EU Energy Policy and the Clean Energy Package

(with a special focus on security of supply)

Forum franco-allemand de l’énergie: la sécurité d’approvisionnement dans un contexte européen; Berlin, 24 octobre 2019

Stefan Moser, European Commission,
DG Energy, Security of Supply

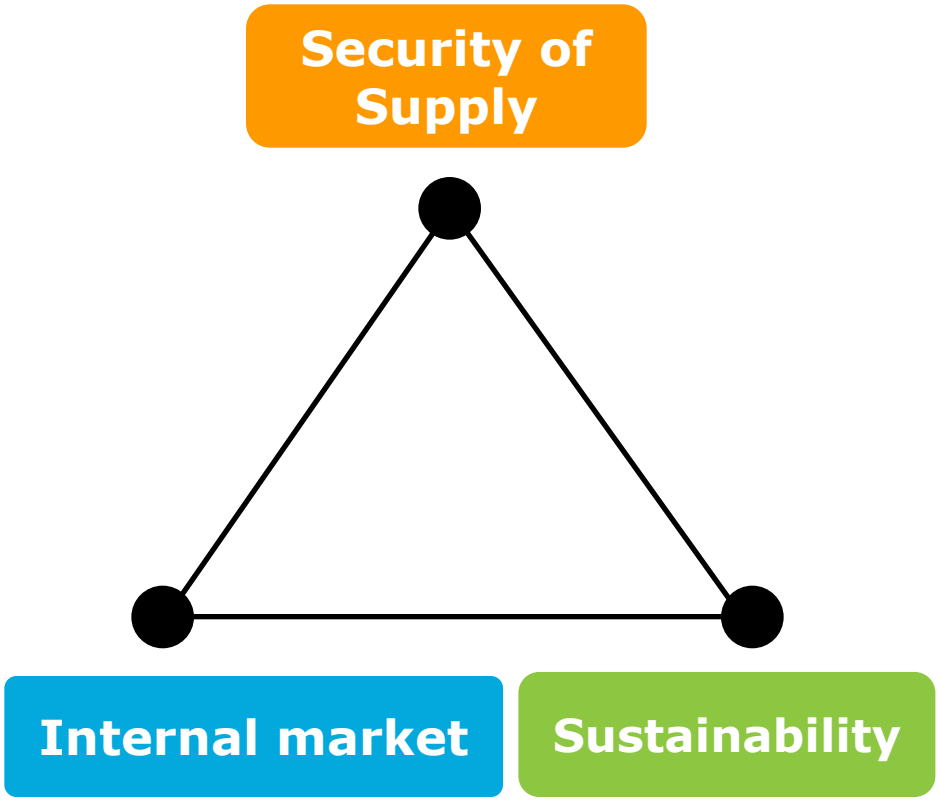
Priorities of the European Energy Policy

Treaty on the Functioning of the European Union

New Art. 194 on energy:

Union policy on energy shall aim, *in a spirit of solidarity*, to:

- Ensure the functioning of the energy market;
- Ensure security of supply;
- Promote energy efficiency and the development of renewable forms of energy;
- Promote the interconnection of energy networks

