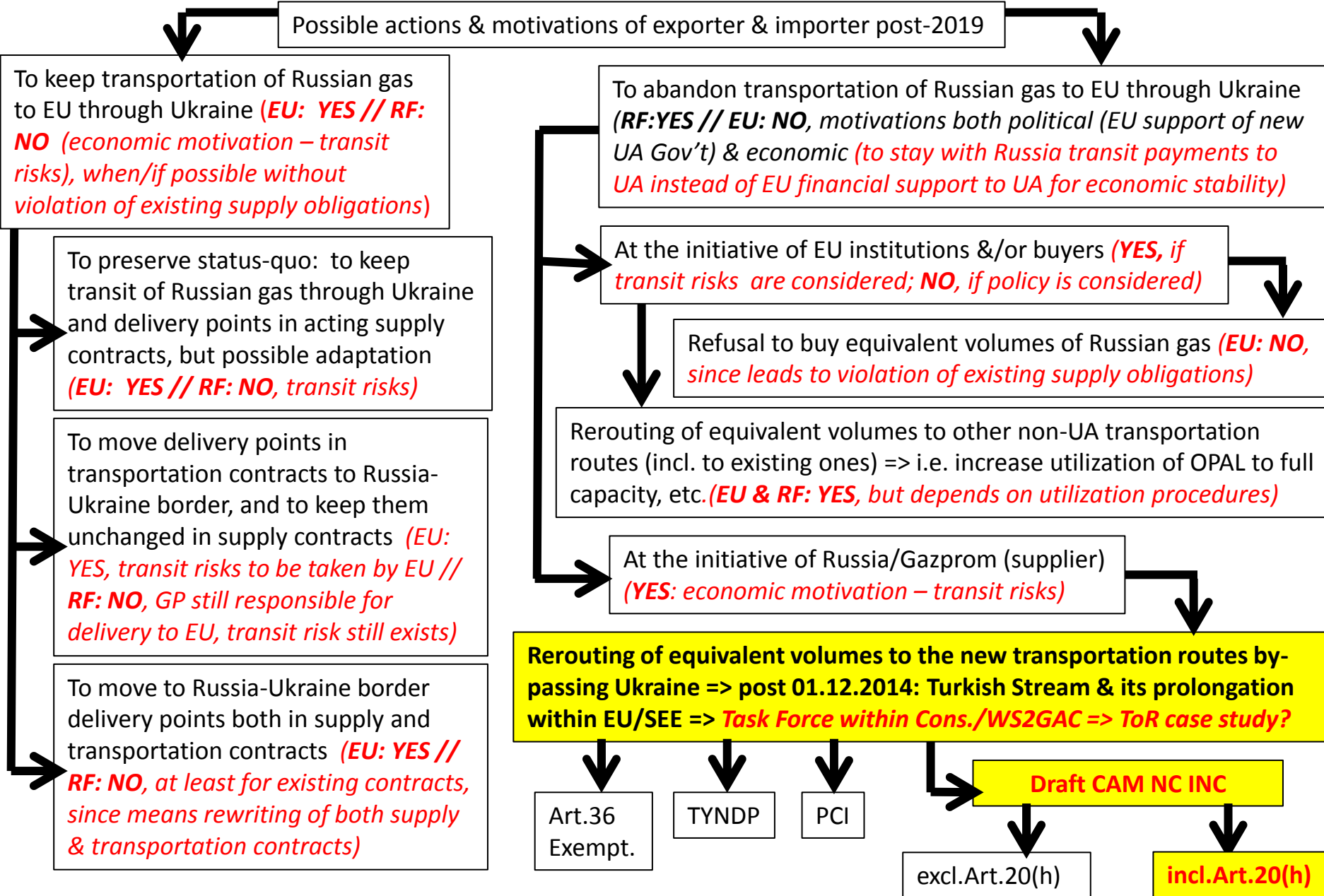


Draft vision/proposal on how WS2GAC expert group can best effectively compare existing & new options for creating new gas transportation capacity in EU in the given circumstances

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Informal Consultations on EU Regulatory issues

**16th WS2 GAC meeting/23rd round of Informal Consultations,
Vienna, E-Control, 22 July 2015**

Russia-Ukraine transit contract to EU will expire in 2019. What then? Possible scenarios & motivations for exporter & importer - & Task Force ToR proposal



