Final Roadmap on the early implementation of the Capacity Allocation Mechanisms Network Code

Update of 9 November 2015

Content

1. Executive Summary

This CAM Roadmap is a joint publication of the Agency and ENTSOG that analyses the early implementation of the NC CAM. The Roadmap was consulted with TSOs and booking platform operators (GSA, PRISMA and RBP). NRAs had the opportunity to provide comments. The aim of the Roadmap is to highlight the progress achieved in the implementation of the NC before its application deadline of 1 November 2015 and to examine open issues which will possibly hinder a timely and effective implementation. Early implementation takes the form of pilot projects, which are undertaken on a voluntary basis. The report also includes a collection of real cases of implementation concerns.

The implementation of the NC CAM involves the auctioning of bundled capacity products at all interconnection points (IPs) within the European Union. To be CAM-compliant, all auctions should follow the rules specified in the NC. Auctions are run on booking platforms, which enable network users to book capacity for cross border IPs, based on the choice of their respective TSOs about which platform to join.

The geographical configuration of the booking platforms has evolved since the last edition of this report. TSOs from various Member States have joined one or more of the existing booking platforms to run pilot projects and test their functionalities. As of 19 August 2015, 7 TSOs have not yet decided to which booking platform they will connect: Eustream (SK), NET4GAS (CZ), Plinacro (HR), Amber Grid[1] (LT), Magyar Gáz Tranzit (HU), Desfa (GR), Bulgartransgaz (BG)[2,3].

Some of the TSOs have started new pilot projects during 2015 with one or more booking platforms. This is the case for NET4GAS and Eustream, which have been testing both GSA and PRISMA; NET4GAS, which has also tested PRISMA together with Ontras; and Transgaz, which has been testing RBP. All pilot projects should help undecided TSOs to come to a decision prior to the NC CAM applicability date.

The compliance of the booking platforms has been thoroughly analysed based on a consultancy study. The consultant identified, described and assessed 15 functionalities that all booking platforms should provide in order to be fully compliant with the NC CAM; among those, the 12 core requirements can be directly derived from the NC. As of 19 August 2015, PRISMA was compliant with 11 out of 12 requirements, GSA and RBP with 7 out of 12. The implementation roadmaps for both GSA and PRISMA foresee full compliance with all twelve NC CAM requirements by 1 November 2015. The features planned for RBP include the implementation of functionalities for compliance with three additional requirements, with two remaining requirements to be determined for inclusion at a later stage upon request.

[1] Amber Grid (LT) has a single CAM relevant interconnection point, with Latvijas Gaze (LV). Anyhow Latvia has been granted derogation under Article 49 of Directive 2009/73/EC: thus no auction of bundled capacity will take place at this interconnection point for the time being.

[2] As of 28 October only Desfa (GR), Bulgartransgaz (BG) and Amber Grid (LT) were still undecided. These recent updates are not reflected in the next chapters of the report, but only in Annex I.

[3] Moreover, the following 4 TSOs have been granted derogation under Article 49 of Directive 2009/73/EC: Latvijas Gaze (LV), Creos (LU), Elering (EE) and Swedegas (SE). The Finnish TSO Gasum has no CAM relevant IP.

The booking platforms have to cooperate to ensure that capacity at IPs bordering different market areas is auctioned on a single platform, as requested by Article 27(2(e)) of NC CAM. The booking platform operators proposed different cooperation models, whose legal compliance was assessed by CEER. Among the solutions that could prove to be compliant if certain conditions are met, GSA and RPB are currently developing a technical cooperation framework that they would be willing to put in place by 1 November 2015, if needed. Beyond this, PRISMA, GSA and RBP, following the input of the XVII Madrid Forum, have been studying the possibility of trilateral cooperation regarding technical and financial aspects. Some progress is expected in October 2015, but at the moment there is no precise implementation date.

This report also sheds light on a number of additional topics related to the NC CAM implementation, providing additional information compared to last year. Regarding how to deal with capacity mismatch, ENTSOG and EFET presented at the XXVII Madrid Forum three practical solutions. On this proposal, the Agency and NRAs have been developing a complementary analysis. Moreover, a solution will have to be found on how the practical usage of bundled different firm capacity products on both sides of an IP can be developed. Regarding the voluntary bundling of existing capacity contracts, for which network users are called to exercise best effort, only a few contracts at a single IP have been bundled. Another open issue is the implementation of the auction calendar, which has received several comments in the public consultation for amending the present NC CAM: different arrangements may be found in the future according to the outcome of the consultation process. Finally, the progress in the application of capacity calculation and maximisation (prescribed by Article 6 of NC CAM) has been analysed by ENTSOG in February 2015: the survey shows that most TSOs have already taken measures to comply with Article 6 of NC CAM.

As of 1 November 2015, all TSOs have an obligation to comply with it the CAM NC. The Agency and ENTSOG will start monitoring the actual implementation, which will result in a new and different report.

Therefore, this Roadmap is the final one in a series of early implementation CAM Roadmap reports.

Please note that that latest updates on booking platform usage are listed in the Annex 1.

2. Purpose of the current CAM Roadmap

The present version of the CAM Roadmap shows an updated picture of the early implementation of the CAM Network Code at the interconnection points of the EU Member States. The previous editions of the Roadmap promoted early implementation of the NC CAM before the code becomes binding on 1 November 2015. After this date, the process will move from promoting early implementation to checking proper implementation. Therefore, this is the last version of the CAM Roadmap.

The CAM Roadmap is structured as follows: section 3 monitors the most recent developments in implementation, with a special focus on the booking platforms, while section 4 provides an update on other relevant NC CAM implementation issues and in the end, Annex II-IV provide details on the implementation of the pilot projects.

3. Implementation status of NC CAM: focus on capacity booking platforms

In Europe currently three different booking platforms (BPs) have been established: PRISMA, Gas-System Auction platform (GSA) and the Regional Booking Platform (RBP). These booking platforms are used for marketing capacities according to the NC CAM requirements. They have been established during the years 2013 and 2014. This year additional implementation steps have been fulfilled by the platforms in terms of functionality and membership.

Features that have been established and were mentioned in the previous CAM roadmap[4] cover:

- The installation of a joint, anonymous, web-based booking platform
- Functionality to offer yearly, quarterly and monthly standard firm bundled capacity products
- Implementation of auctions according to NC CAM, including the auction timings; some booking platform operators implemented further features for marketing capacity outside the scope of NC CAM or they used altering auction timings
- Implementation of an ascending clock algorithm for yearly, monthly, quarterly products
- Functionality to offer bundled and unbundled capacity according to NC CAM requirements
- Implementation of different approaches for the interruption sequences of interruptible capacity, like timestamp and pro-rata
- Realisation of a contract model that is based on a single contract with each TSO

3.1. Geographical scope of capacity booking platforms projects

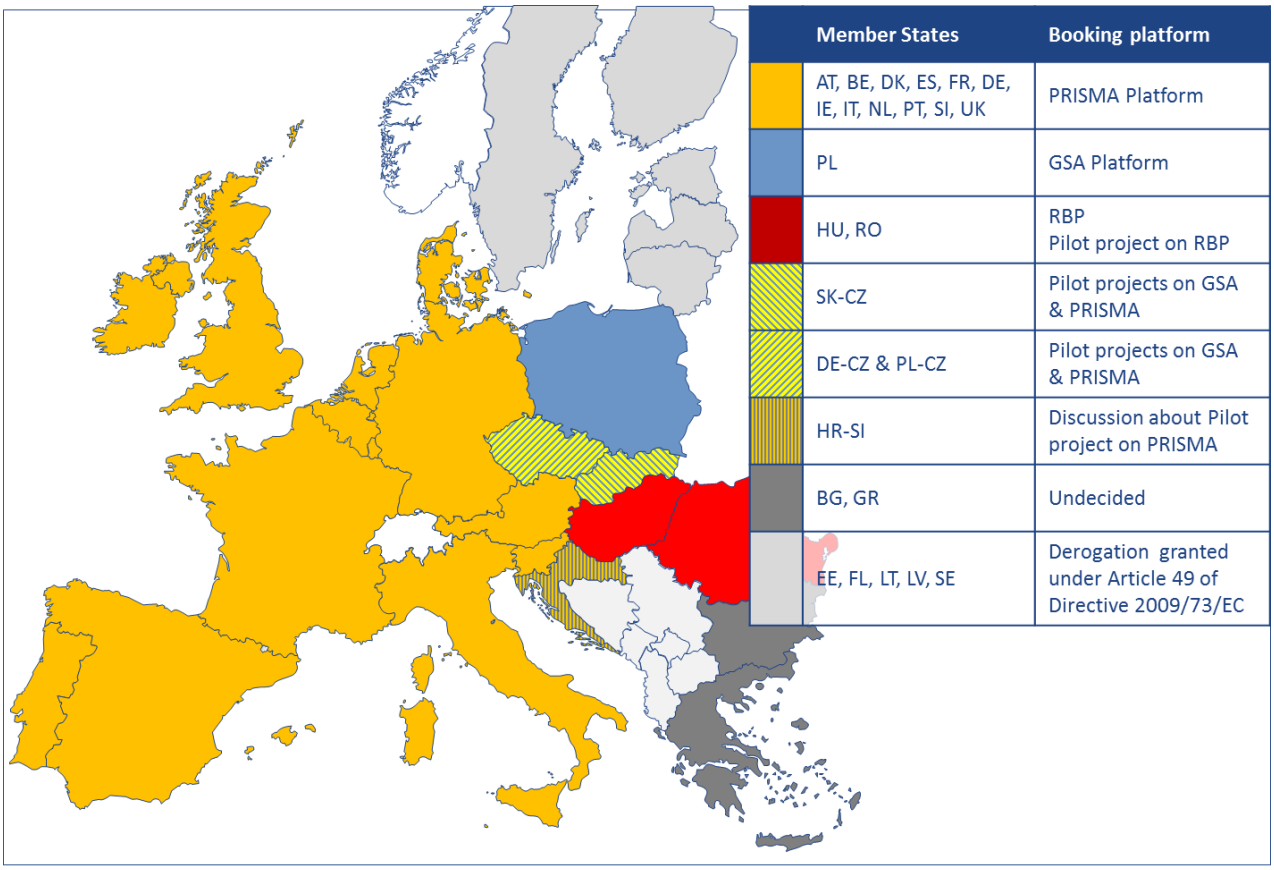
The three existing booking platforms have developed at different times and from different realities. Their current size, structure and scoping still witness this heterogeneity.

