

Turkish Delegation Visit

January 28th 2016



Agenda

Platform functionalities and auction types & algorithms

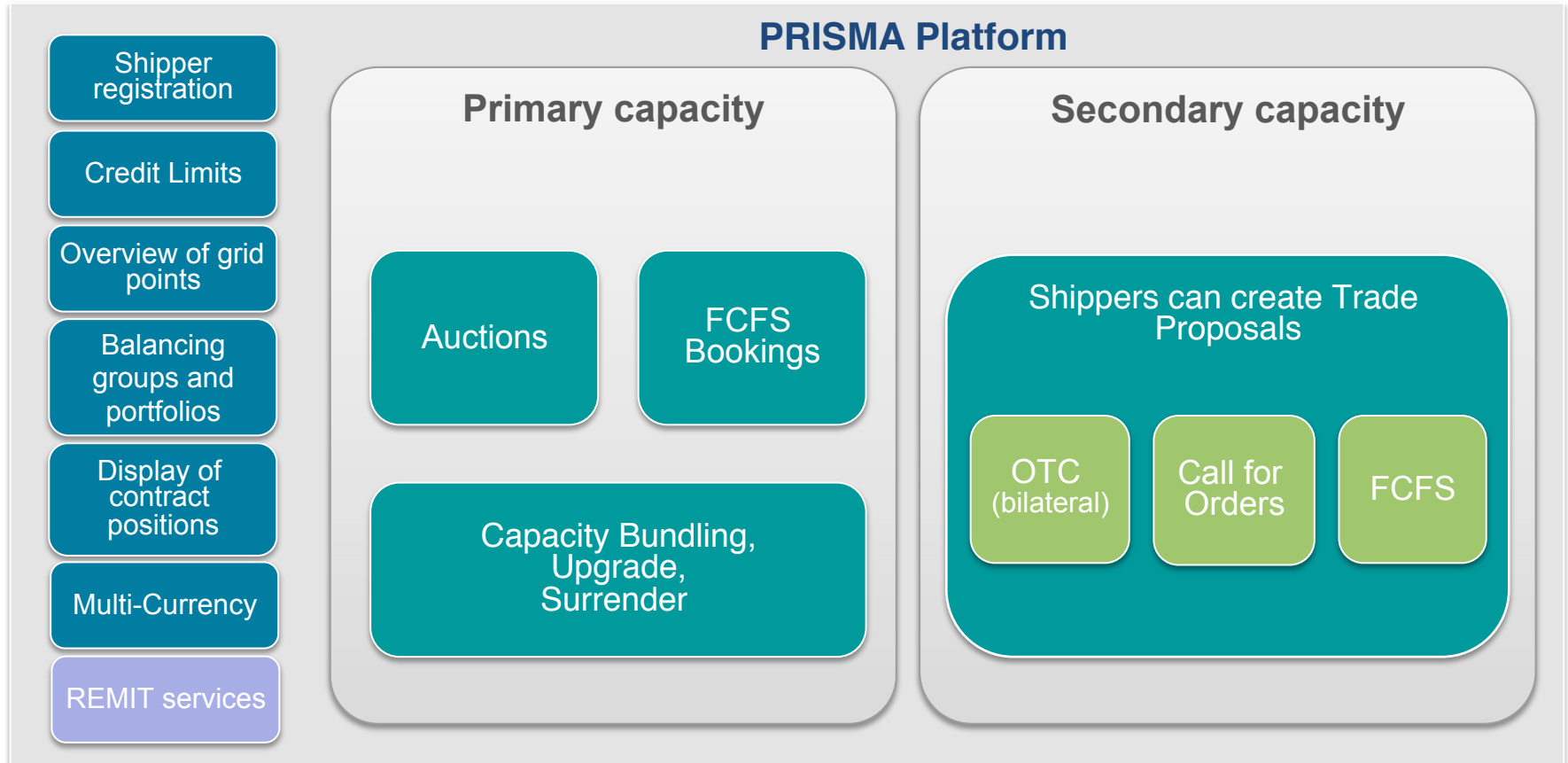
How CMP has been implemented in PRISMA

Results of 2015

Lessons for the Turkish Market

Platform functionalities and auction types & algorithms

PRISMA functionalities



Products marketed via PRISMA

Capacity products

- FIRM
 - BZK
 - DZK
 - FZK
 - FZK_C
- } Different flavours of firm capacity
- INTERRUPTIBLE
 - B_FZK
 - BACKHAUL CAPACITY
- } Different flavours of interruptible capacity

Run times

- Yearly
 - Quarterly
 - Monthly
- } Allocated using the “Ascending clock” algorithm
- Daily
 - Within Day
- } Allocated using the “Uniform price” algorithm

