ENTSOG: 2nd Stakeholder Joint Working Session for the Incremental Proposal
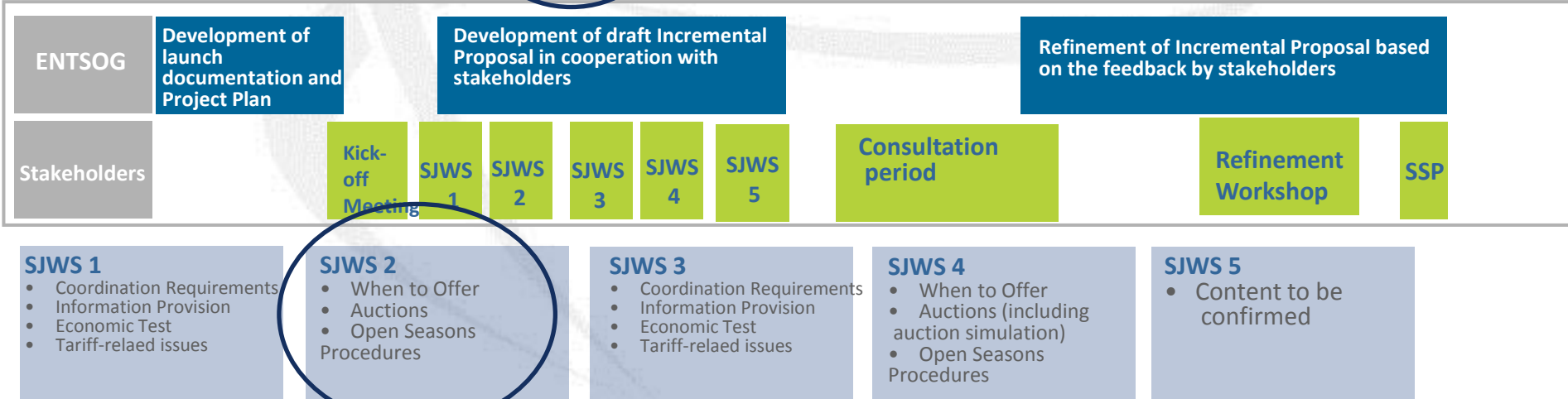## 26 February 2014 – ENTSOG offices

2nd SJWS for the Incremental Proposal

26 February 2014

Mark Wiekens

Advisor, Market Area

Timeline for incremental proposal Development and consultation overview

ACER Guidance

Development of Incremental Proposal with stakeholders on the basis of the ACER Guidance

2013		2014											
Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

ACER Guidance Publication
30 Nov

EC invitation to write Incremental Proposal
19 Dec

Kick Off Meeting
14 Jan

SJWS 1
10 Feb

SJWS 2
26 Feb

SJWS 3
13 March

SJWS 4
25 Mar

SJWS 5
8 April

Draft Proposal
28 May

Consultation Workshop
24 Jun

End of consultation period
28 Jul

Refinement Workshop
23 Sep

Submit Amendment Proposal
31 Dec 2014

Main phases of activities of ENTSOG and stakeholders in BAL NC process

ENTSOG	Development of launch documentation and Project Plan	Development of draft Incremental Proposal in cooperation with stakeholders	Refinement of Incremental Proposal based on the feedback by stakeholders
Stakeholders	Kick-off Meeting	SJWS 1 SJWS 2 SJWS 3 SJWS 4 SJWS 5 Consultation period	Refinement Workshop SSP

SJWS 1
- Coordination Requirements
- Information Provision
- Economic Test
- Tariff-relaed issues

SJWS 2
- When to Offer
- Auctions
- Open Seasons Procedures

SJWS 3
- Coordination Requirements
- Information Provision
- Economic Test
- Tariff-relaed issues

SJWS 4
- When to Offer
- Auctions (including auction simulation)
- Open Seasons Procedures

SJWS 5
- Content to be confirmed

3

Procedure from Guidance to draft legal text

Example: «When to use Open Season instead of auction»

Business rules

ACER GUIDANCE
„Projects of such size and complexity"

Non-exhaustive list of examples:
« *Linking of gas routes, Highly interconnected networks etc.*

Deduction into high level principles

Draft legal text

entso**g**
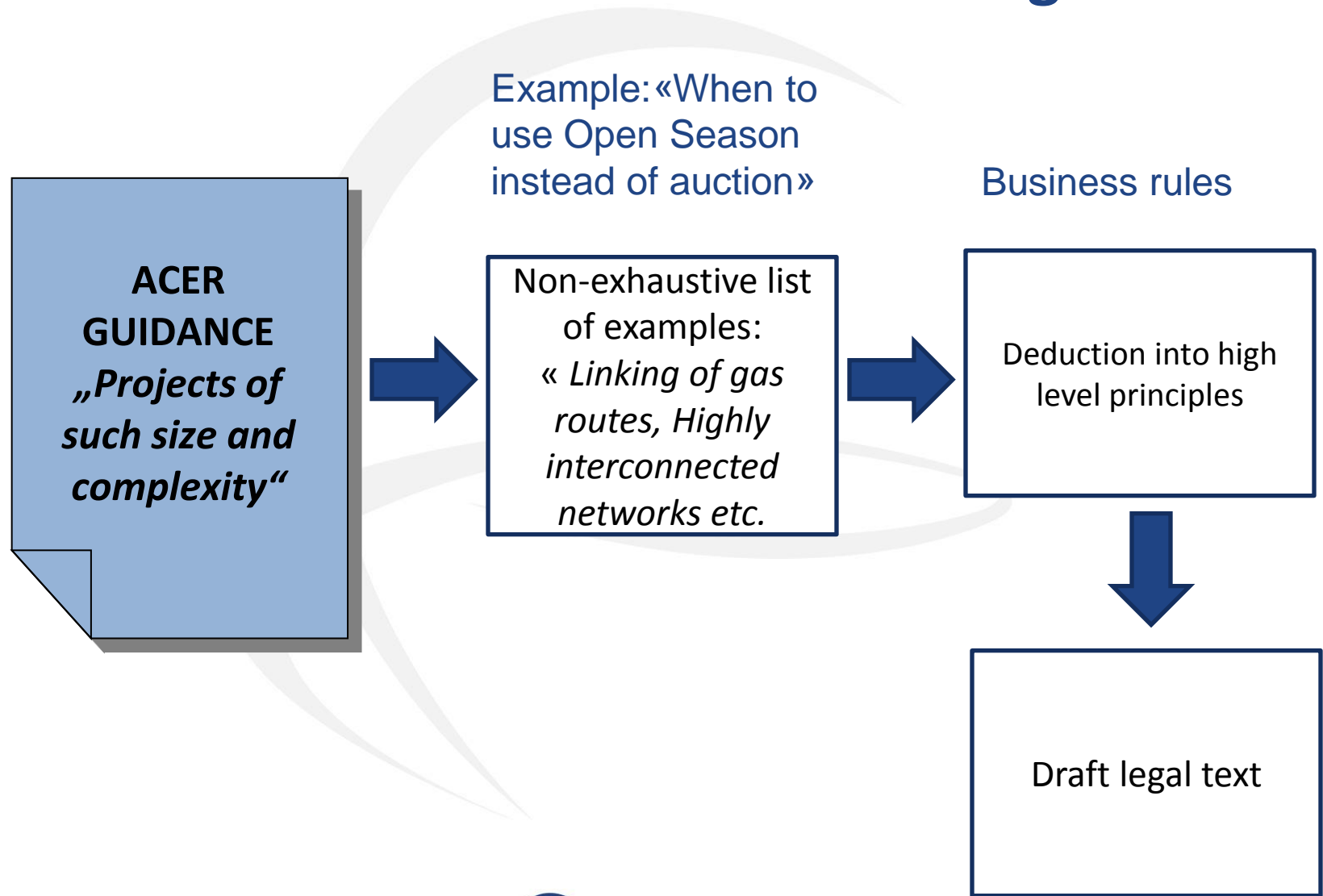
Agenda for today

No.	Description	Time
	Welcome coffee	**10:00-10:30**
1.	ENTSOG opening and introduction	10:30-10:45
2.	When to Offer Incremental/New Capacity ➢ ACER outline of expectations ➢ ENTSOG outline of concepts ➢ View of stakeholders /open discussion	10:45-12:00
	Lunch Break	**12:00-13:00**
3.	Auction Procedures ➢ ACER outline of expectations ➢ ENTSOG outline of concepts ➢ View of stakeholders /open discussion	13:00-14:30
	Coffee Break	**14:30-14:45**
4.	Open Season Procedures ➢ ACER outline of expectations ➢ ENTSOG outline of concepts ➢ View of stakeholders /open discussion	14:45-16:30
5.	Conclusions	16:30-16:45
	Next INC Stakeholder Meeting: 13th March 2014 → 3rd SJWS for the Incremental Proposal	

Housekeeping – recall general information

- Fire escape
  - In case of alarm: Down the staircases close to the entrance – through the lobby – meeting point in front of the mosque

- Attention to the wires from webcast people

- Webcast – questions via mail possible before and during the webcast

- The SJWS discussions (including webcast) are reserved for the stakeholders, but notes and presentations will be available for the press and the public shortly after the meeting
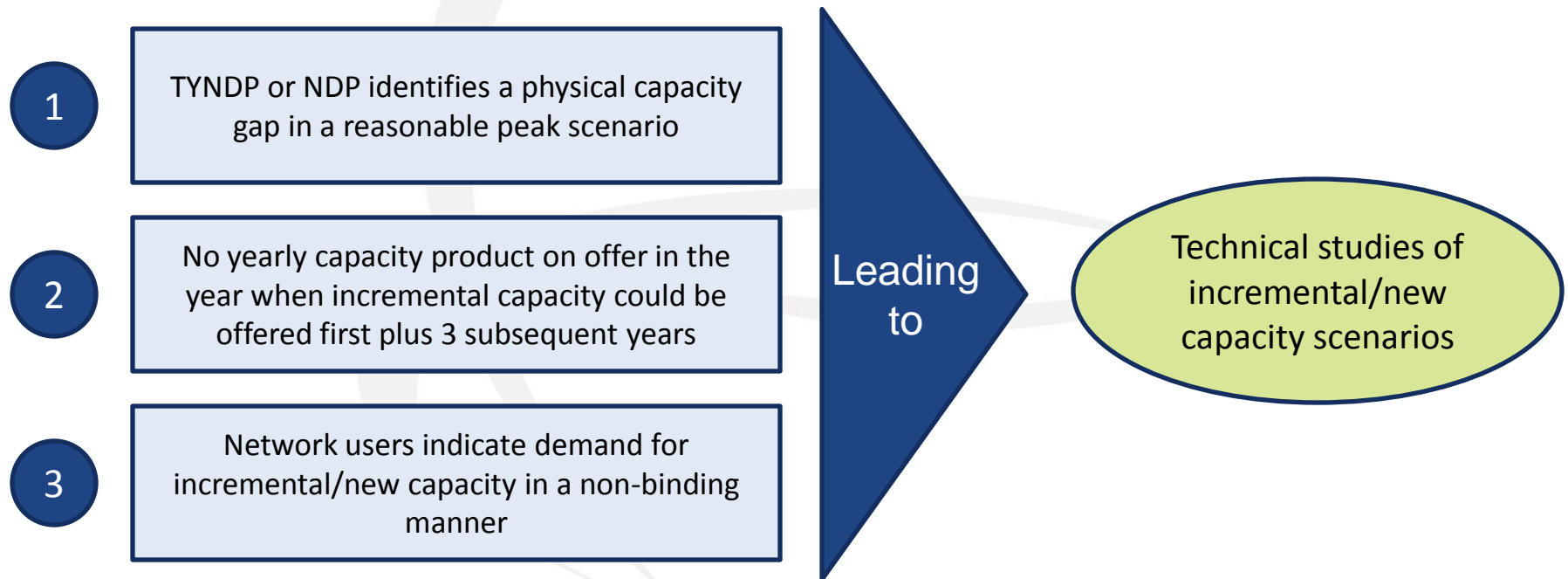
2nd SJWS Incremental Proposal

When to offer Incremental Capacity

Agenda

1. **Conditions for when to offer incremental/new capacity**

2. Concept for non-binding indications

3. Time window for submitting non-binding indications

Conditions for when to offer incremental/new capacity

Three conditions leading to an assessment of technical parameters of potential incremental/new capacity offer scenarios :

1 — TYNDP or NDP identifies a physical capacity gap in a reasonable peak scenario

2 — No yearly capacity product on offer in the year when incremental capacity could be offered first plus 3 subsequent years

3 — Network users indicate demand for incremental/new capacity in a non-binding manner

Leading to → Technical studies of incremental/new capacity scenarios

Demand aggregation increases project viability

In order to ensure efficient technical studies, the following principles should apply to the incremental/new capacity offer process:

> ➢ Technical studies for incremental/new capacity scenarios should be **aggregated** and not commenced more than **once a year**

> ➢ With regards to the design of possible scenarios, TSOs shall assess the signals from the three conditions in **combination**

> ➢ TSOs shall report the planned offer scenarios including explanation to the relevant NRA for **approval**

Allocation of costs related to study work

➢ Depending on the complexity of an infrastructure investment project, the associated study work will imply a considerable level of financial expenses for TSOs

➢ Based on stakeholder feedback, one alternative approach to the proposal in the Launch Documentation could be the following

➢ Study costs must either be recovered by socialisation or by charging the party requesting the capacity:

Gap identified in TYNDP or NDP

No capacity available in auction

➢ Socialisation of costs over all NU

- -

Non binding indication*

➢ Socialisation of costs if other conditions confirm the demand
➢ Possibility of charging the requester if demand is not confirmed by other conditions, subject to NRA decision