The following map illustrates the current booking platforms, the Member states whose TSOs already joined a platform, plus some additional pilot projects for the undecided TSOs of Slovakia, the Czech Republic and Croatia, and the TSOs who still have to decide which BP to join. More details on the pilot projects at each booking platform are provided in the annexes.

The geographical position of a country is one of the drivers influencing the TSOs choice on what booking platform to join.

[4] Roadmap for the early implementation of the Capacity Allocation Mechanisms Network Code, update of October 2014:
http://www.acer.europa.eu/Gas/Regional_%20Intiatives/CAM_roadmap/Documents/CAM_Roadmap_Update_Oct_2014_FINAL.pdf

Figure 1 - Overview of the Member States and pilot projects per booking platform (status as of August 2015)



Source: ENTSOG

The table below reports some summary statistics on the number of users at each BP.

Table 1. Users at each booking platform

	GSA	PRISMA	RBP
Number of TSO registered	4*	35**	2
Number of shipper registered	44	455	35
Registered trading users	122	1561	80

** 2 TSOs have been running pilot projects*

*** as of 12 August 2015, including 3 TSOs that have been running pilot projects*

Source: ACER based on ENTSOG survey

The following table gives additional details on the membership of the three capacity booking platforms currently in place in the EU Member States[5], plus an overview of the scope of the projects and their progress. Some functionality required by the provisions of NC CAM may not be fully adopted (yet) by the platforms and the connected TSOs at this stage.

[5] The previously included separate pilot project "South CAM Roadmap" is now merged into the "PRISMA" project.

Table 2 – Booking platforms: membership per Member State and TSO, plus pilot projects

	Booking platform	Booking platform description	Member States involved	TSOs involved
1	**PRISMA**	Joint European platform for the allocation of capacity according to the NC CAM rules, as well as according to national rules. Implementation started in April 2013 and the platform is fully operational. The implementation of WD auction is currently in progress	Austria, Belgium, Denmark, France, Germany, Italy, the Netherlands, Portugal, Spain and Slovenia As of November 2015: Ireland and the UK In pilot projects from January until April 2015 Czech Republic and Germany, from June until August 2015 Czech Republic and Slovakia	32 connected TSOs: Bayernets, Creos, BBL Company, Enagas, Energinet.dk, Eustream*, Fluxys Belgium, Fluxys Deutschland GmbH, Fluxys TENP, Gas Connect Austria, GASCADE Gastransport, Gas Networks Ireland**, Gastransport Nord, Gasunie, Gasunie Ostseeanbindungsleitung***, Gasunie Deutschland, GRTgaz, GRTgaz Deutschland, Interconnector, jordgasTransport, National Grid, NEL Gastransport, NET4GAS*, Nowega, ONTRAS Gastransport, OPAL Gastransport, Open Grid Europe, Plinovodi, Premier Transmission, REN-Gasodutos, Snam Rete Gas, terranets bw, Thyssengas, TIGF, Trans Austria Gasleitung
2	**GSA**	Capacity auctioning platform developed in accordance with the requirements of the NC CAM	Poland, Czech Republic In a pilot project in September 2015 Slovakia and Czech Republic	GAZ-SYSTEM, GAZ-SYSTEM ISO, NET4GAS**** In a pilot project in September 2015 Eustream and NET4GAS
3	**Regional Booking Platform (RBP)**	Aim: implementation of NC CAM in Hungary. Capacity auctions according to NC CAM: ascending clock auctions from 12/2014 on, uniform price auctions to be conducted from 10/2015 on	In a pilot project since December 2014 Hungary, Romania	In a pilot project since December 2014 FGSZ, Transgaz

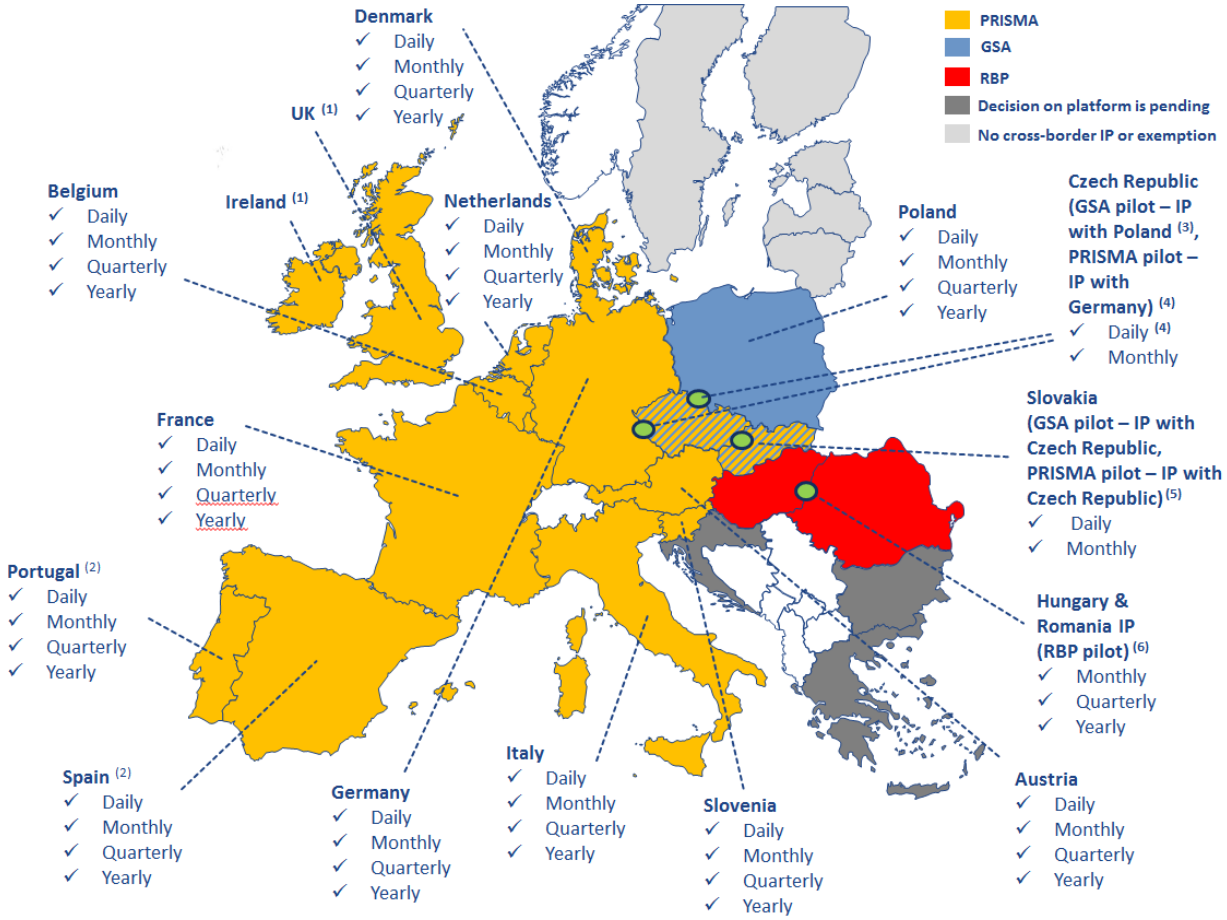
	Booking platform	Booking platform description	Member States involved	TSOs involved
* Eustream and NET4GAS decided in October 2015 to use PRISMA for IP between Czech Republic and Slovakia				
* NET4GAS and the relevant German TSOs decided in October 2015 to use PRISMA for IPs between Czech Republic and Germany				
** Gaslink was renamed to Gas Networks Ireland in January 2015				
*** Gasunie Ostseeanbindungsleitung merged with Gasunie Deutschland on 1 September 2015				
**** NET4GAS and GAZ-SYSTEM decided in 2015 to use GSA for IP between Czech Republic and Poland				
Source: ENTSOG survey				

Figure 1 below provides a snapshot of the products offered in Q3 2015 in each of the countries involved in pilot projects. As previously mentioned, several TSOs envisaged the implementation of further capacity products before the end of 2015. This list of products reflects the current status and it may change in the future due to internal evaluations by TSOs and discussions with the relevant NRAs where necessary.

A table available on the Agency and ENTSOG's websites[6] contains updated information regarding the implementation of NC CAM provisions at each interconnection point (IP).

[6] NC CAM compliance at each IP: excel files on http://www.entsog.eu/publications/capacity-allocation-cam#2-CAM-NC-EARLY-IMPLEMENTATION-DOCUMENTS-AND-AUCTION-CALENDAR and http://www.acer.europa.eu/Gas/Regional_%20Intiatives/CAM_roadmap/Pages/default.aspx.

Figure 1 - Indicative products offer per project, Q3 2015



(1) Allocation of capacities on PRISMA in Ireland and UK will start in November 2015

(2) The daily products are available on first come first served basis

(3) First allocation of cross-border capacities between Poland and Czech Republic on the GSA took place in March 2015 for monthly products. Additional bundled products have been offered in Q3/2015.

