

# Security of gas supplies to the EU, diversification of routes (“multiple pipelines” concept) as a mean to mitigate Russian gas transit risks to the EU, and financeability of draft EU legislation on new transportation capacity

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

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# Mitigation of USSR/Russia gas transit risks to EU

1. USSR/COMECON (in)formal instruments:
  - a. “Socialist economic integration” + cooperation of Communist parties under USSR leadership (till 1988-89/1991)
  - b. Economic motivation (discounted political prices & pricing)
    - i. CEE: till end 1990-ies, then adaptation to forthcoming (2004) obligatory EU rules
    - ii. CIS: till 2006 & through nowadays (Ukraine – unilateral disc., Belarus – Union State)
2. International law instruments:
  - a. Bi-lateral IGAs with transit clauses/guarantees:
    - i. CEE since 2004/2009: conflict with 2<sup>nd</sup> (2003) & 3<sup>rd</sup> (2009) EU Energy packages (economic transit risk - “contractual mismatch” vs MTPA - covered by IGAs as bilateral international law instruments which dominates over domestic rules)
  - b. Multi-lateral international law instruments:
    - i. GATT/WTO Art.5 “Freedom of Transit” (unclear regarding fixed infrastructure)
    - ii. ECT Art.7 “Transit” (cannot prevent interruptions of transit)
    - iii. ECT Draft Transit Protocol (not finalised)
3. Direct participation in ownership:
  - a. Baltic states => ownership unbundling (3<sup>rd</sup> Energy Package)
4. Alternative routes (diversification for exporter) => “multiple pipelines” / Ukrainian by-passes (since mid-2000-ies), but inside the EU:
  - a. Financing, construction, operation rules acc.to Third EU Energy Package are not effective for project financing => room for their legal improvement

*(1-3) “one market-one pipe” concept; (4) “one market-two pipes” concept*

# Ukraine: “transit interruption probability” index (2009–2014)

To evaluate possible interruptions of transit supplies we consider 1009 newsbreaks, related to gas relations between Russia and Ukraine through 30.12.2008 to 10.10.2014 period. These newsbreaks were taken from the newswire <http://newsukraine.com.ua/> (prior to 28.02.2014) & <http://km.ru/> (after 28.02.2014). Then they were filtered to 170 newsbreaks which, in case of their realization, would have a main effect on interruption of gas flows in transit within the Ukrainian territory.

