# Electricity Market Integration in SEE from TSOs perspective

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**Energy Market Integration and Transition in SE Europe**
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entsoe

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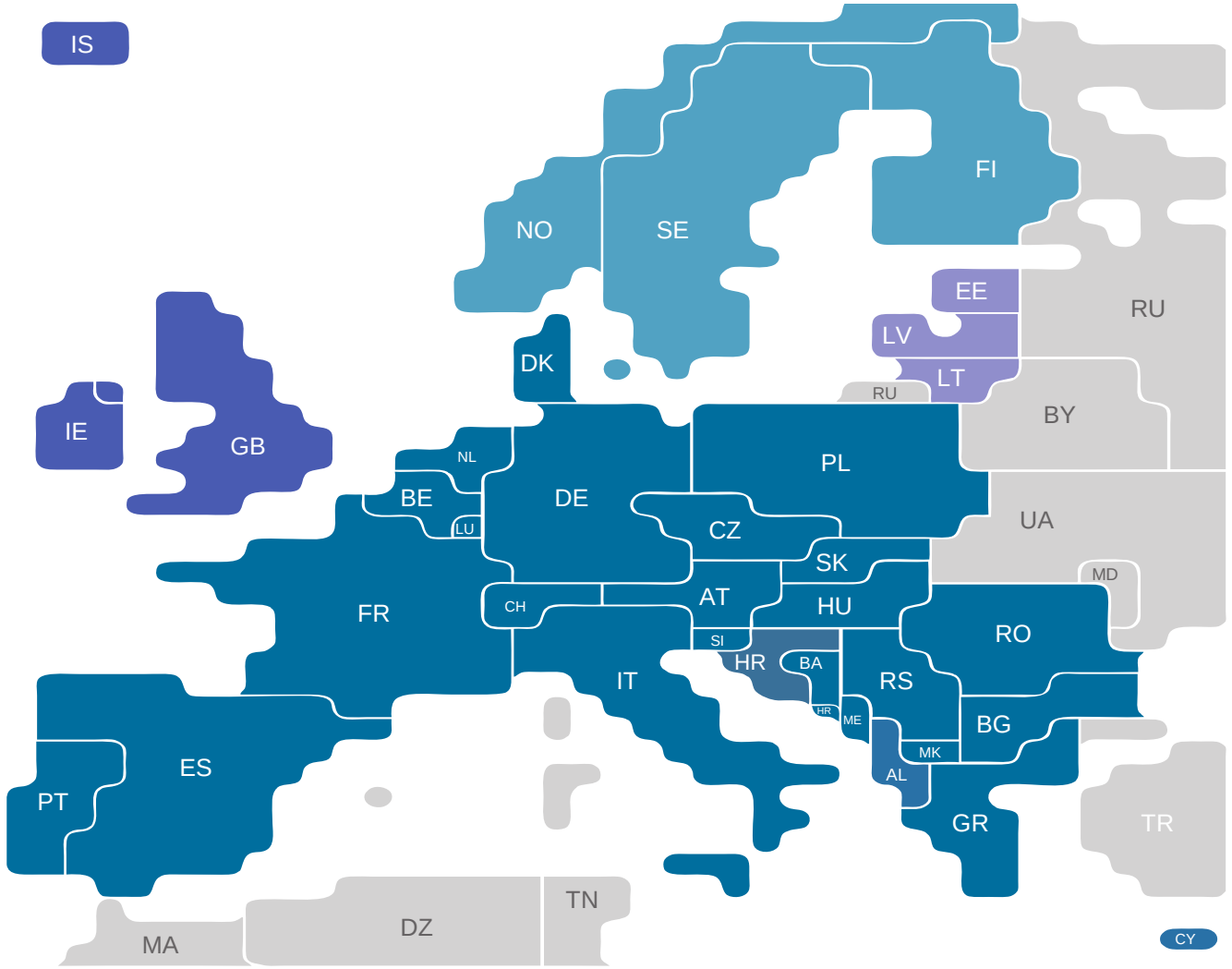
# ENTSO-E – pan-European TSOs Association

