CEER-ACER Workshop on Gas Incremental Capacity

3 June 2013, Brussels

CEER-ACER workshop on gas incremental capacity

Introduction

Walter Boltz

ACER/CEER GWG Chair

Brussels, 3 June 2013

Context of the Incremental Blueprint

The Challenge:

Follow up to the CEER Gas Target Model – calls for studying European processes for the identification of incremental capacity

The Environment:

Network Code on Capacity Allocation Mechanism (of existing capacity), Tariff Framework Guidelines, dynamic market environment with uncertainty in future supply and demand and further challenges ahead

The Task:

22nd Madrid Forum (Oct. 2012) requested CEER to present a "blueprint" at the 23rd Madrid Forum (April 2013)

Ensuring efficient investment with market-driven processes

Blueprint objective:

- *Meet market demand for capacity while limiting the risk of stranded assets*

Key principles:

- *Clarity on when incremental capacity would be offered*
- *Design of the investment procedure as consistent as possible with auctions used for existing long-term capacity*
- *Strong cross-border coordination to ensure project design is consistent and fits the market's needs*
- *Transparency on costs calculation and tariff setting*
- *Decision to invest based on the results of an economic test, known in advance by network users*

Blueprint development

- CEER **public consultation** on market-based investment procedures for gas infrastructures launched in June 2012
- **Evaluation of comments** and CEER preliminary views published in December 2012
- Request from stakeholders
  - Ensure consistent approaches for existing and incremental capacity
  - Preference for predictable offer through joint allocation procedure
- Stakeholder roundtable discussions
- Close co-operation with ACER, ACER-commissioned Frontier Economics study
- Consistency with European Infrastructure Package safeguarded. Results from cost benefit analysis and cross-border cost allocation can feed into economic test. However: methods of these are out of scope for incremental Blueprint.
- Today´s workshop to discuss the Blueprint elements and get guidance
- Way forward

Thank you for your attention!

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Incremental Capacity

Background of the ACER / Frontier Economics study

Dimitris Lelovitis, ACER

CEER-ACER Workshop on Gas Incremental Capacity
Brussels, 3 June 2013

Context of work on Incremental Cap.

CEER Gas Target Model (2011)

→ calls for studying European processes for the identification of incremental capacity (IC)

CEER Consultation Paper (summer 2012)

→ "Market-Based Investment Procedures for Gas Infrastructure: Issues and Approaches"

NC on Capacity Allocation Mechanisms

→ Auctions at IPs for existing capacity only

22. Madrid Forum requested a "blueprint"

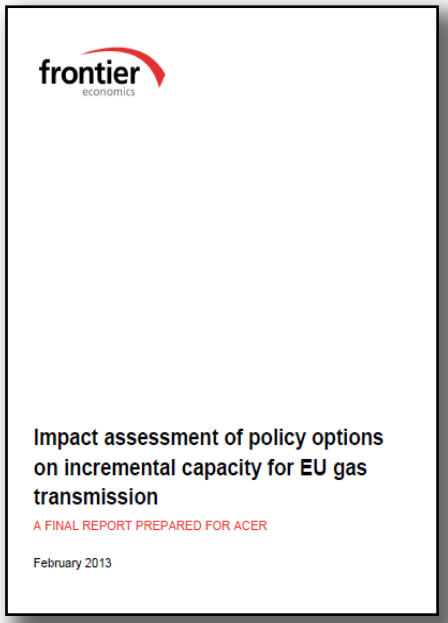
→ ACER consultancy study

→ CEER blueprint development for 23rd MF (incl. Stakeholder Round Table Discussions)

Study on Incremental Capacity

Frontier's Impact Assessment of policy options on incremental capacity for EU gas transmission

- Requested by EC letter to ACER (June 2012)
  → invitation to also assess Incremental Capacity within Tariff FG
- ACER tender and contract with Frontier Economics (Nov. 2012) to assist ACER with Impact Assessment on IC
- The study was steered by a committee of ACER-CEER, ENTSOG and EC
- Release of final report in Feb. 2013



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General conclusions from the study

- Study indicates **benefits** of a harmonised EU approach on IC (e.g. a faster provision of IC to the market)
- A **holistic** treatment of Incremental Capacity beyond tariffs and transparency is needed
  → strong links to
  - NC Capacity Allocation Mechanisms
  - 10-Year Network Development Plan
  - Energy Infrastructure Package (e.g. CBA)
- Two proposals (on publication requirements and payable price) have been admitted in FG Tariff
- Assessed design options for IC (related to timing of the offer of IC, allocation method and economic test)
  → **fed into the drafting of the CEER Blueprint**

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Thank you for your attention!

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Incremental capacity study

Wynne Jones

Presentation to CEER - ACER Workshop on Gas Incremental Capacity

3 June 2013

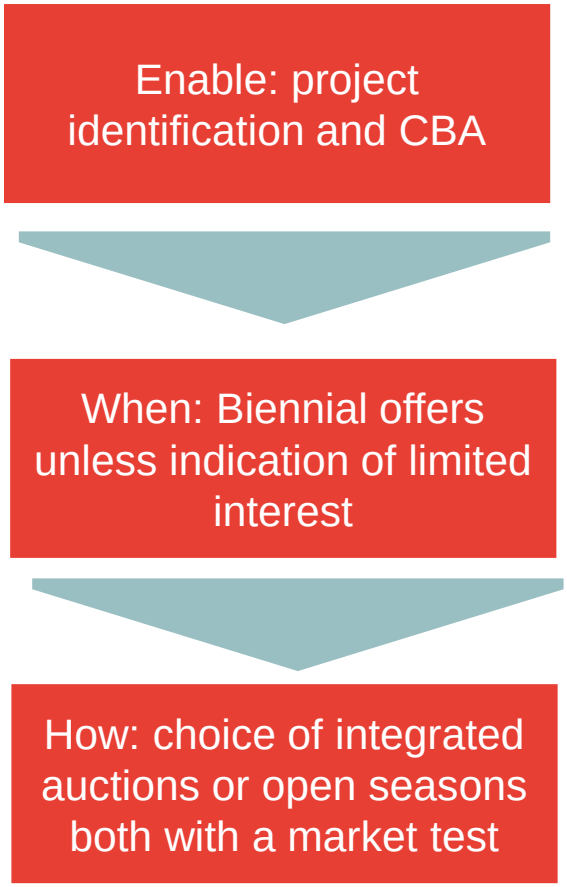
Agenda

- Introduction
- Purpose and scope of the study
- Overview of proposals on incremental capacity
- Basis of market test and harmonised principles
- Options for how to offer incremental capacity
- Roadmap

Introduction – purpose and scope

- Purpose of the study
  - Impact assessment of options for harmonised rules on IC
    - Design of the market test
    - When to offer IC
    - How to offer IC
  - Implications for FGs on harmonised tariffs
  - Implications for the NC CAM draft regulation
- Scope
  - Focus on incremental capacity….. but consider implications for new capacity
    - Given VIPs, new capacity relates to IPs that do not yet exist e.g. HI-SK
  - IPs between MS and between market areas (same as NC CAM)
  - Mechanism could also be applied to storage, LNG and import entry points

Overview of our proposals on incremental capacity

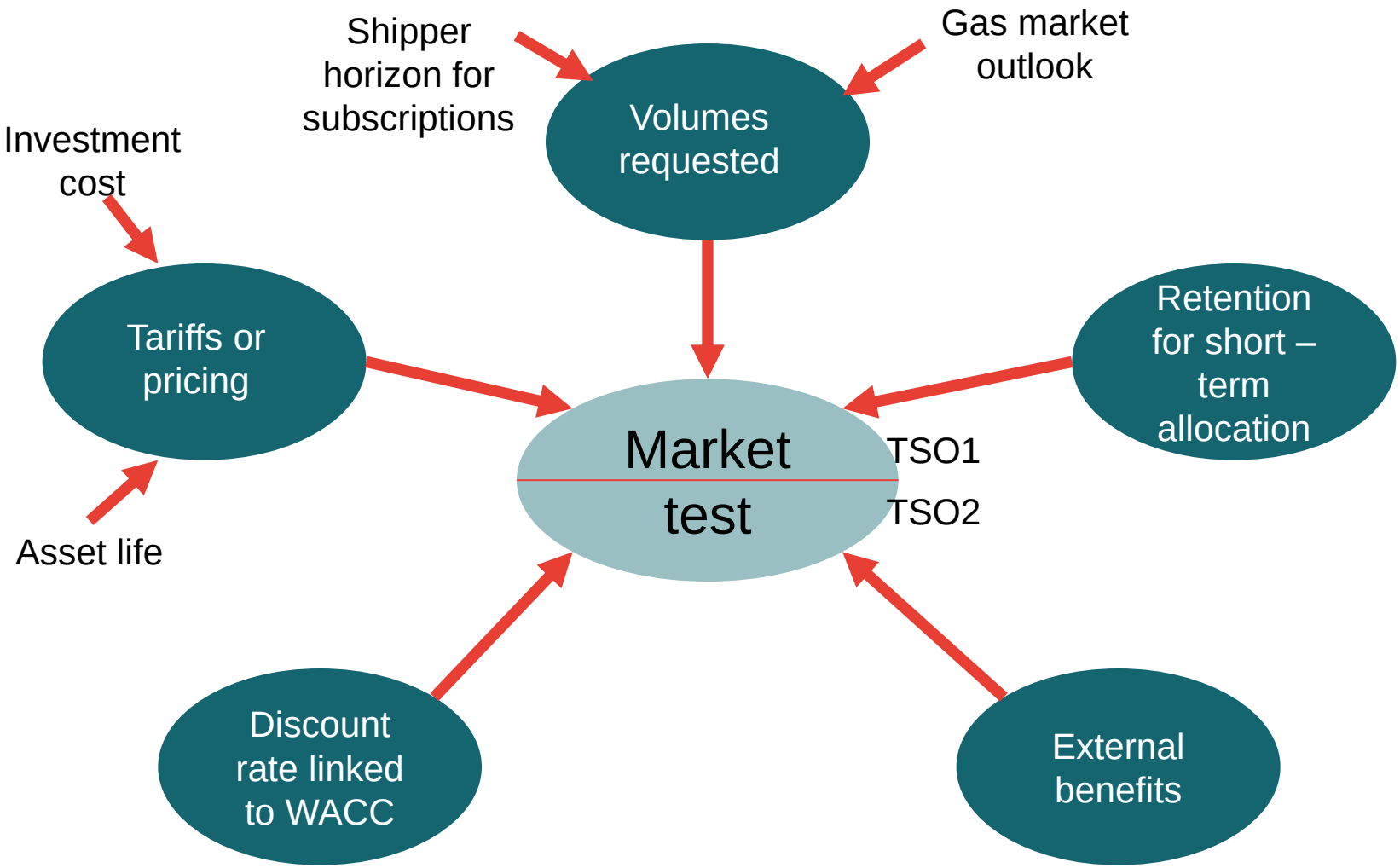


- New obligation on TSOs to cooperate
- Done in context of TYNDP process
- Common CBA to identify external benefits and economic life
- NRA approval of proposed projects
- Offers follow publication of EU TYNDP
- Proposed contra-indicators are:
  - 5% unsold existing capacity in Y5 – Y8
  - but unsold not due to capacity transfer
  - Physical congestion in no more than one TYNDP scenario
- Decision on method based on complexity and number of IPs/TSOs involved
  - One IP – normally integrated auction
  - Two or more IPs – OS process
- Market test substantially common to both options
- Single market test used by both TSOs at an IP if at all possible

Basis of the market test

- Many open seasons in the past have used a quantity threshold
- We see important benefits in a financially based market test that compares discounted revenues to project costs (cost coverage):
  - Shippers see tariff or estimate of floating tariff used as basis for price payable
  - Revenues and costs can be compared as in a conventional cost-benefit analysis
  - Easier to compare different options in financial terms
  - Enable allocation based on price if there is excess demand for incremental capacity – providing a link to the NC CAM
  - Easily adapted to consider differential impact of additional levels of incremental capacity
- Cost of IC “projects”
  - Investment costs for specific actions more likely to be acceptable in continental Europe than LRMC approach used in GB…. but that has a cost!