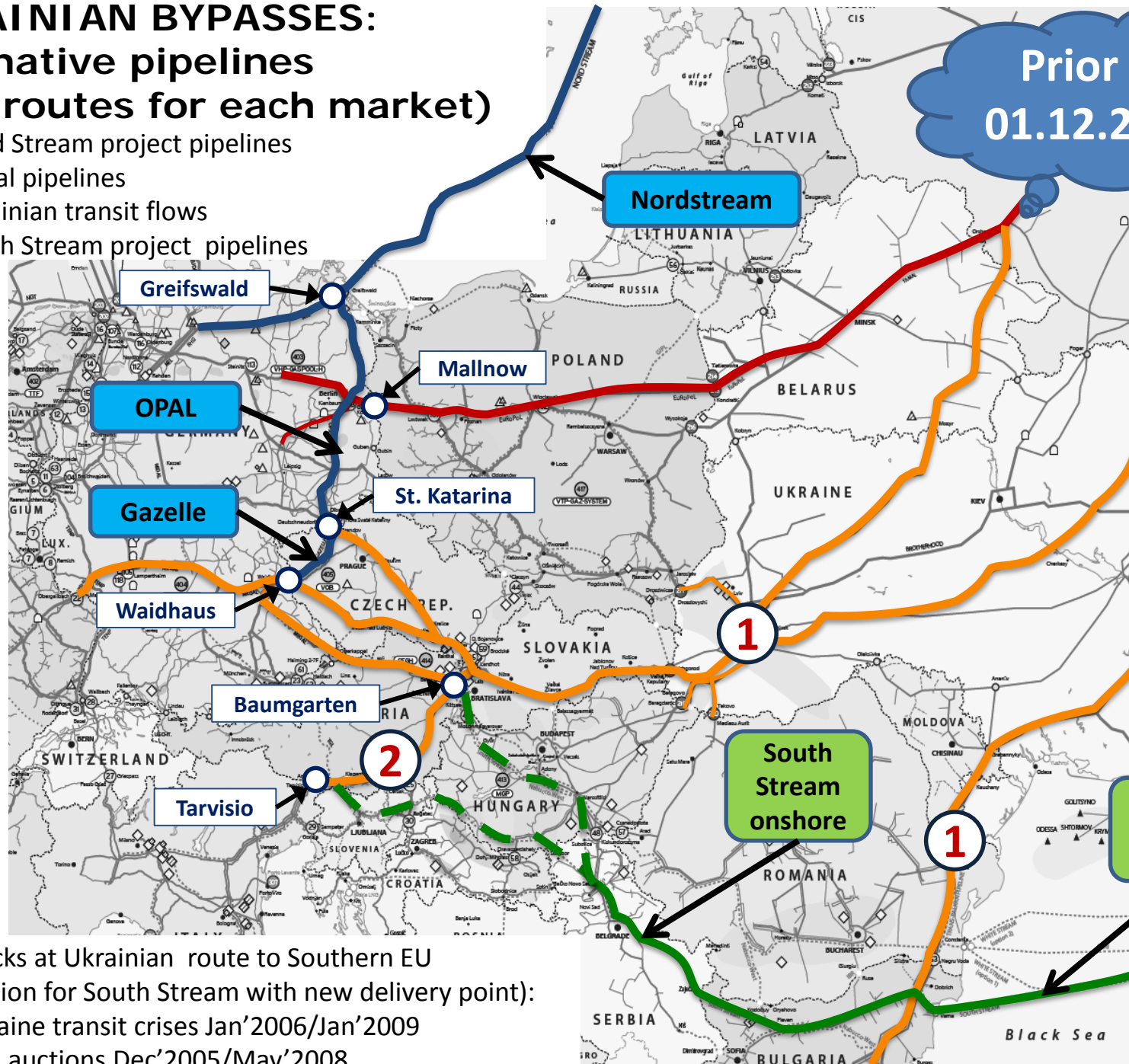


Calculated by M.Larionova, Russian Gubkin State Oil & Gas University, Chair “International Oil & Gas Business”, Master’s programme 2013-2015, based on the methodology jointly developed with the author  
Source: A.Konoplyanik, “Economic background of gas problems within Russia-EU-Ukraine triangle and possibilities for mutually acceptable compromise”. CEPMLP Dundee University lecture, 30.10.2014

# UKRAINIAN BYPASSES: alternative pipelines (two routes for each market)

- █ Nord Stream project pipelines
- █ Yamal pipelines
- █ Ukrainian transit flows
- █ South Stream project pipelines

Prior to  
01.12.2014

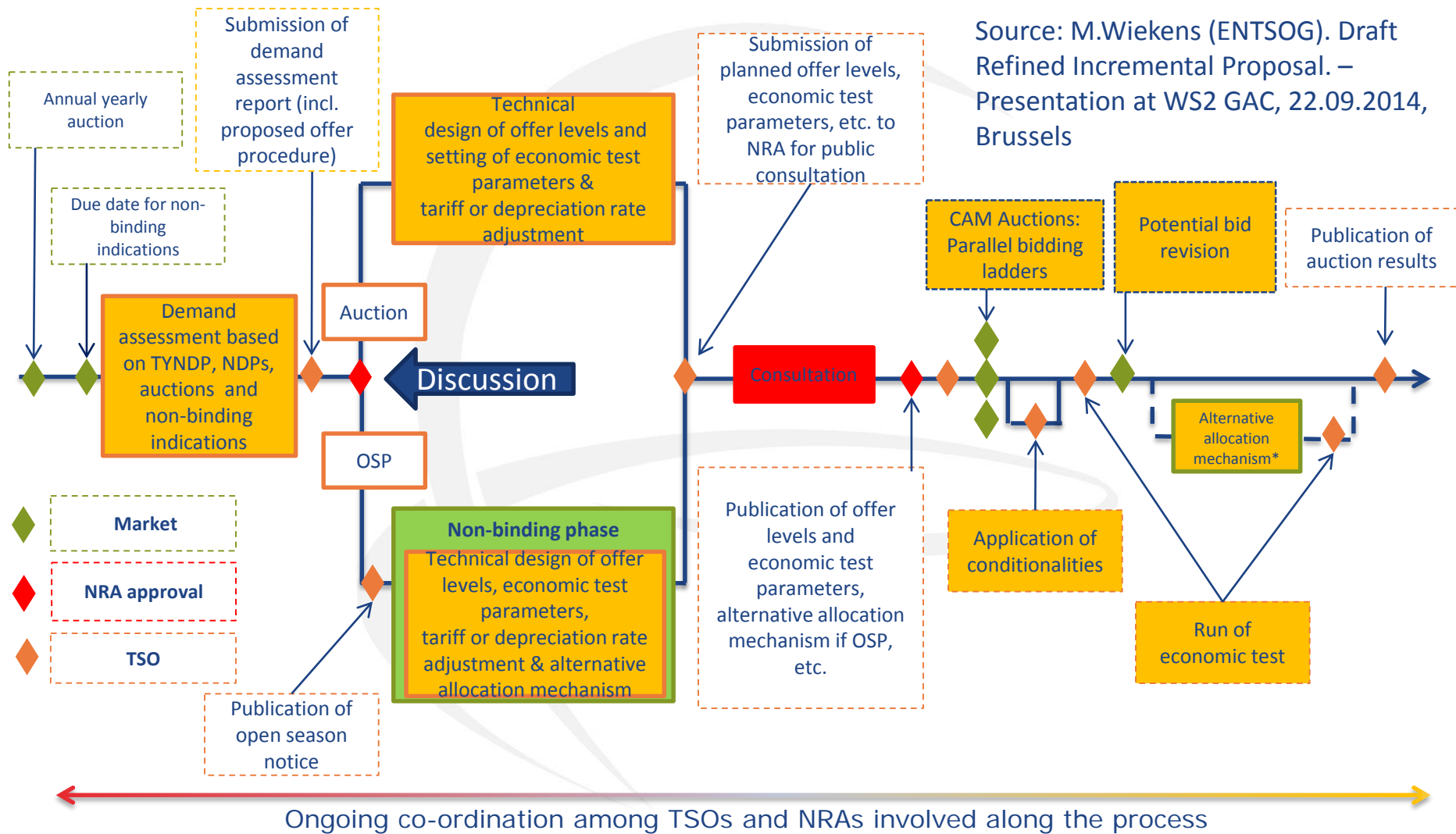


Bottlenecks at Ukrainian route to Southern EU  
(justification for South Stream with new delivery point):

