



Flexibility – The Regulator’s Perspective

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Session 2: Encouraging flexibility

Main title of the page

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- Revenue for Flexibility
- Flexibility for Networks
- Network Load Diversity Assumptions
- Flexibility for Consumers
- Flexibility – the Regulatory Levers



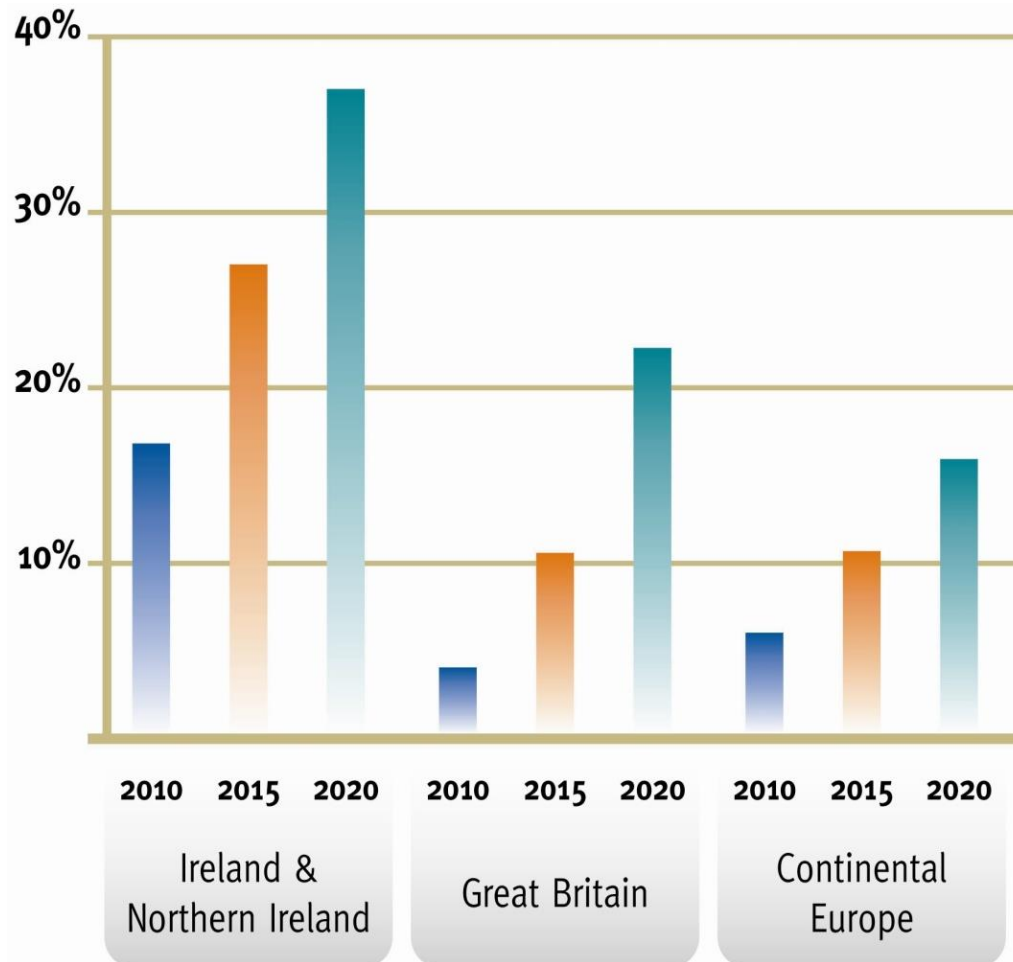
The flexibility need

Year	EU Renewables target (Final Consumed Energy)	
2020	20%	curtailment 0.6%
2030	27%	curtailment 7%*
2050	50+%	curtailment ?

