

FSR Debate

12 November 2025

Moderator: Leonardo Meeus



Panellists



Miriam Stallone



*DG ENER
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Agenda

- **14:00 Introduction**

- Presentation of the FSR working paper:
“Three steps to a regional capacity market in the EU”

- **14:10 Panel debates and live polls**

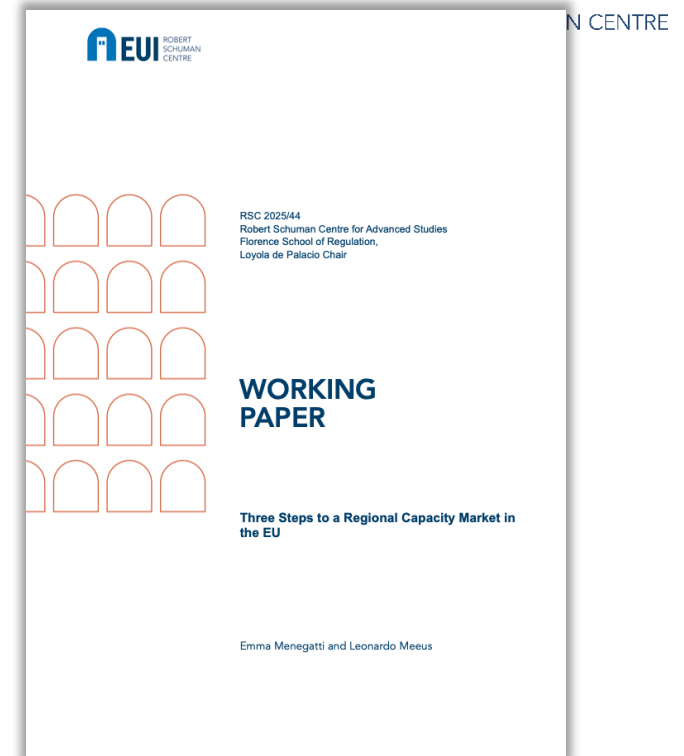
- What would be the benefits of integrating capacity markets across borders?
- How far can we go in capacity markets’ regionalisation?
- What are the main barriers – and potential solutions – to capacity markets’ regionalisation?

- **14:55 Conclusion**

Introduction

Presentation of the FSR working paper:

“Three steps to a regional capacity market in the EU”
(Menegatti&Meeus, 2025)



State of play: growing role of national capacity markets

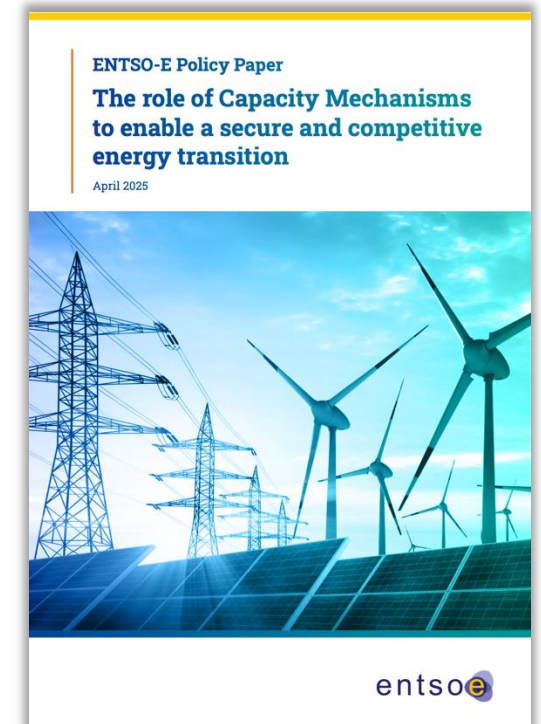
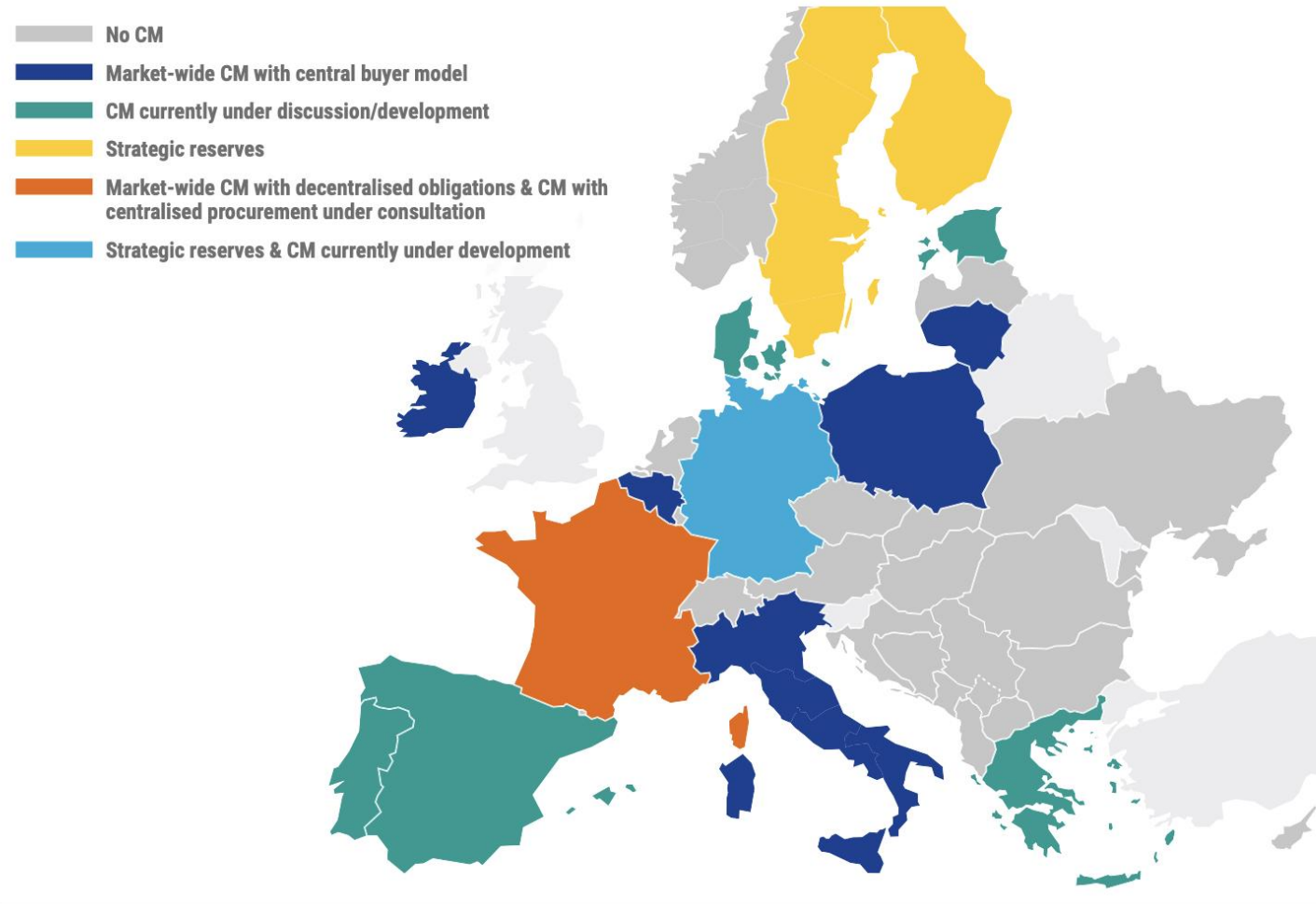


