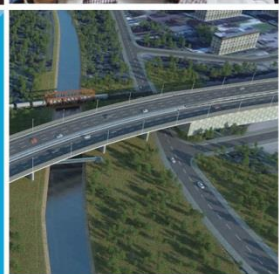
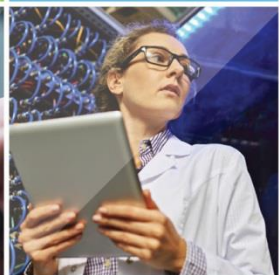
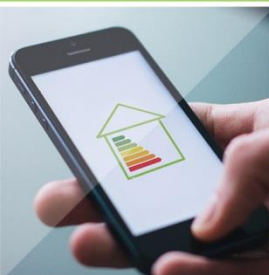




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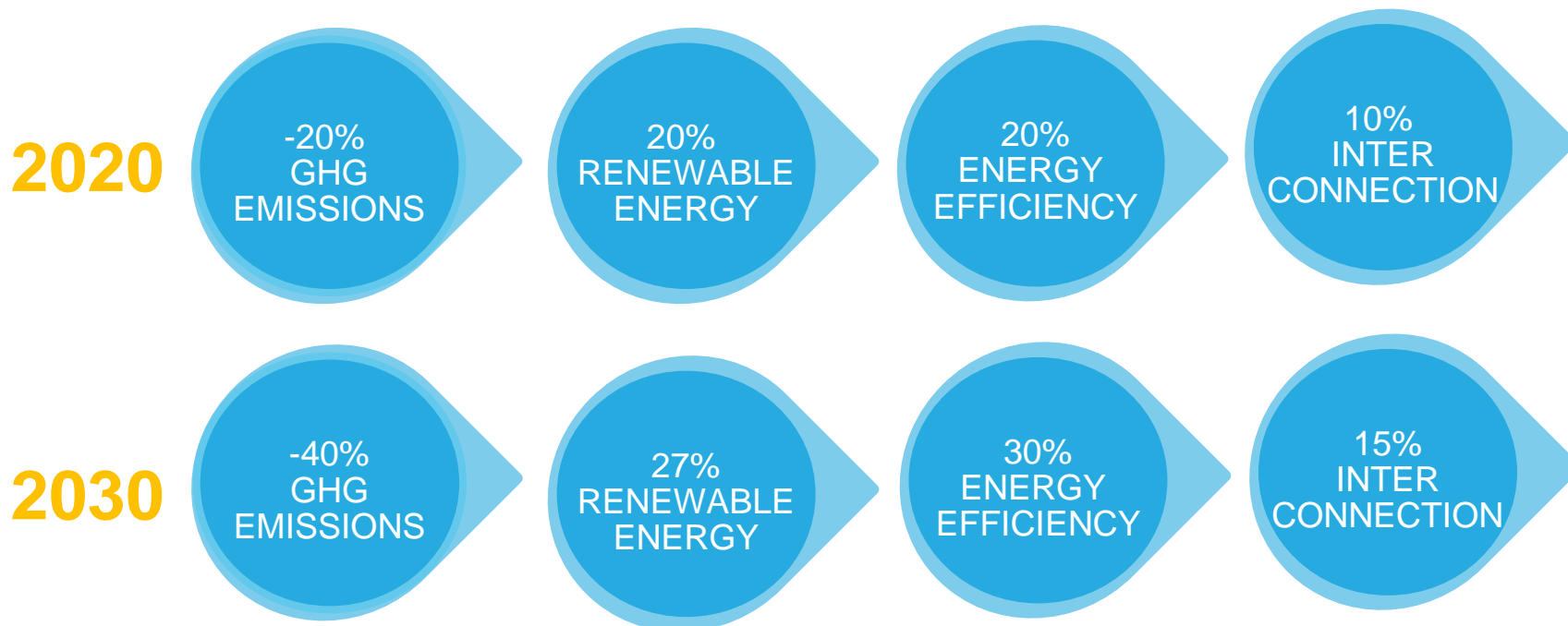


The role of DSOs in Flexibility in the context of the Clean Energy for All Europeans package

CEER workshop on DSO Flexibility, 01/03/2018

Ambitious policy framework until 2030 which needs a fit for purpose energy market

The EU committed to bringing more renewable energy sources and more interconnected and efficient energy systems by 2020, and accelerate change towards 2030



