

ENTSO-G: 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

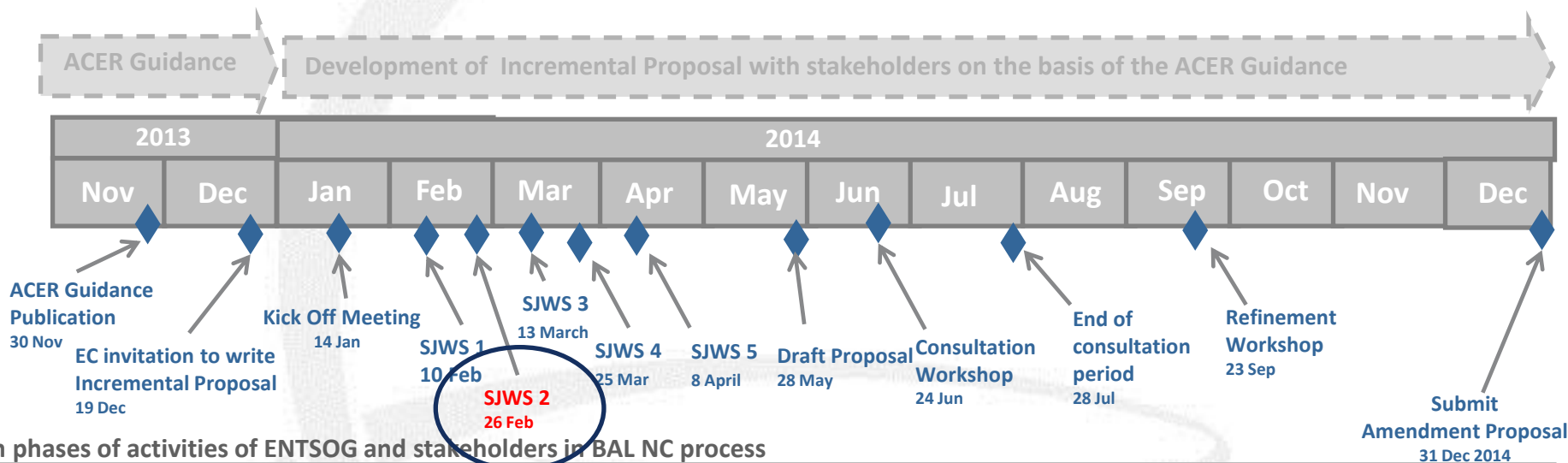
- Gassco AS (Norway)
- Swissgas AS (Switzerland)
- GA-MA AD (FYROM)
- Ukrtransgaz (Ukraine)

2nd SJWS for the Incremental Proposal

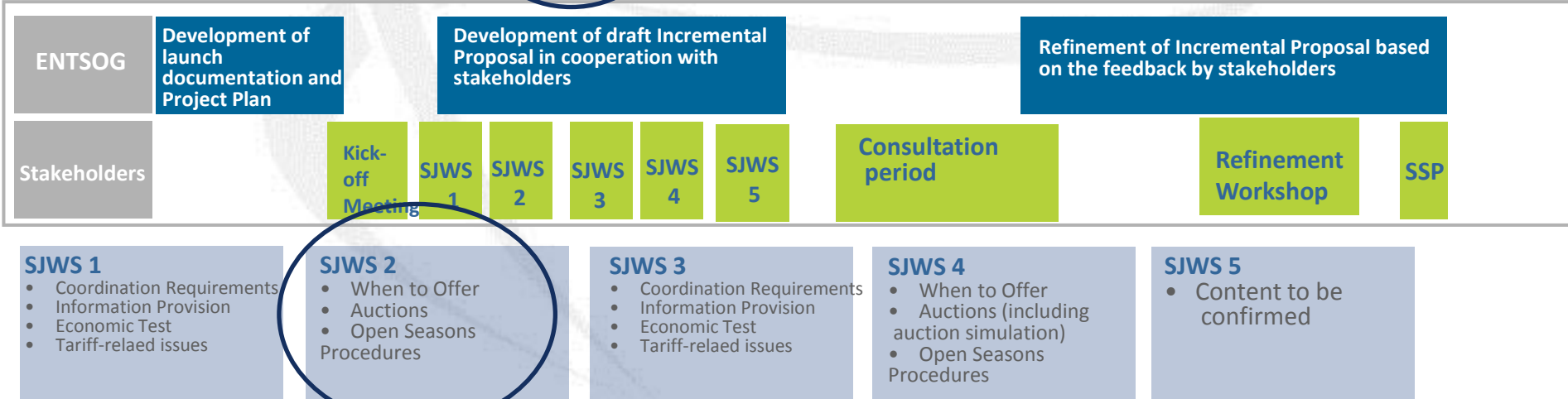
26 February 2014

**Mark Wiekens
Advisor, Market Area**

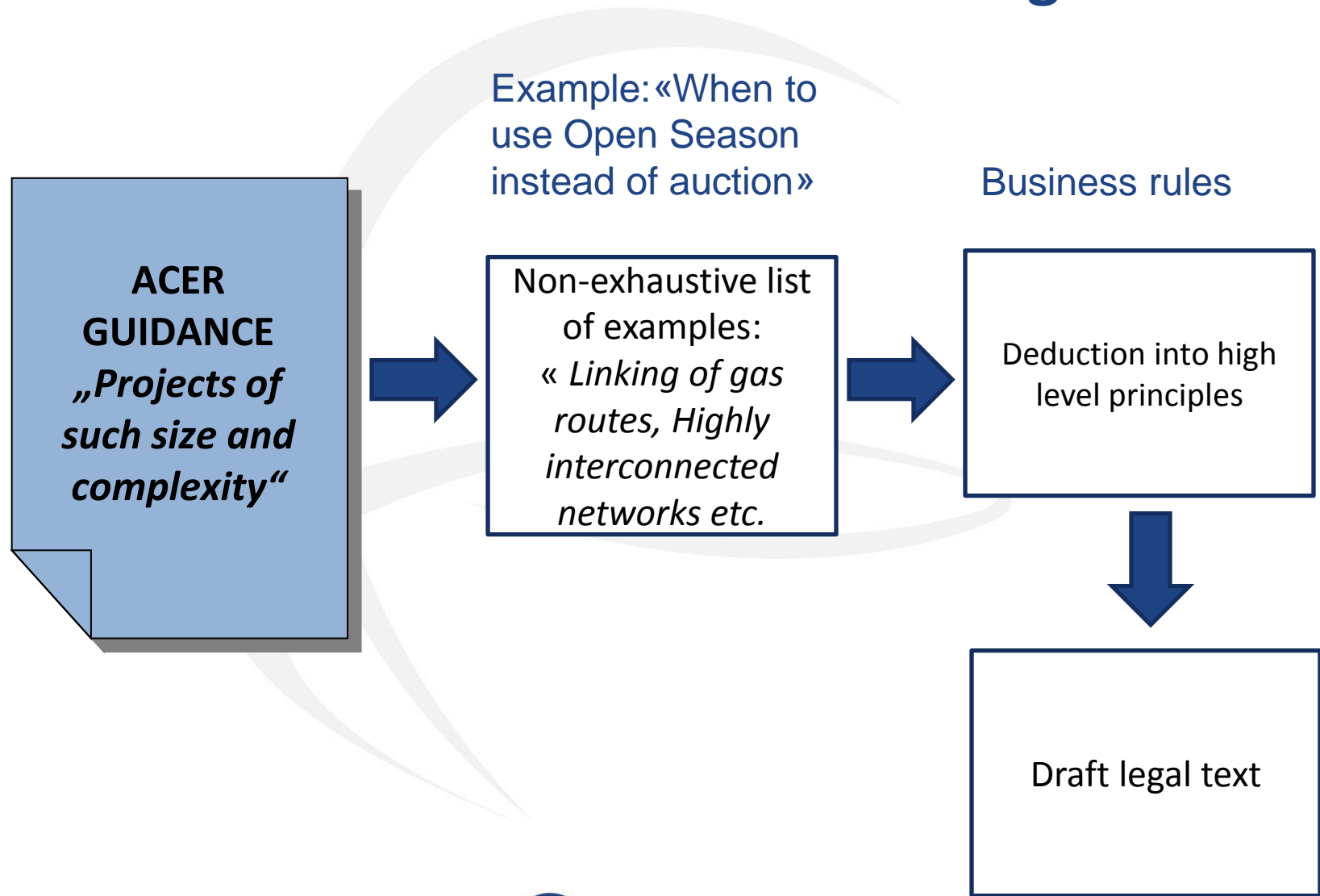
Timeline for incremental proposal Development and consultation overview



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



Procedure from Guidance to draft legal text



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 <ul style="list-style-type: none"> ➤ 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 <ul style="list-style-type: none"> ➤ 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 <ul style="list-style-type: none"> ➤ 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: 13 th March 2014 → 3 rd 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

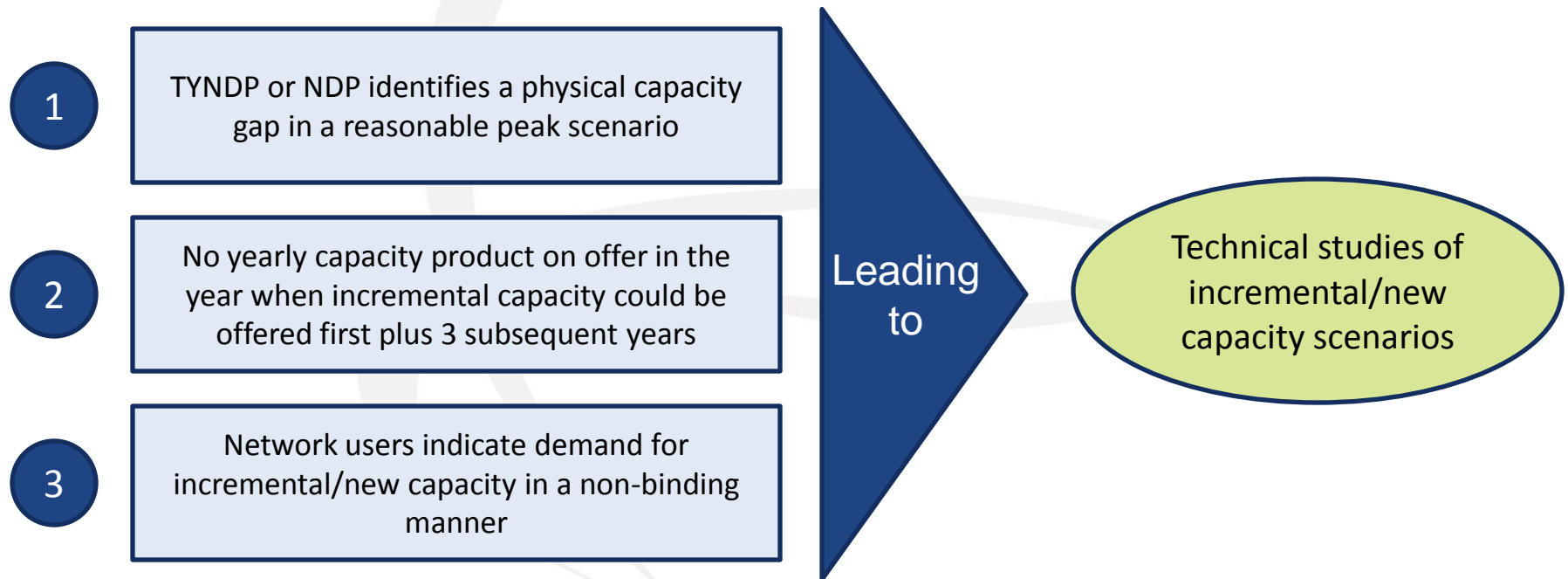
When to offer Incremental Capacity

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 :



