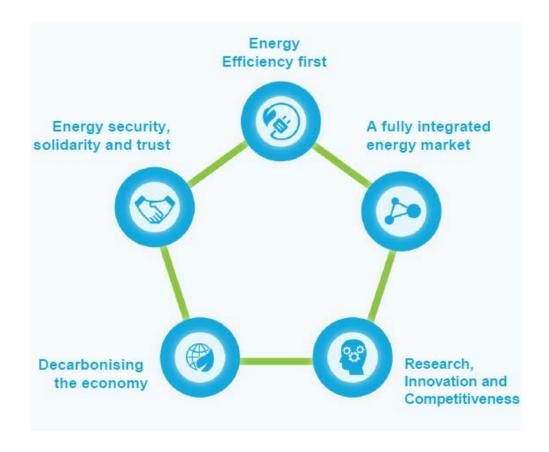


#EnergyUnion

"SMART AND CLEAN ENERGY FOR ALL" - IMPLEMENTING THE ENERGY UNION STRATEGY

AN ENERGY UNION BASED ON 5 MUTUALLY SUPPORTIVE AND INTERLINKED DIMENSIONS





THE GOALS

CREATING JOBS AND GROWTH, REDUCING GREENHOUSE GAS EMISSIONS, SECURING ENERGY SUPPLY



Putting energy efficiency first





Delivering a fair deal for consumers



THE OPPORTUNITY

THE ENERGY SYSTEM OF TOMORROW WILL LOOK DIFFERENT

2015

Most ambitious climate agreement signed in Paris, thanks to EU



2030

50 % of electricity to come from renewables



2050

Electricity completely carbon free





A UNIQUE OPPORTUNITY TO MODERNISE OUR ECONOMY

Stimulate investment

Secure energy supplies

Empower **consumers**

Jobs and growth

Accelerate decarbonisation



THE COST

INCREASING ENERGY INVESTMENT - SCALE OF THE CHALLENGE

Investment needs

Extra €177 billion per year from 2021 (to meet 2030 climate & energy targets)

Bulk of investment to be delivered by the private sector

High capital expenditures, both on demand and supply, in particular for renewable energy sources, mirrored over time by lower fuel expenditures

Step change in energy efficiency investments on the demand side (e. g. renovation of buildings, energy-

using equipment)

Grid infrastructure: interconnectors, smart grids



THE TOOLS

THE RIGHT REGULATORY FRAMEWORK

SMART AND CLEAN ENERGY FOR ALL package

















WHY?



Boost wholesale market flexibility and provide clear price signals to facilitate the continuing penetration of renewable energies and ensure investments







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Promote regional cooperation and provide a true European dimension to security of supply



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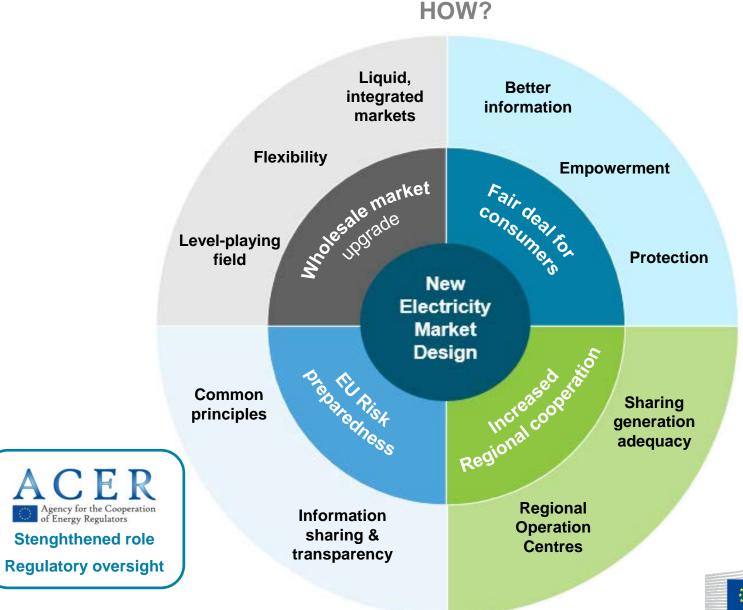


