

Bird & Bird & electricity market design

The Clean Energy Package at a glance

Regulation 714/2009: 31 recitals, 25 Articles, 2 Annexes

Recast Regulation : 73 recitals, 65 Articles, 2 Annexes

Electricity Regulation (recast)



Market principles

- Competitive energy markets:
- market-based prices
 - equal treatment of generation, demand-side response (DSR) and storage; aggregation of consumers, generators and demand response permitted
 - enhance development of more flexible generation and demand
 - measures to enhance independence of NRAs



New roles of DSOs

- All DSOs must create an "EU-DSO", with roles in:
- digitalisation and data
 - network codes
 - cooperation with ENTSO-E
 - coordination of TSO and DSO networks
 - integration of RES-E and DSR



Locational issues (network access and congestion)

- Capacity allocation and congestion**
- More robust rules:
- review of bidding zones, plans for remedial action
 - reinforced principles on capacity allocation
 - TSOs to make max capacity available – considered to comply if at least 70% capacity made available
 - payment for non-use/loss of capacity rights
 - restated and reinforced rules on using congestion income to maintain/develop/optimize interconnection, applying ACER methodology
 - costs of remedying congestion caused by internal transactions to be borne by TSOs of the bidding zone creating them
- Tariffs and charges**
- Use and connection charges to be:
- transparent and non-discriminatory
 - not applied to cross-border trade; locational
 - subject of a recommendation on convergence by 2019
 - extended to DSOs



Network codes (NCs) and guidelines (GLs)

- Refinements to existing NC and GL development process (now to be adopted as implementing acts), plus new NCs for:
- non-frequency ancillary services (important reinforcement of IEM in this area)
 - DSR, storage, curtailment and redispatch
 - cyber security and data
 - RCCs



Dispatching, redispatching and curtailment

Dispatching (moved from Renewable energy Directive)

- Dispatching principles:
- non-discriminatory and market-based
 - priority dispatch for demonstration projects, and RES-E and high-efficiency cogen < 400 kW (from 2026, only for RES-E < 200 kW); Member States may decide not to apply priority dispatch in accessible and high RES-E markets
 - existing priority dispatch for RES-E remains until plant modified/new connection agreement/capacity increased
 - priority dispatch not grounds for curtailment of cross-border capacities except in emergency



Curtailment and redispatching

- Curtailment (not running) and redispatching (instructing generators/DSR to change their schedule):
- non-discriminatory and market-based (ie. based on bids by generators/DSR providers) only subject to specific conditions
 - new definitions of redispatch and countertrade
 - curtailment/redispatch of RES-E to be minimised
 - balancing energy bids for redispatching not to set the balancing energy price
 - if non-market-based, then compensation to be paid

Balancing

Balance responsibility

All market participants to be balance responsible or to delegate balance responsibility (exceptions for demonstration projects, RES-E below 400 kW – reducing to 200 kW for plant commissioned from 2026 – and for existing recipients of feed-in tariff)

Balancing capacity

- Capacity must be procured:
- separately from balancing energy
 - by TSOs – may be facilitated on a regional basis
 - separately for upward and downward capacity (unless NRA exempts)
 - a maximum of one day ahead, for one-day contracting periods, for at least 30% of balancing products

Balancing energy/imbances

- Key principles:
- imbalance pricing not determined in contract for balancing capacity; must reflect the "real-time value" of energy (at least marginal, could include scarcity?)
 - balancing energy to be settled at marginal price
 - bids as close to real time as possible, and at least after gate closure for intraday cross-zonal market
 - 15-minute imbalance settlement period by 2021



Electricity Directive (recast)

Electricity Directive (recast)

- 2009 Directive, plus rules on:
- reinforcing competitive energy markets
 - consumer rights, including billing, metering, dynamic pricing, switching, using aggregators, comparison tools and addressing energy poverty
 - framework for DSR and aggregation
 - assessing alternatives (eg. DSR, storage) to new generation capacity
 - enhanced role of DSOs, particularly in procurement of ancillary services, flexibility, data management and integration of electric vehicles
 - "active customers/consumers" and "citizens" energy communities
 - reinforcement of NRA roles, including in regulation of ENTSO-E, EU-DSO and RCCs

Renewable energy Directive (recast)

Renewable energy Directive (recast)

