

Synthesis of seminar¹

EUROPEAN ELECTRICITY MARKET INTEGRATION AFTER THE WINTER PACKAGE: NEW IMPULSE OR BUSINESS AS USUAL?

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Seminar organised by the Chaire European Electricity Markets (CEEM)

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INTRODUCTION

On 30 November 2016, the European Commission presented the legislative package entitled “Clean Energy for All”, frequently referred to as the “Winter Package”. For the Commission, this package should be seen as part of a larger series of measures being taken since the arrival of President Juncker, which include proposals regarding the circular economy, financial products or car manufacturing. A “Spring Package” dedicated to mobility will be issued soon. Nevertheless, clean energy benefits from a special effort, receiving 20% of funds from the common EU budget and 20% of funds from the EU research programme “Horizon 2020”. Throughout the package special attention is given to the aim of creating jobs in European ‘losing regions’.

The “Winter Package” includes 8 legislative proposals:

1. Electricity Regulation (Recast - Repealing Regulation 714/2009): Contains majority of new wholesale market rules
2. Electricity Directive (Recast): Contains majority of new retail provisions
3. ACER Regulation (Recast): Contains new ACER tasks

¹ This synthesis was prepared by Michel Cruciani, Senior Advisor at the Centre of Geopolitics of Energy and Raw Materials, and CEEM Researcher (Université Paris-Dauphine).

4. Regulation on Risk Preparedness (New): Member States put in place appropriate tools to prevent, prepare for and manage electricity crisis situations
5. Promotion of the use of energy from renewable sources (Recast - Repealing Directive 2009/28/EC)
6. Governance of the Energy Union (New)
7. Energy efficiency (amending Directive 2012/27)
8. Energy performance of buildings (amending Directive 2010/31).

The Commission gives high priority to energy efficiency. The seminar organised at Université Paris-Dauphine by the Chaire European Electricity Markets (CEEM) concentrated instead on proposals 1 to 4 consistent with the mandate of the CEEM.

For the European Commission, according to EU's international commitments electricity should be completely carbon free by 2050. Therefore, as agreed by the European Council in October 2014, about 50% of electricity should also come from renewable sources by 2030, and these sources will be increasingly decentralized. This trend implies investments of 75 billion euros per year, of which 47% will go to the networks. The European Commission believes that such technological and political developments require an overhaul of the market rules. The proposals from 30th November 2016 aim at three objectives:

1. Boost wholesale market flexibility and provide clear price signals to facilitate the continuing penetration of renewable energies and ensure investments;
2. Enable active consumer participation and ensure that consumers are protected and benefit from progress in energy technologies;
3. Promote regional cooperation and provide a true European dimension to security of supply.

1 - Observations and proposals from the Commission

The European Commission deplores a proliferation of Capacity Remuneration Mechanisms (CRMs) across Europe. Nowadays, 14 countries have implemented 14 different mechanisms... The absence of common methods makes it difficult to assess the necessity of planned and existing CRMs. Moreover, many Member States applying CRMs do not have transparent standards to define reliability of supply. CRMs introduced in an uncoordinated manner can be inefficient and distort cross-border trade on wholesale markets, as foreign capacity is rarely allowed to participate. Consequences are serious: distortions to investment signals, risk of costly over-procurement of capacity, increasing risk of fragmentation of the internal market.

To avoid such risks, the Recast Electricity Regulation requires an EU-wide adequacy assessment under the responsibility of ENTSO-E, with an appropriate time horizon (up to 10 year ahead) and an updated methodology including contribution of interconnection and intermittent Renewable Energy Sources (RES), based on a probabilistic approach. This survey will facilitate the assessment by the Commission of national adequacy concerns.

Members States will be requested to exploit the reform of energy-only market first; CRMs will be allowed only to address residual concerns, based on real needs, involving transparency of reliability standards, rules for cross-border participation and an emission threshold for resources committed in CRMs (< 550 g CO₂/kWh). In any case State aid rules will apply, and CRMs should abide with guidelines and case by case notifications to and assessment by the Commission (DG COMP).