Many factors relevant to a market test…



… and common to any demand-driven approach

Proposed harmonised principles for market test

Scope for harmonisation:

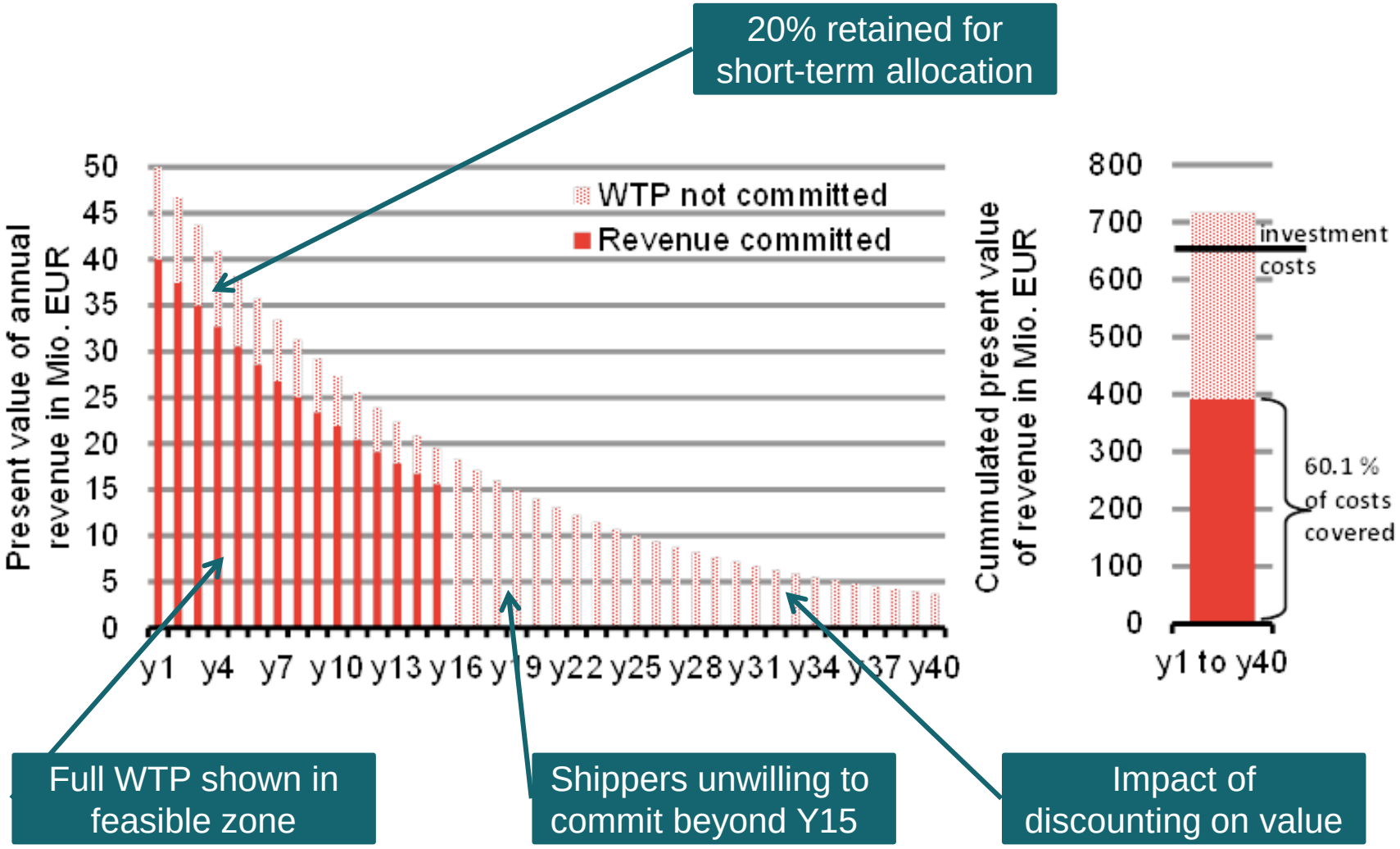
- Principles ✓
- Parameters ✗

(too market/IP specific)

Proposed harmonised principles

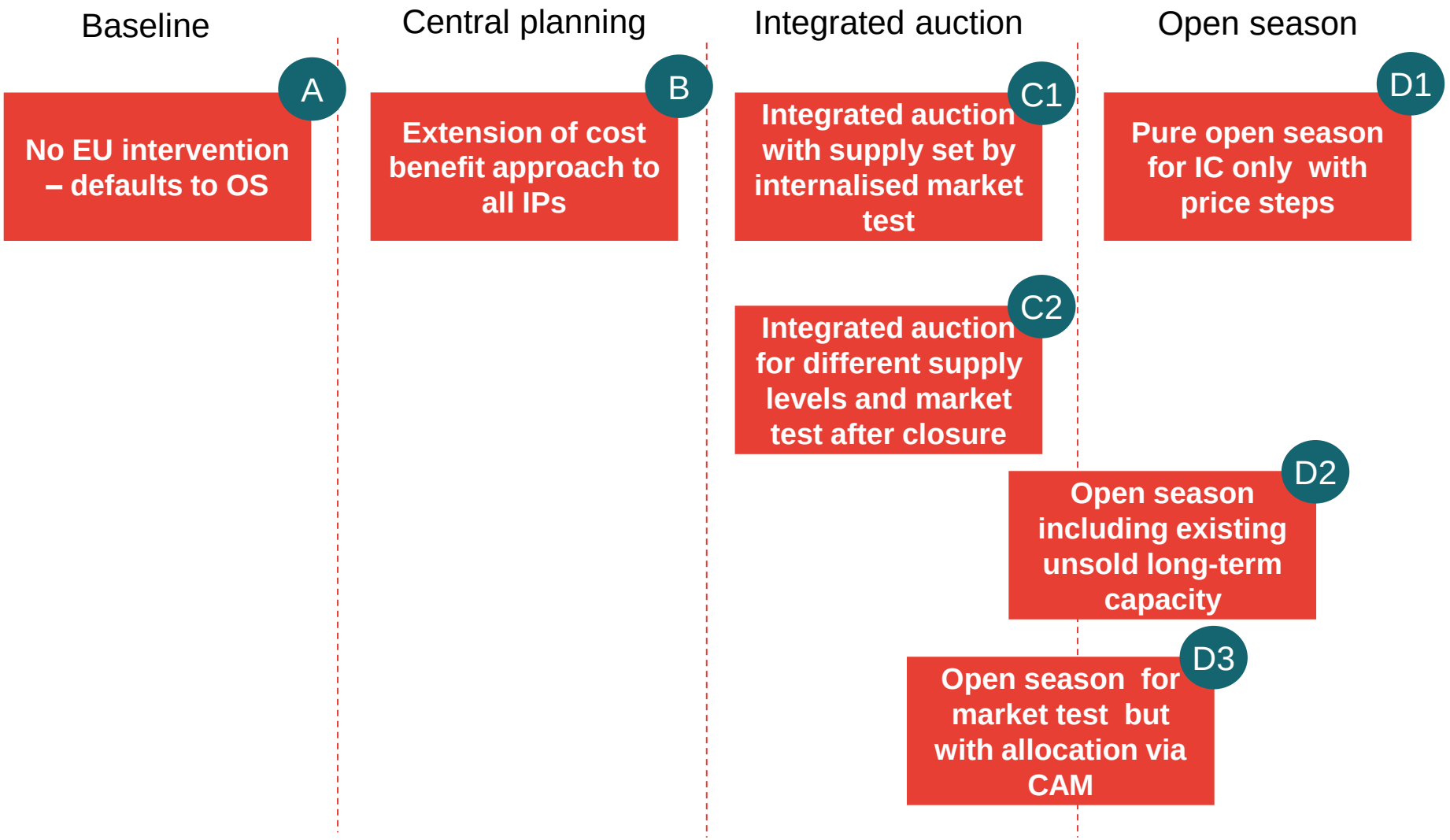
- Transparent and capable of replication
- Based on discounted cash flows
- Applied sequentially to different levels of incremental capacity
- Frame test in real terms unless capacity to be allocated at fixed nominal prices
- Reflect expected **economic** asset life in pricing and in coverage ratio
- Take account of external benefits as notional additional revenue
- TSOs to aim for a single market test. If not possible, reasons for difference to be made explicit

Stylised examples to show issues



Investment of €650m and annual revenues of €50m with a 6.5% real discount rate

Options for EU intervention about how to offer IC…



… beyond baseline

Example of proposed format for integrated auctions using different supplies of yearly capacity