Figure 2: Status of CMs across the ENTSO-E membership countries as of 2025

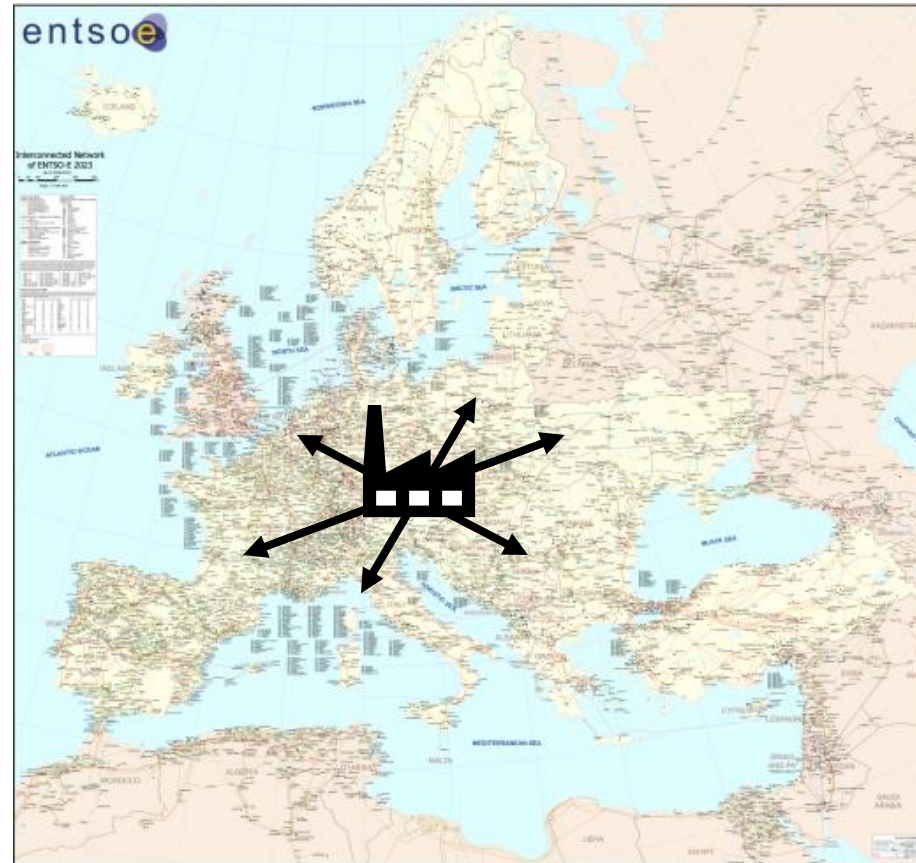
Source: ENTSO-E elaboration based on ACER (2024): Monitoring report on security of EU electricity supply and TSOs input

Cost-efficient Adequacy Framework: **two objectives**



1. Where to invest?

Selecting the cheapest
capacity across borders
ensuring our common
Security of supply