Enable active consumer participation and ensure that consumers are protected and benefit from progress in energy technologies



Promote regional cooperation and provide a true European dimension to security of supply







WHOLESALE MARKET UPGRADE

Competitive energy markets are at the heart of a competitive economy

Strengthened short-term markets

Increase **cross-border trading opportunities** over shorter timeframes (intraday and balancing markets)

Reward flexibility for generation, demandresponse and storage

Allow prices to show real value of electricity in terms of time and location (scarcity pricing)

Enhancing system flexibility:

INTEGRATION OF RENEWABLES

MARKET-DRIVEN INVESTMENTS

Level-playing field among sources

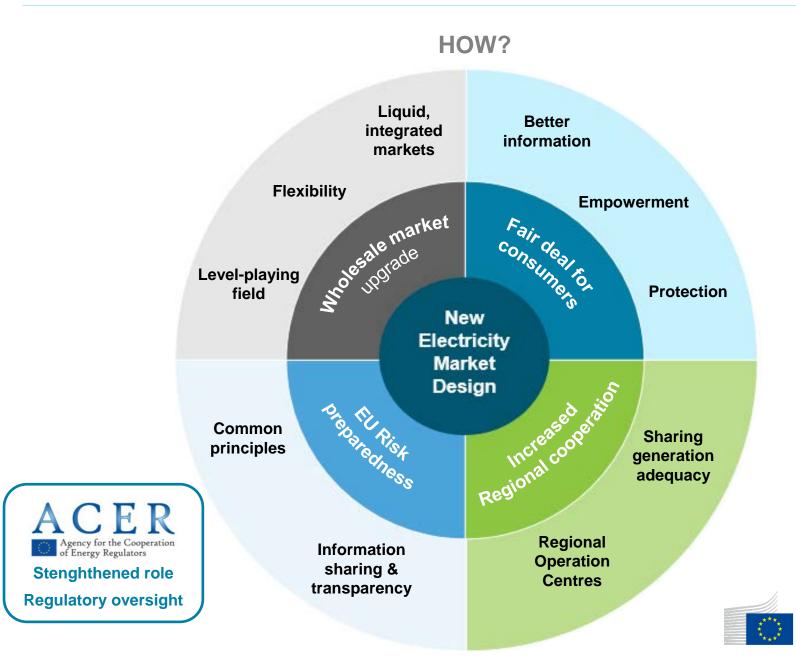
Rules on **priority access** and dispatch

Curtailment rules

Remuneration on equal terms on market principles

Extended **balancing** responsibilities





European Commission

FAIR DEAL FOR ALL CONSUMERS



Our vision is of an Energy Union with citizens at its core, where citizens take ownership of the energy transition, benefit from new technologies to reduce their bills, participate actively in the market, and where vulnerable consumers are protected.

Energy Union Framework Strategy

BETTER INFORMED

- Access to fit-for-purpose smart meters
- Certified price comparison tool
- Clearer energy bills

EMPOWERED

- Entitle individuals and communities to generate electricity and to consume, store or sell it back to the market
- Easier switching conditions
- Reward demand-response