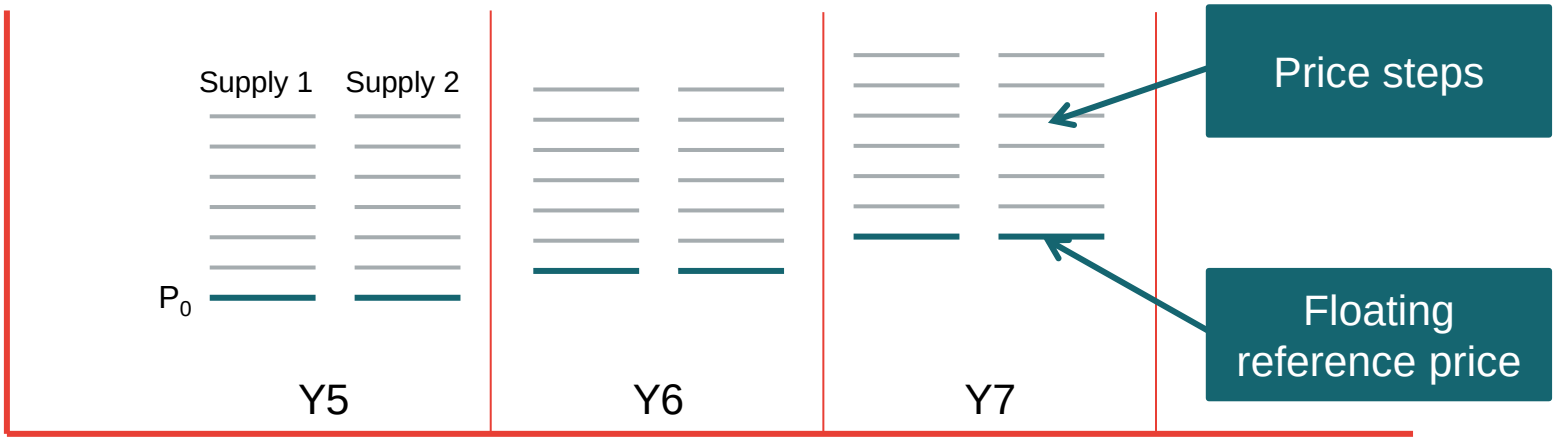
		Y1		----------	Y4			IC = 0	Y5	IC =50			IC = 0	Y6	IC =50		etc
Price step	Price	Supply	Demand		Supply	Demand		Supply	Demand	Supply	Demand		Supply	Demand	Supply	Demand	
21	2.0	150			150			150		200			150		200		
20	1.9	150			150			150		200			150		200		
19	1.8	150			150			150		200			150		200		
18	1.7	150			150			150	140	200			150		200		
17	1.6	150			150			150	170	200			150	145	200		
16	1.5	150			150			150	200	200			150	180	200		
15	1.4	150			150	*135*		150	240	200			150	230	200		
14	1.3	150			150	*155*		150	300	200			150	290	200		
13	1.2	150			150	*195*		150	350	200			150	335	200		
12	1.1	150			150	*250*		150	360	200			150	355	200		
11	1.0	150			150	*300*		150	370	200			150	365	200		
10	0.9	150	*145*		150	*360*		150	380	200			150	380	200		
9	0.8	150	*190*		150	*365*		150	395	200	*198*		150	387	200		
8	0.7	150	*250*		150	*370*		150	398	200	*240*		150	390	200	180	
7	0.6	150	*280*		150	*380*		150	405	200	*350*		150	395	200	205	
6	0.5	150	*300*		150	*380*		150	420	200	*370*		150	420	200	260	
5	0.4	150	*310*		150	*385*		150	440	200	*395*		150	439	200	350	
4	0.3	150	*310*		150	*390*		150	442	200	*405*		150	440	200	400	
3	0.2	150	*315*		150	*395*		150	445	200	*440*		150	445	200	435	
2	0.1	150	*320*		150	*400*		150	448	200	*445*		150	447	200	440	
1	0	150	*320*		150	*400*		150	450	200	*450*		150	450	200	450	

Clearing price

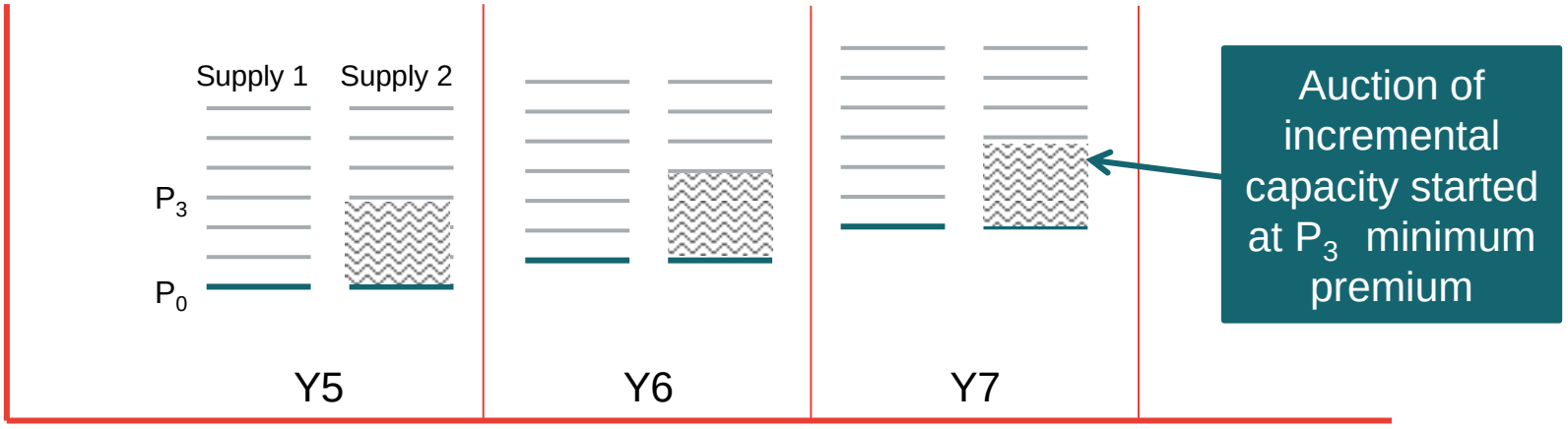
Existing unsold + incremental

Same reserve price shown here

Treatment of reserve prices in integrated auctions

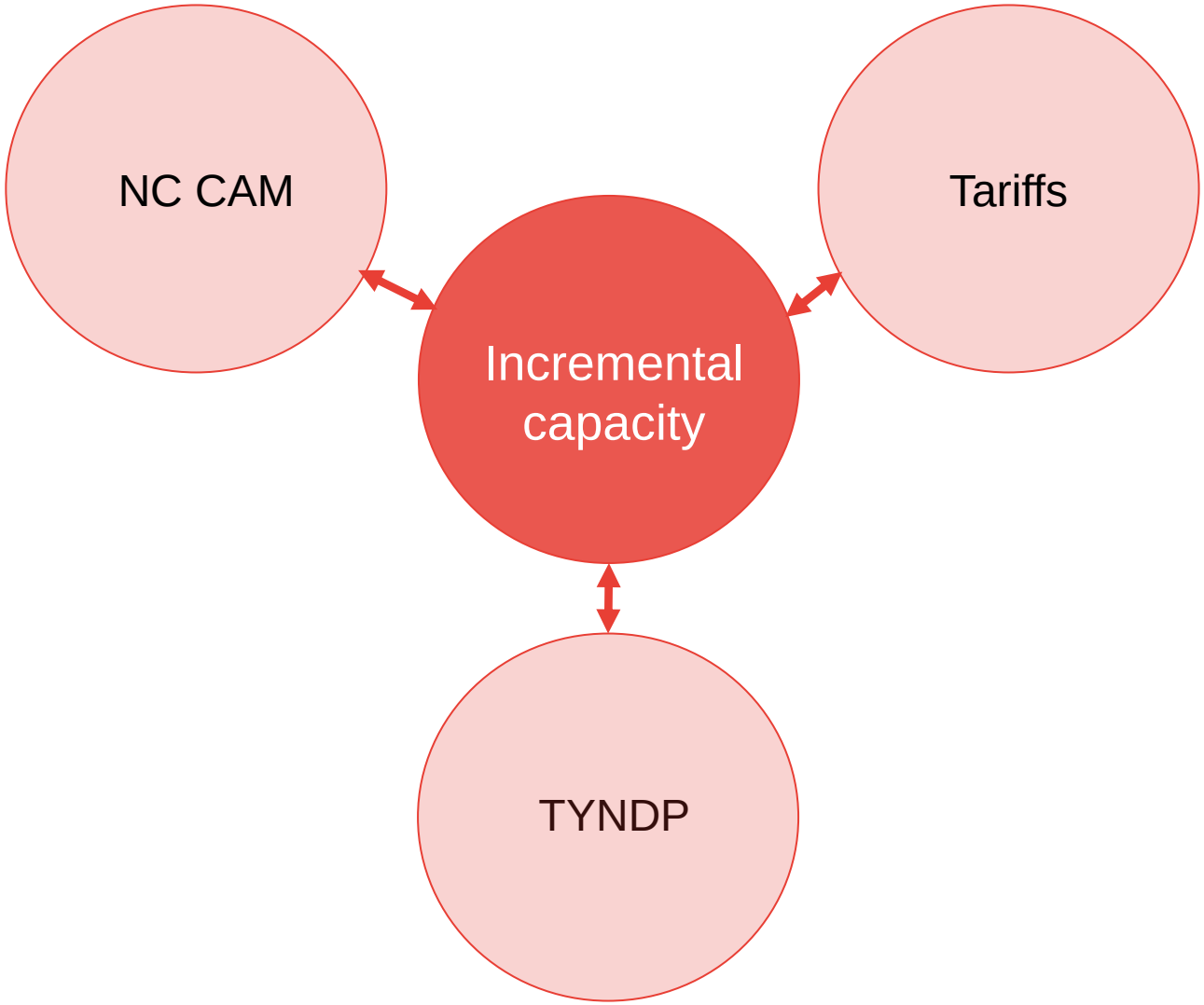


Default arrangement is that all capacity offered with same reserve price in any year



Option for NRAs that want to differentiate reserve price for incremental capacity

Implementation interacts with other network codes etc



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Panel Session 1: When to offer incremental capacity?

Annick Cable, Ofgem, Co-Chair, CEER TF

CEER-ACER Workshop on Gas Incremental Capacity

Brussels, 3 June 2013

When to offer incremental capacity?

Is there likely to be demand for incremental or new capacity, such that the design and coordination of an offer and running the process is worthwhile?

Meet at least one of three criteria

- *Long-term capacity at connection is sold out from year of first potential incremental offer for three subsequent years*
- *TYNDP and/or national NDPs indicate a long-term physical transport requirement at connection, in the sense that more than one scenario show undersupply*
- *Shippers give non-binding indication through a defined window to TSO/NRA that they are willing to commit to capacity levels above existing capacity over long term (possibly beyond CAM NC 15 year allocation period)*

Thank you for your attention!

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CEER-ACER Joint Workshop on Gas Incremental Capacity

Brussels, 3 June 2013

Kees Bouwens, ExxonMobil
Contact: kees.bouwens@exxonmobil.com

OGP

More about OGP: Our membership spans the globe and accounts for more than half of the world's oil output and about one third of global gas production. From our London office, we foster cooperation in the area of health, safety and the environment, operations and engineering, and represent the industry before international organisations, such as the UN, IMO and the World Bank, as well as regional seas conventions, such as OSPAR, where we have observer status. OGP Europe in Brussels represents before the EU OGP members who are active in Europe.

General remarks on Incremental Capacity

- **OGP welcomes CEER-ACER work on Incremental Capacity**
- **We support market-driven investment procedures for gas infrastructures, aiming to:**
  - Meet market demand for new capacity in a timely manner
  - Limit risk of overinvestment and stranded assets
  - Avoid undue discrimination
- **Prefer ‘simple’ process that is also suitable for new capacity**
- **Single economic test is a must**
  - NRAs should be empowered to decide on cost-sharing agreement when appropriate to align cost/benefits

Incremental Capacity: When to offer?