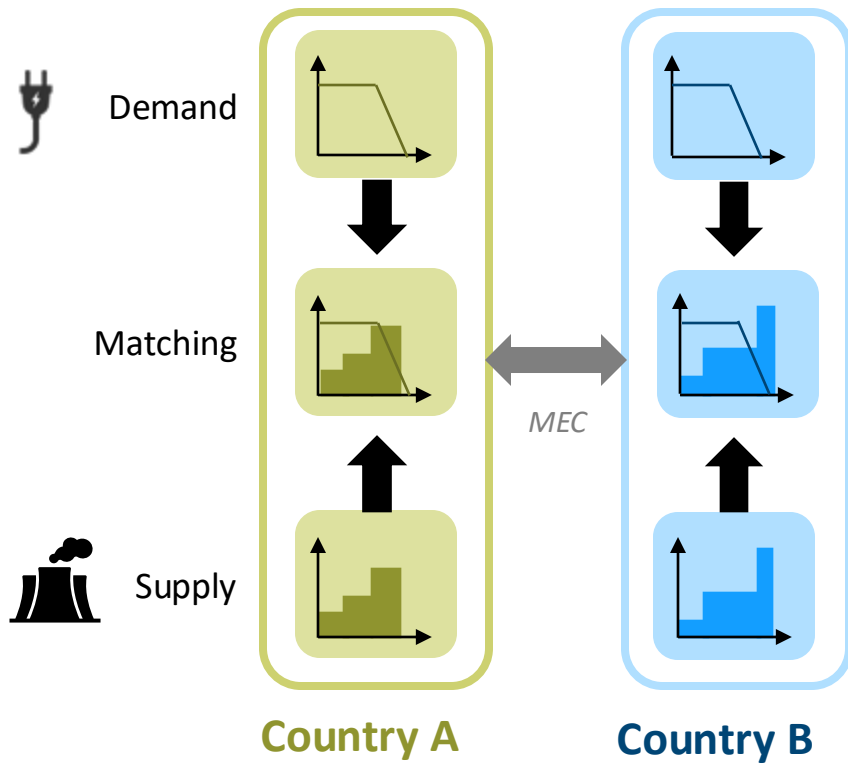


2. How much to invest?

Avoiding costly over(or under)
capacity

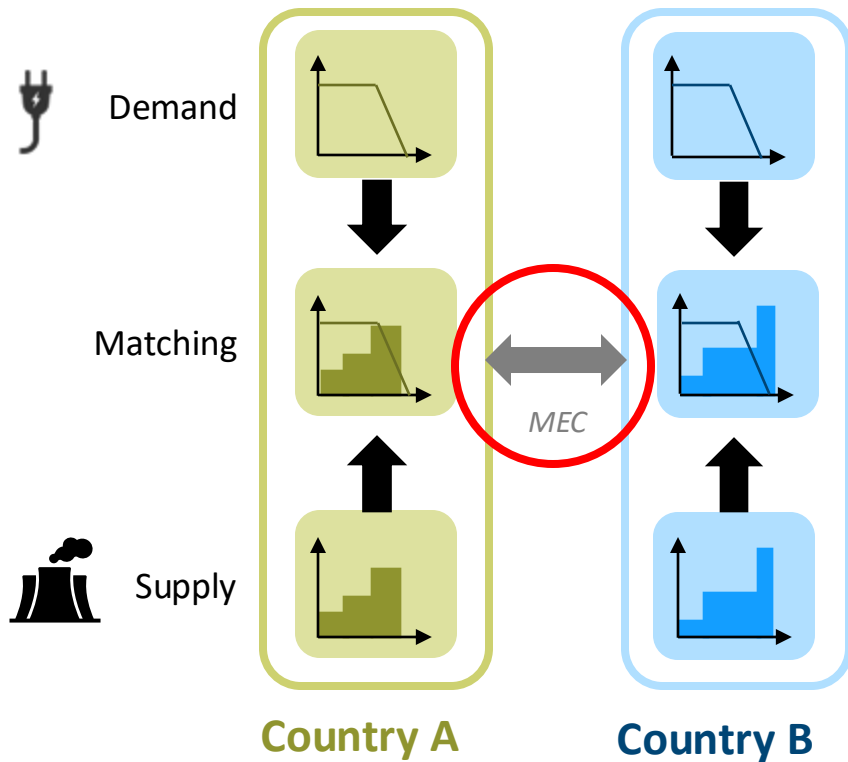


Issues with the current framework





Issues with the current framework



European Resource Adequacy Assessment

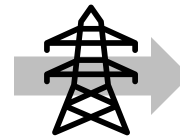
entsoe

ACER
European Union Agency for the Cooperation
of Energy Regulators

corefo

Maximum Entry Capacity

RCCs



Fixed MEC= 1 value per border, either :

- Deducted from national demand (implicit CBP)
- Procured abroad (explicit CBP) → *mandatory*





Issues with the current framework

- **Limited acceptability of the scenarios**
 - So far not realistic for MS procurement horizon?
 - Will be improved:
 - “*with CM*”: account for expected new capacity
 - “*trends and projections*”: account for actual system

**European Resource
Adequacy Assessment**



Issues with the current framework

- **Limited acceptability of the scenarios**
- **Use of national assessments**
 - In which assumptions must be made on neighbors' future system and resource availability

coreso

Maximum Entry Capacity

Recommendation to the TSO - 2024 - Elia

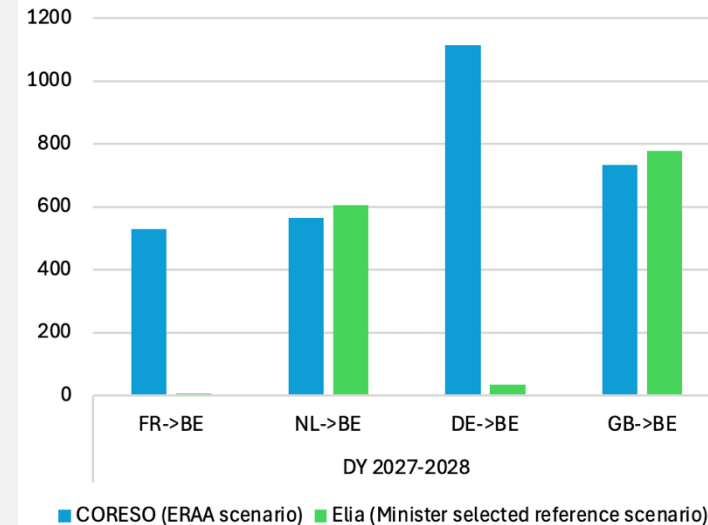
In accordance with Article 26(7) of Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity.