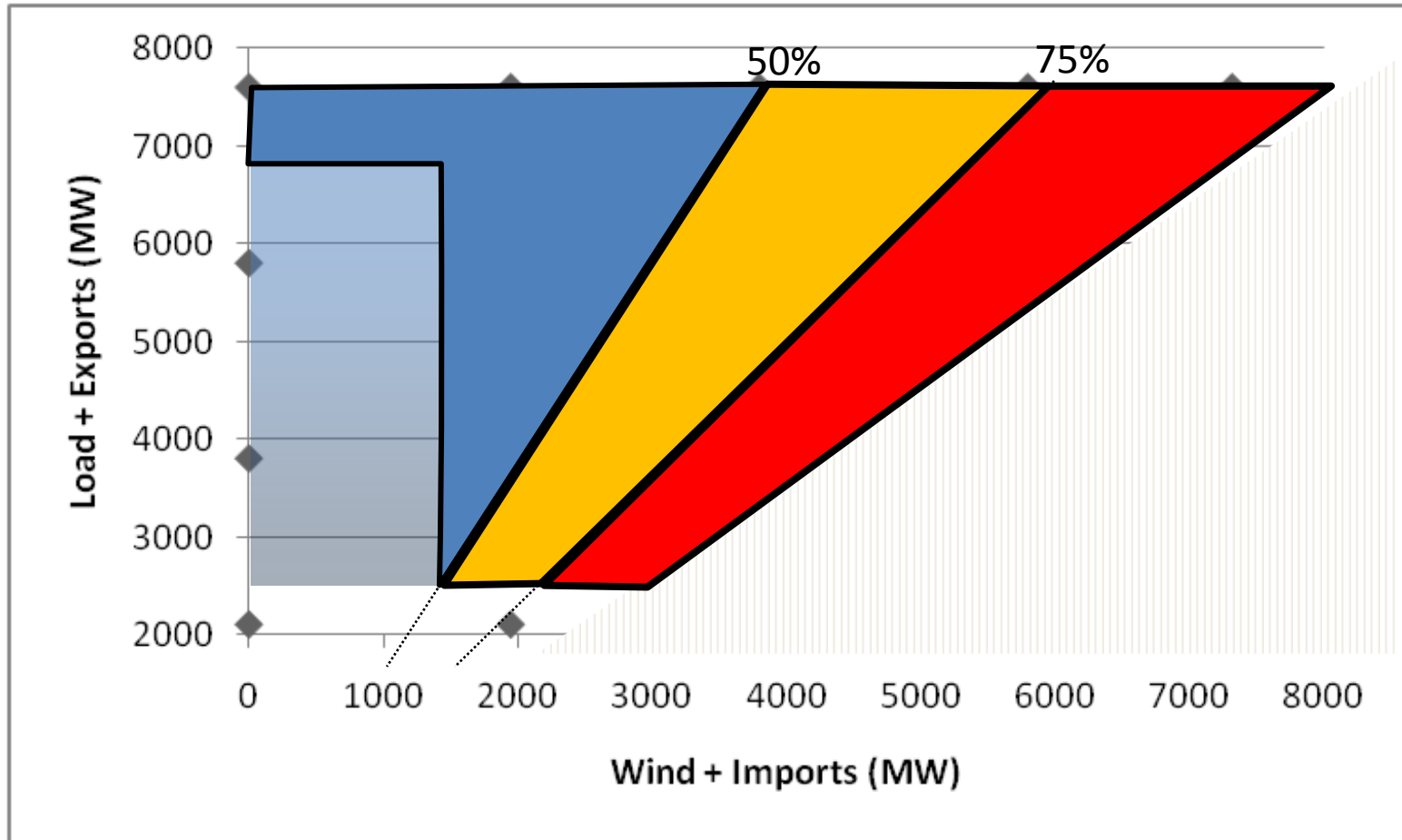
- RES-E penetration likely to be much higher
- Curtailment levels will rise – by how much?
 - ▶ Affected by level of network investment
 - ▶ Efficient cross border flows help