- **We agree to only offer incremental capacity when there is potential demand**
  - This should normally be identified in the TYNDP-processes
  - Blueprint proposes additional triggers (long term capacity sold out; network users' genuine requests) which cause some overlap but avoid that potential demand is not included
- **Sufficient capacity should be built to accommodate all economically reasonable and technically feasible demands for capacity (Art. 13.2 of Directive 2009/73/EC)**
  - If CAM long-term auction is sold out, this implies that the expansion investment is late, or not economic/feasible
- **Process to offer capacity requires some preparatory steps**
  - Recycle input of TSOs, NRAs and NUs ('OS-like' procedure)

Other Topics

- **Allocation procedures for incremental capacity**
  - OGP believes Incremental can be incorporated in CAM NC
  - We support 2-step approach of open-season followed by CAM, with additional rules to avoid ‘free rider’ effects (incentives to users triggering investment)

- **Economic test and tariff issues**
  - Network users should have certainty about forward tariffs
  - Market test should set investment threshold in advance and be transparent to network users
  - NRAs should set minimum coverage by long term bookings rather than setting quotas for mid- and short-term

Thank you for your attention

CEER-ACER joint Workshop on Gas Incremental Capacity

IFIEC-CEFIC position

Jacques van de Worp

Brussels, June 3rd 2013

Revenue recovery:

Tariff structures should be based on recovery of efficient costs

•For end users, security of supply is the no.1 issue. Required / contracted capacity should be available at any given time. In case of:

- Contractual congestion: CAM – CMP
- Physical congestion: TYNDP - investments in incremental capacity

•End users accept to pay a fair price and a tariff that reflects efficient costs relating to their transport/booking profile;

•(Regulated) reference prices for (IP) transport capacity should be:

- cost reflective, based on actual cost (of efficient) network operators;
- Leading to low risk premiums (efficient cost);
- prevent free riders behavior via ‘causer pay’ principle;
- provide optimal incentives for investments based on market tests (OS)
  - Fair ‘return on equity’: ‘WACC’.

Cost allocation split entry-exit of the overall revenues to prevent cross-subsidization

- 50/50 split between entry and exit as a starting point.
- We support a comparative test on cross-subsidization that could be developed as a rule in the Network Code (instead of the Framework Guideline) after enhanced discussions in stakeholder workshops.
  - Current test only between transit and domestic based on distance
- Tariff methodologies preferably based on cost recovery via a capacity charge:
  - to prevent high commodity charges for short term capacity exceeding variable cost and inhibit trade;
  - Main part of transport costs are fixed cost;

Transparency is key, also for the NC on Tariffs

- Customers of the grid must have information about the real transport costs and the methodology how the costs will be allocated into tariffs:
  - historical and actual data on tariffs for all entry and exit points will help consumers to estimate transport price fluctuations in the future that will be dominated by capacity auctions;
- The FG should set a clear framework with regard to ‘access to data’ for everyone who wants to have access, and to minimize the non-publication of data due to apparent ‘confidentiality’:
  - proof: the so-called three-minus rule from the pre-third package era: when at an Interconnection Point (IP) less than three shippers were active, data would not be published because of confidentiality. All shippers were forced to publish the data. This has not led to any problems, hence, the confidentiality-argument is non-existent.

When to offer incremental capacity

ENTSOG's initial views

CEER Workshop

3 June 2013

Timing of initial ‘pre-market test’ assessment

Should a market test be launched?

High frequency of assessment:

- Unnecessary administrative costs
- Risk of ‘splitting’ participation of interested network users
  → underestimating demand
  → higher tariffs due to loss of economies of scale

Assessment around every two years may be appropriate

Low frequency of assessment creates risk of persistent congestion with no possibility to launch market test

<= 1 year **2-3 years** **>= 4 years**

Criteria for launching market test

Criterion	Considerations
TYNDP/ NDP scenarios	• Test is **highly sensitive to choice of parameters** for scenarios • **Identified investment needs should be discussed by relevant parties** to identify the best response (which could be a market test)
Auction results	• Could indicate **urgent need** for more capacity • Potential impact of **quotas** in CAM NC to be **taken into account** • If criterion used, should look at **NPV of auction revenues** and whether demand is sustained, instead of specifying 'sold out for x years' • We note that if market test is integrated into CAM process, this implies **full year's delay** between 'pre-market test' in which criteria are met, and the market test itself
Non-binding user input	• Most **practicable way** to assess whether a market test should be launched • **Inputs should never be directly used for any subsequent market test** • Consultation on a **regular basis**

Important considerations

Any ‘pre-market test’ should incorporate **appropriate safeguards:**

- **Advance agreement of criteria by NRA**
- **Assurances for TSOs on process cost recovery**
- **Parameters to be set locally**

Rules should **allow market test to be launched when criteria are not met**, if NRAs and TSOs agree

Discretion for TSOs to facilitate capacity by **non-physical actions**

Panel Session 2: Allocation procedures for incremental capacity

Johannes Heidelberger, BNetzA, Co-Chair CEER TF

CEER-ACER Workshop on Gas Incremental Capacity, Brussels, 3 June 2013

Allocation procedures for incremental capacity

- **Straightforward hub-to-hub setting: incremental capacity integration into NC CAM algorithm**
  - One bidding ladder
  - Parallel bidding ladders
- **Where size and/or complexity require OS procedures**
  - Ex-post allocation in CAM NC procedure
  - Pro-rating of commitments
  - Full demand curve approach

Short recap on CAM NC allocation procedure

Example:

Ascending clock algorithm for an offered volume of 200 units of existing capacity

Price step (increasing ↑)	Y+1	Y+2	Y+3	…	Y+14	Y+15
p3						
p2	200	190				
p1	210	210	200			
p0 (=regulated tariff)	220	230	230		190	170

Bidding is for volumes against price steps. Allocation clears when aggregated volume bids are equal or below offered volume.

Integration into CAM NC, single bidding ladder 1/2

- **Existing capacity of X is on shelf (150 and 100 units of incremental capacity are on offer)**
- **Auction is run according to CAM until it clears for existing capacity volume (red cells)**

Price step	Y+5	Y+6	Y+7
p2	≤X	≤X	≤X
p1	X+100	X+100	X+90
P0 (=reg tariff)	X+150	X+150	X+100

...

Y+14	Y+15
≤X	≤X
X+90	X+80

Integration into CAM NC, single bidding ladder 2/2

- Now, 150 and 100 units of incremental capacity offer could be tested

Price step	Y+5	Y+6	Y+7
p2	≤X	≤X	≤X
p1	X+100	X+100	X+90
p0	X+150	X+150	X+100
Value of commitment for 100 at clearing price	100*p1	100*p1	100*p0

...

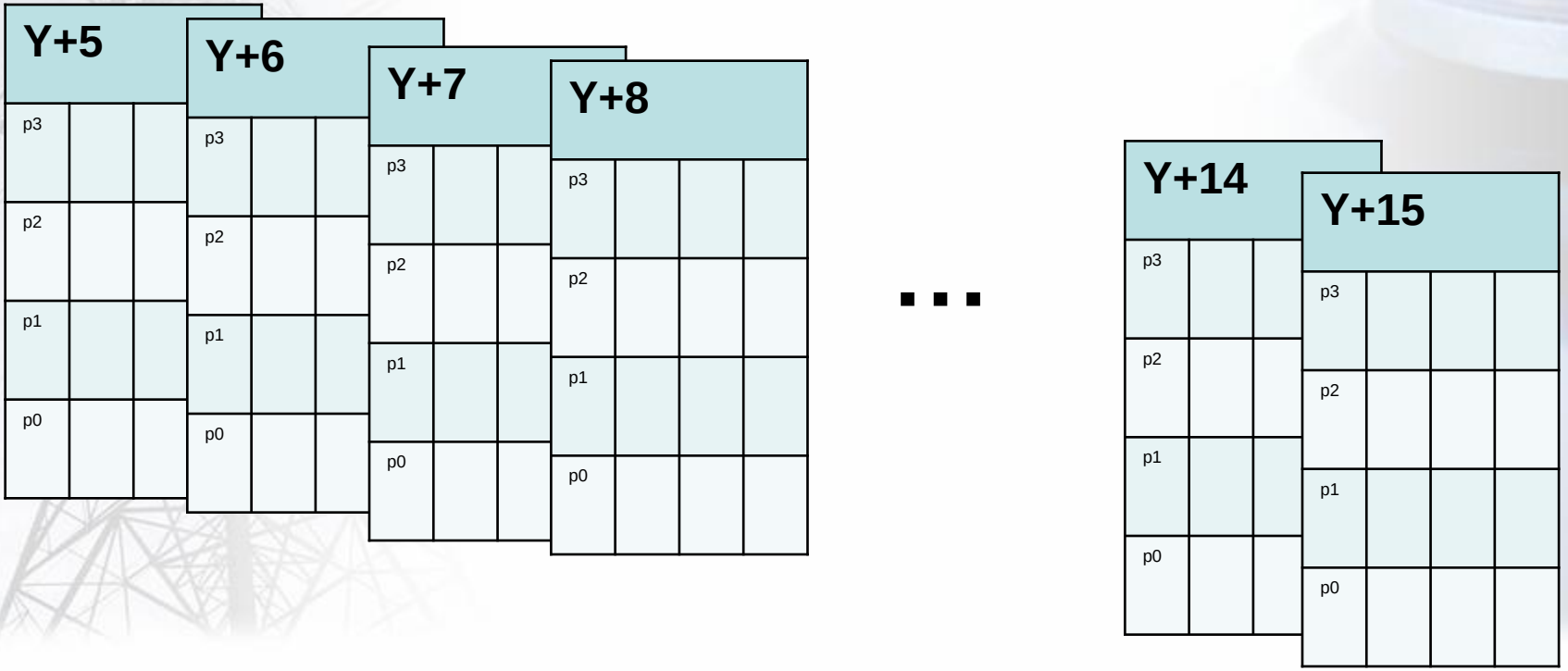
Y+14	Y+15
≤X	≤X
X+90	X+80
90*p0	80*p0

- Let's assume for this example that at 150 incremental, the economic test is not passed (sum of discounted bid volumes x prices is too low)
- Assuming that at 100 incremental capacity, the economic test is passed, capacity can be allocated at p1 in Y+5 and Y+6 and at p0 in years Y+7 through Y+15 (green cells)
- However, if test is not passed at any incremental capacity level, clearing prices remain those for existing capacity (undersell may occur)

Integration into CAM NC, parallel bidding ladders 1/6

If incremental is offered in parallel bidding ladders:

From first year of incremental offer, for each project size (level of incremental release) a bidding ladder opens. In this example 3 ladders, one for existing cpacity and two for X+100 and X+150



Integration into CAM NC, parallel bidding ladders 2/6

- Again, existing capacity of X is on shelf, 100 or 150 units incremental capacity respectively are tested.
- Auction for existing capacity runs as per CAM NC – no changes

Price step	Y+5 existing	Y+5 exist.+100	Y+5 exist.+150
p2	≤X		X+150
p1	X+90		X+160
p0	X+160	X+100	
Value of commitment at clearing price	N/A	100*p1	150*p2

...

