
New Capacity Case Study - Progress, Status Update and Key Issues

St. Petersburg, 10-11 September 2013

Work Stream 2 GAC

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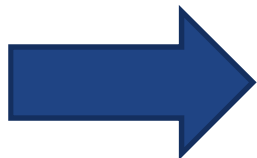
Pre-history

Third package

- > Market rules to enable full retail competition
- > Development of hubs (trade)
- > Longer term and shorter term capacity to be enabled
- > Initial focus on access to existing capacity
- > Development of “new build” capacity paid much less attention



Pressure to consider “incremental” capacity



Development of CEER Blueprint



Options for gaining EU regulatory approval for major complicated infrastructure projects (like South Stream & similar projects)

- **EXISTING (?)/PAST:** Bilateral IGAs with individual EU MSs => EU: “no go” under Third Package
- **EXISTING:** Exemption under Third Gas Directive Art. 36 = a mainstream in EU (22 big projects since 2003) => “a long & winding road”
- **PROPOSED NEW-1:** RF-EU Bilateral Agreement on PMI (Feb’2011) => EU: “export of acquis” as factual policy => “a long & winding road”
- **PROPOSED NEW-2:** Regulated new capacity development under rules of procedure based on TGD Art.13.2 (to be developed) => in full compliance with TEP rules, no derogations needed => still challenges ahead...



Incremental & New Capacity under TEP structure of EU gas market (E-E zones)

Parameters of new IPs 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 =

Incremental Capacity = major attention in Blueprint

Supplies to EU



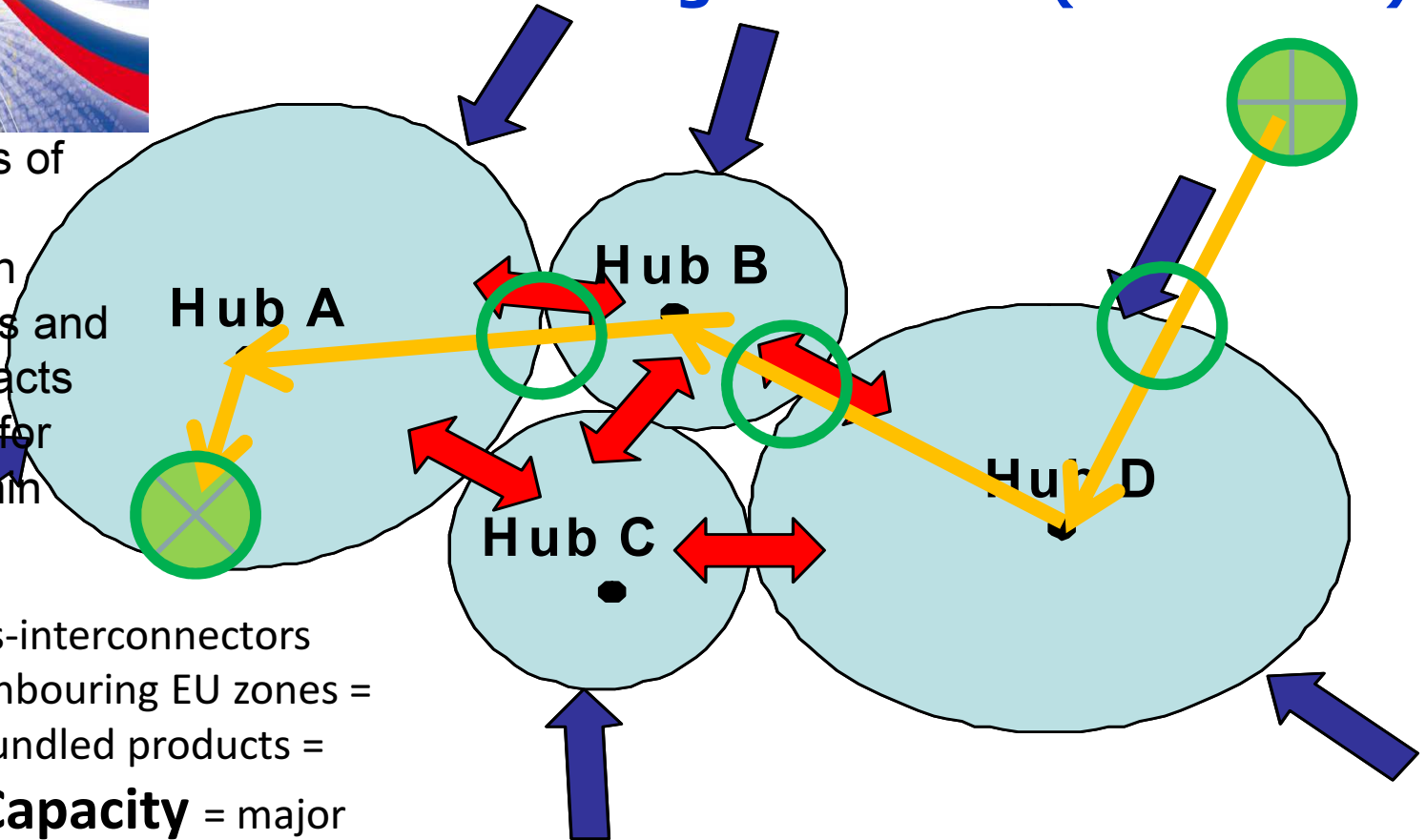
from non-EU



Non-EU producer



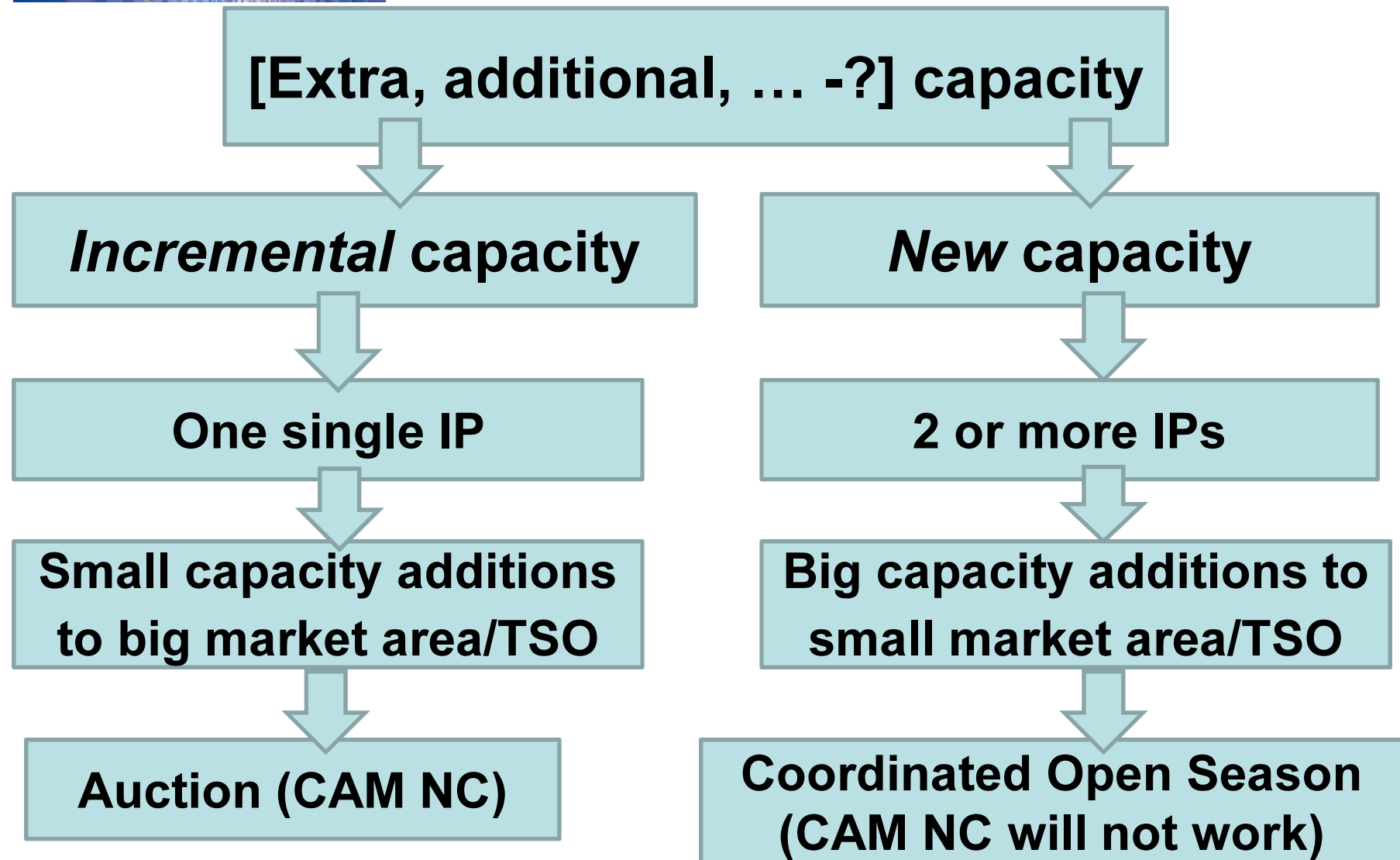
Its EU customer



New Capacity = multiple IPs with bundled products to be balanced, EU-wide coordination of TSOs needed to avoid two types of contractual mismatches (at each IP and between IPs) => influence costly investment decisions to deliver gas from far away outside EU to EU border & further to EU customers