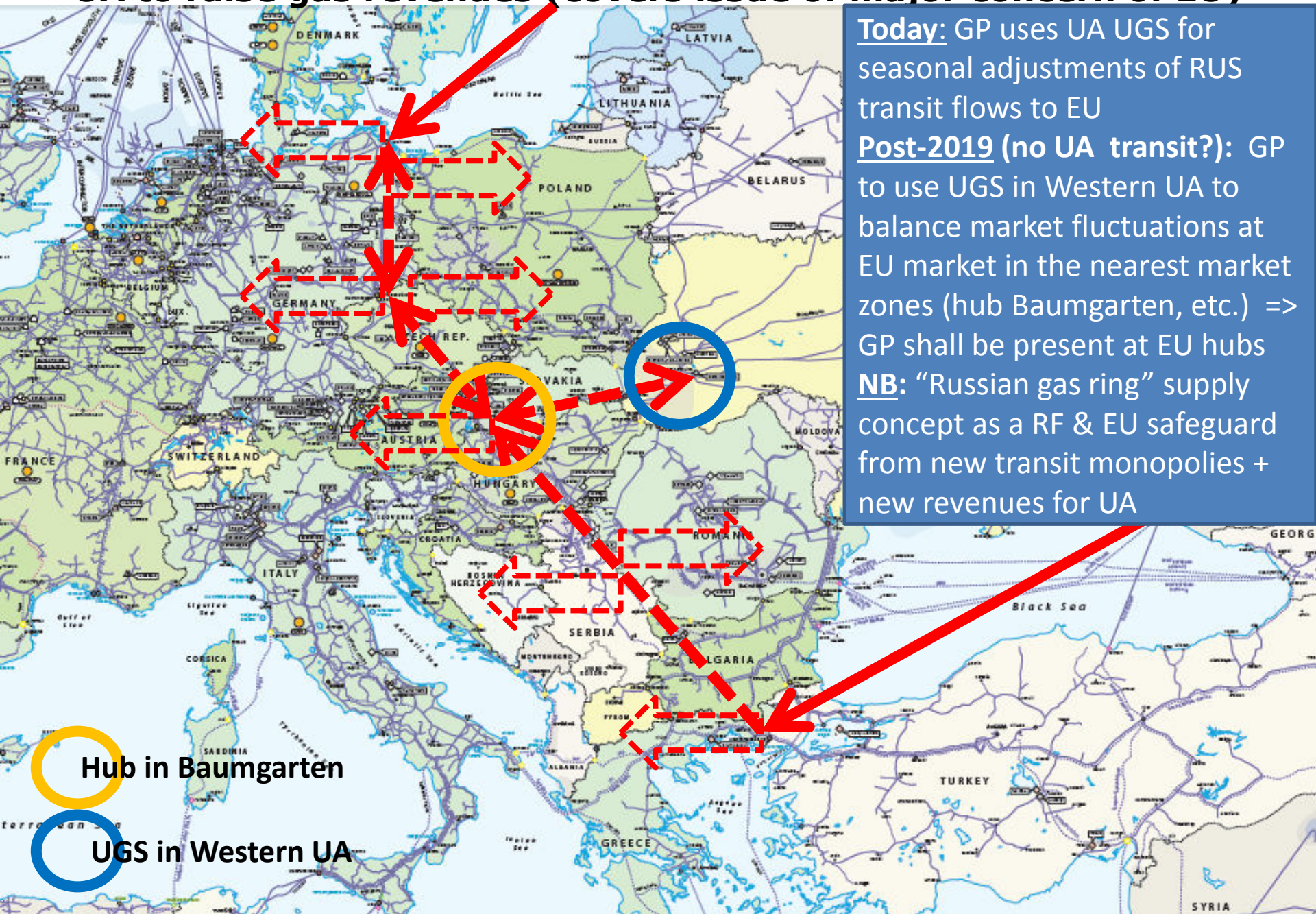
EU support for transit via Ukraine: the end or the means? (1)