elia

Preparation of the CRM Y-1, Y-2 and Y-4 auctions with Delivery Periods 2026-2027, 2027-2028 and 2029-30:

Report of the transmission system operator containing the information to determine the volume to be contracted and proposals for other parameters.

MEC estimates for Belgium - MW (2024)

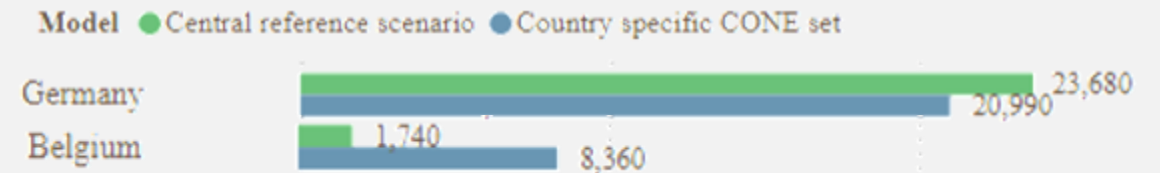




Issues with the current framework

- **Limited acceptability of the scenarios**
- **Use of national assessments**
- **Possible errors: reliance on estimated CONE**
 - To forecast where new capacity will/should be built
 - Is ERAA fit for “central-planning”?

EVA outcome for 2035 (MW)



The results in this section reveal a strong regional investment bias when using country-specific CONE values for investments in gas-fired generation technologies. Some impact can also be observed for the pan-European results.

What happened?

- Belgium submitted lower CONE than Germany
- In ERAA model: significant capacity relocation in Belgium... which is likely not reflect the economic optimum?
- (interim ?) solution: using harmonized values ... which has its limits

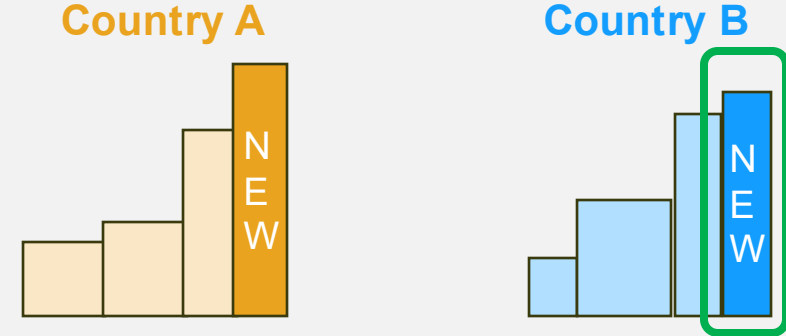




Issues with the current framework

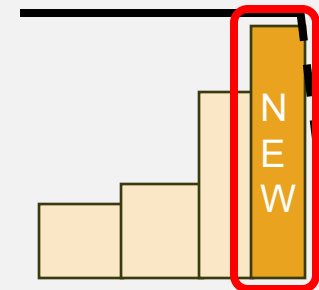
- **Limited acceptability of the scenarios**
- **Use of national assessments**
- **Possible errors: reliance on estimated CONE**
- **Sequential clearing and fixed estimated MEC**
 - Any error can translate into actual capacity procurement
 - “self-fulfilling” prophecy

Only one new generator is needed in A+B



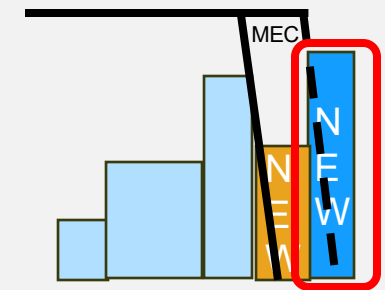
What if ERAA improperly forecasts new capacity in country A?