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*

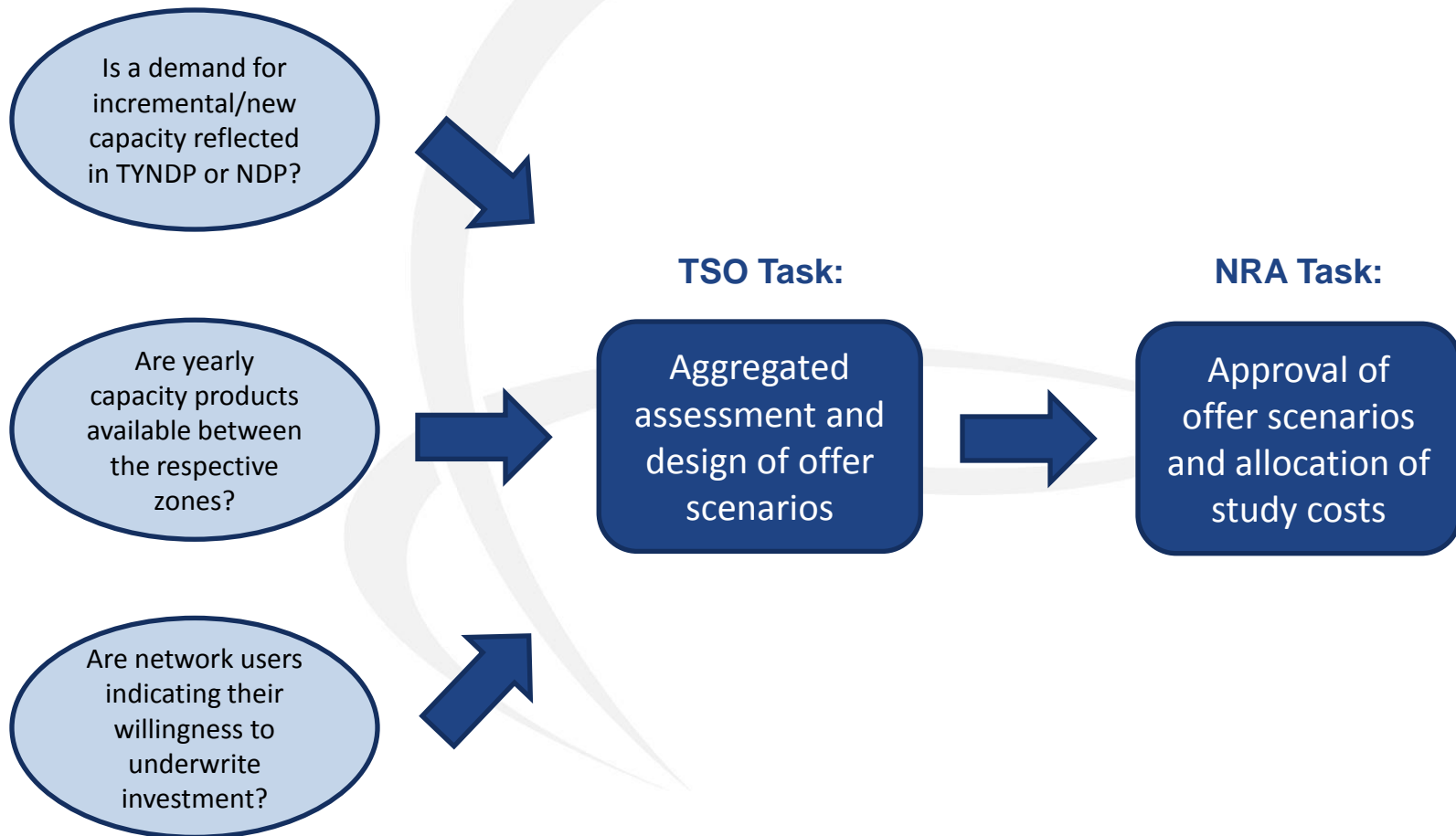


- Socialisation of costs if other conditions confirm the demand
- Possibility of charging the requester if demand is not confirmed by other conditions, subject to NRA decision

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

‘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:



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 location where incremental/new capacity is requested;
- The amount of incremental/new capacity requested;
- The time for which incremental/new capacity is requested.

In addition, ENTSOG is proposing the following minimum content:

- The flow direction 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 'route';
- 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...

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:



- 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

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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'

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 for each incremental/new capacity scenario, 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 <u>incremental/new capacity is on offer</u>) |
| 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!

Agenda

1. Integration into CAM NC auction algorithm
- 2. Revision of bids**

Possibility to revise bids

Additional request in ACER Guidance:

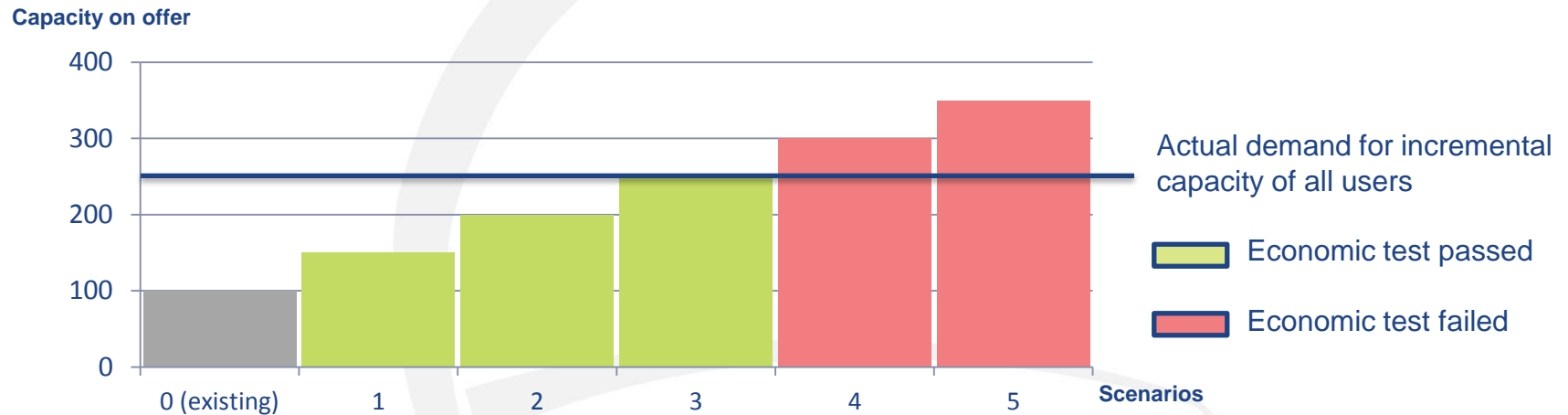
ENTSOG is requested to consider:

- *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

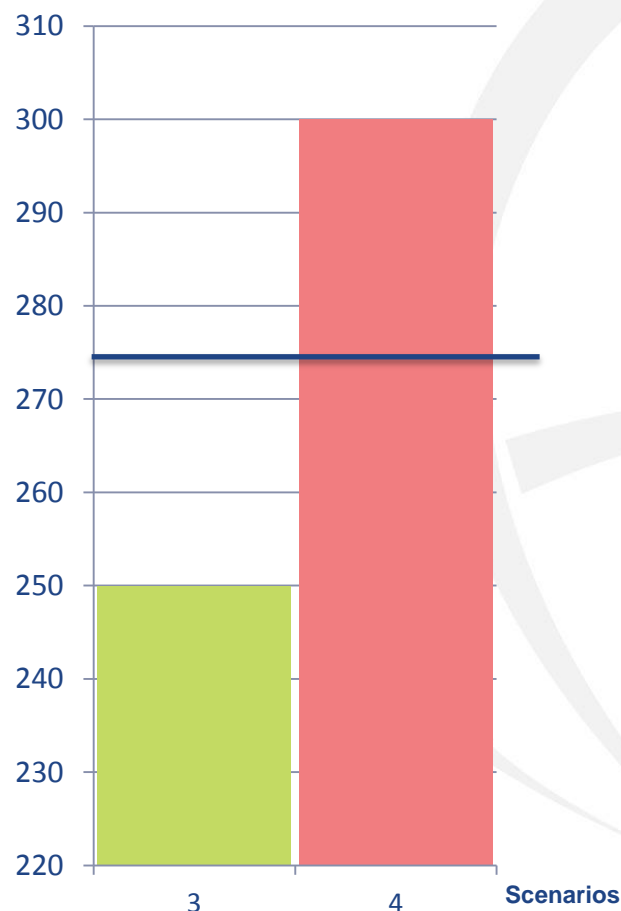


- A negative economic test result for at least one high offer scenario thus is implicit
- ENTSOG opinion is that principle of bid revision is not required if a reasonable design of a multiplicity of offer scenarios is conducted
- However, ENTSOG has considered one possible principle for a bid revision 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

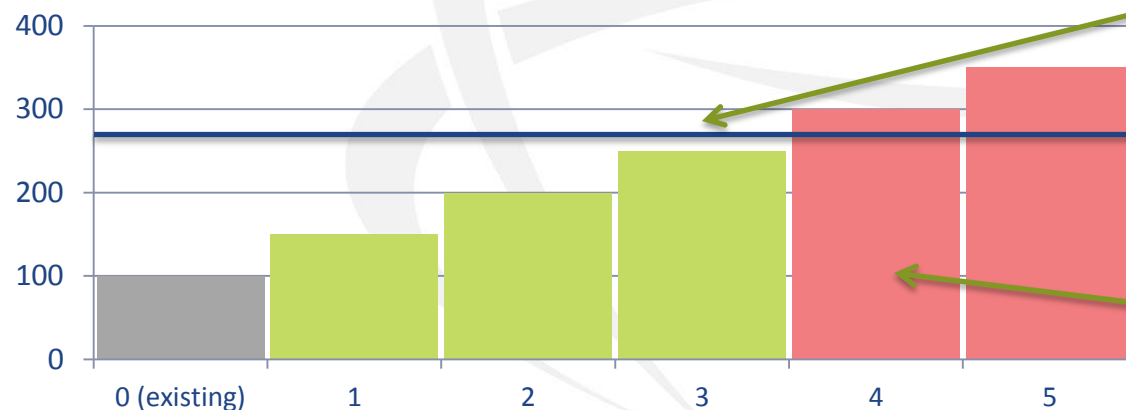
Possible principle for bid revision

Bid revision should only be allowed if:

The bidding ladder with the highest level of increment resulting in a positive economic test outcome clears with an auction premium.