- EU has multiply stated its support for continuation of RUS gas transit via UA post-2019 => (it seems that) this is why EU opposes redirection of RUS gas supplies to new transportation routes to EU post-2019
- (It seems that) EU support for transit of RUS gas via UA is not the end, but just the means; the real goal is:
 - to provide UA with a steady financial flow (of transit revenues) from existing [& future?] RUS supply contracts to EU, and
 - to provide pay-back for CAPEX of US, EU & UA investors in modernization of US GTS by future RUS gas flows via UA:
 - [either under existing supply formula (supplies directly to EU) – RUS will continue taking transit risk via UA, or]
 - by newly proposed formula (delivery of RUS gas at RUS-UA border and EU companies will take the transit risk via UA by themselves)
- => **Unwillingness to discuss WS2 Task Force ToR (15.05.2015) explained by UA transit revenue factor? If so, why these two independent issues are packaged?**

EU support for transit via Ukraine: the end or the means? (2)

- Whether EU will change its opposition to Task Force issue if alternative means for UA to earn money are presented instead of gas transit revenues?
- An idea: “Russian gas circle” with expanded trade at the hub (Baumgarten) which requires regular use of UGS => UA UGS
- UGS in Western UA to be used not for seasonal adjustment of RUS transit flows to EU, but to adjust market fluctuations at the hub (Baumgarten),
 - this will also make Mr.Shevkovich happy since Slovak system will be fully utilized for direct &/or reverse flows both for supplies and UGS use
 - UA will be further integrated into EU energy system
- **BUT: this need be a trilateral or even multilateral debate, not within bilateral format of GAC & its WSs =>:**
 - **To discuss the issues with UA involvement in other (non-GAC) foras => not a “package deal” with GAC but separate issues**
 - **In GAC to concentrate on bilateral issues, incl. Task Force on best effective regulatory rules in EU for new capacity**

Russian gas ring diminishes UA transit risk + a non-transit way for UA to raise gas revenues (covers issue of major concern of EU)



Today: GP uses UA UGS for seasonal adjustments of RUS transit flows to EU
Post-2019 (no UA transit?): GP to use UGS in Western UA to balance market fluctuations at EU market in the nearest market zones (hub Baumgarten, etc.) => GP shall be present at EU hubs
NB: "Russian gas ring" supply concept as a RF & EU safeguard from new transit monopolies + new revenues for UA

Hub in Baumgarten
UGS in Western UA

Different recent events/messages which influence Turkish Stream development (1): Russian side

- 1) 01/07.12.2014: V.Putin's/A.Miller's announcement on change of the route (from "South Stream" to "Turkish stream") & change of its operational model to 3rd Energy Package rules (GP inside EU as a shipper only); "hub" (?) for 47 BCM at Turkish-Greek border since 2019
- 2) Since then: Multiple statements of different RF officials on "no UA transit post-2019" (incl. A.Novak, A.Medvedev/09.06.2015, etc.)
- 3) 18.06.2015: MoU on Nord Stream II
- 4) 19.06.2015: Russia-Greek JV (VEB Capital & EIPE S.A.) for "financing, designing, construction, operation & maintenance" of Turkish Stream prolongation in Greece (South European pipeline) for 47 BCM
- 5) 26.06.2015: "Putin ordered to negotiate with Naftogaz post-2019 transit contract to EU" (A.Miller)
- 6) Early July 2015: Info on Gazprom's letter (S.Prozorov) to freeze works on expansion of RF onshore "Southern corridor" for Turkish Stream since 01.07.2015
- 7) (May'2015) Announcements that offshore pipe-laying will start in June 2015, RF Gov't issue permission for Saipem's pipe-laying barge to enter territorial RF waters, but then (June'2015) cancellation of contract with Saipem

Different recent events/messages which influence Turkish Stream development (2): EU side

- 1) EU negative reaction on Russia's unilateral decision to change skidding "South Stream" to "Turkish Stream"
- 2) Disagreement with Russian sovereign choice to evaluate itself - as resource owner/producer/exporter – its transit risks (which put under question RUS maximum marketable resource rent collection) and to choose best effective transportation route to secure existing RUS supply obligations to EU
- 3) Disagreement with Russia's choice to zero out UA transit post-2019; strong intention to force Russia to continue transiting its gas via Ukraine post-2019 (to finance UA economy + to finance new UA GTS consortium) (i.e. 18.06 AY-KDB meeting)
- 4) Multiple statements that EU will find unilateral solution (w/o Russia) to RUS demand for capacity at entry point to EU/SEE
- 5) Conflicting/competing pipeline proposals in SEE aimed to offer capacity, not to cover demand for it (Eastring, Tesla, Vertical Gas Corridor on top of TANAP, TAP, etc.)
- 6) No clarity with Amended Regulation 984/2013 (CAM NC INC)

