entsog
european network of transmission system operators for gas

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EU-Russia GAC WS2 meeting in St. Petersburg

Incremental capacity – will market driven investments survive?

Jan Vitovský
Subject manager, Capacity area

Image Courtesy of Thyssengas

Contens

- **First market demand assessment in 2017**
- **Overview of initiated Incremental capacity projects in 2017**
- **Way forward**

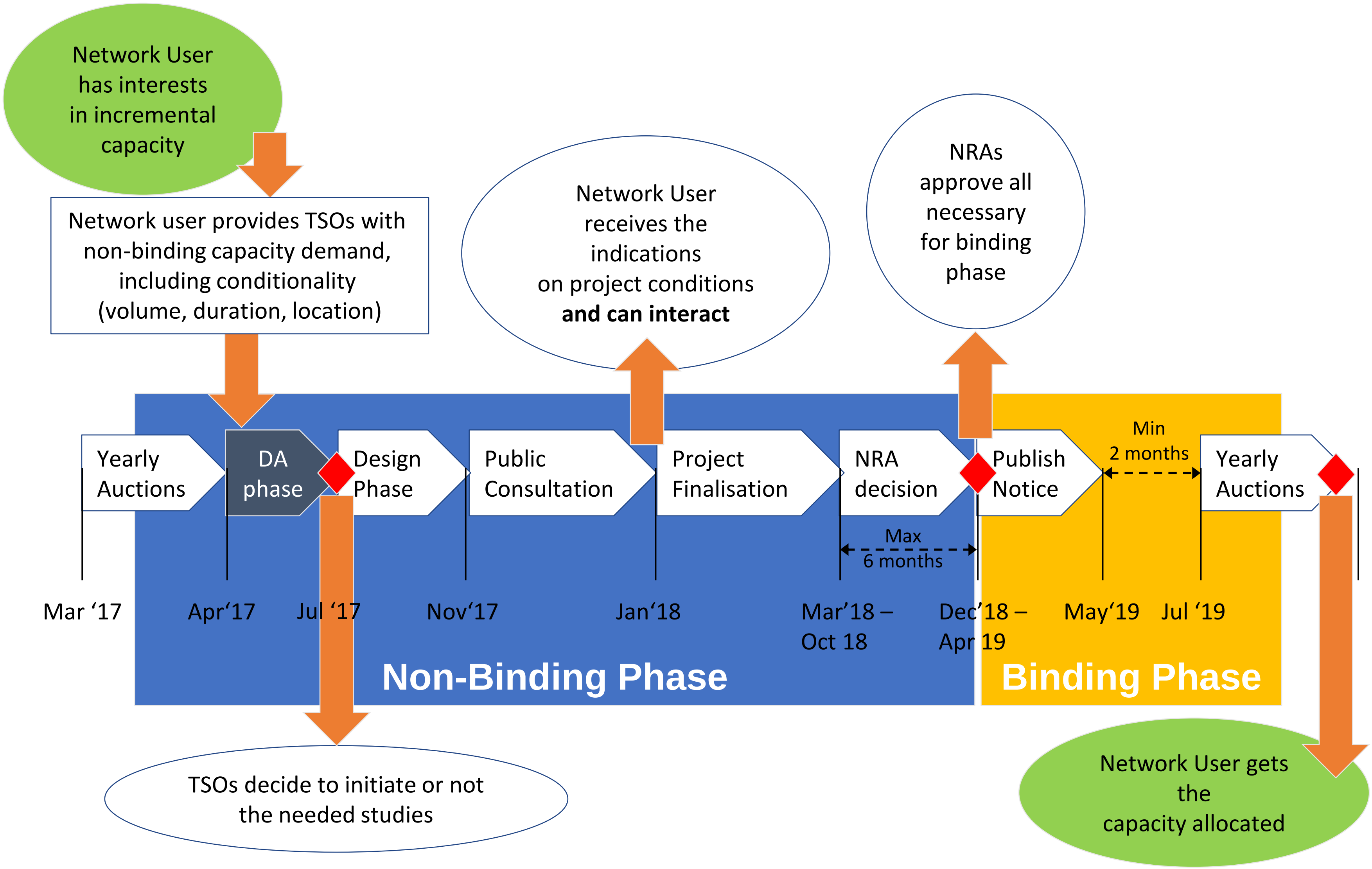
Incremental capacity

What is incremental capacity?