* Only applicable if indication is not already within the scope of the NDP development

entso**g**

'When to offer' process

To ensure an efficient and transparent process, the three conditions should be aggregated when designing scenarios for offering incremental/new capacity:
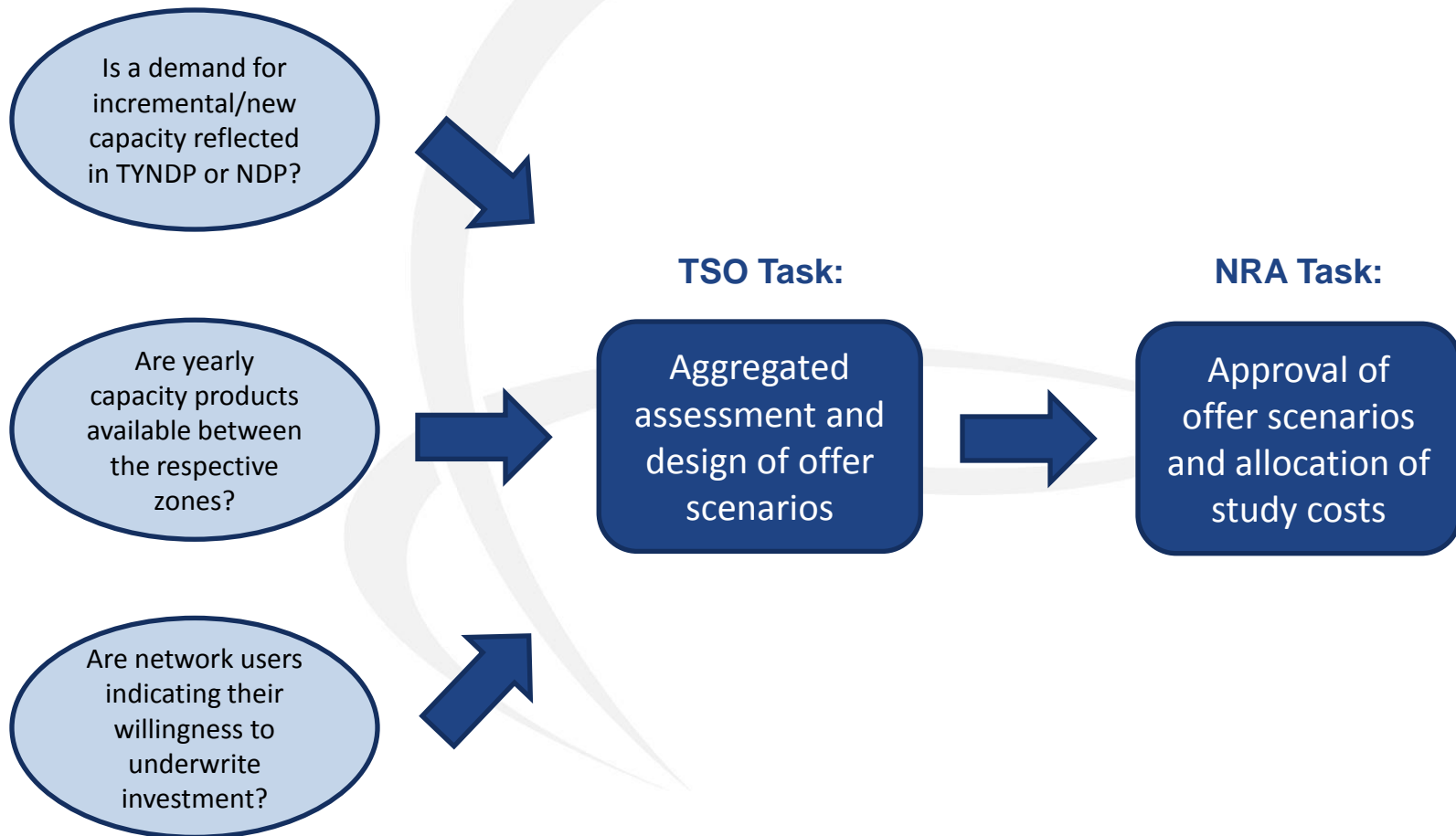
Is a demand for incremental/new capacity reflected in TYNDP or NDP?

Are yearly capacity products available between the respective zones?

Are network users indicating their willingness to underwrite investment?

TSO Task:

Aggregated assessment and design of offer scenarios

NRA Task:

Approval of offer scenarios and allocation of study costs

entso**g**

Agenda

1. Conditions for when to offer incremental/new capacity

2. **Concept for non-binding indications**

3. Time window for submitting non-binding indications

Concept of non-binding indications

➤ As a principal, network users are free to approach the respective TSOs at any time and in any way to express a demand for an increase in capacity at a certain point

➤ For a standardised approach, in which adjacent TSOs need to make a co-ordinated assessment, certain specifications however need to be defined:

> ➤ Minimum required information
> ➤ A common time window for expressing the demand
> ➤ The existence of a specified recipient per TSO
> ➤ The existence of a specified format for expressing the demand per TSO

➤ Specifications allow TSO to efficiently co-ordinate the assessment of non-binding indications potentially leading to the offer of incremental/new capacity

Content of non-binding indications

ACER Guidance specifies minimum content of non-binding indications:

- ➢ The <u>location</u> where incremental/new capacity is requested;

- ➢ The <u>amount</u> of incremental/new capacity requested;

- ➢ The <u>time</u> for which incremental/new capacity is requested.

In addition, ENTSOG is proposing the following minimum content:

- ➢ The <u>flow direction</u> between the respective entry-exit-zones;

- ➢ Whether or not this request is conditional upon another request that has been expressed to adjacent TSOs on a '<u>route</u>';

- ➢ If applicable, whether or not this request has also been expressed to a TSO within the same entry-exit-zone which is also operating an IP to the requested adjacent entry-exit-zone and these requests being mutually exclusive.

Additional requirements are to be defined by TSOs individually…

entsog

Agenda

1. Conditions for when to offer incremental/new capacity

2. Concept for non-binding indications

3. **Time window for submitting non-binding indications**

Timing of non-binding indications

➢ A common time window ensures an efficient co-ordination with adjacent TSOs and NRAs as a full picture of demand becomes visible at a specific point of time;

➢ A common time window allows TSOs to combine the assessment of non-binding indications with the other conditions for offering incremental/new capacity;

➢ For a specification of a time window, the interaction with the yearly long-term capacity auctions and the development of the TYNDP and national NDPs are to be considered

➢ Despite a standardised time window, some degree of flexibility should exist in order to ensure consistency with timings and requirements of national NDPs

Timing of non-binding indications

One possible approach for a specified time window within a year could be:

<div style="border:2px solid #8cc63f; padding:10px;">
1st Monday in March - until - End of April
</div>

- ➢ Starting with the yearly long-term auctions thus clarity is given whether existing capacity is able to satisfy the demand

- ➢ Lasting until end of April gives network users approximately 8 weeks to assess their demand for incremental/new capacity after the auction results

- ➢ Flexibility should be given in order to ensure consistency with the requirements and timing of national NDPs

2nd SJWS Incremental Proposal

Auction Procedures

Agenda

1. **Integration into CAM NC auction algorithm**

2. Revision of bids

Integration into NC CAM auction algorithm

➢ Auction algorithm in NC CAM for yearly auction is the **ascending clock algorithm**;

➢ Ascending clock auction algorithm ensures a **fair** and **transparent** process for the allocation of capacity based on the **willingness-to-pay** of individual network users;

➢ ACER Guidance specifies that incremental/new capacity and existing capacity at an IP shall be auctioned and allocated in **an integrated manner** as bundled capacity products;

➢ Auction methodology refinements should be kept to a minimum;

➢ **The integrity of the ascending clock algorithm shall be kept.**

Methodology to be applied in auctions

Auction methodology needs to:

1. Allow an integrated offer of incremental/new capacity and existing capacity at an IP

2. Be able to offer and allocate incremental/new capacity as bundled products;

3. Be transparent, cost-efficient, non-discriminatory and taking into account willingness to pay;

4. Allow auctioning on a booking platform that allows competition;

5. Ensure an efficient allocation of existing capacity, irrespective of the outcome of the economic test for incremental/new capacity

6. Allow the possibility to accommodate different starting prices for different offer scenarios

7. Allow network users to differentiate their willingness to pay for different offer scenarios

Requirements are combined in the
'parallel bidding ladders approach'

entso**g**

Parallel bidding ladders approach

Parallel bidding ladders for incremental/new capacity auctions at an IP:

➢ One bidding ladder for the offer of existing capacity, without any incremental capacity

➢ One bidding ladder <u>for each incremental/new capacity scenario</u>, offering existing capacity plus the respective amount of incremental/new capacity

Shipper bidding for bundled capacity at one IP with incremental capacity on offer

Bidding Ladder Base Case (only existing):

Price	Cap on offer	Year 1	Year 2	...
X	100	100	100	...

Bidding Ladder Level 1 (Existing plus 25 INC):

Price	Cap on offer	Year 1	Year 2	...
Y	125	125	125	...

Bidding Ladder Level 2 (Existing plus 50 INC):

Price	Cap on offer	Year 1	Year 2	...
Z	150	150	150	...

Changes to existing CAM auction algorithm

Parameter	Existing auction algorithm for annual products in CAM NC	Expected additional requirements of amended auction algorithm for annual products
Auction Algorithm	Ascending Clock	Ascending Clock
Bidding Ladders	Single Bidding Ladder (per IP, year, direction and product)	Parallel Bidding Ladders (per IP, year, direction and product if incremental/new capacity is on offer
Capacity amount	One amount of capacity (per IP, year, direction and product)	One amount of capacity (per bidding ladder)
Starting price	One starting price (per IP, year, direction and product)	One starting price (per bidding ladder)

Integrity of the ascending clock algorithm is kept!

entsog

Agenda

1. Integration into CAM NC auction algorithm

2. **Revision of bids**

Possibility to revise bids

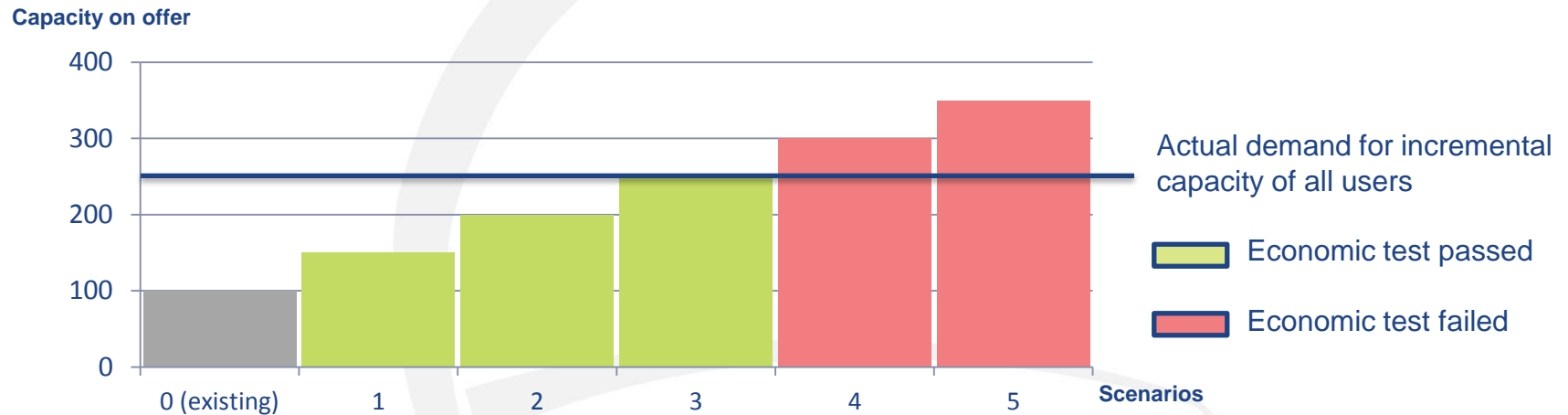**Additional request in ACER Guidance:**

> *ENTSOG is requested to consider:*
> - *the possibility for network users to revise their bids if the economic test fails for incremental and new capacity;*

➤ Possibility for network users to revise bids could be relevant if an economic test fails incremental/new capacity offer scenarios

➤ Examples:

  ➤ Network users are speculating on other network users to make a long-term commitment to underpin an investment

  ➤ Network users decide to commit for additional capacity in order to pass the economic test

➤ ENTSOG has considered the reasoning behind this request and the consequences a possibility to revise bids could have on the complete auction methodology…

Considerations to bid revision 1/2

➢ Different offer scenarios are to be designed in order to 'test' the ceiling of the demand for incremental or new capacity

Capacity on offer

Legend:
- Actual demand for incremental capacity of all users (blue line)
- Economic test passed (green)
- Economic test failed (red)

Chart axis: Capacity values 0, 100, 200, 300, 400. Scenarios: 0 (existing), 1, 2, 3, 4, 5

➢ A negative economic test result for at least one high offer scenario thus is implicit

➢ ENTSOG opinion is that principle of bid revision is not required if a reasonable design of a multiplicity of offer scenarios is conducted

➢ However, ENTSOG has considered one possible principle for a bid revision scheme that could be applied in incremental/new capacity auctions…

Considerations to bid revision 2/2

Example of when red revision could be considered meaningful:

Capacity on offer
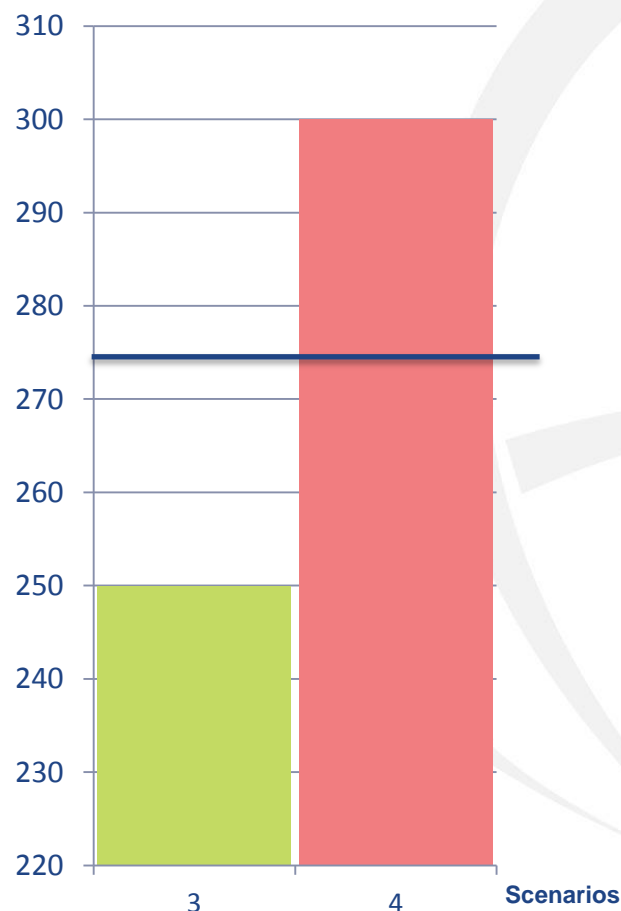
Before Bid Revision	Scenario 3	Scenario 4
Capacity initially requested	275	275
Capacity theoretically allocated	250	275
Bidding rounds	> 1	1
Clearing price	4 Euro (RP + AP)	2 Euro (RP)
UC needed to pass ET at RP	250	300
Economic Test result	Passed	Failed

➢ Scenario 3: Financial exposure of **1.000 Euro** for **250 units** of capacity

➢ Scenario 4: Allowing bid revision for scenario 4 could lead to a financial exposure of **600 Euro** for **300 units** of capacity

entsog

Possible principle for bid revision

Bid revision should only be allowed if:
The bidding ladder with the <u>highest level of increment</u> resulting in a <u>positive economic test</u> outcome clears with an <u>auction premium.</u>

