Baringa

Gas Capacity Auctions:
EU-study platforms

Client: Energy Community
Date: 10.02.2016
Version: V1.0

Reputation built on results

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Introduction to Baringa – European partner

❖ Baringa

▶ Baringa Partners LLP is a market-leading consulting company with a **focus on energy, commodities, telecoms and financial services**

▶ Founded in the UK in 2000 – Baringa Partners has a market turnover of **approximately EUR135m, with more than 450 professionals,** based in London and Dusseldorf

▶ Baringa Partners has a strong track record working with leading organisations across Europe in advising on strategy, investments, business transformation and performance improvement

▶ Baringa is recognised both in the UK and internationally for its unique culture, which has been acknowledged by a number of awards and accolades and continues to reaffirm Baringa's status as a **leading people-centred organisation**

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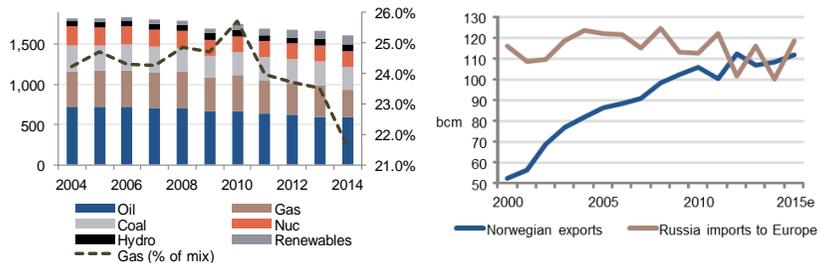
▶ **Study**
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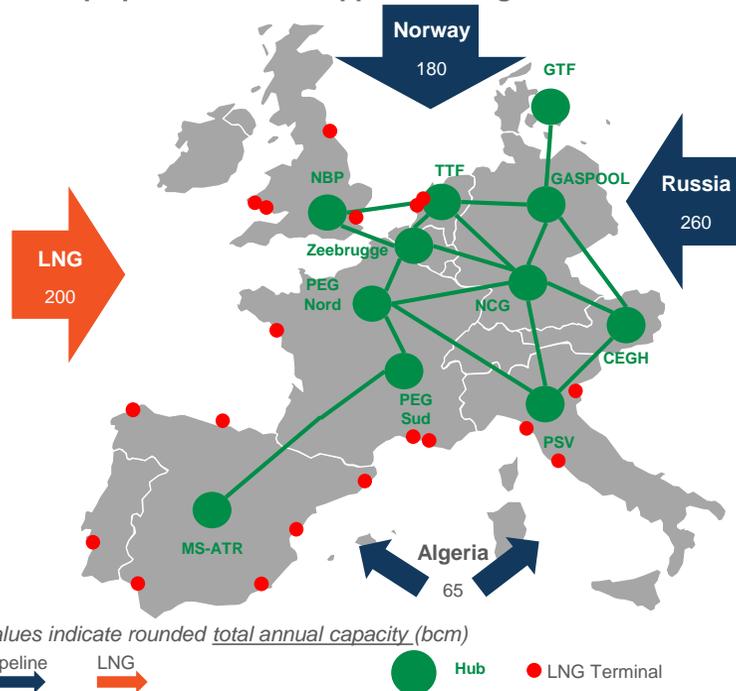
▶ **Next steps, Q & A**

European Gas Flows, Supply and Demand status quo

European gas demand down by 21.8% since 2006, with the 2 major supply sources supplemented by LNG

Legend: Oil, Gas, Coal, Nuc, Hydro, Renewables, Gas (% of mix)

Legend: Norwegian exports, Russia imports to Europe

Europe total demand (2014): c. 445 bcm. Most liquid markets in Europe pictured. Excl. capped Groningen/EU– flows.

Norway 180
Russia 260
LNG 200
Algeria 65
GTF, NBP, TTF, GASPOOL, Zeebrugge, PEG Nord, NCG, CEGH, PEG Sud, PSV, MS-ATR

Values indicate rounded total annual capacity (bcm)

Pipeline — LNG — ● Hub — ● LNG Terminal

Gas storage has grown across Europe

- Gas storage has increased to over 100bcm across Europe, offering services to LNG- and pipeline gas..

Legend: Total gas storage capacity EU, Total gas storage capacity OECD Europe excl. Turkey
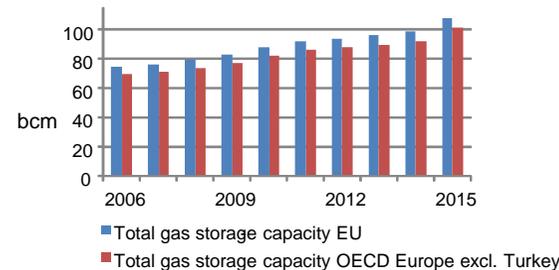
Gas fundamentals are changing

- The overall gas demand in Europe is stagnant or declining, creating a possibly over-supplied market, whilst domestic European production is declining in parallel.