Incremental vs New capacity (terms differ => Blueprint/p.8)



Problem

- The existing procedures available for new gas infrastructure investments are unsatisfactory for **complex investments** i.e. new pipeline projects spanning over several countries

Proposed solution

- Propose a viable procedure to cover complex investments, based on current existing legislation and best practices

Legislative basis

- Directive 2009/79/EC – Third Energy Gas Directive; Article 13.2:

*“Each transmission system operator shall build sufficient cross-border capacity to integrate European transmission infrastructure accommodating all **economically reasonable** and **technically feasible** demands for capacity and taking into account security of gas supply”*

Criteria

- “Economical reasonability”
- “Technical feasibility”

Taking into account ‘*security of gas supply*’ and the need to ensure projects can be financed (e.g. Project financing)

A Case study can contribute to ongoing CEER and ACER work on incremental capacity

CEER Blueprint – consultation to encourage feedback

Recognised 2 distinct capacity enhancements

Hub to (adjacent) Hub

“Route transport”

For integration into CAM allocation algorithm

To be addressed via “open season” process

For smaller and relatively straightforward addition of shorter distance transport – mechanistic (?)

For longer, more complicated projects where there may be critical dependence on securing adequate capacities at several cross-border points – tailored (?_

Two technical options (TD 1-2)

Three technical options (TD 1-3)
– dealing with allocation issues only

Some form of market test is necessary to support both types of enhancement



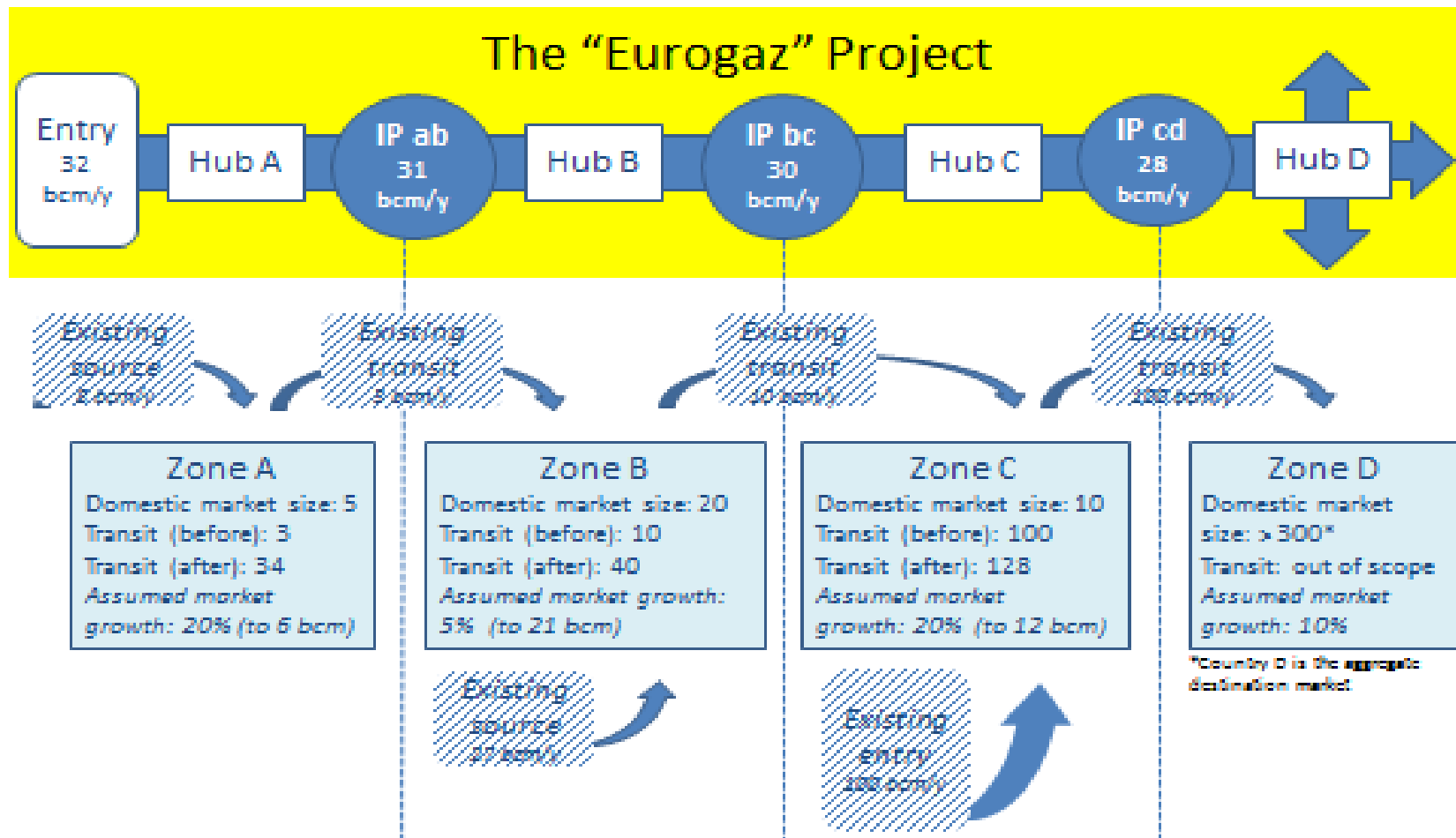
Initial Rus/GG proposal for case study on Art.13.2 ('Sweet Dream' Project)



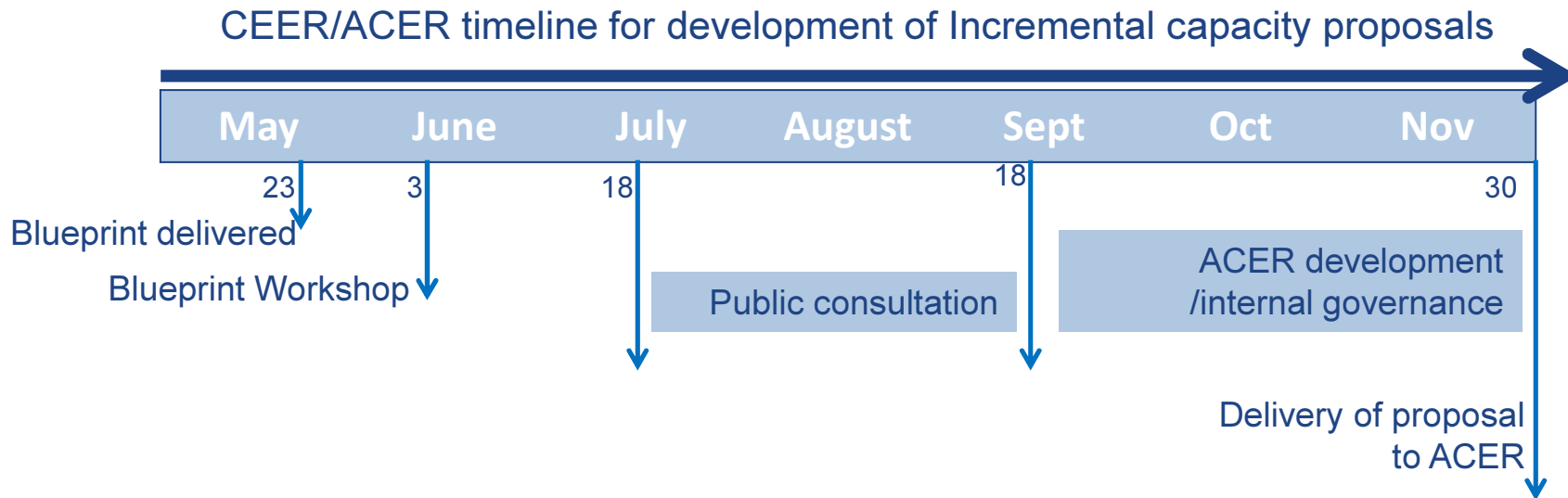


Case study: from ‘Sweet dream’ to “Eurogaz” project (to generalise the problems re NEW capacity)