Bidding Ladder for which revision of bids should be allowed:
A revision of bids should only be allowed for the bidding ladder <u>reflecting the next highest level of increment</u> which initially had a negative economic test outcome
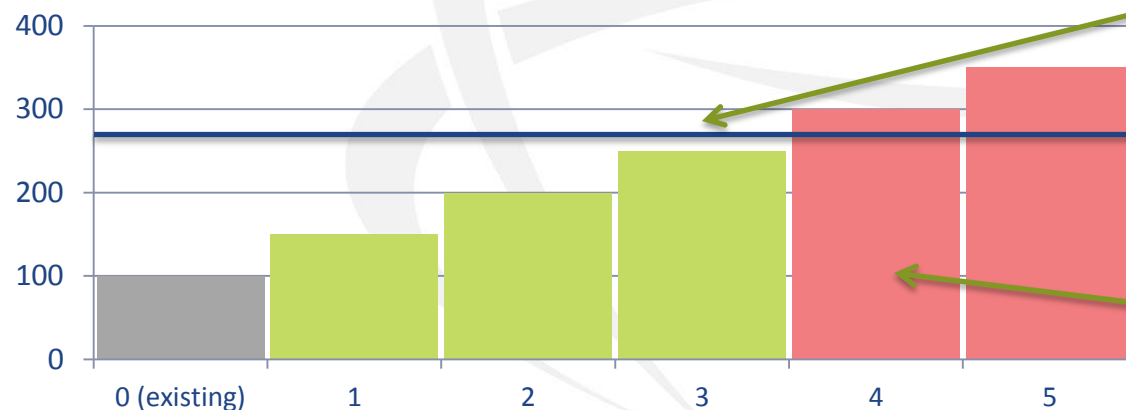
Scenario 3 has cleared at an auction premium and leads to a positive economic test outcome

Scenario 4 has cleared at the reserve price with a negative economic test outcome

Additional complexities of bid revision

➢ Allowing revision of bids is not consistent with the principle of keeping the integrity of the ascending clock algorithm

➢ Allowing revision of bids would increase the complexity of the auction algorithm and potentially lead to some form of bidding speculation

➢ Benefit of principle to network users is questionable

ENTSOG will include the proposed principle for a revision of bids in the auction simulation at SJWS 4!

entsog

ENTSOG: 2ⁿᵈ Stakeholder Joint Working Session for the Incremental Proposal
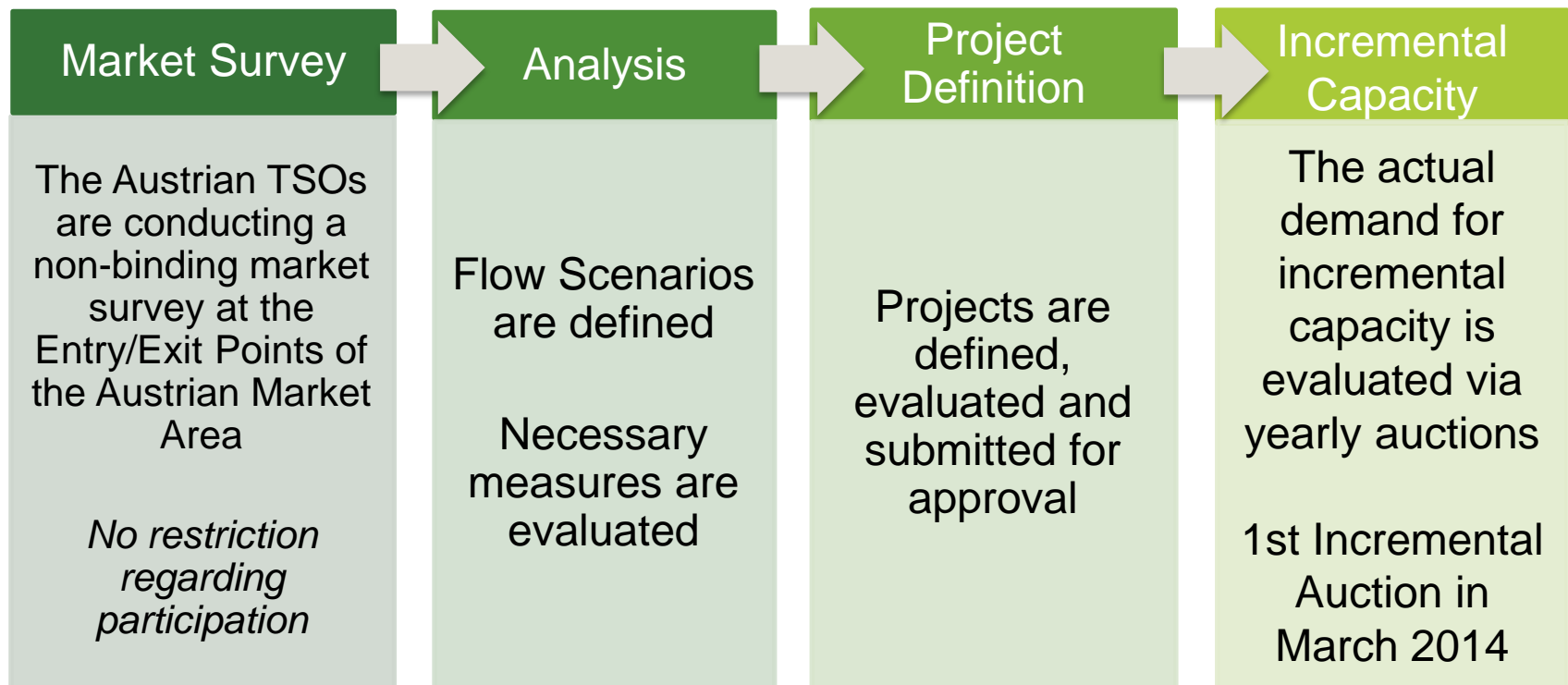## 26 February 2014 – ENTSOG offices

43 Members and **3** Associated Partners in **26** EU countries

4 Observers from EU affiliate countries
- Gassco AS (Norway)
- Swissgas AS (Switzerland)
- GA-MA AD (FYROM)
- Ukrtransgaz (Ukraine)

Energy, everywhere.

GCA's
Incremental Capacity Pilot

From Market Survey to Incremental Capacity on yearly basis - GCA's ICP

Market Survey	Analysis	Project Definition	Incremental Capacity
The Austrian TSOs are conducting a non-binding market survey at the Entry/Exit Points of the Austrian Market Area *No restriction regarding participation*	Flow Scenarios are defined Necessary measures are evaluated	Projects are defined, evaluated and submitted for approval	The actual demand for incremental capacity is evaluated via yearly auctions 1st Incremental Auction in March 2014

GAS CONNECT AUSTRIA

Incremental Capacity Auction Pilot - Process Overview

Customer notification I

Newsletter sent to all activated PRISMA Users & GCA Website publication
(IP, Direction, Auction ID, Product Runtime, Tariff and Price Steps)

Incremental Auction

(Ascending Clock; Yearly auction for 10 years, assuming 5 years lead time; Firm quality; Slot 2)

Customer notification II

Newsletter sent to all customers who placed bid successfully
(PRISMA: Bid confirmation, GCA: Information on required evaluation period)

Evaluation of Auction Results

Communication of final results to participants

GAS CONNECT AUSTRIA

Incremental Capacity Auction Pilot – Expectations

➢ Receiving information on actual incremental capacity demand

➢ Gaining experience concerning process optimization based on feedback received included but not limited to following topics:

- Suitability of existing IT-functionalities

- Requested maximum duration of auction period (<,=, > 15 year ?)

- Single auction algorithm or additional auction algorithm (e.g. Ascending Clock and Uniform-Price)

- etc.

What does the market request?

GAS CONNECT AUSTRIA

Energy, everywhere.

floridotower
Floridsdorfer Hauptstraße 1
1210 Wien, Vienna, Austria
T +43 1 27500-88000

www.gasconnect.at

43 Members and 3 Associated Partners in 26 EU countries

4 Observers from EU affiliate countries
- Gassco AS (Norway)
- Swissgas AS (Switzerland)
- GA-MA AD (FYROM)
- Ukrtransgaz (Ukraine)
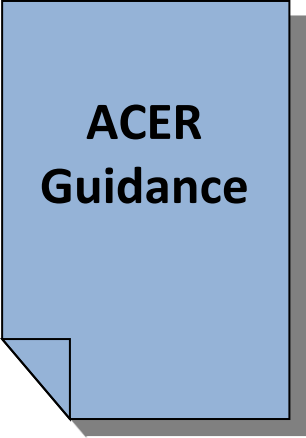
Agenda for exploration of Open Season Procedures

1. Developing principles for when to use OS instead of auctions
2. Open Season procedures
3. Exploring Open Season
   1. Part 1: Examples of when OS>auctions
   2. Part 2: Additions to CAM NC standards
   3. Part 3: The terms of the open season: Allocation rules

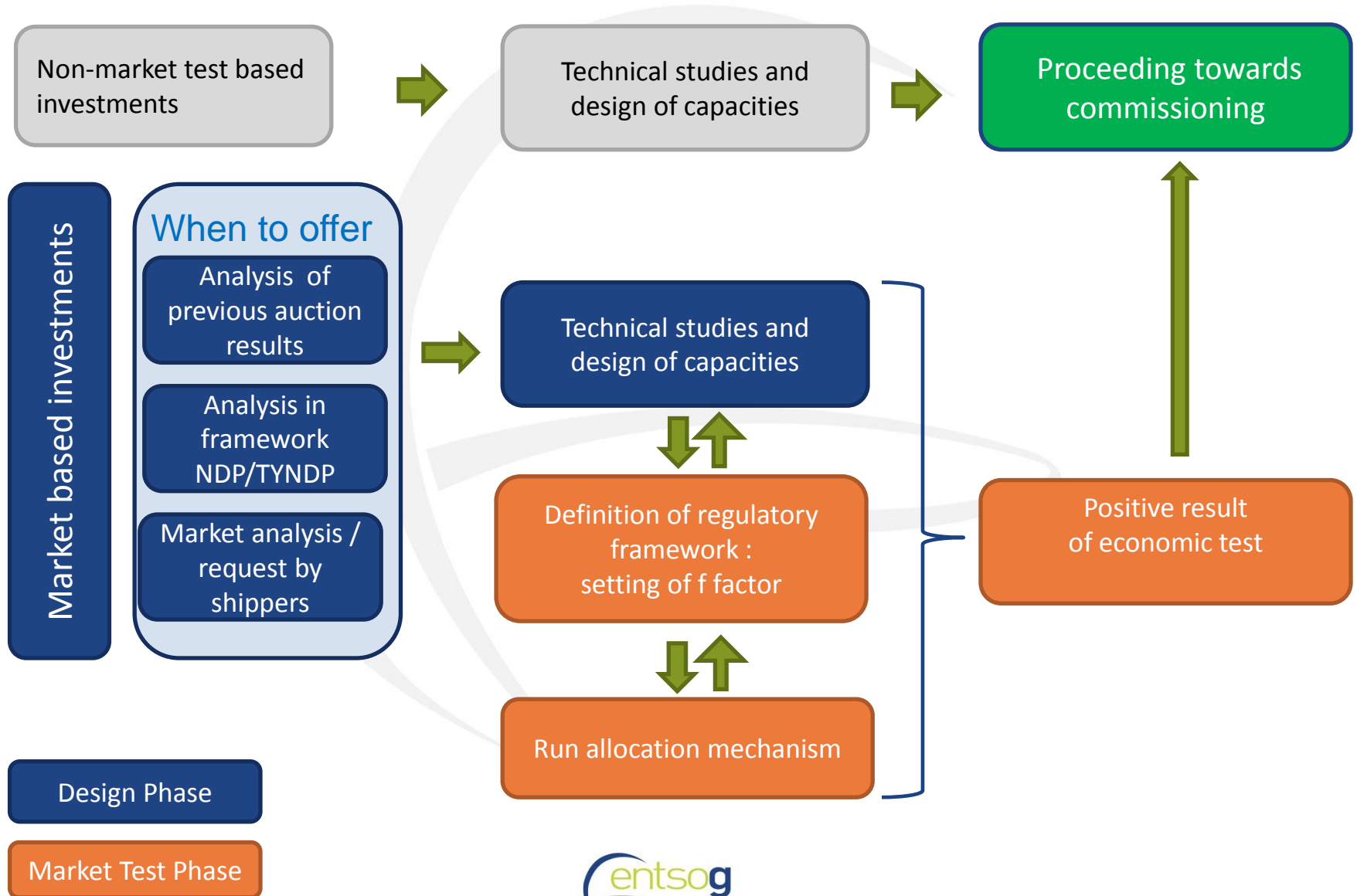# Definition of Open Season Procedure

ACER Guidance

➡️ *'Open season procedure' is a procedure where a transparent and non-discriminatory call for binding commitments of any party for capacity is made by a group of TSOs together spanning two or more market areas, which may be preceded by non-binding expressions of interest of any party, in order to base an investment decision for a capacity expansion on the obtained commitments.'*

High level process diagram

Non-market test based investments

Technical studies and design of capacities

Proceeding towards commissioning

Market based investments

When to offer

Analysis of previous auction results

Analysis in framework NDP/TYNDP

Market analysis / request by shippers

Technical studies and design of capacities

Auction or Open Seasons?

Definition of regulatory framework : setting of f factor

Run allocation mechanism

Positive result Of economic test processing :

Design Phase

Market Test Phase

entsog

High level process diagram Open Seasons

Non-market test based investments → Technical studies and design of capacities → **Proceeding towards commissioning**

Market based investments

When to offer
- Analysis of previous auction results
- Analysis in framework NDP/TYNDP
- Market analysis / request by shippers

→ Technical studies and design of capacities

Definition of regulatory framework : setting of f factor

Run allocation mechanism

Positive result of economic test

Design Phase

Market Test Phase

entso**g**

Principles for when to use OS instead of auctions

ACER Guidance on Open Season Procedures

"The CAM NC amendment should limit the use of open season procedures for incremental and new capacity…"

"extends across more than two market areas;"

"[…] requires an investment project of such size and complexity […] that the procedure described in section 2.e) (auctions) could appear not to be a robust approach."

"ENTSOG is requested to elaborate on provision (ii) in terms of when this is the case."

"The decision whether the criteria are met and an open season can be used is subject to NRAs approval."