- Declining demand is driven by energy efficiency measures in the domestic sector, limited growth in industry and reduced demand from power generation.

- European gas fundamentals are undergoing significant change with the switch away from oil index to hub indexation. European energy regulation is undergoing a detailed change.

- Hub trading is increasing year on year with TTF and NBP the dominant price reference hubs (80% of traded volumes in 2014).

- Producers, such as Statoil and Gazprom, have started to accept hub pricing, but the timeframe for the completion of the transition may take a number of years. In the meantime, gas regulation is being forced on Incumbents as well.

2016 – year of new habits and complexity for EU gas
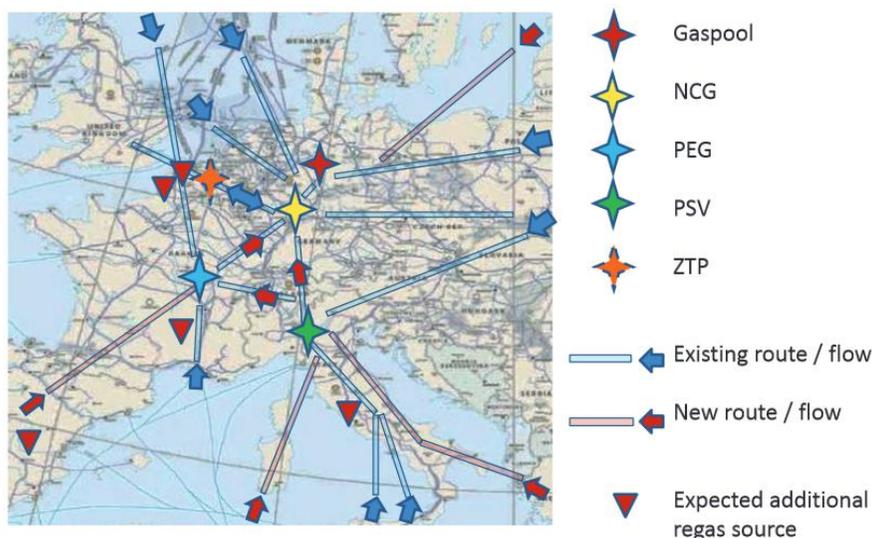
PRISMA-data 2015 shows following IPs (monthly auctions), where up to 49 rounds of auctions occurred:
- NL-DE: Oude Statenzijl
- FR: north-south link PEG
- AUS-DE: Oberkappel, Uberackern
- DE-Swiss-IT: Wallbach
- DE-SK: Deutschneudorf
- SI-CRO: Rogatec

The above capacity is on route between key EU gas hubs (exc. SI-CRO).

▶ Europe is facing a challenging precedent in the upcoming months. For the first time, across all of Europe, in parallel, due to mandatory European regulation (NC CAM) gas transmission capacity will be auctioned across all of European IPs, for 15 years ahead.

▶ The mandatory gas auctions have already started on the 3 platforms platform (Prisma, RBP, GSA) in the form of rolling monthly, daily and within day auctions. Illustratively, the leading platform (35 Euro TSOs) PRISMA now performs nearly 150.000 within-day auction processes across Europe/month.

▶ Gas Industry widely expects, that due to volatility and unpredictability of the market, parties will bid mostly for gas capacity year ahead through annual and quarterly auctions. Same, short term driven, behaviour may be expected in the upcoming years. E.g. EU Regulation on gas tariff pressing short term products tariff pricing may influence this in the next 2-4 years.

▶ These auctions are scheduled, in parallel, by leading (35 TSOs) platform offering capacity, PRISMA, for:
  – Years + 15: 7 March 2016 (8 February 2016 data release)
  – Quarters for Y+1: 6 June 2016 (23 May 2016 data release)

▶ A number of preceding auctions has shown that for a number of crucial IPs are most in demand across Europe, and can be expected to be in demand in the upcoming auctions as well.

▶ These IPs concern IPs linking key EU gas hubs, providing arbitration opportunity (average spreads available when you buy gas capacity); or volatility across different products between the hubs even though there is no outright spread yet known at the time of buying gas capacities (e.g. weekly, weekend, daily etc.).

European and energy community regulatory context

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- In the EU-28, Regulation (EC) 984/2013 on Capacity Allocation Mechanisms in Gas Transmission Systems had to be implemented by 1 November 2015.

- A key element of that regulation is an obligation for EU gas TSOs for auctioning of cross-border gas transmission capacity via a capacity booking platform.

