CLEAN ENERGY FOR ALL EUROPEANS

CLEAN ENERGY TRANSITION - policy background

Enabling Framework

CE4AE LEGISLATIVE PACKAGE

Energy Union Governance

Energy Efficiency

Renewables
- Revised Renewable Energy Directive

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

Innovative

Socially fair

Inter-connected

Inclusive

Harmonised

Digital

Investment-friendly
1. General objectives

1. Why we need a new electricity market design? - General objectives

2. What is the regulatory framework? – The Clean Energy Package (CEP)

3. How will we reach the objectives?

4. Implications for Renewables and Nuclear
1. General objectives

Security of supply

Old Electricity World

From central/ dispatchable...

New Electricity World

...to decentralised/ volatile
1. General objectives
Cost-effective / inciting investment

- Level playing field + strong short-term markets + demand response = €9.5 billion/year of cost savings by 2030;

- Coordinated approach to resource adequacy = capacity savings of ~80 GW (4.8 b€/year of investments!)
2. The regulatory framework - CEP

- **Electricity Regulation (RECAST)**
  - Contains majority of new wholesale rules

- **Electricity Directive (RECAST)**
  - Contains majority of new retail provisions

- **ACER Regulation (RECAST)**
  - ACER tasks and procedure

- **Regulation on Risk preparedness (NEW)**
  - Member States put in place appropriate tools to prevent, prepare for and manage electricity crisis situations
2. The regulatory framework - CEP

- Flexibility
- Liquid, integrated markets
- Information sharing & transparency
- Better information
- Protection
- Empowerment
- Fair deal for consumers
- Increased regional cooperation
- Sharing generation adequacy
- X-border capacity allocation / bidding zones
- Regional operation centres
- New electricity market design
- EU risk preparedness
- Wholesales market upgrade
- Level-playing field
- Common principles

- ACER
  - Strenthened role
  - Regulatory oversight

Agency for the Cooperation of Energy Regulators

European Commission
3. How?

3.1 – Making the market fit for Renewables

New in the regulation

- Full market access for Renewables and Demand Response
- 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
3. How?

3.2 – 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
3. H

3.2 – New opportunities for competitive Nuclear

**Implications for nuclear**

- Level playing field with renewables
- Increased competition with matures RES technologies
- Increased volume of cross border trade relevant for base load supply
- Market design doesn’t rule out State aid schemes for renewables and nuclear
3. How?

3.3 – Framing bidding zones and cross border capacity allocation

Ratio between available cross-border capacity and the benchmark capacity* of HVAC interconnectors per region – 2016 (%)

<table>
<thead>
<tr>
<th>Border-Direction</th>
<th>ratio NTC/benchmark</th>
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<tbody>
<tr>
<td>DE/LU-&gt;PL</td>
<td>0%</td>
</tr>
<tr>
<td>CZ-&gt;PL</td>
<td>1%</td>
</tr>
<tr>
<td>SK-&gt;PL</td>
<td>2%</td>
</tr>
<tr>
<td>DE/LU-&gt;CZ</td>
<td>10%</td>
</tr>
<tr>
<td>RO-&gt;BG</td>
<td>10%</td>
</tr>
<tr>
<td>DK1-&gt;DE/LU</td>
<td>12%</td>
</tr>
<tr>
<td>PL-&gt;SE-4</td>
<td>16%</td>
</tr>
<tr>
<td>AT-&gt;CZ</td>
<td>28%</td>
</tr>
<tr>
<td>AT-&gt;CH</td>
<td>29%</td>
</tr>
<tr>
<td>DE-&gt;CH</td>
<td>29%</td>
</tr>
<tr>
<td>PL-&gt;LT</td>
<td>30%</td>
</tr>
</tbody>
</table>

Source: ACER calculations based on ENTSO-E and NRAs (2017)

Less than 50% of interconnection capacity is made available (!)  
⇒ Objective: Limit undue restrictions of imports and exports
3. How?

3.3 – Bidding zones and structural congestion

New in the regulation

• Addressing structural congestion a key priority. MS 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 &:
• 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.
3. How?

3.3 – 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*
3. How?

3.4 – 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 CMs
- Rules for cross-border participation in CMs
- Emission limit for resources committed in CMs

**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 transition
3. How?

3.5 – 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
### 3. How?

#### 3.6 – Other measures

<table>
<thead>
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<th>Benefits</th>
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<tr>
<td>Mandatory daily procurement for 30%-40% balancing products</td>
<td>Facilitate incorporation of RES and demand response in balancing markets</td>
</tr>
<tr>
<td>New ACER best practice report on transmission and distribution tariffs</td>
<td>Align approaches to new issues in tariff design such as dist. gen, smart meters, EV charging etc.</td>
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<tr>
<td>New methodology on the spending of congestion income</td>
<td>Ensure that congestion revenues are spent as a priority on reducing congestion</td>
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Thank you for your attention!

gerassimos.thomas@ec.europa.eu