Y+15 existing	Y+15 exist.+100	Y+15 exist+150
		X+150
≤X	X+80	
N/A	80*p0	150*p1

Integration into CAM NC, parallel bidding ladders 3/6

- **In parallel, shippers have the opportunity to bid for existing + each level of incremental capacity**

Price step	Y+5 existing	Y+5 exist.+100	Y+5 exist.+150
p2	≤X		X+150
p1	X+90		X+160
p0	X+160	X+100	
Value of commitment at clearing price	N/A	100*p1	150*p2

...

Y+15 existing	Y+15 exist.+100	Y+15 exist+150
		X+150
≤X	X+80	
N/A	80*p0	150*p1

Integration into CAM NC, parallel bidding ladders 4/6

Parallel bidding ladders argument No. 1:

- **The willingness to pay for X + 100 might be *lower* than for existing capacity. Argument: A constraint is removed and exclusive arbitrage opportunities could disappear (less scarcity value of capacity)**

Price step	Y+5 existing	Y+5 exist.+100	Y+5 exist.+150
p2	≤X		X+150
p1	X+90		X+160
p0	X+160	X+100	
Value of commitment at clearing price	N/A	100*p1	150*p2

...

Y+15 existing	Y+15 exist.+100	Y+15 exist+150
		X+150
≤X	X+80	
N/A	80*p0	150*p1

Integration into CAM NC, parallel bidding ladders 5/6

Parallel bidding ladder argument No. 2:

- **Willingness to pay may actually be higher for a higher incremental release: There might be a lumpy upstream project, for which a certain level of capacity is required (and not less!) – in this example bidding clears at p2 for X+150 in Y+5.**

Price step	Y+5 existing	Y+5 exist.+100	Y+5 exist.+150
p2	≤X		X+150
p1	X+90		X+160
p0	X+160	X+100	
Value of commitment at clearing price	N/A	100*p1	150*p2

...

Y+15 existing	Y+15 exist.+100	Y+15 exist+150
		X+150
≤X	X+80	
N/A	80*p0	150*p1

Integration into CAM NC, parallel bidding ladders 6/6

Parallel bidding ladder argument No. 3:

- **Parallel bidding ladders allow to differentiate the reserve prices according to the deemed investment costs**
- **Here, the grey cells illustrate that bidding at p0 would not allow passing the economic test, therefore, minimum bids are at p1**

Price step	Y+5 existing	Y+5 exist.+100	Y+5 exist.+150
p2	≤X		X+150
p1	X+90		X+160
p0	X+160	X+100	
Value of commitment at clearing price	N/A	100*p1	150*p2

...

Y+15 existing	Y+15 exist.+100	Y+15 exist+150
		X+150
≤X	X+80	
N/A	80*p0	150*p1

Integration into CAM NC - what approach?

Single bidding ladder	Parallel bidding ladders
Minimum adjustment to CAM algorithm (all bids must remain binding). During bidding, difficult to monitor incremental	No adjustment to CAM algorithm as such. Additional bidding ladders add complexity for both auction platform and bidders
No differentiation of willingness to pay according to incremental release – bidders may end up with auction premium on existing capacity or undersell may occur	Differentiation of willingness to pay enabled, depending on incremental volumes on offer
No differentiated minimum bids, even if economic test cannot be passed at regulated tariff	Differentiated minimum bid levels (reserve price) to allow for economic test to be passed

Open Seasons for projects of greater size / complexity 1/2

Where size and/or complexity require Open Seasons procedures:

- If commitments for capacity fit project size (or are below) and economic test is passed: *all is fine*
- However: if commitments for capacity are above project size but are not adequate for next bigger project size, an allocation rule is required. Prioritisation solely according to duration of commitment (flat booking) is discriminatory.

  Three options:

  1. Ex-post allocation in CAM NC process
  2. Pro-rating
  3. Full demand curves

Open Seasons for projects of greater size / complexity 2/2

1. Ex-post allocation in NC CAM algorithm:
   - Shippers unilaterally commit to place bids in annual NC CAM auction. Bidding determines who (if necessary) drops out to make capacity demand fit Open Season project size
2. Pro-rating:
   - All bidders in an Open Season are served, if aggregated bids are beyond project size, all bids are pro-rated proportionally
3. Full demand curves
   - Bidders would submit their volume requests against price steps
   - Willingness-to-pay determines allocation success.
   - TSOs could go back to shippers and ask amendment of demand curves if outcome fails to deliver incremental release

Thank you for your attention!

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CEER ACER Workshop on Incremental Capacity

Brussels 3rd June 2013

Comments on CEER Blueprint on Incremental Capacity

European Federation of Energy Traders

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Incremental capacity
Pipeline Investment in response to market needs

- Market based investment mechanisms are superior to planned approaches as they reflect what the market is willing to book and pay
- Open seasons and integrated auctions are two complementary market based approaches
- Open seasons better suited to large complex projects which cross more than one market zone
  - Enable proper coordination between several TSOs and NRAs
  - Allow project to be optimally sized and routed
- Integrated auctions better suited for single Interconnection points
  - Easier to standardise and combine with long term CAM auction process
  - Can be held regularly (every year as part of CAM process) so that new entrants have regular opportunities to buy capacity

We welcome CEER's work on this issue

Allocation issues – integrated auctions

- Technical Design 1
  - Price steps do not reflect costs of providing capacity but are only means to determine allocation of capacity – economic test is decoupled from capacity allocation
  - Shippers need to have model of economic test so they can modify bids if required to ensure test is passed.
- Technical Design 2.
  - More complex
  - Setting P0 at equivalent of regulated cost of new capacity could solve the issue of decoupling of economic test and allocation
- Do shippers want to pay more for a given amount of capacity to pass the economic test or book more capacity at a lower unit price to pass the test?

Allocation issues – open seasons (1)

- By definition Open Seasons are likely to be more bespoke depending on the nature of the project. Key requirements:
  - Transparency of rules and timetable to enable all who wish to participate
  - Ability of project sponsors to adapt to market requests and bidders to adapt in light of market demand
- Technical Design 1
  - Concern that capacity sold at premium to regulated costs and related “free rider” problem for shippers who only bid in the auction phase
- Technical Design 2.
  - Possible to allocate capacity based on size of financial commitment (i.e. NPV value) rather than duration of booking?
  - Benefit of flexibility for complex projects involving multiple Interconnection Points
  - US have successfully used this approach for many years

Allocation issues – open seasons (2)

- Technical Design 3.
  - Mirrors current GB approach which has delivered significant incremental capacity (e.g. Milford Haven)
  - Shippers know the cost of incremental capacity and pay the regulated cost
  - Shippers can see if the economic test will be met at the end of each bid window
  - Can this cope with multiple interconnection points or will it mean that the whole project succeeds or fails based on the result of one interconnection point (e.g. North West Gas Regional Initiative Virtual Test study 2009)

Conclusions

- Welcome CEER work on this and recognition of its importance to prevent unnecessary physical congestion and resulting high capacity costs.
- Urge CEER, ACER and ENTSOG to push forward developing the way forward
  - Clarity as to procedural way forward (FG, NC etc?)
  - Further workshops to develop workable approach
- Needs to be in place when long term CAM auctions start in 2016 or as soon as possible after that date

Thanks for your attention

European Federation of Energy Traders

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Comments on CEER Blueprint on Incremental Capacity – a view from major non-EU producer/supplier perspective

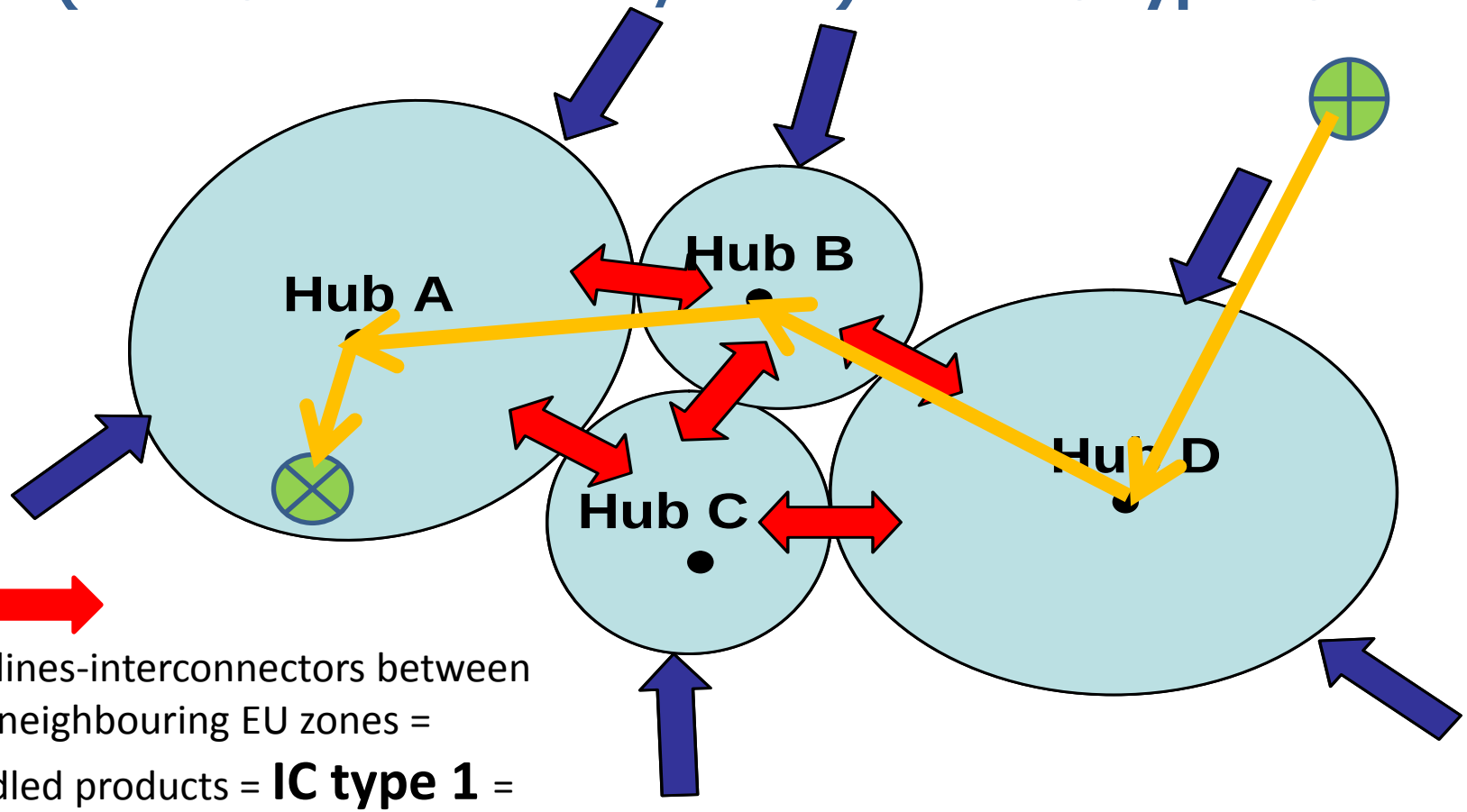
Dr. A.Konoplyanik,
Adviser to Director General, Gazprom export LLC,
Professor, Chair “International Oil & Gas Business”,
Russian State Gubkin Oil & Gas University