Examples for when to use Open Season instead of Auctions:

1. A gas route with many interconnections points – shipper can express conditionalities

    a) Required capacity needed – "fill-or-kill"

    b) Required capacity for a certain time period

    c) Securing capacity bids among multiple IPs

2. Highly interconnected networks where the incremental projects involve more than one IP

3. When the horizon of user commitments that is necessary to pass the economic test is expected to be higher than the 15 years ahead provided in the auctions

4. The range of potential projects is too wide to come to an efficient outcome in an auction

5. When the number of prospective customers is expected to be very low and non-standard flexibility is strongly improving the likelihood of securing requested level of commitment

Shippers can express conditionalities

Open Season Procedures can allow for network users to express certain conditionalities (unlike auctions):

Background: « Gas route with many Interconnection Points »

a) A request to book a certain amount of capacity: **« fill-or-kill »**

   ➢ **Principle:** *If the requested bid of capacity is not obtained, then the network user can cancel the bid.*

b) A request to book capacity for **a certain period.**

   ➢ **Principle:** *If the requested bid of capacity for a certain period is not obtained, then the network user can cancel the bid*

c) A request to book capacity, only when the requested capacity can be booked on **the entire route.**

   ➢ **Principle:** *If the requested bids cannot be obtained on all IPs, then the network user can cancel the bid*

Example 1   Example 2   Example 3   Example 4   Example 5

Example I.a) Booking of a certain amount of capacity: "Fill or kill"

Capacity Units

100 units

75 units

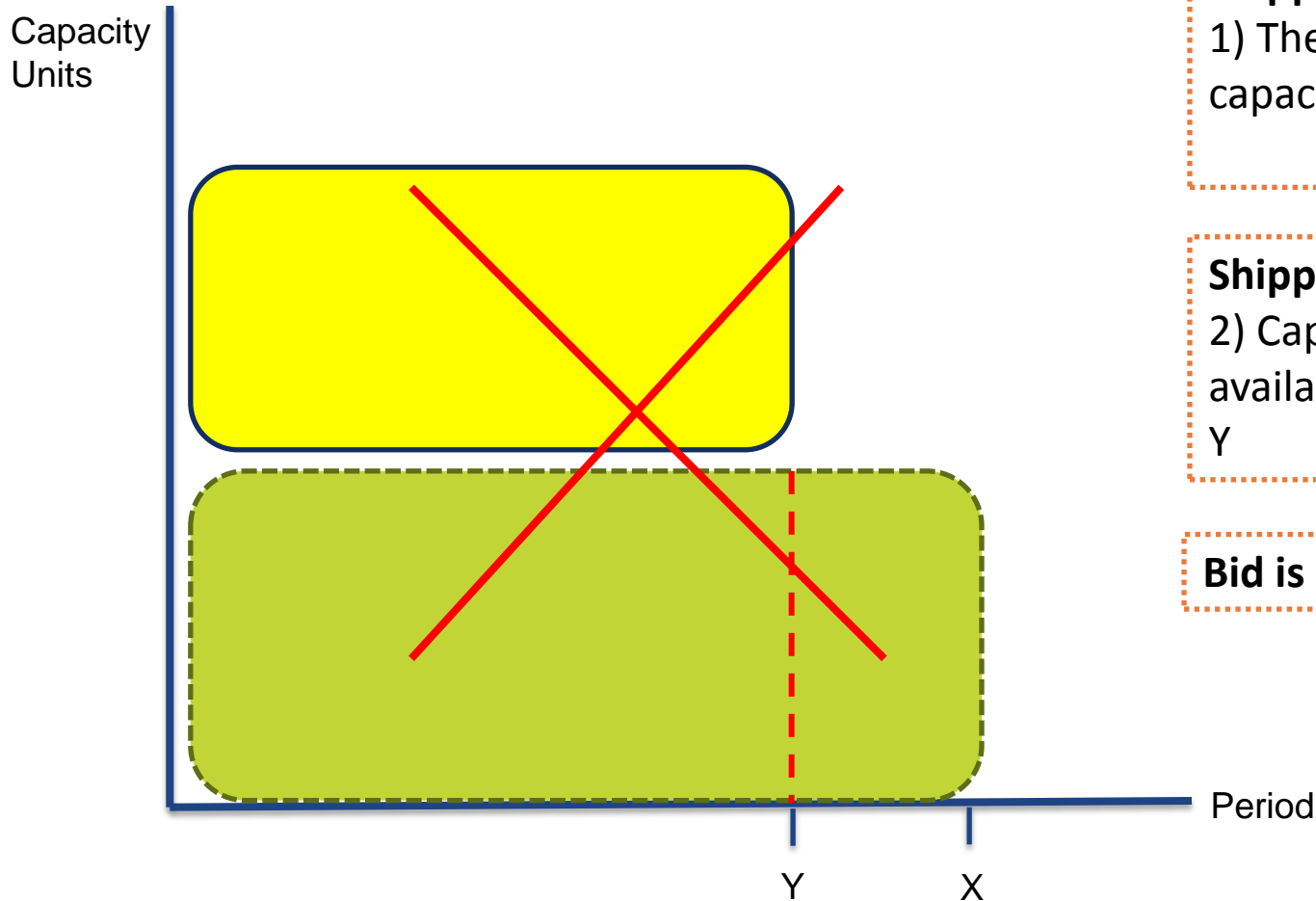Requested Capacity

Available capacity for allocation
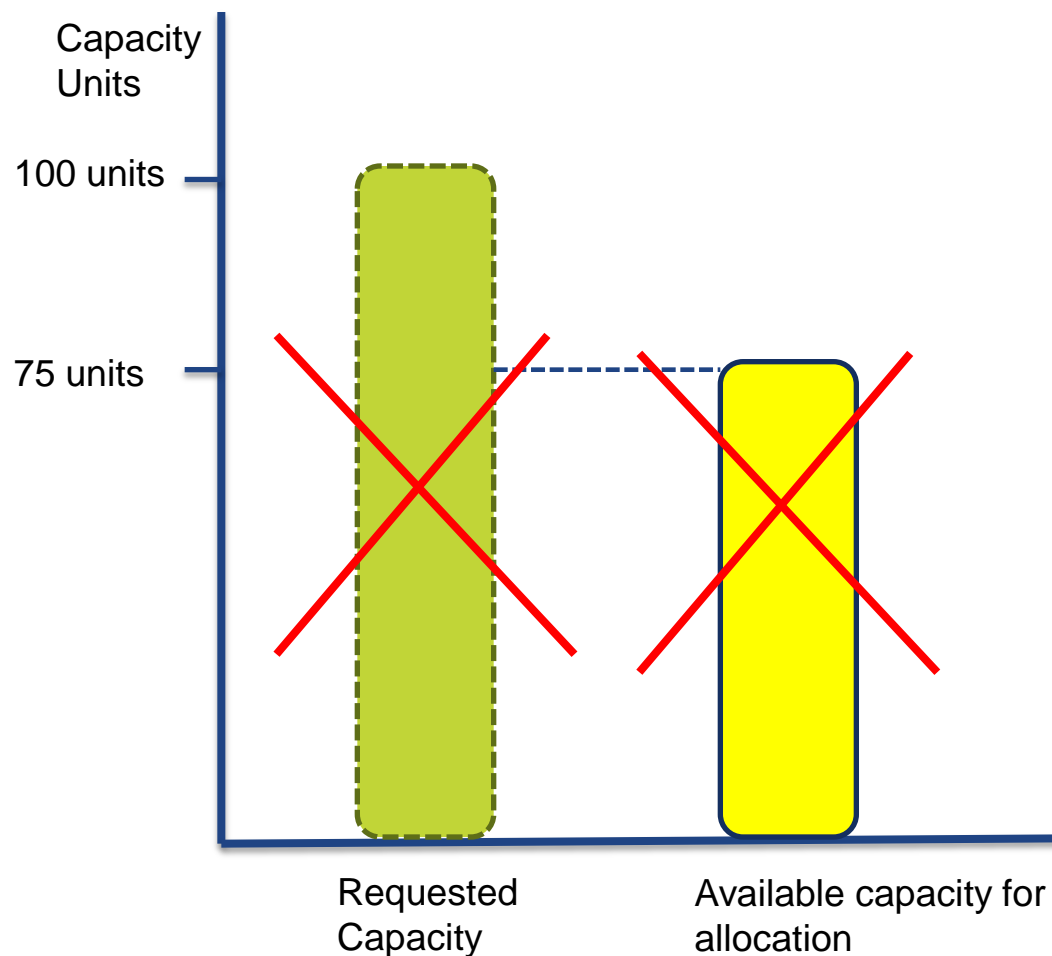
Shipper request
1) The shipper requests 100 units

Shipper allocation
2) Only 75 units of capacity is available

Bid is abandoned

Example 1 Example 2 Example 3 Example 4 Example 5

Example I.b): Booking of capacity for a certain period

Shipper request
1) The shipper requests capacity for period X

Shipper allocation
2) Capacity is only available up until period Y

Bid is abandoned

Example 1 · Example 2 · Example 3 · Example 4 · Example 5

Example I.c.1) A request to book capacity, only when the requested capacity can be booked on the entire route – succesful bid

Market Area A

Market Area B

Market Area C

Market Area D

IP 1   IP 2   IP 3   IP 4   IP 5   IP 6

Bid 50 units

Bid 50 units

Bid 50 units

Shipper X bids 50 units

Example 1 | Example 2 | Example 3 | Example 4 | Example 5

Example I.c.2) A request to book capacity, only when the requested capacity can be booked on the entire route – unsuccesful bid

Market Area A

Market Area B

Market Area C

Market Area D

IP 1 IP 2

IP 3 IP 4

IP 5 IP 6

Bid 75 units

Bid 75 units

Bid 75 units
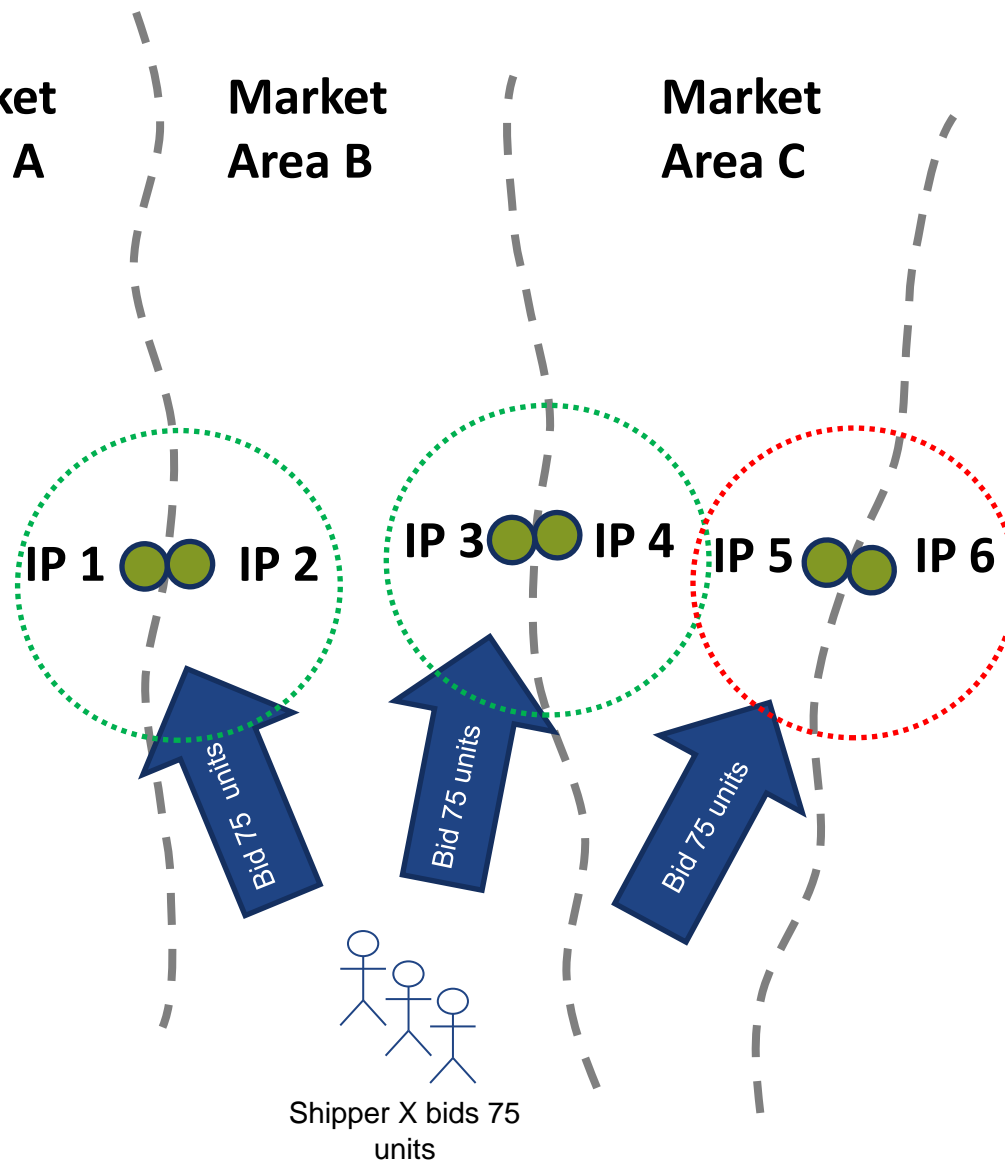
Shipper X bids 75 units

1) Setting: 4 market areas and 3 bundled IPs
IP 1+2, IP 3+4 and IP 5+6

2) Shipper request
Shipper X requests 75 units of bundled capacity at IP 1+2, IP 3+4 and IP 5+6

3) Shipper allocation
Capacity is available for allocation at bids at IPs 1+2 and 3+4, but not at IPs 5+6 -> cancellation of bid

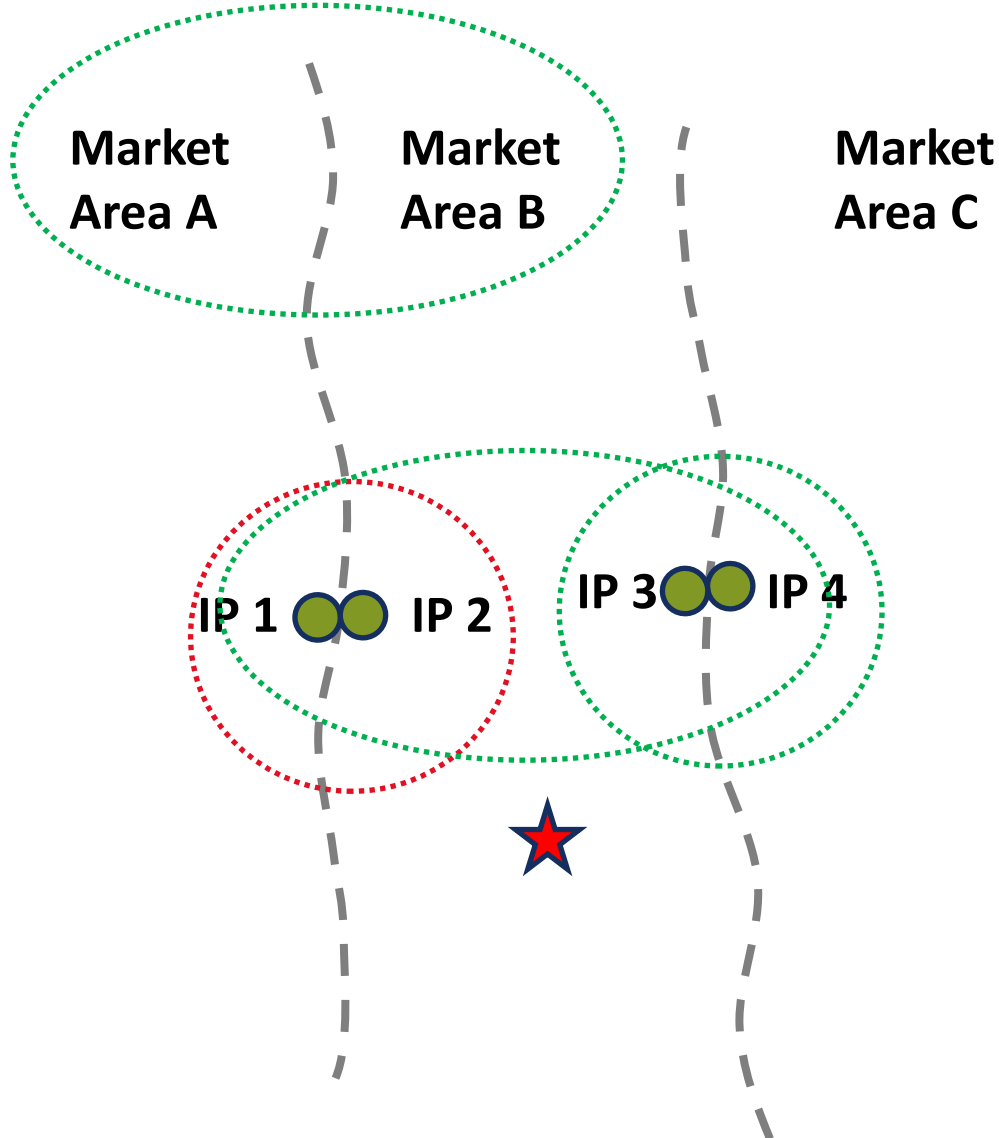| Example 1 | Example 2 | Example 3 | Example 4 | Example 5 |

OS> Auctions: Example II
Highly interconnected networks

Open Seasons are better than autions in higly interconnected networks with more than 1 Interconnection Point »

Background

- A typical example could be the need to build an additional Compressor station within the network in order to increase the capacity at a certain IP.