(4) Allocation of cross-border capacities between Czech Republic and Germany on PRISMA for monthly and daily products covering the period 1 February until 30 April 2015.

(5) Allocation of cross-border capacities between Slovakia and Czech Republic on the GSA for monthly and daily products covering the period 1 September until 30 September 2015. Allocation of cross-border capacities between Slovakia and Czech Republic on the PRISMA for monthly products for July and August 2015 and daily products covering the period 1 August until 31 August 2015.

(6) Daily and Within-day capacity will be offered from October 2015 in Hungary and from November 2015 in Romania.

Source: ENTSOG survey

3.2. Booking platforms' compliance with the NC CAM

3.2.1. Overview

The 2015 edition of the CAM Roadmap analyses the current status of compliance based on an independent analysis provided by a consultant. The consultancy study was initiated by some NRAs of active in the Agency's CAM taskforce and was co-financed and steered by a committee involving the booking platform operators and some concerned NRAs. The results provided in this roadmap are mainly taken from the study itself[7].

This section illustrates the details of the implementation of the NC CAM provisions for each of the existing capacity BPs: GSA, PRISMA and RBP. The implementation assessment takes as reference date 19 August 2015.

Last year's edition of the CAM Roadmap reported a table[8] providing an overview of the compliance status of the existing booking platforms with the NC CAM. At that stage, the analysis was carried out at a broad level. For the sake of comparison, this report offers an updated summary (table 3 below) showing only the items that have changed since the last year's edition. It should be noted that most of the updates will take place at later date than the publication of the present Roadmap, and the information is provided by the platforms operators.

Table 3. Summary update of fulfilment of basic provisions by booking platforms

Product offered	PRISMA	GSA	RBP
Secondary capacity	2014	Nov-15 *	Oct-15
Firm DA	2013	Nov-15	Oct-15
Firm WD	Oct-15	Nov-15	Oct-15 ^
Interruptible DA	2013	Nov-15	Oct-15
Other interruptible	2013	Nov-15 ~	Jun-15

** Green dates are new information with respect to last year. Other dates are reported for the sake of comparison*

^ Developed earlier to satisfy national requirements, but live from October 2015

~ According to ENTSOG calendar. Other regular interruptible auctions already implemented

Source: ACER based on ENTSOG survey

[7] The full study carried out by Baringa can be found at: http://www.acer.europa.eu/Gas/Framework%20guidelines_and_network%20codes/Documents/Gas%20Capacity%20booking%20platforms%20assessment.pdf

[8] Roadmap for the early implementation of the Capacity Allocation Mechanisms Network Code, update of October 2014, page 14: http://www.acer.europa.eu/Gas/Regional_%20Intiatives/CAM_roadmap/Documents/CAM_Roadmap_Update_Oct_2014_FINAL.pdf

3.2.2. Requirements for booking platforms: categories and criteria

The NC CAM regulates capacity booking platforms in Article 27 of NC CAM. Based on that, and the references to other articles and definitions in the NC and on the third package regulation, the consultant identified, defined and assessed a set of requirements and functionalities of booking platforms, selecting 30 criteria, among which 15 formal criteria. Criteria were divided into 4 sub-categories (see tables 4 and 5 below).

The assessment has been performed through a comprehensive analysis based on public and confidential documents provided by the platform operators, site visits to the platforms premises, interviews and questionnaires to the undecided TSOs, as well as questionnaires to the network users of these platforms.

Among all requirements and functionalities assessed, those named “Formal requirements” are directly descending from the NC, either as “core requirement” (explicitly stated, implicitly requested), or as “associated requirement” (needed to ensure full compliance).

On the other hand, criteria falling under “User friendliness”, either “enabling IT” or pure “user friendliness”, cannot be directly found as such in the NC CAM, but their presence can allow or facilitate the implementation of the “formal requirements”.

For all assessed criteria, a weighted score has been assigned in order to allow a comparison across the platforms. Each criterion has been weighted according to its importance: the score of a BP on a specific item is then the product of the score times the weight.

Scores were not conceived for grading platforms, which was out of the scope of the study, but should rather be intended as a proxy to compare the level of compliance on single criteria.

While some TSOs and network users may value criteria other than simply those requested under the European Regulations, or in some cases may not be interested in a BP being compliant on some criteria[9], full compliance with the NC CAM is reached only when all formal requirements are met. NC CAM core requirements should be in place since the applicability date of 1 November 2015 at all active BPs if TSOs do not want to risk incurring sanctions from the respective NRAs.

[9] This is the case for example of “competing capacity” or “bundling in 1-to-n situations” when the physical network does not allow such mechanisms, or CMP-related obligations in case of IPs that do not show congestion.

Table 4 - Assessed criteria and weighting*

Formal requirements compliance

ID	Sub-category	Item	Weighting
1	NC core requirements	Allocation of firm capacity	3
2		Allocation of interruptible capacity	1
3		Bundling of capacity products	3
4		Ascending clock auctions (yearly, quarterly, monthly)	3
5		Uniform price auctions (day-ahead, within-day)	3
6		Day-ahead bid roll over	2
7		Support of kWh/h and kWh/d as capacity unit	2
8		Secondary capacity trading	3
9		Automated bidding	2
10		Reporting of platform transactions (bidders and public)	2
11		Bundling of capacity in 1:n situations	3
12		Offer of competing capacity products	1
13	NC associated requirements	Surrender of capacity	1
14		Buyback of capacity	2
15		REMIT data reporting obligations	3

User friendliness

ID	Sub-category	Item	Weighting
16	Enabling IT	Authorisation level management	2
17		Network point display and administration	2
18		Secure platform access for network users	3
19		Peak service load	2
20		(Financial) insurances taken up to cover disruptions	1
21		Data backup and security	3
22		Continuing development (EU / national regulations)	3
23		Shipper and user registration on the platform	3
24		Graphical user interface of the platform	3
25		Options for connection to the platform	1
26		TSO and shipper automated communication	3
27	User friendliness	Multi-currency booking	1
28		Credit limit check	2
29		Cost reflective fees	3
30		Cost transparency for TSOs	3

* “1” indicated low importance, “2” indicates medium importance, and “3” indicates high importance.

Source: Baringa

Table 5 – Criteria description

ID	Category	Requirement	Description
1	NC core requirements	Allocation of firm capacity	The allocation of firm capacity products via auction – CAM NC Article 8
2		Allocation of interruptible capacity	The allocation of interruptible capacity products via auction – CAM NC Article 21
3		Bundling of capacity products	Automated bundling of two capacity products on the same IP – CAM NC Articles 19 and 20
4		Ascending clock auctions (yearly, quarterly, monthly)	The creation and holding of auctions for long term products in accordance – CAM NC Article 17
5		Uniform price auctions (day-ahead, within-day)	The creation and holding of auctions for short term products in accordance – CAM NC Article 18
6		Day-ahead bid roll over	The automatic rollover of valid, unsuccessful bids from day-ahead to within-day – CAM NC Article 15 par 10
7		Support of kWh/h and kWh/d as capacity unit	The available energy units used to express capacity – CAM NC Article 10
8		Secondary capacity trading	Functionality to offer and make an offer for secondary capacity – CAM NC Article 27.2, para C
9		Automated bidding	Functionality to automatically enter bids against any price step within an ascending clock auction* – CAM NC Article 17.6
10		Reporting of platform transactions (bidders and public)	Publication of auction results in according with CAM NC publication times – CAM NC Articles 11.10-11.11, 12.9-12.10, 13.8-13.9, 14.9-14.10, and 15.12-15.13
11		Bundling of capacity in 1:n situations	Art 3.5; Art 8.2; Art 27.2(a) CAM NC
12		Offer of competing capacity products	Functionality to cater for capacity that can only be allocated by reducing related capacity in a separate auction – art 3.5 CAM NC
13	NC ass. req.	Surrender of capacity	Functionality for network users to surrender capacity won from a previous auction
14		Buyback of capacity	Functionality for TSOs to buy back capacity sold in a previous auction
15		REMIT data reporting obligations	Likelihood of compliance with ability to report data required for REMIT
16	Enabling IT	Authorisation level management	Functionality to manage levels of user access and permissions
17		Network point display and administration	Functionality to create and manage network points by TSOs
18		Secure platform access for network users	Data security protocols in place for network user access
19		Peak service load	Infrastructure capacity available and used, and scalability of infrastructure
20		(Financial) insurances taken up to cover disruptions	Insurance to cover liability of lost revenue through platform failure
21		Data backup and security	Data backup, data retention and data security processes, standards and policies
22		Continuing development (EU / national regulations)	Level of planned future development of platform
23		Shipper and user registration on the platform	Registration process for network users
24		Graphical user interface of the platform	Usability of web front end of the platform
25		Options for connection to the platform	Options (GUI, web services) available for network users to access and utilize the platform e.g. submitting bids
26		TSO and shipper automated communication	Level of support for automated connections to the platform through web services
27	User friendliness	Multi-currency booking	Level of support for non-local currency within platform
28		Credit limit check	Functionality to set and enforce network user credit limits
29		Cost reflective fees	Alignment of platform usage fees to total operating cost (TSOs, Users)
30		Cost transparency for TSOs	Level of transparency of charging structures used to charge TSOs

***** For avoidance of doubt, formal criterion of "automated bidding" does not include comfort function of bidding in advance of auctions, as e.g. offered by Prisma, and as mentioned by interviewed shippers in feedback.