- EU NRAs and ACER (with a contracting lead E-control, and in co-operation with capacity booking platforms), undertook a study on the capacity booking platforms (the study will be described in detail in the follow-up slides).

- The soon to be expected implementation of Regulation (EC) 984/2013 on Capacity Allocation Mechanisms in Gas Transmission Systems in the Energy Community on the horizon will require the Energy Community members to establish web-based capacity booking platform, as an efficient tool for coordinated gas transmission capacity allocation in the Energy Community member countries.

- This presentation will present existing EU solutions, and will allow to initiate further discussion on the next steps for the Energy Community.

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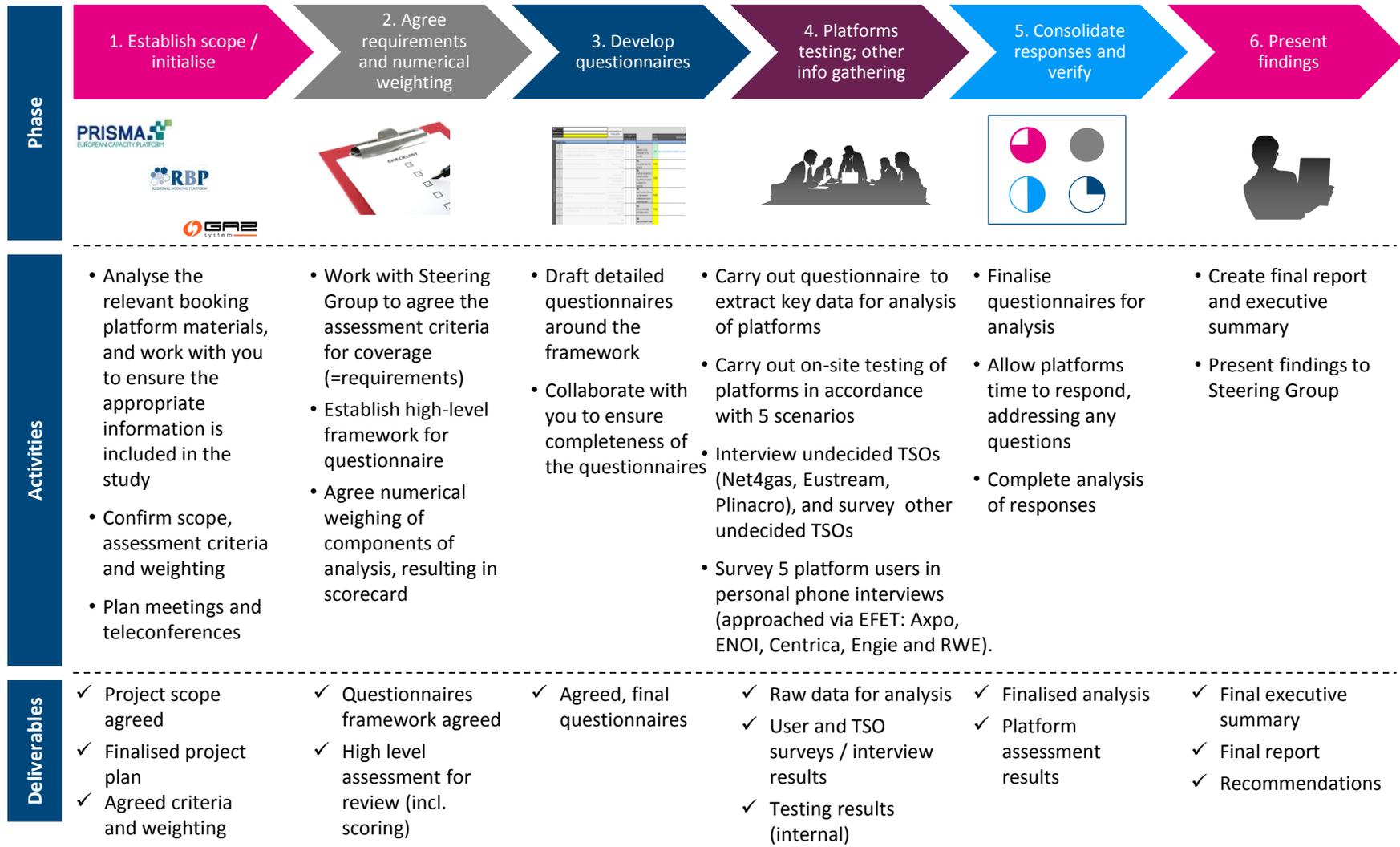
Context and Scope

Recap on our assignment

▶ Baringa partners were asked to analyse the current degree of implementation of the relevant European requirements by the three booking platform operators (GSA, PRISMA and RBP) with a focus on EU NC CAM. Other associated requirements were also captured and analysed.