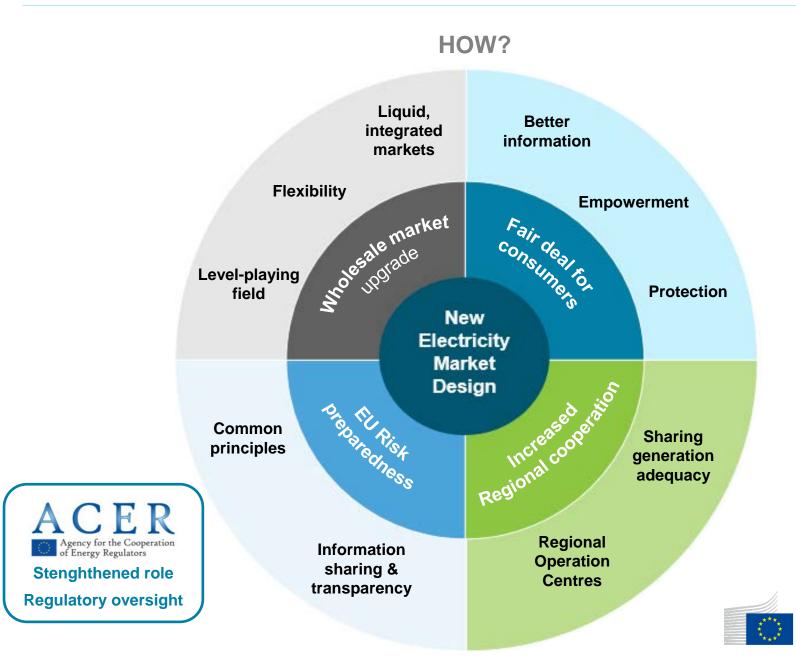
PROTECTED

- Monitoring of energy poverty (governance)
- Information on alternatives to disconnection
- Secured electricity supplies
- Sound data management

COMPETITIVE RETAIL MARKETS

- Regulated prices phased out (only justified exemptions)
- Fair market access for new market players such as new services providers (e.g. aggregators)
 - Flexible network management
 - Distribution operators become neutral but active market facilitator





European Commission

STEPPING UP REGIONAL COOPERATION



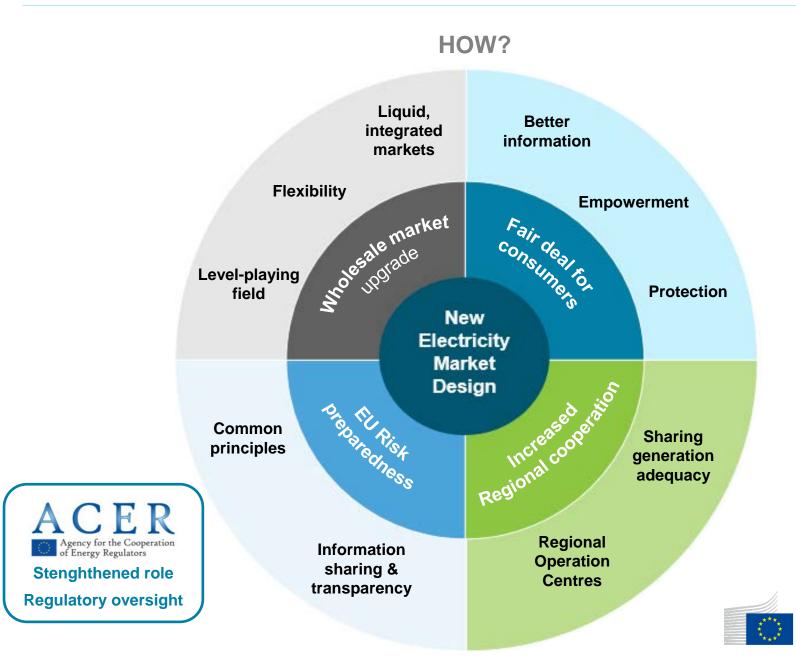


- Development of a transparent

 European adequacy assessment

 including capacity available at the border
- Regional Operation Centres (ROCs)
 bringing National Regulators closer
 together on system operation decisions
- Development of shared Methodologies for cross-border trading of electricity at all market timeframes





European Commission



Common risk identification and assessment

Monitoring at EU level via Electricity Coordination Group

Risk preparedness plans

Information sharing and transparency



Common principles on how to handle crisis

STRENGTHENING RISK PREPAREDNESS: SAFER TOGETHER

ENHANCED COOPERATION COMES FROM COMMON RULES

Common risk identification and assessment

- Common methodology for:
 - Identifying electricity crisis
 - Assessing short-term adequacy
- Identification of crisis scenario

Risk preparedness plans

- Mandatory plans and coordinated measures
- Consultation with other Member States and Electricity Coordination Group (ECG)