Bidding Ladder for which revision of bids should be allowed:

A revision of bids should only be allowed for the bidding ladder reflecting the next highest level of increment 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!

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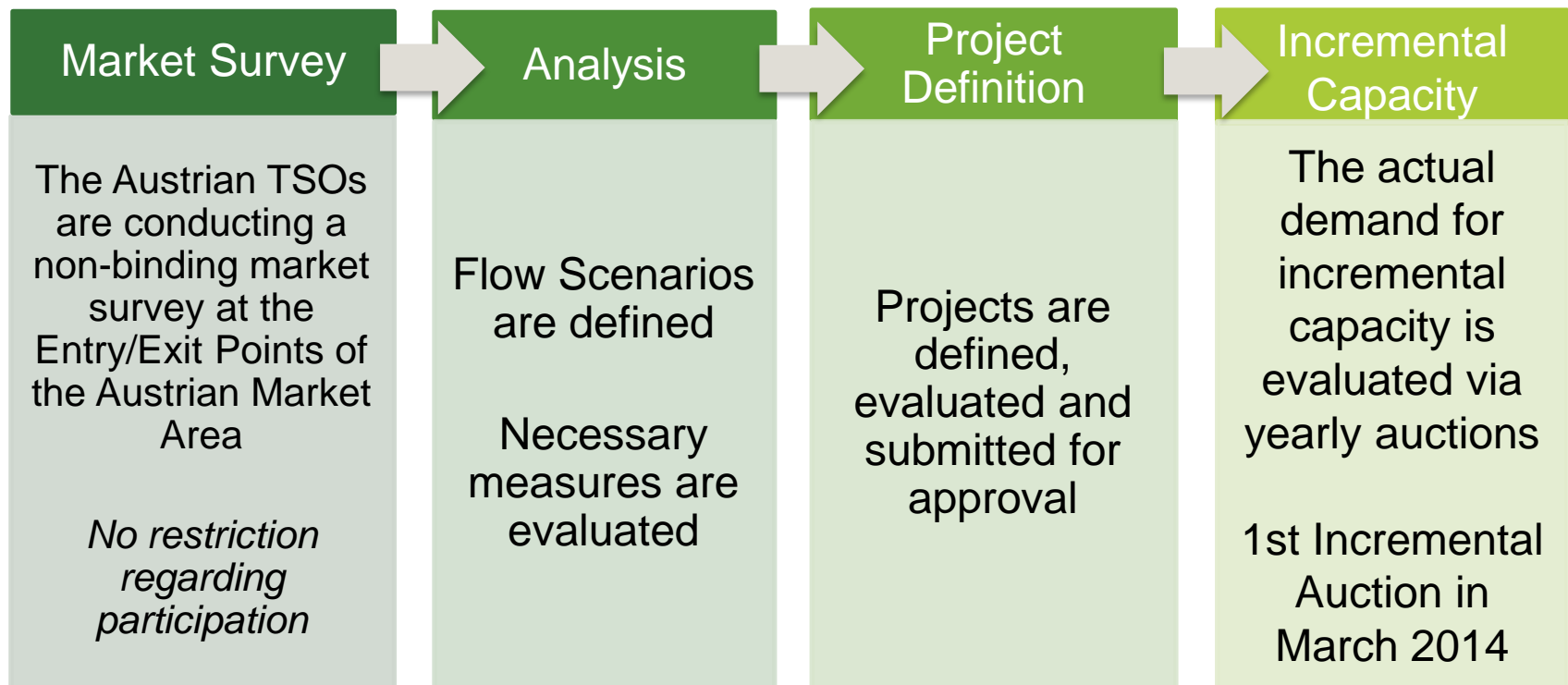




Energy, everywhere.

GCA's Incremental Capacity Pilot

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



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

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?



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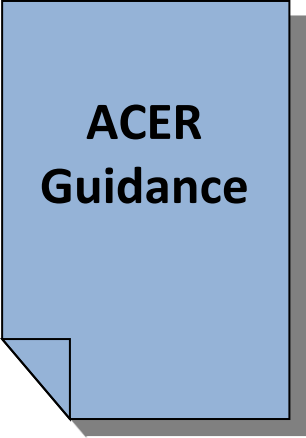
2nd SJWS Incremental Proposal

Open Season Procedures

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

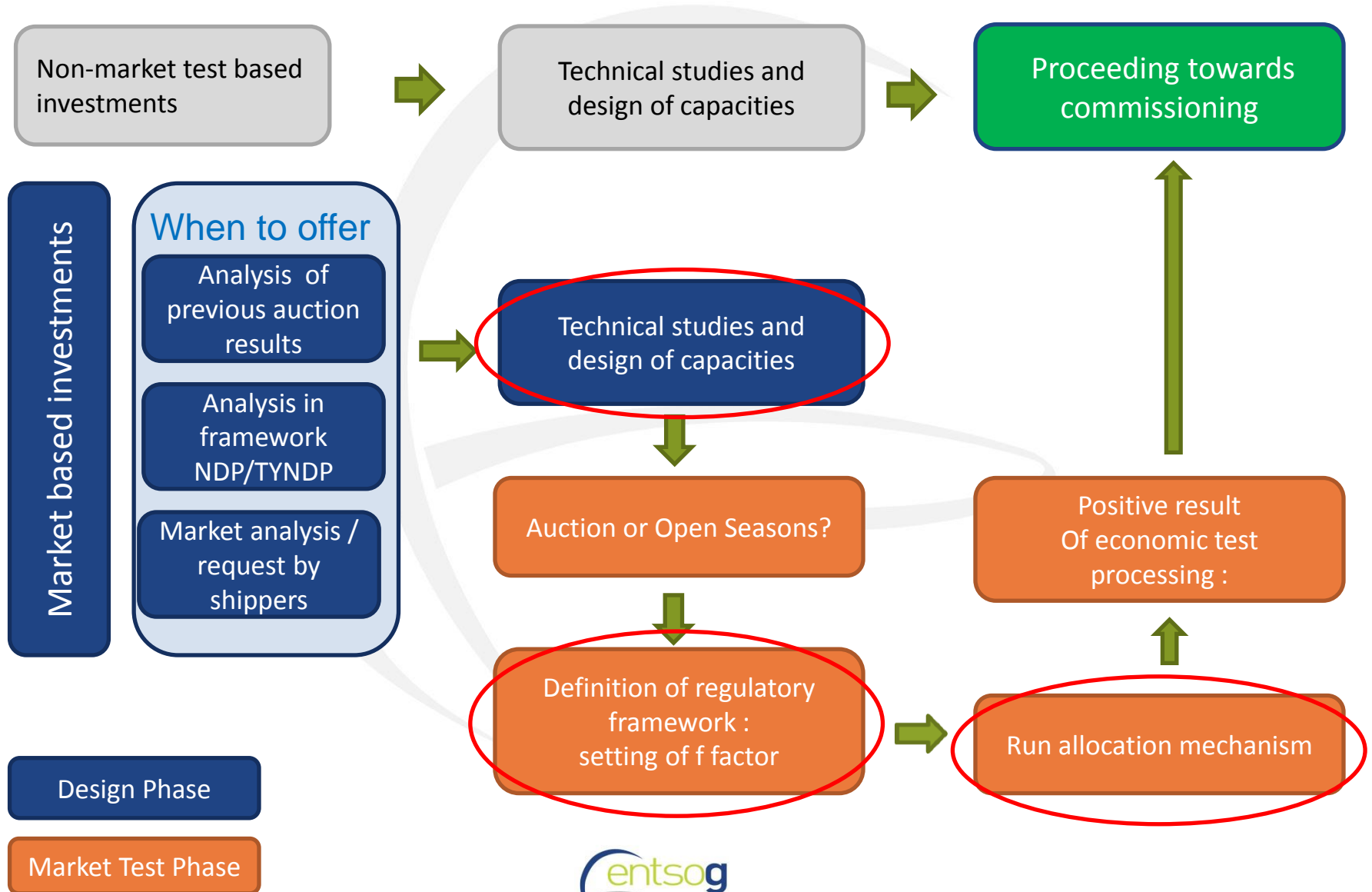
A blue square icon with a folded corner, containing the text 'ACER Guidance' in bold black font.

ACER Guidance

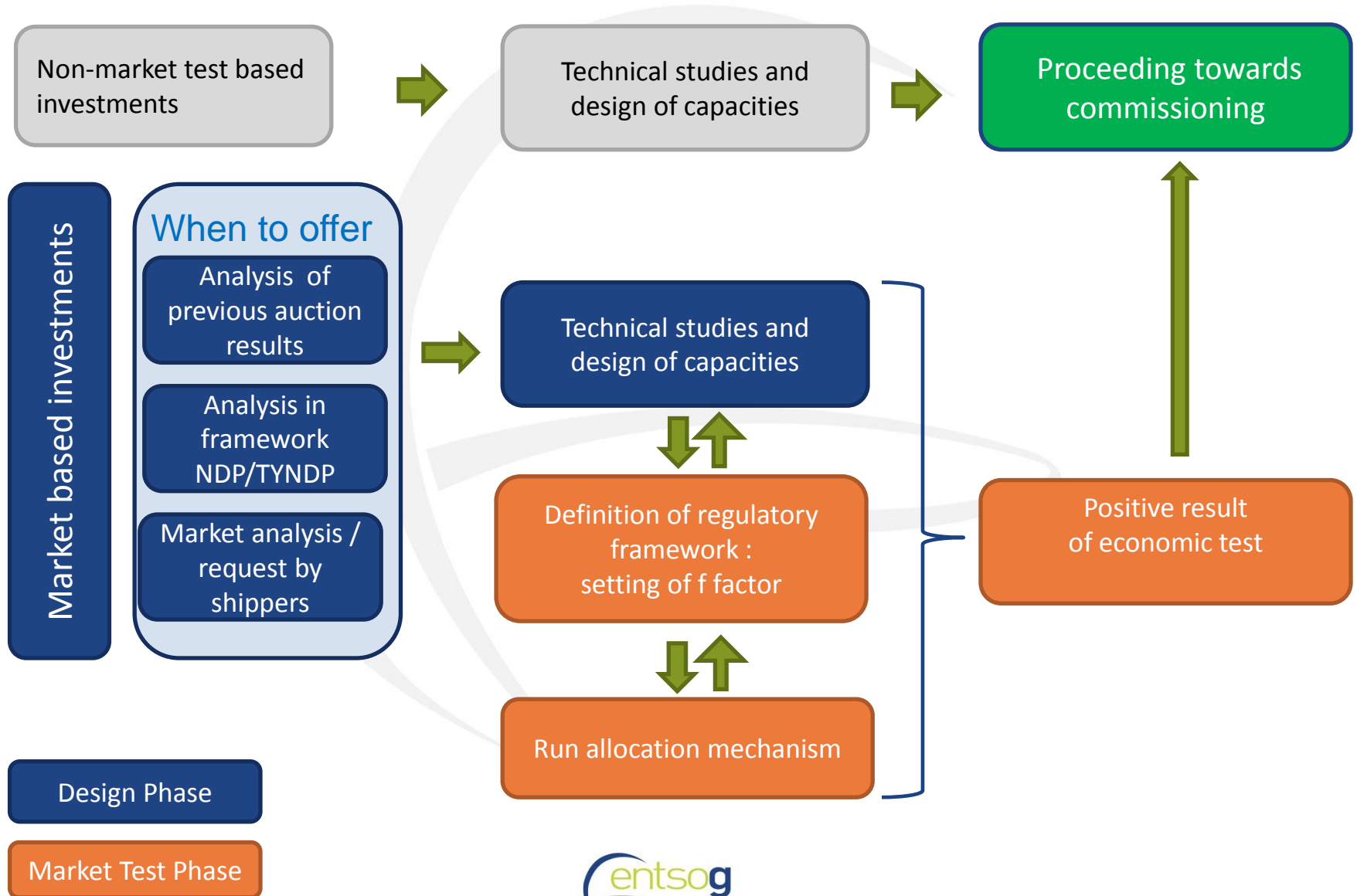


‘Open season procedure’ is a procedure where a transparent and non-discriminatory call for binding commitments of any party for capacity is made by a group of TSOs together spanning two or more market areas, which may be preceded by non-binding expressions of interest of any party, in order to base an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