A clears first



Expensive generator is selected

B clears second



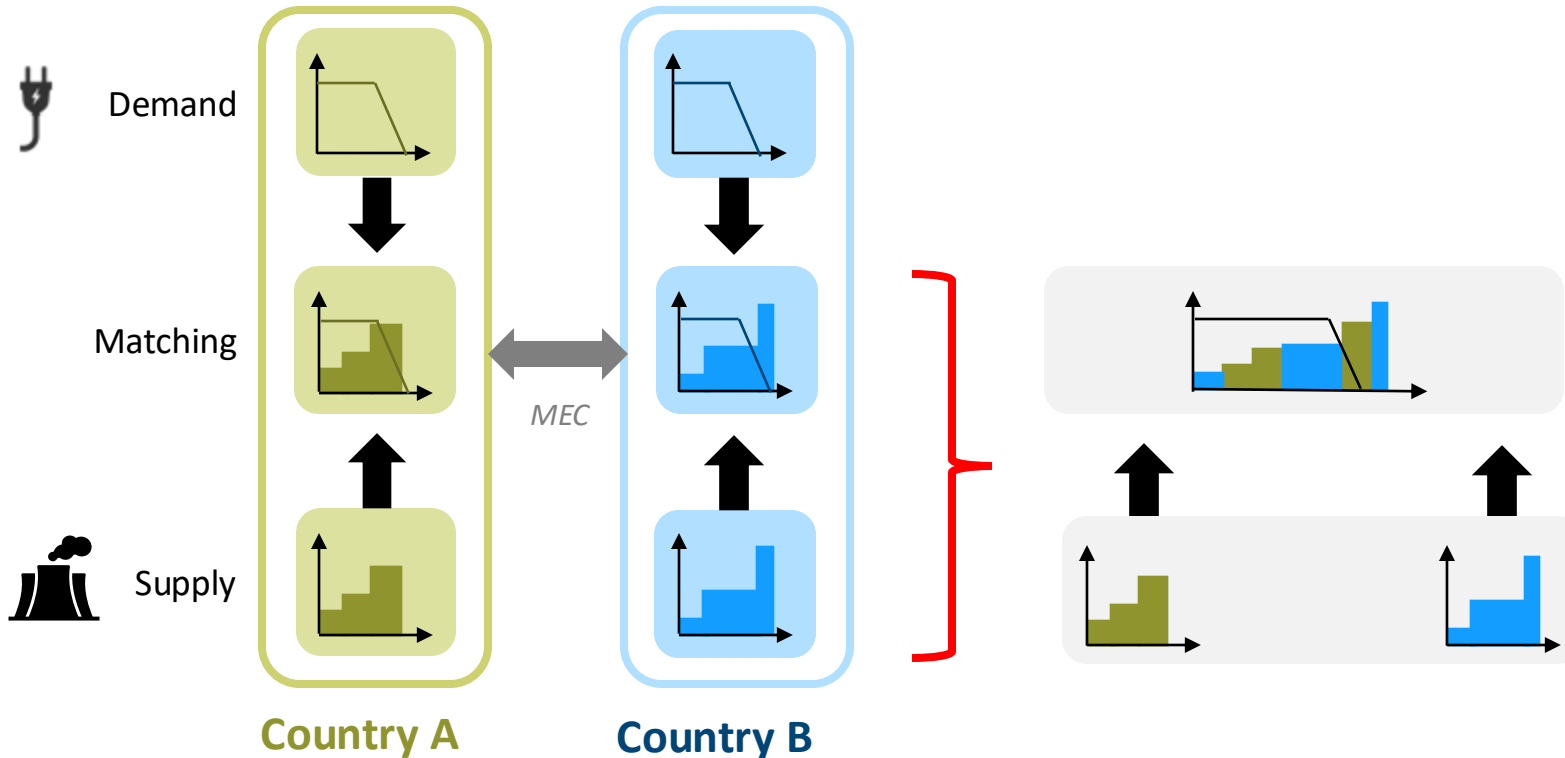
Cheaper generator not selected



Solution: pooling supply bids and simultaneous clearing

Step 0.
National clearing

Step 1.
Regional supply pooling



- ✓ Selection of resources based on **cross-border bid-based competition**
- ✓ **Imports become a result**, rather than an input, of the capacity procurement process
- ✓ **Single clearing is simpler** for market participants

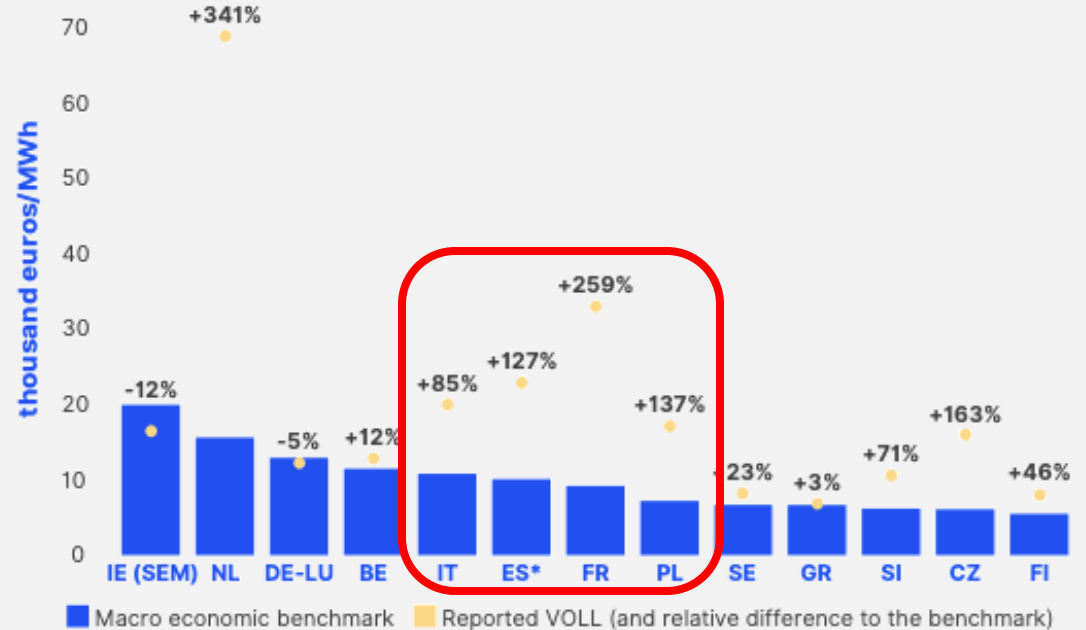


Issues with the current framework

Nationally defined demands

- Political interference
- Possible to over(under) procure
 - RS definition (*VOLL example*)
 - NRAAs
 - CM parametrisation
- Focus on national stress events