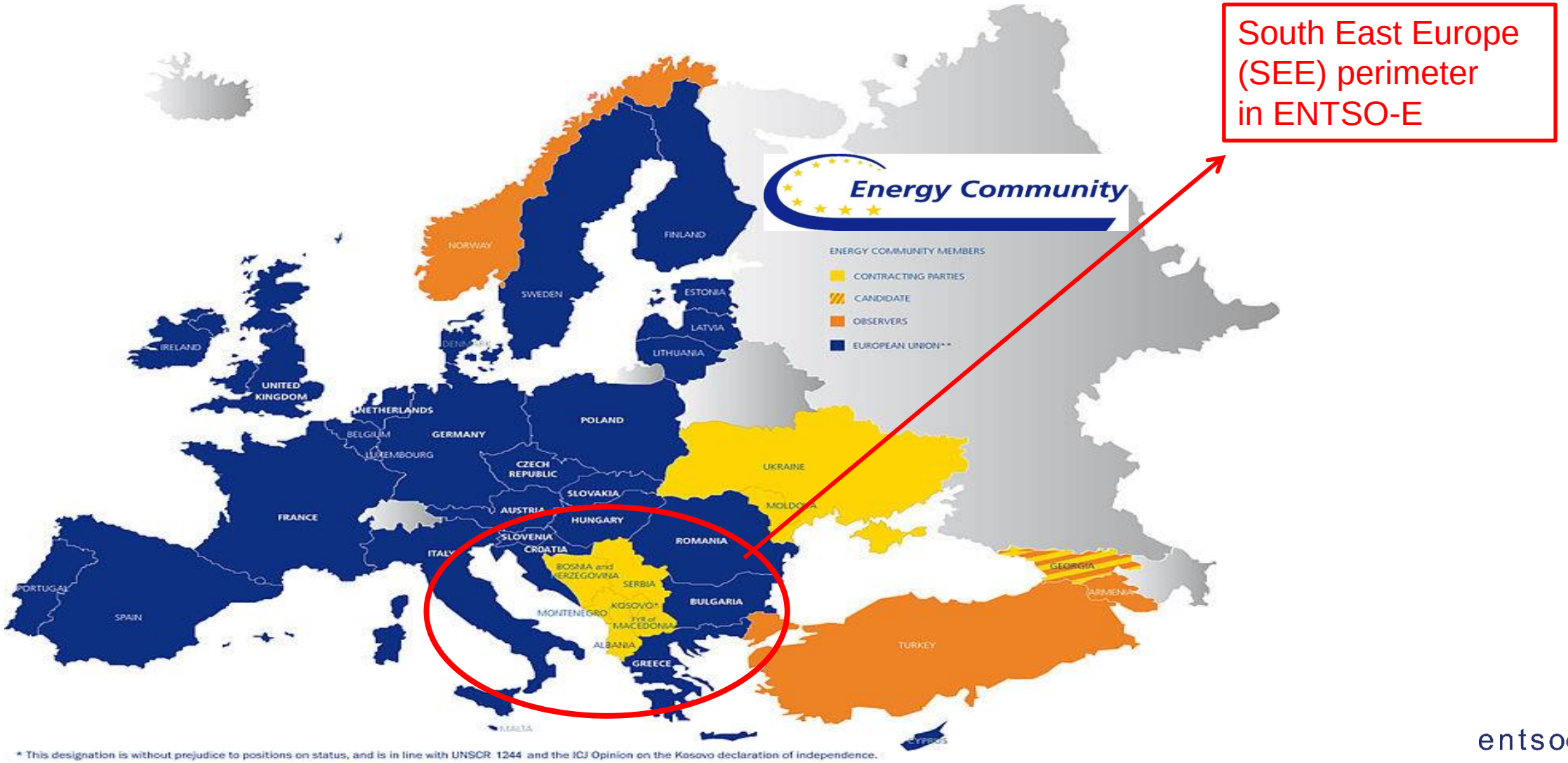



- 43 member TSOs from 36 countries
- 5 synchronous areas (represented by different colours on the figure left)
- Most of the ENTSO-E organisational elements (such as committies – SO, SD, Market, RDIC, LRG) are at association level, but there are several also at the regional levels