High level process diagram



High level process diagram Open Seasons



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

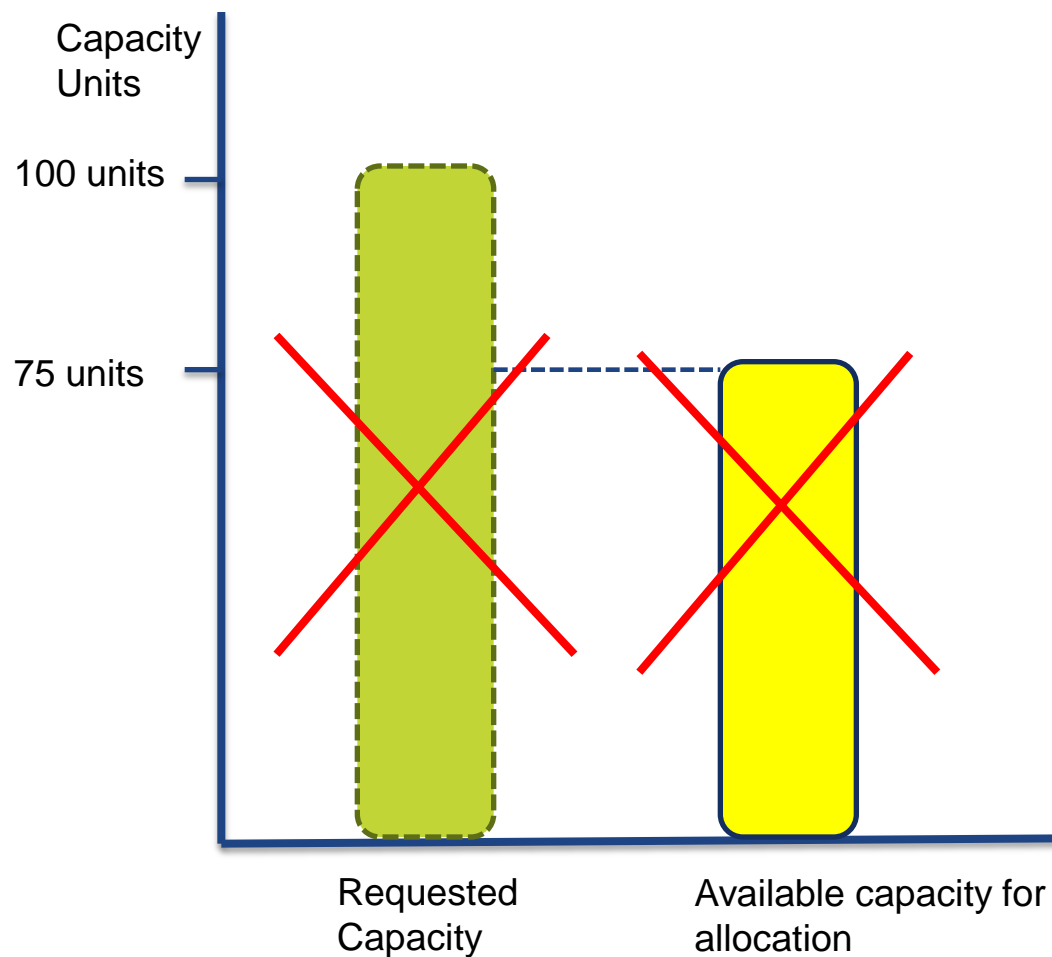
Shippers can express conditionalities

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 I.a) Booking of a certain amount of capacity: “Fill or kill”



Shipper request

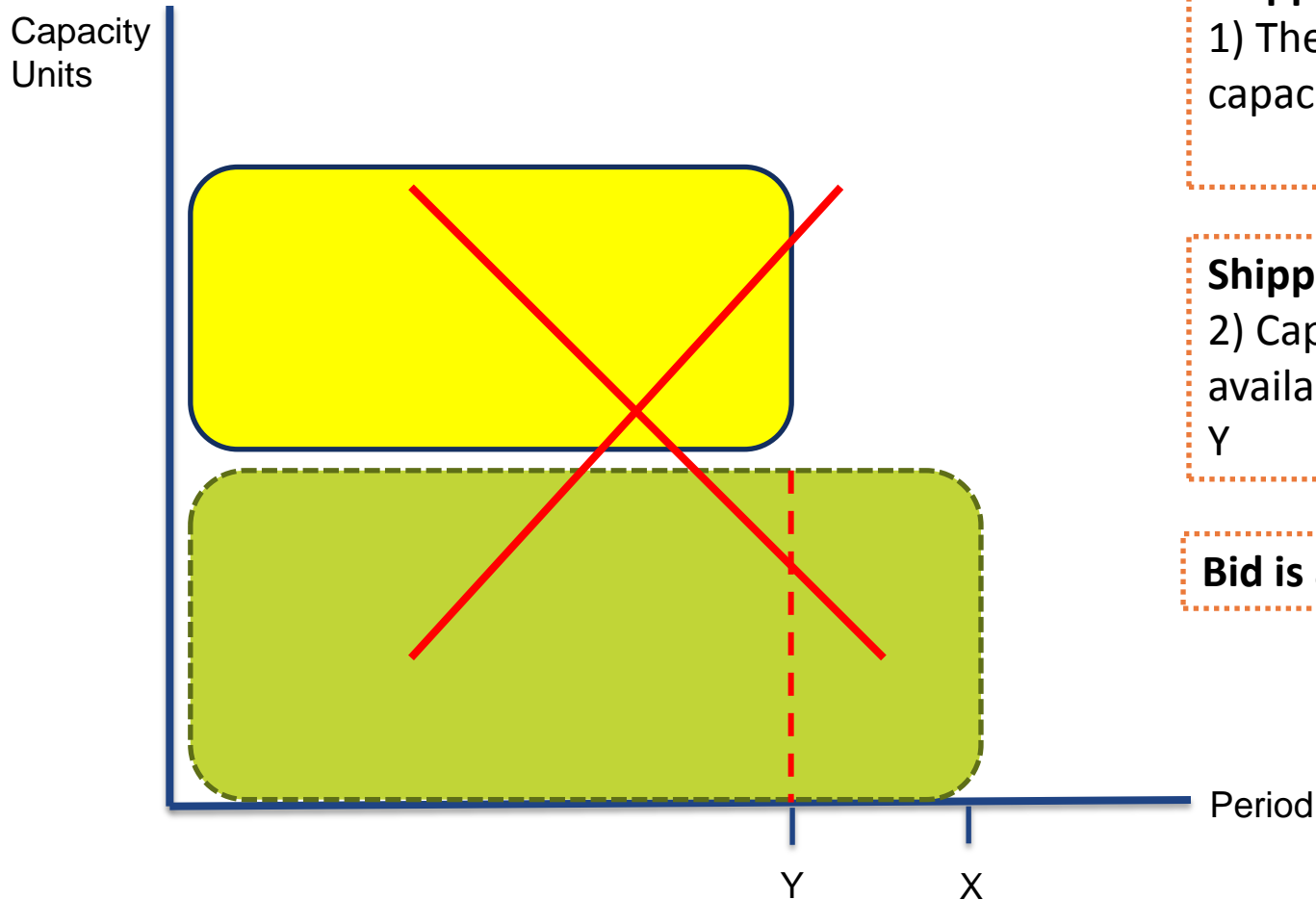
1) The shipper requests 100 units

Shipper allocation

2) Only 75 units of capacity is available

Bid is abandoned

Example 1.b): Booking of capacity for a certain period



Shipper request

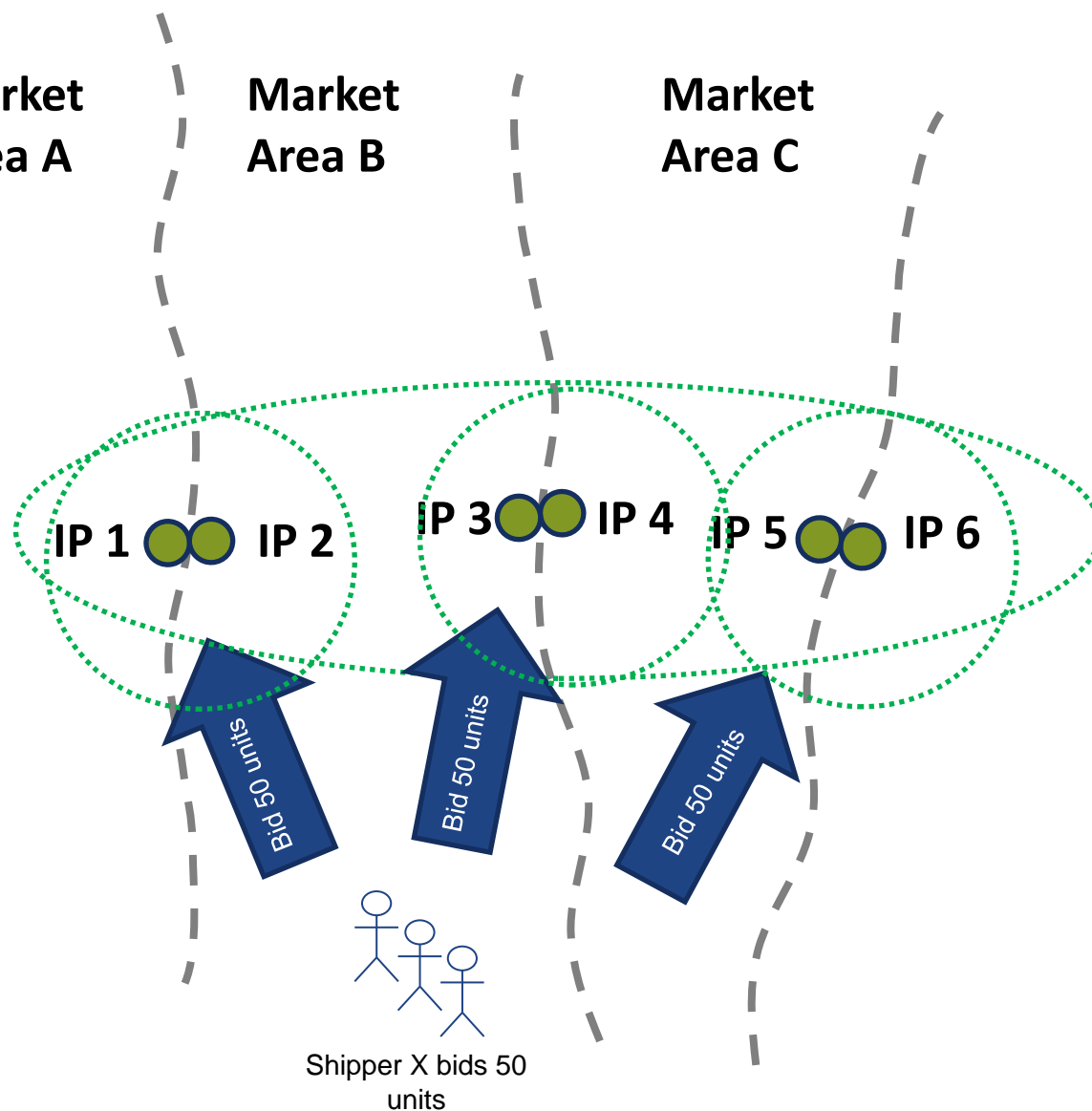
1) The shipper requests capacity for period X