Cross-border participation will be possible with explicit participation of foreign capacity, but no interference with physical flows: the draft regulation requests primacy of 'market coupling', no delivery obligation across the border, market prices to guide flows in times of system stress. TSOs will keep an important role: calculate and allocate capacity for cross-border participation, verify availability of resources, issue transparent protocols for simultaneous scarcity situations.

2 – Remarks and comments from the panellists & the audience

The Commission sees Capacity Remuneration Mechanisms (CRMs) as temporary palliatives, and calls for an Energy Only Market based design. Yet the possibility of ensuring system adequacy through short term scarcity pricing is far from being proven. It is quite demanding: first, the output should be a socially acceptable loss-of-load probability; second, the incentives for developing or maintaining capacity should be sufficient, despite uncertain revenues.

Nowadays security of supply is shared between the market (EU level) and the Member States (national level). The Winter Package places regional adequacy centre stage, but a regional context adds more complexity at each step:

1. Define security standard: At regional level, which common standard? Which regions? Will different standards between regions be an issue?
2. Decide on market failure: At regional level, there is a risk of free riding.
3. Define mechanism: Energy only (scarcity pricing) or CRM (which design?). At regional level, we may see distributional issues.
4. Define emergency: At regional level or national level?

Converting any security standard to MW requires some subjective judgements (ex: evolution of reliability, plant retirements, hydropower availability...). Moving to the regional level adds more complexity, such as the availability of interconnections, not to mention the complexity linked to new technologies (ex: is 1 MW of generation the same as 1 MW of battery storage?).

REGIONAL COOPERATION:

1 - Observations and proposals from the Commission

The European Commission views Regional Operational Centres (ROCs) as necessary in order to facilitate the integration of RES in the system, adapt to the increase of cross-border exchanges, improve the operation of the system and lower the costs of the transmission system. The Commission deems the current process as insufficient, since it is based on voluntary cooperation, with existing initiatives limited to an advisory role (input to TSOs operations but no decision-making powers).

The Recast Electricity Regulation therefore requires that ENTSO-E proposes ROC regions, based on technical criteria, to the approval of ACER. The ROCs will perform a large range of functions beyond national borders, excluding real-time operation of the system. The ROCs will supplement (not replace!) TSOs which will have to develop the decision-making process; decisions will be binding unless risk to the system but any TSO can request a review of decisions. As observers on the board, the National Regulatory Authorities are given oversight of the ROCs, while ACER has the task of monitoring their performance (through the Recast Regulation of ACER).

2 – Remarks and comments from the panellists & the audience

ENTSO-E has long proactively reinforced regional coordination of system operation: Regional System Coordinators have been established across EU since 2016. Voluntary cooperation through a bottom-up process does deliver. Do we really need a top-down legislation?

Most panellists showed a preference for a practical and evolutionary way forward, rather than a quick jump to Regional Operational Centres. In this evolutionary pattern, the tasks performed by the Regional System Coordinators could be gradually extended to new activities, taking into account regional specificities, to achieve Enhance Regional Coordination by 2025. Enhance Regional Coordination might eventually open the way to new models, such as 'Regional Centres for Before Real-Time Operations', 'Regional Independent System Operators' or other models for the period 2030-2050.

The rationale behind the preference for a gradual approach includes several points:

- Full network codes and guidelines implementation will be fully completed by 2023; we do not have returns yet. Among the three kinds of network codes, connection codes and market codes have been adopted, but operational codes are not yet published: one of them is still under comitology process and the other one is not expected before mid-2017.
- New steps require a strong regional cooperation at political level which is far from being achieved nowadays.
- Integrating European electricity markets has so far relied on regional cooperation between all parties: National Regulatory Authorities (NRAs), Transmission System Operators (TSOs) and Nominated Electricity Market Operators (NEMOs). The empowerment of ROCs might put an end to this cooperation, leading either to splitting decisions or to conflict of interests.