Source: Baringa

3.2.2.1. Compliance and scoring

A maximum of 4 points was awarded to each BP for each criterion according to the following rule (1 point each):

- Compliance with the criteria (feature in use on the live BP)
- Availability of the function in the live environment (feature implemented, but not yet used by any network user on the live BP)
- Full documentation available
- Criterion tested, but not yet into live environment

Table 6 below shows the situation as of 19 August 2015, based on existing and tested functionalities. The consultant reports that PRISMA is compliant on 11 out of 12, RBP on 7 out of 12, GSA on 7 out of 12

NC CAM core requirements. According to this, PRISMA shows for the moment the highest degree of compliance.

As it will be more clearly shown in the remainder of this chapter, BPs cannot be easily compared as they were launched in different contexts and times, and have different governance and business models. Nonetheless comparing BPs' functionalities and compliance can help undecided TSOs[10] to select their BP by 1 November 2015.

Table 6 – Summary of compliance of the booking platforms

ID	Category	Requirement	GSA		PRISMA		RBP	
			Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
1	NC core requirements	Allocation of firm capacity	●	12	●	12	●	12
2		Allocation of interruptible capacity	●	4	●	4	●	4
3		Bundling of capacity products	●	12	●	12	●	12
4		Ascending clock auctions (yearly, quarterly, monthly)	●	12	●	12	●	12
5		Uniform price auctions (day-ahead, within-day)	◑	6	◕	9	◕	9
6		Day-ahead bid roll over	◑	4	◕	6	◔	2
7		Support of kWh/h and kWh/d as capacity unit	●	8	◑	4	◑	4
8		Secondary capacity trading	◑	6	●	12	◕	9
9		Automated bidding	●	8	●	8	●	8
10		Reporting of platform transactions (bidders and public)	●	8	●	8	●	8
11		Bundling of capacity in 1:n situations	◔	3	●	12	○	0
12		Offer of competing capacity products	◔	1	●	4	○	0
13	NC ass. req.	Surrender of capacity	◔	1	●	4	◔	1
14		Buyback of capacity	◔	1	●	4	◔	1
15		REMIT data reporting obligations	●	8	●	8	●	8
16	Enabling IT	Authorisation level management	●	8	●	8	●	8
17		Network point display and administration	●	8	●	8	●	8
18		Secure platform access for network users	●	12	●	12	●	12
19		Peak service load	●	8	●	8	●	8
20		(Financial) insurances taken up to cover disruptions	◑	2	●	4	●	4
21		Data backup and security	◕	9	●	12	●	12
22		Continuing development (EU / national regulations)	●	12	●	12	●	12
23		Shipper and user registration on the platform	●	12	●	12	●	12
24		Graphical user interface of the platform	●	12	◕	9	●	12
25		Options for connection to the platform	◑	2	◕	3	◕	4
26		TSO and shipper automated communication	◑	6	●	12	●	12
27	User friendliness	Multi-currency booking	●	4	●	4	◑	2
28		Credit limit check	◕	6	●	8	◕	6
29		Cost reflective fees	●	12	●	12	●	12
30		Cost transparency for TSOs	●	12	●	12	●	12

Legend

Each platform receives an unweighted score from 0 to 4 based on the four aspects stated below.

NC core and associated requirements		Enabling IT and user friendliness requirements	
In compliance with the criteria – 1 point	Fully documented – 1 point	In compliance with the criteria – 1 point	Platform specific considerations – 1 point
Available in the live environment – 1 point	Tested / demoed during this study – 1 point	Available in the live environment – 1 point	Maturity of implementation – 1 point

Source: Baringa

[10] As of August 2015, 7 TSOs have not yet decided to which BP they will connect: Eustream (SK), NET4GAS (CZ), Plinacro (HR), Ambergrid (LT), Magyar Gáz Tranzit (HU), Desfa (GR), Bulgartransgaz (BG), while further 5 TSOs, Latvijas Gaze (LV), Creos (LU), Gasum (FIN), Elering (EE) and Swedegas (SE), have been granted a derogation under Article 49 of Directive 2009/73/EC or do not have a CAM relevant IP.

The circles in table 6 show how many of the 4 previously mentioned conditions are met for each criterion. The consultant adjusted the scores, based on TSOs' and network users' feedback, in cases where the analysis did not provide a clear-cut score.

When concentrating on the core and associated requirements, which do not pass half of the total score, it can be seen that GSA has not yet implemented live the functionalities related to day-ahead, within-day and secondary market, plus functionalities to deal with competing capacities, 1-to-n situations and CMP related measures. With the same focus, PRISMA has implemented live WD auctions and will complement the support of kWh/d going live in October 2015. RBP has not yet provided the possibility for unsuccessful DA bids to automatically enter the WD auctions, nor the functionalities to manage competing auctions and 1-to-n situations, nor the ones to auction CMP-related capacity.

Among all tested criteria, auction algorithms have been thoroughly assessed. While all BPs provide fully functioning ascending clock algorithms to run medium-to-long-run auctions, the situation changes when it comes to short term auctions (see table 7 below).

Table 7 - Short-term auctions algorithms: state of the play as of August 2015

	GSA	PRISMA	RBP
Within-day (ascending clock)	demo tested	live, not yet used	live, not yet used
Day-ahead (uniform price)	demo tested	running live	live, not yet used

Source: ACER's elaboration from Baringa's report

Although not being fully operational yet, all uniform price algorithms appear to provide[11] the same outcome also in the debated case highlighted in Article 18(9) of NC CAM, where users are willing to buy no less than a certain level of capacity.

3.2.2.2. Charging structure

The cost charged by BP operators to TSOs and users is one of the drivers influencing the choice on what BP the undecided TSO would select. The three BPs apply different fees to TSOs in terms of methodology and amount. The charging structure also depends on the present governance framework (described in the next paragraph) and both may evolve for all BPs in the future. Charges become an increasingly important factor when TSOs are faced with subscriptions to more than one BP, because TSOs will multiple fees. The following analysis per BP is entirely taken from the consultant's report.

GSA charges TSOs for use of the platform based on the number of interconnection points (IPs) they hold within the platform. The running costs of GSA are relatively fixed and the addition of a small number of TSOs would not substantially increase the total operating costs, resulting in an overall lower cost per

[11] According to the high level documentation provided.

TSO the more TSOs are on the platform. Past a certain 'tipping point' of adding TSOs, users and network traffic, the running cost of the GSA platform would increase through the need for additional infrastructure. It is likely however that this would still result in an overall lower cost per TSO. There are no fees paid by shippers or users.

PRISMA charges a part of its costs to TSOs for use of the platform primarily based on the ENTSOG voting rights system. This reflects country population, gas consumption and total transported through TSO-network volumes. The majority of the remaining cost is charged equally per participating TSO. A small proportion of costs is charged 1-1 per TSO for any national specific requirements, and PRISMA only pass on maintenance and IT provider costs. Majority of costs charged to TSOs. By default there are no feeds paid by shippers or users, with an optional service for shippers for the use of web services.

RBP Core Services are priced equally between TSO members. These services concern NC CAM requirements including the "enabling IT". For additional services (i.e. those not explicitly required by NC CAM) a specific fee is applicable, equal for all TSO Members who use the given service (including the enabling IT). For tailor-made services, a specific fee is applicable for the given TSO based on actual costs of the change request and a feasibility study provided to the given TSO.

3.2.2.3. Governance

Governance is another key factor influencing the choice of a TSO towards which BP to subscribe to. The NC CAM does not require any particular governance model and allow TSOs and third parties to directly operate BPs. The three different platforms have three different governance frameworks, implying different decision powers for member TSOs, as well as different flexibility and costs.

GSA is owned by the Polish TSO GAZ-SYSTEM, likewise RBP which is owned by the Hungarian TSO FGSZ. Both GSA and RBP are currently operated as platform projects within their TSOs, with separate costs sheets for accounting purposes. They both have a short history so far and their governance could change according to future developments: in fact GSA will consider modifying its governance if additional TSOs[12] would join it.

RBP provides the possibility to stipulate membership agreements or joint venture agreements: the Romanian TSO Transgaz has signed a membership agreement, because the joint venture proved to be more expensive and inefficient in its case. TSOs have also the option to sign an additional bilateral cooperation agreement with FGSZ to arrange for bundling responsibilities[13].

PRISMA, unlike GSA and RBP, is a separate registered company where TSOs join according to an article of association. Key decisions are taken with a 75% threshold, while less strategic decisions need only 60% of shareholders rights[14]. At a working level, PRISMA has set up different topical working groups. TSOs have different ways to join PRISMA as members: service, co-operation, and shareholder

[12] Presently Eustream and NET4GAS are running pilots at GSA, for which they have ad-hoc agreements.

[13] In the case of Transgaz, the bilateral agreement was included in the membership agreement.

[14] Shareholding rights are based on an adjusted ENTSOG voting system.

agreements. Association or observer agreements are also envisaged, but do not give any voting right. Associated members can participate to all working groups and have to decide whether to stipulate a tighter membership or to quit PRISMA within 3 years. Regarding the formation of PRISMA internal rules, it is worth noting that any change to the General Term and Conditions is consulted with relevant NRAs and market participants.

3.2.3. Outlook on booking platforms' compliance expected by 1 November 2015

As of the applicability date of the NC CAM, according to BPs development plans, GSA and PRISMA would be compliant on all core requirements, while RBP would still be incompliant on 2 criteria: "1-to-n bundling" and "competing capacity". While RBP has at present a high level solution for "1-to-n bundling", there are no plans to implement these functions by 1 November 2015 because it is unlikely that any TSO would request those functions. Should a TSO request them, RBP state that they would be ready to take steps toward the actual implementation[15].