Shipper allocation

2) Capacity is only available up until period Y

Bid is abandoned

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



Market Area D

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

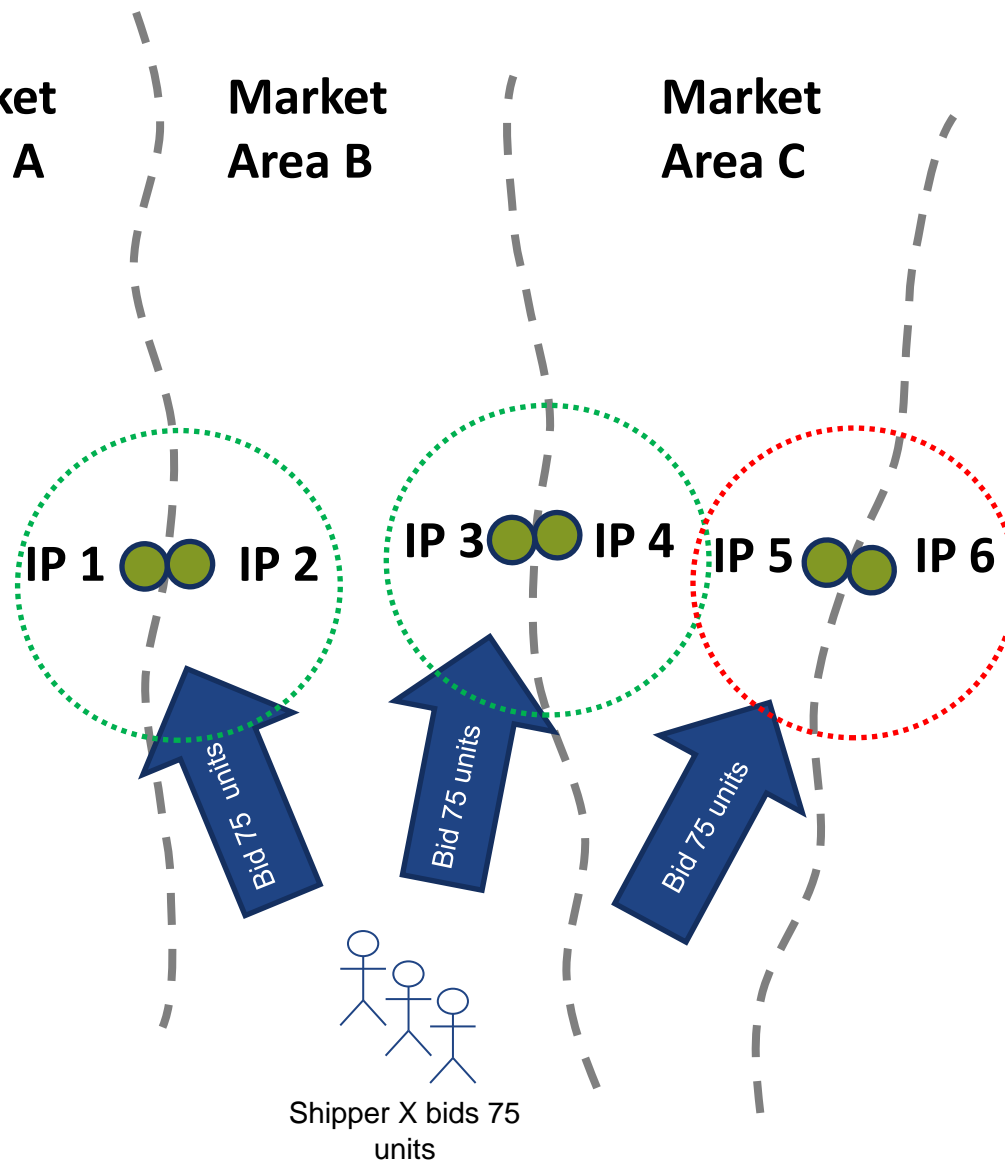
2) Shipper request

Shipper X requests 50 units of bundled capacity at IP 1+2, IP 3+4 and IP 5+6

3) Shipper allocation

50 capacity units of capacity is available at all IPs, thus securing the gas route

Example 1.c.2) A request to book capacity, only when the requested capacity can be booked on the entire route – unsuccessful bid



Market Area D

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

OS> Auctions: Example II

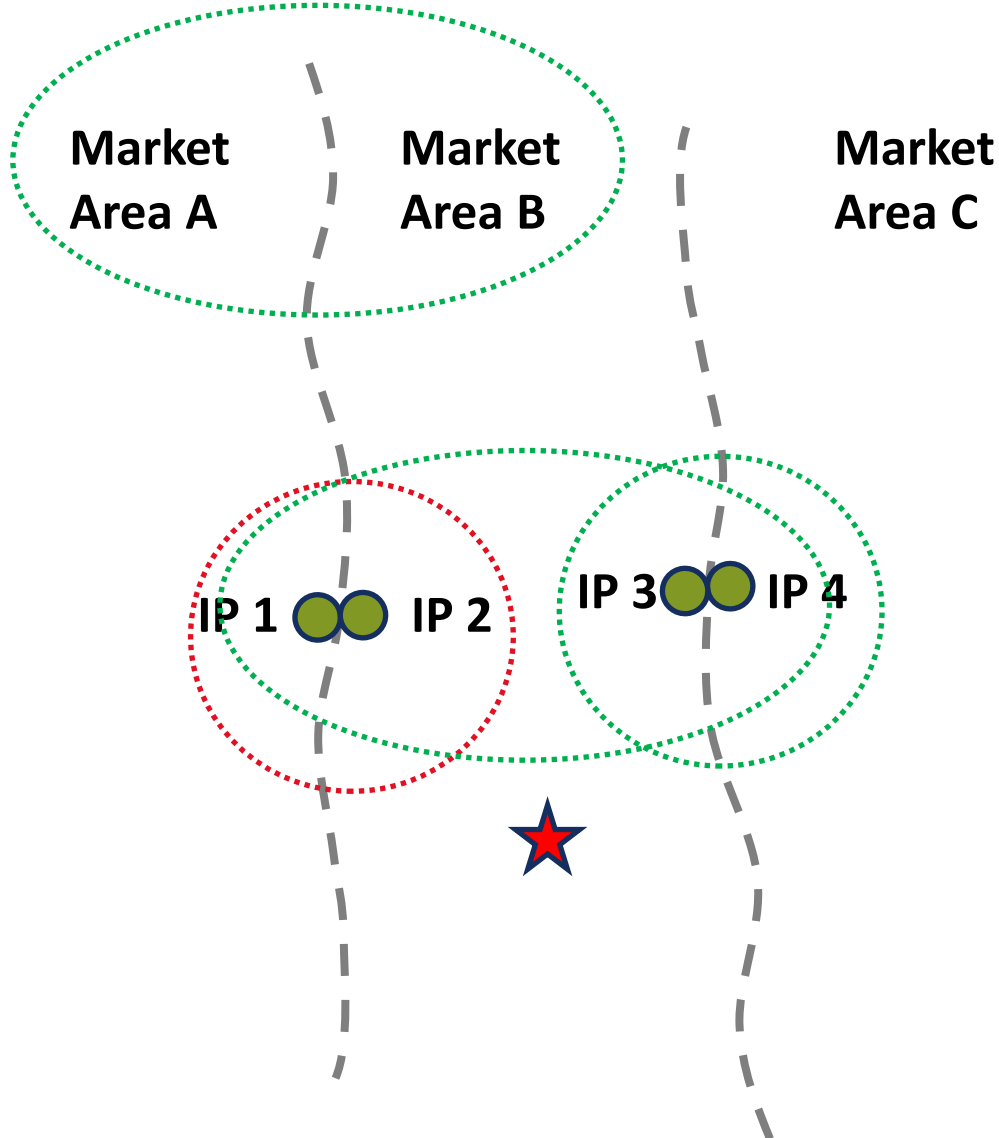
Highly interconnected networks

Open Seasons are better than auctions in highly 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 II: Highly interconnected networks