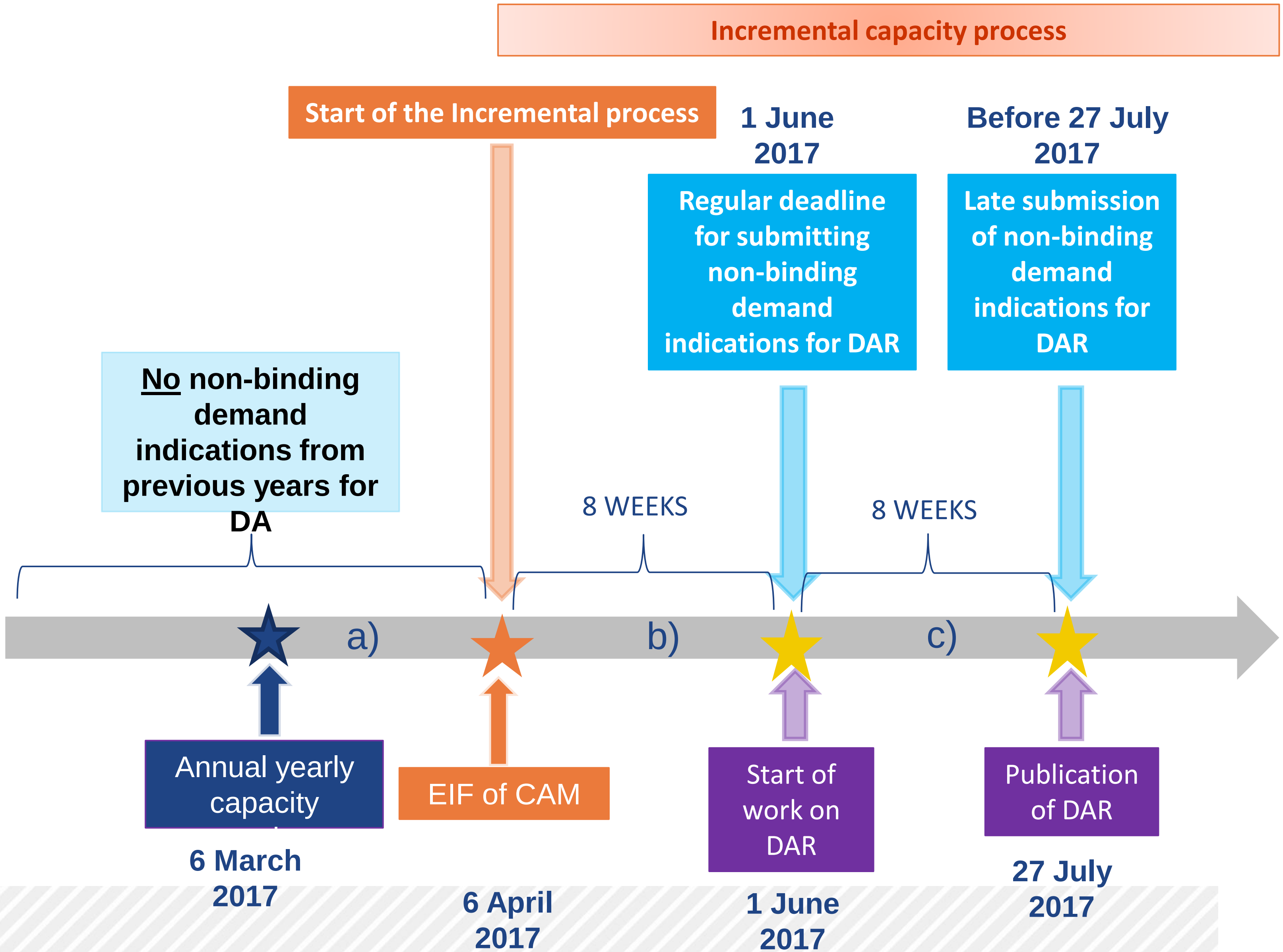
“a possible increase in technical capacity that may be offered based on investment or long term capacity optimization and subsequently allocated subject to the positive outcome of an economic test”