Country characteristics and assumptions

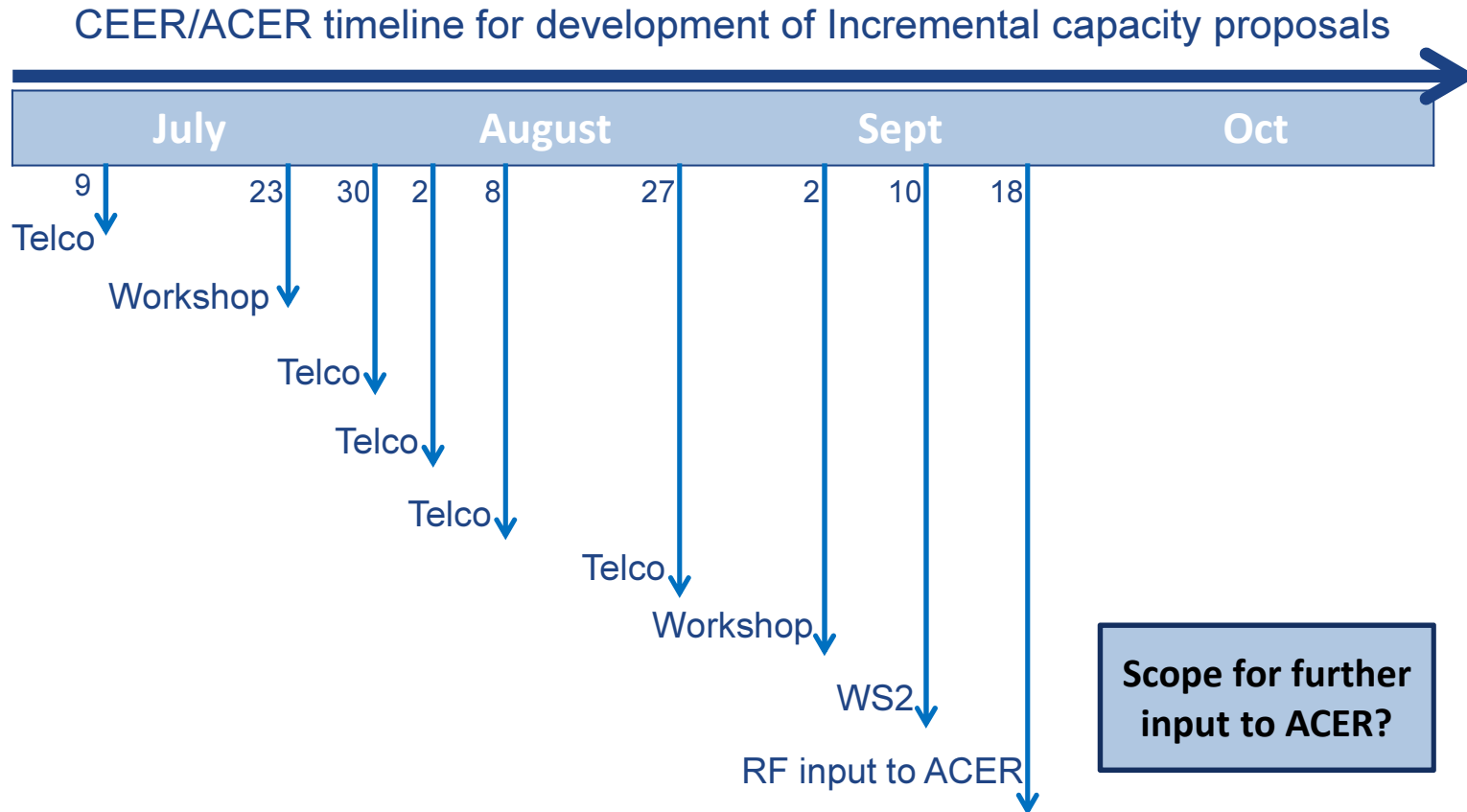


Incremental Project plan and processes



New capacity case study started in July to deliver inputs to ACER process

Case study timeline



Way of Working for case study

Case study Term sheet

- to prepare proposal for procedures for complex projects and routes
- to add to / refine Blueprint proposals

Timings

- Workshops 23.07, 02.09, CEER 03.09
- 5 Telcos
- Workshop early Oct(?)

Participation

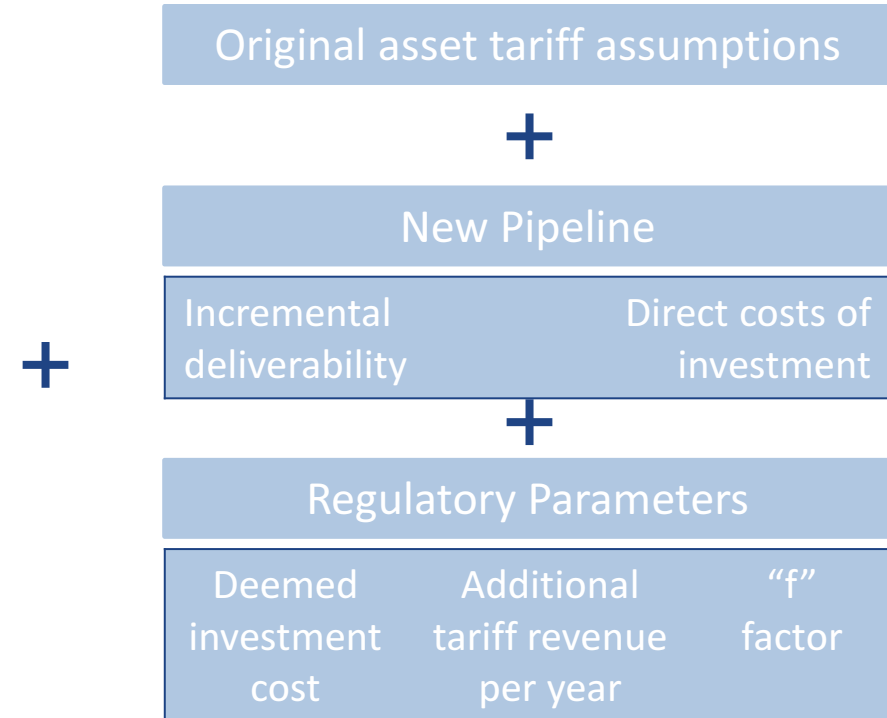
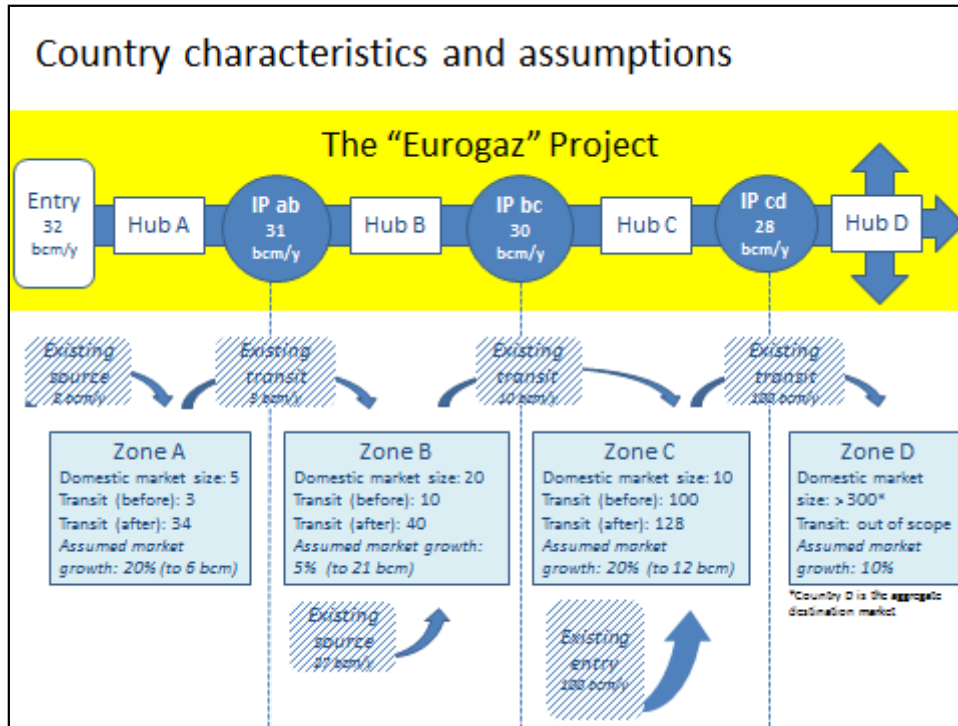
- EC/ACER/CEER
- Gazprom (GP/GPE/GMT)
- ENTSOG