# SEE needs

## Gaps and challenges

# SEE in European Union and Energy Community (EnC)



# Key Messages on Transmission Infrastructure Development in SEE Region

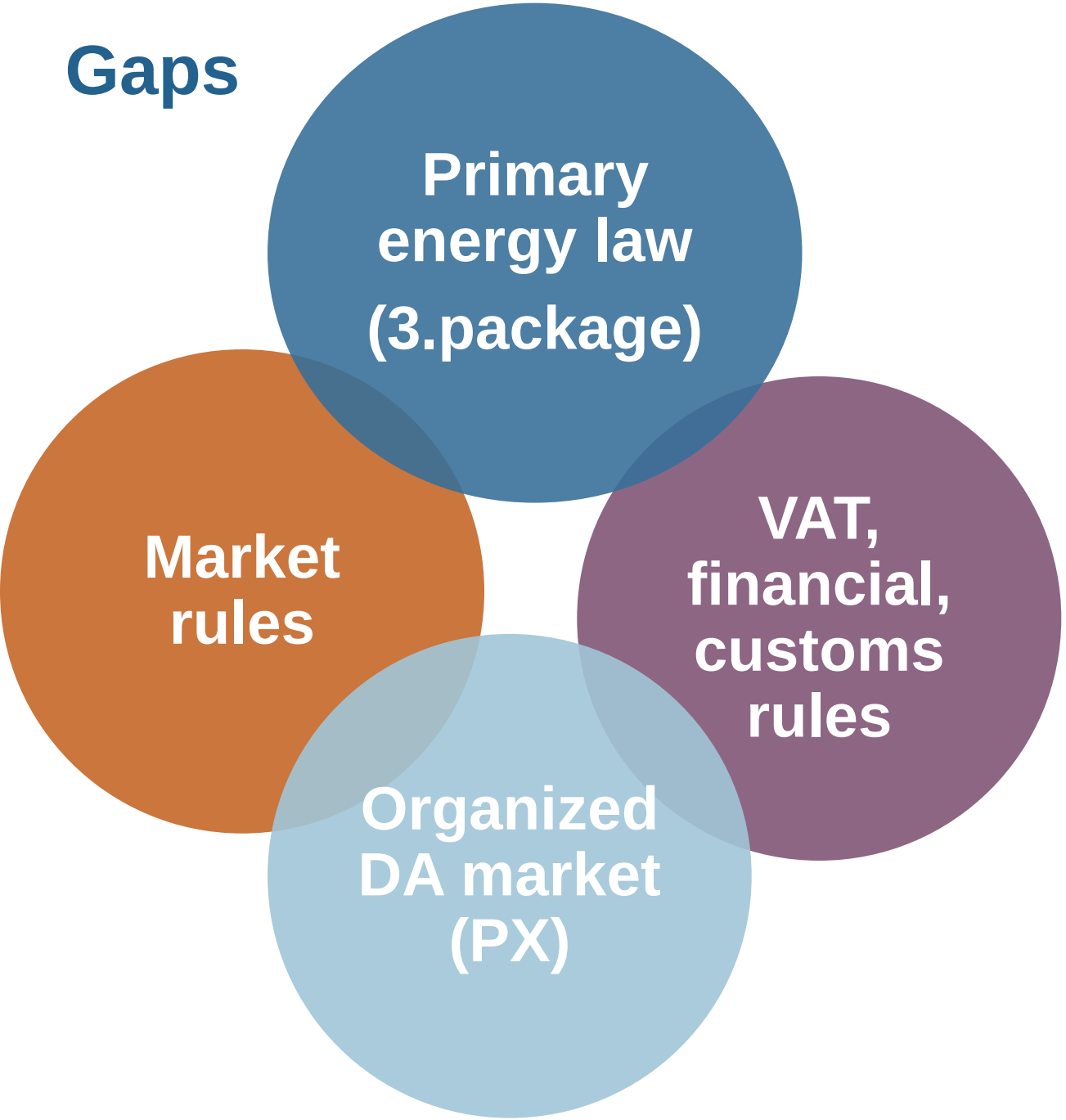
The main challenges and drivers of transmission grid development in the region are:

- Increase of Transfer Capacities (cross-border and internal alike) as a prerequisite for Market Integration facilitation.
- Massive RES integration in order to achieve EU and national targets.
- Flexibility needs, especially for the countries with the highest RES penetration in the region.
- Extensions of ENTSO-E system to the East and South.