CEER Public Workshop on Blueprint on Incremental Capacity, 03 June 2013, Brussels

CEER Blueprint on IC: positive development from perceptions to realities

- Informal experts Consultations Russia / GG vs. EU Regulators / TSOs / CEC representatives since Jan'2010 => major issues, inter alia:
  - Development of IC within EU to match term supply contracts of non-EU producers & EU customers,
  - EU-wide coordinated binding OS (shippers to book capacity) as best effective mechanism to test and satisfy market demand for capacity,
  - How to incorporate EU-wide OS into 10YNDP, etc.
- Perceptions (until recently): these issues are not (at least properly) addressed within initial set of 12FGs & 12NCs:
  - key attention in CAM NC on allocation of capacity in deficit, not at preventing capacity deficit to appear
  - High risk of contractual mismatch problem to appear – major risk for term supply contracts, especially important issue for non-EU producers who are long-distant large-scale long-term suppliers to EU, such as Russia/GG
- Reality: Blueprint responds to a major number of these issues, at least properly / adequately stating them:
  - Financial (bankability) approach to develop IC (Art.1.1, para 2 – p.7),
  - Key principles for market driven investment process (Art.2.3 – p.10-11),
  - Market-based condition to develop IC (Art.3, third bullet point – p.12), etc.
- => Blueprint: Positive development from perceptions to realities, but…

EU internal gas market architecture according to TEP (E-E zones with VTP/hubs) - & two types of IC



Pipelines-interconnectors between two neighbouring EU zones = bundled products = **IC type 1** = major attention in Blueprint

Supplies to EU from non-EU

Non-EU producer

Its EU customer

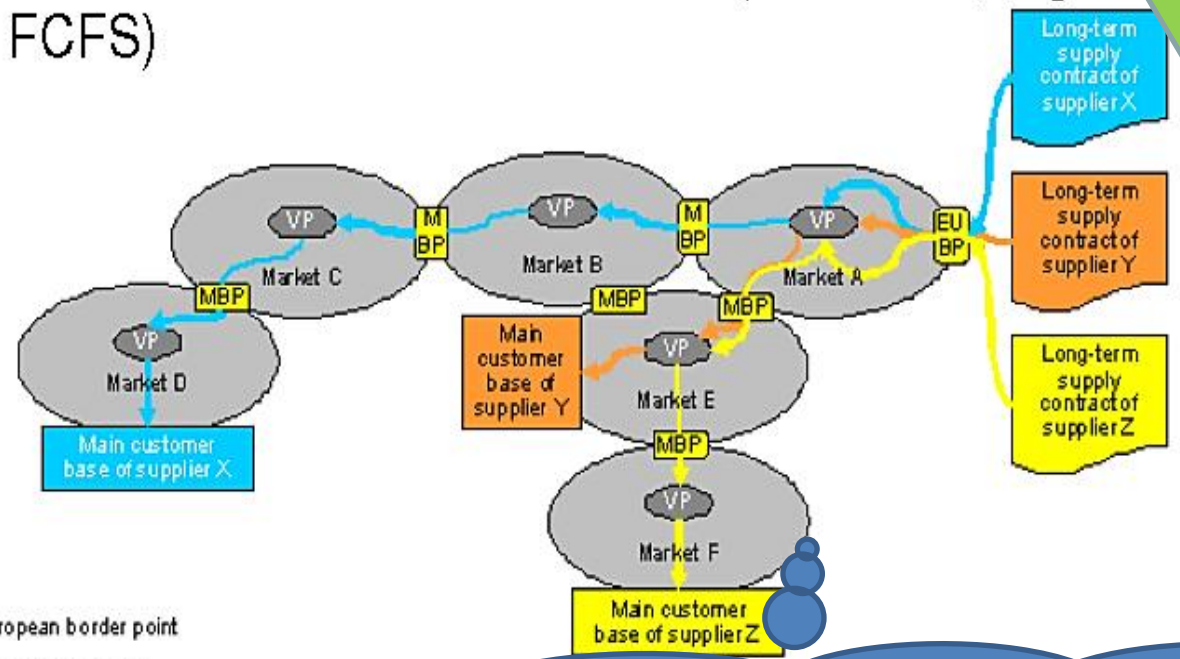
IC type 2 = multiple bundled products to be balanced, EU-wide coordination of TSOs needed to avoid contractual mismatch => influence costly investment decisions to deliver gas from far away outside EU to EU border & further to EU customers

Long Distance Large Scale Capacity bookings in EU Regulatory Framework (appeared in GTM/MECO-S model, inter alia, in result of Consultations)

- Introduction of Entry-Exit System in all countries
- Auctions as standard allocation (instead of, e.g. FCFS)

…whether Auctions are the best effective systemic solution?

Yes, this is a given legal reality to be dealt with by any actor at the EU market, but …



It was agreed at Consultations, that for such complicated cases (multiple cross-border crossings based on shippers demand for capacity) – EU-wide coordinated & binding OS procedures needed

Open Season as Universal Mechanism of Long-, Medium-, and Short-Term Allocation of Capacity (*initial proposal of Russia/GG experts*)

10YNDP + CAM FG/NC + CMP FG/NC

Market test for/Allocation of capacity via regular annual / bi-annual mechanism

Based on results of informal RF-EU expert consultations on Energy Charter Protocol on Transit open issues in 2004-2007 (Art.8.4): continuity

Available Capacity

no

yes

Short-term solution (approx. Y1-Y5/7) - to deal with existing deficits

Opportunities to invest in capacity expansion

Long-term solution (appr. Y5/7 forward) – to liquidate existing deficits & to prevent future deficits to appear

no

yes

Booking: booked (allocated) capacity deducted from Available Capacity

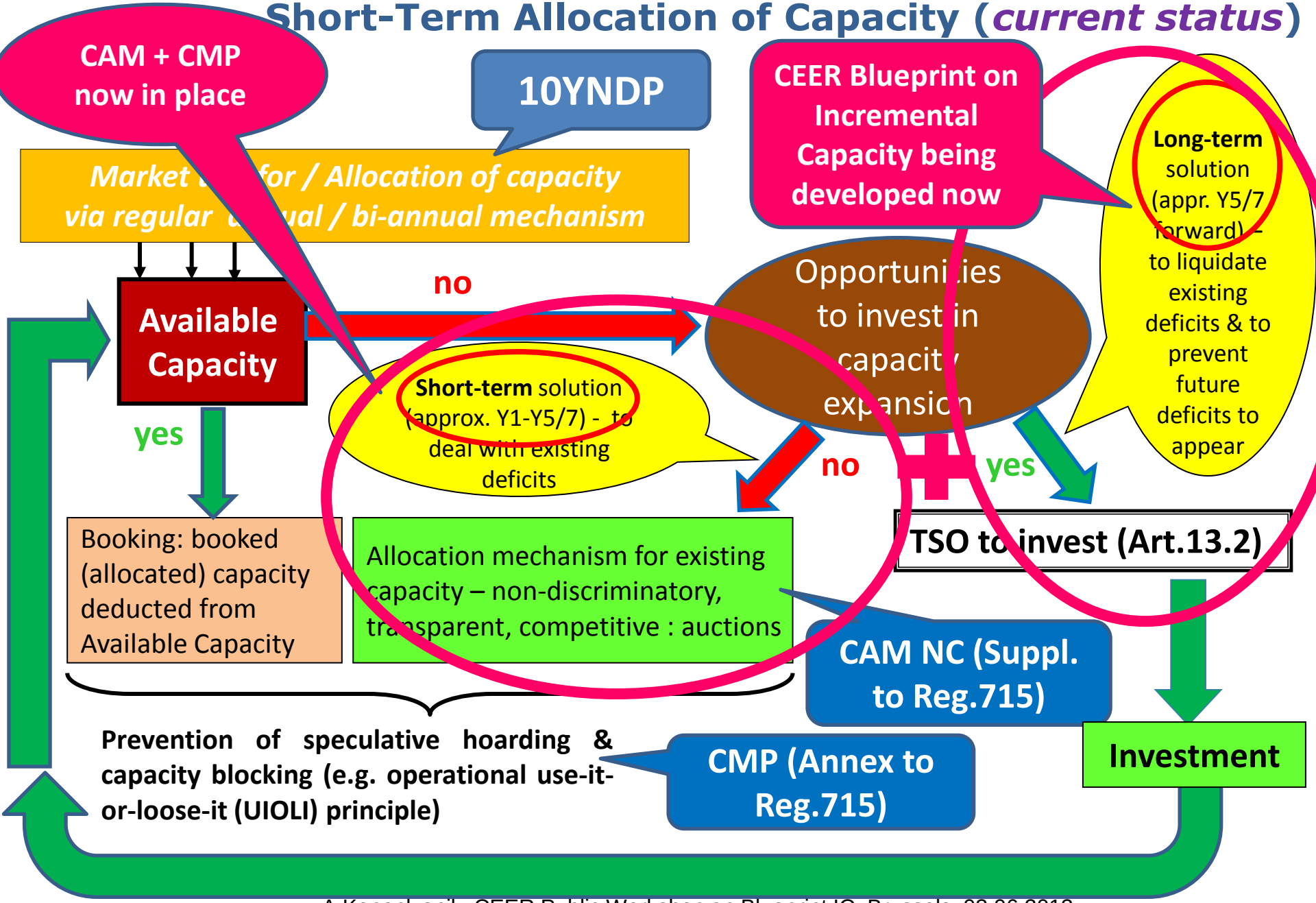
Allocation mechanism for existing capacity – non-discriminatory, transparent, competitive : auctions

TSO to invest (Art.13.2)

Investment

Prevention of speculative hoarding & capacity blocking (e.g. operational use-it-or-loose-it (UIOLI) principle)

Open Season as Universal Mechanism of Long-, Medium-, and Short-Term Allocation of Capacity (*current status*)