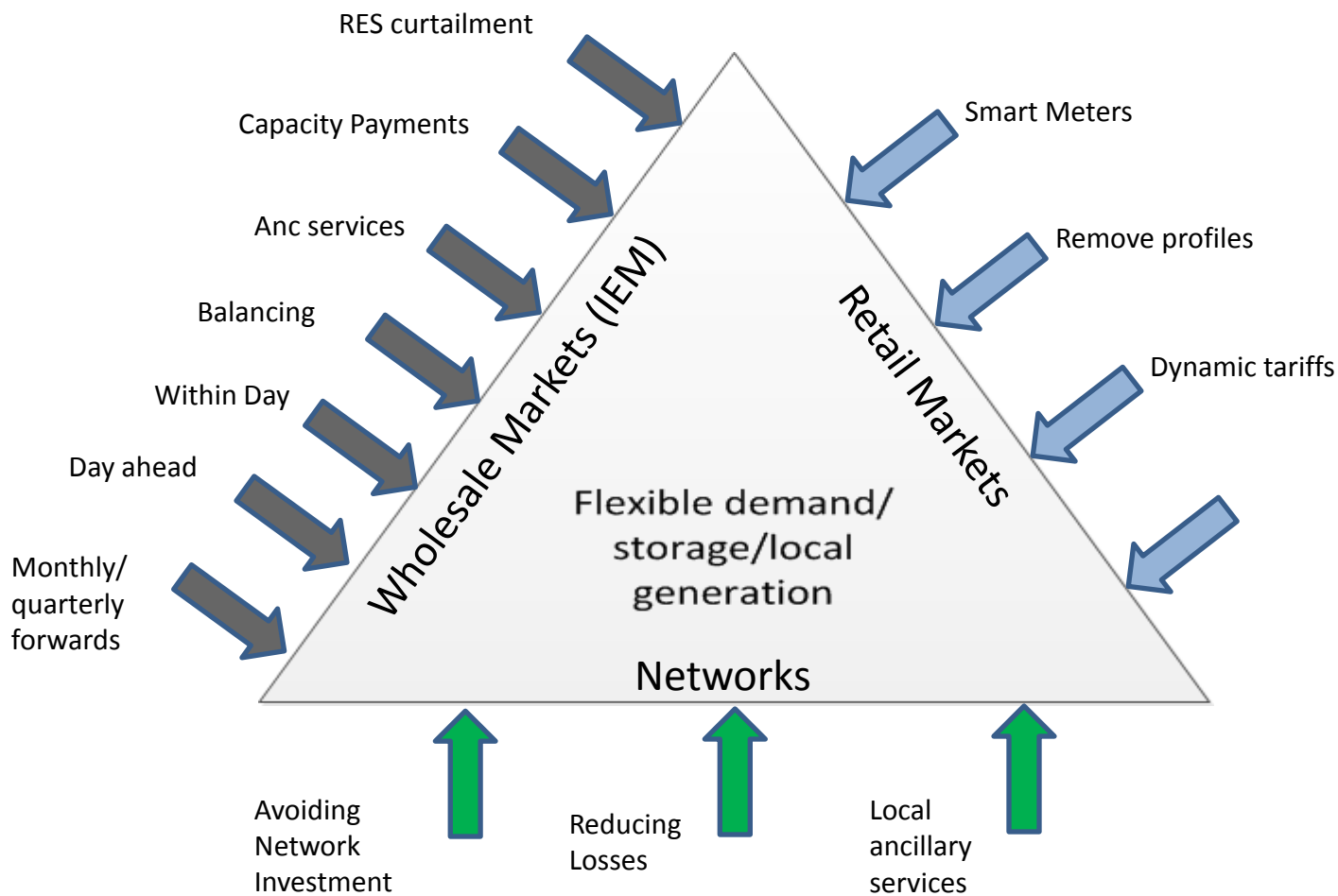
Penetration Levels for Non-synchronous RES-E (e.g. Wind/Solar)