Different recent events and messages which influence Turkish Stream development (3)

- Turbulent & mutually exclusive statements, information, speculations are result of the approach based on “capacity offer”, NOT on covering “demand for capacity”:
 - Capacity offer based on assessments of future possible supply-demand in **commodity** and its correlation with existing & yet to be built **capacity** of infrastructure => today’s developments,
 - Meeting demand for capacity based on market test for it through non-distorted open season procedure (OSP) => proposition for “test case” => WS2 Task Force

Most of recent analytical publications on Turkish Stream compare 63/47 BCM with throughput capacities of different available pipeline proposals (volumetric comparison)

- J.Stern, S.Pirani, K.Yafimava. Does the cancellation of South Stream signal a fundamental reorientation of Russian gas export policy? – OIES, Oxford Energy Comment, Jan'2015
- J.Roberts. Turkish Stream: Realities Behind the Big Pipeline Project. (Report on Breakout Session On Turkish Stream). – 8th European Gas Conference 27-29 January, Vienna, Austria. The Energy Exchange-Clarion Events (disseminated June 2015)
- «Турецкий поток»: сценарии обхода Украины и барьеров Европейской Комиссии. М., Vygon Consulting, июнь 2015 (“Turkish stream”: Scenarios of by-passing Ukraine and barriers of European Commission”. Vygon Consulting, June 2015)
- М.Белова, Е.Колбикова. Как решить «проблему-2020». – «Нефть России», 2015, №5-6, с.10-14 (M.Belova, E.Kolbikova. How to solve “2020-problem”. – “Oil of Russia”, 2015, N5-6, p.10-14)
- THE “VERTICAL CORRIDOR” FROM THE AEGEAN TO THE BALTIC. - An IENE Study Project (M26), May 2015, Athens.

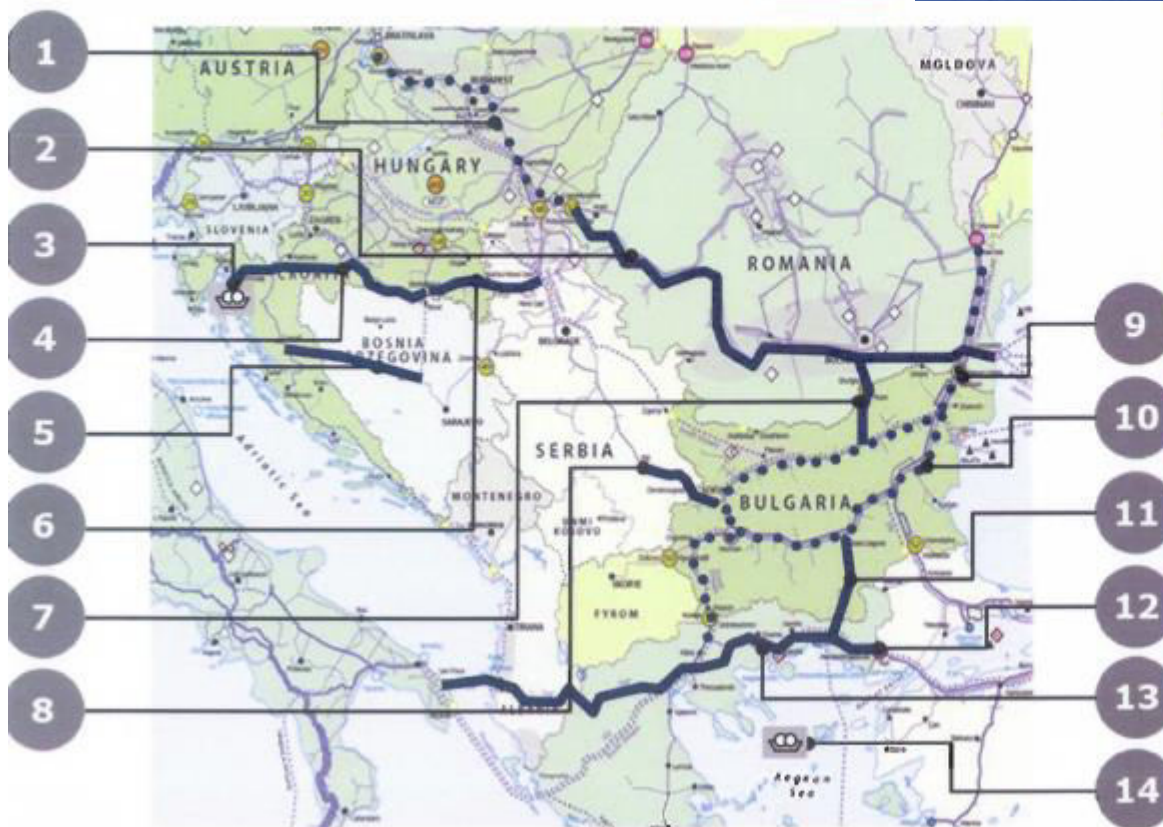
EU: fragmented approach? (1) Central East South Europe Connectivity - CESEC