Finally, the transfer of the responsibility for system security from TSOs to ROCs raises numerous questions. Would a supra-regional scale be more efficient? Would it allow for enough local flexibility? Would it not increase the risk of wide area events or the consequences of cyber and terrorist attacks? Should it not be a political decision rather than a technical and bureaucratic process?

OTHER ISSUES

Use of the congestion rent for new interconnections only

For the time being, Member States may use this rent to lower the general transmission tariff. If this rent becomes restricted to new interconnections only, there is a risk that we build interconnections with a very bad cost/benefit ratio. Should the priority be given to maximising cross-border capacities even when the costs of removing internal congestion (such as re-dispatch) outweigh the benefits of cross-border exchanges?

A new network code to define tariffs methodologies (including distribution)

A common methodology should concern general principle such as transparency, cost reflectivity, non-discrimination. It should not enter into technical parameters nor neglect national specificities such as thermo-sensitivity for France.

Mandatory procurement of balancing capacity at regional level

Thorough impact assessments are needed. Costs of immobilizing interconnection capacity and disruption of market coupling could offset the benefits of balancing capacity at regional level.

Suppression of price cap in short term markets:

The cap is currently 3000 €/MWh in the Centre West Europe region. However, some Competition Authorities start inquiries when the price exceeds 200 €/MWh... In addition, the removal of the cap may incur high financial risks for households, especially if they opt for dynamic-price contracts. Finally, a technical price cap is necessary for the Exchange to work properly (e.g. 9999.99 €/MWh).

A new role for aggregators, functioning independently from suppliers:

Allowing Demand Side Management Aggregators to value on the market an energy they have neither produced nor bought is not based upon sound economics. This proposal fails to address the interaction between the aggregator and the supplier. Balance responsibility is a must and all energy sourced and injected should be paid for.

Expansion of powers of the ACER (Agency for the Cooperation of Energy Regulators)

There are concerns that these new powers undermine the cooperation between the ACER and the National Regulatory Authorities. There is also a fear that the proposed use of simple majority rule instead of qualified majority would profoundly affect the checks and balances within the Board of Regulators, the key body of ACER.

Integration of renewable energy sources

Variable renewable energy poses challenges on market prices & network management which are not fully addressed by the Winter Package. Key issues for market integration of RES are:

- Balancing responsibility
- Priority dispatch
- Congestion management & curtailment

REMARKS DURING CONCLUDING PANEL DISCUSSION

- The EU electricity wholesale market was designed in the 1990's, at a time when the priority was market integration through day-ahead pricing and the use of pre-existing network infrastructure. The main features of the background were dominance of variable cost technology such as gas-fired generation and easy access to capital (until 2008). Priorities are now very different: security of supply, decarbonisation, long term investments, needs for new grids, while the background has also changed, with dominance of fixed costs, a growth of decentralised generation and a distrust of the finance sector, requiring guaranteed income, such as feed-in tariffs. In this context, the reforms proposed by the European Commission (integrate wholesale market) aim at potential gains much lower than those which could be achieved with other types of reforms (namely investment coordination and optimisation of renewable energy sources deployment throughout the EU).
- Overlapping targets and tools may cause real damage. For instance, the increased energy efficiency target and the poor situation of the EU ETS may aggravate the uncertainty all low-carbon investors are facing. Keeping flexible generation alive hence becomes a real challenge.
 - Key issues in the current regulatory framework are:
 - Interface with decarbonisation policies: ETS and renewables
 - Price signals to value flexibility
 - Investment framework to ensure security of supply
 - Locational signal to coordinate network with centralised & decentralised generation
- In harsh words, there is a fear that part of the Winter Package is trying to fix yesterday's problems. The pace of technological change is accelerating: we are entering a disruptive area. Just think of the tremendous progress regarding batteries! We need a fast changing regulation... otherwise there will be a push to remove the regulation.
- More research is needed on scarcity pricing and a real reform of the EU ETS.