Real Time Operational Limits and Impact on RES-E

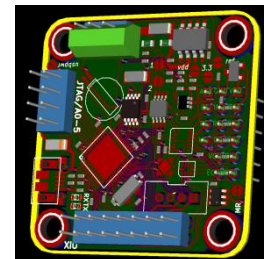
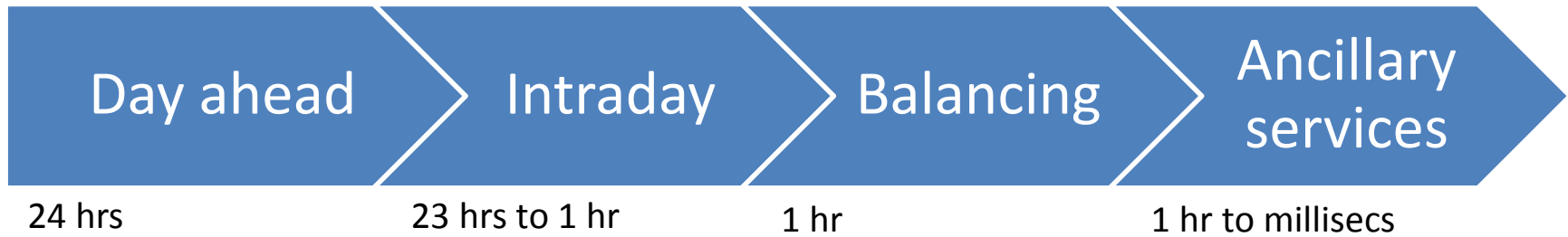