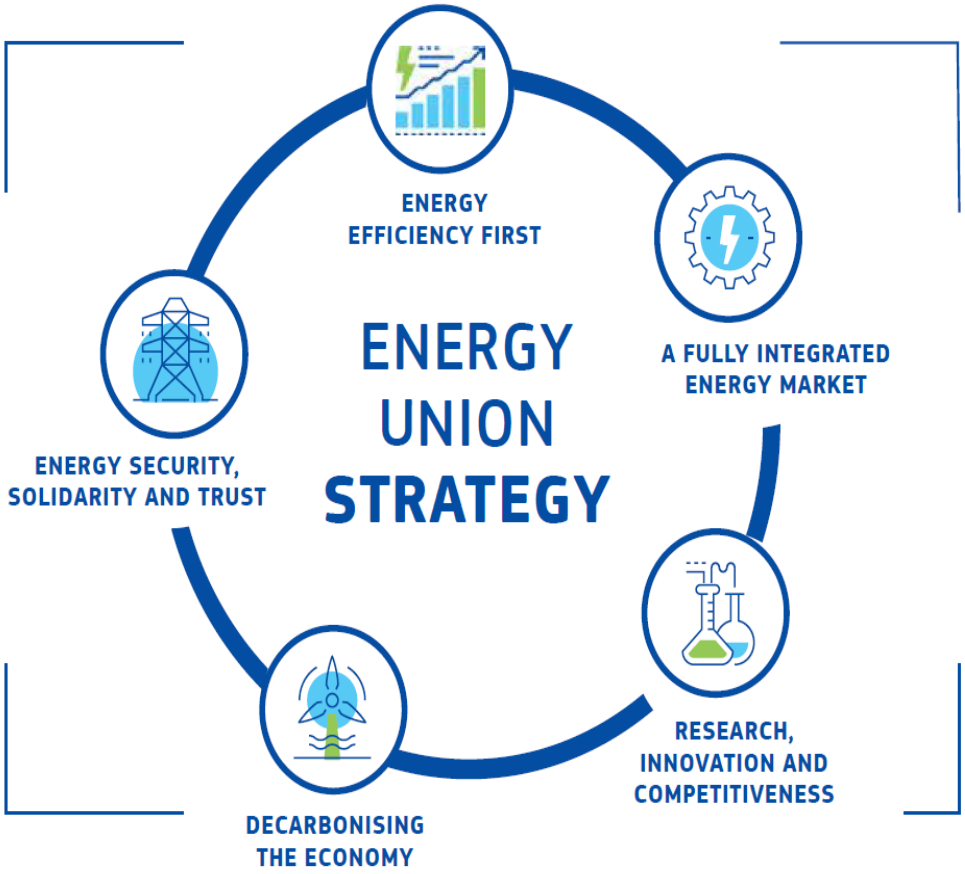


Energy Union

Modernised economy

Renewable energy and efficiency

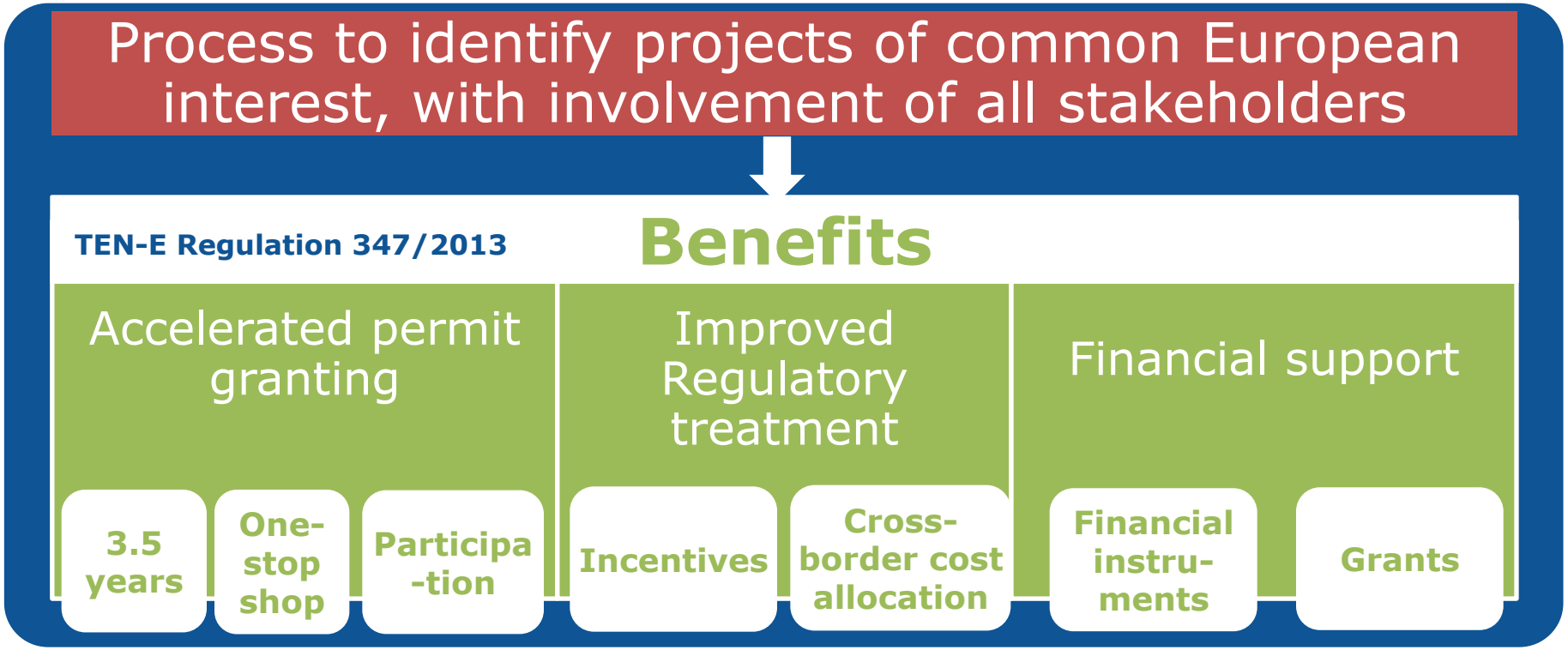
Fair and social transition



How to improve the EU's resilience?

- Further market integration:
  - Software: ensuring implementation of EU legislation (Third Energy Package, Clean Energy Package)
  - Hardware: ensuring that the necessary transmission lines, pipelines and LNG terminals are in place to enable the electricity and gas to flow where needed

A list of 195 key energy infrastructure projects have been identified as "Projects of Common Interest" (PCIs)



How to improve the EU's resilience?

- Further diversification: routes and suppliers

- Gas Security of Supply Regulation (EU) 2017/1938:
  - Infrastructure standard: N-1, reverse flow
  - Supply standard: gas supply to protected customers during (a) extreme temperatures during a 7-day peak period (once in 20 years); b) any period of 30 days of exceptionally high gas demand (once in 20 years); (c) for a period of 30 days in the case of disruption of the single largest gas infrastructure under average winter conditions
  - Regional cooperation based on risk-groups
  - Mandatory risk assessments and plans (preventive and emergency)