Figure 3: Comparison of reported VOLLs with a benchmark based on macroeconomic data



Source: ACER (2024)

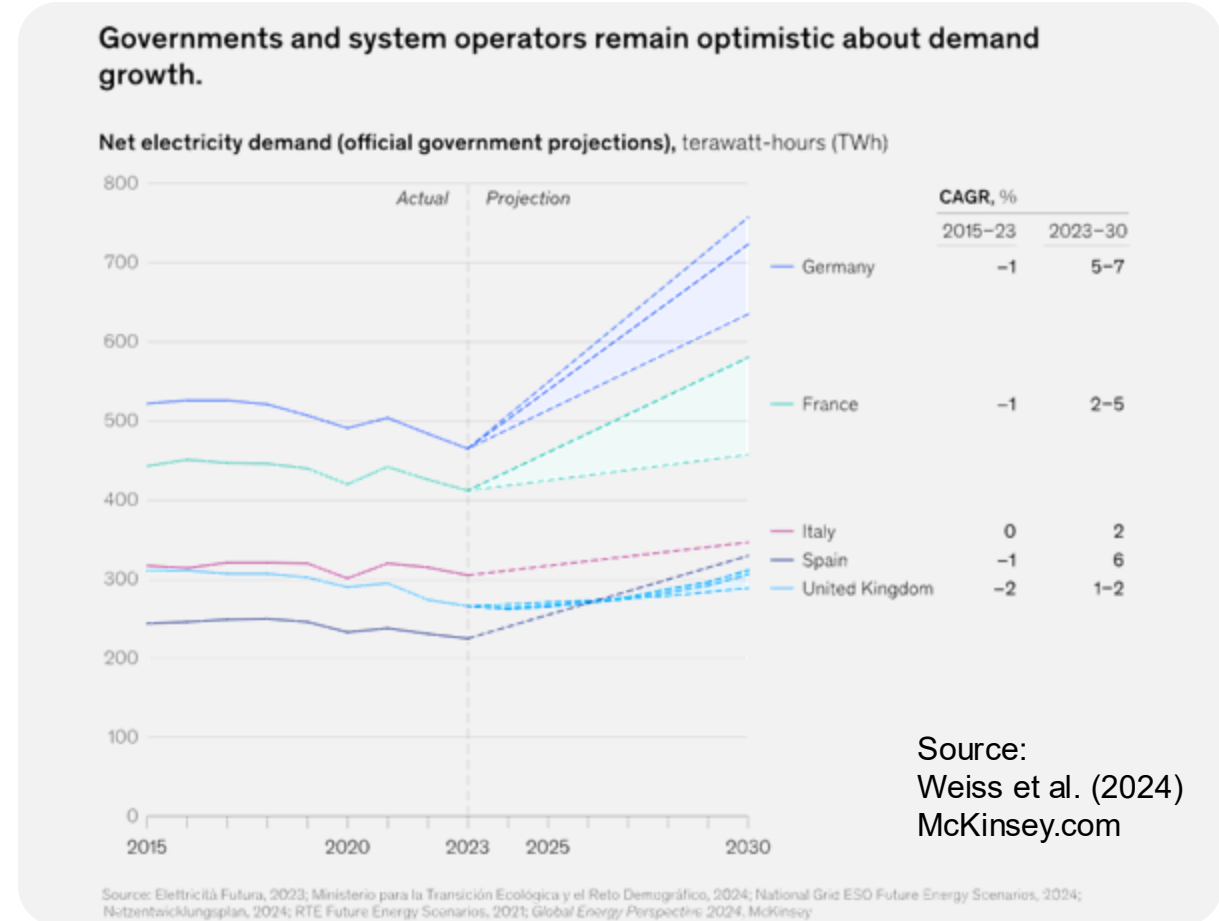


Issues with the current framework

Nationally defined demands

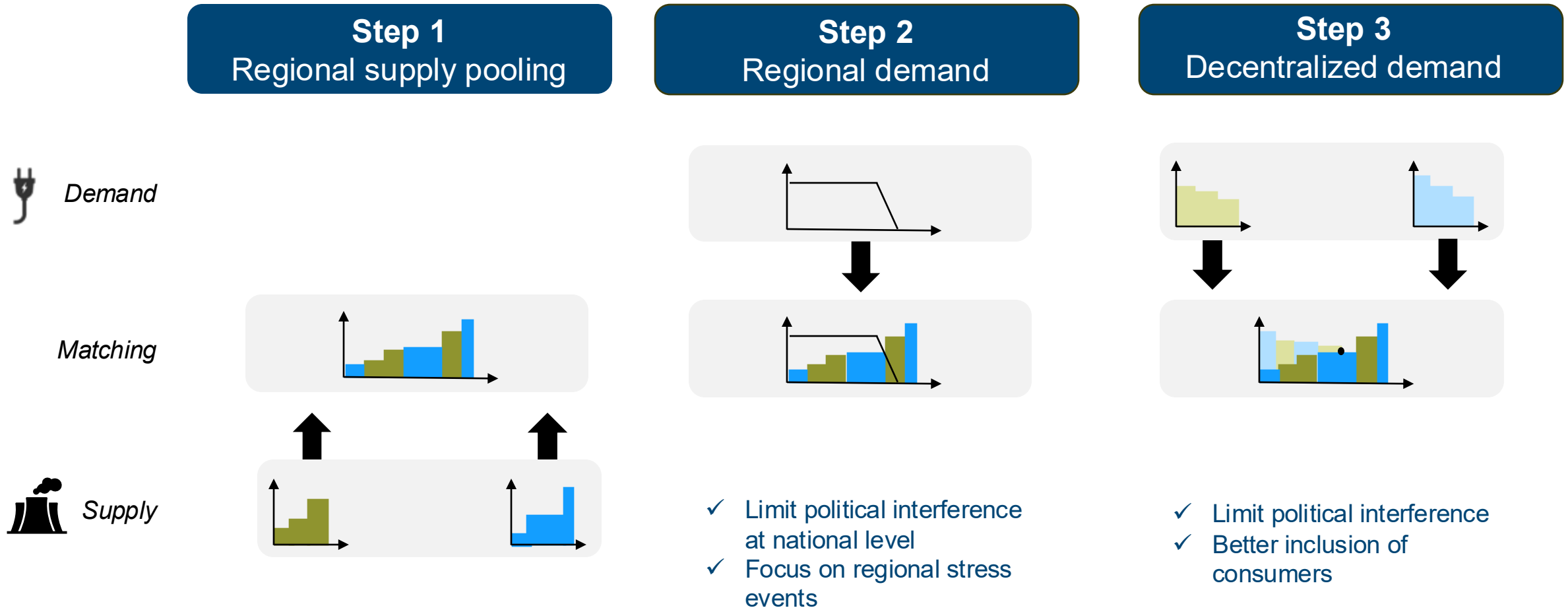
Centralized demands

