CAM Auctioning & Bundling pilot
GTS / Gasunie Deutschland

GRI NW Stakeholder Meeting

23 November 2012
1. Background
   - EU and national legislation
   - TTF and market developments
   - TSO & NRA cooperation

2. Project set-up & outline
   - Service description
   - Tariffs & revenue principles
   - Auctioning, bundling principles

3. Regulation
   - Existing legislation
   - Required adaptation

4. Auctioning results
   - Shipper & booking analysis
   - Sales versus TTF & Gaspool spread
   - Available and sold capacities

5. Future outlook
Background - European and national codes

Europe (CAM)
- EU adoption of CAM NC Q3 2013
- Auctioning of bundled cross border capacity

Germany (KARLA)
- KARLA: in force from February 2011
- Capacity auction of all TSOs on one platform (TRAC-X)

The Netherlands (Ministerial decree)
- In force as of July 2011
- Reservation of capacity for short term contracts
- Auctioning partly obligatory
Increase attractiveness of gas roundabout & hubs
  - Improve interconnection between the hubs
  - Increase tradability and liquidity

First steps towards EU wide CAM, CMP
  - Learning experience for GTS
    - bundling & auctioning
    - operation via external platform
  - First time crossing international borders

GTS and GUD started auctioning service
  - As of 22 May 2012
  - Day-ahead, bundled, bi-directional firm capacity
  - Cooperation of GTS and GU Deutschland
  - Additional firm capacity, on top of regular
National codes & EU codes the process adopted

<table>
<thead>
<tr>
<th>National Codes</th>
<th>EU Codes</th>
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<tbody>
<tr>
<td>NL codes</td>
<td>in place FCFS</td>
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<tr>
<td>NL 2nd law</td>
<td>not active Auction</td>
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<tr>
<td>EU codes</td>
<td>not yet Auction, bundle</td>
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For the pilot a temporary solution was required to overcome contradictive legislation

GTS, NMa & MEA cooperate in the project
GTS requested for temporary exemption of NL codes
NMa adopted consultation process for market parties
Exemption letter published by NMa, March 2012

Exemption letter to be extended for further auctioning at IP’s, in advance of CAM coming into force
<table>
<thead>
<tr>
<th><strong>Service description</strong></th>
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<tbody>
<tr>
<td><strong>TSOs</strong></td>
<td>GTS &amp; Gasunie Deutschland</td>
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<td><strong>Network points</strong></td>
<td>Oude Statenzijl H-gas exit &amp; entry, bi-directional</td>
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<td><strong>Products</strong></td>
<td>Firm day-ahead bundled capacity</td>
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<td><strong>Platform</strong></td>
<td>TRAC-X Primary</td>
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<td><strong>Capacity allocation</strong></td>
<td>According to KARLA</td>
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<td><strong>Available capacity</strong></td>
<td>Estimated day ahead, on top of technical Based on mutually agreed mechanisms 50.000 – 100.000 m3/h</td>
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<td><strong>Auction window</strong></td>
<td>Bid(s) offered between 3.30 until 4.30 p.m. (LET)</td>
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<td><strong>Auction frequency</strong></td>
<td>Each working day for the following day</td>
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<td><strong>Clearing price</strong></td>
<td>Sum of reserve price and clearing bid price</td>
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TSO cooperation, agreement

GTS and Gasunie concluded an agreement on

1. Day ahead additional capacity on top of technical
2. Distribution of revenues from auction premiums
3. Information exchange operational and contractual level
4. Weekends and holiday auctioning

Tariffs, reserve prices, bundling

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<th>Start</th>
<th>Jan 2013</th>
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<tr>
<td>GTS</td>
<td>Regulated</td>
<td>Regulated*</td>
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<td>GUD</td>
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*)GTS regulated tariff with monthly & daily factor (1/20th)
GUD regulated tariff, 1/365
Shipper & booking analysis

~ 50 Shippers registered at TRAC-X / Oude Statenzijl
10 Shippers actively booking
Booking period 23 May – 1 November, 163 days
Number of bookings 154, realized on 85 days
151 bookings were TTF ➔ GasPool
71% bookings in line with spread GasPool – TTF
Day ahead capacity up to 20% of totally booked capacity
Shipper & booking analysis

Booked capacity TTF ==> GasPool vs. GasPool - TTF spread

TTF > GasPool

GasPool > TTF

€/MWh

mln kWh/h
Price spread & tariff analysis

Auction Pilot TTF GasPool, 23 May - 1 November
price spread, tariff and premium

€/MWh

Shipper premium
Regulated exit tariff €/MWh
Price spread Gaspool TTF

23-05-2012
29-05-2012
04-06-2012
10-06-2012
16-06-2012
22-06-2012
28-06-2012
04-07-2012
10-07-2012
16-07-2012
22-07-2012
28-07-2012
03-08-2012
09-08-2012
15-08-2012
21-08-2012
27-08-2012
02-09-2012
08-09-2012
14-09-2012
20-09-2012
26-09-2012
02-10-2012
08-10-2012
14-10-2012
20-10-2012
26-10-2012
01-11-2012
Available and sold capacities

Auction Pilot TTF Gaspool, 23 May - 1 November
Capacity available and sold

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<th>Available entry</th>
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GASPOOL TTF spread since 2010

Spread GASPOOL TTF since 2010

Pilot start

Data from GASPOOL site
European Capacity Platform: follow up regarding early implementation of CAM/CMP

- As of 1 April 2013 the NewCo / CAM platform will be operational. Border capacity can then be bundled and auctioned on an annual, quarterly, monthly and daily basis according to CAM NC

- In accordance with this platform scheme, GTS and neighbouring TSOs plan to start auctioning bundled border capacities on a daily basis at some relevant border points.

- GTS foresees functionality to be comparable with the bundled daily auction already in place at GTS/GUD border point Oude Statenzijl/Bunde.

- Auctioning & bundling will then be according to CAM in stead of KARLA (different timing, optimised algorithm).
Future outlook of explicit market coupling