  - Explicit mechanism for solidarity

- Increased energy efficiency

- Use of sustainable indigenous resources & renewable energy

- Increased co-ordination of national energy policies

- To be prepared for new risks (i.e., cybersecurity)

Clean Energy Transition

- The EU ratified the Paris Agreement in October 2016
- Clean energy transition is necessary to fulfill the EU commitments under the Paris Agreement and to reach climate neutrality by 2050
- The Clean Energy Package for all Europeans sets the legislative framework for the clean energy transition
- While ensuring social fairness for a just transition

2030 Framework for Climate and Energy –agreed targets-

Greenhouse Gas Emissions

2020	2030
-20%	**≥-40%**

Renewable Energy

2020	2030
20%	**≥32%**

Energy Efficiency

2020	2030
20%	**≥32.5%**

Climate in EU-funded programmes 2014-2020

2020	2030
20%	**25%**

Interconnection

2020	2030
10%	**15%**

CO2 from :

Cars	Vans	Lorries
2030		
-37.5%	**-31%**	**-30%**

Clean Energy Transition – "A clean planet for all"

- In November 2018, the EC published the long-term strategy « A clean planet for all » which looks into pathways delivering the Paris Agreement goals by 2050 https://ec.europa.eu/clima/policies/strategies/2050_en