3.2.3.1. Feedback from network users and TSOs

It should be noted that TSOs have several obligations in the application of the NC CAM and, when selecting a BP, they may discount the fact that possible incompliances of the BPs may lead to sanctions to TSOs from the respective NRAs.
The table below summarizes the main plus and cons highlighted by a selection of TSOs and network users which have experienced all three platforms:

[15] While the application of "competing capacity" is subject to agreements of interested TSOs and approval of respective NRAs, the application of "1-to-n bundling" is not because such a mechanism has no impact on TSO(s) in bordering market zones.

Table 8 – Highlight feedbacks from network users and TSOs

	GSA		PRISMA		RBP	
	Advantages	**Disadvantages**	**Advantages**	**Disadvantages**	**Advantages**	**Disadvantages**
Network users	• Good performance • User friendly layout • Easy to register and use	• Unclear tariff representation • Lack of comfort bids	• Easy and quick registration • High number of TSOs • Rich functionality • Comfort bidding • High level of automation	• Performance issues during reporting • Performance issues during bidding • GUI can be difficult to navigate • New filtering process difficult to use	• Good performance • Modern UI and design	• Complicated registration process • Different gas calendar used for auctions in 2015 (Q1 was on other platforms Q4) • Non-intuitive layout • No filter on publication of auction results • Low helpdesk support
Undecided TSOs	• Flexibility in TSO connection • Potentially lower charges	• Low overall experience in automated TSO connections • Governance structure tied to platform owning TSO	• Manageable cost structure • Strong experience in automated TSO connections • Mature governance structure	• Inflexibility in data / interface requirements when connecting backend system • Unique IDs per IP per direction rather than just per IP	• No specific advantages mentioned	• Unclear charging structure • Unclear governance structure

Source: Baringa

Network users also noted the following critical points:

- WD auctions will increase complexity and may create the need for constant support
- In the long term, the possibility to use a single BP for all IPs, or at least a unified frontend, would allow additional efficiency gains (avoiding duplication of costs and efforts).

From the undecided TSOs' side, service-reflective pricing seems to be, together with quality of the service provided and usability, one of the most important additional features BPs should provide.

3.3. Scenarios of cooperation between booking platform operators

3.3.1. Overview

The NC CAM sets out that TSOs shall offer capacity for the relevant standard capacity products on a booking platform (Article 19(2) of NC CAM). It also establishes that capacity at any single IP or virtual IP shall be offered at not more than one booking platform (Article 27(2(e)) of NC CAM). This implies that, in case two adjacent TSOs use different platforms for allocating capacity, they have to agree on which platform they will use for allocating capacity at their common IP(s).

The BPs presented the agreed phases of their possible trilateral cooperation at the XXVII Madrid Forum in April 2015. The cooperation comprises the following three phases:

1) Pre-Phase: Concept / cost analysis "study" on a technical solution to connect the platforms
2) Presentation-Phase: Present analysis to Stakeholders, including a detailed "cost-benefit" discussion that needs to take place with (affected) NRAs and TSOs
3) Implementation Phase: implementation of the solution chosen by (affected) NRAs and TSOs

3.3.2. Technical solutions at IPs where two platform operators are active

That said, BPs are studying possible technical solution that could serve as solutions at IPs where two platform operators are active on both sides of an IP. Energy regulators subsequently analysed the possible technical solutions from the legal point of view[16]. BPs are focussing on the following options, which could prove to be compliant if certain conditions are met:

BPs connect and for all the concerned IPs one BP is selected and used to auction all capacity

According to this option, each TSO connects its back-end system to only one of the available BPs, which manage all processes, e.g. data exchange with the BP running the auction. BPs then stipulate an agreement and create the necessary interoperability by connecting via interfaces. More in detail, all bundled and any potentially unbundled capacity products (including competing auctions and 1-to-n bundling) between two or more TSOs at both sides of an IP are marketed via one BP. Each TSO remains connected to a single BP: multiple registrations are not required.

BPs connect and for each concerned IP one BPs is selected and used to auction all capacity

Each TSO connects its back-end to only one of the available BPs. All processes and auctions are managed by the BPs, which are connected via interfaces. In this case, the TSOs have to be decided in advance the rule according to which a specific IP is auctioned on which BP. It is important to highlight that compliance requires that all capacity (including competing auctions and 1-to-n bundling) related to a single IP has to be auctioned on a single BP, i.e. all products, capacity for both direction flows, bundle capacity, as well as firm and interruptible capacity. The rule for selecting the BP for each IP may include a rotation principle.

3.3.3. State of the play in platforms cooperation

In addition to the discussed trilateral cooperation between PRISMA, RBP and GSA, FGSZ and GAZ-SYSTEM worked out the business concept and the technical cooperation model to connect RBP and GSA as a local solution. The RBP-GSA communication will be tested during the second half of September. Depending on the outcome of the testing, the platform cooperation can be used as of October/November 2015. Currently, the only candidate IP for which this bilateral platform cooperation could be used as of 1 November 2015 is at the Slovak-Hungarian border, but the actual progress and possible implementation will depend on the platform selection decision of the two TSOs active at this IP (Eustream and MGT).

[16] The *Council of European Energy Regulators* assessed six different options proposed by BP operators: except for the extreme cases of a single BP (fully compliant) and several not connected BPs (fully incompliant), all other options show elements of possible not compliance. The two scenarios more extensively described in this report are among those that can be conditionally compliant: the conditions are expressly mentioned in the main text.

The high-level documents of the RBP-GSA bilateral cooperation model have been shared with PRISMA and feedback has been provided. The discussions on technical level are ongoing to identify those points, which can be taken as they are from the bilateral cooperation, and which points require modification in view of enlarging the cooperation to PRISMA. In October 2015 the technical documentation is expected to be ready, as well as the legal and financial aspects, is in line with the time plan presented by the platform operators at the XXVI Madrid Forum in April 2015. Nonetheless the potential trilateral platform cooperation will not be ready for 1 November 2015.

Most likely, all cooperation between BPs would require revisiting the governance structures and the GTCs. Moreover, it remains to be understood how the costs of the cooperation will be shared among BPs and passed to TSOs. Depending on the outcome of the "presentation-phase" of the trilateral platform cooperation and the detailed cost-benefit analysis on a TSO-level, a legally compliant as well as cost-efficient solution to implement Article 27 of NC CAM needs to be found among TSOs, BPs and NRAs. If the implementation of a sufficiently detailed interoperability between the BPs turns out to be too costly overall and for the TSOs concerned, a scenario whereby the concerned TSOs connect their back-end system to two platforms may have to be considered by the TSOs and NRAs concerned. Finally, national rules have to be taken into account when designing and implementing a cooperation model (e.g. TSOs may have different licensing rule, access rules, etc.).

3.4. Cost of NC CAM implementation

The implementation of NC CAM, e.g. the establishment and use of 'joint web-based booking platforms', generates costs for TSOs. How such costs are recognised as 'efficiently incurred' by the relevant NRAs remains an open issue in some Member States. TSOs have to cover the compliance costs, e.g. the incurred costs for adjusting IT-back-end-systems for an expanded data transmission and publication.

IT developments for the implementation of the auction algorithms, the connection of the IT tools with the respective back-ends of the parties active on the platform, and the implementation of national regulatory requirements involve resources and costs which need to be shared appropriately. The related costs have to be assessed by TSOs when deciding which platform(s) to use and need to be recovered.

Discussions on this matter will continue within the next months to ensure that TSOs can take part in one of the platforms currently existing (or still to be implemented) at a fair cost and that these expenditures, if efficiently incurred, are recognised by NRAs.

3.5. Regulatory supervision of booking platform operators

At present, direct supervisory functions of NRAs over booking platform operators are not provided by NC CAM or any other regulation. General questions remain on whether, how and by whom the activities of the platforms will be supervised at the European level. Nevertheless, an indirect national regulatory supervision is already in place. TSOs, the members of the platforms, are regulated companies, and their costs, including those for booking platform services, are scrutinized by NRAs. The offered products, and

the process for their allocation, are clearly regulated via NC CAM and supplemented, where needed, by NRAs' specific resolutions.

Furthermore, there are already organisational structures established to ensure coordination between NRAs and BP (e.g. PRISMA Regulatory Advisory Group).

For the time being, NRAs follow PRISMA developments via the Regulatory Advisory Group (RAG), which is convened on a monthly or two-monthly basis. This format allows for discussing major regulatory issues that relate to PRISMA platform.

GSA and RBP do not at present have such a stricter supervision, yet being directly owned by TSOs they are indirectly supervised via them.

4. Additional topics related to the implementation of NC CAM

The following topics, which have been already presented in previous CAM roadmaps, present a number of issues and implementation aspects which are implicit to create a comprehensive market place where NC CAM can function appropriately:

- **Licensing issues -** The different requirements for network users to operate in different countries might create obstacles when accessing bundled capacity at certain IPs.
- **Transition period from the current gas year to the NC CAM gas year** (where it is different) **-** The first legally binding yearly auction takes place in March 2016, where products are offered for the gas year Oct 2016 - Sep 2017 and onwards. Measures should be taken in advance in order to know what will be on offer in March 2016, in order to use these products in October 2016 and communicated to the users.
- **Interaction between CAM and CMP -** According to the last Congestion Report of the Agency[17], contractual congestion at interconnection points decreased to about 15% of considered 257 IP sides in the report. Roughly one third of the points were identified congested in the previous report. The Agency recommends the EC to review the definition of congestion under 2.2.3(1) of Annex I to Regulation (EC) No 715/2009 and review the case of "congestion" when firm monthly capacity is not offered every month. In general, congestion management procedures (CMPs) are increasingly applied at IPs in the European Union.

