EU electricity market model: from integration of energy markets toward hybrid markets

IAEE Webinar - Electricity Markets Assessment: Europe & the US

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EU HAS A COMMON ENERGY MARKET… BUT NATIONAL APPROACHES FOR SECURITY OF SUPPLY AND RES SUPPORT SCHEMES

In practice most countries have put in place some form of tendering and/or long term contracts to support investment in clean technologies and/or dispatchable resources.

Sources:
European Commission - Final Report of the Sector Inquiry on Capacity Mechanisms
European Commission - RES Legal
CEER - 2nd CEER Report on Tendering Procedures for RES in Europe
CEER - Status Review of Renewable Support Schemes in Europe for 2016 and 2017
European Commission - Final Report of the Sector Inquiry on Capacity Mechanisms
CEEM – Capacity Remuneration in power markets: an empirical assessment of the cost of production
CL Intelligence
THE CURRENT EU MARKET MODEL HAS ITS ROOTS IN THE CONTEXT OF THE 1990S – BOTH TECHNOLOGIES, CONSUMERS, AND POLICY OBJECTIVES HAVE CHANGED…

<table>
<thead>
<tr>
<th>Context of the 1990s and early 2000s</th>
<th>Current context</th>
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<td><strong>Policy</strong></td>
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<tr>
<td>Focus on competition and market integration</td>
<td>Focus on decarbonization requires step up in investments</td>
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<td><strong>Market</strong></td>
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<tr>
<td>Focus on day ahead wholesale market integration</td>
<td>Focus on intraday and real time markets to manage variable RES growth</td>
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<td><strong>Technology</strong></td>
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<td>Dominance of variable costs technologies (‘dash for gas’)</td>
<td>Dominance of fixed costs (CAPEX) / decentralised technologies</td>
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<td><strong>Consumers</strong></td>
<td></td>
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<td>Passive (no decentralised generation, storage, DSR, etc.)</td>
<td>Active demand participation, rise of prosumers</td>
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<td><strong>Networks</strong></td>
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<td>Focus on optimisation of the use of existing infrastructure</td>
<td>Need to reinvest to upgrade grid to decentralised generation &amp; RES growth</td>
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THE EU DECARBONISATION WILL REQUIRE A NEW MARKET MODEL TO STEP UP AND COORDINATE INVESTMENTS

The Green Deal requires a step up in power sector investments
- 800 bn€ investments needed in power generation in the next decade, a significant increase compared to the previous decades

A framework to boost private investment is needed to support the energy sector decarbonisation
- Private investments in energy assets can play a key role in the economic recovery but requires a sound investment framework

Historically most EU investments in the power sector were made under regulation or supported by long term contracts
- Based on the current regulatory framework, only a small share of total generation investments in the next decade are expected to be merchant

Source: CL analysis based on Platts, Country NECPs and CL Intelligence
European Commission - Final Report of the Sector Inquiry on Capacity Mechanisms
CEEM – Capacity Remuneration in power markets : an empirical assessment of the cost of production
CEER – 2nd CEER Report on Tendering Procedures for RES in Europe
TOWARDS HYBRID MARKET: COMPETITION IN TWO STEPS THROUGH TENDERING OF LONG TERM CONTRACTS

**Competition “for” the market**
- Tendering of long term contracts
- Can be technology neutral or specific
- Puts competitive pressure where it matters: CAPEX
- Can be used to stimulate new entrants and development of competitive market
- Ensures coordinated system developments

**Competition “in” the market**
- Well integrated and liquid forward, day ahead and intraday markets
- Optimises short term dispatch and minimises costs for consumers
- Level playing field with balancing obligation for all
- Supports retail competition and development of demand response

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Investment planning (years ahead)  
Operations planning (days /hours ahead)
### The Three Key Stages for a Hybrid Market Framework: Planning, Contracting and Short Term Market Interaction

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<th>Investment framework stages</th>
<th>Key features of an efficient hybrid market investment framework</th>
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<tbody>
<tr>
<td><strong>1. Planning &amp; definition of system needs</strong></td>
<td>▪ Need for efficient coordination &amp; holistic planning of the different system needs (clean tech and for flexible/firm capacity), across sectors (power/gas/heat/mobility) and Member States</td>
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<td>▪ Need for neutrality of the planning agency(ies), supported by sound regulatory framework</td>
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<td><strong>2. Contracting &amp; hedging mechanisms</strong></td>
<td>▪ Need for long term contractual commitments to hedge some of the policy, regulatory and market risks and facilitate investment</td>
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<td>▪ Need for increased coordination &amp; consistency of the procurement mechanism with the planning process, to make it more efficient and predictable (e.g. RES tenders schedule consistent with long term policy targets)</td>
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<td><strong>3. Efficient short term market interaction</strong></td>
<td>▪ Need for efficient interface with wholesale and retail markets, to avoid distortions</td>
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<td>▪ Need for an assessment framework and mitigation of the impact of some of the current schemes on short term market signals (e.g. negative prices triggered by feed-in-tariffs)</td>
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If you have any question about this paper, please contact

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