- The pathways are « what if-scenarios »: what would happen with a given combination of technologies and actions. They are options to achieve a climate-neutral Europe

- Energy efficiency & renewables are no-regrets options in all pathways

- The analysis also shows that in 2050:
  - ✓ The EU economy will grow but it could reduce its energy consumption by almost half;
  - ✓ Much more of the energy will come from electricity, also used to produce other energy carriers;
  - ✓ More than 80% of electricity produced will come from renewable sources alongside nuclear

Clean Energy for All Europeans Package

(with a special focus on security of supply-related issues)

CLEAN ENERGY TRANSITION- policy background

Innovative

Socially fair

Enabling Framework

CE4AE LEGISLATIVE PACKAGE

Energy Union Governance

Inclusive

Energy Efficiency

Energy Efficiency Directive, Energy Performance of Buildings Directive

Renewables

Revised Renewable Energy Directive

Electricity Market Design

Regulation and Directive on internal electricity market; Regulation on risk-preparedness, ACER regulation

Inter-connected

Harmonised

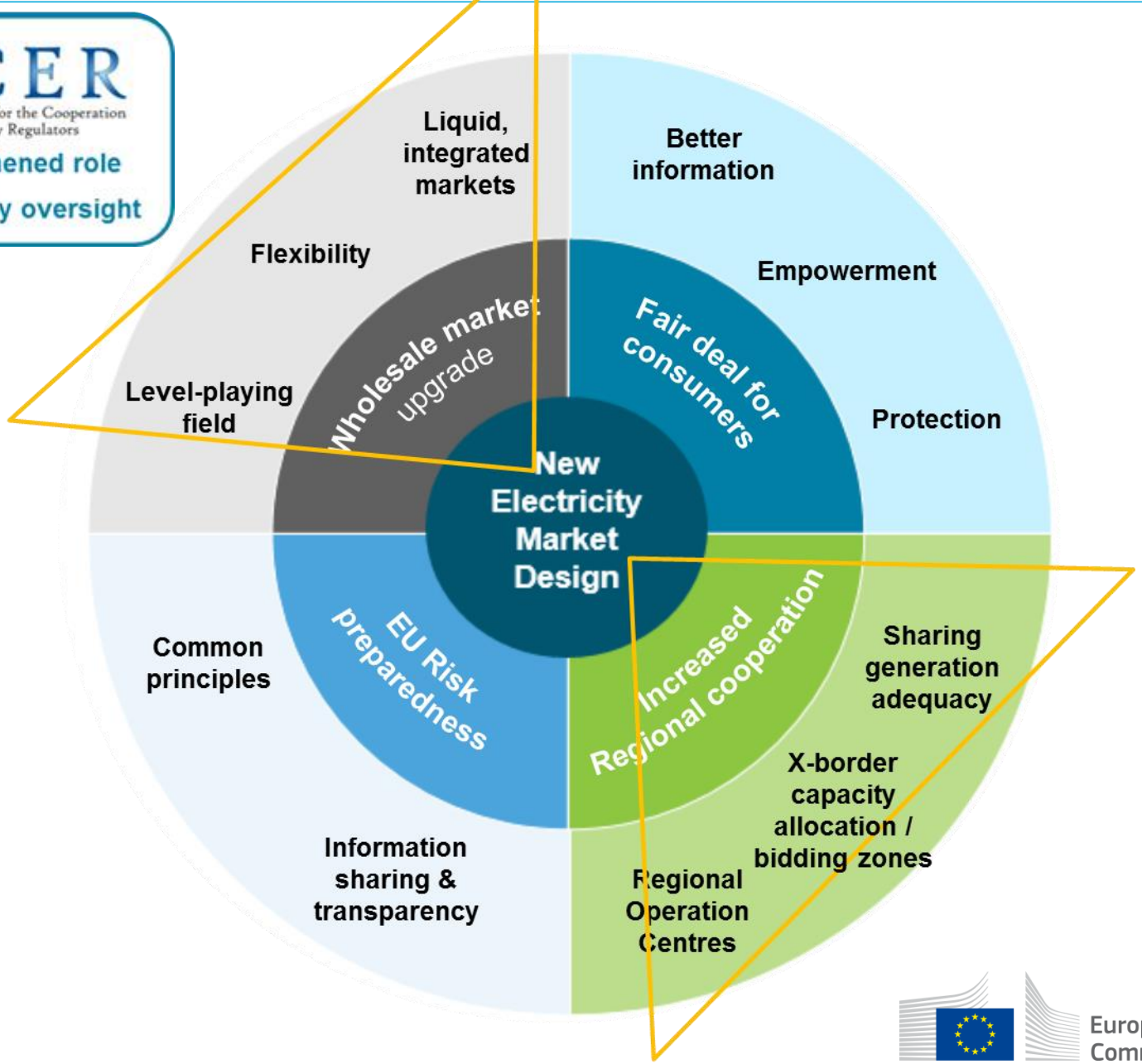
Digital

Investment-friendly

European Commission

WHOLESALE MARKETS

ACER
Agency for the Cooperation of Energy Regulators
Strengthened role
Regulatory oversight



European Commission

Making the market fit for Renewables

New in the regulation

- Full market access for Renewables, Demand Response and Storage
- Shorter term markets:
  - Gate Closure Time <= 1 hour before real time
  - Imbalance settlement period of 15 min

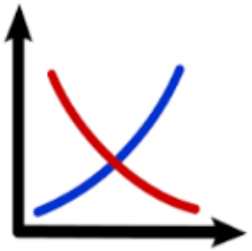
Benefits

- Increased market flexibility and access, enabling renewables to become the backbone of our electricity system

Making Renewables fit for the market

Old: ”produce and forget”

New: Market orientation



New in the regulation

- Phase out priority dispatch
- Phase in balancing responsibility

**Derogations for existing installations and new small RES*

Benefits

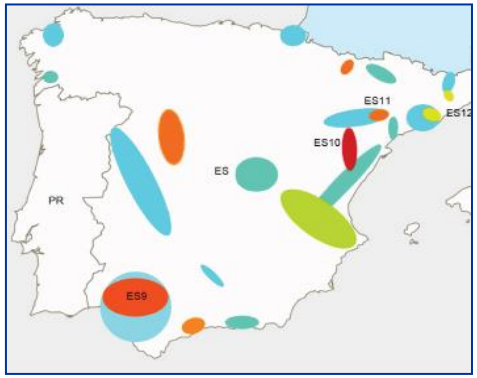
- Eliminating market distortions for mature technologies…
- …whilst ensuring feasibility of smaller RES installations