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

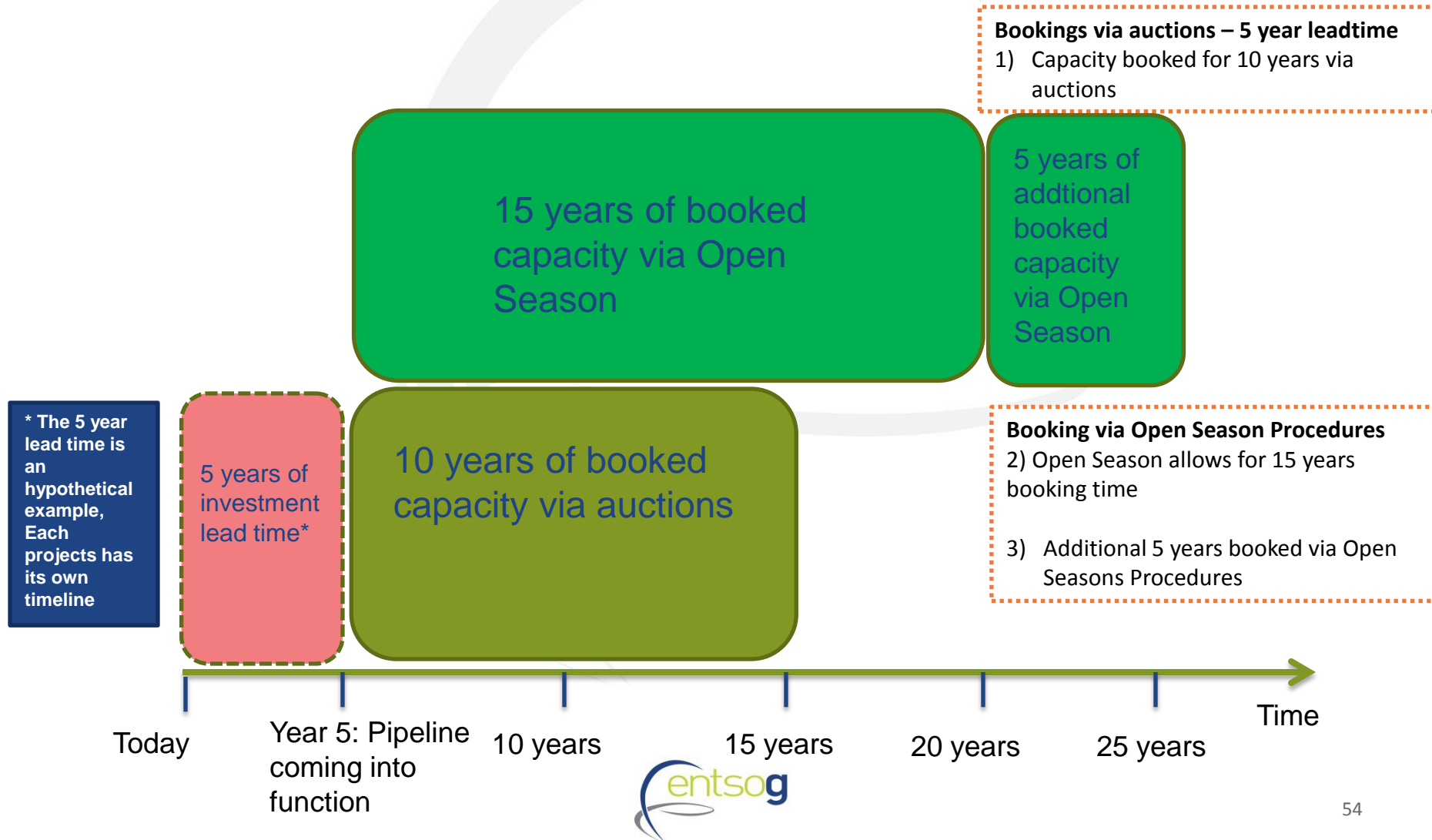
OS> Auctions: Example III

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



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.

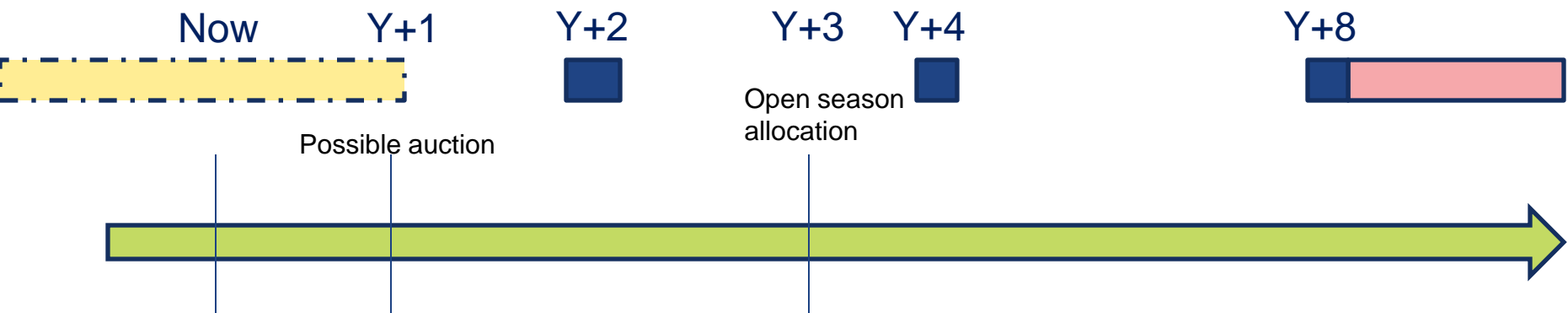
- **Principle:** *If the range of potential projects is too wide to come to an efficient outcome in an auction, then Open Seasons should be permitted*

Example:

- Capacity requests 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

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



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.*

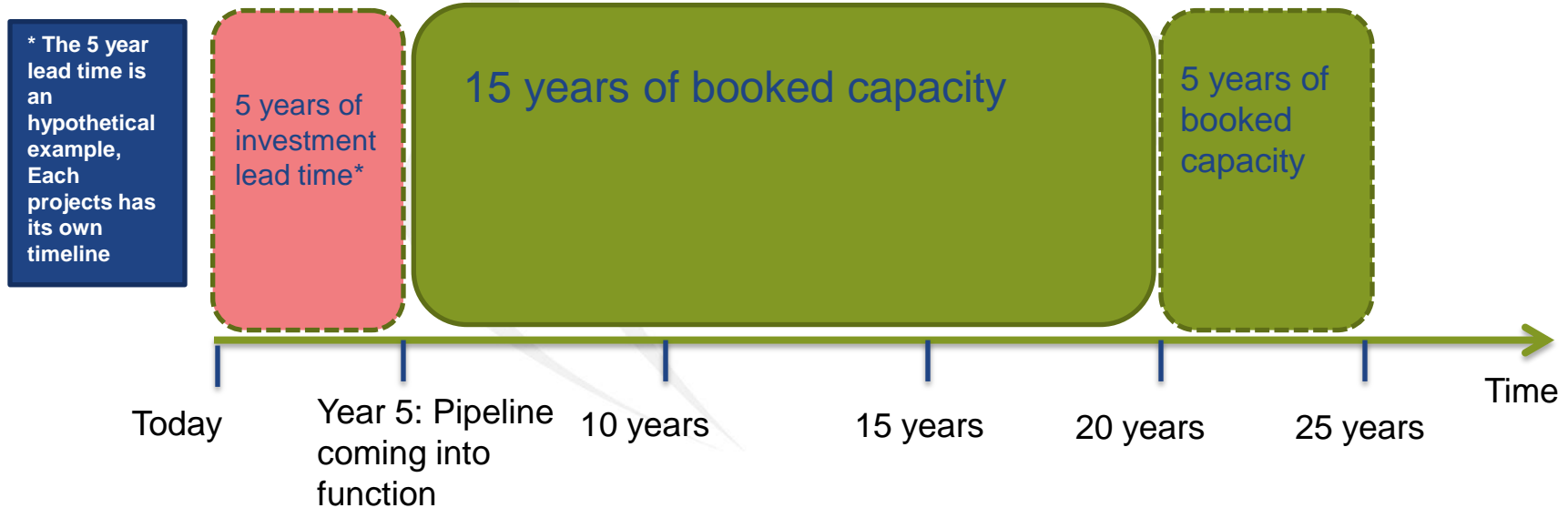
Background:

- 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

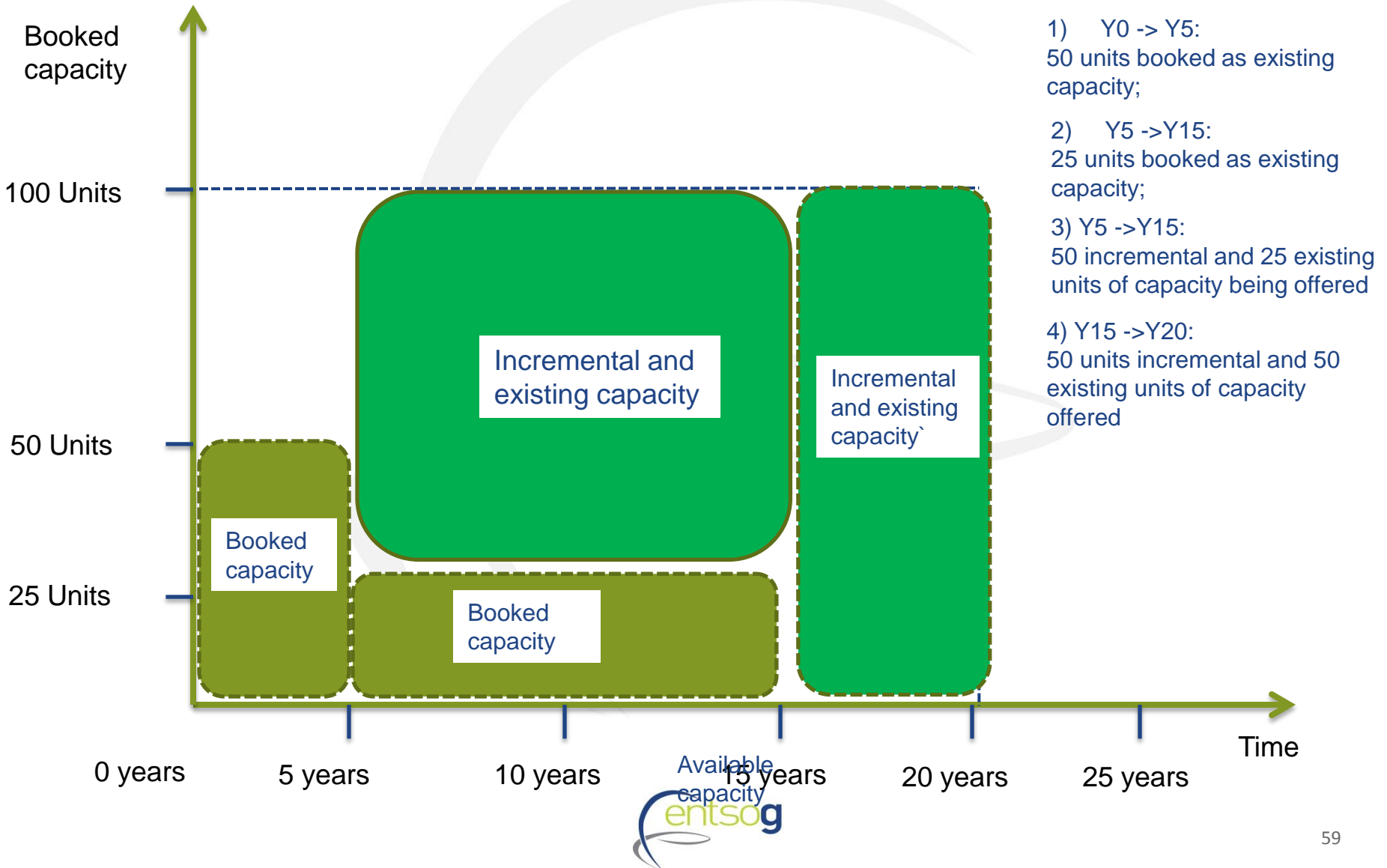
5* + 15 years principle: Investment lead time + 15 year booking

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



Amendments of CAM NC II :

Inclusion of existing capacity products in offer for new or inc. capacity



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 met 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.”