- Building such an additional compressor in a highly meshed network would typically not only increase capacity in that one IP, but would also increase capacity in other IP's.

- The passing of the economic tests in that case would be depending on the demand on the other impacted IPs and would require auctions at those different locations to become conditional to each other, which would be overly complex

- ➢ **Principle:** *Open Season Procedures should be allowed in situations with highly connected networks with more than 1 interconnection point*

Example 1 | Example 2 | Example 3 | Example 4 | Example 5

Example II: Highly interconnected networks

Market Area A

Market Area B

Market Area C

IP 1 ● ● IP 2

IP 3 ● ● IP 4

★

1) Setting: 3 market areas and 3 bundled IPs
IP 1+2, IP 3+4 and IP 5+6

2) Increased demand
a) Demand for incremental capacity between Market Area A & B
b) So compressor station is required in Market Area B (red star)
c) Costs would be too high to be covered at IP 1&2…
d) …but the compressor station allows for additional capacity at IP 3&4
e) A combined allocation of incremental capacity over IP 1&2 and IP 3&4 significantly increases the likelihood of passing the economic test

3) Open Season more efficient
a) Only an Open season process can shape such an allocation, so NRAs may select this kind of market test

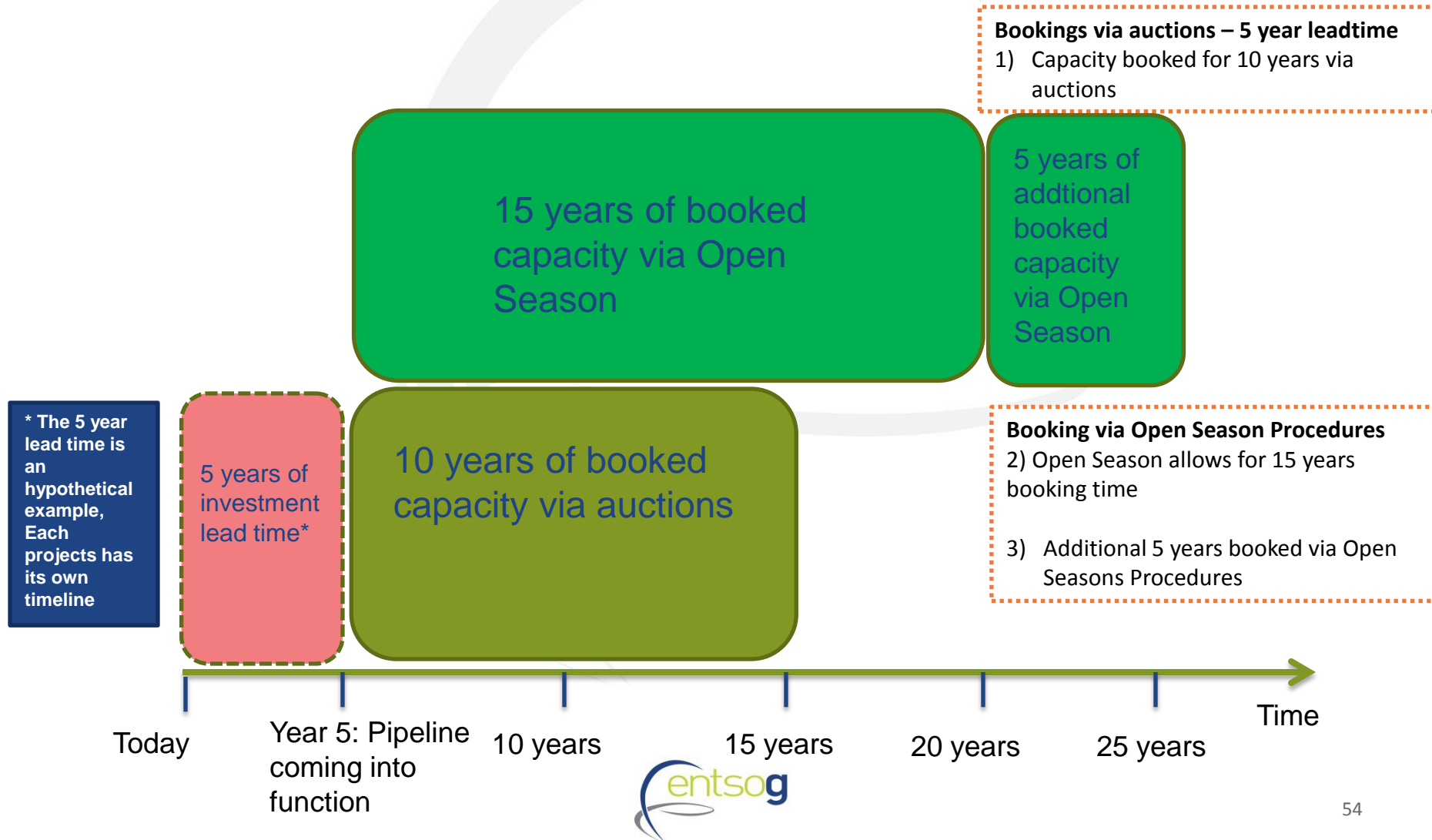Example 1   Example 2   Example 3   Example 4   Example 5

OS> Auctions: Example III

When the horizon of user commitments that is necessary to pass the economic test is expected to be higher than the 15 years ahead provided in the auctions

Background

- A typical example could be the construction of an additional pipeline where the user commitments, required to pass the economic test, are longer than the booking horizon for auctions.

- ➤ **Principle:** *If the economic test cannot be satisfied within the time frame when applying auctions, then Open Season can be applied*

Example 1 Example 2 Example 3 Example 4 Example 5

Example III: When the horizon of user commitments that is expected to be higher than the 10 years provided in the auctions

Bookings via auctions – 5 year leadtime
1) Capacity booked for 10 years via auctions

15 years of booked capacity via Open Season

5 years of addtional booked capacity via Open Season

Booking via Open Season Procedures

2) Open Season allows for 15 years booking time

3) Additional 5 years booked via Open Seasons Procedures

10 years of booked capacity via auctions

5 years of investment lead time*

* The 5 year lead time is an hypothetical example, Each projects has its own timeline

Today

Year 5: Pipeline coming into function

10 years

15 years

20 years

25 years

Time

entsog

54

Example 1 Example 2 Example 3 Example 4 Example 5

OS>Auctions: Example IV
The range of potential projects is too wide to come to an efficient outcome in an auction

Background

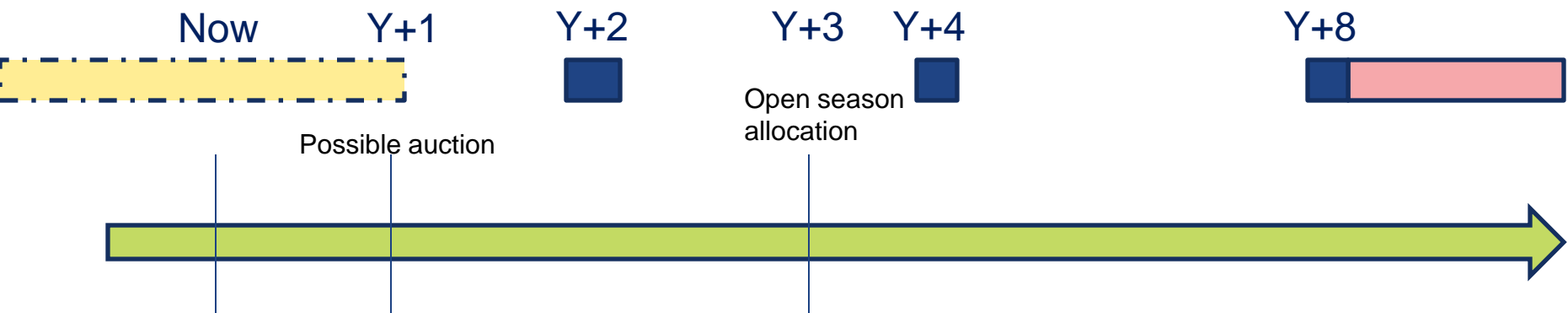Shippers have different capacity requests and auctions cannot satisfy the diversity in their requests.

➢ **Principle:** *If the range of potential projects is to wide to come to an efficient outcome in an auction, then Open Seasons should be permitted*

Example:

• Capacity request have been lodged by 4 shippers at one IP, including S1, S2, S3, S4

• S2 and S4 are interested in big amount of capacity whereas S1 and S3 are interested in small increments

• First year of availability for increments are ranging between Y+2 and Y+8

• The solutions to satisfy request of shippers 1 and 3 requires 6 months of study (guesstimate) before auctions can be launched

• The solution for shippers S2 and S4 (investments) require 2 year studies (guesstimates) before OS allocation or auction can be performed

• At this stage an integrated auction can be launched to test only the requests of shippers S1 and S3

Example 1 · Example 2 · Example 3 · Example 4 · Example 5

OS>Auctions: Example IV
The range of potential projects is too wide to come to an efficient outcome in an auction

- Handling an auction early to allocate small incremental capacity may not be the best solution :
  - S2 and S4 not satisfied by capacity offered
  - S1 and S3 may not get the capacity in the auction if S2 and S4 are bidding
- The NRAs may decide an OS is better since it will cover a wider scope of scenarios, while converging progressively to a few of them
- They may think better to integrate all the request in one industrial file, rather than handling them separately (otherwise, two separate processes, two economic tests, may be not the more efficient)
- The Open season process is involving the interested shippers to further define which solution are actually the most likely to succeed and are worth being tested

Now   Y+1   Y+2   Y+3   Y+4   Y+8

Possible auction

Open season allocation

Example 1 Example 2 Example 3 Example 4 Example 5

OS> Auctions: Example V

➢ **Principle:** *In situations where additional conditionalities are requested that cannot be granted within the framework of integrated auctions, Open Season Procedures shall be allowed.*
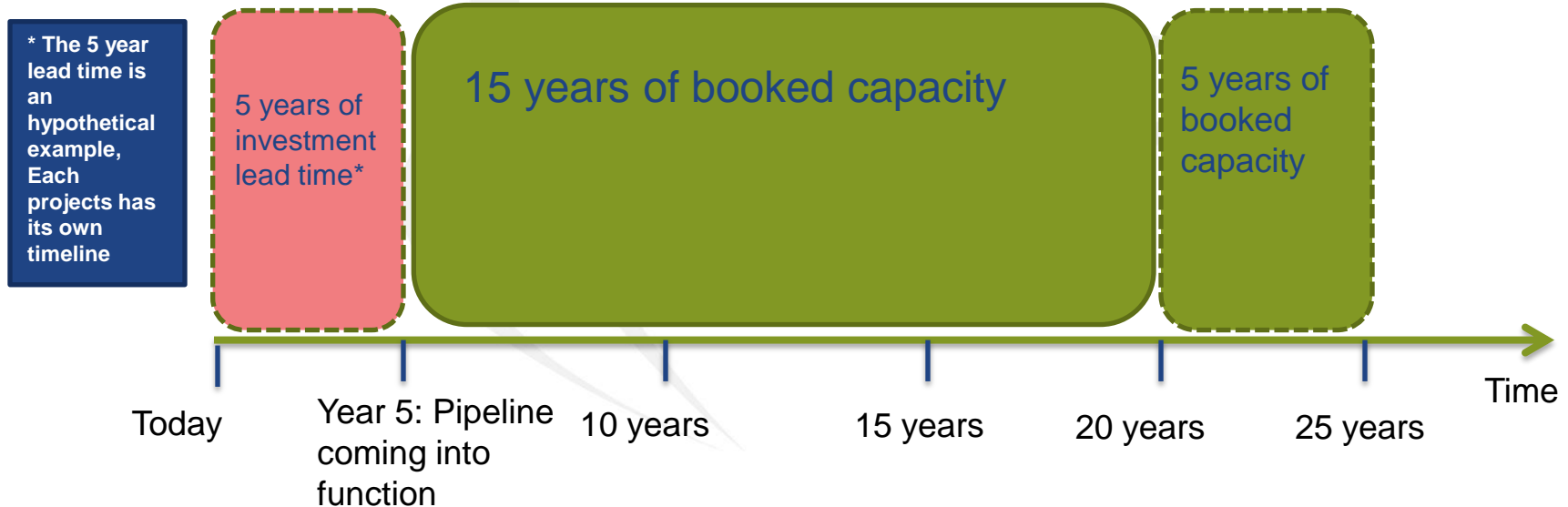
Background:

- One prime-mover shipper « S-Company » is requesting incremental/new capacity at an IP
  - ad-hoc conditionality in his commitment
  - interrelation with an industrial project

- The Open season provides the opportunity to have a continuous dialogue until the end of the binding phase, that lasts until the allocation