- Incremental capacity process = **market-based** procedure to satisfy all economically reasonable and technically feasible demand for capacity
- At existing interconnection points, by establishing a new interconnection point or a physical reverse flow capacity at an interconnection point, which has not being offered before
- Core is a harmonized and simultaneous assessment of demand for incremental capacity across the EU

INC process - 1st initiation in April 2017



Demand Assessment Timeline 2017



First market demand assessment in 2017

<u>Incremental capacity demand assessment 2017</u>

- ENTSOG published the Demand Assessment Reports on 27th July
- Network users submitted non-binding demand indications at *19 market area borders / interconnection points*

- In 11 *cases*, demand indications will lead to technical studies of the incremental capacity projects being initiated by the affected TSOs
  - AT-HU, AT-SI, AT-DE, HR-SI, DE-NL, DE-RU, DE-PL, GR-IT, IT-Malta, HU-SK-AT

- At the 8 remaining market area borders
  - the indicated demand was below the available capacity for the requested period;
  - the indicated demand was considered (by the TSO) to be too low to pass the economic test;
  - network development projects were already initiated covering the expressed demand.

Overview on initiated INC projects in 2017

Overview on initiated INC projects '17

country	E-X border	Direction	Period of demand (Start-end year)	Demanded capacity bcm/y	Year of capacity allocation	Link to a webpage with public consultation	Proposed f-factor	f-factor approved by the NRA	Alternative capacity allocation proposed by TSOs?
AT	AT-DE (NCG)	bidirectional	AT-DE: 2023-28; DE-AT: 2018-27	AT-DE: 0.76 bcm/y; DE-AT: 1.99 bcm/y	2018	https://www.gasconnect.at/netzinformationen/netzentwicklung/netzentwicklungsplanung/	f = 1	f = 0,5	no alternative capacity allocation
AT	AT-HU	bidirectional	HU-AT: 2019 /20 - 2036/37	HU-AT: 8.85 bcm/y	2019	https://www.gasconnect.at/netzinformationen/netzentwicklung/netzentwicklungsplanung/	f = 1		no alternative capacity allocation
AT	AT-SI	exit Slovenia	-	SI-AT (offer level): 4.93 bcm/y; AT-SI (offer level 1): AT side 3.14 bcm/y, SI side 1.66 bcm/y	2019	https://www.gasconnect.at/netzinformationen/netzentwicklung/netzentwicklungsplanung/	f = 1		-
AT	AT-SK	exit SK/entry AT	SK-AT: 2022/23 - 2036/37	SK-AT: 0.15 bcm/y	2018	-	-		alternative capacity allocation
HR	HR-SI	exit HR/entry SI	HR-SI: 2019-2024	HR-SI: 0.39 bcm/y		http://www.plinacro.hr/default.aspx?id=826	f = 1		no alternative capacity allocation
DE	DE (GP)-NL	exit DE (GP)/entry GTS	DE(GP)-NL: 2025/26; DE(GP)-NL: 2026/27-2029/30; DE(GP)-NL: 2030/31-2039/40	DE(GP)-NL: 2.10 bcm/y; DE (GP)-NL: 4.20 bcm/y; DE (GP)-NL: 9.45 bcm/y	2019	https://www.fnb-gas-capacity.de/konsultation/	f (offer level 1) = 0,67; f (offer level 2) =		no alternative capacity allocation
DE	DE (GP)-PL (GCP)	exit PL/entry DE (GP)	PL-DE: 2019/20– 2034/35;	PL-DE: 1.61 bcm/y (indicated to ONTRAS); 0.73 bcm/y (indicated to GAZ-System)	2019	https://www.fnb-gas-capacity.de/konsultation/	f = 0,24		no alternative capacity allocation
DE	DE (GP)-RU	entry DE (GP)	Ru-DE: 2025/26-2039/40	RU-DE: 10.51 bcm/y	2019	https://www.fnb-gas-capacity.de/konsultation/	f = 0,83		no alternative capacity allocation
DE	DE (NCG)-AT	bidirectional	AT-DE: 2023-28; DE-AT: 2018-27	AT-DE: 0.76 bcm/y; DE-AT: 1.99 bcm/y	2018	https://www.fnb-gas-capacity.de/konsultation/	-	AT side: f = 0,5	-