Approach

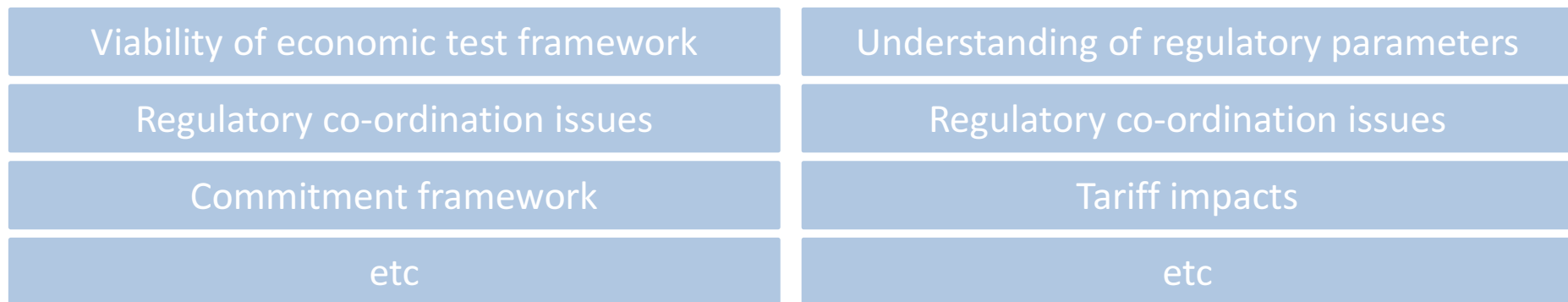
- Circulation of documents
- Explore issues
- Develop proposals

| | Key elements | defining scope |
|--|--|---|
| | Within EU regulatory framework | General rather than specific study |
| | What new processes might be necessary | Permitting and planning out of scope |
| | Requesting/offering capacity - new cap on new routes | Triggering development of a project, nature of binding commitments, bankability, investment decisions |
| | Financiability | Capacity allocation - fair sharing risks/costs |
| | Interactions with other codes | Regulatory co-ordination and scope for non-TSO project developers |

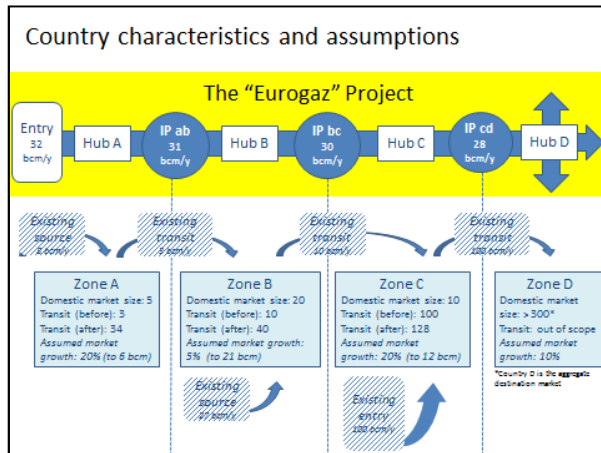
Analytical component concept



Case study provides opportunity to explore



Analytical component experience



Virtual country concept

- avoids identification with specific project, but
- sense checking harder

Pre-investment tariffs

- very little data available
- Low level of appreciation of approaches to derive pseudo cross-border v domestic tariff assumptions

Investment project costs

- Major differences in assumptions about capital cost assumptions

Regulatory parameters

- So far very little discussion about the regulatory parameters (Deemed Investment Cost, "f" factor, PV of commitment calculation)



Russian side preference to focus first on the development of the process strawman

- to develop first joint paper on principles which will ensure no-discriminatory treatment under coordinated "Open Season"-type procedure of those shippers who will be ready to share risks and costs of creation of new capacity
- Economic test afterwards – supportive/secondary role at this stage

Analytical component learning

Project sizing to be determined taking account of upstream deliverability

“f” values

- for such large projects “f” may need to be quite high
- quotas may increase investment costs to detriment of viability of projects and wholesale competition

Commitments

- could come from network users (on behalf of upstream players)
- Where economic test not satisfied, RF prefer longer period of commitment rather than higher price

Allocation processes

- Risks of getting less capacity than requested to be avoided (“fill or kill” offers)



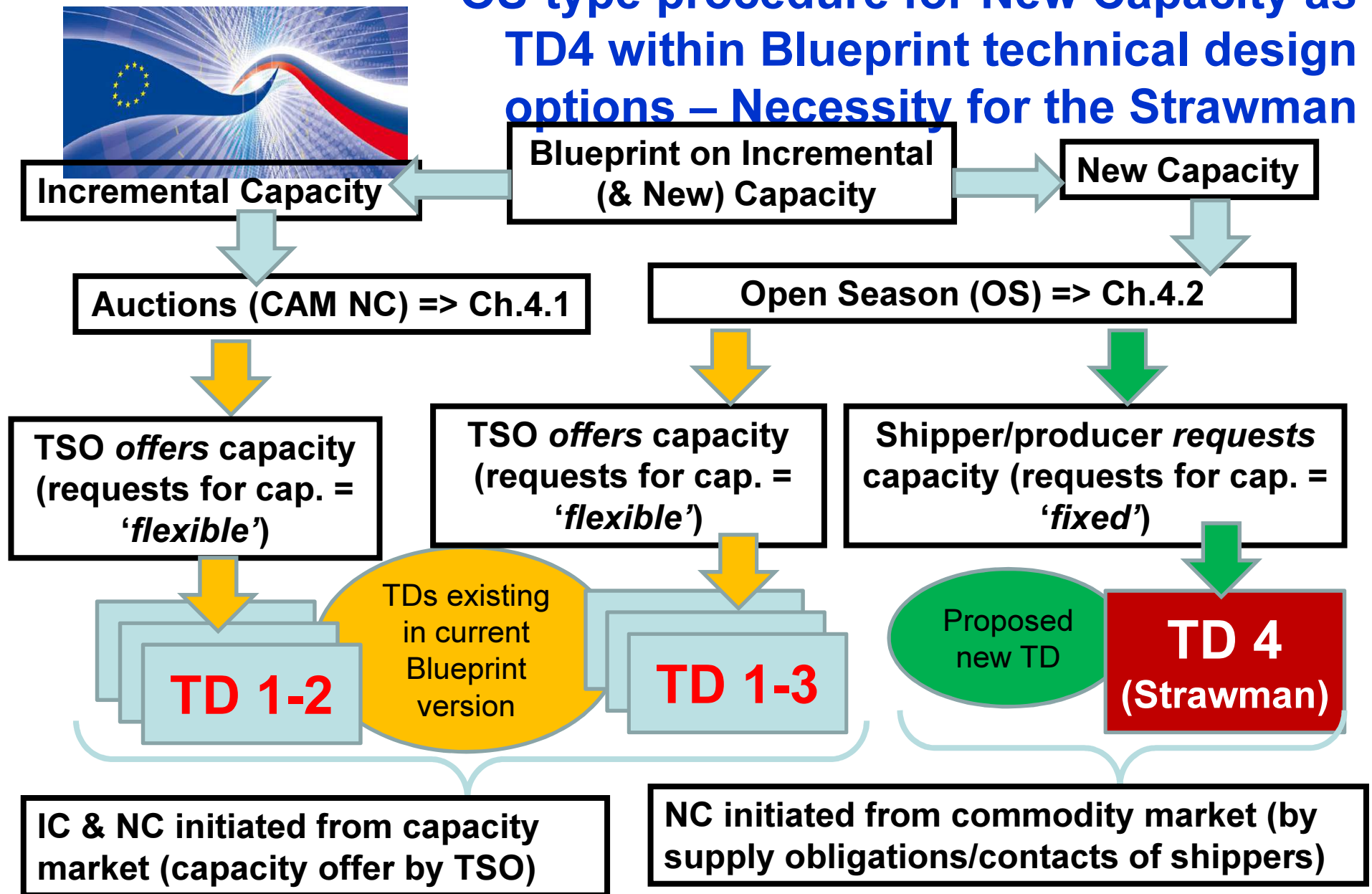
For these large projects across multiple zones auction processes are not credible and individually tailored open season type processes must be used