Furthermore the tables below give a brief description of the NC CAM related discussions that occupied stakeholders, ENTSOG and the Agency this year. Previous editions of the Roadmap[18] collect some additional issues, which are not repeated here.

[17] ACER annual report on contractual congestion at interconnection points, second edition, 29 May 2015: http://www.acer.europa.eu/official_documents/acts_of_the_agency/publication/20150529_acer%202015%20report%20on%20congestion%20at%20ips%20in%202014.pdf .

[18] Roadmap for the early implementation of the Capacity Allocation Mechanisms Network Code, update of October 2014: http://www.acer.europa.eu/Gas/Regional_%20Intiatives/CAM_roadmap/Documents/CAM_Roadmap_Update_Oct_2014_FINAL.pdf

1. Capacity mismatch

Brief description	Current status
The amount of capacity that can be bundled at each IP is in some cases limited due to the existence of asymmetric available / technical capacity at both sides of the IP. Some network users holding unbundled capacity only on one side of an IP complained about the following issue: If only bundled capacity is offered and booked (and no unbundled on the other side), respective network users may have to pay "twice" for the same service on one side. In case of a mismatch of technical capacity at an IP, the network user on the "long" side might even have more difficulties to get the missing unbundled capacity on the other "short" side, because the TSO on the "short" side is not allowed to offer unbundled capacity according to Article 19(5) of NC CAM. However this leaves the network user an option to enter into a bundling arrangement with a network user holding an unbundled contract on the "short" side.	With the support of the European Commission and the Agency, at the XXVI Madrid Forum EFET and ENTSOG started a dialogue process in an ad-hoc joint work stream with the aim to identify and resolve potential issues related to the introduction of capacity bundling before more long term bundled products are offered. The results of the dialogue between EFET and ENTSOG were jointly presented on the XXVII Madrid Forum and developed the following proposals for national implementation[19]: **1) Capacity conversion mechanism** When adopting this option, shippers holding existing unbundled contracts take part in a bundled auction as any other shipper as a first step and in case of being successful in the auction of bundled capacity, their already contracted unbundled contract will be converted into the acquired bundled contract. **2) Capacity conversion mechanism with maximisation of bundled capacity offered** This option is a modified version of option 1) where network users are allowed to indicate "capacity release" before a bundled auction. Such a "capacity release" could be executed via the normal surrender mechanism or via an alternative indication. **3) Allocation of leftovers** In case demand of capacity expressed in the first round of an auction exceeds the offer of bundled capacities, capacity conversion is not applied anymore

[19] Some of the described options for issue 1 dealing with identified problems have raised specific legal concerns of some parties. It might be appropriate to clarify these concerns on a national level in order to comply with the applicable national rules and Annex 1 to Reg. 715/2009.

1. Capacity mismatch	
	in the second round. This means that CAM auction runs normally and capacity is allocated as foreseen in NC CAM. After allocating capacity, any leftover capacities are allocated to shippers who indicated request for conversion, to the extent possible, of their unbundled contracts. The capacity is allocated at the clearing price of the CAM auction. The Agency and NRAs appreciate the development of the above options, however from their point of view more quantitative analysis of the problem and legal assessments of the outlined options are needed. Moreover, the Agency and NRAs find that any solution should be applied on a case-by-case basis and comply with the following principles: – justification of the need and no strategic behaviour from complainants – non-discrimination and no distortion of capacity auctions – maximising the offer of available capacity – avoiding modification of contracts, unless agreed by network users and TSOs – no reduction of network users' amount of booked firm capacity or financial commitments – compliance with exiting legislation.

2. Voluntary bundling of existing capacity contracts	
Brief description	**Current status**
It is currently not obligatory for network users to reach bundling agreements for existing capacity contracts, as Article 20 of NC CAM only provides for a "best effort" clause for bundling, initiated on a voluntary basis by network users. NRAs and the	Concerning the progress made on bundling capacity, the Agency contacted the relevant NRAs to collect data from TSOs on the bundling agreements that have been reached until 1 January 2015. The results indicate a very low level of bundling progress of existing contracts, i.e. only at 1 IP a few contracts were bundled in both

2. Voluntary bundling of existing capacity contracts	
Agency are obliged to monitor and report on the bundling progress.	directions (however, only by one and the same network user).

3. Harmonisation of capacity contracts at both sides of the border	
Brief description The implementation of the NC CAM will result in the harmonisation of a number of aspects of capacity contracts (duration, units, etc.). The NC CAM, however, does not require detailed standardisation of capacity products in terms of firmness, restrictions to allocability or accessibility to the VTP. Further harmonisation of contractual terms may eventually be required when other, already developed network codes are fully implemented (e.g. the balancing network code as regards nominations). Solutions for the practical usage of the bundled different firm capacity products on both sides at an IP remain an open issue and require further analysis and monitoring at EU-level (e.g. interruption of firm capacity products on both sides of an IP, triggered by the interruption on one side due to accessibility restrictions).	**Current status** ENTSOG and the Agency have identified the existence of differences in capacity contracts in EU Member States on aspects such as levels of firmness and restrictions to allocability. As certain TSOs already bundled different firm capacity product, a shift of the focus can be recommend. It no longer seems to be necessary to only concentrate on the assessment whether these capacity products may represent a barrier to capacity trade, it should also be considered how the practical usage of bundled different firm capacity products on both sides at an IP can be developed.

4. Implementation of auction calendar

Brief description	Current status
When exactly does the TSO have to start auctioning capacity products in line with the code?	The auction calendar based on Article 28 of NC CAM is applicable as of 1 November 2015 (with the exception of Article 6(1(a)) of NC CAM). This implies that, after this date, only standard products could be offered and those shall be offered through auctions. Therefore, although Article 8(3) of NC CAM may seem to suggest that there is a logical order in offering capacity, starting from yearly to daily products, as of 1 November 2015 day-ahead and rolling monthly capacity products shall start to be offered via auctions. There are changes foreseen to the auction calendar, subject to the approval of the NC TAR. In this context, annual yearly capacity auctions are planned to start on the first Monday of July, while the annual quarterly capacity auctions are planned to be on the first Monday of August each year, allowing stakeholders to know the reserve prices for all standard capacity products before the first auctions takes place. These changes will be aligned with NC TAR implementation. Further changes to shift the rolling monthly capacity auction from the third to the second Monday of each month would allow for the rolling monthly interruptible capacity auction to happen on the third Monday. Both, the firm and the interruptible monthly auction would last one week. The aforementioned changes are subject to public consultation launched by the Agency.

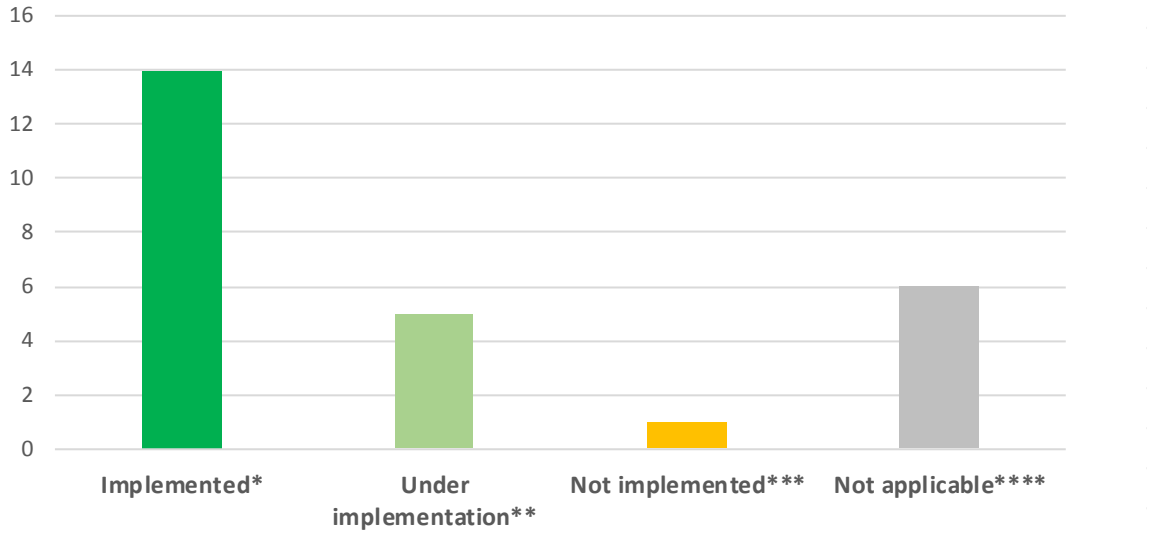
5. Capacity calculation and maximisation (Article 6 of NC CAM)

Brief description	Current status
According to Article 6(1(a)) of NC CAM, TSOs have to take certain measures in order to implement a regular process for maximising the offer of bundled capacity through the optimisation of the technical capacity at IPs, giving priority, but not limited to those IPs where there is contractual congestion pursuant	A survey conducted by ENTSOG in February 2015 on the implementation of Article 6 of NC CAM indicates that 31 of 47 EU TSOs have applied measures for maximising technical capacity, which were developed and applied jointly with their neighbouring TSOs at interconnection points. Furthermore, six TSOs are currently implementing or at least in the process of

5. Capacity calculation and maximisation (Article 6 of NC CAM)

to point 2.2.3 (1) of Annex 1 to Regulation (EC) No 715/2009. By 4 February 2015, TSOs had to establish and apply a joint method, setting out the specific steps to be taken by the respective TSOs to achieve the required optimisation. The detailed description of the requirements of such joint method is outlined in points (1), (2), (3) and (4) of Article 6(1(a)) of NC CAM.	defining the joint mechanism to be applied. Five of these six have already developed a methodology. Four of them are currently in discussion with (nearly) all adjacent TSOs at their interconnection points in order to agree on the methodology and / or its application. One of the five TSOs is limited to preparing a joint approach to increase capacities. As capacity bundling is not foreseen in the current national regulation, this TSO will presumably not apply bundling of capacities at cross-border points before 1 November 2015. Another TSO is currently elaborating on how to approach the requested joint method to increase the bundled capacity at interconnection points. The majority of the TSOs apply the methodology at all their IPs and not only at the congested ones. For ten TSOs, the requirements of Article 6 of NC CAM have not been applicable by 4 February 2015 since their Member States have been granted derogation under Article 49 of Gas Directive or the TSOs have no IP where the requirements of the NC CAM have to be applied. This means that in most Member States the requirements deriving from Article 6 of NC CAM have been met on time because measures have been applied before 4 February 2015 at congested and non-congested IPs. In the Member States were the methods for maximising of technical capacity have not been fully implemented by February 2015, the TSO are on their way to apply them. The results of ENTSOG's assessment have not yet been validated by NRAs or the Agency and should therefore not anticipate the upcoming formal implementation monitoring by ENTSOG and the Agency according to Articles 8(8) and 9(1) of Regulation (EC) No 715/2009.