Level of connection

- Bundled
- Unbundled

Start Price and Total Price of an Auction

TSO 1: Regulated tariff
+ TSO 1: Additional fees

TSO 2: Regulated tariff
+ TSO 2: Additional fees

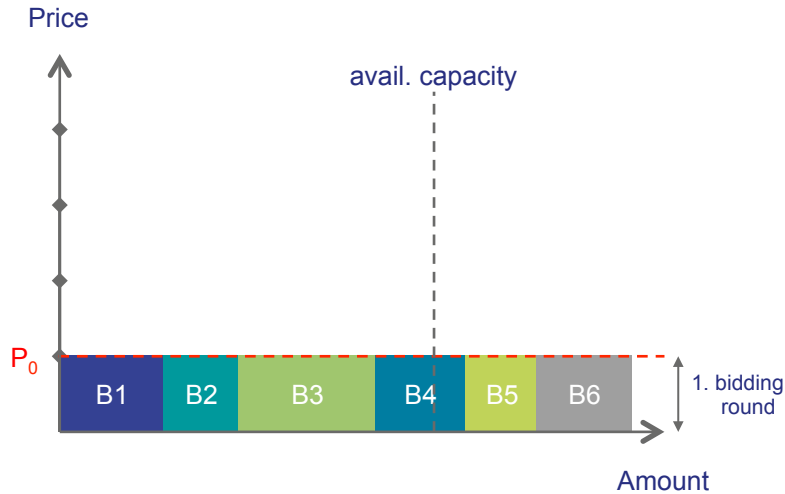
= Starting Price

+ Auction surcharge

= Total price

- The regulated tariff and additional fees are provided by the respective TSO
- In case of a bundled auction the regulated tariff and additional fees of both TSO(s) are summed up.
- The auction surcharge depends on the demand
- The auction surcharge is divided between the TSOs

Ascending clock algorithm (1/3)



Legend:

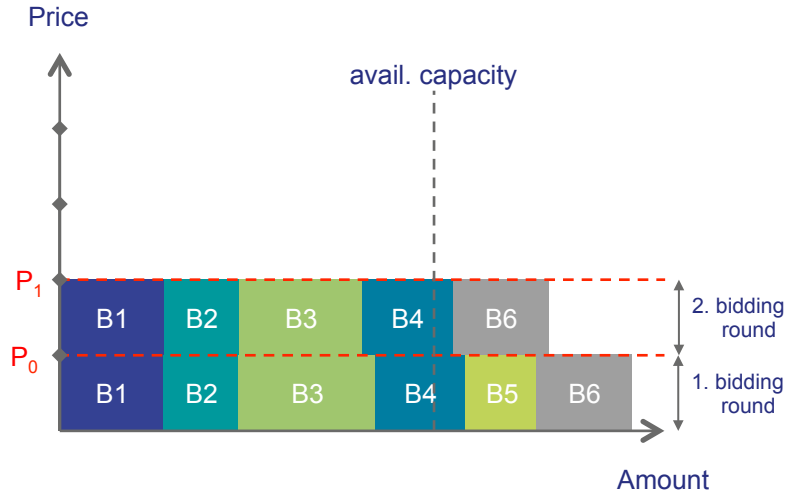
P_0 Regulated Tariff
B1 - Bn Bid 1 to Bid n

1. Bidding round:

- Six bids are placed
- Sum of all bids exceeds the available capacity)

- If the sum of all placed bids in the first bidding round is higher as the available capacity (oversell) the auction continues with the next bidding round
- A large price step is applied and bids can be placed for a certain amount at the new price P_1 (regulated tariff plus large price step)
- The amount of the bid has to be equal or lower to the bid in the previous bidding round

Ascending clock algorithm (2/3)



Legend:

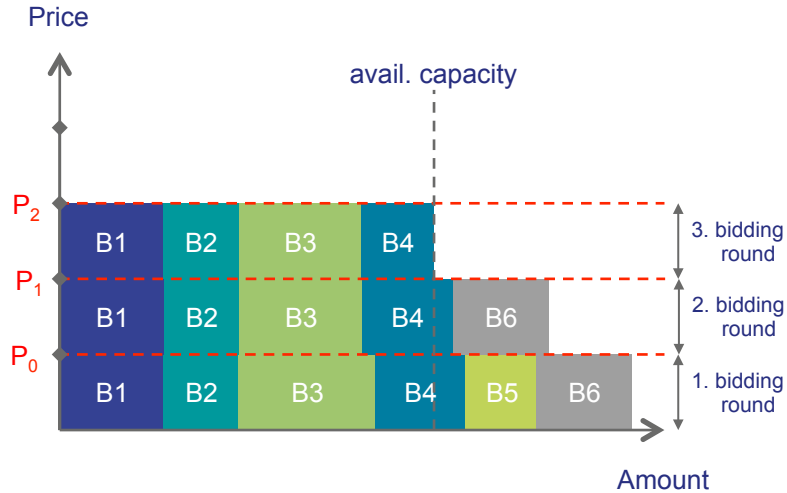
P_0 Regulated Tariff
B1 - Bn Bid 1 to Bid n