▶ The study aims to capture the status quo as of July/August 2015 with an anticipated outlook on compliance by 1st November 2015.

▶ This study was and is being undertaken by EU NRAs and ACER (with a contracting lead E-control) In order to meet the Madrid 27th EU Gas Regulatory Forum invitation, as a basis to support a legally compliant and fully operational co-operation model between the platforms.

▶ The following slides (10 – 21) are an extract of the above study. Note that all data dated 19 August 2015, including an outlook on compliance by 1 November 2015. Baringa did undertake a brief informal phone interview with all 3 platforms operators in January 2016, so that a respective oral update on recent developments can be provided (see slide 22).

Approach

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Overview of our approach

|	1. Establish scope / initialise	2. Agree requirements and numerical weighting	3. Develop questionnaires	4. Platforms testing; other info gathering	5. Consolidate responses and verify	6. Present findings
Phase	PRISMA, RBP, GAZ system	(checklist)	(questionnaire screen)	(meeting silhouette)	(charts)	(person reading silhouette)
Activities	• Analyse the relevant booking platform materials, and work with you to ensure the appropriate information is included in the study • Confirm scope, assessment criteria and weighting • Plan meetings and teleconferences	• Work with Steering Group to agree the assessment criteria for coverage (=requirements) • Establish high-level framework for questionnaire • Agree numerical weighing of components of analysis, resulting in scorecard	• Draft detailed questionnaires around the framework • Collaborate with you to ensure completeness of the questionnaires	• Carry out questionnaire to extract key data for analysis of platforms • Carry out on-site testing of platforms in accordance with 5 scenarios • Interview undecided TSOs (Net4gas, Eustream, Plinacro), and survey other undecided TSOs • Survey 5 platform users in personal phone interviews (approached via EFET: Axpo, ENOI, Centrica, Engie and RWE).	• Finalise questionnaires for analysis • Allow platforms time to respond, addressing any questions • Complete analysis of responses	• Create final report and executive summary • Present findings to Steering Group
Deliverables	✓ Project scope agreed ✓ Finalised project plan ✓ Agreed criteria and weighting	✓ Questionnaires framework agreed ✓ High level assessment for review (incl. scoring)	✓ Agreed, final questionnaires	✓ Raw data for analysis ✓ User and TSO surveys / interview results ✓ Testing results (internal)	✓ Finalised analysis ✓ Platform assessment results	✓ Final executive summary ✓ Final report ✓ Recommendations

Approach

Timeline followed by project

W/C 06-Jul*	W/C 13-Jul	W/C 20-Jul	W/C 27-Jul	W/C 03-Aug	W/C 10-Aug	Mid/end August

▲ Steering Group meeting ▲ Project checkpoint ▲ Project checkpoint ▲ Project checkpoint ▲ Project checkpoint ▲ Project checkpoint ▲ Final project checkpoint

▲ Initial findings review with steering group

Arrange key meetings, incl. side visits. NDA negotiations and meetings/interviews co-ordination.

▲ Agree criteria with Steering Group

Analyse relevant materials

Gather requirements

Outline questionnaire
- Agree criteria
- Agree frame-work

Finalise questionnaire
- Build in detail
- Agree with team

▲ Platform visit GSA ▲ Platform visit PRISMA ▲ Interview 3 platform users ▲ Interview 3 undecided TSOs ▲ Platform visit RBP

Collate information received

Prepare survey (users/TSOs) Consolidate findings

Review and verify initial findings (with steering group). Interim landing on 4 August. Final meeting on 25 August.

Draft interim and final report including executive summary ▲ Present findings

Assessment methodology

Scoring process

▶ Information has been gathered through a combination of on-site visits, live demos, five test scenarios, the review of documentation, brief surveys to all EU undecided TSOs, 3 sample interviews with undecided TSOs and 5 sample network users (see appendix for more background). This data has been used to provide a score for each of the assessment criteria, which was then weighted according to the importance of each of the criteria.

▶ The scoring of criteria uses a 0 to 4 range (4 being the highest); for core and associated requirements, platforms are awarded one point for documentation, one point for live availability of the function, one point for this criteria having been met through demonstration during the study via a demo or testing, and one point for fulfilment of the CAM NC requirement.

▶ For enabling IT and user friendless requirements, platforms are awarded one point for live availability of any relevant function, one point for fulfilment of the criteria at a base level, one point for platform specific considerations of the criteria, and one point for a sufficiently mature implementation of functionality to meet the criteria.