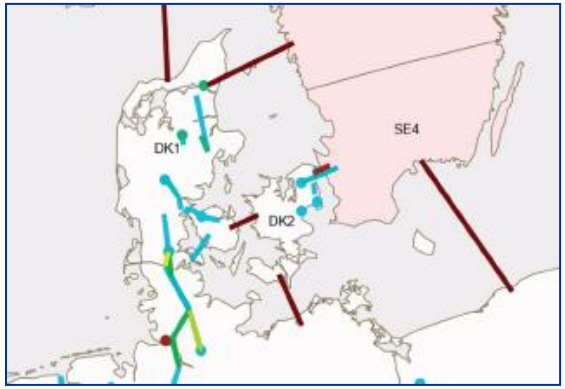
More flexibility

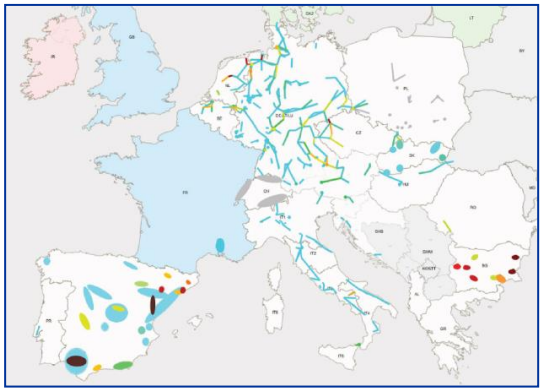
- **Demand response – Active consumers:**
  - ✓ Price based demand response
    - Right to request a fully functional smart meter
    - At least one and all suppliers with more than 200,000 customer must offer a dynamic price contract
  - ✓ Incentive based demand response
    - Member States to develop framework for independent aggregators
    - Consumer can contract independent aggregators without consent of supplier
    - Access of flexibility to all electricity markets

- **Energy storage in the electricity market:**
  - ✓ Definition of energy storage accommodates all storage technologies
  - ✓ TSOs/DSOs should not own or operate storage facilities
  - ✓ Non-discriminatory and effective provision of storage services: balancing for TSOs, non-frequency ancillary services and flexibility services for DSOs/TSOs
  - ✓ Enable participation of energy storage & market rules facilitating participation:
    - Network tariffs should not discriminate against storage
    - Not subject to double charges and no discriminatory licensing or fees
    - Re-dispatching rules should account for storage
    - Participation in capacity mechanisms
    - Network code on demand response and storage

Bidding zones and structural congestion







Source: Entso-E Technical Report 2018

New in the regulation

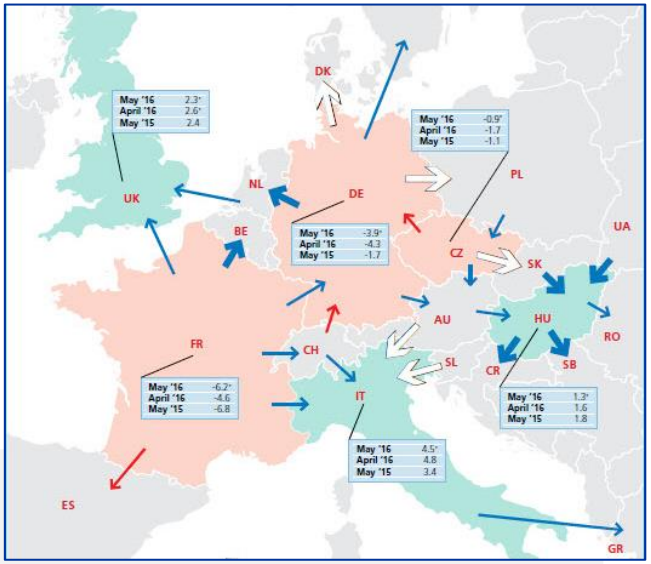
- Addressing structural congestion as key priority. Member State can choose:
  - an Action Plan with network investments until 2025, or
  - a bidding zone reconfiguration
- Bidding zone review: no agreement by MS → EC decides

Benefits

A market better aligned to the physical grid which increases trade and:

- reduces the need for costly after-market remedial actions
- decreases the impact of congestion in one zone on the neighbours
- enhances security of supply by ensuring that electricity can be traded to where it is most needed

Cross border electricity trading (capacity allocation)



New in the regulation

- Key principles:
  - Maximisation of trade across borders
  - No discrimination of cross-zonal vs internal trades
- Deductions by TSOs for loop flows and reliability margins capped
- New min. threshold of 70% of cross-zonal capacity for trade

Benefits

- Increased trade provides reliable access to electricity imports for:
  - Increased security of supply
  - Reduced need for new investments, thereby
    …reducing the cost of electricity for final consumers

*Source: ICIS Electricity cross border flows 2016

Coordinating state interventions in support of resource adequacy ('Capacity Mechanisms')