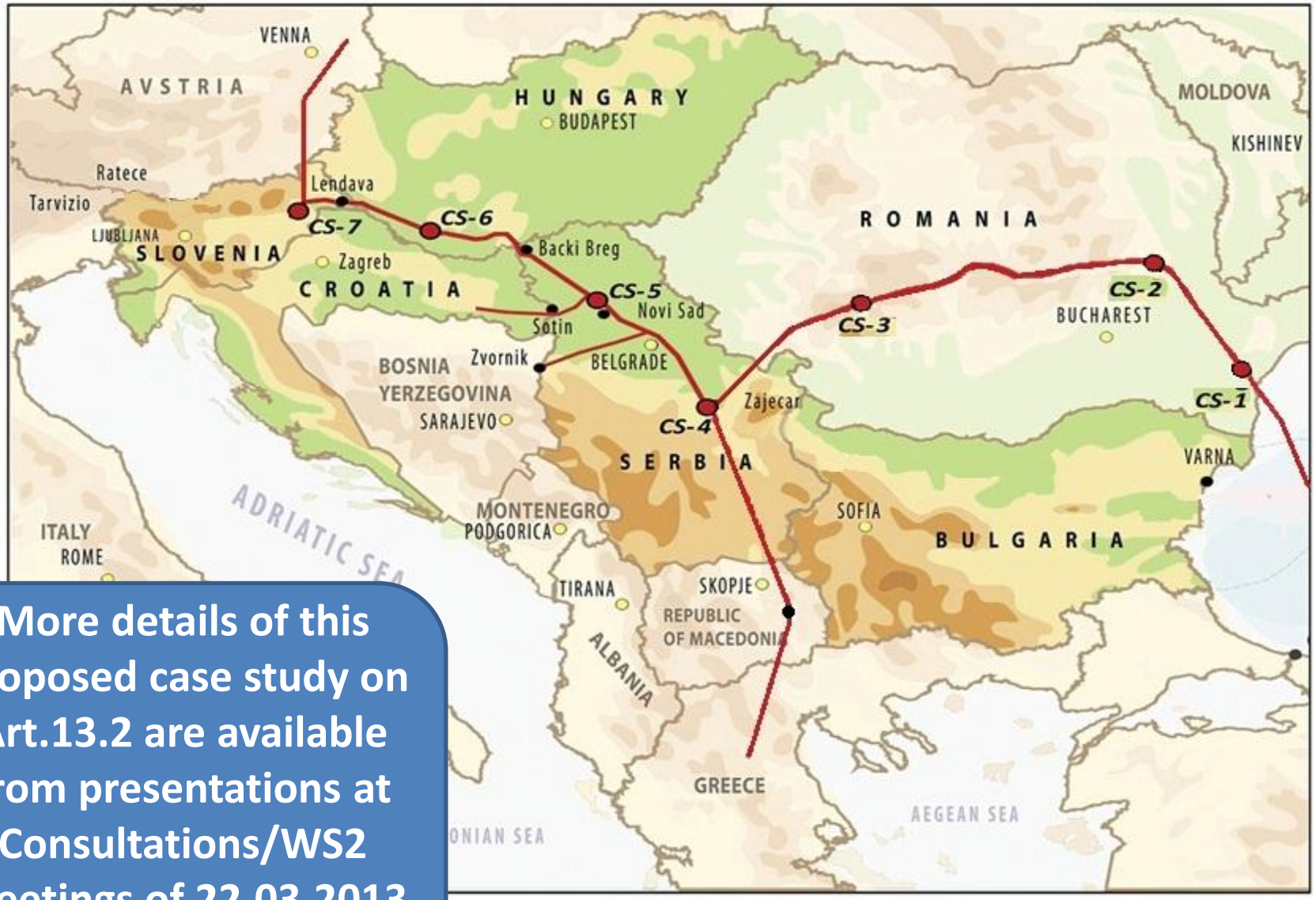
Conclusions (1): Blueprint does…

- Blueprint is based on fair starting economic standpoints and declares justified economic aims
- Mechanism of developing IC (its bankability) is justified
- Blueprint's approach for development of IC: to offer IC by TSO ("supply" approach) to be allocated among the potential shippers; demand-based OS seems not to be binding
- Bundling of capacity at individual IP is helpful to prevent capacity mismatch to appear at this IP (key risk for term contracts in unbundled gas market)
- Blueprint describes development of IC within two neighbouring zones & presents a case study (numerical example – Annex 3) for such situation, but…

Conclusions (2): Blueprint does not…

- Blueprint does not examine situation when demand for IC initiated by major producer/shipper from outside of EU & backed up by term supply contract with customer within EU, esp. in a distant zone when a number of IPs (chain of zones) should be crossed =>
- The issue of coordination of bundled products between the zones in line with shipper's demand for cross-border ICs (backed by its term supply contract) is not present in Blueprint yet (EU-wide coordinated OS) =>
- Case study (in analogy to Annex 3) for a most complicated case should be helpful to make Blueprint more effective, to take into consideration options not yet analyzed in the Blueprint, to diminish risks & uncertainties of the Blueprint's draft procedures to the tolerable level =>
- Russia/GG experts proposed within Consultations/WS2 a case study on Art.13.2 ("Sweet Dream" project ☺) to complement Blueprint

Proposed case study on Art.13.2 ('Sweet Dream' Project map)



More details of this proposed case study on Art.13.2 are available from presentations at Consultations/WS2 meetings of 22.03.2013 & 29.04.2013

Some key provisions of proposed case study on Art.13.2 ('Sweet Dream' Project) to complement Blueprint on IC in full compliance with TEP rules

- It's not for project – it's for procedures
- Most difficult scenario to test => close to most complicated option among all pipeline projections available in public domain
- Full ownership unbundling (supplier is only a shipper)
- Legally binding "open season": shipper to book capacity requested => provide collateral to TSO
- TSO "shall invest" => guaranteed return of investment, financial risks for TSO = 0 (firmly booked IC + "ship or pay" + UIOLI)
- Open questions (to be addressed in case study), inter alia:
  - Whether CAM NC provisions will apply? (20% short-term capacity reservation, 15 year-long booking, etc.),
  - MTPA above capacity volumes requested
- => Further cooperation within informal Russia/GG-EU (CEER, ENTSOG, CEC) expert Consultations/GAC WS2 will make Blueprint & its legally-binding instruments (to de developed) a more effective instrument with tolerable level of risks & uncertainties for all parties involved

Thank you for your attention

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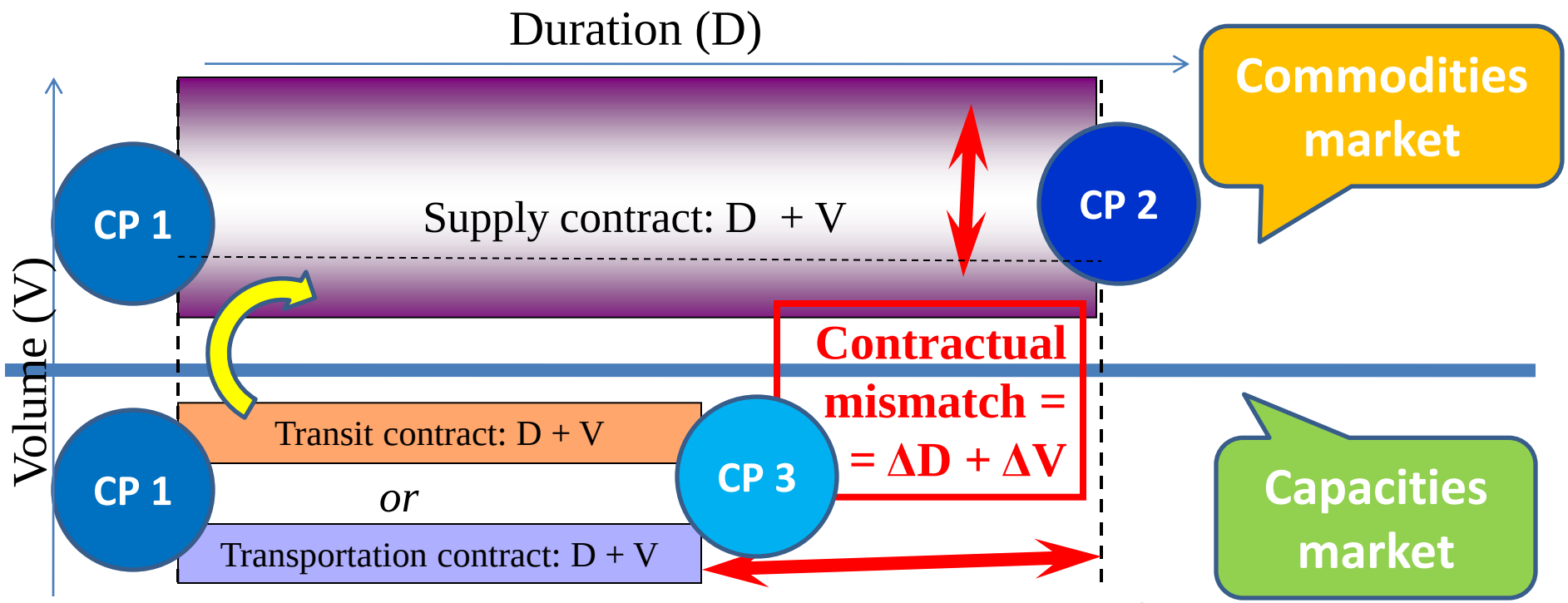
Reserve slides

Contractual Mismatch Problem: major risk for contract parties in unbundled gas market



Contractual mismatch: between duration/volumes (D/V) of long term supply/delivery contract (LTGEC; CP1-CP2) and transit/ transportation contract (CP1-CP3); the latter is integral part to fulfill the delivery contract => risk non-renewal transit/ transportation contract => risk non-fulfillment supply/delivery contract.