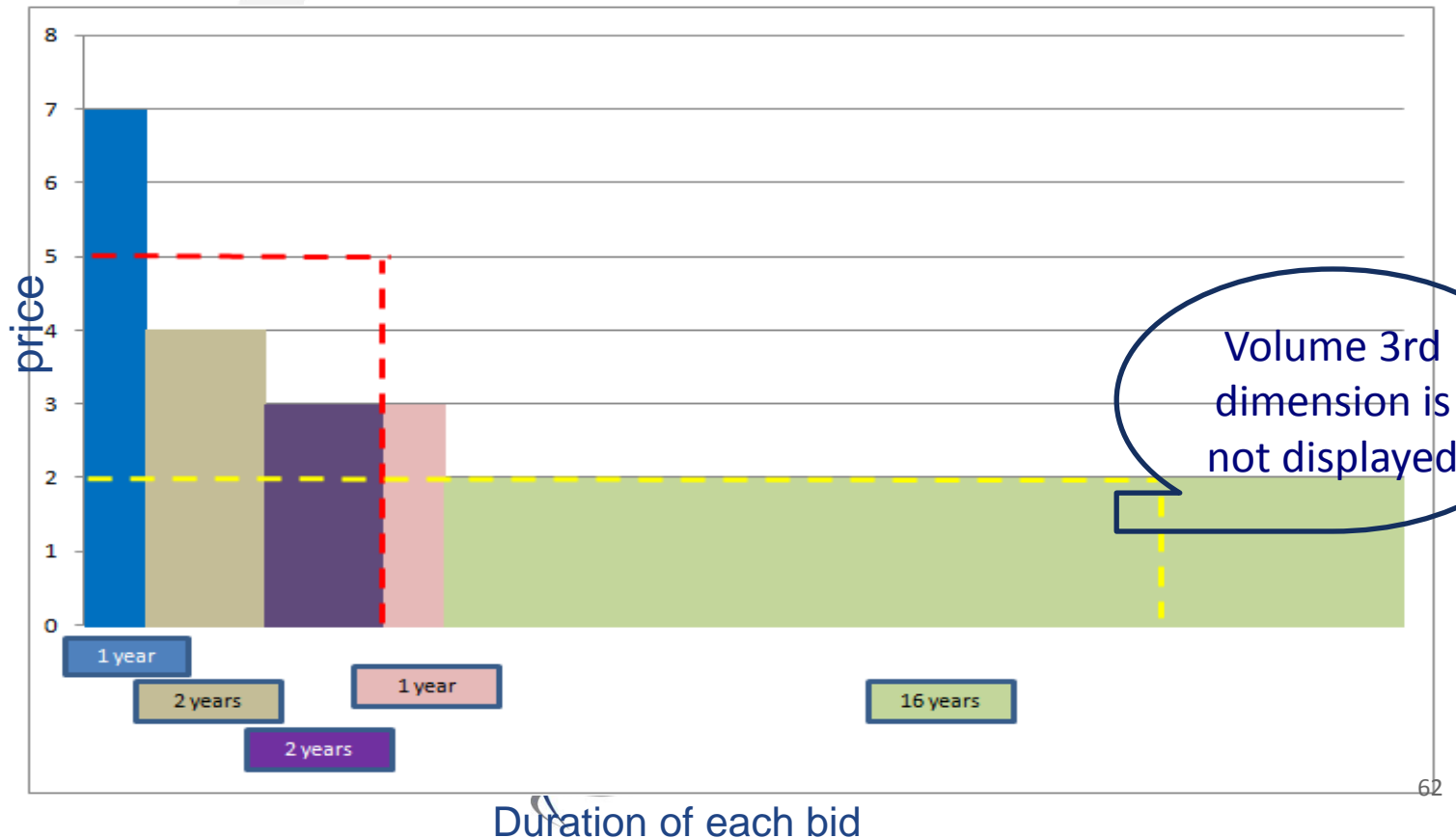
ACER Guidance on Willingness-to-pay or pro-rata:

- *« 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 loses 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



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

ENTSO-G: 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).



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

Market test

Incremental vs New Capacity

Criteria: 1IP, size...

Incremental Capacity

Auction

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

CHINESE WALL
BETWEEN TWO
PROCEDURES

At least until economic test on COS gives negative result (see reserve slides)

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

New Capacity

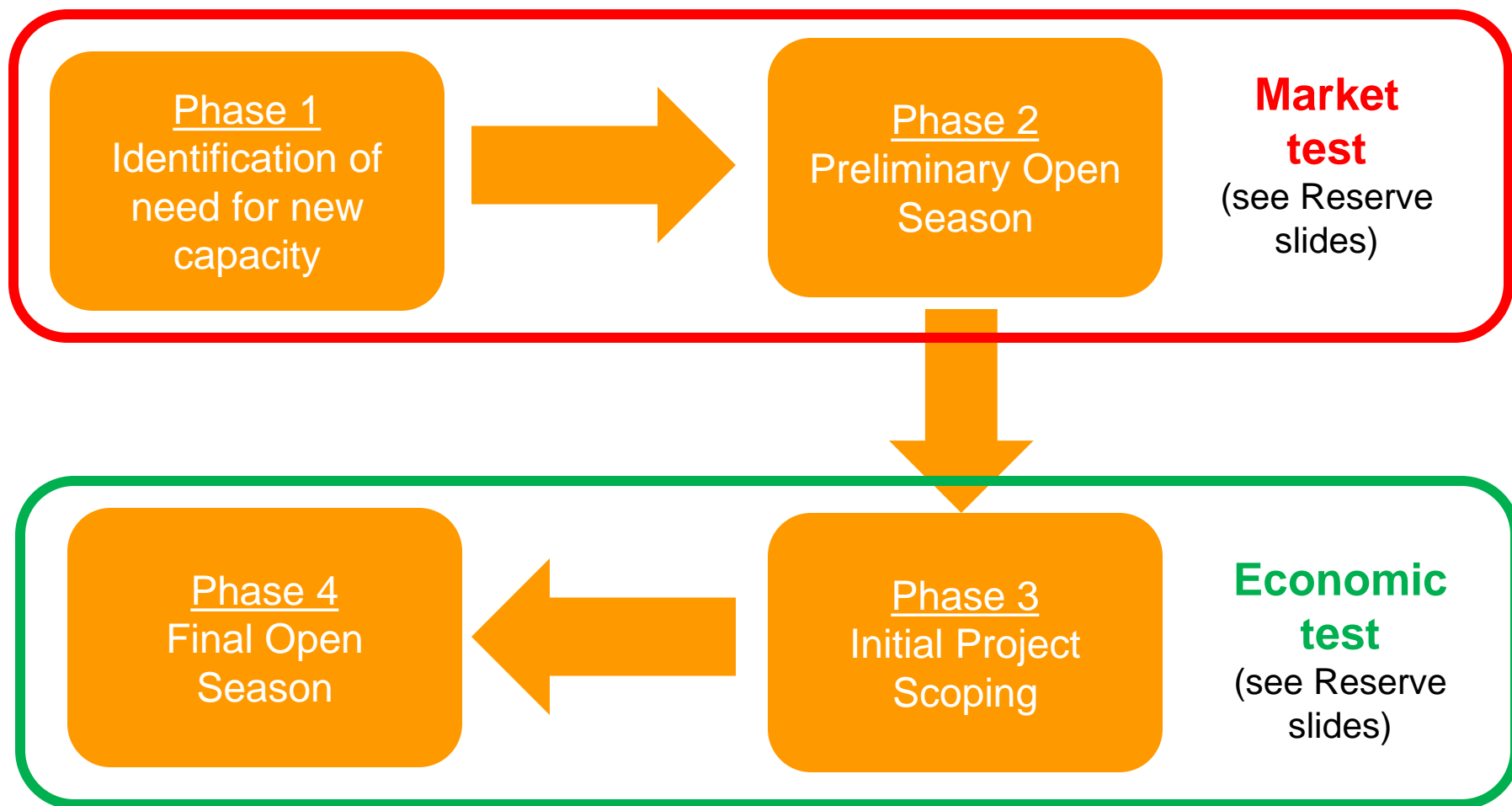
Coordinated Open Season (COS)

New Capacity requested by market participants (potential shippers) from TSO = bottom up approach => can/should be project-based (see reserve slides)



Outline structure of the Open Season

(as proposed in RF/GG 'COS-Strawman' Paper)





COS Phase 1: Identification of need for new capacity

Three alternative ways in which a project may be initiated:

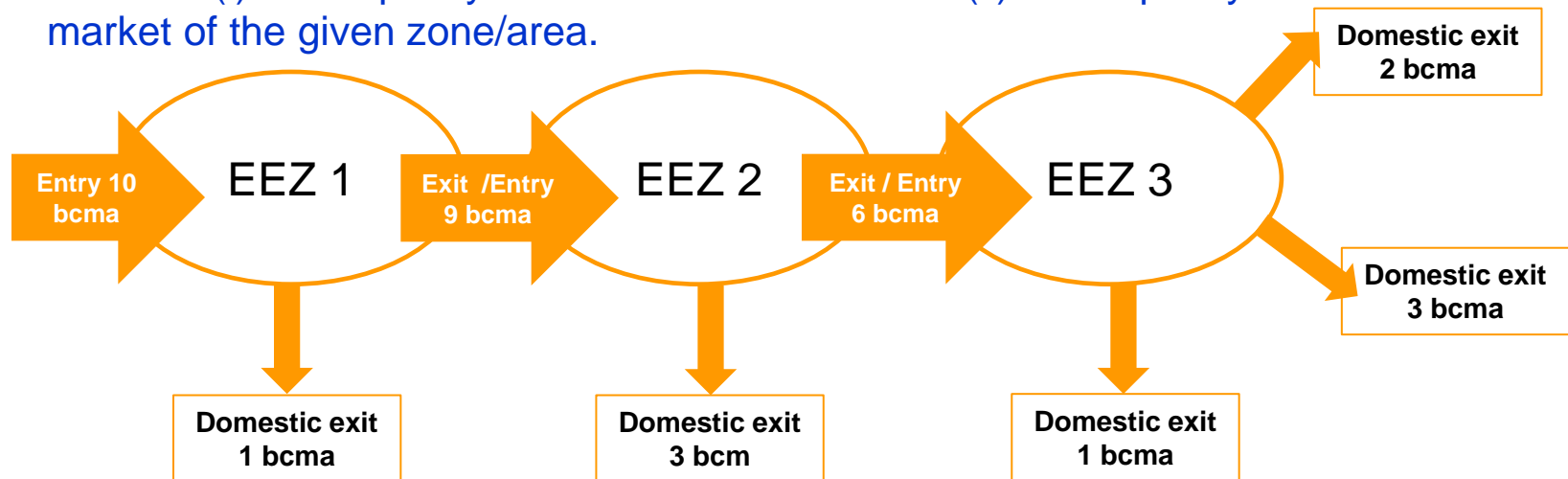
- **Shippers** request capacity for new supply routes either within the EU or from outside the EU to market zones within the EU.
- **Project developer** announces intention to develop project, subject to confirmation of shipper demand, for capacity following discussion with potential shippers (e.g. large 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.



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



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).