These challenges are reflected in the planned projects and confirmed by the system needs identified by 2040.


ENTSO-E Regional Group Continental South East:(CSE) for System Development :
AL, BA, BG, HR, CY, GR, HU, IT, ME, MK, RO, RS and SI.

# Gaps




**SEE countries with different legal obligations (EU and non-EU)**

**SEE countries with different level of allingment of market rules (NC&GL)**

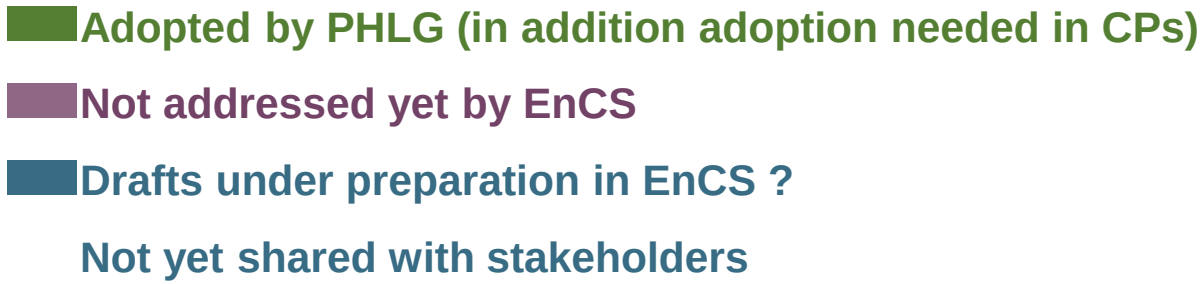
**SEE countries with different level of harmonisation of other rules & laws**

**SEE countries in different stages of market development**

- Ready for DA market coupling with feasible neighbours
- Completing remaining rules
- Establishing an organized DA market

# Network Codes and Guidelines Transposition in EnC

## State of play




**3 CONNECTION NETWORK CODES**

- Requirements for Generators
- Demand connection
- HVDC connections

**3 MARKETS GUIDELINES**

- Capacity Allocation & Congestion Management
- Forward Capacity Allocation Guidelines
- Balancing Guidelines

**2 OPERATIONAL NC & GL**

- System Operation Guideline
- Network Code on Electricity Emergency and Restoration

# Progress towards market integration

## Review of the Road Map from 2017 report „Enhancing Market Coupling of SEE Region”

# Tentative road map for DA coupling
## Main Steps envisaged in 2017

- Northern part of the region » 2-4 borders coupled
- WB6 target » 6-8 borders coupled
- Coupling of the remaining borders