2. Bidding round:

- B3 reduces the bid
- B5 does not place a bid
- Sum of all bids exceeds the available capacity (oversell)

- If the sum of all placed bids in the second bidding round is higher than the available capacity (oversell) the auction continues with the next bidding round
- A large price step is applied and bids can be placed for a certain amount at the new price P_2 (regulated tariff plus two large price steps)
- The amount of the bid has to be equal or lower to the bid in the previous bidding round

Ascending clock algorithm (3/3)



Legend:

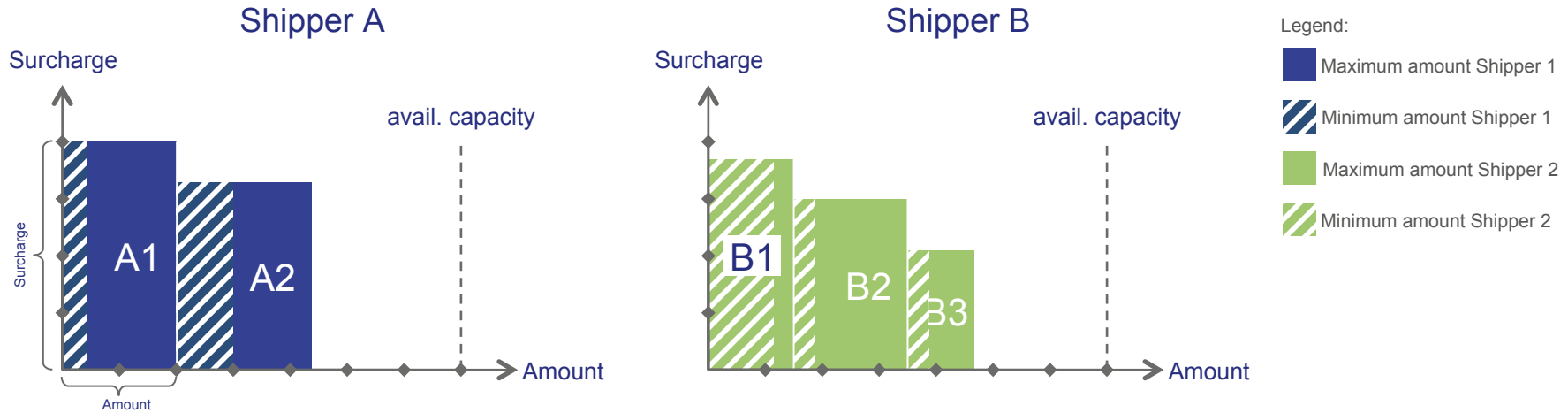
P_0 Regulated Tariff
B1 - Bn Bid 1 to Bid n

3. Bidding round:

- B4 reduces the bid
- B6 does not place a bid
- Sum of all bids equals the available capacity
- The auction closes at clearing price P_2

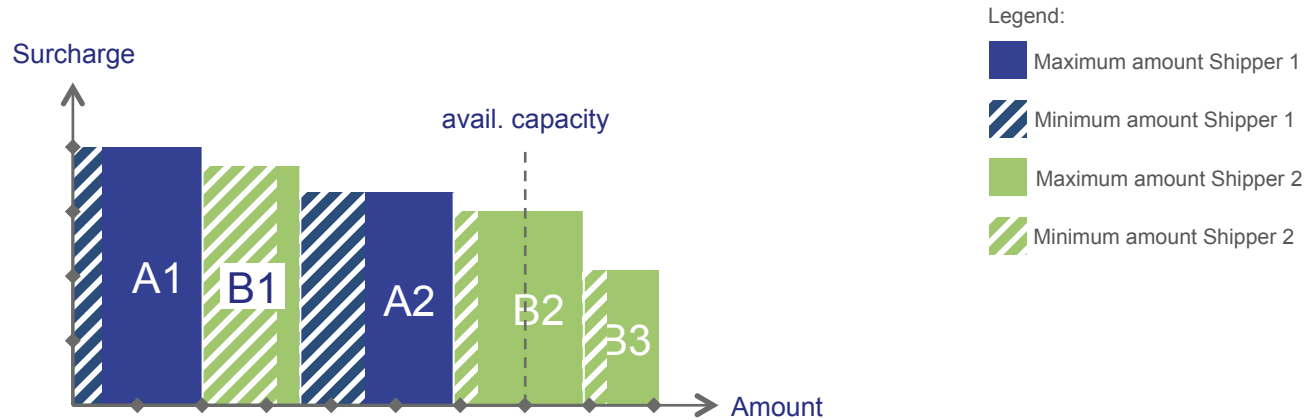
- If the sum of all placed bids in the bidding round is equal to the available capacity the auction closes and the capacity is allocated
- The clearing price of the auction is P_2 (Regulated Tariff + 2 large price steps)