- The Open season process is best suited to enable TSOs and NRAs to assess the flexibility than they can grant to the S-Company
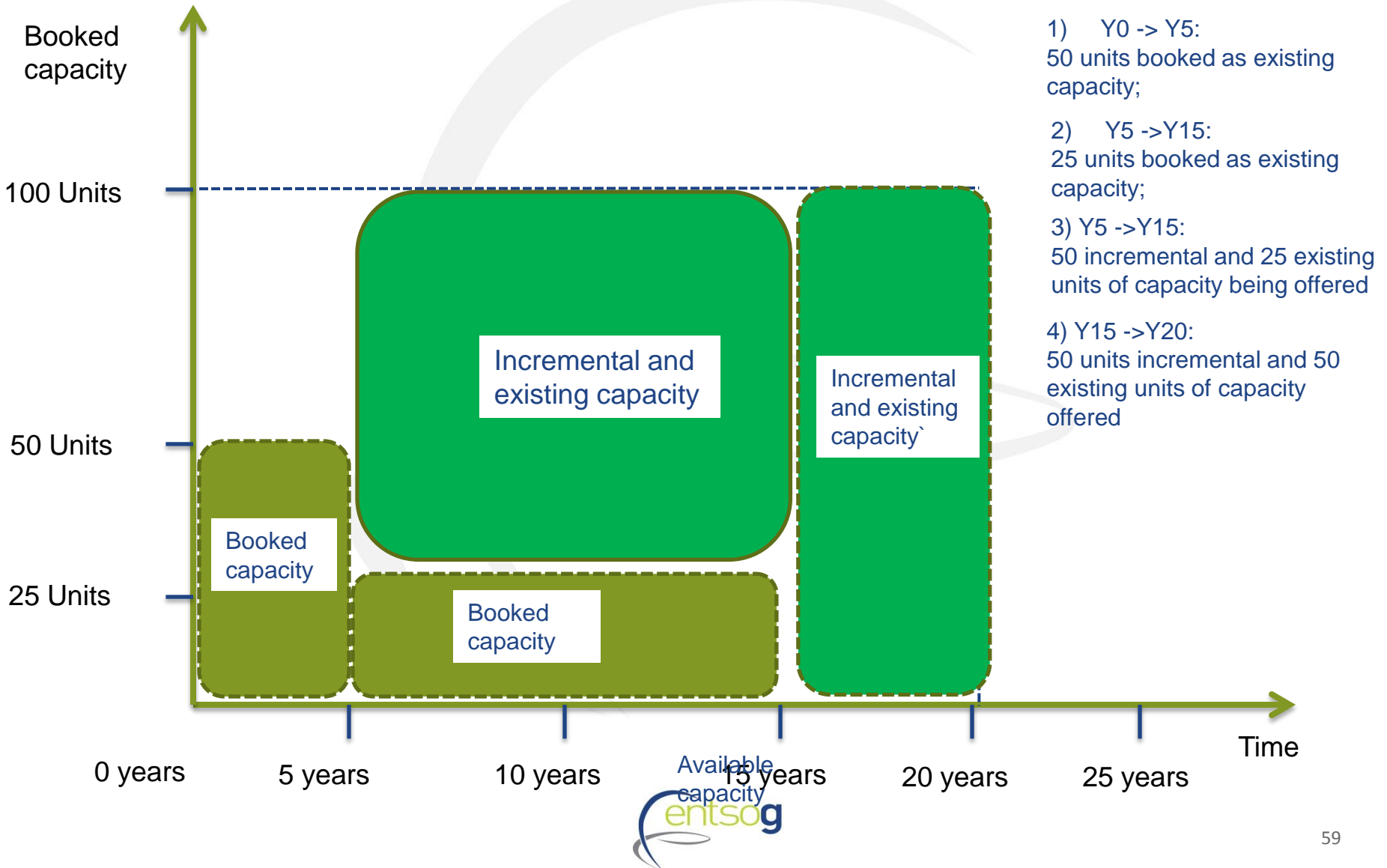
Amendments from CAM NC I

5* + 15 years principle: Investment lead time + 15 year booking

15 + 5 years principle: Possibility to have an additional period of 5 years of capacity booking subject to NRA approval

* The 5 year lead time is an hypothetical example, Each projects has its own timeline

5 years of investment lead time*

15 years of booked capacity

5 years of booked capacity

Today

Year 5: Pipeline coming into function

10 years

15 years

20 years

25 years

Time

Amendments of CAM NC II :
Inclusion of existing capacity products in offer for new or inc. capacity

1) Y0 -> Y5:
50 units booked as existing capacity;

2) Y5 ->Y15:
25 units booked as existing capacity;

3) Y5 ->Y15:
50 incremental and 25 existing units of capacity being offered

4) Y15 ->Y20:
50 units incremental and 50 existing units of capacity offered

Booked capacity

100 Units

50 Units

25 Units

Incremental and existing capacity

Incremental and existing capacity`

Booked capacity

Booked capacity

0 years   5 years   10 years   Available capacity 15 years   20 years   25 years

Time

entsog

Allocation mechanism

➤ Aim of an Open Season should always be to satisfy all demand on the condition of the economic test being passed

➤ As long as offer > demand the allocation mechanism is of minor importance

➤ However, due to the stepwise nature of investment (caused by industry standards for pipeline diameter, compressor size etc.) it might happen that not all demand can be meet at condition that pass the economic test

➤ For these specific cases deciding on the allocation mechanism is part of striking the right balance between the economic viability of the project, the demand of participating shippers, access/competitiveness effect on the market etc.

Allocation rules in the Guidance & GGPOS

GGPOS Article 41:

"Different capacity allocation methods can be used, but the method that the sponsor chooses must be transparent and non-discriminatory. The NRA must ensure that this is the case."
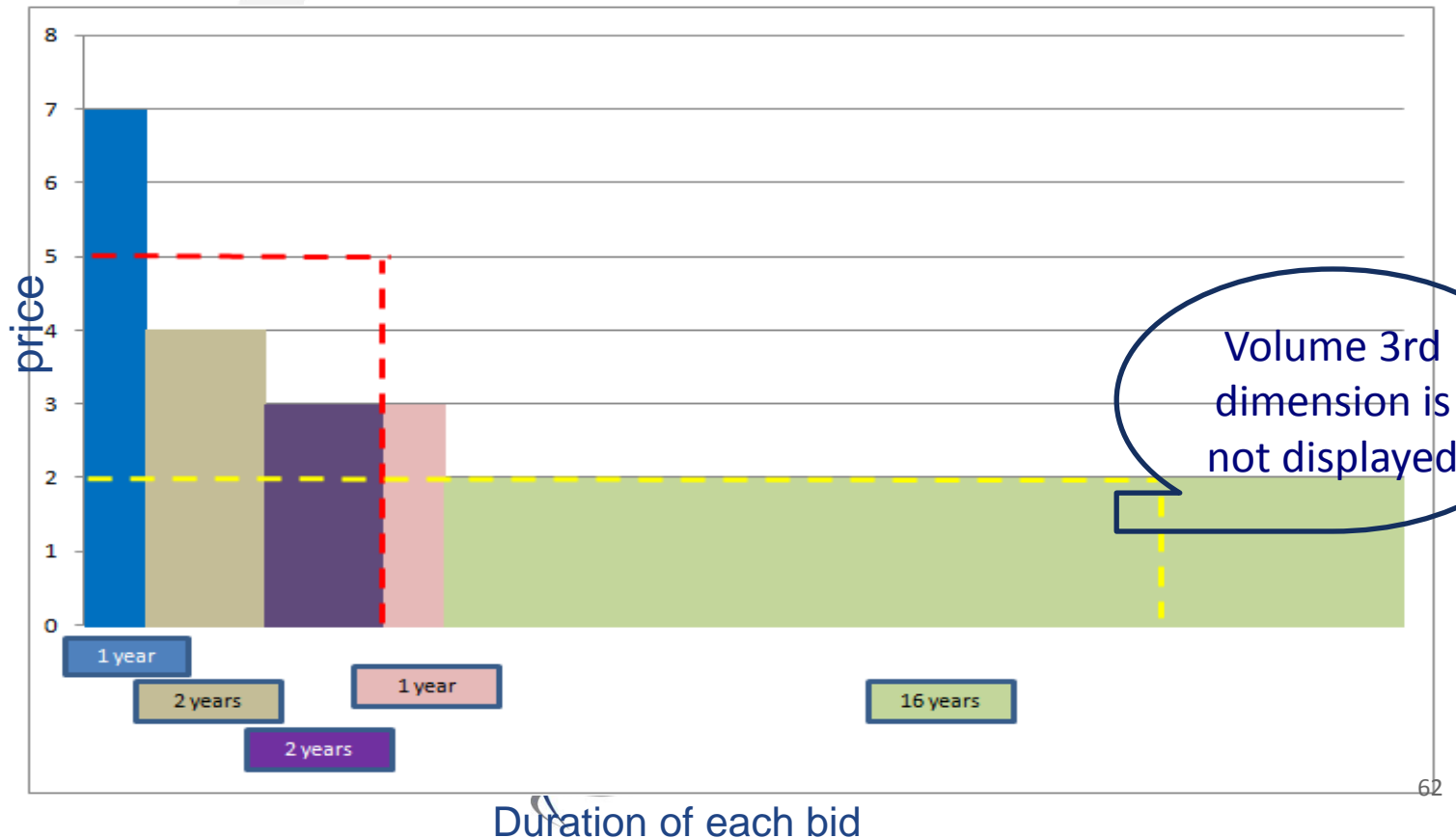
ACER Guidance on Willingness-to-pay or pro-rata:

- *« It should offer non-discriminatory opportunities to make commitments for capacity products.*

- *« …an allocation rule based on the willingness-to-pay should be used in priority ».*

- *« Pro-rating is the only other fall-back allocation rule that should be allowed ». « …its usage should be conditional on the demonstration that the (sole) use of willingness-to-pay would be impractical ».*

However, pro-rata has some of the same drawbacks as willingness-to-pay

Allocation rules: Alternative to CAM algorithm

- Example: Green shipper provides sufficient LT commitment (16 years) to pass economic test, but looses the first 6 years to competitors
- This jeopardizes the success of market test in case of fill or kill
- Alternative allocation mechanisms are required to provide for incremental or new capacity
- F-factor guarantees the NRA required level of ST users' access

- **Bars depicts price bids and duration of bids.**
- **The dotted lines depict NPV for passing the economic test: 5 years at price 5 or 15 years at price of 2**
- **Volumes of bids are not shown**

Volume 3rd dimension is not displayed

Duration of each bid

Alternative allocation rules in open seasons

Timing considerations	Evaluation
Net Present Value	Favours short term commitment
Net Value	No bias between short term and long term

Volume considerations	Evaluation
NPV or Net Value	Favours large commitments above small
NPV or NV divided by largest commitment in any year	No bias between large commitments and small

- Equal treatment of large and small commitments is attractive for new entrants
- Alternatives are not limited to presented examples

Conclusion

- Open Season Procedures is going to offer both existing and incremental capacity

- Open Season Procedures allocation rules will be driven by principles set in Guidance and GGPOS

- Too specifically defined Open Season allocation rules might not lead to the most efficient outcome in all cases

- The GGPOS definition is more in line with the spirit of Open Season

ENTSOG: 2nd Stakeholder Joint Working Session for the Incremental Proposal
26 February 2014 – ENTSOG offices

43 Members and 3 Associated Partners in 26 EU countries

4 Observers from EU affiliate countries
- Gassco AS (Norway)
- Swissgas AS (Switzerland)
- GA-MA AD (FYROM)
- Ukrtransgaz (Ukraine)

Draft RF/GG vision of "Coordinated Open Season" for "New Capacity" within ENTSOG "Incremental Proposal"

Andrey A.Konoplyanik – Alex Barnes,
Workstream 2 "Internal market", Russia-EU Gas Advisory Council &
Russia-EU Informal Consultations
on EU Regulatory Topics /(3rd EU Energy Package)

2nd JSWS on ENTSOG "Incremental Proposal" (CAM NC amendment),
Brussels, ENTSOG, 26 February 2014

COS: Objective and Context

- Aim to develop CAM NC amendment for coordinated open season(s) for new capacity that enables new sources/routes of gas supply to reach Europe:
  - New capacity is capacity which does not yet exist
  - For projects which cross three or more entry-exit zones & thus should be large in size (economy of scale) compared to existing TSOs
- Capacity developed by this route would be subject to all aspects of TEP (CAM, CMP, Balancing) as the proposal is aimed at developing a regulated approach for new capacity, as an alternative to Article 36 Exemption.
- Proposal is consistent with TEP, ERGEG Guidelines for Good Practice for Open Seasons (GGPOS-2007) and ACER Guidance on Incremental Capacity.
- Issues discussed with regulators, ACER & EU Commission & ENTSOG representatives and other stakeholders as part of the EU-Russia Informal Consultations/GAC process since 2010 (see reserve slides), esp. during 2013
  - Series of workshops within Case Study Task Force, June-Sept'2013
- Proposal sent to ACER on 17th September 2013 as part of input to ACER thinking on Guidance on Incremental Capacity (a final in a series of COS-related doc's from Consultations/WS2 GAC).

A.Konoplyanik-A.Barnes-ENTSOG Incremental Proposal-2nd JSWS, Brussels, 26.02.2014

Auction & Open Season are *two different* economic models => separate procedures within TEP/CAM NC

Market test

Incremental vs New Capacity

Criteria: 1IP, size...

Criteria: new IP, 2IP+, size...