Overview on initiated INC projects '17

country	E-X border	Direction	Period of demand (Start-end year)	Demanded capacity bcm/y	Year of capacity allocatio	Link to a webpage with public consultation	Proposed f-factor	f-factor approved by the NRA	Alternative capacity allocation proposed by TSOs?
GR	GR-IT	exit GR/entry IT	R-IT: 2019/2020 – 2038/203	GR-IT: 11.87 bcm/y	2019	http://desfa.gr/userfiles/5fd9503d-e7c5-4ed8-9993-a84700d05071/Public-consultation-incremental-capacity-Greece-and-Italy_final-new-date-Mar.pdf	f = 0,8		in consideration
HU	HU-AT	bidirectional	HU-AT: 2019 /20 - 2036/37	HU-AT: 8.85 bcm/y	2019	https://fgsz.hu/en-gb/partnereinknek/kapacitaskereskedelmi-informaciok/bovitett-kapacitasra-vonatkozo-eljaras	f = 1		no alternative capacity allocation
	HU-SK	-	HU-SK: 2022-2032; HU-SK:2032-2037	HU-SK: 5.67 bcm/y; HU-SK: 3.70 bcm/y		https://fgsz.hu/en-gb/partnereinknek/kapacitaskereskedelmi-informaciok/bovitett-kapacitasra-vonatkozo-eljaras	-		-
IT	IT- Malta	exit IT/entry Malta	IT-Malta: 2025/2026	IT-Malta: 1.86 bcm/y		http://www.snam.it/en/transportation/Online_Processes/Allacciamenti/procedure-module/incremental-capacity/request_incremental_capacity.html.html	With letter dated 19th October 2017, the subject who submitted on 29th May 2017 the non-binding demand indication for incremental capacity between Italy and Malta has required to cancel the request. Therefore the current incremental capacity process is considered closed.		
	IT-GR	exit GR/entry IT	R-IT: 2019/2020 – 2038/203	GR-IT: 11.87 bcm/y		http://www.snam.it/en/transportation/Online_Processes/Allacciamenti/procedure-module/incremental-capacity/request_incremental_capacity.html.html	f = 0,8		in consideration

Overview on initiated INC projects '17

country	E-X border	Direction	Period of demand (Start-end year)	Demanded capacity bcm/y	Year of capacity allocatio	Link to a webpage with public consultation	Proposed f-factor	f-factor approved by the NRA	Alternative capacity allocation proposed by TSOs?
NL	NL-DE (GP)	exit DE (GP)/entry GTS	DE(GP)-NL: 2025/26; DE(GP)-NL: 2026/27-2029/30; DE(GP)-NL: 2030/31-2039/40	DE(GP)-NL: 2.10 bcm/y: DE (GP)-NL: 4.20 bcm/y; DE (GP)-NL: 9.45 bcm/y	2019	https://www.gasunietransportservices.nl/en/shippers/shippers-information/incremental-capacity-process	f = 1		no alternative capacity allocation
PL	PL (GCP)-DE (GP)	xit PL (GCP)/entry DE (GF	PL-DE: 2019/20–2034/35;	PL-DE: 1.61 bcm/y (indicated to ONTRAS); 0.73 bcm/y (indicated to GAZ-System)	2019	http://en.gaz-system.pl/pdf/press-centre/news/information-for-the-media/artykul/202585/	f = 1		no alternative capacity allocation
SK	SK-AT	-	SK-AT: 2022/23 - 2036/37	SK-AT: 0.15 bcm/y	2018	http://www.eustream.sk/en_transmission-system/en_development-of-the-network/en_market-demand-assessment	-		alternative capacity allocation
	SK-HU	-	HU-SK: 2022-2032; HU-SK:2032-2037	HU-SK: 5.67 bcm/y; HU-SK: 3.70 bcm/y		http://www.eustream.sk/en_transmission-system/en_development-of-the-network/en_market-demand-assessment	-		-
SI	SI-AT	exit Slovenia	-	SI-AT (offer level): 4.93 bcm/y; AT-SI (offer level 1): AT side 3.14 bcm/y, SI side 1.66 bcm/y	2019	http://www.plinovodi.si/en/access/demand-assessment-report/			-
	SI-HR	xit Croatia/entry Sloveni	HR-SI: 2019-2024	HR-SI: 0.39 bcm/y		http://www.plinacro.hr/default.aspx?id=826	f = 1		no alternative capacity allocation