CESEC – Projects in the region



An Overall Plan
Sofia, 9 February 2015

Directorate General for Energy



	Projects	Status	Capacity	Commissioning date
1	Reinforcement of HU network	PCI	Up to 10bcm/a	2019
2	New pipeline in RO	PCI	Up to 10bcm/a	2019
3	Krk LNG terminal	PCI, PECE	Up to 6bcm/a	2019
4	Pipeline Zlobin – Slobodnica	PCI, PECE	11bcm/a	2019
5	BIH – HR Interconnector	PECE	Up to 5bcm/a	2019
6	HR – SB Interconnector	PECE	6-7bcm/a	2023
7	Interconnector Bulgaria – Romania	-	1.5bcm/a	2015
8	Interconnector Bulgaria – Serbia	PCI, PECE	Up to 3bcm/a	2017
9	Reverse flow on the Trans-Balkan	PCI	Up to 27.5bcm/a	2018
10	Reinforcement of the BG network	PCI	-	2019
11	Interconnector Greece - Bulgaria	PCI	Up to 5bcm/a	2019
12	Compressor station in Kipi	PCI	Up to 12bcm/a	2020
13	Trans-Adriatic Pipeline	PCI	Up to 20bcm/a	2019
14	LNG terminal in Greece	PCI	Up to 11bcm/a	2016

EU: fragmented approach? (2)

Some South East Europe Pipeline Projects in public debate



- Eastring – Route A
- Eastring – Route B
- Tesla
- TAP
- ➔ Direction of flow

- Eastring – governments of Slovakia, Hungary, Romania and Bulgaria signed Declaration at Riga Summit 21st May 2015, supporting new interconnections. Proposal by Eustream – Slovak TSO
- Tesla – no details but supposedly as if Gazprom project (Euractiv 30th April 2015)
- TAP – secured exemption 2013. Exemption expires if construction not started by 16th May 2016, and not operational by 31st December 2020

EU: fragmented approach? (3)

Basic components of the Vertical Corridor (IENE)

THE VERTICAL CORRIDOR FROM THE AEGEAN TO THE BALTIC



Source: THE “VERTICAL CORRIDOR” FROM THE AEGEAN TO THE BALTIC. - An IENE Study Project (M26), May 2015, Athens, p.33 (Figure 7)

EU: fragmented approach? (4)

How the extension of Turkish Stream can be mapped if 47BCM structure is still not presented?