Figure 3 - Overview of the implementation status of Article 6 of NC CAM by EU Member State[20]



* Austria, Belgium, Czech Republic, Denmark, France, Germany, Ireland, Italy, Netherlands, Poland, Portugal, Slovakia, Spain and United Kingdom. However, some TSOs in Germany, Italy and Spain have certain IPs to non-EU Member States outside the EU, thus application of Article 6 of CAM NC is subject to NRA decision.

** Bulgaria, Croatia, Greece, Hungary and Slovenia

*** Romania (however, the method is under development)

**** As regards scope, implemetation date, or derogation under Article 49 of the Gas Directive: Estonia, Finland, Latvia, Lithuania (they gave back their exemption), Luxemburg, Sweden (has no bookable point, but is not exempted) – ENTSOG has no information about the Article 6 Implementation in these Member States

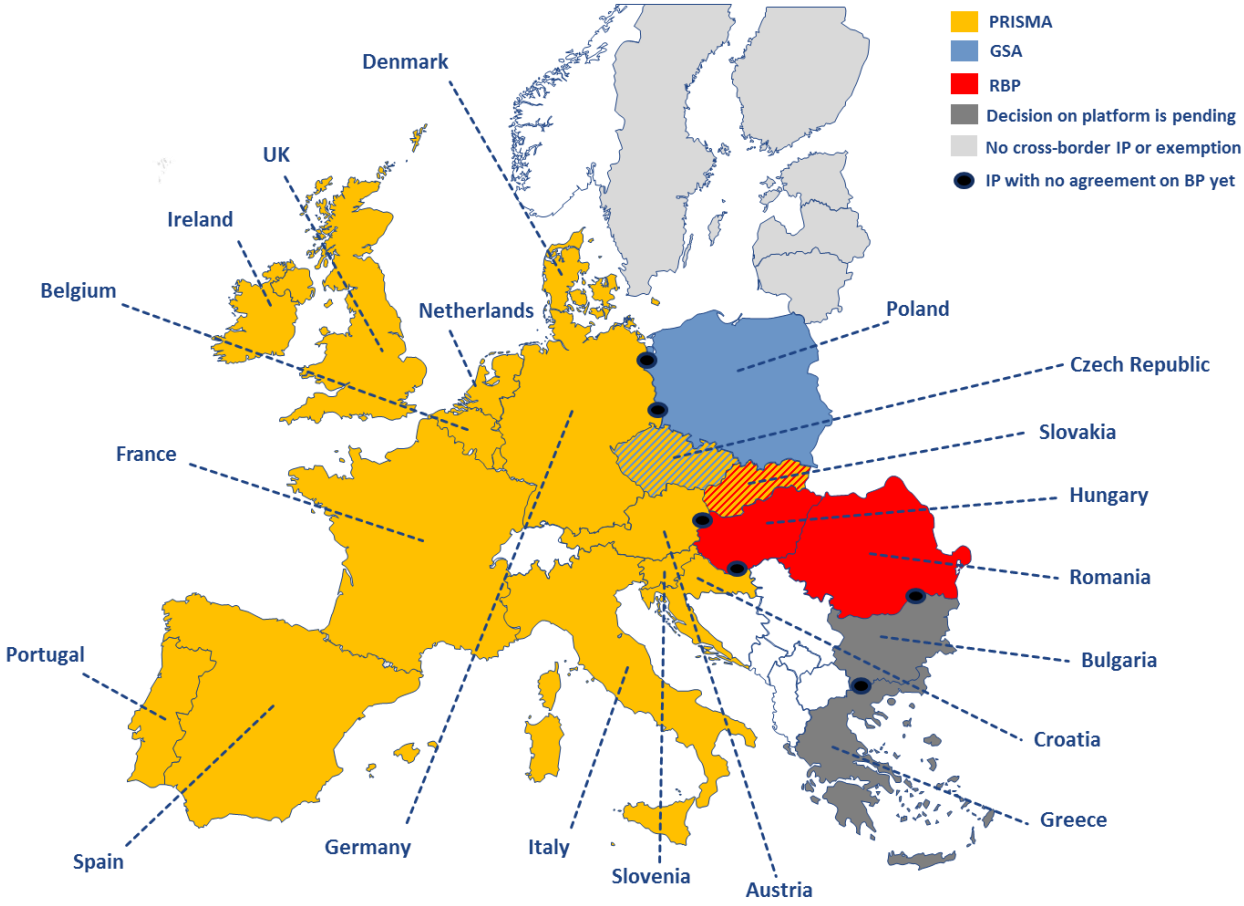
Source: ENTSOG's survey

[20] The presented numbers are taken from the survey conducted by ENTSOG in February 2015 on the application of the Article 6 of NC CAM requirements. Further information is provided in ENTSOG's report on the Monitoring of Regulation 984 / 2013 (NC CAM), Article 6: http://www.entsog.eu/public/uploads/files/publications/Implementation%20Monitoring/entsog_IMR_art6_2014_highres.pdf

ANNEX I: Latest updates on booking platforms

After the finalisation of the chapters 2 to 4 of this roadmap (9 October 2015), some of the undecided TSOs, among which some participated in pilot projects, have decided which booking platforms to use to auction capacity at their IPs. Most announcements were made at the end of October 2015 and led to the following updated picture regarding the usage of booking platforms.

Figure 2 – Usage of Booking Platforms from 1 November 2015 as announced by TSOs (Status as of October 2015)



Countries with two colours represent usage of two platforms

Source: ENTSOG

According to the agreements between the TSOs, the usage of all three booking platforms will be expanded.

PRISMA will be used to auction capacity at the IPs between:

- Czech Republic and Germany
- Czech Republic and Slovakia
- Austria and Slovakia
- Croatia and Slovenia

RBP will be used to auction capacity between Hungary and Slovakia.

Furthermore, the auctioning of capacity between Czech Republic and Poland will be continued on the GSA platform.

Despite the progress achieved, TSOs have not yet found an agreement on the choice for a single booking platform for the auctioning of bundled capacity at the following interconnection points:

- Croatia and Hungary
- Austria and Hungary
- Germany and Poland
- Greece and Bulgaria
- Bulgaria and Romania.

Thus these points are not fully CAM-compliant based on Article 27(2)(e).

After the closing date for the assessment of the compliance and functionalities of booking platforms (19 August 2015), the booking platform operators communicated the following updates:

- PRISMA is fully NC CAM-compliant since 1 October 2015[21]
- GSA is fully NC CAM-compliant since 1 November 2015[22]
- RBP has introduced several new functionalities[23], improving its NC CAM compliance

[21] https://corporate.prisma-capacity.eu/press-releases/starting-on-the-1st-of-october-prisma-platform-will-be-fully-cam-nc-compliant/

[22] http://en.gaz-system.pl/centrum-prasowe/aktualnosci/informacja/artykul/202168/, http://en.gaz-system.pl/centrum-prasowe/aktualnosci/informacja/artykul/202165/

[23] https://rbp.eu/news/20151103/within-day-auctions-started-rbp, https://rbp.eu/news/20150930/first-daily-auctions-completed-rbp

ANNEX II: PILOT PROJECTS on PRISMA:

A. Slovakia – Czech Republic capacity bundling project

TSOs involved	Member States Involved	Project description
NET4GAS	Czech Republic	Allocation of monthly and daily firm bundled capacity at the interconnection point Lanžhot via PRISMA according to the NC CAM. The offered bundled capacity covered the period from 1 July 2015 to 31 August 2015 for monthly products, and from 1 August 2015 to 31 August 2015 for daily products.
Eustream	Slovakia	

Project features:

NET4GAS and Eustream have decided to execute pilot projects to test the functionality of PRISMA.

Eustream and NET4GAS offered firm bundled transmission capacity at Lanžhot IP for two specific types of product: firm monthly and firm day-ahead capacity. All product were offered in both directions.

Through this pilot project, the two TSOs were able to test and use the communication interfaces between their back-end systems and PRISMA.

Shippers have registered to PRISMA so to be able to participate in the auctions.

Thereby, Eustream moves into the position to operate an automated solution which will allow them to offer bundled capacity and therefore to fulfil the NC CAM requirements by 1 November 2015.

Next Steps:

The TSOs will submit a written report on the results to the NRAs of the Czech Republic / Slovak Republic and share it with market participants for comments.

NET4GAS and Eustream announced that they are going to continue to offer available bundled transmission capacity at Lanžhot IP on PRISMA from 1 November 2015.