NB: Much greater learning about the quantitative detail of the economic test and its associated parameters and consequences could easily be obtained by the completion of this study



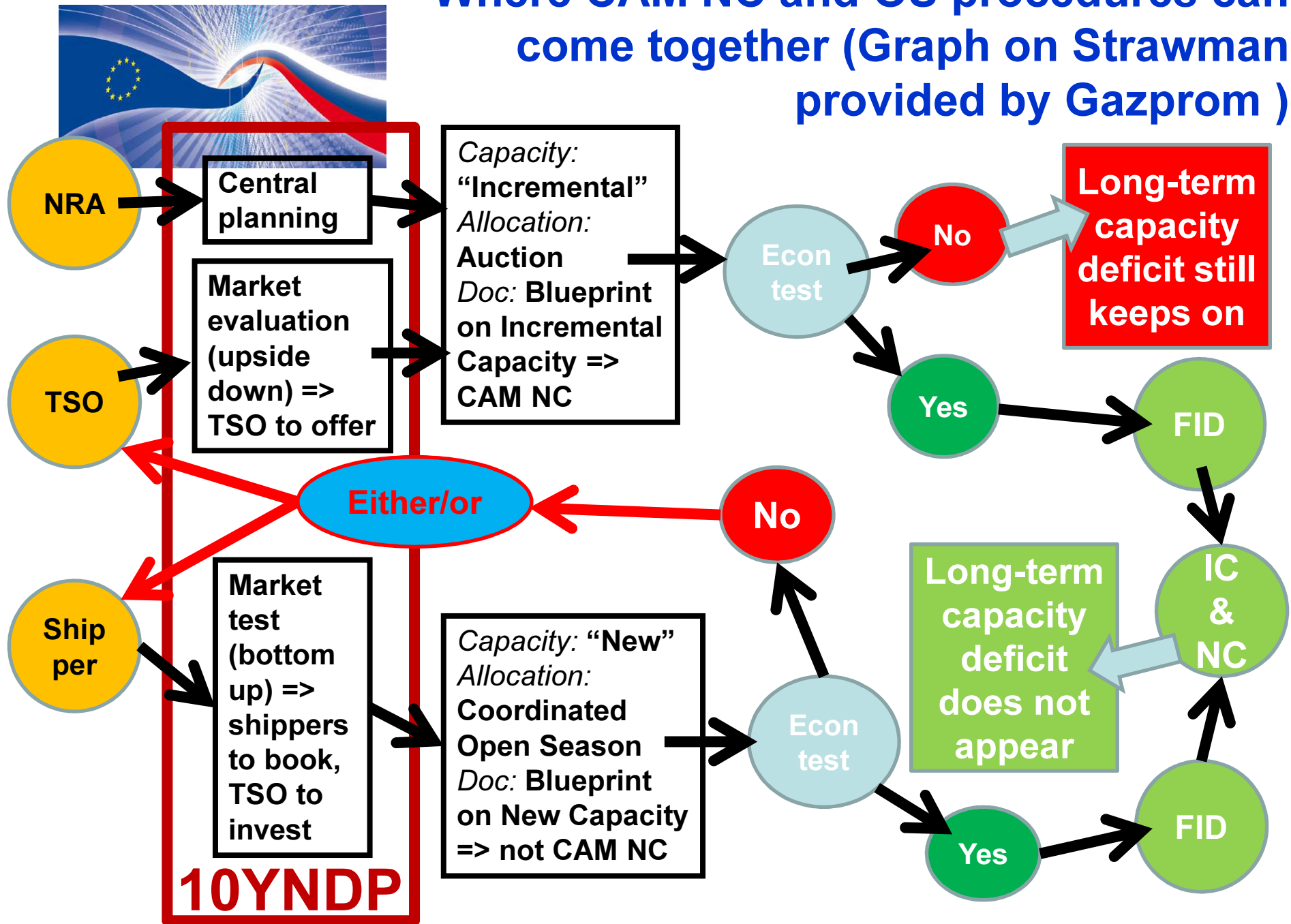
**Case study => Strawman
[Strawman => Blueprint on Incremental
Capacity TD4 ? => Blueprint on NEW
capacity???)**

OS-type procedure for New Capacity as TD4 within Blueprint technical design options – Necessity for the Strawman



NB: 'fixed' vs. 'flexible' – meaning non-dependence vs. dependence on tariff level (whether indicative request for & firm booking of new capacity are equal or not equal for the whole long-term booking)

Where CAM NC and OS procedures can come together (Graph on Strawman provided by Gazprom)



Process strawman – paper overview

Analysis of Blueprint identified two main areas for improvement

Differentiation of incremental and new

- Incremental– small one hub to adjacent hub
- New– larger, multiple zones

New capacity demand/offer

- Option for upstream to trigger must be reflected in the process

- Outlines proposal for OS procedure to enable new capacity demanded by the shipper across a chain of several E/E zones
- Describes 5 phases until final investment decision
 - Phase 1: identification of need for new capacity
 - Phase 2: preliminary open season phase
 - Phase 3: initial project scoping phase
 - Phase 4: final open season phase
 - Phase 5: final investment decision
- Provides Rus/GG comments/argumentation on the issues of debate on substance (end-notes)

Whilst strawman is not completely agreed between the 2 sides, much of it is and at least understood as vitally important for NEW capacity, and the Russian side of the case study anticipate submitting a further (existing?) draft to ACER on 18.09 together with a cover note proposing a further procedure on the Blueprint (see final slides).

8 issues have been raised yet as potentially problematic although the issues are not fully recognised as issues by both sides at this point of time as follows ..



- 8 Potential issues (open list) for further clarification/work:**
- NS overview,
 - Rus/GG description,
 - EU interpretation/understanding & initial respond

8 issues: Nigel Sisman overview

| No | Issue | Agreement likely | Comment |
|----|---|------------------|--|
| 1 | CAM auction vs open season capacity | Yes | There should be no concept of scarcity when network expansion/new pipelines are to be built |
| 2 | Willingness to pay vs NPV (NPV vs bidding) | Not sure | More work needed – project should either go ahead on the basis that appropriate coverage arises from network user commitments; succesful bidders should not face an unwarranted premium (ie face a winner's curse) |
| 3 | Willingness to pay vs NPV (capacity downsizing for producers) | Yes | Principle is accepted but may require further work to develop satisfactory approach |
| 4 | Capacity mismatch | Yes | Aspiration would be to ensure that no capacity mismatch (supply and capacity) need arise. For open seasons a commitment period of more than 15 years should be an option when the initial offers and allocations of capacity are made. |
| 5 | f=1 | No | It should be assumed that f must be 1. This could be damaging to a marginal upstream project where an f of less than 1 might be helpful and regulators might be prepared to socialise some of the costs to deliver end consumer benefits / enhanced security of supply |
| 6 | Quotas | No | EU (EC and ACER) prefer quotas; ENTSOG remains opposed. |
| 7 | Project promoter participation in financing & project mngt support to existing or newly established TSO | Yes | EU believe better understanding/more analysis may be necessary |
| 8 | Specific process for establishing coordinated open seasons across several MSs | Yes | Seems like it is the co-ordination that we are trying to define by working through the analytical approach in the case study work |

Nigel Sisman personal views; not views of ENTSOG, ACER or EC



8 issues (Rus/GG view)

- 1) CAM NC auction for incremental vs. open season for new capacity
 - 2) Shipper's NPV and/or other criteria in economic test
 - 3) Upper-down sizing of project design – producer limitations
 - 4) Capacity mismatch of two types (at individual IPs & between IPs through the route)
 - 5) F-factor (cost coverage & socialization of costs)
 - 6) 10% quota to be reserved in new capacity for future short-term trade (acc. to CAM NC approach)
 - 7) New TSO & its identification (its relations with companies affiliated with shippers prior to start of operation of newbuilt capacity)
 - 8) Cross-border issues (coordination between corresponding IPs through the route)
-
- 9) Tariffs issues for new capacity (to be discussed under separate item of the WS2 agenda)



Issue 1: CAM auction vs. open season for new capacity (Rus/GG position)

- **(Since beginning of Consultations in 2010):** Capacity allocation procedure for NEW (yet to be built) capacity should not be auction-based since auction (CAM NC) is an instrument of allocating EXISTING capacity being in DEFICIT. Auction does not prevent capacity deficit to appear. Only Open Season (as described in the WS2 paper as of 2012) lead to prevention of capacity deficit to appear.
- Capacity deficit for traders = lower flexibility in redistribution of already available gas within EU internal market, while capacity deficit for producers = lower level of supplies to EU market, lower gas competition within EU (deficit at capacity market leads to lower level of competition at commodities market)



Issue 1: CAM auction vs. open season for new capacity (EU understanding/interpretation)

- Prescribed capacity allocation procedure should not be auction-based and should not be strictly tied to the CAM auction algorithm. Instead the methodology should be a more flexible open season-type allocation procedure.