# Tentative road map for DA coupling comparison with notified DA MC projects (e.g. in WB6 and or CESECe)

**SI-HR**
**HU/RO-RS**
**ME-RS; HR-HU**

**AL-KS; BG-RO**
**GR-IT; HR-RS**
**BG-FYROM; IT-ME**
**FYROM-RS; AL-ME**

**BG-GR; BiH-HR; BiH-RS**
**AL-FYROM; KS-RS;**
**FYROM-GR**

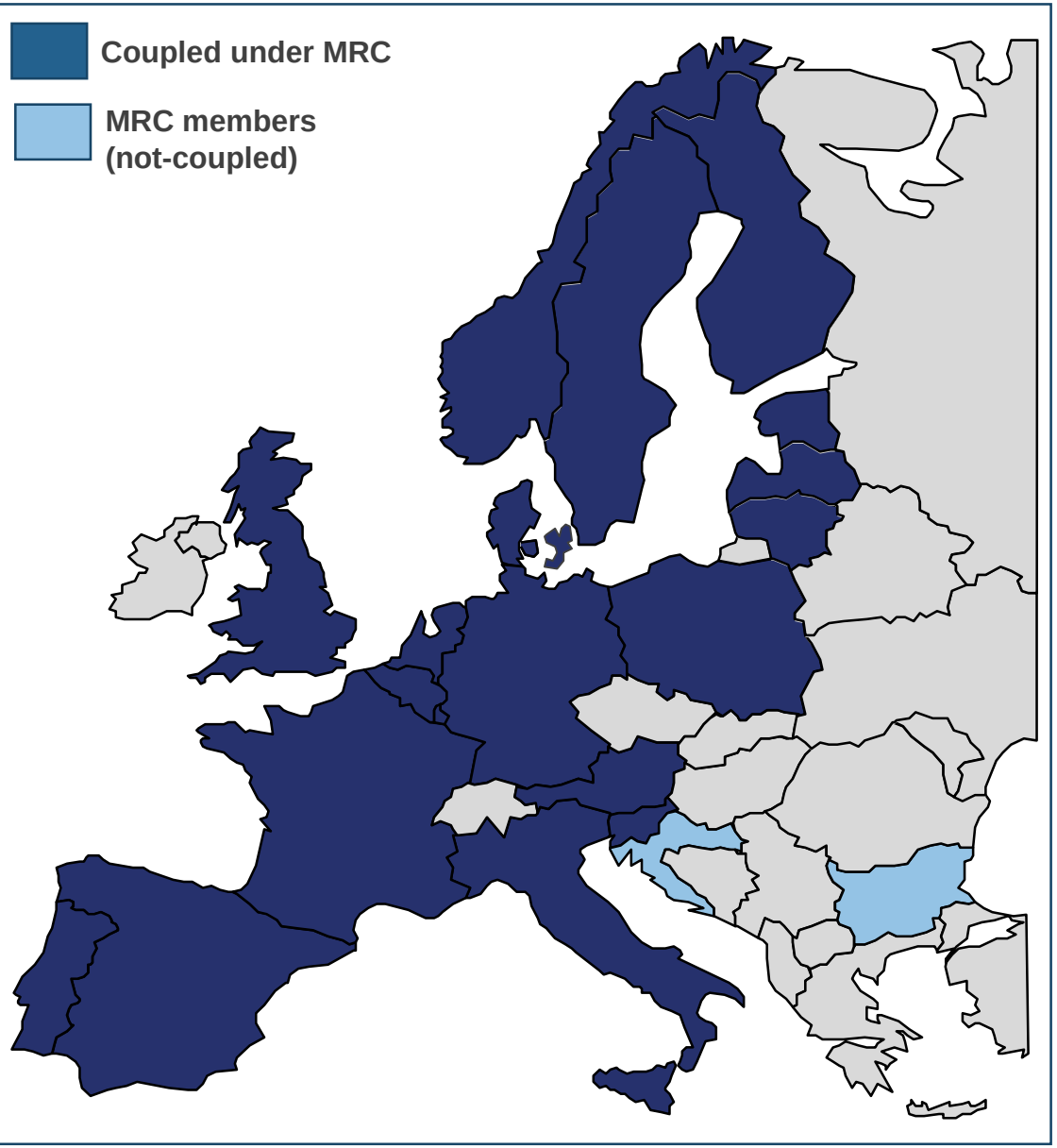
**Day-Ahead**

## Multi Regional Coupling (MRC)

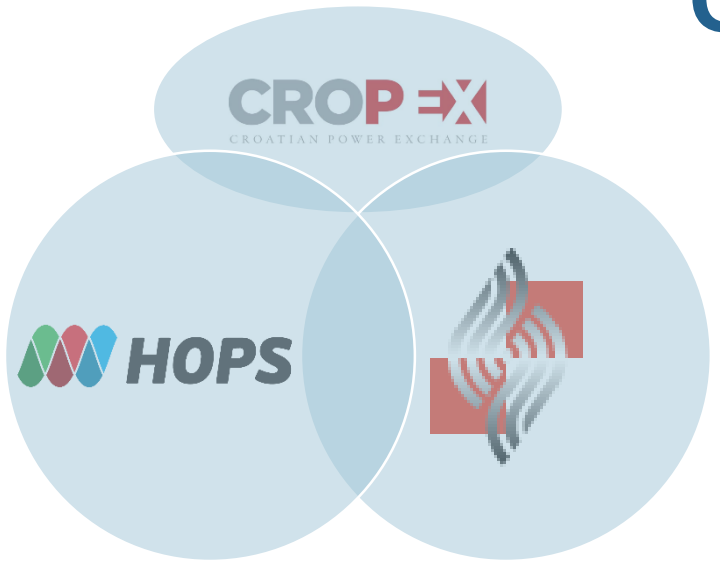