Uniform price algorithm – Placing bids



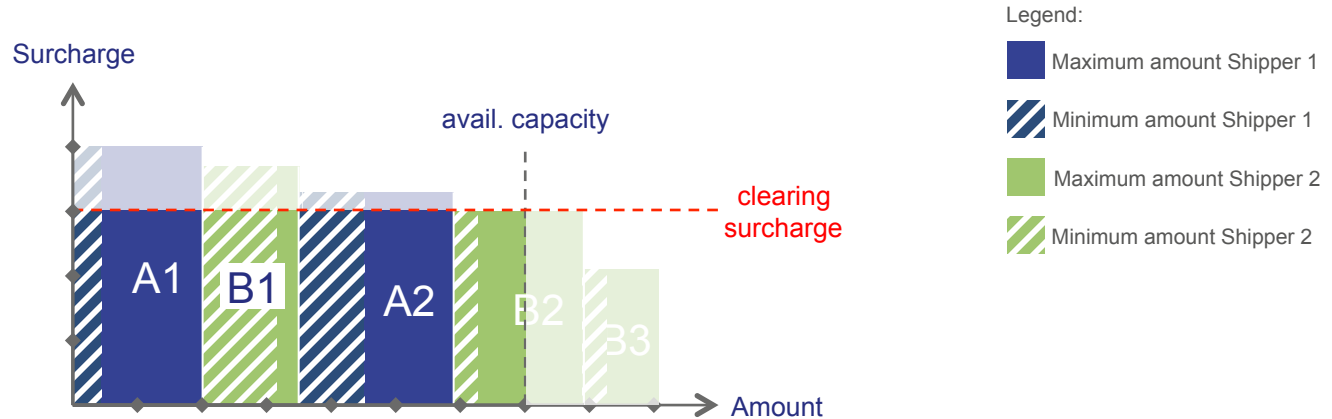
- The Shippers place their bids during the bidding round.
- Each bid contains a surcharge, a minimum amount and a maximum amount.
- Uniform price auctions only have one bidding round in which up to 10 bids (surcharge + amounts) can be placed.
- The evaluation of the placed bids and the allocation of capacity is done after the bidding round is closed.

Uniform price algorithm – Bid Consolidation and Ranking



- After closing the bidding round all received bids are evaluated.
- The auction algorithm ranks all bids (from all Shippers) according to the surcharge of the individual bid.
- Depending on the received bids the clearing surcharge is determined by either the fill-or-kill procedure or the pro-rata procedure.

Uniform price algorithm – Clearing Price



- All successful bids are allocated at the clearing surcharge.
- B2 is “filled” until the sum of the maximum amounts of A1, B1, A2 and the part of B2 equal the available capacity.

How CMP has been implemented
in PRISMA

European Congestion Management Procedures

Implementation in PRISMA

Oversubscription and Buy-Back (OS & BB)	√ ¹
Firm day-ahead Use-It-Or-Lose-It (FDA UIOLI)	×
Long-Term Use-It-Or-Lose-It (LT UIOLI)	×
Capacity Surrender	√

Note:

1- Only Buy Back is implemented in PRISMA

Buy-Back procedure

TSOs can Buy-Back transmission capacity via two different processes

Reverse Auction

Auction organized by TSO to buy capacity from Shippers

Secondary Market

TSO can place an anonymous request to buy capacity on the secondary market.

Capacity Surrender

6 Start surrender request

Start a new surrender request from network point detail page

Proposal ID CFD Assignment ASC-test-point02 PRISMA (GASPOOL) ENTRY FZK

OFFER
QUANTITY: 500 MWh/h

Product runtime: 25/10/2015 06:00 - 31/10/2015 06:00 Proposal created by René Lindner on: 10/10/2015 16:35

Contract position at this Point

Contract number	Deal ID	Runtime	Booked Capacity	Price
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Surrendered capacity at this point

Deal ID	Runtime	Booked Capacity	Balancing Exit	Contract Position Exit	Balancing Entry	Contract Position Entry
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Start new surrender request

6 Booking ID

Provide booking ID from transaction concluded on PRISMA or check tick box in case of surrender of old contract

Surrender capacity

PRISMA SA

CAPACITY RETURN INFORMATION

Booking ID

This is a contract without a booking ID or an old contract.