SOUTH-EAST EUROPE ENERGY BRIEF

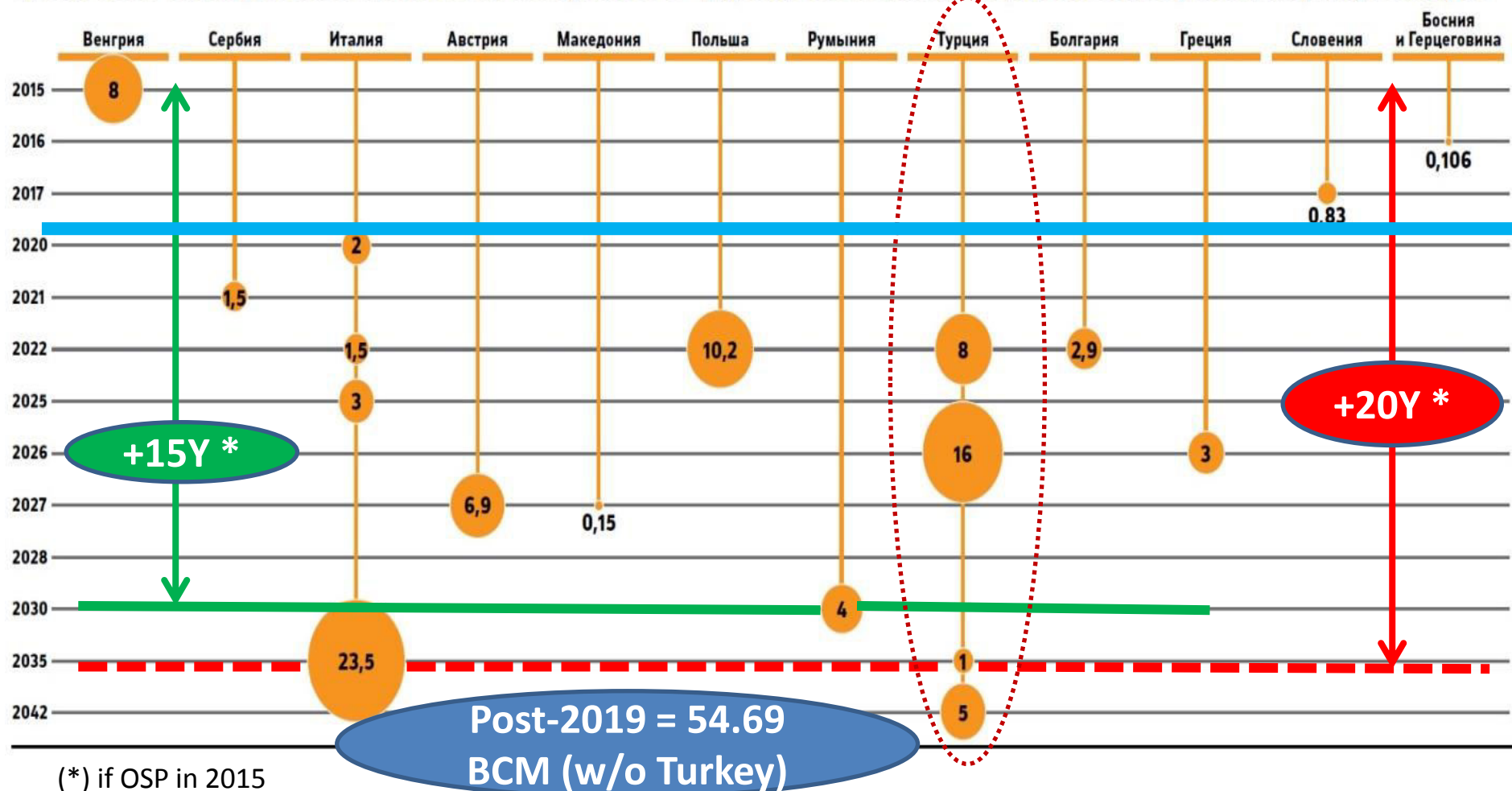
Market Insight

Issue No 172 • May 29 2015



Termination dates of RUS gas supply contracts to EU with UA transit component: what composition of rerouted 47BCM?

Сроки окончания российских газовых контрактов в «украинозависимых» европейских странах, млрд кубометров



(* if OSP in 2015)

Source of basic graph: "Gazprom is rest upon Ukraine . Turkish stream will not solve transit problem of Russian monopoly". – RBC-daily, 08.06.2015, p.12-13 (<http://www.rbcdaily.ru/industry/562949995501331>) - based on : "Turkish stream": Scenarios of by-passing Ukraine and barriers of European Commission". Vygon Consulting, June 2015 (fig.4, p.30).