CHINESE WALL BETWEEN TWO PROCEDURES

Incremental Capacity

New Capacity

Auction

Coordinated Open Season (COS)

Incremental Capacity *offered* by TSO to market participants (potential shippers) = *top bottom* approach => *system-based*

At least until economic test on COS gives negative result (see reserve slides)
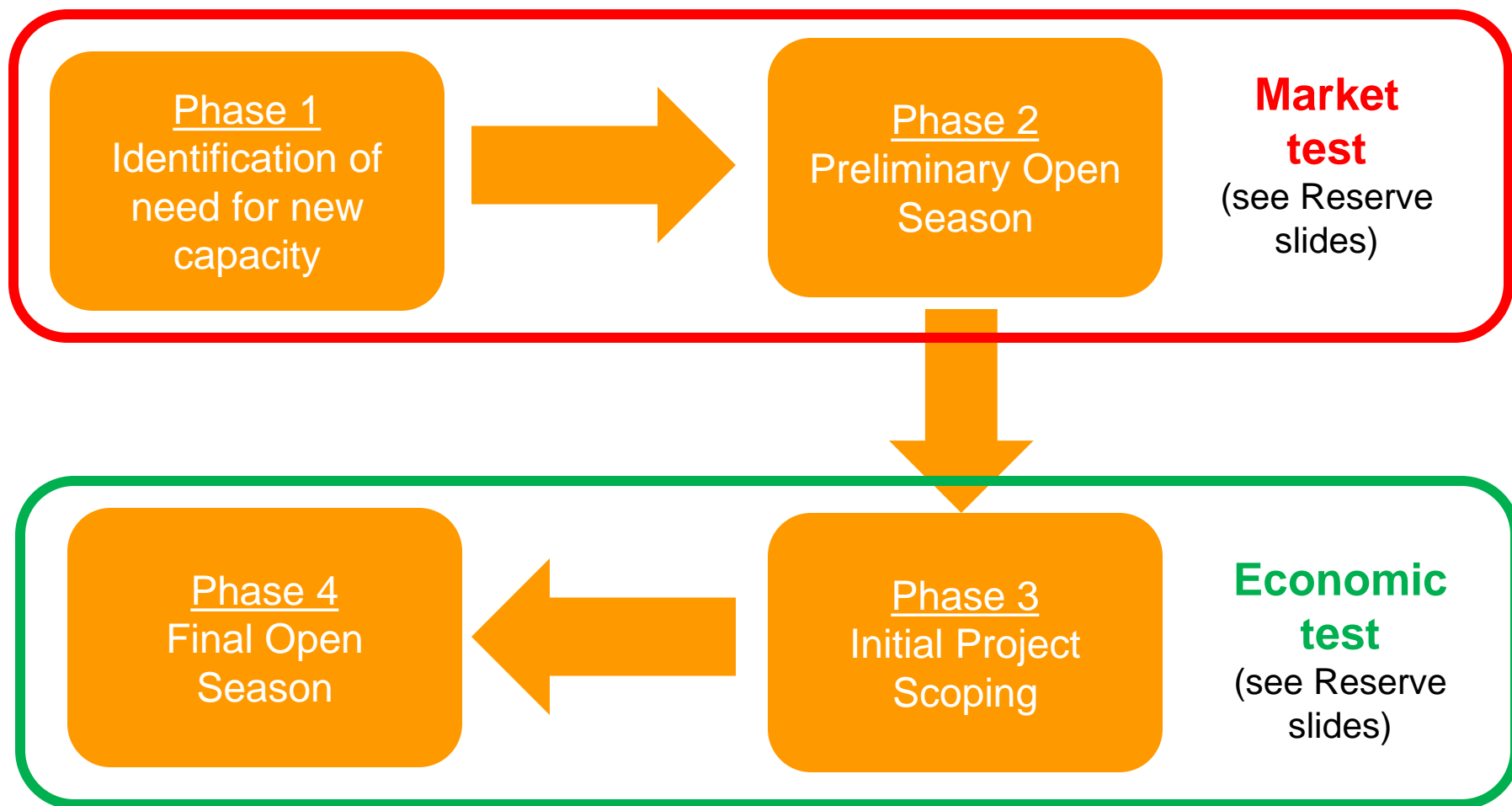
New Capacity *requested* by market participants (potential shippers) from TSO = *bottom up* approach => can/should be *project-based* (see reserve slides)

A.Konoplyanik-A.Barnes-ENTSOG Incremental Proposal-2nd JSWS, Brussels, 26.02.2014

Outline structure of the Open Season
(as proposed in RF/GG 'COS-Strawman' Paper)

Phase 1
Identification of need for new capacity

→

Phase 2
Preliminary Open Season

Market test
(see Reserve slides)

Phase 4
Final Open Season

←

Phase 3
Initial Project Scoping

Economic test
(see Reserve slides)

COS Phase 1: Identification of need for new capacity

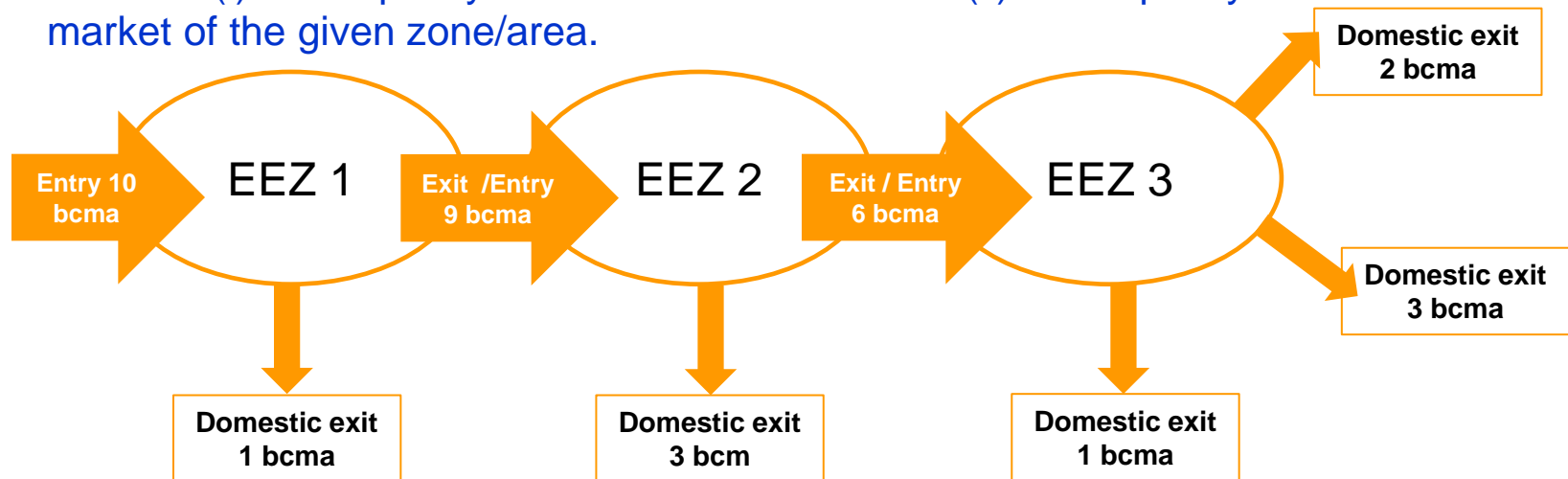**Three alternative ways in which a project may be initiated:**

- **Shippers** request capacity for new supply routes either within the EU or from outside the EU to market zones within the EU.

- **Project developer** announces intention to develop project, subject to confirmation of shipper demand, for capacity following discussion with potential shippers (e.g. large non-EU producers)

- **National TSOs** announce intention to develop project, subject to confirmation of shipper demand, for capacity following publication of analysis in Ten Year Network Development Plan

In all cases it will be helpful if a close dialogue is held with NRAs, ACER and the EU Commission to help their decision making in later phases.

COS Phase 2: Preliminary Open Season

- All open seasons must consider bids from any type of shipper so long as they meet the bidding criteria of the open season

- Project developer / TSOs publish Open Season process procedures and timetable and request non binding Letters of Intent (LoI) from shippers stating their capacity requirements.

- Shippers submit LoI's detailing quantity of entry and exit capacities they require in each entry-exit zone. In addition shippers will be required to distinguish within each zone between (i) exit capacity to another zone/area and (ii) exit capacity into the domestic market of the given zone/area.

| Entry 10 bcma | EEZ 1 | Exit /Entry 9 bcma | EEZ 2 | Exit / Entry 6 bcma | EEZ 3 |

Domestic exit 2 bcma

Domestic exit 3 bcma

Domestic exit 1 bcma

Domestic exit 3 bcm

Domestic exit 1 bcma

The aim of this preliminary phase is to gain an estimate of likely demand for additional capacity in order to enable initial estimates of the likely costs and quantities of capacity that may be offered

A.Konoplyanik-A.Barnes-ENTSOG Incremental Proposal-2nd JSWS, Brussels, 26.02.2014

COS Phase 3: Initial Project Scoping

- Based on shippers' Letters of Intent TSOs / project developers performs initial design studies to plan:
  - best route for infrastructure, incl. combination of new & available (existing un-booked) capacity
  - forecast costs and
  - level of investment in new infrastructure required, incl. use of existing un-booked capacity.
- Opportunity for further discussion with interested shippers (those who signed Letters of Intent) to refine project design prior to finalization of project design:
  - Iterative process to ensure the best match between shippers' requests and what capacity can be offered at a given cost vs what tariff should be paid to cover all capacity requests from the shippers
  - Minimize any mismatches and risks that shippers will not receive the capacity they are prepared to pay for.
- Based on final project design NRAs confirm regulatory treatment of project so that shippers have regulatory certainty prior to making binding commitments in final open season phase:
  - (e.g. how tariffs will be set, incl. system-based vs project-based approach
  - tariffs control review periods,
  - how to deal with under or over recovery issues,
  - linkage with TSOs existing Regulated Asset Bases in case of system-based approach etc.)

Phase 3 is aimed at ensuring that all parties have a clear view of what is required to enable them to make binding decisions in the final phase (Phase 4 below).

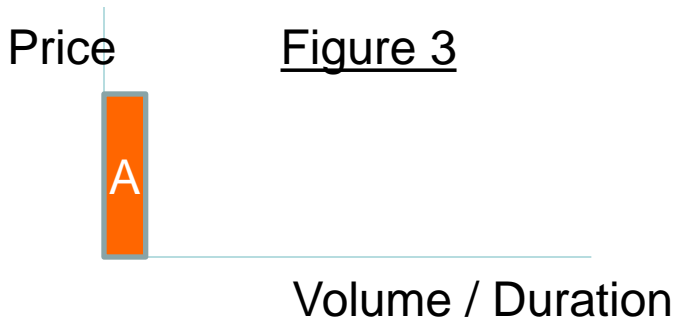A.Konoplyanik-A.Barnes-ENTSOG Incremental Proposal-2nd JSWS, Brussels, 26.02.2014
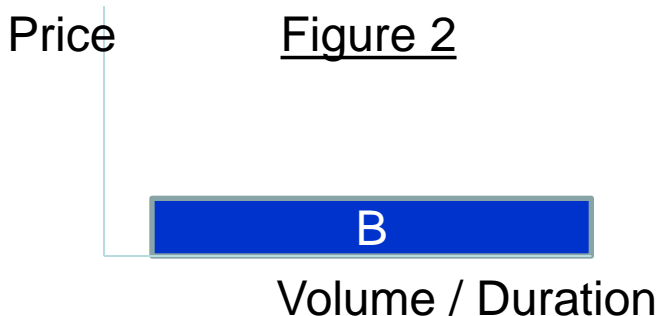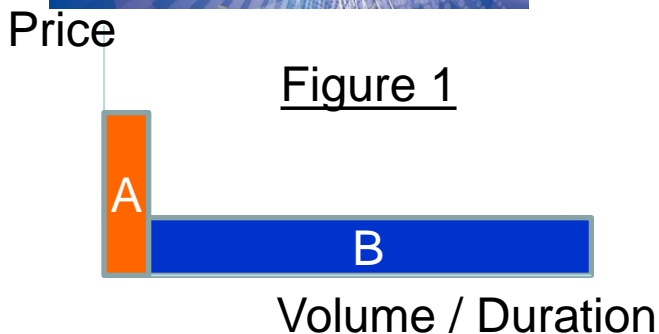
COS Phase 4: Final Open Season

- NRAs, ACER and EUC confirm regulatory treatment of the project.
    - These regulatory terms and conditions (see (3) of Phase 3 above) form a part of the binding open season commitments that shippers are required to sign to be allocated capacity.

- TSOs / Project developer start final phase by providing necessary information to shippers:
    - defined timetable,
    - tariffs (system-based vs project-based),
    - terms and conditions for capacity once booked,
    - minimum bid requirements,
    - capacity allocation methodology and
    - the parameters of the economic test

- Shippers are required to submit binding offers for capacity subject to the terms and conditions of the open season.

- Following close of process for submission of binding offers, TSOs / project developer allocates capacity:
    - If economic test not met, no capacity allocated. Consider if offer second opportunity to amend bids to help meet the test or to move to CAM NC auction (see reserve slides).
    - If economic test met, allocate capacity first to shippers whose bid value has greatest Net Present Value (quantity booked * duration * price * Discount rate) as this indicates greatest contribution towards meeting economic test and greatest willingness to pay in NPV terms (see next slide).

Why willingness to pay does NOT equal pay as bid

Price

Figure 1

A

B

Volume / Duration

Price

Figure 2

B

Volume / Duration

Price

Figure 3

A

Volume / Duration

Figures represent the economic test
Figure 1 shows the result if allocation is based on highest bid for an annual strip of capacity
A is allocated Year 1, B is allocated the remaining years
Economic Test is met overall

BUT

B contributes more to passing the economic test but will not want to accept capacity as he receives no capacity in Year 1

AND

Although A has paid more for capacity than B, A's bid is not sufficient on its own to meet the economic test

Use of CAM algorithm does NOT take account of need for shippers to book contiguous strips of capacity => NPV-based approach suits best for this

74

Thank you for your attention

Andrey A. Konoplyanik

+ 7 499 503 6006

andrey@konoplyanik.ru

a.konoplyanik@gazpromexport.com

www.konoplyanik.ru

Alex Barnes

+ 44 774 775 6032

alex.barnes@gazprom-mt.com

Concluding remarks

Mark Wiekens

Advisor, Market Area

Back-Up Slides

Auction Example for SJWS 2

Incremental Proposal

February 2014

Increment Levels on Offer

3 Parallel Bidding Ladders:

➢ Existing Capacity (150 units per year)

➢ Existing Capacity plus **small Increment Level** (50 units per year) starting year 5

➢ Existing Capacity plus **large Increment Level** (100 units per year) starting year 5

Units/year

■ Existing technical capacity booked ■ Existing technical capacity available ■ Small increment level ■ Large increment level
or reserved for short term
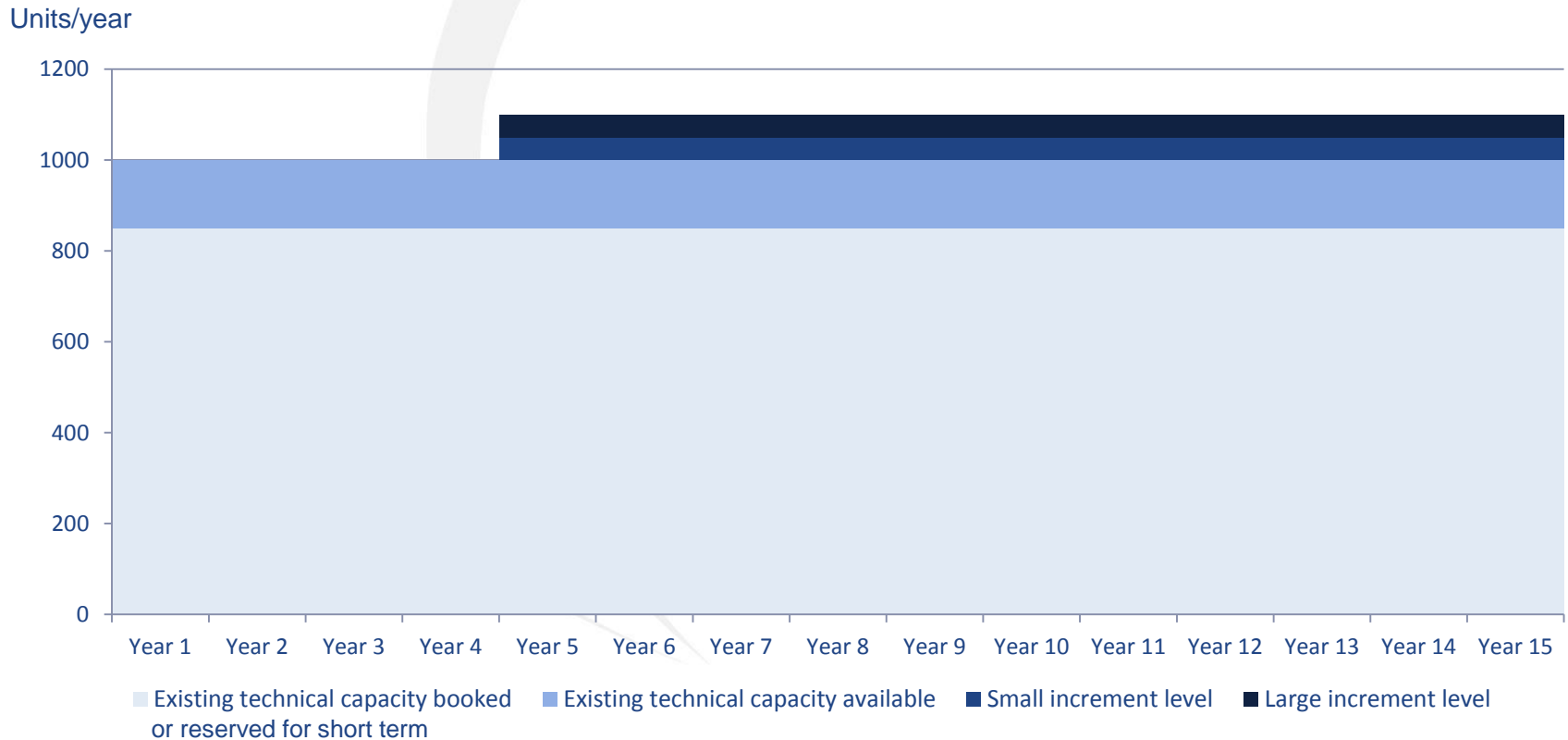
Single Economic Test Parameters of the defined offer scenarios