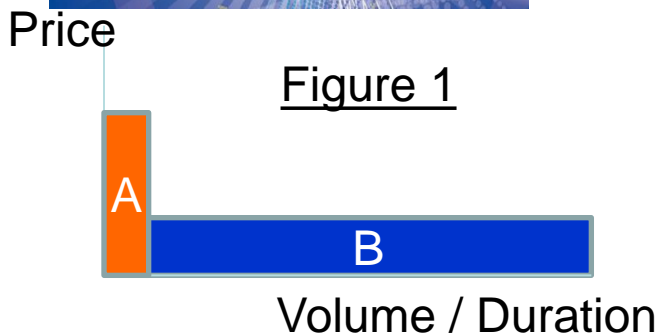


COS Phase 4: Final Open Season

- 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



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

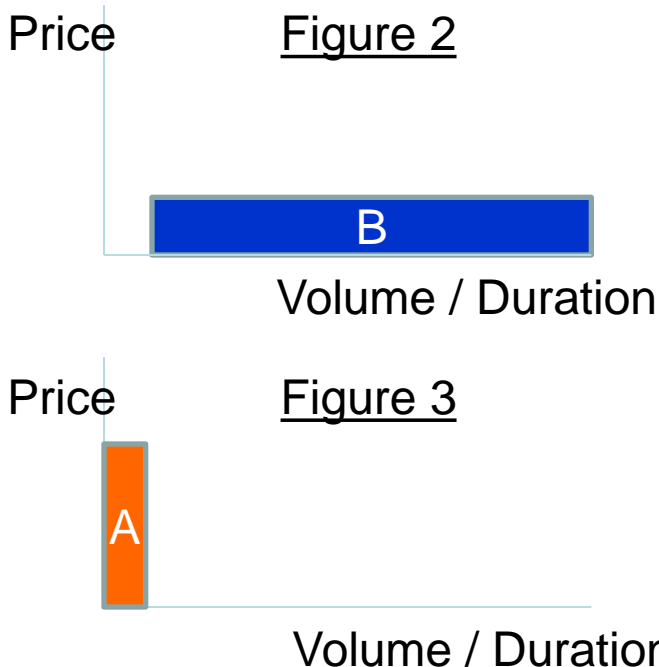
Economic Test is met overall

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**

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

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Concluding remarks

Mark Wiekens
Advisor, Market Area

Back-Up Slides



Auction Example for SJWS 2

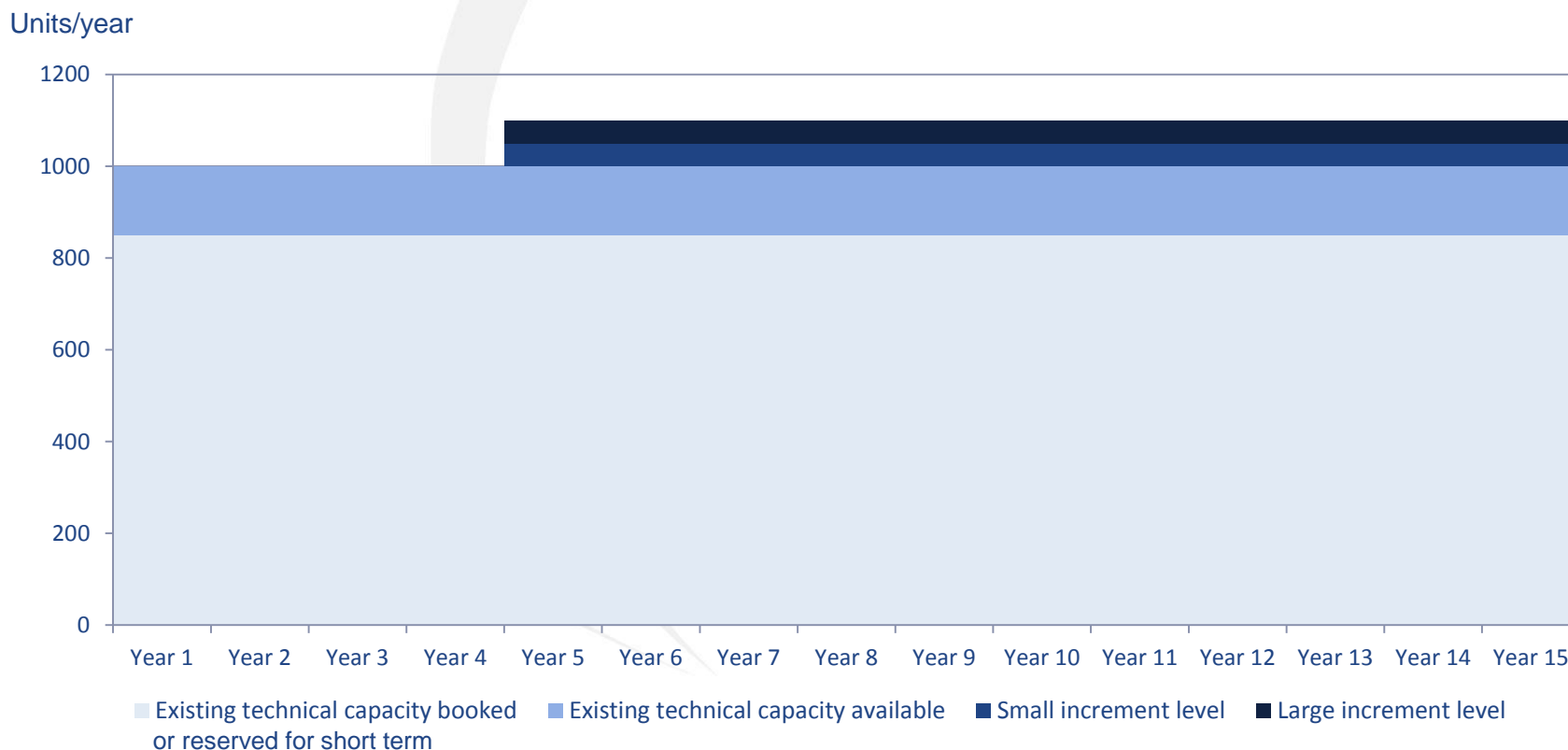
Incremental Proposal

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



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) \approx 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

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

| 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

Bidding Ladder 3 Auction Results

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

| 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

Outcome of Economic Test

$$\text{PVUC} > f \times \text{PVAR}$$

| Scenario | Small Increment | Large Increment |
|--|-----------------|-----------------|
| Present Value of Increase in Allowed/Regulated Revenues (PVAR) \approx 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

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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)



Market test: specific features

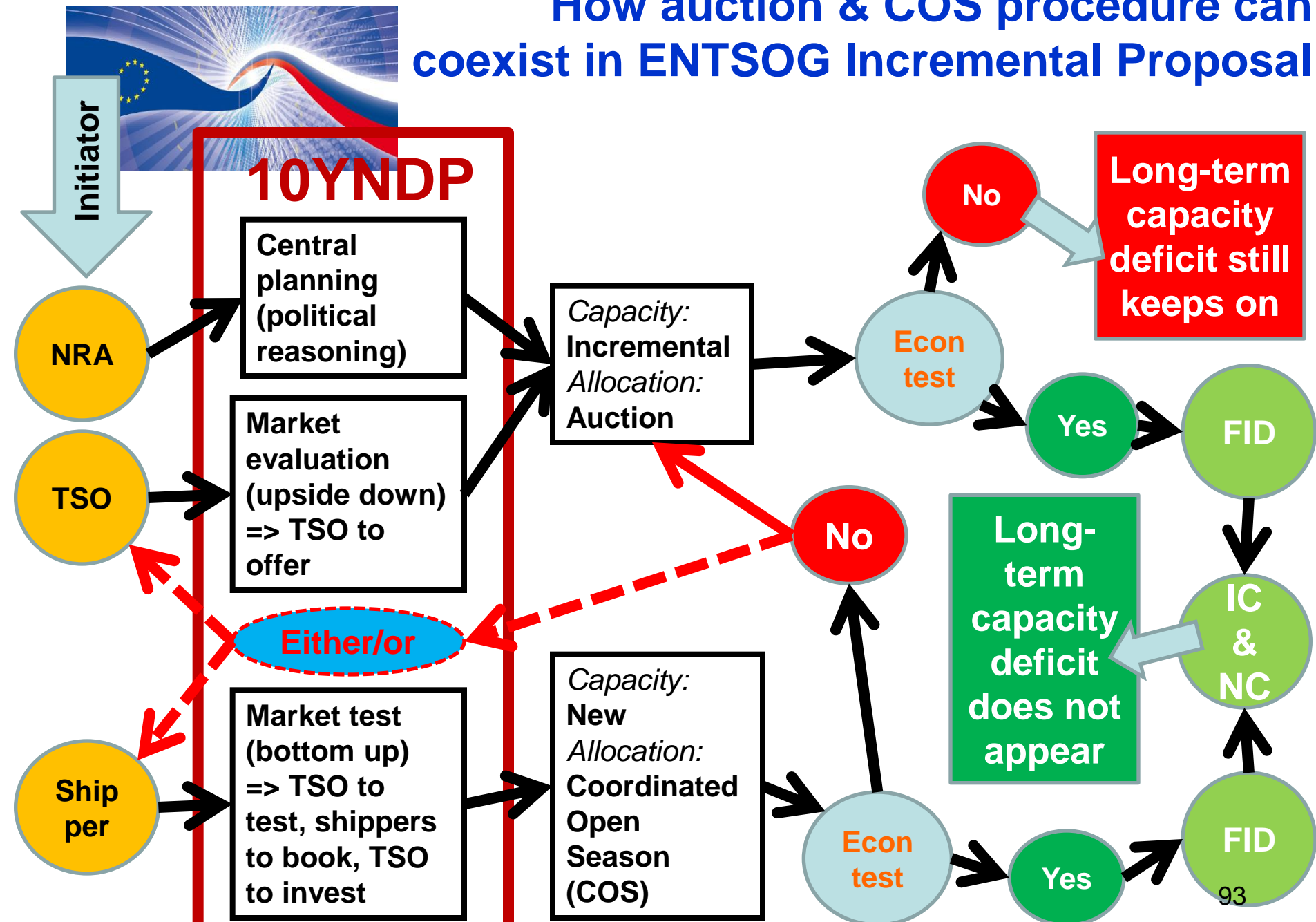
- Proposed to be organized:
 - as integral part of 10YNDP,
 - both for existing & not yet existing capacity,
 - both at each existing & potential new IPs (e.g. within the EU) & at each existing & potential new cross-border points between EU & non-EU (CBP)
 - for allowed future period, e.g. up to 15Y 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





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

| | Existing Capacity | Incremental Capacity | New Capacity |
|--|-------------------|----------------------|--|
| Capacity allocation mechanism (<i>CAM NC + amendment</i>) | Auction | Auction | Coordinated Open Season (+ cross-border project ring-fencing + new project-based ITSO) |
| Tariff methodology (<i>draft NC HTTS</i>) | 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

Draft solution for TSO coordination for new cross-border capacity within E-E EU zones: COS, ring-fencing, ITSO



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

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