- Defined by TSOs/NRAs/governments
- Large uncertainty on e.g. peak demand growth
- Consumers not directly involved in the demand definition



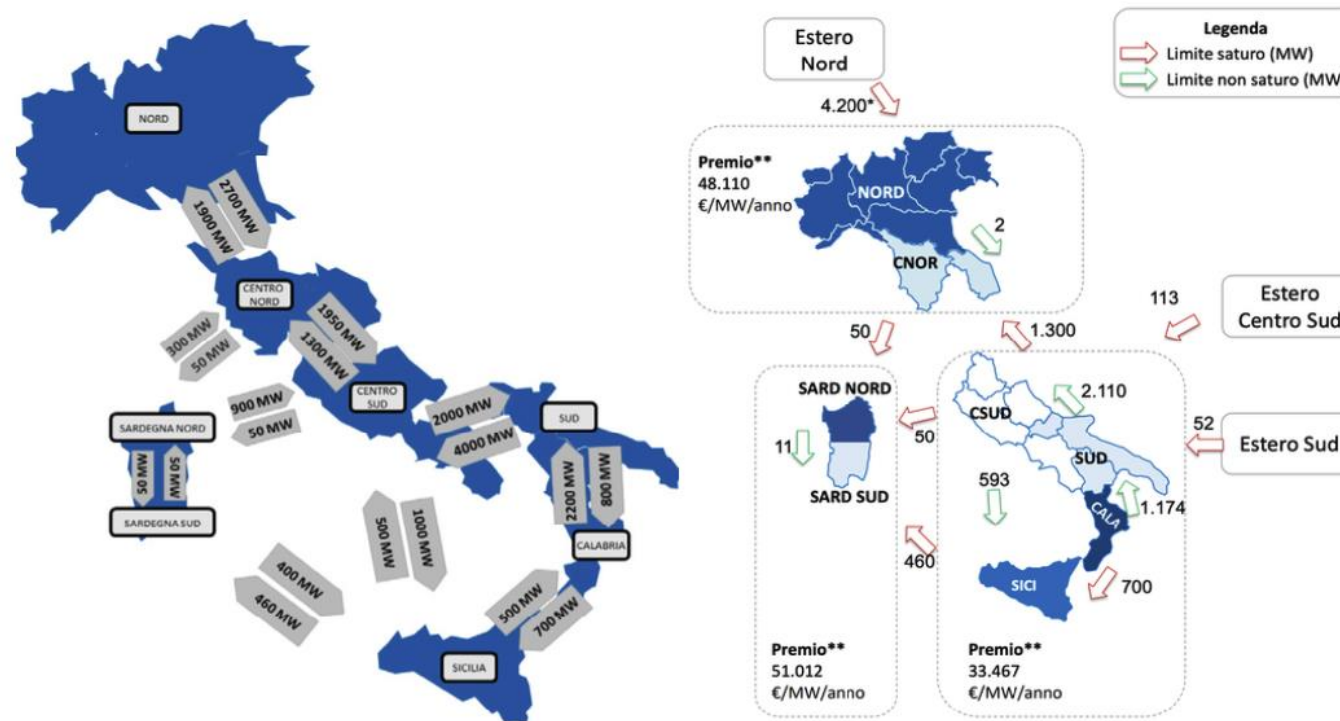


Solutions: Regional or decentralized capacity demands



How can it look like in practice ?

