Capacity Remuneration Mechanisms and the future of the EU Electricity Market

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3rd European Energy Forum

"European Energy Policy to Support Transition"

Conseil Français de l'Énergie, Paris, April 24, 2014

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In brief

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On the general motivation questions …
Some general statements

- How the electricity market design could cope with the growing share of RES?
- How to avoid negative influence to neighboring markets?
- Whether and why the market needs coordinated capacity mechanisms?
- Whether the EU European policy supports investments in infrastructure?

On the general motivation questions …
Some general statements

- **How the electricity n systems sign could cope with the growing share of RES?**
  - Market design
    - Decreasing regulators' interference in the short-term (Govs.)
    - Increasing the role of distributed generation and demand response in the balancing and ancillary services markets (TSOs)
    - Increasing market integration and coordination
      - Day-ahead and balancing (ACER)
  - The key role of tariff design
    - Avoding inefficient ways of subsidizing RES-E
      - e.g. net metering and volumetric tariffs
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- **How to avoid negative influence** **and take advantage of the positive one** **of neighboring markets**?
  - Increasing market integration and coordination
    - Day-ahead and balancing (ACER)
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On the general motivation questions …
Some general statements

- How the electricity m systems ign could cope with the growing share of RES?
- How to avoid negative influence and take advantage of the positive one of neighboring markets?
- **Whether and why the market needs coordinated capacity mechanisms?**
  - Discussed also briefly (but not so much) next
- Whether the EU European policy supports investments in infrastructure?

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Some general statements

- How the electricity m systems ign could cope with the growing share of RES?
- How to avoid negative influence and take advantage of the positive one of neighboring markets?
- Whether and why the market needs coordinated capacity mechanisms?
- **Whether the EU European policy supports investments in infrastructure?**
  - Not much comment to make about this …

  … although it is crucial to remind that there is not a better way to support investment than minimizing regulatory risk

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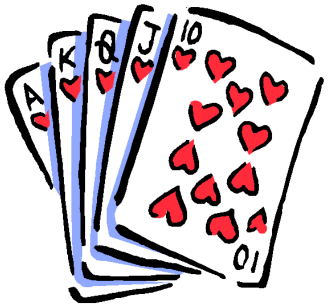
CRMs and the EU electricity market

Digression from the textbook
Levels of regional market integration

- Objectives of regional integration of power systems
  - Minimum: to increase the responsiveness of the system to very short-term **contingencies**
  - Intermediate: to optimize the **economic dispatch**
    - operation and planning in the short (intermittency) and medium term (e.g. different seasonalities)
  - Ultimate: **integrated expansion** of both the generation and transmission at the regional level optimization

- Apparently, the objective of the **EU Commission** is to go all the way
- But to what extent the **Governments** of the Member States really want to go?

- Cheating in Solitaire…



CRMs are here to stay

- It is a waste of time to argue if yes or no, we'd better focus on
  - preventing flawed designs and barriers
  - guaranteeing minimum design requirements

- If properly designed, **CRMs could even help** to advance in the **integration and efficiency** of the Internal Energy Market

- **But** the current trend is **heading towards the worst** of the scenarios
  - New non-market oriented patches
  - Perpetuation of the current market agents' structure
    - National, vertical and horizontal
  - Long-term market cross-border segregation
    - The ***Internal Electricity Market for Leftovers***
  - Missed (maybe last in many years) opportunity for **demand response**

CRMs and the EU Internal Electricity Market
The shrinking market

- Uncertainty, not risk: the **future short-term volatility of prices should by no means be a problem** for system adequacy
  - ***The "missing (or excessive) planning" problem***: the move towards a low carbon power system has boosted the regulator intervention in the capacity expansion decision-making

- **Is there any market left?** Growing irrelevance of the spot market
  - *"Why should I be the only one not receiving any sort of regulated financial support?"*

Levels of CRMs harmonization

- Highest level: implementation of a **EU-wide** capacity mechanism
  - Not only extremely unlikely for the moment, but also **unnecessary** from the theoretical and practical point of view
- Regulators in different **Member States** can and **should be allowed** to require different levels of reliability
  - Depending on the expected impact of a potential electricity curtailment in their system.
- To exploit the above-mentioned benefits of market integration, it is of paramount importance to **avoid** the creation of **any regulatory barrier that may hamper cross-border trades**

A question of (good) will
CRMs, cross-border trade and demand response

- Assuming the Target Model is implemented, **CRMs do not interfere with short-term market efficiency and cross-border trade IF**
  - the Article 4.3 of the Security of Supply Directive is respected,
    - **Firm imports and exports** linked to the CRM should have priority over any domestic demand without such commitments
      - Need to allow for firm nominations of cross-border bilateral contracts
        - Implemented in Central America
      - No need for cross-border capacity reservation
    - Limited by the actual interconnection capacity limits (zonal auction)
  - Scarcity is related only to market prices
    - e.g. not to temperatures or discretional decisions of TSOs

- **Demand response** has to play a crucial role
  - TSOs have to open grid codes to take advantage of the DR potential

Thank you very much and excuses

Comillas University Massachusetts Institute of Technology Electricity Systems (COMITES) Program
For more information on COMITES or to explore how you can help support it, please contact:

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