- ① Ukraine transit crises Jan'2006/Jan'2009
- ② TAG auctions Dec'2005/May'2008



# ENTSOG: Proposed streamlining of INC process

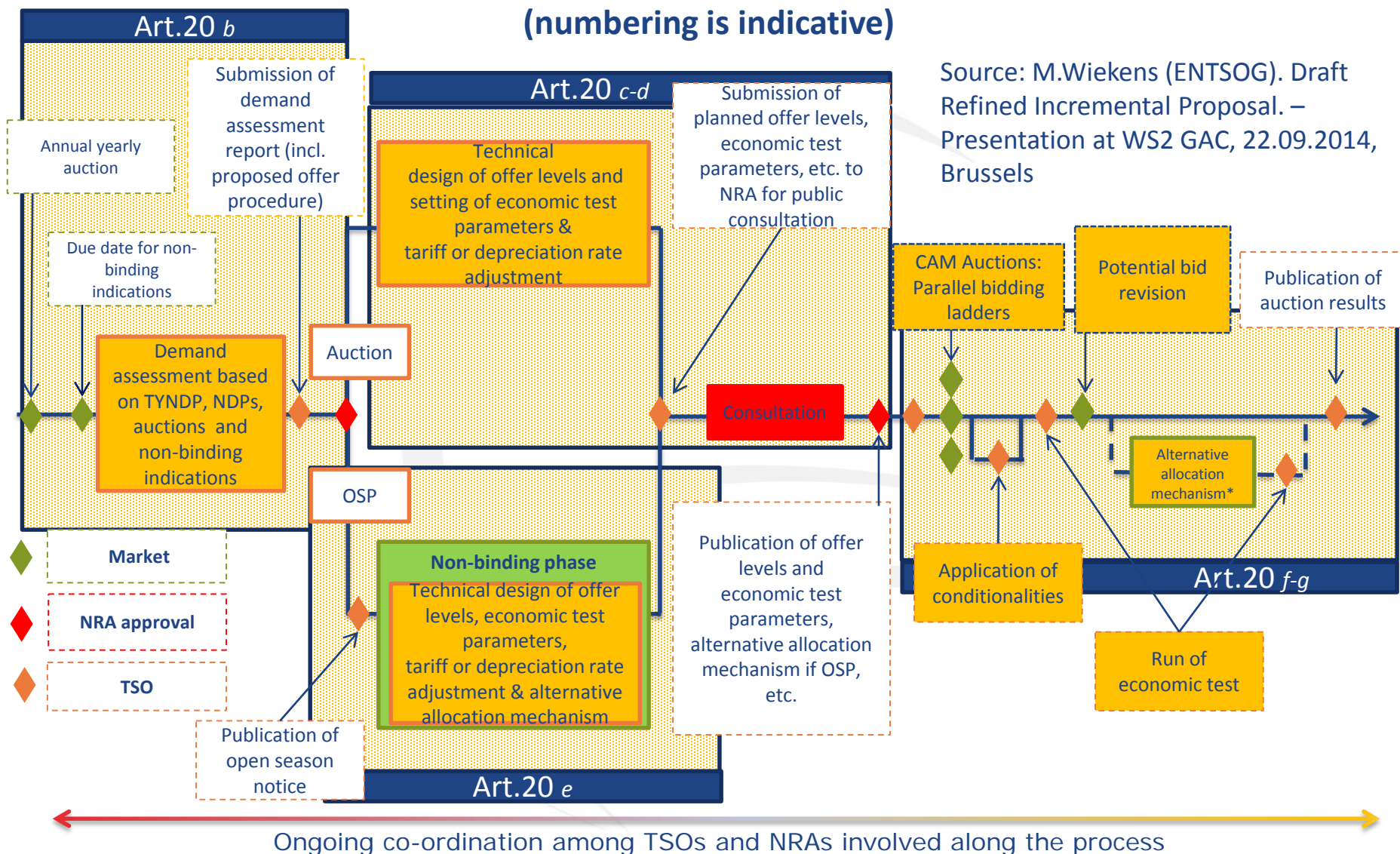


\* An alternative allocation mechanism can only be applied in Open Season Procedures and if the default allocation mechanism prevents a positive economic test

# ENTSO G: Refining the order of articles to reflect process

(numbering is indicative)

Source: M.Wiekens (ENTSO G). Draft Refined Incremental Proposal. – Presentation at WS2 GAC, 22.09.2014, Brussels