**Scope:** Operation and evolution of single Day Ahead Market Coupling (Single DA Solution)

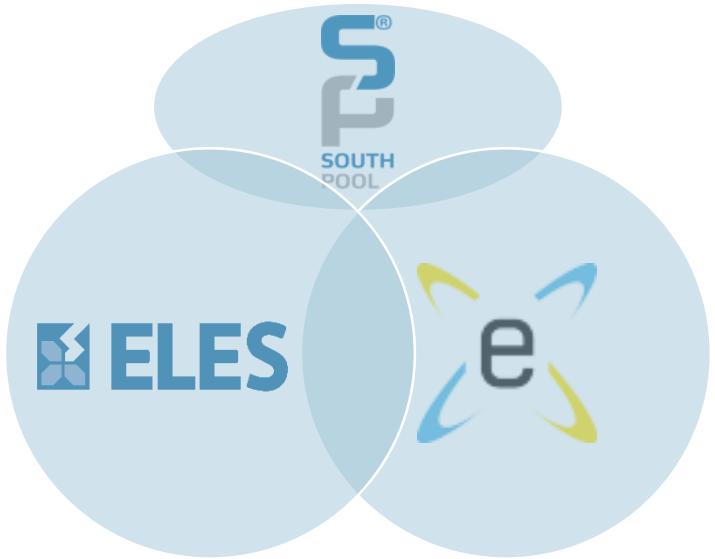
**TSOs:** 50HERTZ, AFFARSVERKETSVENSKAKRAFTNAT, AMPRION, APG, AST, BRITNED, CREOS, ELERING, ELES, ELIA, ENERGINET.DK, FINGRID, LITGRID, NATIONAL GRID, PSE, REE, REN, RTE, STATNETT, TENNET B.V, TENNET GMBH, TERNA & TRANSNET