Conclusions on INC process so far

- First INC process has been used at 19 E/X boarders however projects can be considered as successful only after a positive economic test. Most of the INC project will have binding allocation and test in 2019

- Low number of network users are willing to book in a long term

- Some of the non-binding demand received was not repeated in an binding way in 2018

Future of market based procedures

Possible negative factors for a future of market based investments

Greater market areas

- In case of national market mergers, the cancelled IPs cannot be booked anymore.
- Higher need for intra-zone network development planning among TSOs
- No capacity and price signals from shippers to TSOs inside of a merged zone

High short term capacity quotas and **limitation of long term bookings**

- Both inputs (booked capacity level and allowed number of years to be booked) are quite important to successfully pass economic test
- Usual booking period needed to payback market based investments is 15-20 years (in case of no or moderate Mandatory minimum premium on top of a regular tariff)

Will we see market based investments in the EU in the next decades?

⇒ Depends on willingness of shippers to book in a long term and future development of EU gas rules and policies

Thank You for Your Attention

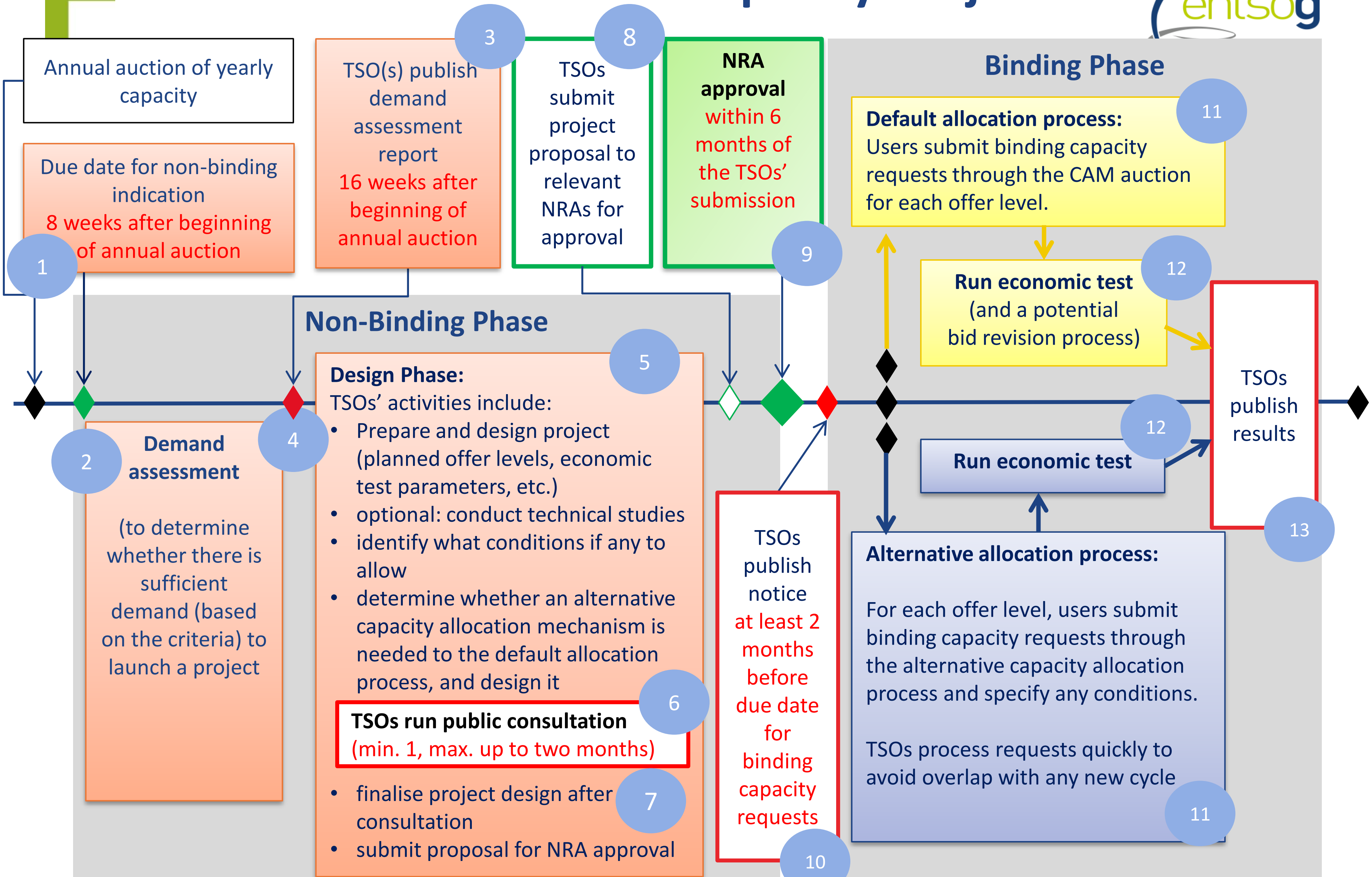
Jan Vitovsky
Subject manager, Capacity area