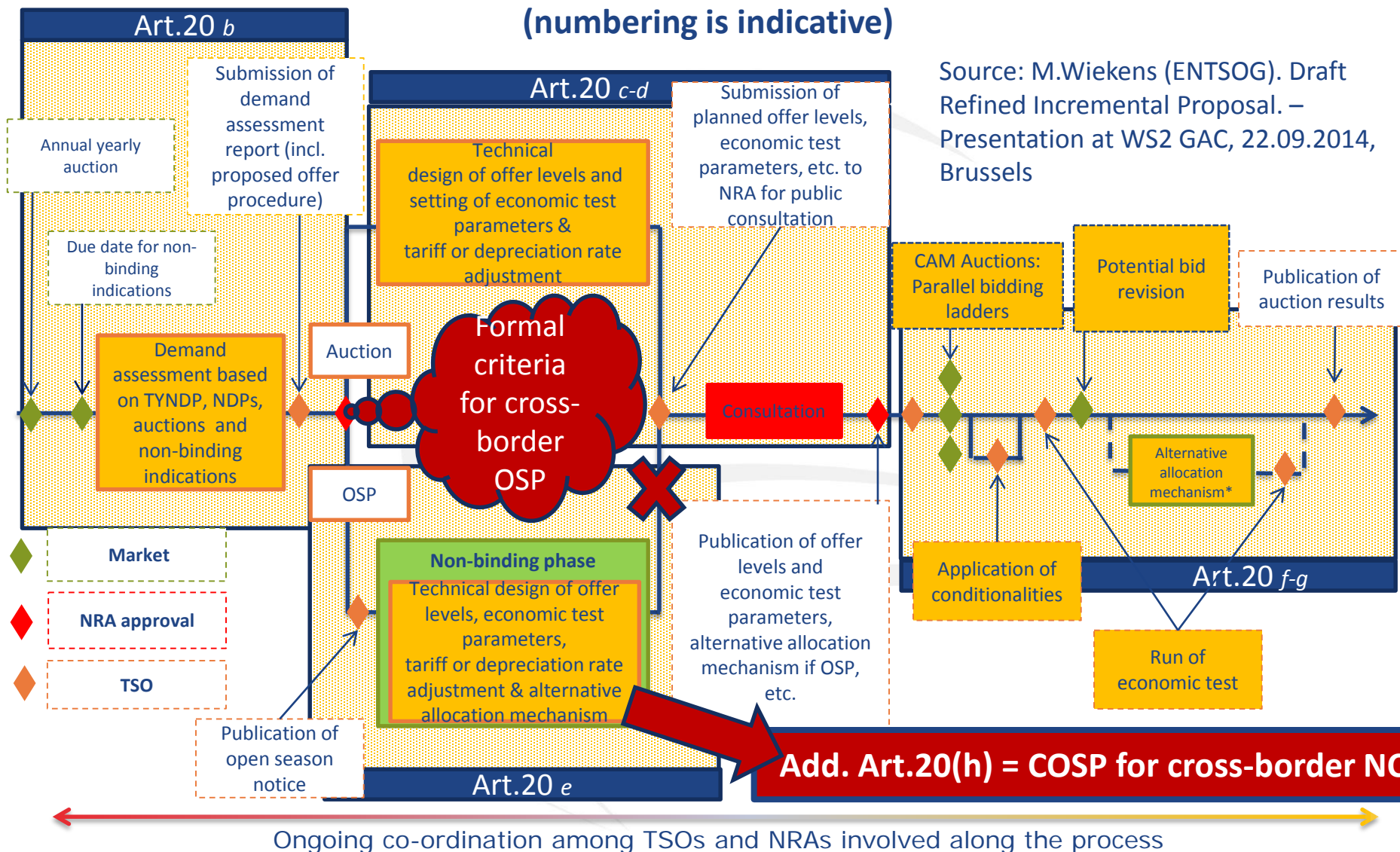


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# ENTSOE: Refining the order of articles to reflect process

(numbering is indicative)

Source: M.Wiekens (ENTSOE). Draft Refined Incremental Proposal. – Presentation at WS2 GAC, 22.09.2014, Brussels