Drivers for New Flexibility Products



Flexibility from Wholesale Markets

The Wholesale Market

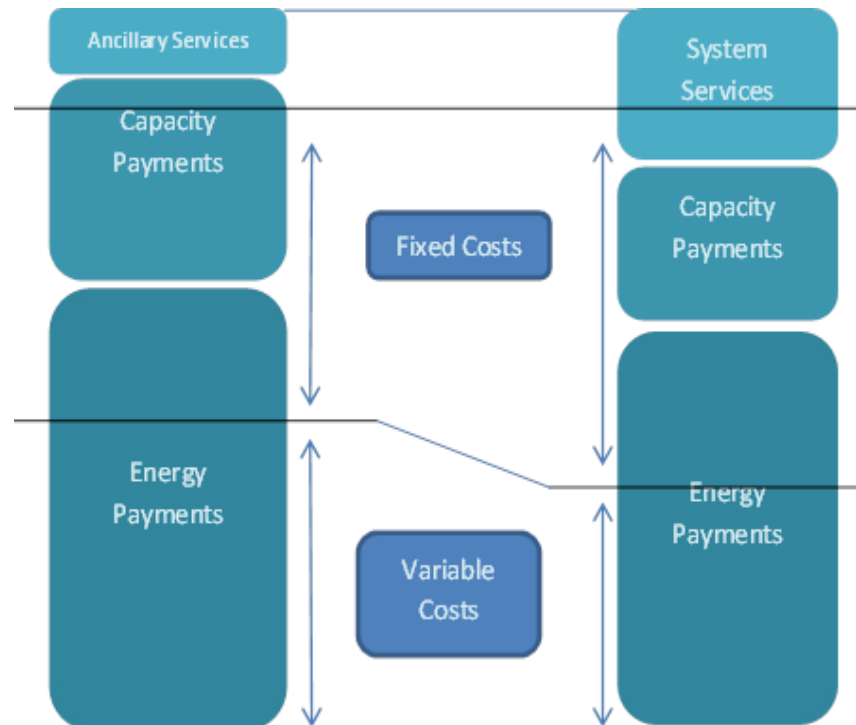


Revenue for Flexibility

Volume of Revenue

Volatility of Revenue

- Stable return
- Low cost of Capital
- Lower cost to Consumers



Flexibility for Networks

Reducing Network Build

- Avoiding local system overloads
- E.g. Storage/DSM as alternative to new lines

Managing Congestion

- Larger less predictable load flows triggered by embedded RES

Providing Local Services

- E.g. Voltage,
- Other Ancillary Services in co-ordination with TSOs

Need to ensure this does not unfairly distort wholesale or retail markets

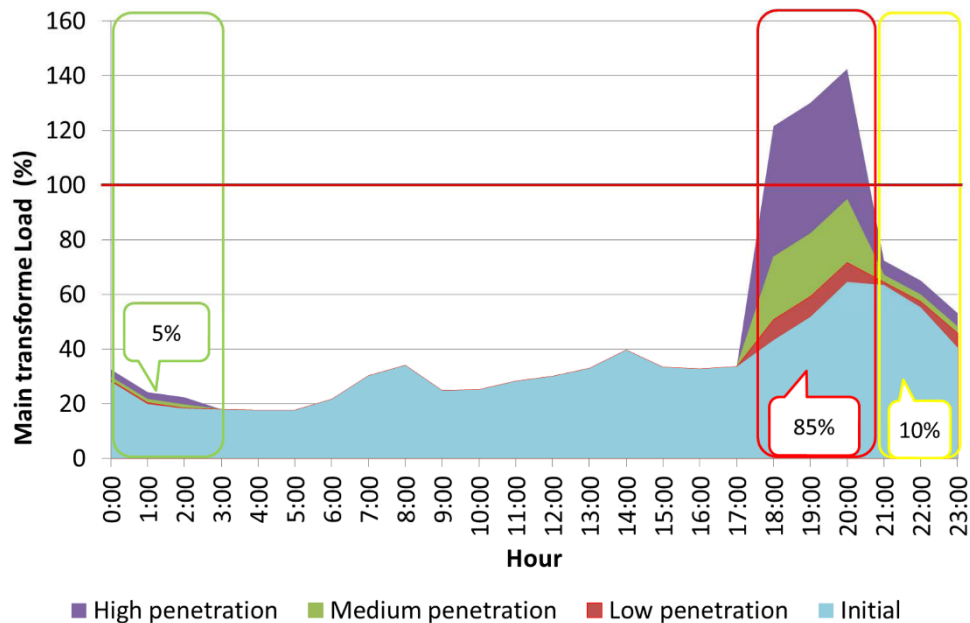


Network Load Diversity Assumptions

Network Planning based on Load Diversity Assumptions.

New Use of Networks changes Diversity Assumptions:

- Prosumer production – common solar resource
- Changing consumer response e.g. EVs, storage heaters, etc.



Flexibility – the Regulatory Levers

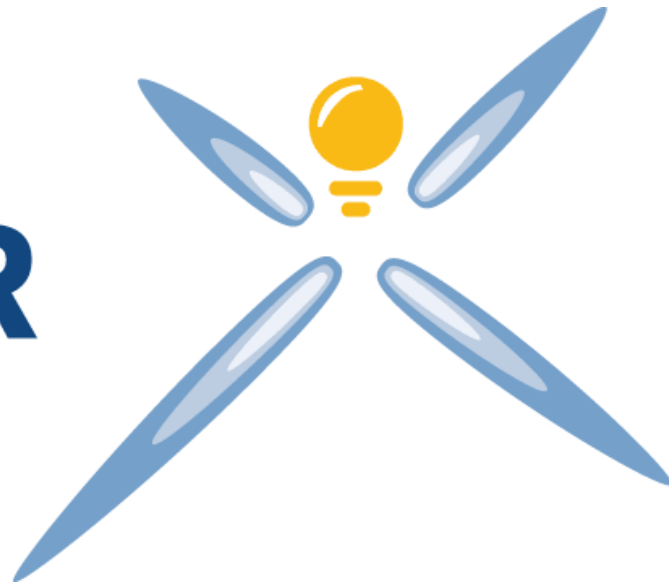
- Pan-European Internal Energy Market
- Flexibility Guidelines for Network Companies
- Promoting Smart Meters and Dynamic Tariffs



Thank you for your attention!

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