Enagás, GRTgaz, REN and TIGF

22nd SG meeting

16th March 2015
II.1 Results of the auctions using PRISMA
II.1 Results of the auctions using PRISMA

Enagás, TIGF and REN have developed an early implementation of the Commission Regulation 984/2013:

- Capacity auctions have been held on PRISMA booking platform from March 2014 (Yearly Auction)
- Current registrations on PRISMA:
  - On Enagás side: 31 Shippers and 91 Network Users
  - On REN side: 9 Shippers and 17 Network Users
- From March 2014 until March 2015:
  - 109 auctions - 17 participating Shippers
  - 24 auctions in which capacity has been allocated
- Next slides: final results of the auctions where capacity has been allocated
II.1 Annual yearly capacity auctions VIP PIRINEOS

For the Gas year 2014, all unbundled capacity offered (FR/SP) has been allocated.

Price step: 3.1
II.1 Annual quarterly capacity auctions VIP.PIRINEOS

Allocated bundled capacity - Quarterly auctions
May 2014 - FR/SP

Price step: 1.1

- Q1: 65%
- Q2: 74%
- Q3: 56%
- Q4: 54%

kWh/h at 25°C
II.1 Rolling monthly capacity auctions VIP.PIRINEOS

Allocated bundled capacity - Monthly auctions - FR/SP

- Oct.14: 34% Offered, 6% Allocated
- Nov.14: 69% Offered, 5% Allocated
- Dec.14: 87% Offered, 13% Allocated
- Jan.15: 78% Offered, 22% Allocated
- Feb.15: 75% Offered, 25% Allocated
- Mar.15: 72% Offered, 28% Allocated
II.1 Annual yearly capacity auctions VIP.IBERICO

Allocated bundled capacity
Yearly auctions - SP/PT

Unbundled capacity allocated (SP/PT)
Gas year 2014 94%
Gas year 2015 95%
II.1 Annual quarterly capacity auctions VIP.IBERICO

**Allocated bundled capacity - Quarterly auctions**

**May 2014 - SP/PT**

- **Q1**: 7% Offered, 7% Allocated
- **Q2**: 7% Offered, 7% Allocated
- **Q3**: 7% Offered, 7% Allocated
- **Q4**: 7% Offered, 7% Allocated

KWh/h at 25°C
II.1 Rolling monthly capacity auctions VIP.IBERICO

Allocated bundled capacity - Monthly auctions - SP/PT

<table>
<thead>
<tr>
<th></th>
<th>Offered</th>
<th>Allocated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct.14</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Nov.14</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Dec.14</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Jan.15</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Feb.15</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Mar.15</td>
<td>5%</td>
<td></td>
</tr>
</tbody>
</table>
II.2 Status of the IT systems for the preparation of the first daily auction
II.2 Status of the IT systems for the preparation of the first daily auction

TIGF roadmap

- **Business topics**
  - Auction on Monthly B/U product on VIP Pirineos
  - Auction on Daily U product on VIP Pirineos
  - Joint use of single nomination (with BRS Nominations)
  - First Auction on bundled DA product on VIP Pirineos
  - First Auction on Intra-Day product on VIP Pirineos

- **IT Systems stages**
  - IT Specifications
  - IT Development
  - IT Testing/Acceptance with PRISMA
  - Testing release 2.4 from PRISMA

- **Timeline**
  - January
  - March
  - June
  - August
  - October
  - November

- **2015**

---

[Image links and logos]
II.2 Status of the IT systems for the preparation of the first daily auction

REN roadmap

<table>
<thead>
<tr>
<th></th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Daily &amp; within-day auctions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tests</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Secondary Market</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tests</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gas Day</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tests</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
II.2 Status of the IT systems for the preparation of the first daily auction

Enagás Project Planning 2015

<table>
<thead>
<tr>
<th>Projects</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jan</td>
<td>Feb</td>
</tr>
<tr>
<td>Daily &amp; within-day auctions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014 Closure of Requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas Day</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary Market (re-sell)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
II.2 Status of the IT systems for the preparation of the first daily auction

Developments resulting from the implementation of the CAM NC

- Harmonisation of the gas day in the related IPs:
  - from 5:00 to 5:00 UTC the following day for winter time and from 4:00 to 4:00 UTC the following day when daylight saving is applied

- Early implementation of BAL NC:
  - Single-side nomination
  - Renomination cycle every two hours

The mentioned developments will be implemented as from 1 November 2015
II.2 Status of the IT systems for the preparation of the first daily auction