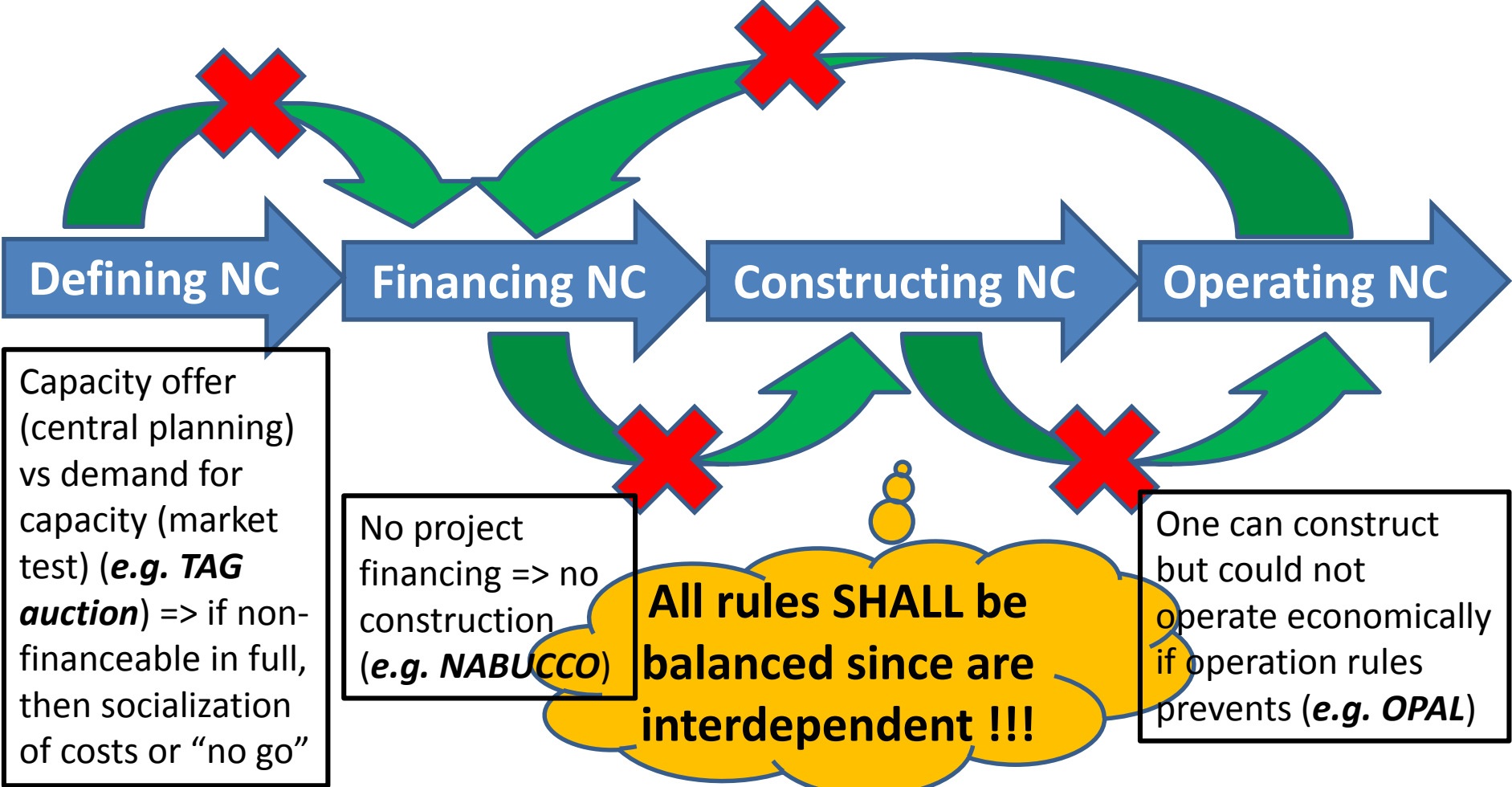


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# Defining, financing, constructing, operating NC: to exclude repetition of past negative experience within EU

Operation rules **SHALL** be financeable to raise finance to start construction => if no adequate operation rules => no shipping contracts => no project financing => no construction => capacity deficit continues (*e.g. NABUCCO*)



# Development of new capacity in the EU: project financing, draft Amended Reg.984 & Art.20(h)/COS

Guarantees to shipper for transportation of his contracted supply volumes (100% of booked capacity - volumes, duration, profile) at predictable tariffs => security for TSO to pay-back its project CAPEX ("project financing" + double guarantee by congestion management procedures: "ship &/or pay", UIOLI) => security for lenders (commercial financiers) to pay-back their "debt financing" to TSO => **draft Art.20(h) to Amended Reg.984 on effective "Coordinated Open Season" (COS) for cross-border new capacity**

**Financing NC**

**Constructing NC**

**Operating NC**

"TSO shall invest" (Third Gas Directive, Art.13.2) => only "project financing" as a financial & financeable tool to develop cross-border new capacity => commercial financial institutions (lenders) to define prospects & risks for pay-back of their debt financing

Non-discriminatory open & competitive bidding leads to cost decrease

**Effective rules of operating NC as precondition & guarantee for raising CAPEX & to pass "economic test" (project financeability)**

To be financeable & effectively manageable, cross-border transportation route requires:

- ring-fencing (unitization),
- ITSO for unitized project,
- fixed/predictable tariffs (project-based not system/"market zone"-based),
- no cost socialization...



# What is fundamental fault of current “default mechanism” in ENTSOG draft of Amended Reg.984

- “**Auctions are the default mechanism for the allocation of incremental/new capacity**” (ENTSOG Business Rules, art.III.1.5, based on ACER Guidance on Incremental & New Capacity), but:
  - Incremental/new capacity = yet *non-existing* capacity,
  - To allocate non-existing capacity one should first create it, but CAM NC deals with **existing** capacity only => direct application of CAM NC rules to new (**yet non-existing**) capacity is incorrect in principle => auction is **NOT** investment tool
  - To *allocate* (**trade** with) existing capacity and to *create* (**invest** in development of) not yet existing capacity is **NOT** the same => **trade & investment are NOT** synonyms, but *different types of economic activity* => their mixture seems to be a systemic long-term misconception in EU (energy) legislation (the justified reason for Art.21 in 2<sup>nd</sup> & Art.36 in 3<sup>rd</sup> EU Directives for new invest.projects)
  - ACER intention to put “investment” into Procrustean bed of “trade” is counterproductive since considers “investment” just as occasional (from time to time) deviation from “trade” => procedural faults in ACER Guidance reproduced in ENTSOG Business Rules, then in ENTSOG draft Amended Reg.984, at least for new capacity.