Period to return

Capacity MWh/h

NETWORK POINT INFORMATION

PRISMA SA EXIT ENTRY

Contract ID

Balancing group/sub-balancing account

Portfolio code

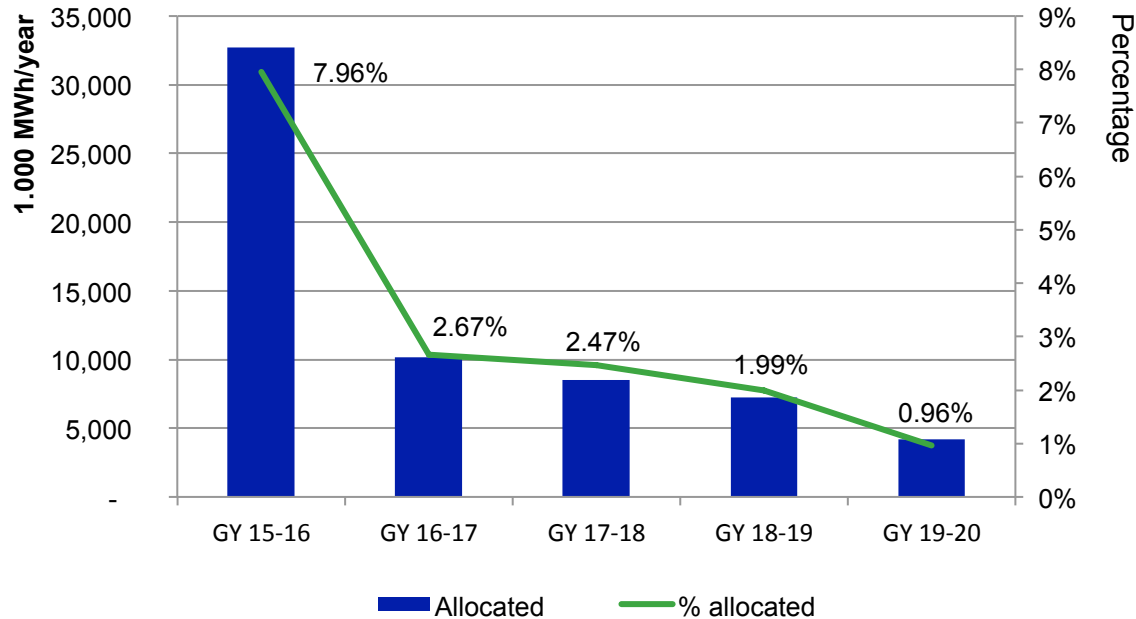
OTCs

General terms and conditions* I hereby accept PRISMA SA's OTCs*

Surrender

Results of 2015

Yearly auctions in 2015

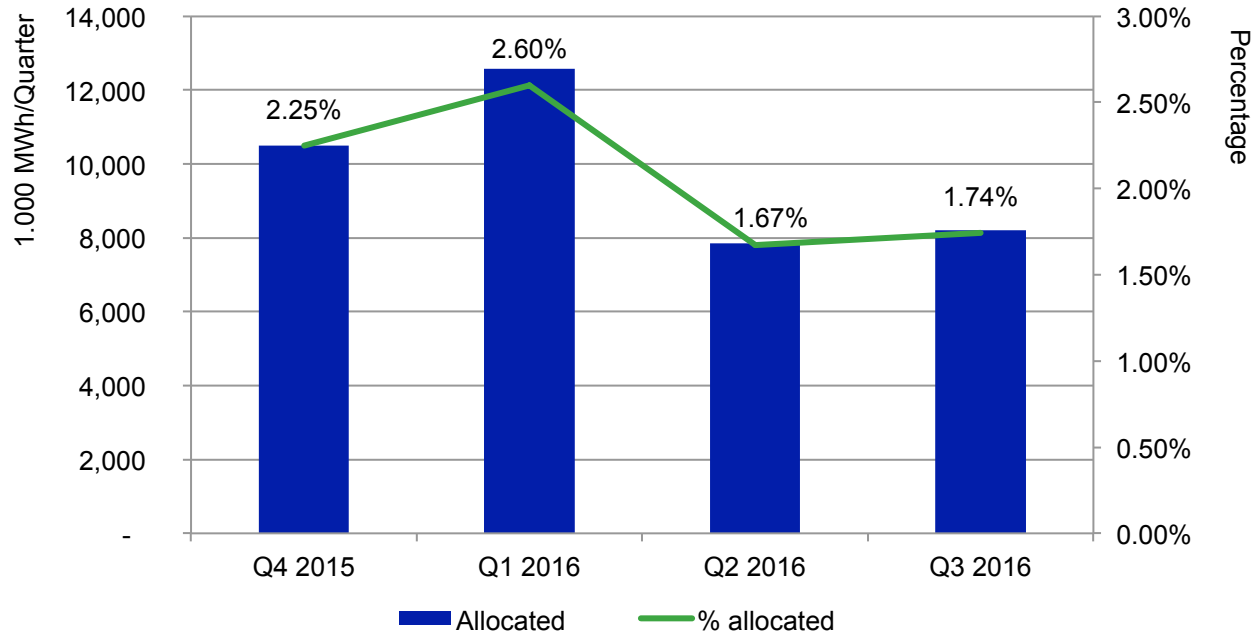


TSOs marketed transmission capacity for the next 15 Gas Years (GY)