Why NPV of 47 BCM contracted volumes of Russian gas supplies to Europe differs => why Russian participation is a must

bcm

200

180

160

140

120

100

80

60

40

20

0

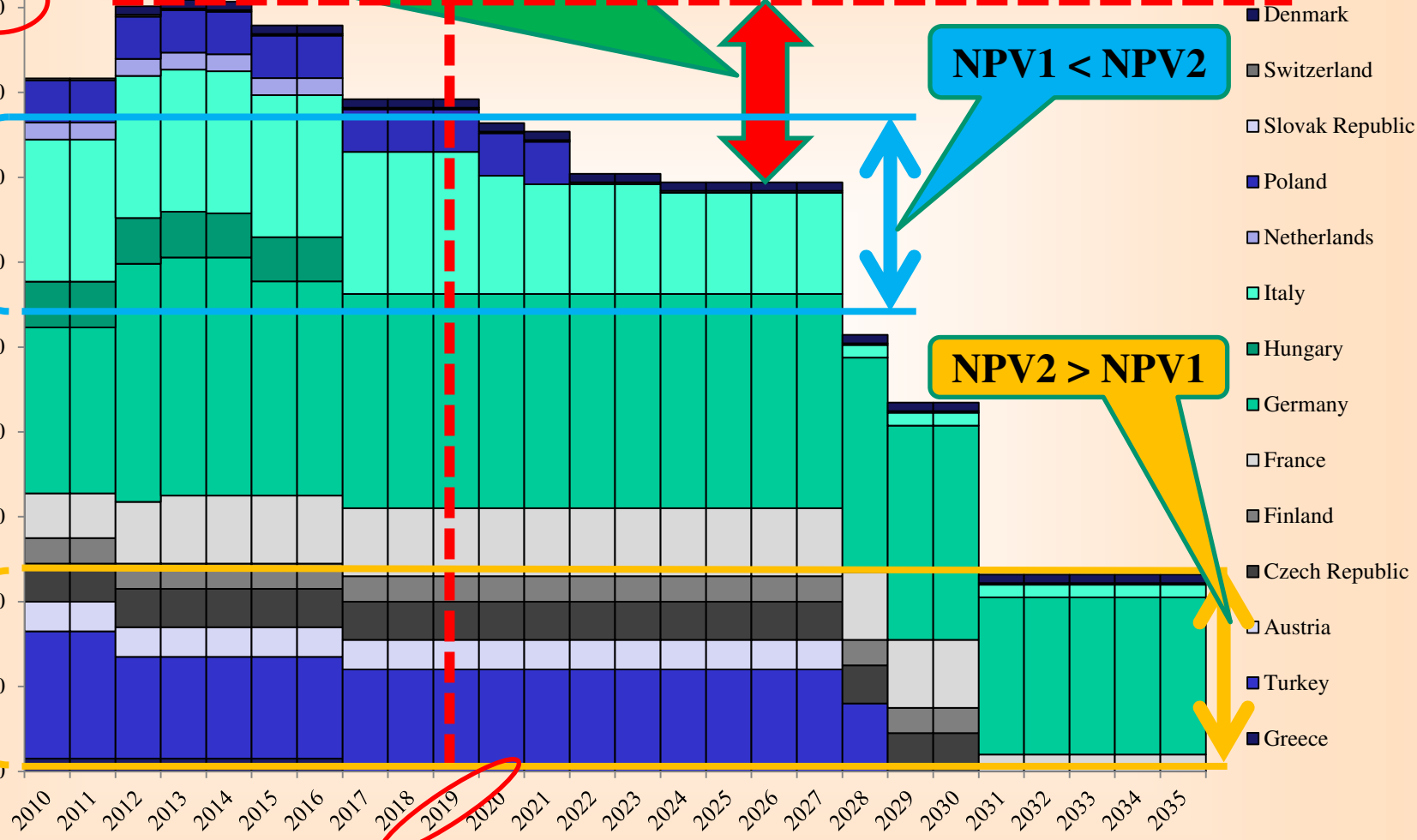
Expanding niche for (at least partial?) substitution of terminating LTC supplies at the border by new LTC & spot deliveries & trade at the hubs

$\sum V1 = \sum V2 = 47 \text{ BCM}$

$\sum V2 = \sum V1 = 47 \text{ BCM}$

NPV1 < NPV2

NPV2 > NPV1



Source (primary chart): ERI RAS (T.Mitrova), reproduced in & taken from «The Russian Gas Matrix: How Markets Are Driving Change», Ed. by J.Henderson & S.Pirani, Oxford University Press, 2014, Fig.3.1/p.53.