Figure 1 – Maximum cross-zonal capacity (left map) and results of the Italian capacity market main auction (right map) for delivery year 2024



Sources: Terna (2021b, 2022)

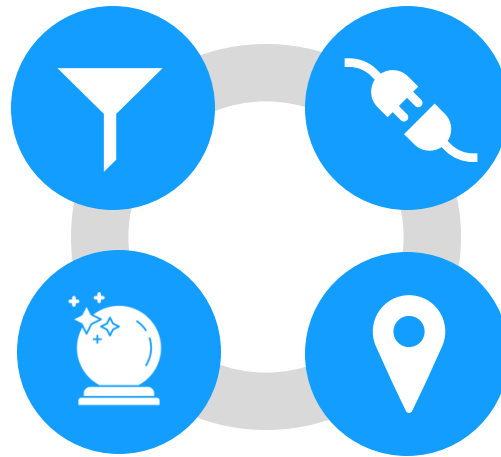
Barriers – and potential solutions – to regionalisation

Design convergence

- “Main” features are harmonised
- Possible to use common price-based availability periods
- **Regional initiatives**: to align on technical choices and methodologies

Scenarios definition

- Crucial to define: demand targets, de-rating factors...
- EU-level (ERAA): being improved
- National scenarios (NRAAs): still used
- **Regional adequacy assessments** as an in-between



Curtailment allocation

- Lack of clarity on curtailment sharing vs local matching
- Not aligned with capacity costs allocation
- **Clarify curtailment rules** and enshrine in legislation

National autonomy

- Trade-off: cost-efficient plants' relocation increases dependency on imports
- Possible to consider **minimum national constraints**, which can be more or less binding

Assessment summary

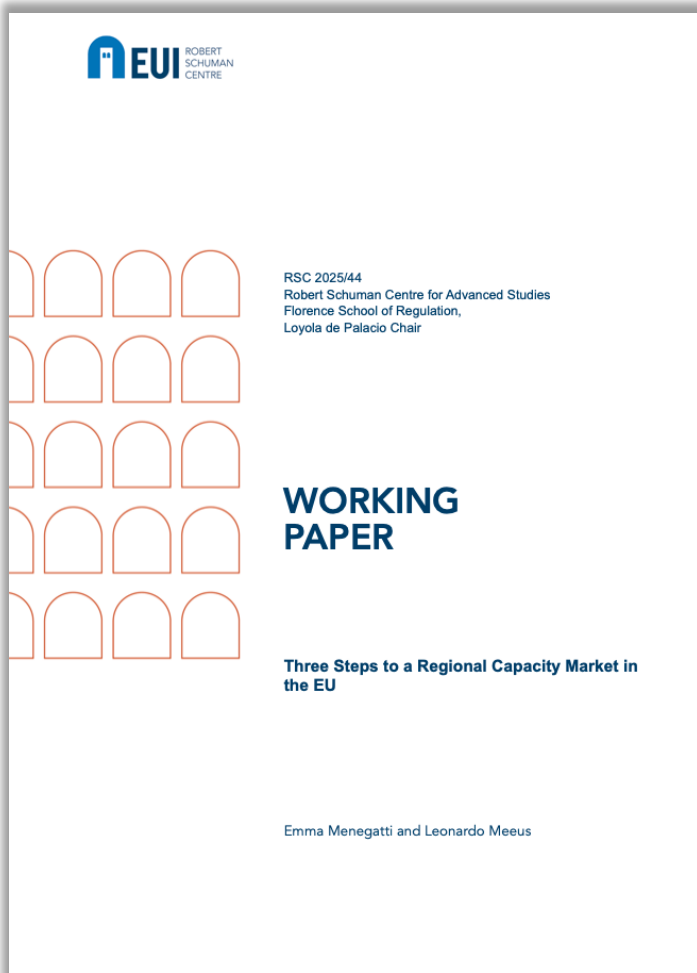


Table 1 - Overview of the three “regionalisation” steps and their assessment against the objectives and feasibility consideration

Solution - Step	0 (baseline)	1	2	3
<i>Supply pooling</i>	National	Regional	Regional	Regional
<i>Demand definition</i>	National	National	Regional	Decentralized
Objective or consideration				
Selecting the least-cost generators across borders	Reliant on fixed MEC estimations	Enabled by pooling and single simultaneous auction		
Address risk of over/under-procurement	Demand reliant on NRAAs, VOLL and other nationally taken assumptions		Coordinated but still regulated demand	Bidding-based demand
Feasibility and political acceptability	Current set-up	More difficult, can be made more acceptable with minimum national constraints		Most complex, lower acceptability

Panel debate



Miriam Stallone



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Internal Energy Market unit
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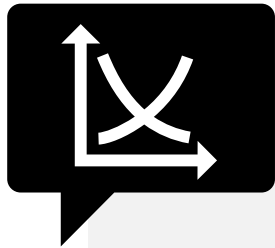
What would be the **benefits** of integrating capacity markets across borders?



Live poll 1: Do you agree with the arguments for regionalisation?

1. Yes, to avoid under/over procurement of capacity
2. Yes, for selecting the cheapest generators across borders
3. Yes, other
4. None

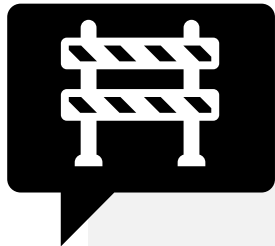
How far can we go in capacity markets' regionalisation?



Live poll 2: What is your preferred regionalisation step?

1. Step 0: Status quo (national clearing)
2. Step 1: Regional supply bids pooling (single clearing)
3. Step 2: Regional capacity demand
4. Step 3: Decentralized capacity demand

What are the main **barriers** – and potential solutions – to capacity markets' regionalisation?



Live poll 3: What do you see as the main barrier to regionalisation?

1. Converging towards a single harmonised design/product
2. Trusting imports' availability during common scarcity periods
3. Agreeing on common scenarios of the future
4. Political preference for autonomy/autarky

Thank you!

