The case for European capacity mechanisms

Evidence on rationale and impact

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Bruegel
Reforms underway or being discussed

**France**
Government passed decree for the implementation of a Capacity Market

**England and Wales**
Government considering implementation of a centralized capacity market managed by the TSO

**Spain and Portugal**
Capacity payment reformed in 2011

**Belgium**
Considering the implementation of a strategic reserve for security of supply reasons

**Italy**
Government considering implementation of a capacity market by 2017

**Nordics**
Strategic reserves up and running

**Poland**
Strategic reserves are up and running, reform being discussed

**Germany**
Implemented a strategic reserve for both security of supply and grid stability reasons; debating long term options

**Reform / introduction of capacity mechanism**

**Possible reform under discussion**

**Existing capacity mechanism**

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CCGT revenues have collapsed
Longer term investment incentives being questioned

Annual reserve margins in Europe with no additions

- Belgium
- France
- Germany
- Italy
- Malta
- Netherlands
- Spain
- United Kingdom

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Will capacity mechanism prices reflect needs?

**Price drivers**
- Will there be a need for new resources?
- What is the level of prices that would avoid delisting older units?
- What will drive bids of market players?
- Could expectations of lower energy revenues lead to higher capacity bids?

**Example of capacity price estimation**

- CCGT annualized fixed costs
- Peaker (CT) annualized fixed costs
- Energy + AS Revenues
- What is the "Missing Money" of the different resources?

- Who sets the MCP? New units vs. de-listing units

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Risks to cross-border trade – capacity leakage

Imports and exports from New York

Imports from New York

Exports to New York

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Risks to cross-border trade – incentives to trade

Russian exports to Finland

Capacity market introduced

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Options for treatment of interconnected capacity

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<th>Treatment</th>
<th>Impact</th>
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<tr>
<td>Direct</td>
<td>Increase supply</td>
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<tr>
<td></td>
<td>Allow participation of plant with physical nominations</td>
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<tr>
<td>Indirect</td>
<td>Decrease demand</td>
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<td>Subtract interconnector capacity from resource requirement</td>
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Reduces impact, but still affects price differentials used in market coupling

**Possible adjustment mechanism?**

- Create interconnector fund based on participation in capacity mechanism
- Allocate fund across year
- Pay (charge) interconnector users nominating import (export)
IHS CERA multi-client study: Keeping Europe’s lights on

1. Outlook and Design of Capacity Mechanism
   • Description of scope and design of capacity mechanism in each country

2. Modeling Capacity Revenues
   • For typical base load/mid-merit/peaking units
   • Up to 2030

3. Modeling Impact on Electricity Prices and Plant Revenues
   • Impact on electricity prices to 2030
   • Total plant revenues by technology/country

Review of capacity mechanisms by country

Detailed review of existing or planned capacity mechanism: conditions for participation, timing of implementation, etc.

Analysis of the three forms of capacity mechanisms (strategic reserve, capacity payments, capacity reserves) and the impact of each on electricity prices and power plant revenues.

Outlook for capacity prices in different countries.

For countries with capacity markets (United Kingdom, France), IHS will provide its outlook for capacity supply and demand as well as prices.

In other countries, IHS CERA will provide its outlook for capacity payment and strategic reserves remuneration (Spain, Portugal, Ireland, Nordics, Germany, Belgium).

Modeling the impact of capacity revenues on energy prices.

IHS CERA will use its proprietary dispatch model to assess the impact of the different types of capacity mechanisms on electricity prices.

The model simulates every hour the European electricity market functions on a plant-by-plant basis.

Particular attention will be placed on the fixed-cost recovery issue and the electricity price distortions introduced by the capacity mechanism.
Thank you
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