Scenario	Small Increment	Large Increment
Level of Increment	50 units per year	100 units per year
Present Value of Increase in Allowed/Regulated Revenues (PVAR) ≈ deemed investment costs	3.500	11.000
Discount rate	6 %	6 %
Reserve Price/Tariff Assumption	10 /unit/year	10 /unit/year
F-Factor	0,5	0,5

Assumptions of Example

➢ For illustration purposes, the example includes different levels of demand (demand curves) for the different offer scenarios

➢ The quota for short-term reservation for existing capacity is:
  ➢ 10% in years 1 to 5
  ➢ 20% in years 6 to 15

➢ The short-term reservation principle applies also to incremental capacity, however at a constant level of 10%

Bidding Ladder 1 Auction Results

➤ **Existing Capacity (150 units per year)**

	Price	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15
P(3) RP + 3 Price Step	13															
P(2) RP + 2 Price Step	12															
P(1) RP + 1 Price Step	11	150	150	150	150	150	150									
P(0) Reserve Price (RP)	10	230	230	230	230	210	190	150	90	90	90	90	90	90	90	60
Capacity on offer		150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Available existing capacity		150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Incremental investment		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ST reservation quota		10%	10%	10%	10%	10%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Available incremental		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capacity reserved for ST		100	100	100	100	100	200	200	200	200	200	200	200	200	200	200
Booked capacity		750	750	750	750	750	650	650	650	650	650	650	650	650	650	650
Technical capacity		1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

➤ Auction clears at premium in years 1 to 6
➤ Auction clears at reserve price in years 7 to 15

Bidding Ladder 2 Auction Results

➢ <u>Existing Capacity plus small Increment Level (50 units per year) starting year 5</u>

	Price	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15
P(3) RP + 3 Price Step	13															
P(2) RP + 2 Price Step	12															
P(1) RP + 1 Price Step	11	150	150	150	150	195	195	195								
P(0) Reserve Price (RP)	10	230	230	230	230	240	220	220	195	195	195	195	195	195	195	195
Capacity on offer		150	150	150	150	195	195	195	195	195	195	195	195	195	195	195
Available existing capacity		150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Incremental investment						50	50	50	50	50	50	50	50	50	50	50
ST reservation quota		10%	10%	10%	10%	10%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
INC reservation quota						10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Available incremental		0	0	0	0	45	45	45	45	45	45	45	45	45	45	45
Capacity reserved for ST		100	100	100	100	105	205	205	205	205	205	205	205	205	205	205
Booked capacity		750	750	750	750	750	650	650	650	650	650	650	650	650	650	650
Technical capacity		1000	1000	1000	1000	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050

➢ Auction clears at premium in years 1 to 7
➢ Auction clears at reserve price in years 8 to 15

entsog

Bidding Ladder 3 Auction Results

➤ <u>Existing Capacity plus large Increment Level (100 units per year) starting year 5</u>

	Price	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15
P(3) RP + 3 Price Step	13															
P(2) RP + 2 Price Step	12															
P(1) RP + 1 Price Step	11	150	150	150	150	240	240	240	240	240	240	240	240	240	240	240
P(0) Reserve Price (RP)	10	230	230	230	230											
Capacity on offer		150	150	150	150	240	240	240	240	240	240	240	240	240	240	240
Available existing capacity		150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Incremental investment						100	100	100	100	100	100	100	100	100	100	100
ST reservation quota		10%	10%	10%	10%	10%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
INC reservation quota						10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Available incremental		0	0	0	0	90	90	90	90	90	90	90	90	90	90	90
Capacity reserved for ST		100	100	100	100	110	210	210	210	210	210	210	210	210	210	210
Booked capacity		750	750	750	750	750	650	650	650	650	650	650	650	650	650	650
Technical capacity		1000	1000	1000	1000	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100

➤ Tariff adjustment in form of a premium applied for large increment scenario, as economic test can't be positive at reserve price
➤ Auction therefore clears at premium in all years

entso**g**

Outcome of Economic Test

$$PVUC \; > \; f \; x \; PVAR$$

Scenario	Small Increment	Large Increment
Present Value of Increase in Allowed/Regulated Revenues (PVAR) ≈ deemed investment costs	3.500	11.000
F-Factor	0,5	0,5
Required Level of PVUC	1.750	5.500
Actual Level of PVUC	2.907	6.185
Economic Test Outcome	Passed	Passed

➢ Large Increment Scenario would proceed towards the next steps of commissioning

RESERVE SLIDES

History

- **20.09.2007**: CEC announced preparation of Third EU Energy Package (TEP) & its basic provisions, which have been permanently criticized since then by RF authorities as creating new risks & uncertainties for energy supplies to EU

- **02.09.2009, Alpbach**: W.Bolts proposed to A.Konoplyanik to organise a meeting between EU & Gazprom to explain to RF/Gazprom EU intentions regarding TEP in gas; counter-proposal to organize a series of regular informal consultations between both parties where RF/GG will also explain its justified concerns & visions of TEP-related new risks & uncertainties for gas supplies

- **19.01.2010, Vienna**: 1st round of RF/GG-EU Informal Consultations (EU Co-chair: W.Boltz; RF/GG Co-chair: A.Medvedev, coordinator: A.Konoplyanik);

- **24.02.2011, Moscow**: Russia-EU Gas Advisory Council (GAC) established; Coordinators: RF Energy Minister & EU Energy Commissioner

- **17.10.2011, Vienna**: 1st GAC meeting, three WSs organised, WS2 "Internal market" created based on Informal RF/GG-EU Consultations (EU Co-chair: W.Boltz, RF Co-chair: A.Konoplyanik)

- **31.01.2014, Vienna**: 19th round of Consultations & 12th WS2 GAC meeting

COS is a key issue at Informal RF/GG-EU Consultations/WS2 GAC process 88

Available doc's at RF/GG COS proposal within Consultations/WS2 GAC since 2010

- …
- …
- …
- …
- …
- …
- 'COS-Strawman' Paper (17.09.2013)

COS: Market test vs economic test

- "Market test" & "Economic test" are two consecutive steps in COS capacity allocation procedure

- **Market test** (*first step*) : TSOs to test appetite of the market participants – potential shippers (capacity users) for transportation capacity

- **Economic test** (*second step*): TSOs to evaluate whether potential demonstrated shipper's appetite for transportation capacity at each IP/CBP (and/or at ring-fenced "route/combination of market zones/traded areas") is "economically reasonable and technically feasible" (Art.13.2 Third EU Gas Directive)
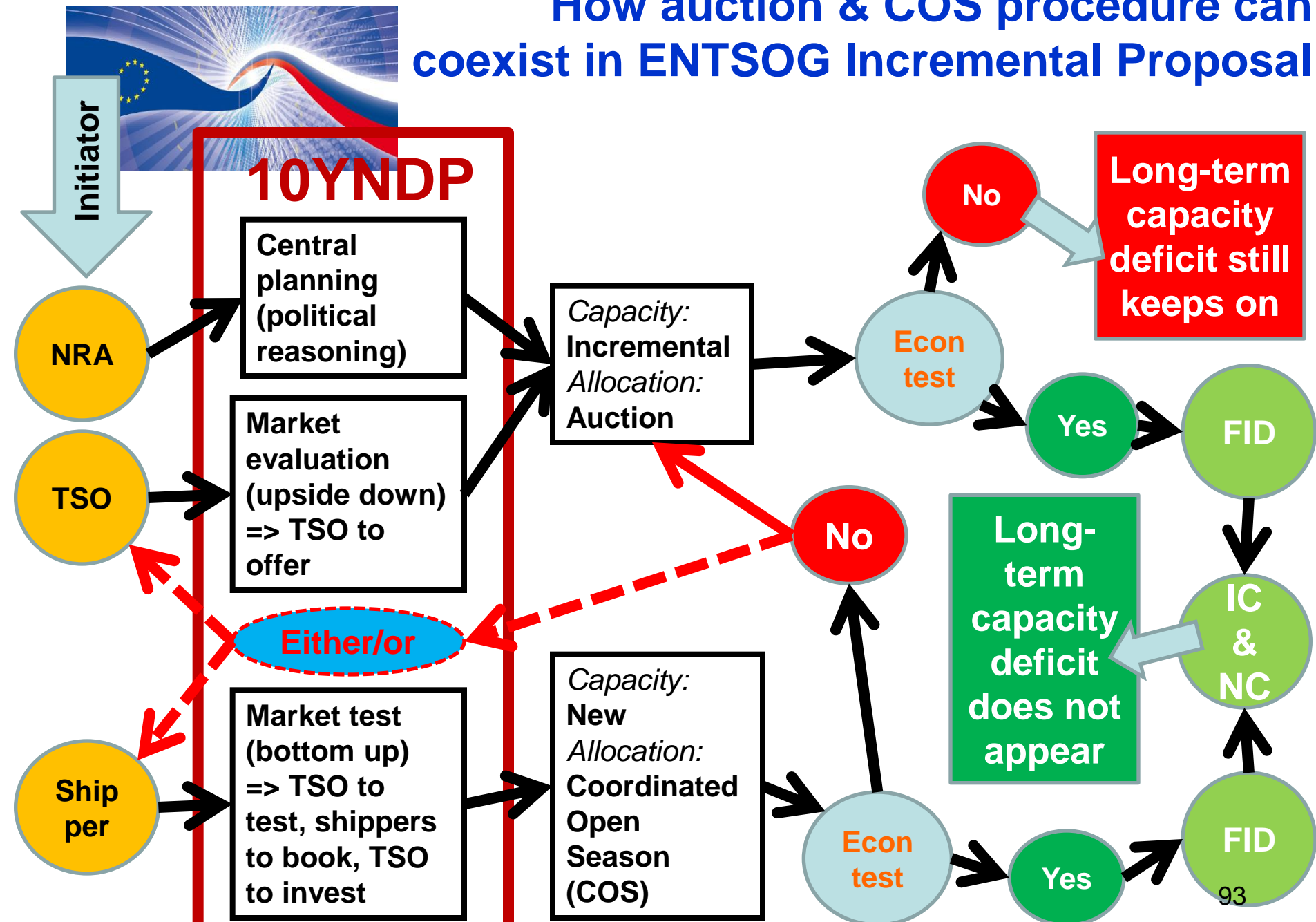
90

Market test: specific features

- Proposed to be organized:
  - as integral part of 10YNDP,
  - both for existing & not yet existing capacity,
  - both at each existing & potential new IPs (e.g. within the EU) & at each existing & potential new cross-border points between EU & non-EU (CBP)
  - for allowed future period, e.g. up to 15Y forward,
  - on a regular basis (annual or bi-annual),
  - on a synchronized basis, e.g. simultaneously at all IPs/CBPs within & at the borders of the EU

Economic test: specific features

- To summarize shippers requests for capacity provided at "market test" phase of COS & to structure best effective configuration of draft capacity allocation at each IP/CBP:
    - Existing vs Incremental vs New Capacity ,
- To asses whether sum-total shippers' demand for capacity proves economic justification for creation of "new capacity":
    - New Capacity: ring-fencing & creation of cross-border ITSO where proper (incl. project-based tariffs for pay-back period); after pay-back
- Based on NPV analysis to proposed to market participants best effective (e.g. financeable & cross-border coordinated) configuration of new capacity

How auction & COS procedure can coexist in ENTSOG Incremental Proposal

Initiator

10YNDP

NRA

TSO

Shipper

Central planning (political reasoning)

Market evaluation (upside down) => TSO to offer

Either/or

Market test (bottom up) => TSO to test, shippers to book, TSO to invest

Capacity: **Incremental** *Allocation:* **Auction**

Capacity: **New** *Allocation:* **Coordinated Open Season (COS)**

Econ test

No

Yes

FID

Long-term capacity deficit still keeps on

No

Long-term capacity deficit does not appear

IC & NC

FID

Yes

Econ test

93

A.Konoplyanik-A.Barnes-ENTSOG Incremental Proposal-2nd JSWS, Brussels, 26.02.2014

Incremental Proposal & New Capacity: proposed correlation between CAM NC & NC HTTS

	Existing Capacity	**Incremental Capacity**	**New Capacity**
Capacity allocation mechanism *(CAM NC + amendment)*	Auction	Auction	Coordinated Open Season (+ cross-border project ring-fencing + new project-based ITSO)
Tariff methodology *(draft NC HTTS)*	System-based	System-based	Project-based (project ring-fencing through pay-back period)

(*) CAM NC = Capacity Allocation Mechanism Network Code; NC HTTS = Draft Network Code on Harmonised Transmission Tariff Structures

Parameters of new IPs/CBPs to be coordinated within chain of the zones and with supply contracts backing demand for new capacity within each zone

Hub A

Hub B

Hub C

Hub D

Pipelines-interconnectors between two neighbouring EU zones = = single IPs with bundled products

Supplies to EU from non-EU

Non-EU producer

Its EU customer

New Capacity = multiple IPs with bundled products to be balanced, cross-border coordination of TSOs to avoid two types of contractual mismatches:
(1) at each IP: between term supply & transportation contract, and
(2) at all IPs on the route from zone to zone: between bundled products at each IP

95

A.Konoplyanik-A.Barnes-ENTSOG Incremental Proposal-2nd JSWS, Brussels, 26.02.2014