Capacity was allocated only for the first five GYs

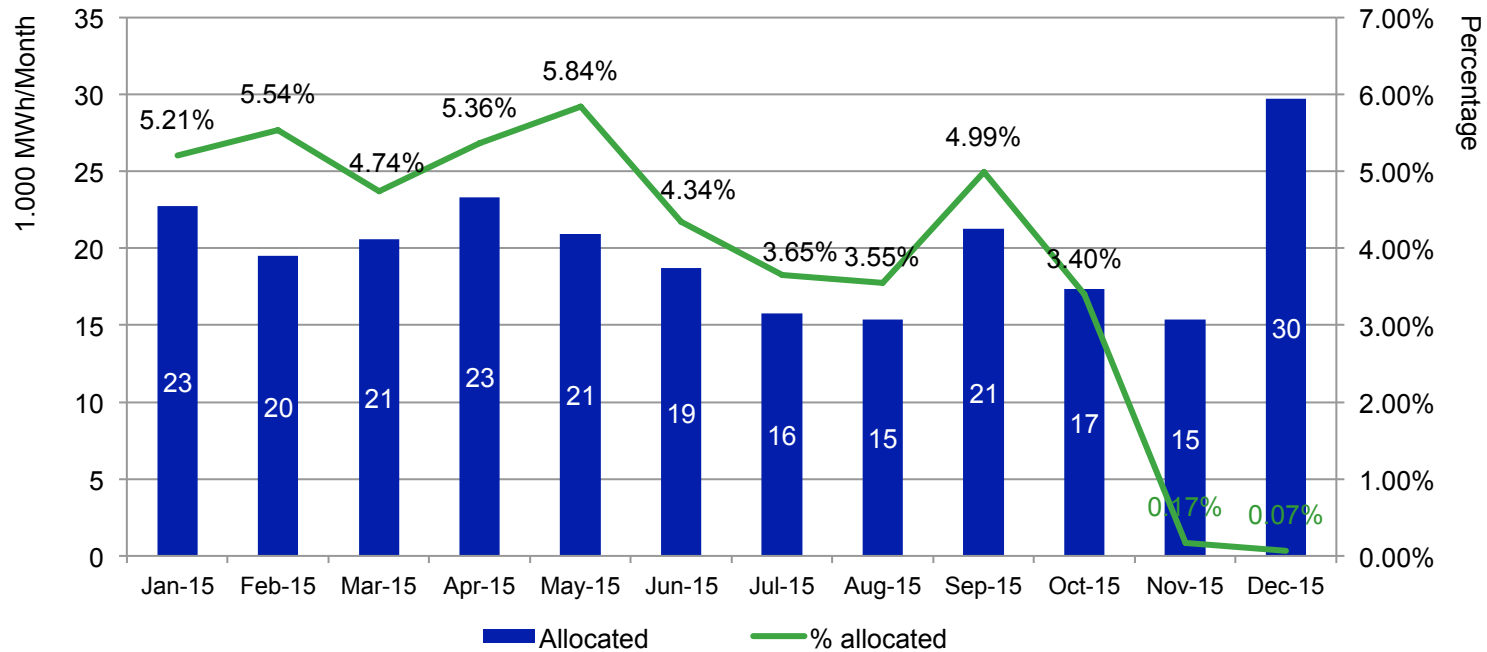
Only a few cases of over demand

Quarterly auctions in 2015



Low demand of quarterly products
Q1 2016 slightly higher than other quarters