▶ For those criteria where demonstration is not applicable (e.g. data security) or not included in CAM NC, one point has been reserved for matching leading practice regarding this criteria. For the avoidance of doubt, scoring is provided per criterion with no aggregation. Note that test scenarios (see appendix i) were used to confirm various functions are available in each platform, and should not be considered as extensive testing. The functionality can be expected to have been tested to a much greater extent by the platform operators themselves.
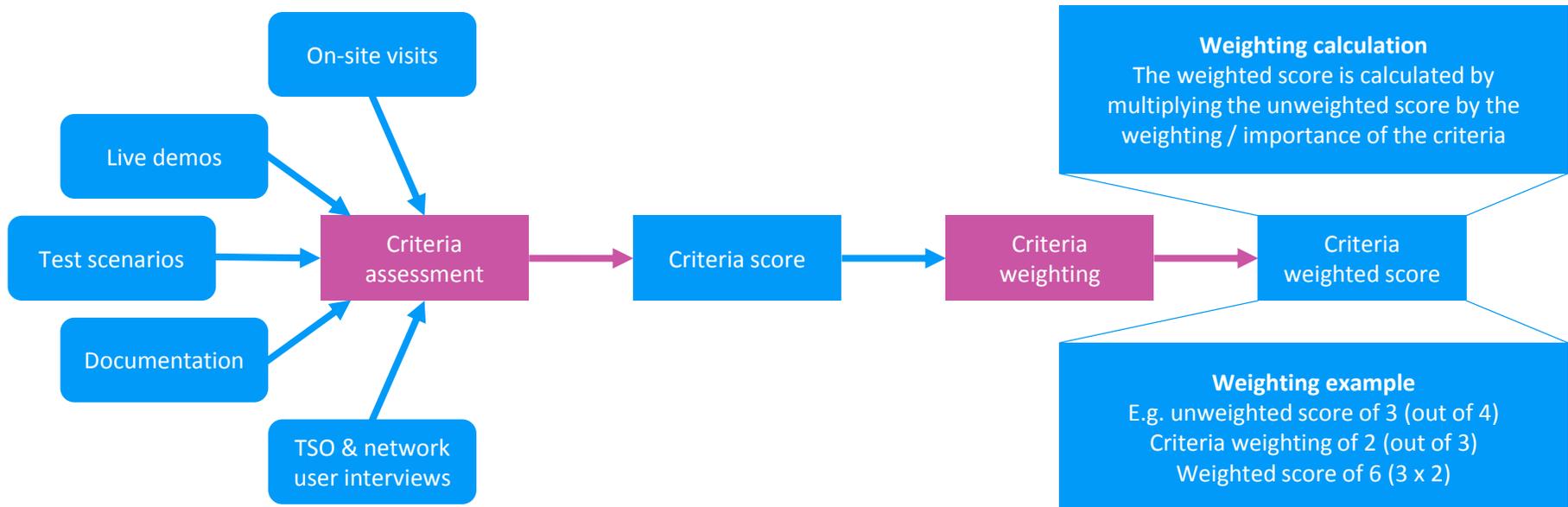
Criteria agreed in Steering Group

Criteria descriptions

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.

Assessment methodology

Criteria weighting

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▶ 30 criteria of assessment were agreed during initiation of the study and all of these were weighted according to their agreed relative importance, where a weighting of "1" indicated low importance, "2" indicates medium importance, and "3" indicates high importance.

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

Platforms summary

Comparative scoring

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ID	Category	Requirement	GSA Unweighted	GSA Weighted	PRISMA Unweighted	PRISMA Weighted	RBP Unweighted	RBP 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

Platforms summary

Charging structures

▶ The following tables set out the current charging structures (which may evolve); these differ per platform, and are described by undecided TSOs interviewed as part of the study as an issue given the potential need for several TSOs to utilise two or more platforms based on their neighbours' choice of platform.

GSA	PRISMA	RBP
▶ GSA charges TSOs for use of the platform based on the number of interconnection points (IPs) they hold within the platform.	▶ PRISMA charges 65% 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.	▶ RBP Core Services are priced equally between TSO members. These services concern CAM NC requirements including the enabling IT. A basic service costs 48.000 EUR/TSO/year (this can include servicing up to 50 IPs for auctions and 2ndary markets). Baringa understands that the total costs for a TSO are typically higher.
▶ 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 TSO the more TSOs are on the platform.	▶ The majority of the remaining cost is charged equally per participating TSO. A small proportion of costs (approx. 5%) is charged 1-1 per TSO for any national specific requirements, and PRISMA only pass on maintenance and IT provider costs.	▶ For additional services (i.e. those not explicitly required by CAM NC) a specific fee is applicable, equal for all TSO Members who use the given service (including the enabling IT).
▶ 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.	▶ This charging system results in a fee range of approx. €100k per year to €1.1m per year per TSO.	▶ 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.
▶ There are no fees paid by shippers or users	▶ 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 charged at €1400 per month (based on pass through of costs according to Prisma).	