ENTSOG -- European Network of Transmission System Operators for Gas
Avenue de Cortenbergh 100, B-1000 Brussels

EML: Jan.vitovsky@entsog.eu
WWW: www.entsog.eu

Back up

Process for Incremental Capacity Projects



Ongoing co-ordination among TSOs and NRAs involved throughout the process

Project Characteristics

Austria – Germany

From "EXIT CAPACITY"	To "ENTRY CAPACITY"	Gas year	Amount	Additional Information
NetConnect Germany, Germany	Market Area East, Austria	2018 - 2027	Entry: demand at Entry Überackern SÜDAL has been indicated - already submitted in 2016 Exit: demand lower than available capacity	*Market Area East: Freely allocable firm; plan to offer incremental freely allocable capacity in yearly auction in July 2018; potentially a bundled auction with restricted allocable firm capacity; relevant project in Austrian development plan will be updated; NCG: Restricted allocable firm (Überackern 2 - storage Haidach)*

Project Characteristics

Austria – Hungary

From "EXIT CAPACITY"	*To "ENTRY CAPACITY"*	*Gas year*	*Amount*	*Additional Information*
Hungary	Market Area East, Austria	2019/20 – 2036/37	Entry: Project 1: 6,378,300 kWh/h Project 2: 11,115,307 kWh/h Exit: 6,378,300 kWh/h	*Market Area East (IP Mosonmagyaróvár): Project 1 results from Austrian national network development Plan 2017-2026 - NSI East Gas priority corridor ("ROHUAT/BRUHA) and alternative allocation mechanism ("ROHUAT Open Season");* *Project 2 results from Project 1 plus additional incremental capacity demand received on top* *Hungary (IP Mosonmagyaróvár): incremental capacity project is part of the Hungarian National Development Proposal 2016-2025 and also included ENTSOG's TYNDP 2017 document (not approved yet)*

Project Characteristics

Austria – Slovenia

From "EXIT CAPACITY"	To "ENTRY CAPACITY"	Gas year	Amount	Additional Information
Market Area East, Austria	Slovenia	From 2020/21	Entry/Exit: 9,070,838 kWh/h	*binding demand in yearly auction 2017 too low for positive economic test of projects:* • *GCA – Entry/Exit Murfeld* • *Plinovodi – Upgrade of Murfeld/Ceršak interconnection, Upgrade of Rogatec interconnection, CS Kidričevo, 2nd phase of upgrade* *However, Priority Corridor North-South Gas Interconnections in Central Eastern and South Eastern Europe includes the Cluster Croatia — Slovenia — Austria with above mentioned projects as PCIs* → *corresponding projects are included in the Austrian and Slovenian national development plans* → *technical studies will be performed by GCA and Plinovodi*
Slovenia	Market Area East, Austria	From 2020/21	Entry/Exit: 6,937,800 kWh/h	

Project Characteristics

Bulgaria – Romania

From "EXIT CAPACITY"	To "ENTRY CAPACITY"	Gas year	Amount	Additional Information
Romania	Bulgaria	To follow	To follow	*Demand indications have been received, But so far no demand assessment report has been published*

Croatia – Slovenia

From "EXIT CAPACITY"	To "ENTRY CAPACITY"	Gas year	Amount	Additional Information
Croatia	Slovenia	Not stated in the report 2018/19 – 2034/35 (period of non-binding indications)	Entry/Exit: Not stated in the report (indicated by NUs up to 1,100,023 kWh/h)	*Direction SI-HR: demand for capacity has been received, which does not include incremental capacity* *Direction HR-SI: Received indicative demands for the at IP Rogatec are dependent on the new sources of natural gas i.e. LNG Terminal Krk, IAP or potential new gas flow in direction HU-HR-SI etc.*