Developments resulting from the implementation of the CAM NC

Common roadmap

<table>
<thead>
<tr>
<th>2015</th>
<th>ENE</th>
<th>FEB</th>
<th>MAR</th>
<th>ABR</th>
<th>MAY</th>
<th>JUN</th>
<th>JUL</th>
<th>AGO</th>
<th>SEP</th>
<th>OCT</th>
<th>NOV</th>
<th>DIC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Common BRS for Nomination and Matching</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technical Requirements Specification for IT Systems Connection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technical Platform Test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FAT/SAT Tests</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Implementation 1 Nov 15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[Logos: enagas, RENX, TIGF]
II.3 TSOs proposal of common methodology to maximize technical capacity
II.3 TSOs proposal of common methodology to maximize technical capacity

With the scope of maximizing the offer of bundled capacity, a joint method for optimization of technical capacity has been established and applied for several years for all the interconnections between TIGF and Enagás, as well as between REN and ENAGAS, despite no related documentation has been published.

This joint method:

✓ Includes an in-depth analysis of the technical capacities
✓ Solves discrepancies therein on both sides of an interconnection point
✓ Establishes a detailed timetable in line with possible regulatory requirements and commercial needs.
✓ Is consistent with National Investment Plans and Union-wide TYNDP assumptions.
✓ Takes into consideration the best information provided by the market regarding future flows
✓ Is regularly updated, especially when critical changes in demand or infrastructures are identified
II.3 TSOs proposal of common methodology to maximize technical capacity

1. Agreement in **DEMAND** criteria's regarding design scenarios for calculations: Worst case scenario is selected for each direction:
   - Import point of view  →  summer average demand
   - Export point of view  →  peak demand.

2. Agreement in terms of **INFRASTRUCTURES** and **OPERATIONAL SETTINGS**:
   - Infrastructure scenarios
   - Commission of new investments
   - Operational settings for compressor stations or other relevant points in the network

3. Agreement in **SIMULATIONS**:
   Saturation of the infrastructures linking the core network with the interconnection

   **1. VIP Pirineos**: agreed conditions between 2 Compressor Stations  →  Equivalent to 1 single simulation

   **2. VIP Iberico**: agreed condition is the Border pressure  →  lesser rule should be applied to the capacity calculated by each TSO.
II.3 TSOs proposal of common methodology to maximize technical capacity

- Results calculated on each side are contrasted during several meetings and discussions until reaching a decision of the maximum technical capacity.

- Calculation Updates

  ✓ Once a year

  ✓ Nevertheless, each TSO reserves the right to review the capacity value in case of critical changes such as unpredictable demand variations at wide or local level, in case of commissioning of new infrastructures that may have an impact in cross-border capacities, or changes in the operative conditions of any facility working in the network.

  ✓ Two year period → If no changes in the main assumptions
II.3 TSOs proposal of common methodology to maximize technical capacity

- **ALREADY DONE:**
  - Questionnaire submitted to ENTSOG
  - Technical note regarding VIP Pirineos calculation submitted to NRA’s

- **FOLLOWING STEPS:**
  - Feedback and expectations from Regulators
  - Methodology should be published? If so, regulatory treatment

Further details of the technical capacity calculation and optimisation can be found on TIGF, REN and Enagás websites:
- [https://www.ign.ren.pt/web/guest/sub-regulamentacao](https://www.ign.ren.pt/web/guest/sub-regulamentacao) (Procedure n.º 1)
- [http://www.enagas.es/stfls/EnagasImport/Ficheros/667/432/NGTS%20actualizaci%C3%B3n%20dic-13,0.pdf](http://www.enagas.es/stfls/EnagasImport/Ficheros/667/432/NGTS%20actualizaci%C3%B3n%20dic-13,0.pdf) (NGTS-02)
- [http://www.enagas.es/stfls/EnagasImport/Ficheros/912/744/PD%20actualizaci%C3%B3n%20may-13.pdf](http://www.enagas.es/stfls/EnagasImport/Ficheros/912/744/PD%20actualizaci%C3%B3n%20may-13.pdf) (PD-10)
III. 1 Common OSBB methodology in the Region
This proposal comes up in response to the provisions established in Circular 1/2013 of CNMC regarding CMP implementation, as well as to the decisions adopted in the 14\textsuperscript{th} RCC meeting that took place on the 5\textsuperscript{th} of June 2014.

III.1 Methodology: Additional capacity to be offered

- Increase liquidity (capacity to be offered)
- Minimize risk situations and avoid activation of Buy-Back mechanism

- As requested by regulation and NRA’s
- As requested for the Security of supply
III.1 Methodology: Additional capacity to be offered

Main principles of the Methodology

1. The aim of the methodology is based on the difference between the nomination and renomination.

2. Additional capacity will be offered on daily basis, taking into account the maximum historical deviation between nomination and renomination.