Issue 1: CAM auction vs. open season for new capacity

Preliminary EU Position

- In light of the inherent complexity of allocating new pipeline capacity, the EU side is ready to consider delineating the open season process for allocating new capacity from the CAM auction algorithm and related specific process.
- It requires further analysis how already existing IPs along a largely new route (if applicable) are dealt with.
- The EU side is also ready to consider a "fill-or-kill-type" approach in a possible open-season-type procedure whereby a shipper may make his request for capacity along the route to be established conditional on receiving the specific capacity requested at each of the IPs along the route.



Issue 2: Shipper's NPV and/or other criteria in economic test (Rus/GG view)

- NPV value of bid for capacity is approach used in US by FERC
- Recognises “willingness to pay” as comprises quantity * price of capacity booked * time value of money discount factor
- Recognises need for sufficient bookings to meet economic test – those who contribute most are allocated capacity first *where there is a conflict*
 - Iterative process of one season process minimises chance of conflict as enables optimum sizing of project to meet as many shippers’ needs as possible
- NPV approach prevents bidders from using far distant bookings to distort process – bookings in near term valued more highly
- Shippers pay regulated price
 - Avoids paying more than regulated price in pay as bid approach which creates distortions



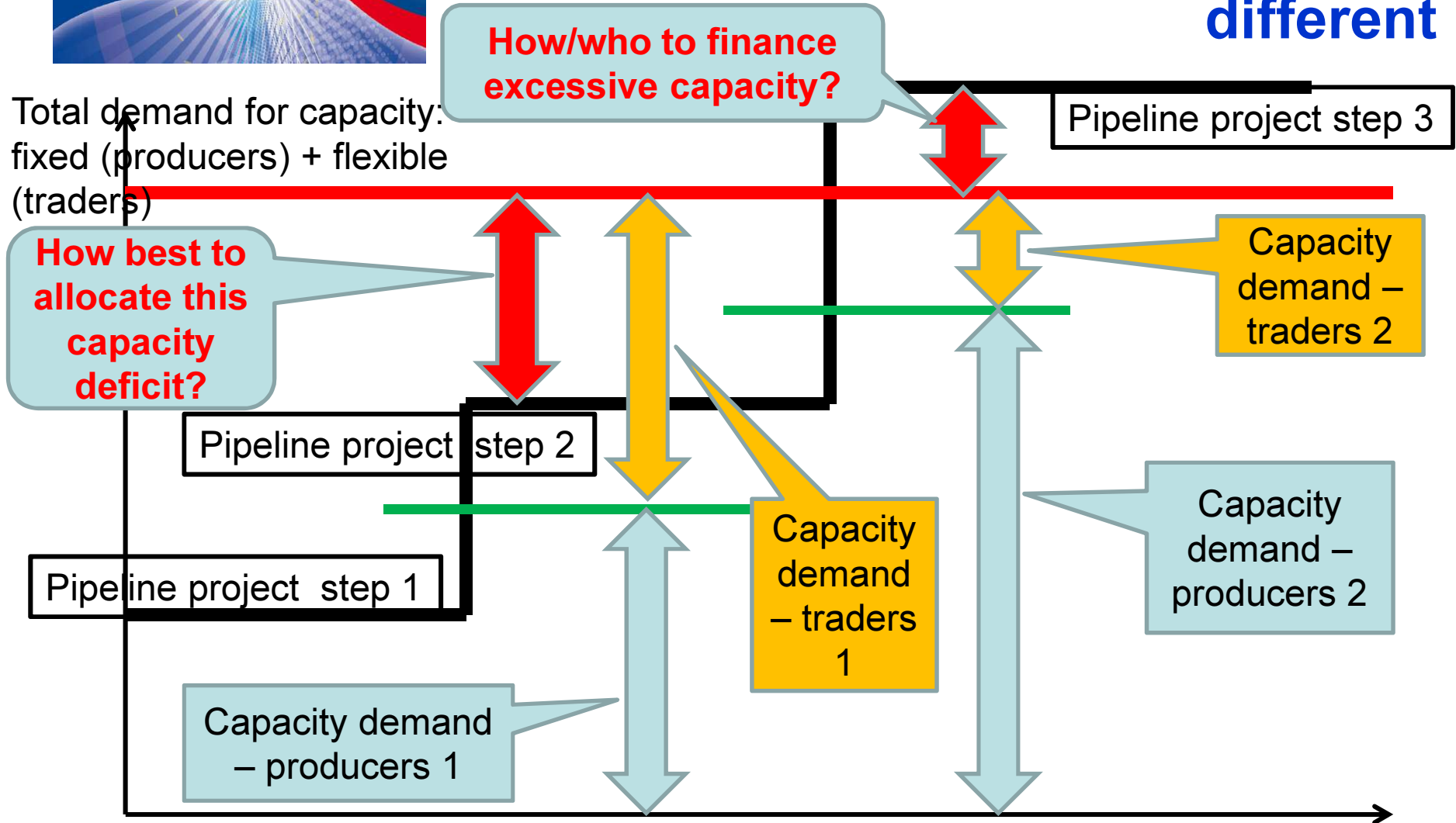
Issue 3: Upper-down sizing of project design – producer limitations (**Rus/GG view**)

- Shippers-producers need fixed amount of new capacity, it defined by their long-term supply obligations
- Their indicative demand for capacity (step 2: preliminary OS stage) corresponds to their legally binding demand (step 4: final OS stage) & is non-dependent on tariff level compared to shippers-traders
- Two possible situations (to be further analyzed) – see next slide



Upper-down sizing of project design: producers & traders are different

Total demand for capacity:
fixed (producers) + flexible
(traders)





Issues 2 & 3: Willingness to pay vs. NPV (EU interpretation/understanding)

- **Issue 2:** Allocation of capacity on the basis of the "NPV-principle" instead of the "willingness-to-pay"/bidding principle, i.e. shippers making the larger commitment have priority to be allocated capacity when scaling the project.
- **Issue 3:** In case of lumpy investments a system avoiding any risk for the producer-shipper should be established, i.e. the project shall not be downsized to the detriment of the producer-shipper. A specific mechanism to resolve the allocation-related complexities of potentially substantial discrete steps in such a project has not yet been worked out.



Issues 2 & 3: Willingness to pay vs. NPV

Preliminary EU Position

- The EU side considers that a willingness-to-pay approach is more appropriate in the spirit of the third energy package calling for non-discrimination and promotion of competition and market entry.
- It also mirrors the approach taken in the cam NC.
- An open season should in any case always aim at arriving at an optimally sized project that satisfies all capacity demand. Then, any “scarcity”-type, non-discriminatory allocation procedure will have no detrimental effect on any shipper request.



Issue 4: Capacity mismatch of two types (at individual IPs & between IPs through the route) (Rus/GG view)

- To match supply and transportation contract (access to/allocation of future - yet to be built - transp.capacity) for the whole volume & duration of shipper's supply contract (non-dependent less or more 15 years) within single IP
- To match access to/allocation of future capacity at all IPs through the route of NEW – yet to be built - capacity



Issue 4: Capacity mismatch (EU interpretation/understanding)

- Capacity mismatch, i.e. the temporal mismatch between capacity and supply contracts should be avoided to forego any risks of not being able to deliver contracted gas. CAM provisions of maximum 15-year capacity reservations may in certain cases be appropriate but may not be long enough in others so a more flexible and tailor-made approach is necessary.



Issue 4: Capacity mismatch

Preliminary EU Position

- The CAM NC already allows for the allocation of capacity up to 15 years ahead.
- Therefore no "capacity mismatch" can occur between supply and capacity contracts in that time frame.
- The EU side is furthermore ready to consider allowing booking periods longer than 15 years for specific open seasons.



Issue 5: F-factor (cost coverage & cost socialization) (Rus/GG view-1)

- “Mandatory, full, up-front coverage of the project's deemed investment costs (DIC) in the form of binding capacity reservations (PV) by shippers”.
- F-factor to be equal 1 (cost coverage = 100%) due to:
 - Requirements of bankability of project,
 - Financial risks for TSO = 0 (Art.13.2: TSO shall invest) => shippers provide collateral for TSO to raise project's CAPEX
 - By full upfront booking new (yet to be built capacity) fair sharing of risks & costs is provided between TSO & shippers
 - No risks of stranded assets,
 - No risks/problems related to socialization of costs (esp. when big project in small market area/TSO), ...