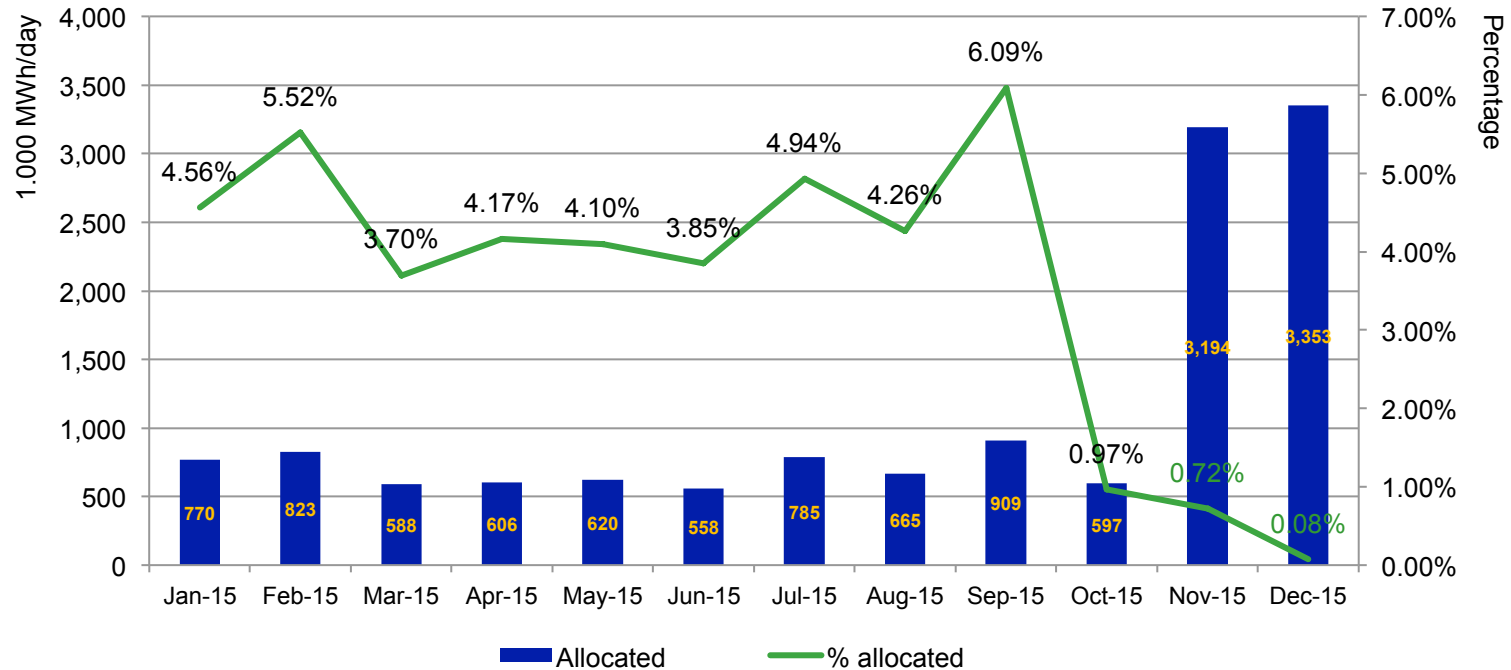
Monthly auctions with delivery in 2015



Low demand of monthly products

From November 2015 significant quantities of transmission capacity were marketed in competing auctions