Platforms summary

2015 business plan budget comparators, using agreed in study definitions (snapshot 19.08.2015)

▶ Part of the scope of platform assessment is presenting a holistic view of the cost per platform. To this end a number of comparative metrics have been devised using approximate calculations based on total platform operating cost and number of platform assets (TSOs, shippers, users, IPs, and network points). All figures are taken as a snapshot of August 2015, and all figures (TSOs, users, IPs, auctions conducted etc.) are likely to change in the future.

▶ It has been noted that it is difficult to provide an exact comparison across platforms given the differing business models and organisational structures (i.e. GSA and RBP are owned by a TSO, run fewer auctions overall and may include some shared costs, whereas PRISMA is a separate legal entity with a large number of registered TSOs and separate accounting). The figures below are presented as current costs per platform as of August 2015, and do not accommodate any change in costs caused by upward scaling.

▶ The cost per auction comparator included below includes both long term auctions (yearly, quarterly and monthly) that all platforms are currently running and short term auctions (day-ahead) that currently only PRISMA are running. This has significantly increased the number of auctions run by PRISMA in a comparable timescale (46511 of 50244 auctions in relevant comparison period are day-ahead i.e. short term). Additionally it is noted that each platform has a different history, launch date, total running times, and are at different stages of development (i.e. some platforms have been running for a shorter or longer duration, with varying levels of experience. RBP held its first auction on 10 December 2014). We have therefore used auction data from comparable 8-month period for all 3 platforms, December 2014 to July 2015 inclusive. We have taken accordingly pro-rated part of annual budget as basis for cost per auction calculation.

GSA	PRISMA	RBP
▶ 2 registered TSOs* - €200k per TSO	▶ 32 registered TSOs* - €281k per TSO	▶ 2 registered TSOs - €275k per TSO
▶ 44 registered shippers - €6.8k to €9.1k per shipper	▶ 455 registered shippers - €19.8k per shipper	▶ 35 registered shippers - €15.7k per shipper
▶ 122 registered trading users - €2.5k to €3.3k per user	▶ 1,561 registered trading users - €5.8k per user	▶ 82 registered trading users - €6.7k per user
▶ 12 IPs (excl. 1 pilot IP) - €33k per IP (€21k per IP typically charged)	▶ 107 IPs - €84k per IP	▶ 6 IPs - €68.8k to €91.7k per IP
▶ 190 auctions held in 8-months' comparison period - €1404 per auction	▶ 1304 total network points - €6.9k per point	▶ 323 total network points - €1.7k per point
	▶ 50,244 auctions held in 8-months' comparison period - €119 per auction	▶ 900 auctions held in 8-months' comparison period - €407 per auction

*GSA: 4 active TSOs, of which 2 TSOs are running pilot projects. 2 registered TSOs concern separate TSO-systems, (being) certified by EC and NRAs under 3rd package. For background consult EC-certifications overview, as updated by EC on 4.09.2015, and available at https://ec.europa.eu/energy/sites/ener/files/documents/certifications_decisions.pdf. PRISMA: 35 active TSOs, including 3 pilot running TSOs.

Please note that these figures are not the amounts charged to the specified parties; charging structures are detailed on the previous slide

Platforms summary

Governance (TSO decision making) arrangements as of August 2015 (1)

▶ This is a summary overview of governance status quo of each platform. Please see next slide for elaborated detail on governance of the platforms.

▶ Each platforms governance was assessed at a high level through interviews with the platform staff during the site visits, and based on provided by platform operators documentation. We note that the scope of the study did not include the assessment of pros and cons of business models employed by platform owners.

▶ Governance maturity varies per platform.

GSA	PRISMA	RBP
▶ Platform with recent history.	▶ Platform with significant history.	▶ Platform with recent history.
▶ Governance is being developed though platform is still primarily TSO owner based (GAZ-System).	▶ PRISMAs articles of association clearly assign decision making roles and describe various levels of decisions with 75%/60% thresholds.	▶ Governance is still primarily TSO owner based (FGSZ), with other member TSO (Transgaz) a customer rather than co-owner of the platform.
▶ First pilots with TSOs Net4gas and Eustream are being conducted (first auctions already performed), which may lead to a governance change.	▶ Voting power is based on shares in PRISMA. The shares are determined based on (proxy of) country population, gas consumption and total transported through TSO-network volumes.	▶ FGSZ is ready to set-up a separate entity, if and when required.

Platforms summary

Governance (TSO decision making) arrangements as of August 2015 (2).

