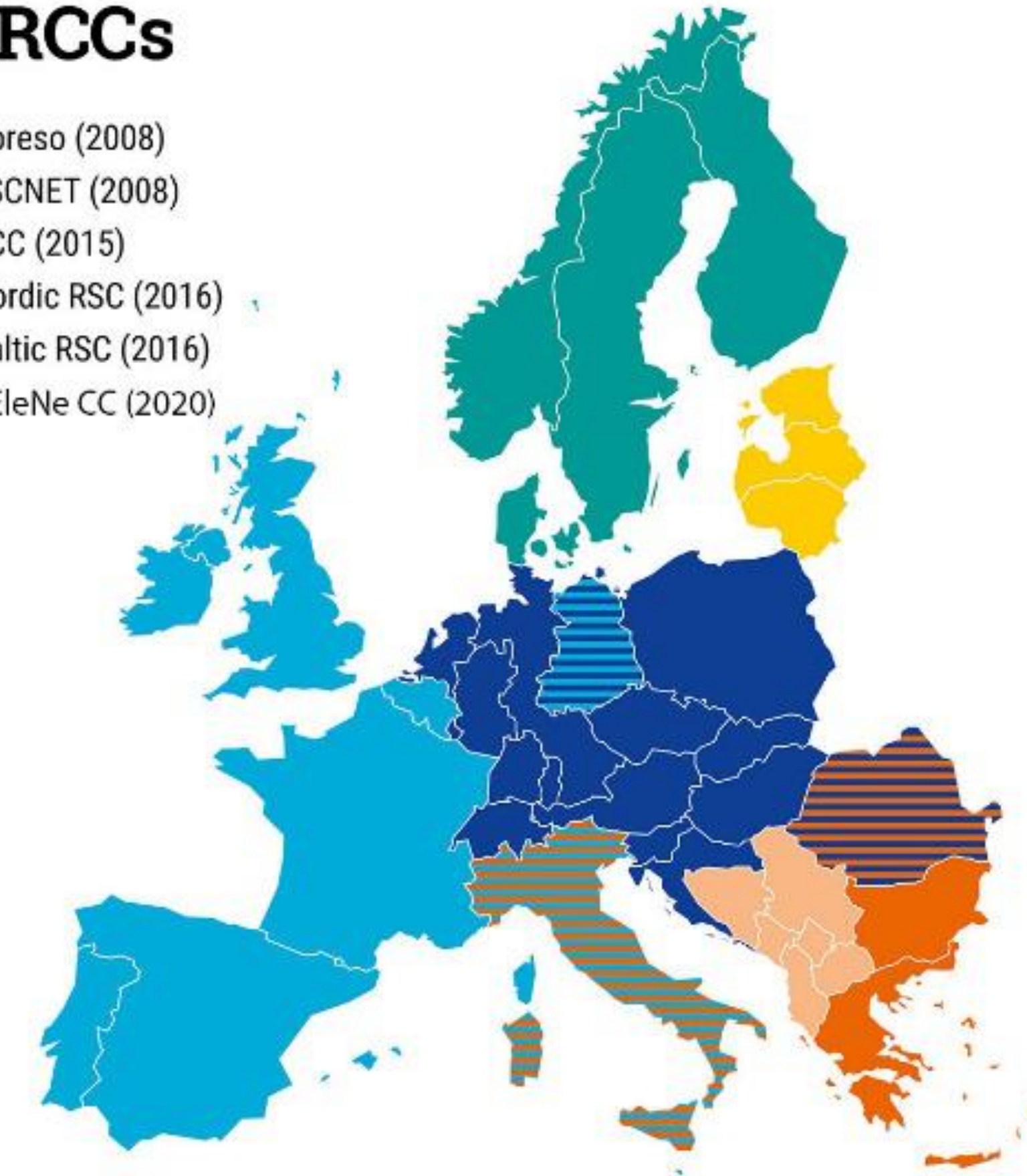


11 CCRs



6 RCCs

- Coreso (2008)
- TSCNET (2008)
- SCC (2015)
- Nordic RSC (2016)
- Baltic RSC (2016)
- SEleNe CC (2020)



■ Services obtained from several RSCs

State of play of TSOs' regional coordination in markets and system operations.

Source: Joachim Vanzetta, Chair of the Board, ENTSO-E, Enhanced TSO coordination for Europe, RSC Conference, Copenhagen, October 2019



Southeast Electricity Network Coordination Center (SEleNe CC)

07

- SEleNe CC (**S**outheast **E**lectricity **N**etwork **C**oordination **C**enter) was the last Regional Security Coordinator (RSC) established in Europe
- The company created on 22nd May 2020 - **during the pandemic** – and started providing all services on 1st July 2021.
- SEleNe CC is located in Thessaloniki (Greece)
- The participating Transmission System Operators (TSOs) were ESO-EAD (Bulgaria), IPTO (Greece), TERNA (Italy) and Transelectrica (Romania) being shareholders of equal portion (25% each).
- It comprises and serves **2 CCRs: SE Europe and GRIT.**
- A subsidiary has been established under the name “Esperia” (located in Rome) serving the internal bidding zones of Italy.
- From 1st July 2022, SEleNe CC has been upgraded to a Regional Coordination Center (RCC) in compliance with the European Commission Regulations and the Clean Energy Package, serving the South East Europe SOR (System Operation Region).

Southeast Europe and GRIT CCRs



Future RCC services | Status

Status

- 14 of 16 legal RCC tasks to be implemented, 2 remain optional
- For 8 existing ● tasks & obligations knowhow and capabilities are established at RCCs
- Basis for 8 new ● tasks & obligations has to be newly created – feasibility is key
- Complexity of operational tasks can become a challenge for human interaction & business continuity
- Strong focus on transparency & reporting



Thank you for your attention!

Yannis Kabouris

Email: ceo@selene-cc.eu , kabouris@admie.gr

Web: www.selene-cc.eu