Daily auctions in 2015

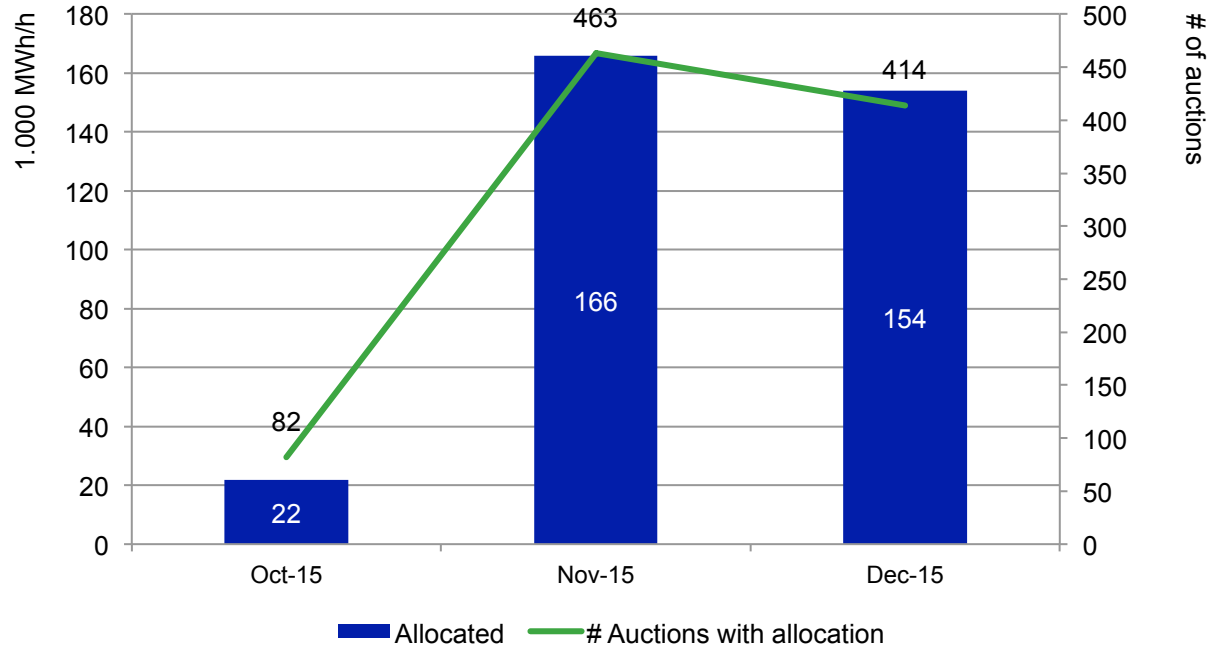


Shippers and traders are interested in daily products

From November 2015 significant quantities of daily capacity were marketed in competition

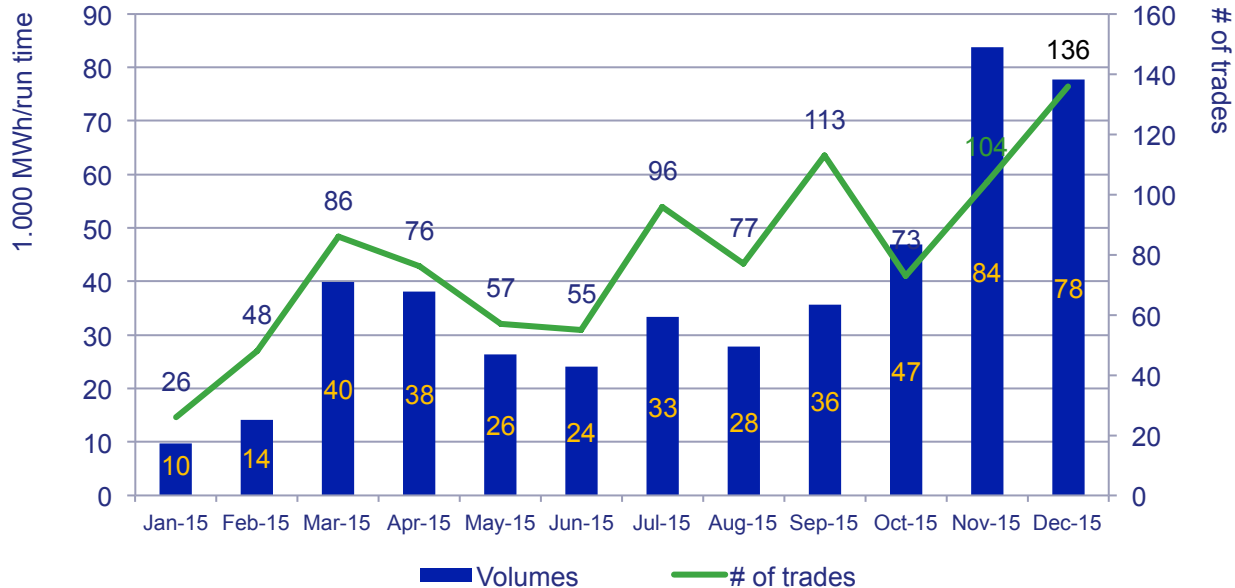
Significant increase in allocated daily capacity (nominal values) from November 2015

Within day auctions in 2015



Shippers and traders are already buying within day capacity

Secondary market in 2015



Secondary market in PRISMA is still limited

Majority of the transactions/traders are OTCs

With the entry in to force of the REMIT obligation (April 2016) it is probable that the number of transaction will significantly increase

Lessons for the Turkish Market

Lesson learnt

European gas markets are changing

Demand of yearly products is decreasing, while short term products as Day Ahead and Within Day are frequently demanded

No significant congestions in the Interconnection Point manage by PRISMA

Only in critical situations transmission capacity is allocated with surcharge

Secondary market of gas transmission capacity is mainly an OTC market