Core issue: guarantee of access to/creation of adequate transportation capacity for volume/duration of long term contracts

Allocation procedures for incremental capacity

ENTSOG's initial views

CEER Workshop

3 June 2013

Allocation procedures for incremental capacity

ENTSOG supports CEER's distinction between project types

More straightforward projects
One IP only
E.g. 'correction' of capacity mismatches

More complex projects
Multiple IPs or one IP with impact on others

Could be integrated into CAM NC process for existing capacity (auctions)

Single bidding ladder

Parallel bidding ladders

Interesting concept with theoretical advantages
→ thorough discussion and further assessment required

Allocation procedures for incremental capacity

ENTSOG supports CEER's distinction between project types

More straightforward projects
One IP only
E.g. 'correction' of capacity mismatches

More complex projects
Multiple IPs or one IP with impact on others

Separate process needed

Pre-phase and auction

Open season + pro rata

Open season + demand curves

A successful process for complex projects **must** involve close dialogue with network users and refinement of the project to ensure their needs are met

Further elaboration needed

Allocation procedures for incremental capacity

- *NRAs and TSOs, in discussion with network users, must retain a **high degree of discretion** to select an appropriate vehicle for the allocation of incremental capacity.*
  - Any potential network code or guideline could present a 'toolkit' of potential approaches but rigid criteria should be avoided.
  - Should also be recognised that in some circumstances an alternative methodology may be justified.
- ***Users should be fully informed***
- ***Process and criteria should be decided in advance** of the incremental offer*

Panel Session 3:
Economic test and tariff issues

Benoît Esnault, CRE, Co-Chair, CEER TF

CEER-ACER workshop on Gas Incremental Capacity, Brussels, 3 June 2013

Economic Test for Investment decision 1/2

- Principle: determine a financial threshold to trigger investment decisions
- Objective: check that a sufficient proportion of the investment costs are covered by shippers' long-term bookings
- Harmonisation to be promoted to:
  - Increase transparency
  - Develop coordination at cross-border IPs

Economic Test for Investment decision 2/2

- A **harmonised test based on a financial evaluation** comparing:
  - **Net present value of the forecasted revenues from shippers' commitments** over the subscription period (NPV)
  - Forcasted ***increase of the TSOs' allowed revenue*** due to the investment (deemed investment cost, DIC)

- NPV shall reach a certain fraction ***f*** of the DIC:
  NPV ≥ f * DIC, $f \leq 1$

Parameters of the economic test

- **The parameters of the economic test should be established and published before proposing incremental capacity to the market**
  - ***f* and *DIC*** shall be determined for each specific level of incremental capacity offer

  ➔Aim: allow shippers to adjust their bids to best reveal their need for incremental capacity development
- **On cross-border points, the economic** test shall be agreed by adjacent TSOs/NRAs
  - Agreed shippers' commitment thresholds to trigger the capacity development
  - Ensure the coherence of investment decisions

Financial threshold

- **NRAs shall justify how they determine** the fraction ***f*** of the incremental costs which have to be covered by shippers' commitments
- Several criteria are relevant:
  - **Uncertainty** on expected investment costs
  - Capacity set aside for **short term**
  - **Positive externalities**:
    - Improvement of **competition**
    - Improvement of **security of supply**
    - Investment useful for other reasons than only incremental capacity

Tariff setting for incremental capacity

- **Default approach**:
  - Application to incremental capacity of the “reference price”/regulated tariff”, as determined by the usual methodology (cf Framework Guideline on the harmonised tariff structures)
- **The default approach may not allow to pass the test for the following reasons:**
  - The “reference price” may be too low to generate enough revenues from expected bookings
  - The CAM algorithm does not allow shippers to reveal their willingness to pay in the absence of scarcity
- **Proposal**:
  - Determine an ad hoc “tariff level” based on a realistic assumption on capacity requests and the economic test to be applied during the incremental capacity process

Options for ad hoc tariff levels

Concrete measures	PROS	CONS
Increasing the reference price for all capacity users at the IP	• Simplicity of the approach	• Unexpected tariff increase for users having booking LT capacity before the investment
Increasing the reference price except for users who booked capacity before the investment decision	• "Existing" users protected from unexpected tariff increase	• Complexity linked to the coexistence of two reference prices (up to 14 years ahead)
Introducing a minimum premium for users participating to the incremental process	• "Existing" users protected from unexpected tariff increase • Simplicity as there is a single reference price	• Reduces the incentives to commit long-term since the reference price for future bookings will be lower than the incremental tariff

Risks of discrimination between users of existing and incremental capacity

- Discrimination would occur in case of unforseeable difference of tariff conditions for a same product booked at different points in time
- If network users have **certainty about how to trigger an incremental capacity process**, those that committed to a premium when booking LT existing capacity took a conscious decision
  - ➔ **No undue discrimination** if congestion is relieved later on and incremental capacity is sold with no premium
- In the interim and/or as a safeguard, **adjustments to the payable price** for those who booked long-term capacity before the congestion was relieved should be allowed
- Implementation issues
  - Complexity;
  - Legal obstacles;
  - Potential side effect on auction bidding strategies.

Evolution of the payable price for incremental capacity

- Transparency on payable price and its evolution is fundamental to facilitate long-term commitments from shippers
- Floating tariff
  - The draft FG on tariffs provides for a floating reference price for existing capacity
  - The systematic application of floating tariffs remain open for incremental capacity
- Question about the application of a fixed or indexed reference price
  - Would further encourage shippers to underwrite the investment
  - But potential discrimination if “existing” and “new” users face a different price treatment
  - Need for under/over recovery mechanism

Thank you for your attention!

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Market test and tariff issues

ENTSOG's initial views

CEER Workshop

3 June 2013

Form of the market test

The value of user commitments exceeds a pre-determined fraction of expected investment costs

If **NPV ≥ f * DIC** then the investment could be made and the requested capacity allocated - if the residual (1-f) is covered by other commitments

NPV
Net present value of committed future payments

f = upfront network user commitment

DIC
"Deemed investment costs"

Any part of the DIC not covered by up-front network user commitments represents a cost or a risk that must be covered by another party
=> Risk distribution defined **in advance** via overall regulatory contract

New capacity should reflect sustained demand levels within a realistic timeframe.

Form of the market test

The value of total commitments at least meets the expected investme

If **NPV ≥ f * DIC**

In advance of the market test, "f" is set by the NRA and it is decided who will bear the residual risk (1-f). The market test is used to discover whether the NPV of commitments is sufficient to cover f*DIC

NPV

Net present value of committed future payments by shippers, and other commitments

f = upfront network use commitment

DIC

"Deemed investment costs"

"f" values should be set locally:

- high enough to ensure investment has sufficient backing taking into account the risks
- low enough that it does not set an unreasonable target given e.g. marketing horizon

DIC should include the **full budgeted cost of investment,** including return, depreciation and opex over the economic lifetime of the asset.

Market test: cross border co-ordination

- ***TSOs already co-ordinate on technical and procedural aspects***
- *Also need to consider how market test will function in a cross-border context where bundled entry-exit products are offered*
  - There may be circumstances in which the **committed revenue is sufficient** for the investment to proceed but there is a **discrepancy between the two sides of the border**
  - **In such cases it is desirable that investment goes ahead**, but a successful outcome requires **clear agreement between all TSOs and NRAs on how to set the reserve price** (affecting the distribution of committed revenue)

Tariff issues

Reference price for incremental	Providing incremental capacity may entail different costs (opex, capex, risk) from existing capacity	- Sometimes logical to calculate tariff separately - Separate allocation process needed
	Users making longer term commitments assume greater risk. Commitments benefit all network users	Option to provide appropriate discounts for commitments (to promote cross-border flows) should be further investigated
Payable price	Capacity may have different values to users purchasing it at different times	Additional mechanisms to equalise prices for all may not be necessary
	Not clear how changes in pricing between time of allocation and time of use will be handled	Market test framework should ensure advance agreement on who bears the associated risk
Under-recovery	No guarantee that bookings will materialise for capacity that is created but not already covered by up-front commitments	Market test framework should ensure advance agreement on who bears the associated risk; under-recovery in the overall system must be provided for via regulated tariff or via non-market commitment

Conclusions

- ***NPV-based assessment of up-front shipper commitment levels*** *remains the most appropriate framework for the market test*
- *Test parameters must be* ***set locally***
- ***Effective cross-border co-ordination*** *of market tests requires discussion and co-operation between parties*
- *Pricing of incremental capacity should* ***reflect its costs*** *where possible and* ***provide appropriate incentives*** *for users to make commitments*
  - ‘Equal prices for all’ not an appropriate aim in itself

Initial Thoughts on Economic Test and Tariff Issues

CEER – ACER Gas Incremental Capacity Workshop

Sara Molinero – Member of Eurelectric Gas to Power Working Group

3rd June 2013

EURELECTRIC – The Union of the Electricity Industry

- **Sector association** representing the common interests of the European electricity industry and its worldwide affiliates and associates

- EURELECTRIC **represents the electricity industry in public affairs**, in particular in relation to the EU legislative institutions, in order to promote the interests of its Members at political level

- Its **Mission** is the development and competitiveness of the electricity industry and to promote the role of electricity in the advancement of society

Economic Test (ET)

- ET based on the NPV of expected revenue streams of shippers' bids is preferred

- Fully harmonised ET across EU not achievable but:
  - Harmonised *NPV* ≥ *f* * *DIC* formula should apply across EU regardless of allocation process
  - Accompanying guidelines and/or spreadsheet demonstrating how ET works
  - Maximum level of user commitment (*f*) could be harmonised at < 100%
  - Externalities or past congestion rent to be treated in a harmonised way through adjustments to *f* or *NPV*

- Transparency and cost efficiency are key considerations
  - Full transparency over how revenue streams are determined and the level of user commitment required
  - Sufficient transparency to allow shippers to compare efficiency of project costs e.g. unit investment costs (€/km/diameter) costs split between cross-border and downstream reinforcement
  - Information and ET parameters to published ex-ante and not subject to change but for open seasons, if the economic test is not conclusive, a bidding window could be reopened to allow shippers to adjust their bids.
  - Circumstances and timescales whereby NRAs sanction any TSO investment arising from a successful economic test, ET to be known in advance.

- Single ET should be applied to incremental capacity offered on a bundled basis

- Inter NRA cooperation and TSO cost allocation to have minimal impact on shippers

Tariff Issues

- Complex interactions between CAM Code, Incremental Roadmap and Tariff Framework Guidelines – the examples in Appendix 3 aid understanding
- Will users really bid for significant quantities of incremental capacity in the long term to trigger user commitment?
  - Will a fixed payable price incentivise this?
  - Will a floating payable price provide enough certainty over ET NPV calculation?
- Can TSOs, NRAs and Ministries be persuaded not to rely on central planning?
- Will SoS Regulation deliver incremental capacity the market doesn't value?
- No perfect solutions, but at this stage we think
  - Principles in the Tariff FG should apply equally to all capacity holders, existing or incremental
  - Rules should be consistent across auctions and OS
  - Simplicity is preferred
  - If shippers know the rules and tariff methodology in advance they bid can accordingly
  - Floating payable price ensures all shippers pay at least the regulated tariff for capacity, whether existing or incremental
  - Floating payable price deals with under/over recovery reasonably equitably
- May be case for capping or indexing year-on-year increases in reference prices
  - May incentivise longer term user commitment
  - Provides more certainty over revenue streams in the ET

Thank you for your attention

Incremental Capacity

Way forward

Brussels, 3 June 2013

Next steps

Incremental Capacity (IC)	FG / NC Tariffs
3 – 17 June 2013: Possibility for written stakeholder feedback on the CEER Blueprint	
Finalisation of Blueprint	**18 July – 17 Sept. 2013:** Public Consultation on FG Tariffs (with tariff-related IC issues) and Workshop **early Sept. 2013**
By 30 Nov. 2013: Delivery of ACER amendment framework (narrowing down the options) for IC	**By 30 Nov. 2013:** Delivery of final FG on Tariffs

Way forward

- ENTSOG continues the work on IC and Tariffs in a twin-track approach
- Foreseen:
  - **NC amendment on CAM** (Article 7 of the Gas Reg.)
  - NC Tariffs (Article 6 of the Gas Regulation)
- Further consultations by ENTSOG & ACER on incremental capacity and tariffs are foreseen (under the provisions of Article 6 and 7)
- Comitology procedure

Envisaged goal: 1st Incremental Capacity auction in March 2017

Thank you for your attention!

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