3. There is a nomination value (Trigger Value) from which offered additional capacity is 0 GWh / day.
III.1 Methodology: Additional capacity to be offered

Contrasting example VIP PIRINEOS

Example Oversubscription 2014

- Renomination + Oversubscription
- Oversubscription
- Nomination
- Nominal capacity
- Trigger value
- Physical flow

GWh/day

ene-14 feb-14 mar-14 abr-14 may-14 jun-14 jul-14 ago-14 sep-14
III.1 Methodology: Additional capacity to be offered

Implementation

Additional capacity won’t be offered before April 2016

- **NO Additional capacity** will be offered for the day D in case of:
  - Special programmed operations between both TSOs.
  - Emergency situations that might activate other processes or agreements.
  - Shippers or TSOs IT System failures.
  - TOSs justified intervention.

- **ANNUAL REPORT**.

Annual update of fixed parameters if needed.
III.1 How to offer OS capacity

- OS capacity will be sold in the daily auction together with the available capacity.
  - If not sold, the OS capacity will not be reoffered again in the within-day auctions.
  - Otherwise, complexity will be increased, because OS capacity should be recalculated before each auction (time constrains).

- OS capacity will be sold as bundled.
  - The methodology proposed for calculating the OS capacity ensures that the OS capacity will be always the same at both sides of the VIP.
  - Each TSO will upload at PRISMA its daily available capacity (technical + OS capacity).
  - PRISMA will apply the lesser value to determine bundled capacities. The remaining capacity, if any, will be sold as unbundled.
III.1 OS bundled capacity

Taking into account that the OS capacity is calculated based on nominations, the OS capacity will also be the same value. OS capacity will be offered as bundled capacity.
III.1 Buy-back procedure

Phases

1. Evaluation about the need to buy-back capacity
2. Determination of the amount of capacity subject to buy-back
3. Communication to the adjacent TSO and shippers
4. Buy-back process
5. Reception and evaluation of the results
6. Confirmation of the final renominations
III.1 When will the buy-back process be triggered?

If: $\Sigma$ Net nominations > technical capacity $\rightarrow$ technical and commercial measures and, if necessary, buy-back

**Merit order of technical and commercial measures before buying back the capacity:**

1. Management of the OBA
2. Interruption of the interruptible capacities under the following order:
   1. Within day interruptible capacity (overnomination)
   2. Daily interruptible capacity
   3. Monthly interruptible capacity
   4. Quarterly interruptible capacity
   5. Yearly interruptible capacity
3. Buy-back of oversubscribed capacity
4. Pro-rata between all firm capacities
III.1 When will the buy-back process be triggered?

Situations where the operational capacity is below the technical capacity

In this case BB should not be triggered, TSOs should apply the same procedure as currently in place.

In this case it is clear that BB should not be triggered, TSOs should apply the same procedure as currently in place.
III.1 How much will be needed to buy-back?

If: $\Sigma \text{Net nominations} - \text{OBA} - \text{Interruptible capacity} > \text{Technical capacity} \rightarrow \text{Buy-back process}$

The capacity subject to buy-back will be calculated as follows:

Buy-back capacity = Net nominations – OBA – Interruptible capacity – Technical capacity
III.1 Communication to the adjacent TSO & shippers

- The TSO will inform the adjacent TSO about the need to buy-back capacity.
- Shippers will be informed about the restriction of their re-nomination rights upwards.
- The TSO will inform shippers about:
  - The amount of capacity to be bought-back.
  - The maximum price the TSO is willing to pay.
  - Which shippers are allowed to sell capacity.
  - The maximum amount of capacity each shipper can sell.
III.1 Timeline for the BB process

- **End of DA auction with OS capacity**: 17:00 D-1
- **BB information to be sent to platform**: hh:mm
- **Start of the BB process on PRISMA platform**
- **Communication of the results**
- **06:00 D**: BB process to be finished before the start of the gas day

**Nominations**
Information of the relevant data necessary to carry out the BB
III.1 Buy-back procedure at PRISMA

- The capacity will be bought back using PRISMA Platform as *bundled capacity* or as *unbundled capacity* by the same legal entity on each side of the IP.