Issue 5: F-factor (cost coverage & cost socialization) (Rus/GG view -2)

- If $F < 1$:
 - If $F < 1$ is established by administrative order (say, by decision of NRA) to TSO, who will securitize $(1 - F)$ value? Whether such NRA will cover for TSO its financial risk for $(1-F)$? From which money this risk will be covered? From public finance (see socialization)? Or...?
 - With $F < 1$ major “socialization problems may arise in EU MSs with a relatively small gas market compared to the size of the planned pipeline crossing their territory” (CEE – a special case, since major new gas supplies will come to EU from the East through CEE).
 - $F < 1$ can be possible ONLY if the market players themselves will decide which particular $(1-F)$ they can hedge and thus accept



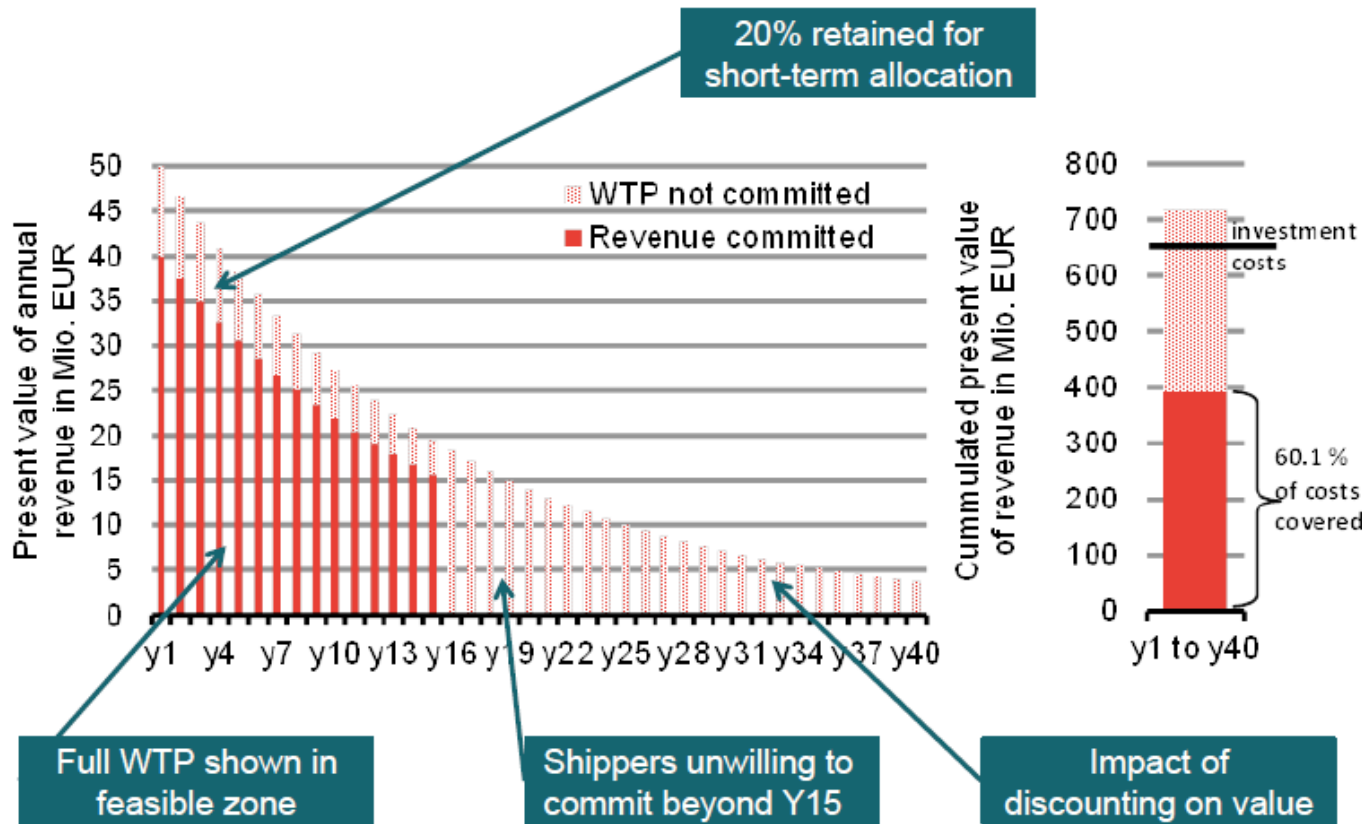
Issue 6: Quota issue (Rus/GG view)

- 10% quota to be reserved in new capacity for future short-term trade (acc. to CAM NC approach) = $F < 1 \Rightarrow$ deprives project bankability + leads to stranded assets + cost socialization issue \Rightarrow see issue 5 above
- The same effect for bankability has fixed by CAM NC upper limit of 15 years for existing capacity allocation \Rightarrow in case of major projects (new capacity) it might not be enough for:
 - 100% cost coverage (DIC)
 - Avoiding Contractual mismatches at IPs



Frontier Economics at CEER Workshop: CAM NC approach downgrades new project bankability

Stylised examples to show issues



Cited from
Frontier
Economics
presentation
at CEER
Workshop on
Blueprint on
Incremental
Capacity,
Brussels,
03.06.2013

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



Issues 5 & 6: F=1 and no quotas (EU interpretation/understanding)

- **Issue 5:** The Russian side argues for a mandatory, full, up-front coverage of the project's deemed investment costs (DIC) in the form of binding capacity reservations (PV) by shippers. This effectively translates to the "f-value" being equal to 1. The Russian side argues that this is necessary in view of potential socialization problems that may surface in Member states with a relatively small gas market compared to the size of the planned pipeline crossing their territory.
- **Issue 6:** The Russian side argues against any mandatory capacity quotas as enshrined in the CAM Network Code.



Issues 5 & 6: F=1 and no quotas

Preliminary EU Position

- The EU considers that quotas as enshrined in the CAM NC are a necessary element of an internal market promoting entry and competition and balancing interests between players for the benefit of consumers.
- The specific f value is to be determined but a value of 1 should not be excluded.
- It should be noted, however, that projects can be scaled in accordance with the mandatory quota. Any possible up-front cost which needs to be covered by shippers booking long-term capacity (and should not be socialized up front) can be later readjusted via tariffs as further bookings are being made.
- Similarly, bookings of mandatory reverse flow offer may also lead to readjustments of tariffs.

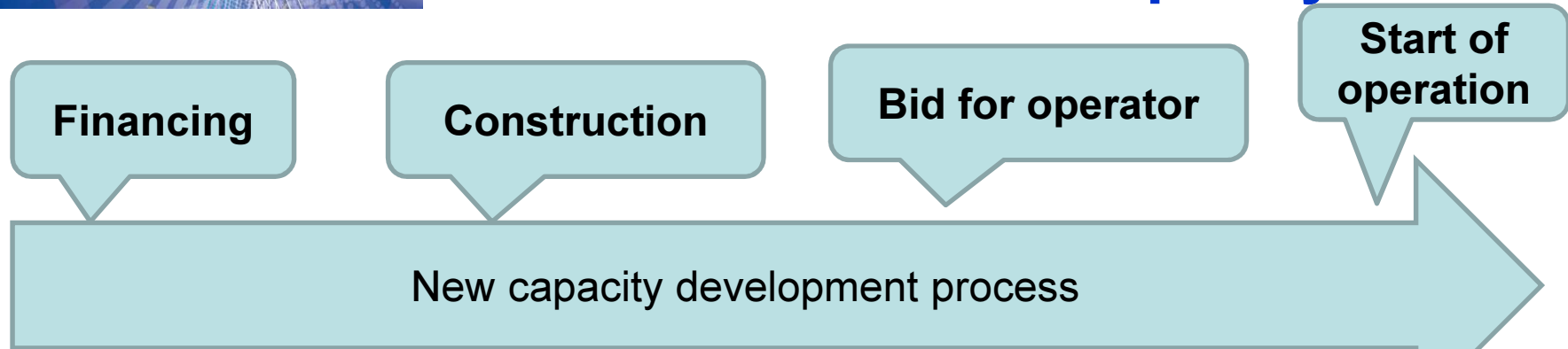


Issue 7: New TSO & its identification (Rus/GG view)

- Acc. to EU, new TSO can be established in market area to develop new capacity => what relations of this TSO with companies affiliated with shippers, initiated the project, will not violate TEP rules (ownership unbundling) prior to start of operation of newbuilt capacity



New TSO: at which step ownership unbundling rules start to act in case of new capacity dev't?