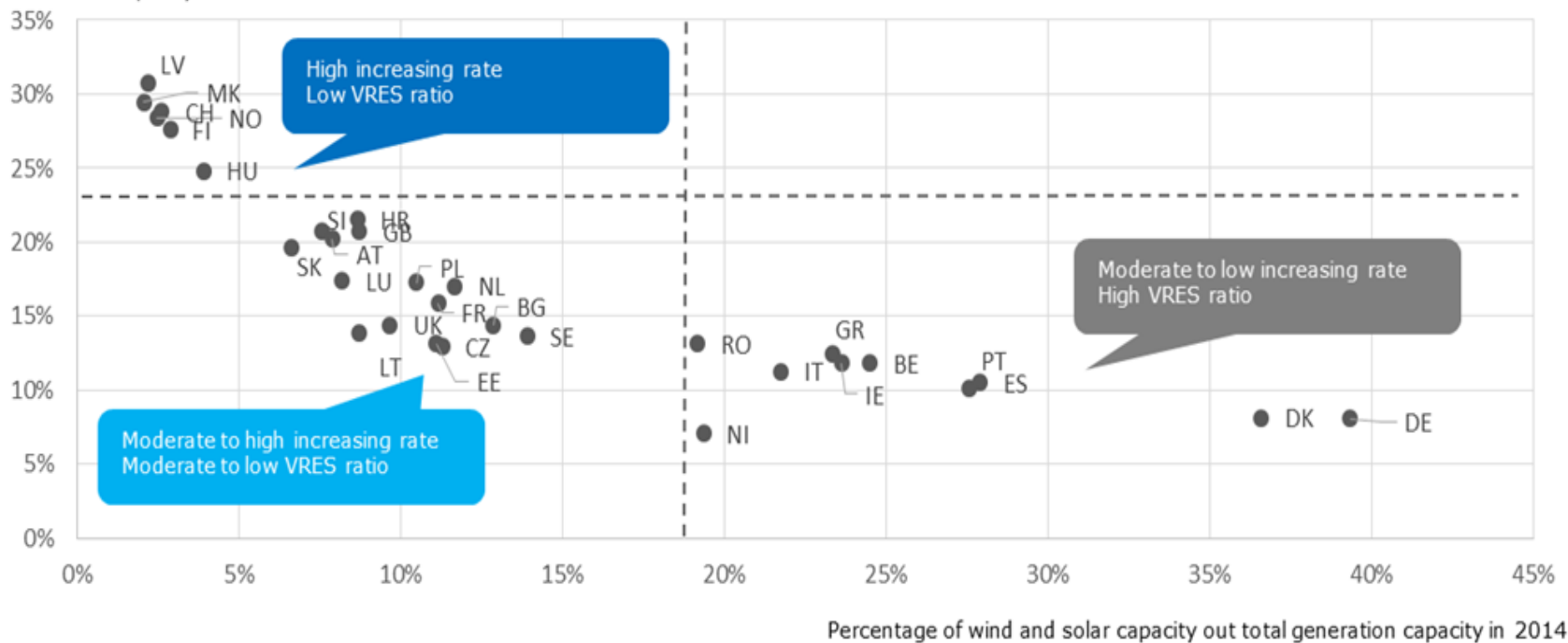
Our energy market needs to be re-designed to integrate a growing share of renewable energy sources at the lowest possible cost

Distribution networks have to address new challenges

Wind - solar growth and ratio to total capacity

Wind and solar is on the rise with a large part connected to distribution grids

Expected annual growth rates of wind and solar power capacity



Ref: Copenhagen Economics & VVA Europe, 2016

DSO framework that fits energy transition

Three main aspects of the Clean Energy package:

- ❑ DSOs to procure and use Flexibility – integrating renewables and new loads requires innovative solutions and an appropriate regulatory framework
- ❑ Neutral role of DSO – specific rules for DSO involvement in storage, EV infrastructure and data management to maintain its neutrality
- ❑ DSO participation in the EU institutional framework and cooperation with TSOs – establish a EU DSO entity with specific tasks and cooperation with TSOs in network operation and development

Use of flexibility services from DSOs: objectives

- Allow DSOs to procure flexibility services from distributed energy resources (demand response, local generation, storage and EVs) in order to:
 - manage local congestions
 - solve technical problems (e.g. voltage control, reactive power)

AIM:

- ✓ Improve efficiencies in operation and development of network
- ✓ Avoid unnecessary grid expansions → lower grid costs and tariffs (around 3.5 bn/year of avoided investments)



Use of flexibility services from DSOs: framework

- Procurement through market based procedures, with definition of required products and technical modalities → level playing field for flexibility providers
- Member States to define the exact regulatory framework including incentives for DSOs and appropriate remuneration
- Distribution network development plans, transparent network development with emphasis on RES integration and innovative network solutions

Cooperation TSOs/DSOs:

- cooperate in designing the framework (e.g. rules, products)
- exchange of data and coordinated operation of the system
- market facilitation and efficient integration of flexible resources

DSOs' involvement in storage and EV infrastructure

- DSOs involvement under conditions in storage and EV recharging points (own, develop, manage, operate)
- Member States could allow DSOs to get involved:
 - ❖ If other parties are not interested to be involved in such activities
 - ❖ In order to ensure the reliable, efficient and secure operation of the distribution system (storage)

- ✓ Open tendering procedure
- ✓ Regulatory authority approval
- ✓ Reassess the market every 5 years



DSO to phase-out activities if market interest exists

Distribution tariffs: providing the right incentives

- The main regulatory framework for setting distribution tariffs and methodologies remains unchanged
- Principles which link to flexibility:
 - ❖ Cost-reflective tariffs including the possibility of time-differentiated tariffs
 - ❖ Regulatory authorities to provide incentives to DSOs for using flexibility and innovation
 - ❖ Non-discrimination or disincentives against storage and demand response
- Additional aspects:
 - ❖ More explicit transparency requirements on regulatory authorities regarding tariff methodologies and underlying costs (Electricity Directive)
 - ❖ Non-discrimination between generation connected to transmission and distribution (Electricity Regulation)

EU DSO entity: improving the institutional framework and strengthening TSO-DSO cooperation

- Distribution networks are gaining importance in the energy transition and creating new requirements for DSOs; however, DSOs are not formally integrated in the EU institutional framework
- DSOs and TSOs are facing mutual challenges, cooperation exists but on a voluntary basis, a formal cooperation is required to address common challenges, integrate new renewables and loads in the electricity system
- Adapt the institutional framework to the new realities, including the establishment of a EU DSO entity in line with the increasing DSO role
- Focused scope of activities → network codes, operation/planning of T&D networks, integration of RES and flexibility, digitalisation of distribution networks

What's ahead?



EU level:

- Trilogues on Electricity Directive and Regulation - adoption of the package
- Further EU legislation (e.g. DSF network code)?
- Establishment of the EU DSO entity and cooperation on a formal basis with ENTSO-E

MS level:

- Implementation of new EU law
- Additional national rules and suitable regulatory framework
- Cooperation between TSOs and DSOs



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**Thank you for your
attention!**

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