- EU toolkit for renewable electricity support schemes:
- must not distort markets, must incentivise RES-E producers to respond to market price signals
 - subject to limited exceptions, support schemes must be market-based (generally through premiums), must involve open, transparent and non-discriminatory tenders and must be technology-neutral
 - must be open to cross-border participation by RES-E in directly interconnected Member States, subject to cooperation agreement

ACER Regulation (recast)

ACER Regulation (recast)

- Greater role for ACER – as Regulation 713, plus:
- supervision of ENTSO-E, EU-DSO, RCCs and NEMOs
 - developing and approving network codes, guidelines and methodologies
 - decisions approving resource adequacy assessments
 - decisions on cross-border participation in CRMs
 - Board of Appeal to have 4 rather than 2 months for deciding appeals against ACER decisions

Risk preparedness Regulation

Risk preparedness Regulation

- National authorities to cooperate in developing and implementing plans for electricity crises on the basis of methodologies developed by ENTSO-E

Governance Regulation

Governance Regulation

- Development of integrated national energy and climate plans

€ Pricing in short-term and balancing markets

- No price caps or price floors, although NEMOs may apply harmonised min and max DA and ID prices, that take VOLL into account, provided they adjust automatically if reached (cf. CACM methodology)
- Member States to eliminate obstacles to market-based pricing

🔥 Calculation of Value of Lost Load (VOLL)

- ENTSO-E to propose, ACER to approve methodology
- Member States to calculate VOLL using ENTSO-E methodology
- VOLL used in a number of applications in new market design

📡 Data and digitalisation

- Interoperability of energy services
- TSOs and DSOs to develop data formats and protocols
- TSOs to be responsible for digitalisation of transmission systems
- TSOs and DSOs to ensure cyber security

🔋 Focus on flexibility

- No DSO/TSO ownership of storage (limited exceptions)
- Demand response – active customers and aggregators to be able to act without consent of suppliers, to be balance responsible and to compensate suppliers
- NRAs, TSOs, DSOs to ensure that DSR can participate fully
- Member States to incentivise DSOs to procure flexibility

Wholesale markets

Short-term markets

- Day-ahead (DA) and intraday (ID) markets:
- harmonised gate closure times
 - consistent products, volumes (min ≤ 500 kW to permit participation by all market participants), market times (≤ imbalance settlement period), and non-discriminatory access/trading principles
 - reliable price signals

Forward markets

- Long-term transmission rights to allow cross-border hedging by 2021

Capacity remuneration mechanisms (CRMs)

Toolkit for "energy-first" market

- Before introducing CRM, Member States must:
- remove regulatory distortions
 - enable scarcity pricing
 - develop interconnection, DSR and storage
 - consult directly interconnected Member States

CRM design

- Key principles
- CRMs to be last resort only, following adequacy assessment, with preference for strategic reserves
 - open to all types of resource, subject to emission limit of 550g CO₂/kWh and total 350 kg/installed kW/year – immediately for new generation and after 2030 for existing
 - market-based, non-discriminatory, harmonised participation rules proposed by ENTSO-E, approved by ACER
 - reliability standard set by NRAs, following ENTSO-E methodology, using VOLL and CONE
 - CRMs to be open to direct cross-border participation, subject to calculation of entry capacity by RCCs (existing CRMs may allow interconnector participation for initial period)
 - interconnected TSOs to verify eligibility and availability
 - existing CRMs to be adapted on entry into force

Regional Coordination Centres

- TSOs to create RCCs by 1 July 2022, under plans approved by NRAs, to replace RSCs and to coordinate:
- capacity calculation
 - supporting security and restoration
 - adequacy forecasting
 - procurement of balancing capacity
 - interconnector entry capacity for cross-border CRMs
 - risk preparedness
- Liability to TSOs established in plans
- Costs approved by NRAs recovered in TSO tariffs

★ Notable changes since the November 2016 Commission proposal

Note: this is intended to provide a summary of some of the key features of the wholesale electricity market design introduced by the Clean Energy Package. It is not an exhaustive list, nor a substitute for legal advice. It is based on the compromise texts published in December 2018/January 2019 which are still subject to amendment

Acronyms not defined in the text
 IEM: Internal Energy Market
 RES-E: Renewable electricity source
 CONE: Cost of New Entry
 NRA: National regulatory authority