Common principles on handling crisis

- Solidarity principle and assistance
- Ensure market functions as long as possible
- Non-market measures only as last resort

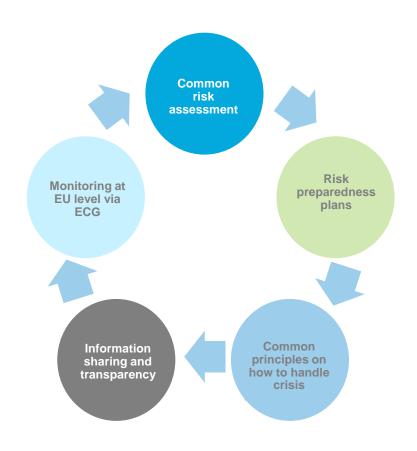
Information sharing and transparency

Obligation to inform EC and Member States:

- In case of electricity crisis (measures and need for assistance)
- "Early-warning"

EU level monitoring

- Systematic monitoring via Electricity Coordination Group
- Harmonised indicator to monitor
- Reporting on electricity crisis events

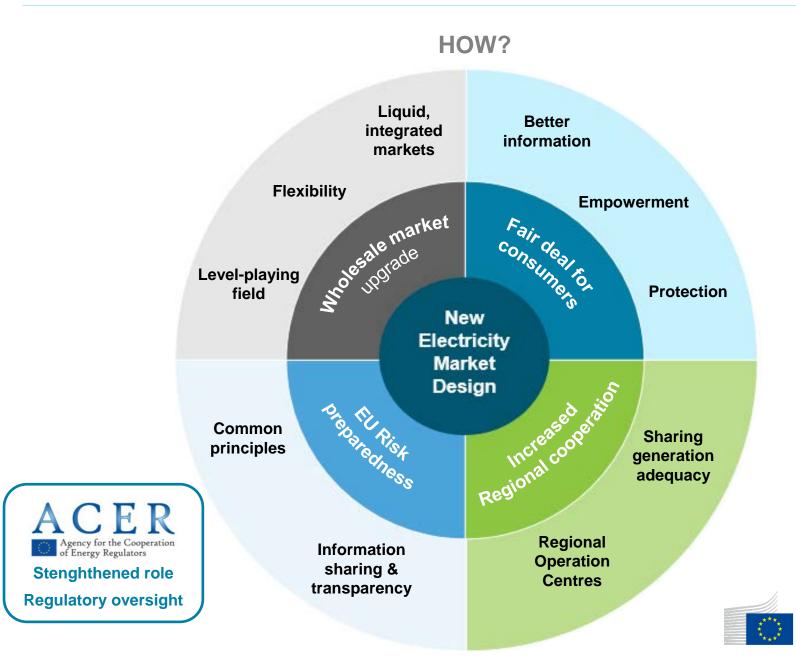






Cooperation with Energy Community

- Possible crisis does not stop at EU border
- ➤ Close cooperation with EnC Contracting Parties, especially regarding identification of electricity crisis scenarios and establishment of risk preparedness plans
- Participation in Electricity Coordination Group upon invitation of the Commission



European Commission

AN AGENCY UP TO THE TASK



A **coordination hub** for tighter European and regional cooperation Main engine behind the effective **implementation of market rules** Critical **market surveillance** functions both in wholesale and retail

Regional and cross-border decisions

- Setting the configuration of Regional Operation Centres and monitoring of regional performance
- Coordinator role towards National Regulators to enhance interoperability
- Apporoval of methodologies for cross-border trade and generation adequacy
- Approval of methodology for the identification of electricity crisis scenarios

Wholesale markets performance

- Monitoring of market efficiency: 'flexibility barriers', price caps; bidding zone decisions, locational price signals, etc.
- Follow through the implementation of existing and new system and market operation codes
- Surveillance of Member States performance against security of electricity supply indicators

DSO-related tasks

- Formal place for DSO to be represented at EU-level: establishment of EU DSO for electricity
- Ensure DSOs and TSOs cooperation





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