WS2 Task Force: to search for/find best effective ways to answer the following interrelated Qs

- 1) How much transportation capacity of the required 47 BCMA can be created prior to 2019, if not all,
- 2) At what time transportation capacity for delivery of all 47 BCMA from Turkish-EU border can be created, if not at 2019,
- 3) What is the best effective procedure for developing new capacity adequate to demand for capacity among available existing and draft procedures/regulations:
 - a) Existing: Art.36 exemption route => NO? (artificial constraint of capacity, historically/precedents by up to 50%)
 - b) Existing: 10YNDP/PCI route => NO? (key aim search for public EU finance)
 - c) Draft: CAM-INC without Art.20(h) => NO? (OSP & auction within one OSP procedure = “marriage of snake & hedgehog”)
 - d) Draft: CAM-INC with Art.20(h) => YES? (clear project financing) => test case is needed, can be organised both in the Southern EU (more complicated) or in the Northern EU (less complicated)
- 4) Which permissions, etc. are available from different unrealized past projects to be used for development of new capacity to streamline/shorten administrative procedures (+ learning curve)

Legal & economic logic of pilot test

- Amended Reg.984/2013, art.20.A(3):
 - Unconditional Open Season (since demand for capacity in more than 2 IPs simultaneously)
- How to best coordinate OSP:
 - (i) to coordinate different individual OSPs organised by individual TSOs/NRAs of EU MSs on route (especially if TSOs in SEE lack experience, etc.), or
 - (ii) to organise immediately one coordinated (cooperative/ring-fenced on cross-border level) OSP => ACER/ENTSOG?
- Who can authorize? DG ENERGY? (Internal Market Unit => K.D.Borchardt/GAC Co-chair) since by his orders were initiated:
 - CAM NC drafting by ENTSOG,
 - 10YNDP and its post-South Stream adaptation, etc.

Proposed line of action for pilot test of Turkish stream prolongation inside EU

(to be further developed by proposed joint Task Force)

- ENTSOG/ACER: To receive mandate from CEC (DG ENERGY) on pilot test for SEE
- ENTSOG/ACER: To organize OSP as “pilot test” in 2015 at Turkish-EU border to evaluate additional demand for capacity for next 15/20Y (on top of all existing authorized projects in the area which are to be excluded from OSP – not to calculate twice new capacity):
 - demand for capacity = $[47\text{BCM}+X]+10\%$ (if RF/GP will reconfirm 47BCM at OSP),
 - its structure through the whole period - volumes, durations, delivery points
- Task Force/ENTSOG/ACER (?): To check with former Nabucco, South Stream, etc. availability of permissions, etc. still valid for development of new capacity
- ENTSOG: based on demand for capacity to define configuration and CAPEX for new capacity, incl.:
 - in cooperation with the shippers (i.e. Gazprom) to maximize NPV by optimizing contractual structure (of rerouted 47BCM supplies);
- ENTSOG: based on ITSO concept, to calculate financial flows for the period
 - non-Gazprom potential shippers’ prospective capacity bookings will be most probably based on not yet existing supply contracts (which diminishes financial value of their guarantees)
 - Gazprom’s capacity booking as potential shipper will have the highest financial value for financiers since is based of existing supply contracts to last through next 15/20Y (which are just rerouted to another transportation route post-2019)

Pilot test Nord Stream II prolongation inside EU (an option)

(to be further discussed by proposed joint Task Force?)

- Similar line of action for pilot test can be considered for Nord stream II prolongation within EU (to be further discussed)
 - Might be a more simple case since:
 - No need in multi-state cross-borders
 - More easy to find a competent TSO
 - Closest market to entry point to EU is also a target market
 - Etc.
- Non-dependent Northern or Southern wing of “Russian gas circle”, the EU rules for development of new capacity shall be best effective, financeable and manageable – this is in long-term common interests of all parties involved, not only Russia and the EU

Thank you for your attention!

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