Project Characteristics

Germany – Poland

From “EXIT CAPACITY”	*To “ENTRY CAPACITY”*	*Gas year*	*Amount*	*Additional Information*
GCP GAZ-SYSTEM, Poland	GASPOOL, Germany	not stated in the report 2019/20 – 2034/35 (period of non-binding indications)	Exit: not stated in the report (indicated by NUs 910,676 kWh/h) Entry: not stated in the report (indicated by NUs 2,025,676 kWh/h)	*GASPOOL:* *Due to the merging of the market areas in Germany, not ensured that given technical capacity used in the Market Demand Assessment Report will be available from 01.04.2022 onwards + other, currently non-involved TSOs may have to be included* *TYNDP project partially covers non-binding demand [up to 1,112,083 kWh/h/1,116,667 kWh/h (2nd step)]* *General:* *Offer levels will be assessed later, being output of the technical study*

Project Characteristics

Germany – Russia

From "EXIT CAPACITY"	*To "ENTRY CAPACITY"*	*Gas year*	*Amount*	*Additional Information*
Russia	GASPOOL, Germany	not stated in the report 2025/26 – 2039/40 (period of non-binding indications)	Entry: not stated in the report (indicated by NUs 13,191,273 kWh/h)	*GASPOOL:* *Demand indications exceed technical capacity + new capacity according to TYNDP 2017 projects for the expansion of the capacities from Russia to GASPOOL in the Advanced Infrastructure Scenario (based on demand indicated in the "more capacity" market survey)* *Due to the merging of the market areas in Germany, not ensured that given technical capacity used in the Market Demand Assessment Report will be available from 01.04.2022 onwards + other, currently non-involved TSOs may have to be included* *General:* *Offer levels will be assessed later, being output of the technical study*

Project Characteristics

Germany – Netherlands

From "EXIT CAPACITY"	*To "ENTRY CAPACITY"*	*Gas year*	*Amount*	*Additional Information*
GASPOOL, Germany	Netherlands	not stated in the report 2025/26 – 2039/40 (period of non-binding indications)	Exit: not explicitly stated in the report (indicated by NUs up to ~ 12,000,000 kWh/h) Entry: not explicitly stated in the report (indicated by NUs up to ~ 10,000,000 kWh/h)	*GASPOOL:* *Restricted allocable firm capacity from the border Russian Federation/GASPOOL* *TTF:* *Firm capacity*

Project Characteristics

Hungary – Serbia

From "EXIT CAPACITY"	*To "ENTRY CAPACITY"*	*Gas year*	*Amount*	*Additional Information*
Serbia	Hungary	not stated in the report 2019/20 – 2034/35 (period of non-binding indications	Exit/Entry: 12,129,000 kWh/h	*Direction Serbia > Hungary:* *IP Kiskundorozsma is not functional yet and needs further investments to operate.* *Direction Hungary > Serbia:* *No technical studies considered for*

Italy – Malta

From "EXIT CAPACITY"	*To "ENTRY CAPACITY"*	*Gas year*	*Amount*	*Additional Information*
Italy	Malta	From 2025/26	Exit/Entry: 56,000,000 kWh/d	Project connecting Malta to Italy at Gela is already included in 2nd union list of PCI

Project Characteristics

Italy – Greece

From “EXIT CAPACITY”	*To “ENTRY CAPACITY”*	*Gas year*	*Amount*	*Additional Information*
Greece	Italy	2019/20 – 2039/39	Entry/Exit: 357,672,000 kWh/d	TYNDP 2017 + Southern Corridor Gas Regional Investment Plan include two projects for interconnection between Greece and Italy via Turkey: • Poseidon: direct connection Greece and Italy, enabled by Komotini - Thesprotia • Trans Adriatic Pipeline: indirect connection Greece and Italy through Albania Greece: TYDP 2016-2025 includes Komotini - Thesprotia project, with interconnection point to Poseidon project Italy: NDP 2016 – 2025 mentions Poseidon project + Trans Adriatic Pipeline, maybe relevant to the capacity request