Italian Capacity Market

Bruxelles, April 14\textsuperscript{th} 2015
Agenda

- Introduction

- Main principles of the Italian Capacity Market
Regulator defines criteria to be followed by Terna in developing its detailed proposal

Approval of the resulting proposal of Terna,

Timeline of internal legal and regulatory framework

2008-2010
Public consultations on CRM issue
Regulator produces 4 consultation documents on Capacity Remuneration Mechanism issue:
DCO 27/8, DCO 10/9, DCO 9/10 and DCO 38/10

2011
AEEG Decision ARG/elt 98/11
Regulator defines criteria to be followed by Terna in developing its detailed proposal

2012
AEEG Decision ARG/elt 482/12
Positive check from Regulator of the proposal developed by Terna

2013
Public consultation of Terna proposal
Detailed proposal by Terna under public consultation

AEEG Decision 2013/375/R/eel
Regulator gives the green light to the proposal considered compliant with the guidelines

2014
30 June Decree Min. for Econom. Dev.
Approval of the resulting proposal of Terna,
Italian Capacity Market: *aims and tools*

**Centralized Capacity Remuneration Mechanism**

**AIMS**
- system adequacy
- coordinated development
- proper investments
- competition

**TOOL**
Product procured: *reliability option contract* assigned by means of *auctions* organized by Terna.

- Counter-parties selection
- (Premium; Capacity obligations)

Sellers submit their portfolio offers → **Auction** → Reliability Option Contract
Main principles – *market structure*

Procurement of capacity is performed by competitive tenders where Terna is the central counterparty.

The product negotiated into each tender is a **reliability option contract**

### Multi-round descending auction

- **Main yearly auction**
  - **Procurement of capacity**
  - • Lead Time: 4 years
  - • Delivery period: 3 years
  - • Location: Area where the resource is located

- **Adjustment auction**
  - • Re-negotiation of the products acquired in the main auction *(sellers)*
  - • Adjustment of the adequacy objectives when approaching the delivery period *(Terna)*
  - • Lead time: 3 to 1 years
  - • Delivery period 1 year
  - • Location: Area where the resource is located

### Continuous transactions

- **Secondary Market**
  - • Re-negotiation of the products acquired in the previous auctions *(sellers)*
  - • Lead time: less than 1 year
  - • Delivery period: 1 month
  - • Location: Area where the resource is located
Main principles – **eligibility requirements**

**Admission to Capacity Market**

Both **new** (planned or under construction) and **existing** resources are admitted to the CM as long as these are:

- non-intermittent;
- not subject to any type of investment incentive scheme;
- not subject to dismantling measures approved by the competent authorities.

Each participant can submit offers for an amount no greater than its **expected available capacity** defined by Terna for each power plant.

**Participation to Capacity Market**

Participation is **voluntary**, subject to the presentation of **appropriate guarantees** to Terna.
Main principles – *contract rights and obligations*

**Contract structure:** reliability option (1-way *Contract for Difference*)

**Rights**
- Selected counterparties receive **premium** (€/MW-year) for their **capacity obligation** (MW-year); premium is the auction clearing price (the marginal price principle is applied)

**Obligations**
- Selected counterparties are obliged:
  - to submit offers in Day Ahead (DAM) and Ancillary Services Markets (ASM);
  - to pay Terna the positive difference between spot price and strike price

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*The considered spot price* penalizes selected counterparties not offering in DAM and ASM or offering at a price higher than the strike price

*Strike price* is the standard hourly variable cost of the **marginal technology** which is the technology with the lowest annual fixed costs.
Main principles – *supply and demand curves*

**Capacity Market Equilibrium:** *Capacity Clearing Price* (Premium - \( P^* \)) and *Clearing quantity* procured (\( Q^* \))

*A simplified example of auction results:*

Ineligible capacity and not offered available capacity are implicitly considered as offered at 0€/MW-year and don’t receive any remuneration.

- **Demand Curve** - elastic yearly demand curve defined by Terna on an annual basis
- **Supply curve** - participants portfolio offers (premium;quantity)
Backup
**Main principles – supply and demand curves**

Each reliability option contract foresees a **spot price** for each hour of the delivery period calculated as follow:

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Spot price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accepted on the Day-ahead market</td>
<td>Price on the Day-ahead market (P_DAM)</td>
</tr>
<tr>
<td>Presented but not accepted on the Day-ahead market (DAM) and not presented on the Dispatch Services Market (DSM) <strong>or</strong> Not presented on the DAM nor on the DSM</td>
<td>Adequacy system: Max (P_DAM; Max Price on the DSM)</td>
</tr>
<tr>
<td></td>
<td>Lack of adequacy system: VENF</td>
</tr>
<tr>
<td>Presented and accepted on the DSM</td>
<td>Strike price</td>
</tr>
<tr>
<td>Presented but not accepted on the DSM</td>
<td>Offered price</td>
</tr>
<tr>
<td></td>
<td>Max (P_DAM; Max Price on the DSM)</td>
</tr>
</tbody>
</table>