New in the regulation

- State-of-the-art resource adequacy assessment
- Adequacy concerns to be addressed by market reforms
- Design principles for Capacity Mechanisms (CMs)
- Rules for cross-border participation in CMs
- Emission limit for resources committed in CMs (transition!)
- Removal artificial price caps on wholesale market

Benefits

- Necessity of CMs to be based on real needs → reduction of costs
- Make sure CMs if introduced are least distortive
- Exclude polluting technologies from CMs → facilitate clean and realistic transition

Fostering regional cooperation – Regional Coordination Centres (RCCs)

- Additional coordination tasks
- Competence to issue coordinated actions and recommendations + liability scheme
- Optimised geographical delineation
- Robust governance & regulatory oversight

Benefits

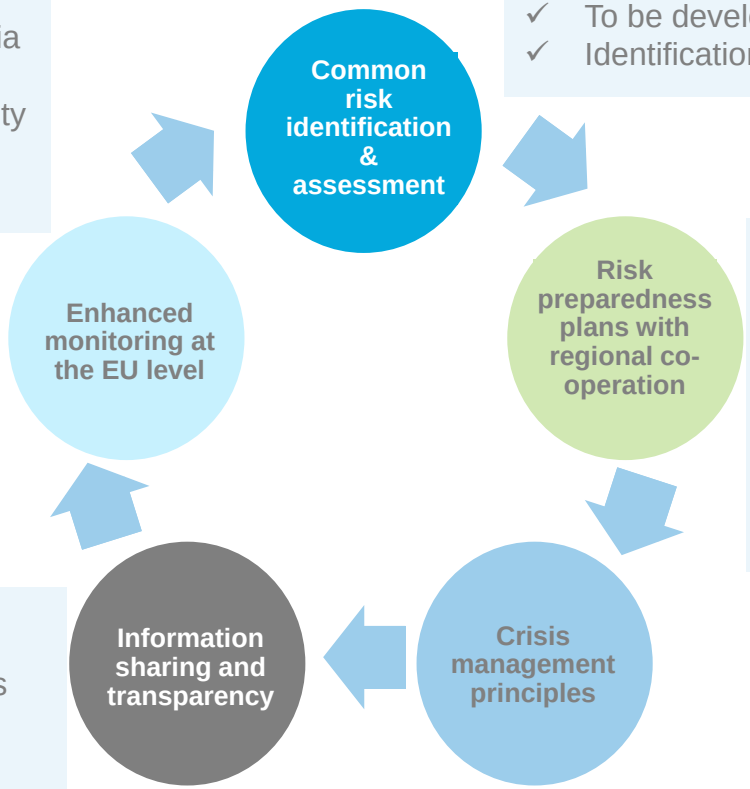
- Improve the operation of the system across EU
- Decrease the risk of blackouts

Risk Preparedness Regulation

HOW? Common rules & regional co-operation

- ✓ Ex-post evaluation of electricity crisis
- ✓ More systematic monitoring (via ECG) and reporting on MS' performance in terms of security of supply, based on common indicators

- ✓ Common methodology for:
  - Identifying electricity crisis scenarios
  - Assessing possible short-term adequacy issues
- ✓ To be developed by ENTSO-E, approved by ACER
- ✓ Identification of crisis scenarios in regional context



- ✓ National plans based on common rules and templates, drawn up by competent authorities. Plans have to be published
- ✓ Some measures must be co-ordinated at the regional level
- ✓ Prior consultation of other MSs and Electricity Coordination Group (ECG)
- ✓ EC can issue opinions on the plans

- ✓ Obligation to inform EC and Member States:
  - In case of electricity crisis
  - "Early-warning"
- ✓ Information on the reasons of crisis, measures and need for assistance

- ✓ Market comes first: non-market measures can be taken only as a last resort measure
- ✓ Cross-border co-operation and assistance

European Commission

Thank you for your attention!

For more information:

https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/clean-energy-all-europeans

https://ec.europa.eu/energy/en/topics/energy-security