# “Project-based” proposal for COSP – not considered in Amended Reg.984

## New cross-border capacity project life-cycle

Invest.phase+pay-back period

Post-pay-back period

### Coord.OSP (ring-fenced project)=>Art.20(h)

- 1.Project-based approach through pay-back
- 2.Cross-border unitization, ITSO for unitized project, coordination within single project
- 3.NPV as criteria for economic test
- 4.F-factor =100% (90% - shippers demand, 10% - NRA guarantees, securitized by EU Fin. Inst.)
- 5.Tariff as swing parameter in economic test
- 6.Fixed tariff through pay-back period
- 7.No cost socialization
- 8.Costs/revenues reallocation within project
- 9.No contractual mismatch...

### Amended NC + draft NC HTTS

- 1.System-based approach
- 2.Cross-border TSO coordination for existing & not yet existing cap.
- 3.WTP (auction) as criteria
- 4.F-factor established by NRA, flexible, less 100%
- 5.Volume as swing parameter
- 6.Floating tariff
- 7.Huge cost socialization (1-F)
- 8....between diff. market areas
- 9.Risk of contractual mismatch...

Cross-border new capacity (“transportation route”) principle: until capacity is built & paid-back – OSP procedure based on project-based (not system-based) approach



# 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/area-based

CHINESE WALL BETWEEN TWO PROCEDURES

At least until economic test on COS gives negative result

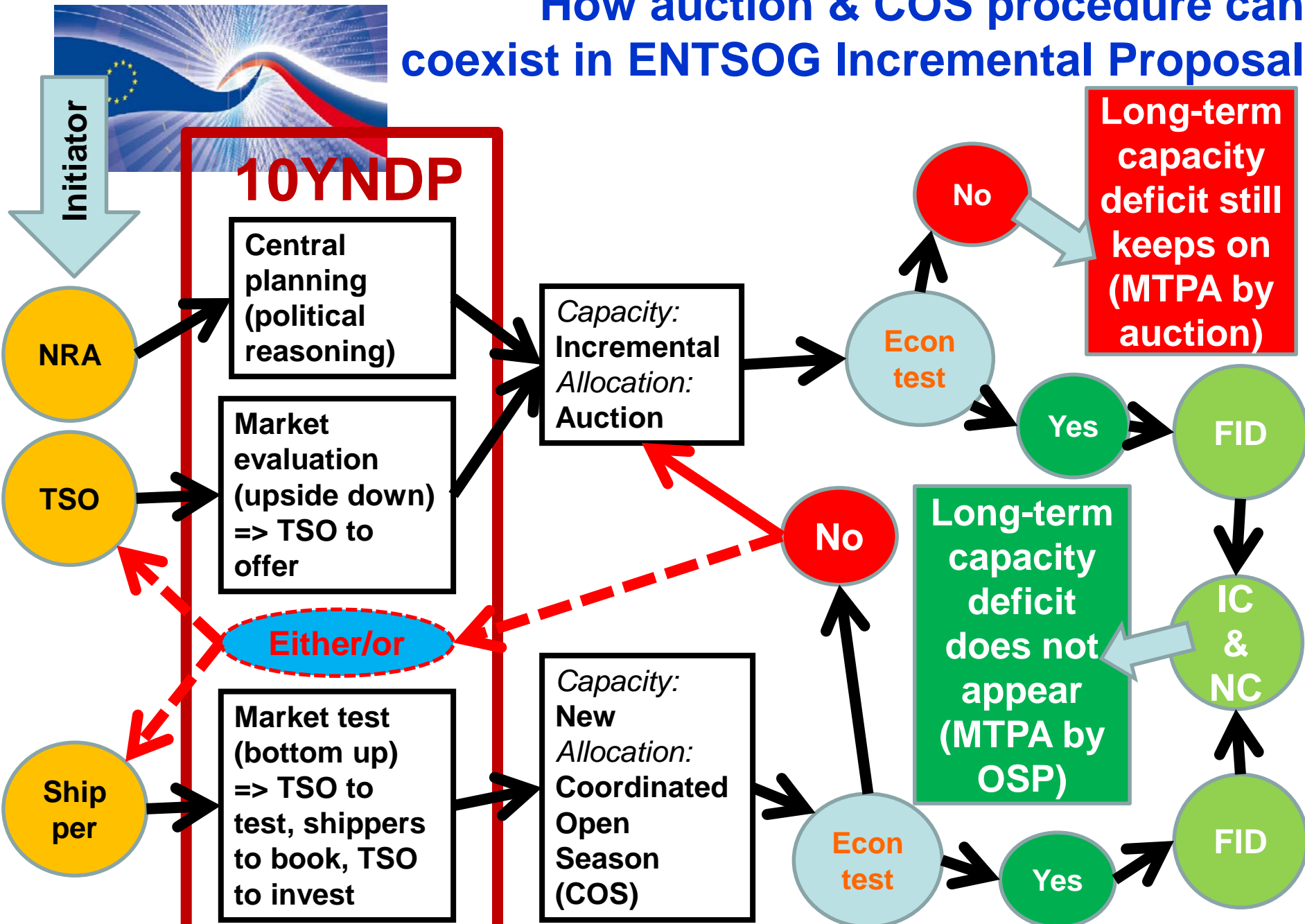
Criteria: new IP, 2IP+, size...