B. Czech Republic – Germany capacity bundling project

TSOs involved	Member States Involved	Project description
NET4GAS	Czech Republic	Allocation of monthly and daily firm bundled capacity at the interconnection point Deutschneudorf / Hora Svaté Kateřiny via PRISMA according to the NC CAM. The offered bundled capacity covered three monthly products – February, March, April 2015, as well as daily products from 1 February until 30 April 2015.
ONTRAS	Germany	

Project features:

NET4GAS and ONTRAS offered firm bundled transmission capacity at the Deutschneudorf (Saxony) / Hora Svaté Kateřiny IP. The pilot project was executed using PRISMA.

NET4GAS and ONTRAS organized auctions of monthly firm bundled capacity as well as firm day-ahead capacity in both directions of the physical flow of gas.

Bundled capacity was offered by means of auctions held between January and March 2015. Bundled capacity concerned the period from 1 February 2015 to 30th April 2015.

For bundled capacity, NET4GAS allocated 5% of its total available firm capacity to monthly auctions and 5% for daily auctions.

In total NET4GAS and ONTRAS conducted successfully 6 monthly auctions and 164 daily auctions. Bundled monthly capacity in the direction Germany to Czech Republic (from ONTRAS to NET4GAS) was sold out completely. One of these auctions had 26 auction rounds and a closed with premia shared up as agreed between the two bundling TSOs.

NET4GAS was able to test and use the interfaces developed by PRISMA. Furthermore, in the preparation to full NC CAM implementation, NET4GAS will also test within-day products on the same border point before 1 November.

The transmission system operator assessed the pilot project in May 2015 and submitted a written report to the Energy Regulatory Office and consulted the market participants upon.

NET4GAS announced that they are going to offer available bundled transmission capacity together with ONTRAS at Deutschneudorf (Saxony) / Hora Svaté Kateřiny IP on PRISMA from 1 November 2015.

ANNEX III: PILOT PROJECTS on GSA:

A. Poland – Czech Republic capacity bundling project

TSOs involved	Member States Involved	Project description
GAZ-SYSTEM	Poland	As a follow up on their agreement, on 16 March 2015 GAZ-SYSTEM & NET4GAS conducted the first bundled capacity auction for monthly product (firm capacity) for April 2015. Two additional monthly bundled auctions were run: on 15 June 2015 for July 2015 and on 20 July for August 2015. The TSOs discuss the continuation of cooperation and further possibilities of bundling additional capacity at Cieszyn IP.
NET4GAS	Czech Republic	The pilots proved that GSA is fully operational and auctions for the bundled capacity products can be organized also at other IPs.

Project features:

In mid-June 2014, GAZ-SYSTEM and NET4GAS agreed to launch a pilot project concerning capacity at the currently existing IP Cieszyn, connecting the Polish and the Czech transmission systems. Both TSOs also agreed to use GSA (auctions.gaz-system.pl) for the allocation of capacity. Both NET4GAS and GAZ-SYSTEM, with the assistance of the respective NRAs (ERU and URE), set up a working group (WG) to prepare the marketing concept of the bundled capacity at Cieszyn IP.

The relevant cooperation agreement between GAZ-SYSTEM and NET4GAS was concluded in August 2014.

Both TSOs use the GSA Test Environment (available at auctions.gaz-system.pl/test) for the testing purposes of the pilot project.

Between Q4/2014 and Q1/2015 the WG worked to define details of the pilot project, such as: products, auction details, time schedule, responsibilities, etc.

In March 2015 NET4GAS and GAZ-SYSTEM concluded an agreement on the marketing concept for the pilot project. The necessary informational campaign was prepared in parallel to this process.

On 16 March 2015 NET4GAS and GAZ-SYSTEM conducted the first bundled capacity auction for monthly product (firm capacity) for April 2015. Following a respective amendment of the marketing concept, a

second bundled capacity auction was held on 15 June 2015 for the July 2015 monthly product, and on 20 July 2015 for the August 2015 monthly product.

Next steps:

In parallel GAZ-SYSTEM and NET4GAS take action to make the GSA and TryGas (NET4GAS) connect automatically, in order to streamline the communication between TSOs on offering bundled capacity, and also ease checking financial credibility of auction participants in line with the requirements in the Czech Republic.

During Q3/2015 both TSOs have been discussing the continuation of cooperation and further possibilities of bundling additional capacity at Cieszyn IP in the period before the NC CAM application deadline.

NET4GAS announced that they are going to continue to offer available bundled transmission capacity together with GAS-SYSTEM at Cieszyn IP on GSA from Q4/2015.

B. Slovakia – Czech Republic capacity bundling project

TSOs involved	Member States Involved	Project description
Eustream	Slovakia	Pilot project for the allocation of bundled capacity at the IP Lanžhot on the SK-CZ border with the use of GSA platform, as an early implementation of the NC CAM. The aim of the project is to: • Define the terms and conditions on how bundled capacity products can be offered between the Czech Republic and Slovakia now and in the future; • Test the GSA platform for the offering of bundled products at an IP not bordering directly with Poland. In April 2015 GAS-SYSTEM and Eustream signed a cooperation agreement to run the pilot project on the GSA Platform. Thus Eustream and NET4GAS offered a firm, bundled monthly capacity product covering the period from 1 September 2015 until 30 September 2015.
NET4GAS	Czech Republic	

Project features:

As mentioned in Annex II, NET4GAS and Eustream have decided to execute a pilot project to test the functionality of both the PRISMA and the GSA platform for the Lanžhot interconnection point.

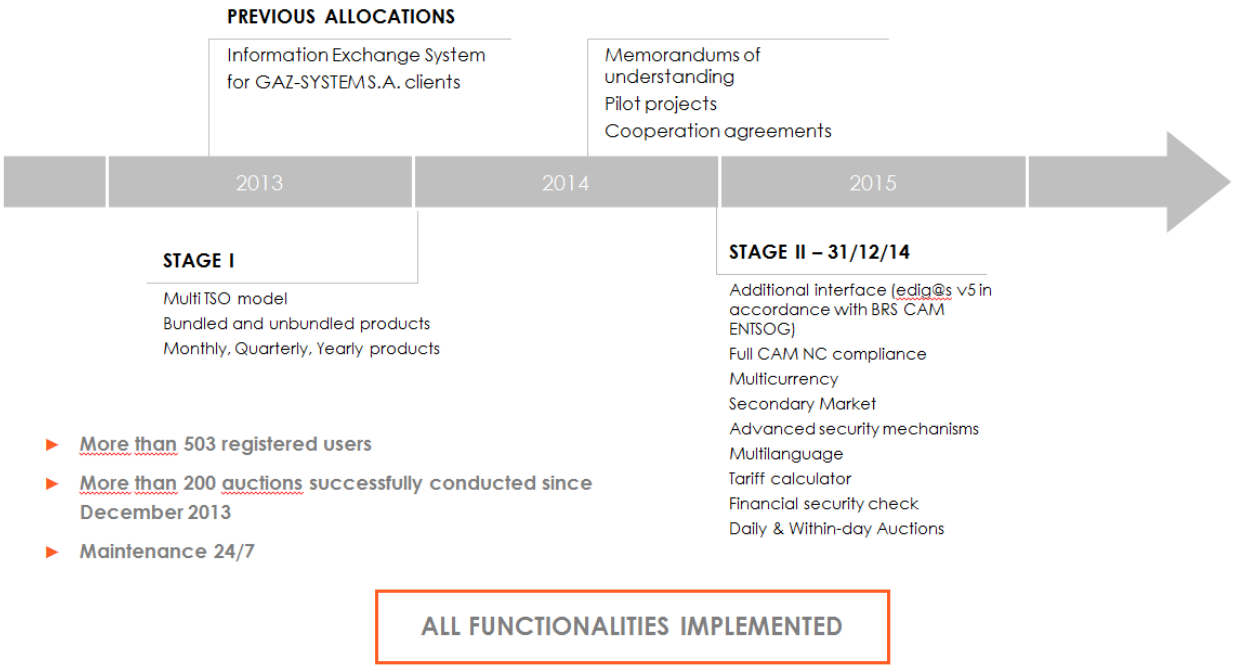
After previous talks between the TSOs, a cooperation agreement between GAZ-SYSTEM and Eustream was concluded in April 2015 to run the pilot project on the GSA Platform.

NET4GAS and Eustream offered a firm bundled monthly capacity product at Lanžhot IP by means of an auction held on 17 August 2015, covering the period from 1 September 2015 until 30 September 2015.

Next steps:

The TSOs plan to assess the pilot project after September 2015 and submit a written report to the NRAs of the Czech Republic / Slovak Republic, which will be open to market participants for comments.

Timeline of GSA and pilot projects implementation:



ANNEX IV: PILOT PROJECTS on RBP

A. Hungary – Romania bundling capacity project

TSOs involved	Member States Involved	Project description
FGSZ	Hungary	Allocation of bundled capacity on the HU-RO interconnector via the Regional Booking Platform according to the NC CAM.
Transgaz	Romania	

Project features

FGSZ and Transgaz have progressed in their cooperation for marketing bundled capacities on the Romanian-Hungarian border using the RBP.

In December 2014, the first auction of bundled capacity at the interconnection point Csanádpalota was held. Monthly capacity was offered by FGSZ and Transgaz according to ascending clock auction algorithm. Since then, monthly bundled capacity is offered regularly for Csanádpalota on RPB.

In May and June 2015, yearly and quarterly unbundled capacity has been offered for the interconnection point Csanádpalota.

Next steps:

FGSZ and Transgaz are going to broaden the scope of the allocated capacity products at the interconnection point Csanádpalota and offer bundled capacity for all runtimes, including daily and within-day, starting November 2015.