- PRISMA offers several options to TSO to buy back capacity:
  1) Primary reverse auction (used by GTS and also German TSOs; no price indication; 30 min time window; maximum product runtime is 24 hours)
  2) Secondary platform (more familiar to shippers)
     - *FCFS*
     - *OTC*
     - *CFO* - requires setting specific rules for bidding and determining winning bids
VI.1 Project candidates of PCIs in the Region
### PCI 5.4. - 3rd Interconnection point between Portugal and Spain

<table>
<thead>
<tr>
<th>Phase</th>
<th>ENTSOG Code</th>
<th>Infrastructures</th>
<th>Capacity GWh/d</th>
<th>Length km</th>
<th>Diameter ''</th>
<th>Power MW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TRA-N-283</td>
<td>Pipeline Celorico - Spanish Border</td>
<td>Entry: 75 Exit: 50</td>
<td>162</td>
<td>28</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>TRA-N-284</td>
<td>Cantanhede Compressor Station</td>
<td>Entry: 107 Exit: 97</td>
<td>-</td>
<td>-</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>TRA-N-285</td>
<td>Pipeline Cantanhede - Mangualde</td>
<td>Entry: 141.4 Exit: 141.4</td>
<td>67</td>
<td>28</td>
<td>-</td>
</tr>
</tbody>
</table>
### ENTSOG Code

<table>
<thead>
<tr>
<th>ENTSOG Code</th>
<th>Infrastructures</th>
<th>Capacity GWh/d</th>
<th>Length km</th>
<th>Diameter ''</th>
<th>Power MW</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRA-N-168</td>
<td>Pipeline Zamora-Portuguese Border 1</td>
<td>Entry: 100 Exit: 100</td>
<td>85</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zamora CS 2</td>
<td></td>
<td></td>
<td></td>
<td>Pending</td>
</tr>
<tr>
<td></td>
<td>Core network reinforcements in Spain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(*) After the submission of the info to DG ENER, Enagás has identified the following core network reinforcements:

- Guitiriz-Yela Pipeline (G6) 3: Entry: 142 Exit: 142, Length 625 km, Diameter 26/30/32 MW

Core network reinforcements in Spain under study*.
- Pipeline between French border and Figueras (25km)
- Pipeline between Figueras and Hostalrich (79km)
- Compression at Martorell (36MW)
- Loop between Tivisa and Arbós (114 km)
- Loop between Villar de Arnedo and Castelnou (214 km)

- New compression in Montpellier
- Reinforcement of compression in Saint-Martin-de-Crau

- Pipeline between Spanish border and compression station of Barbaira (120km)
- Reinforcement of compression station at Barbaira (10MW)
- Pipeline between Lupiac and Barran (28km)
PCI candidates reported by GRTgaz as MidCat enablers

GRTgaz proposes Arc Lyonnais and Eridan, PCI candidates for the 2015 list, as enablers for MidCat.

It is still under discussion in the Regional Gas Group, regarding the grouping for the Project-Specific CBA simulations (PS-CBA), whether MidCat should be simulated alone, or if these two projects should be grouped with MidCat.

An agreement at the Regional Gas Group is pending.
MIDCAT + enablers

- Pipeline between French border and Figueras (25km)
- Pipeline between Figueras and Hostalrich (79km)
- Compression at Martorell (36MW)
- Loop between Tivissa and Arbos (114 km)
- Loop between Villar Armedo and Casternou (214 km)

- CS Martorell
- CS Barbaira
- CS Montpellier
- CS Saint-Martin-de-Crau

- Pipeline between St Avit and Etrez (Arc Lyonnais, 150km in DN1200) as partial enabler
- Pipeline between St Avil and St Martin (Eridan, 220km in DN1200 ) as enabler
- New compression in Montpellier – reinforcement of compression in St Martin
- Adaptation of interconnection stations

- Pipeline between Spanish border and compression station of Barbaira (120km)
- Reinforcement of compression station at Barbaira (10MW)
- Pipeline between Lupiac and Barran (28km)
First step MIDCAT

A study has been launched in cooperation between TSOs and under French and Spanish Authorities to determine the firm and interruptible capacities that can be created with minimum investments.

- Pipeline between French border and Figueras (25km)
- Pipeline between Figueras and Hostalrich (79km)
- Compression at Martorell (36MW)

*capacities to be determined by TSOs

120 GWh/d *

80 GWh/d *

*Pipeline between Spanish border and compression station of Barbaira (120km)
A single market place in France: Val de Saône and Gascogne Midi

• Pipeline between Voisines and Etrez (188 km in DN1200)
• Additional compression (9 MW) in Etrez
• Adaptation of interconnexion stations in Voisines, Palleau and Etrez

• Pipeline between Lussagnet and Barran (60 km in DN900)
• Additional Compression (7 MW) in Barbaira
• Adaptation of interconnexion stations in Cruzy and St Martin
Thank you for your attention!