New Capacity

Coordinated Open Season (COS)

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

# How auction & COS procedure can coexist in ENTSOE Incremental Proposal





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

	<b>Existing Capacity</b>	<b>Incremental Capacity</b>	<b>New Capacity (proposed)</b>
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 (floating)	System-based (floating)	Project-based (project ring-fencing through pay-back period) (not floating)

(\* ) 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



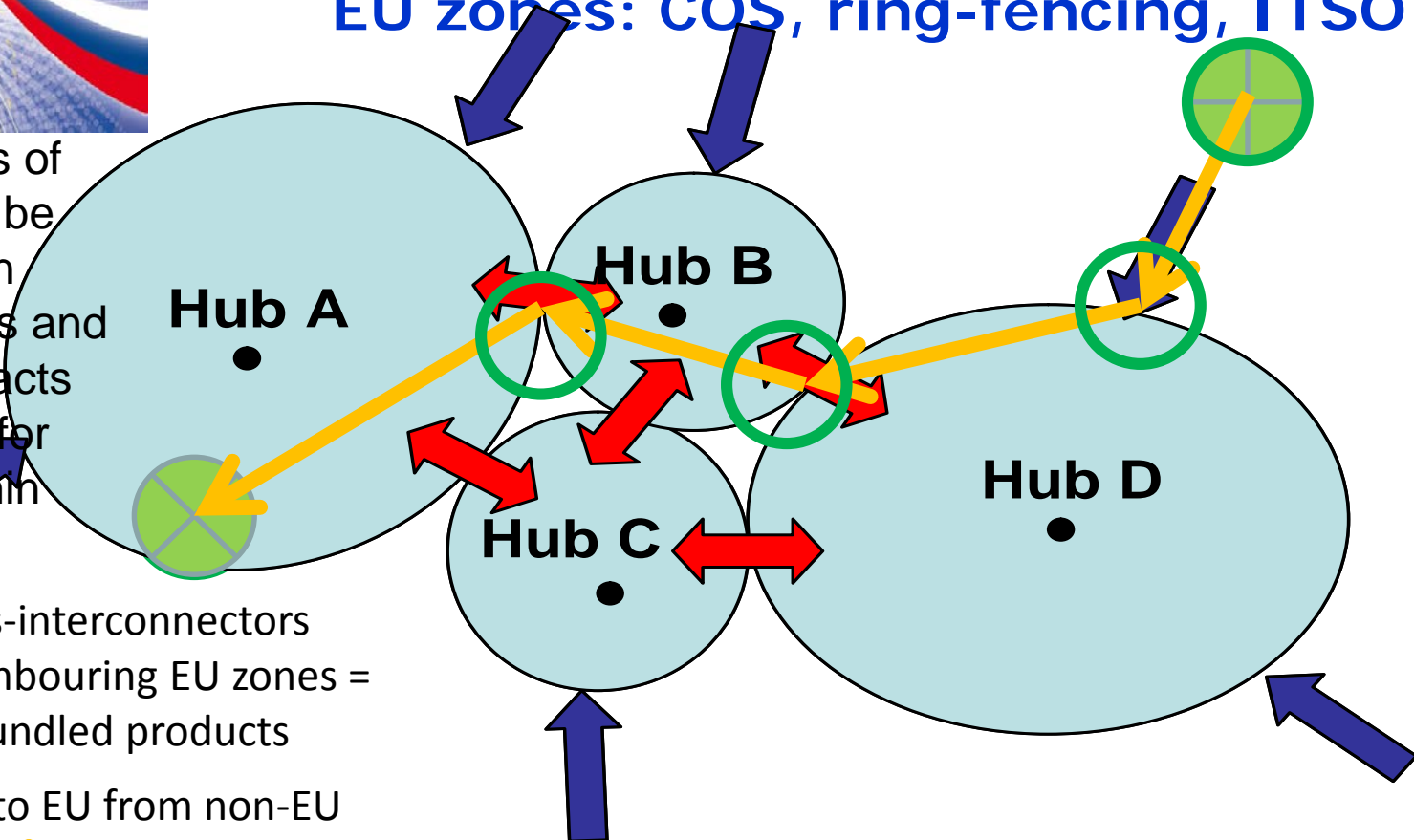
Parameters of new IPs/CBPs to be coordinated within chain of the zones and with supply contracts backing demand for new capacity within each zone