Whether companies affiliated with Gazprom can finance? => F.i. Gazprom itself, RF state money (Pension Fund, Oil Fund, State bank loans, etc.)

Whether companies affiliated with Gazprom can construct & provide other services to develop project? => F.i. established JVs with national TSOs?

When & how selection procedure for independent TSO should be organised? Criteria? Can it be done at the end of constr.period?

From this moment ownership unbundling to be implemented? Gazprom as a shipper only, no affiliation with new TSO

What possibilities for affiliated companies with the shipper to participate without violation of TEP rules ?



Issue 7: Project promoter participation in financing and project mgmt support to existing or newly established TSO (EU interpretation/understanding)

- Under full compliance with the unbundling rules, the Russian side would prefer the opportunity to directly or indirectly promote the project development phase potentially through providing financing and project management support to the incumbent or possibly a newly established TSO, as applicable.



Issue 7: Project promoter participation in financing and project mgmt support to existing or newly established TSO

Preliminary EU Position

- Further analysis is necessary but the promotion of the project in the development phase appears not to be incompatible with the unbundling regime so long as there is absolutely no influence of the operations.
- The certification process will certainly carefully scrutinize such participation to ensure that all previous ties/engagements are relinquished and no influence can be carried forward from those engagements.



Issue 8: Cross-border issues **(Rus/GG view)**

- 1) Coordination between corresponding IPs through the route to exclude Contractual Mismatches => project financing risk both for shipper & individual TSOs

Incremental & New Capacity under TEP structure of EU gas market (E-E zones) – demand for TSOs coordination



Parameters of new IPs 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 =

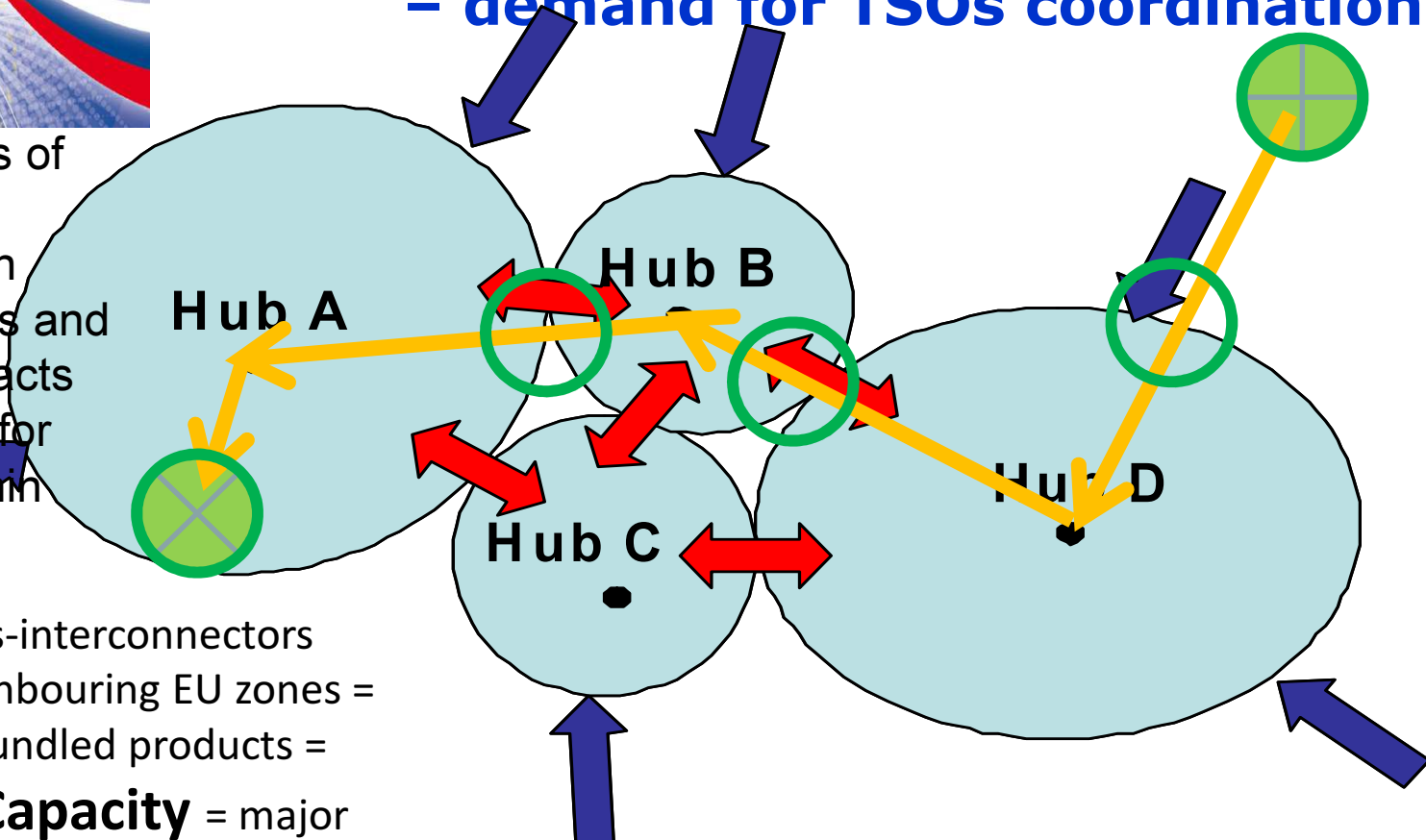
Incremental Capacity = major attention in Blueprint

Supplies to EU

from non-EU

Non-EU producer

Its EU customer



New Capacity = multiple IPs with bundled products to be balanced, EU-wide coordination of TSOs needed to avoid two types of contractual mismatches (at each IP and between IPs) => influence costly investment decisions to deliver gas from far away outside EU to EU border & further to EU customers



Issue 8: Specific process for establishing coordinated open seasons across several MSs (EU interpretation/understanding)

- The Russian side has highlighted the need for strong cross-border cooperation between Member State regulatory authorities and TSOs in the course of the project development, including in particular relating to the open season procedure.



Issue 8: Specific process for establishing coordinated open seasons across several MSs

Preliminary EU Position

- The EU side considers that essential elements of a system of coordinated open seasons with a defined process or its principles could be enshrined in EU legislation.
- Further analysis is however necessary as to how such a process can be made mandatory across Member States in light of the existing related national legal frameworks.



Issue 9: Tariffs issues for new capacity (Rus/GG view)

- 1) Bankability & shipper's willingness to pay depends on predictability of tariffs for at least the whole pay-back period
- 2) Risks of floating tariffs methodology for project financing/new capacity dev't
- 3) to be discussed under separate item of the WS2 agenda (10.09)

Next steps: proposal Case Study Workshop 02.09 => finalisation Blueprint on **Incremental** Capacity

- RF side to produce cover note to accompany draft strawman as an RF input to ACERs process with Blueprint on Incremental Capacity by 18 Sep.
 - To propose to continue with Blueprint on Incremental Capacity WITHOUT Open Season section for NEW capacity
 - Explain importance of 8+ issues for NEW capacity & impossibility to solve them (to create effectively working procedure for NEW capacity based on CAM NC)
 - To propose to develop ADDITIONAL/separate Blueprint for NEW capacity based on Strawman and to further work on it within the case study group beyond ACER/CEER schedule for Blueprint on Incremental capacity (e.g. beyond 18/09 & 30/11 deadlines)
- ACER to advise timelines for acceptance of further inputs to contribute to 30 Nov recommendations
- ACER Incremental Capacity Guidance Paper is submitted to ENTSOG on 30 November to prepare amendment to CAM NC

Next steps: proposal Case Study Workshop 02.09 => consideration for Blueprint on **New Capacity** **(Rus/GG proposal)**

- **WS2 (10.09.2013) to consider:**
 - Proposition to separate development of procedures for Incremental & New Capacity
 - EU to finalise development of Blueprint on Incremental Capacity and to start joint RF-EU work within WS2 on development of Blueprint on NEW capacity based on strawman
 - Discuss opportunities for further input on strawman – procedure (shared principles of procedure) & analytical approach (minimum reasonable economic test exercise)
 - How to report on case study to GAC (19.11.2013) asking for support of this way forward => GAC to provide its advise to CEC on Blueprint on New Capacity (which might end as potential new NC-13 on new major cross-border EU/non-EU investments in new infrastructure)



Thank you for your attention!

**Alex Barnes,
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Kristof Kovacs,
Nigel Sisman
(case study working group participants)**