**NEMOs (PXs):** BSP, CROPEX, EPEX, GME, IBEX, Nordpool, OMIE & TGE



# MRC Extension Project underway at the edge of SEE: Coupling of the HR & SI markets



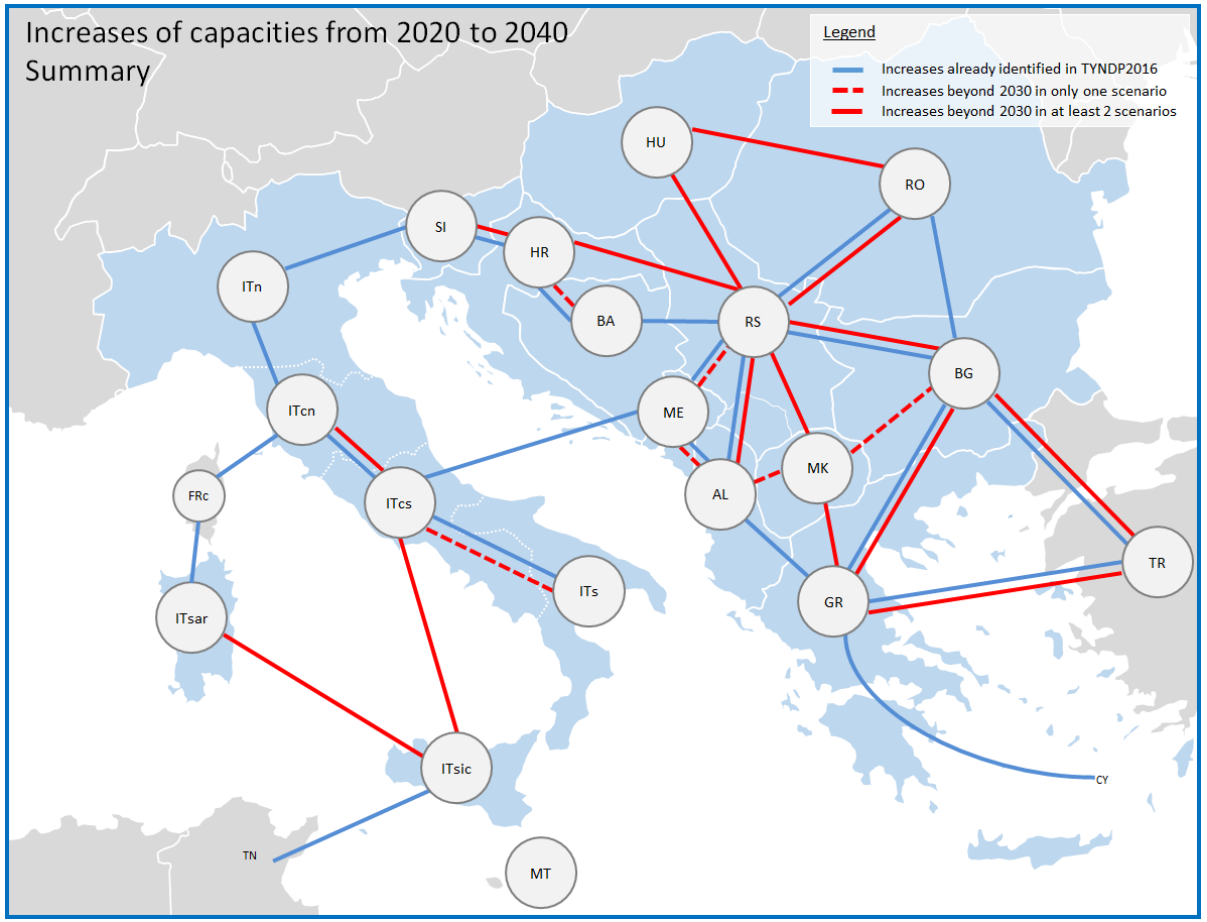

DA project under IBWT regional governance

go live by end of Q2 2018

# Next steps

## Way forward in regional cooperation

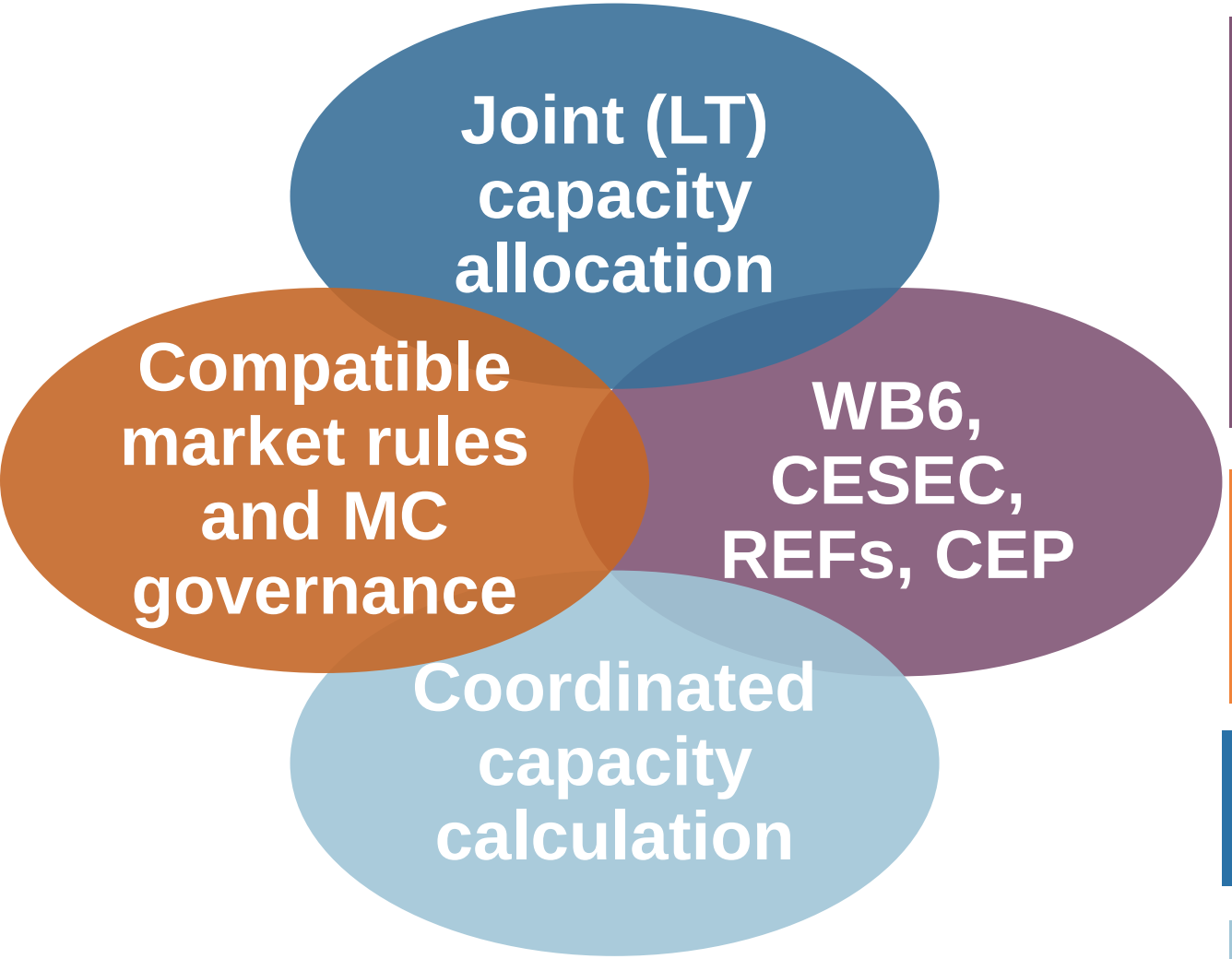
# Main Identified Infrastructure Needs
## (in ENTSO-E Regional Investment Plan for SEE – a part of TYNDP)




Strengthen the E-W and N-S axis by increasing transfer capacities at the respective borders in order to:

- Cope with the assumed high RES penetration (e.g. in TR, RO and GR)
- Cope with high transit power flows (e.g. in RS)
- Support market integration in SEE Region and with neighbouring regions

# Regional cooperation–drivers and challenges for way forward




- **WB6 initiative** - EnC
- **CESEC-e (market,infrastructure,SoS)** – EC
- **Finalisation of CEP (Clean Energy Package)** – EC & EP
- **RGs and future REFs (Regional Energy Forum)** – **ENTSO-E**

- **Decentralized process of national/bilateral projects (with a close view on CACM)**
- **Contractual basis and operative governance (MRC model)**

- **Two auction offices provide services for (not yet all) SEE borders**

- **One of basic 5 RSC services (two RSCs likely to be involved)**

# SEE CCR – now and in the future

- Legal implementation of SEE CCR currently binding only for 3 EU TSOs
- Scope of the future CACM and FCA implementation
- Preparation for voluntary implementation underway in the framework of WB6


- Future SEE CCR ( *„SEE Shadow region”* ) according to „all –TSOs” proposal for CCRs from 2015 (Annex 1 to Explanatory document)
- Includes EU SEE CCR , non-EU (WB6) and EU/non-EU bidding zone borders (with 3 additional EU TSOs)

IT-ME will be included when HVDC interconnection is commissioned; HU-RO & HU-HR in Core CCR

# Q&A

# THANK YOU FOR YOUR ATTENTION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