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

Supplies to EU from non-EU

Non-EU producer  
Its EU customer

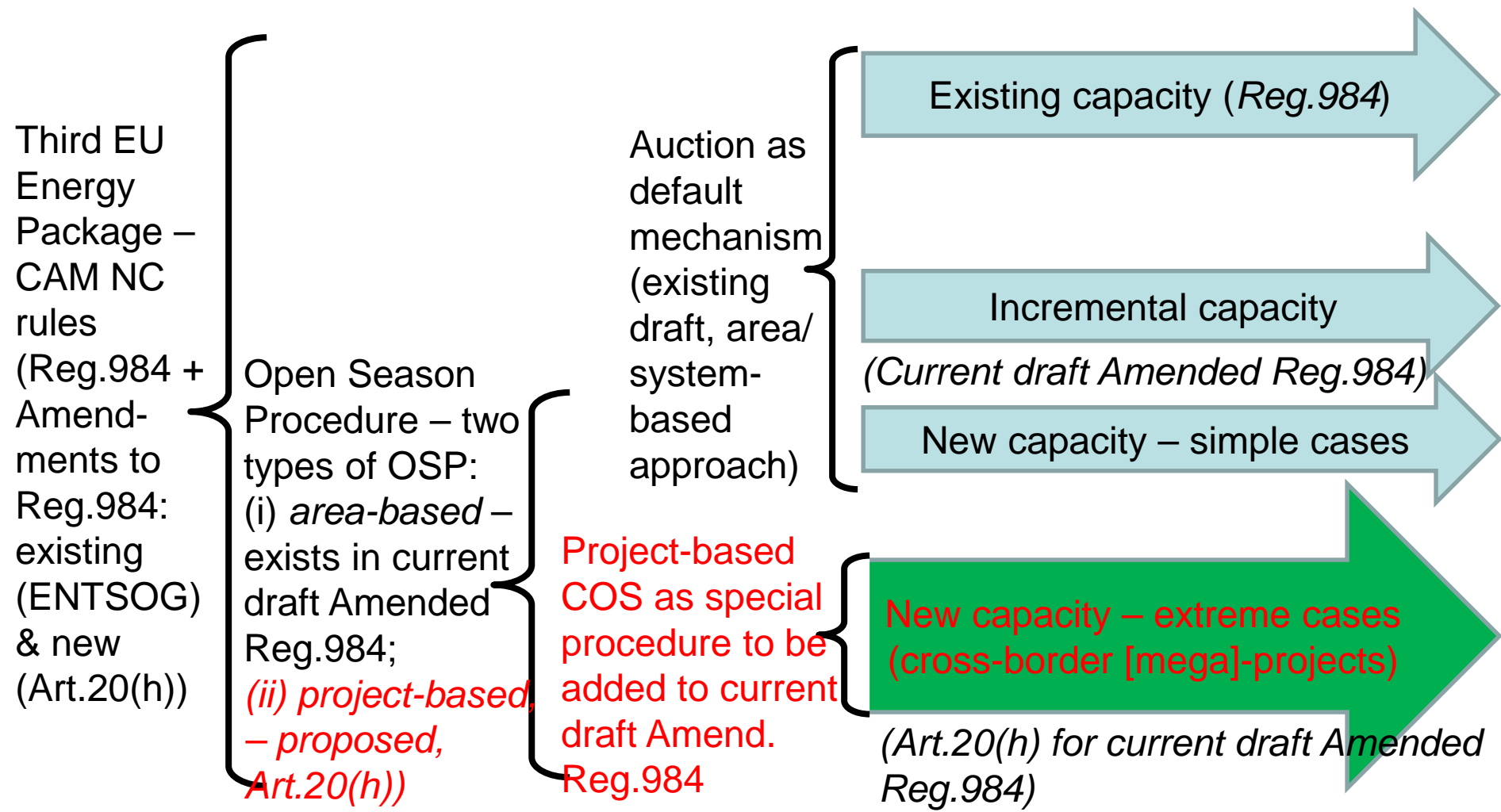
**New Capacity** = multiple IPs with bundled products to be balanced, cross-border coordination of TSOs to avoid two types of contractual mismatches:  
 (1) at each IP: between term supply & transportation contract, and  
 (2) at all IPs on the route from zone to zone: between bundled products at each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







# Coordinated Open Season (COS) & its existing & proposed place in Amended CAM NC (Reg.984)



# Proposal: Pilot test for CAM Incremental (Amend. Regulation 984) for SEE Vertical Gas Corridor

- “Turkish Stream” to be further prolonged within the EU towards Central Europe:
  - non-dependent delivery points (existing vs new)
  - based on 3<sup>rd</sup> Energy Package rules (Art.13.2: TSO shall invest)
  - TSO to effectively combine existing & new capacity
  - TYNDP/PCI vs. OSP for New Cap. acc.to Amended Reg.984
- 09.02.2015, Sofia: “Vertical Gas Corridor” for SEE
- Pilot test for financeability of EU invest.rules: first implementation of Amended Reg.984 without (existing draft) & with (our proposal) Art.20(h):
  - ACER “public consultations” (till 04.03.2015) => ENTSOG to correct on ACER comments => then Commission to decide
  - To adapt before final approval based on pilot test results
  - => EU to decide...

# Thank you for your attention!

[www.konoplyanik.ru](http://www.konoplyanik.ru)  
[andrey@konoplyanik.ru](mailto:andrey@konoplyanik.ru)  
[a.konoplyanik@gazpromexport.com](mailto:a.konoplyanik@gazpromexport.com)

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