GSA	PRISMA	RBP
▶ The governance and direction of the GSA platform is formally owned by GAZ-System, with features and functionality added on an ad-hoc basis based on user / TSO requirements. ▶ Currently GSA auction platform operations are carried out as an auction platform project, with costs separated for accounting purposes within the framework of GAZ-SYSTEM as a TSO. ▶ Should additional TSOs become users of the GSA platform (e.g. through pilots with Net4Gas and Eustream), more detailed governance arrangements will need to be developed.	▶ PRISMA is registered as a GMBH, with various decision making bodies primarily composed of shareholder TSOs. Decisions are taken using weights of shareholding rights of TSOs. The shareholding rights are based on ENTSOG voting system (or a proxy of that system, where not applicable). Nationally, for multiple TSOs, shares are decided differently per country. Key decisions require a 75% majority, while less strategic decisions require a 60% majority. ▶ The governance details of decision making are laid down in article 8 of Articles of Association. In addition to decision making bodies, there are various topical working groups, including a working group for providing information on latest developments to EU NRAs and EC. All the changes in the PRISMA's GTCs are consulted with all the relevant NRAs, and market participants. This caters in addition for regulatory governance for a number of TSOs who have specific references to PRISMA's GTCs in their Network Codes. We note that there is no specific provision in EU NCs for a standard approval procedure of such GTCs by NRAs. ▶ Each new member TSO has to sign a service agreement, co-operation agreement and shareholder agreement. In addition associate memberships or observer roles are allowed, with no voting participation. Associate memberships are for 3 years, providing a lower cost opportunity to explore participation in PRISMA. Associate members can request development of specific national requirements. Associate members who sign before 1.11.2015 get a guaranteed price for acquisition of voting shares in PRISMA.	▶ The governance and direction of the RBP platform is formally owned by FGSZ, with transferred to FGSZ decision making on features and functionality development on a case-by-case basis, solely based on the given user (or TSO) requirements. RBP is operated as an auction platform project, with costs separated for accounting purposes within the framework of FGSZ as a TSO. ▶ Each new member TSO has to sign a TSO Membership Agreement. Optionally, TSOs are advised by FGSZ to sign a bilateral cooperation agreement to arrange for bundling responsibilities, to which FGSZ as a platform operator is not a contracting party. With Transgaz, the cooperation agreement was incorporated into the TSO Membership Agreement. Responsibilities for bundling were agreed as part of Interconnection Agreement as well. ▶ Joint Venture agreement* for the operation of the RBP with Transgaz was considered, but not signed. A study showed that incorporating and running a separate legal entity would have nearly doubled the current costs of RBP without significant added value for the potential shareholders. ▶ Presently, governance is managed at basic level through change process being stipulated in the TSO Membership Agreement. FGSZ is open to discuss different governance models should that be required by RBP's TSO Member(s). *This (draft) agreement was requested by Baringa during site visit in Siofok, but not provided to Baringa due to confidentiality, and draft character of the agreement.

Platforms compliance

Overview as of 19 August 2015

▶ Observations on platforms compliance as of 19th August 2015:

▶ Based on the perspective of existing and tested functionality, PRISMA has a greater degree of compliance with the requirements, along with a larger and more established user base and experience.

▶ The other two platforms (GSA, RBP) have achieved a lower level of compliance, with a focus on longer term auctions.

GSA	PRISMA	RBP
▶ As of 19th August 2015, GSA is non-compliant on five out of twelve CAM NC legal requirements: – Day ahead & within-day trading – Day ahead bid rollover – Secondary market trading – 1:n capacity bundling – Competing capacity ▶ Day ahead (plus bid rollover) and within-day trading functions have been developed and tested by GAZ-System, and are pending national regulatory approval for implementation into the live / production system due October 2015, in accordance with the 1st November deadline of NC CAM. ▶ Two core NC associated requirements have not yet been developed (buyback, surrender).	▶ As of 19th August 2015, PRISMA is non-compliant on one out of twelve CAM NC legal requirements: – Support of kWh/d ▶ All core NC associated requirements have been developed.	▶ As of 19th August 2015, RBP is non-compliant on five out of twelve CAM NC legal requirements: – Day ahead bid rollover – Support of kWh/d – Secondary market trading – 1:n capacity bundling – Competing capacity ▶ Secondary market functionality is at present split across two platforms (RBP and the FGSZ' Trading Platform, a balancing products & capacity trading system), with 'over the counter' currently within RBP. Full functionality for secondary market capability and functionality to automatically roll over day ahead bids into within-day auctions are planned prior to 1st November. ▶ Two core NC associated requirements have not yet been developed (buyback, surrender).
▶ 2 registered TSOs* ▶ 44 registered shippers ▶ 122 registered trading users ▶ Edigas messaging	▶ 32 registered TSOs (incl. 17 German TSOs)* ▶ 455 registered shippers ▶ 1,561 registered trading users ▶ Custom XML messaging	▶ 2 registered TSOs ▶ 35 registered shippers ▶ 82 registered trading users ▶ Custom XML messaging (SOAP, Edigas)

*GSA: 4 active TSOs, of which 2 TSOs are running pilot projects. 2 registered TSOs concern separate TSO-systems, (being) certified by EC and NRAs under 3rd package. For background consult EC-certifications overview, as updated by EC on 4.09.2015, and available at https://ec.europa.eu/energy/sites/ener/files/documents/certifications_decisions.pdf. PRISMA: 35 active TSOs, including 3 pilot running TSOs.

Platforms compliance

Planned for 1st November 2015

▶ Observations on platforms compliance as planned for 1st November 2015:

▶ Given its existing, tested and delivered functionality, PRISMA poses the least risk in achieving complete compliance by 1st November 2015. PRISMA already has most of the requirements in place as of this study.

▶ The other two platforms (GSA and RBP) have more significant development work to undertake prior to 1st November, including the risks associated with projects of this type.

▶ The scope of this study has not included the validation of the development plans for the platforms.

▶ Any TSOs making the choice of platform will have to undertake their own due diligence, along with an assessment of the risks and mitigations, given that the obligations to comply with CAM NC will be on the TSOs.

GSA	PRISMA	RBP

▶ By 1st November 2015, GSA is planned to meet all the functional requirements of CAM NC, subject to associated risks, particularly for developing 1:n capacity bundling and competing capacity functions.
 	
▶ Day ahead (plus bid rollover) and within-day trading functions have been developed and tested by GAZ-System, and are pending national regulatory approval for implementation into the live / production system due October 2015, in accordance with the 1st November deadline of NC CAM.
 	
▶ 1:n capacity bundling and competing capacity are at an earlier stage of development, though are on the product roadmap for implementation prior to 1st November.
	▶ By 1st November 2015, PRISMA is planned to meet all the functional requirements of CAM NC.
	
	▶ Support of kWh/d has been developed and tested by PRISMA, and is due to be implemented in the next release of the platform due October 2015, in time with the 1st November deadline of NC CAM.
		▶ By 1st November 2015, RBP will be non-compliant on two out of twelve CAM NC legal requirements:
		
		  – 1:n capacity bundling
		  – Competing capacity
		
		▶ Full functionality for secondary market capability and functionality to automatically roll over day ahead bids into within-day auctions are planned prior to 1st November.
		
		▶ While there is a high level solution for 1:n capacity bundling, there are no plans for this nor competing capacity to be implemented prior to 1st November.
		
		▶ Plans to migrate anonymous secondary trading from Trading Platform to RBP by 1st November

Platform overviews – recent developments

Summary – January 2016

Baringa

Update themes for all 3 platforms

- ▶ Platform use improved
  - – Day-ahead
  - – Within-day
  - – CMP
  - – Preparing for new NC CAM changes & GUI
  - – No major news on interoperability

- ▶ On-going pilots & new TSOs

- ▶ Governance aspects

- ▶ User statistics changes (Shippers+, TSOs+, IPs+):
  - – Incremental usage

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▶ **Next steps, Q & A**

Next steps, Q & A

▶ Energy Community requested that Baringa presents an EU-study of the three gas capacity booking platforms (GSA, PRISMA and RBP) performed for EU NRAs, finalised in Q3 2015.

▶ All three platforms are either compliant or expected, based on their plans and recent feedback, to be compliant with relevant EU regulations (CAM NC and CMP); while each platform operator has approached these regulations slightly differently, the results can be expected to be similar across platforms. The obligation to meet the terms of the EU Network Codes will sit with the TSOs and therefore it is critical that each NRA of the Energy Community, together with its TSO, undertakes a final and full assessment of the platforms before a decision is made. Possibly, the Energy Community Secretariat may consider offering co-ordinating input through e.g. a study support.

▶ Of the three platforms, PRISMA is the most proven and well developed in terms of functionality, though is also the most expensive and is less flexible given its mature state. GSA and RBP share a similar level of more basic functionality at a relatively similar cost between GSA and RBP, though given the small user base these platform operators are more flexible in terms of features and functionality.

▶ It is recommended that the Energy Community Secretariat supports the NRAs in undertaking the selection of the favoured platform(s) across several phases:

    i.   **Finalise requirements:** Utilise the output of the EU-report to finalise Energy community regional requirements

    ii.   **Review platform progress:** Examine the state of preferred platform(s) prior to engaging

    iii.   **Tender process:** Including a full set of functional and technical requirements and commercials

    iv.   **Negotiate commercials:** Obtain finalised quote from preferred platform(s) – in conclusion of the tender process

    v.   **[Optional] Pilot:** Engage with selected platform to test functionality and suitability for gas TSOs

    vi.   **Implementation:** Roll out the platform once it has been selected

▶ Given the experience of other TSOs approaches to platform selection, it is evident that appropriate time will need to be allowed for.