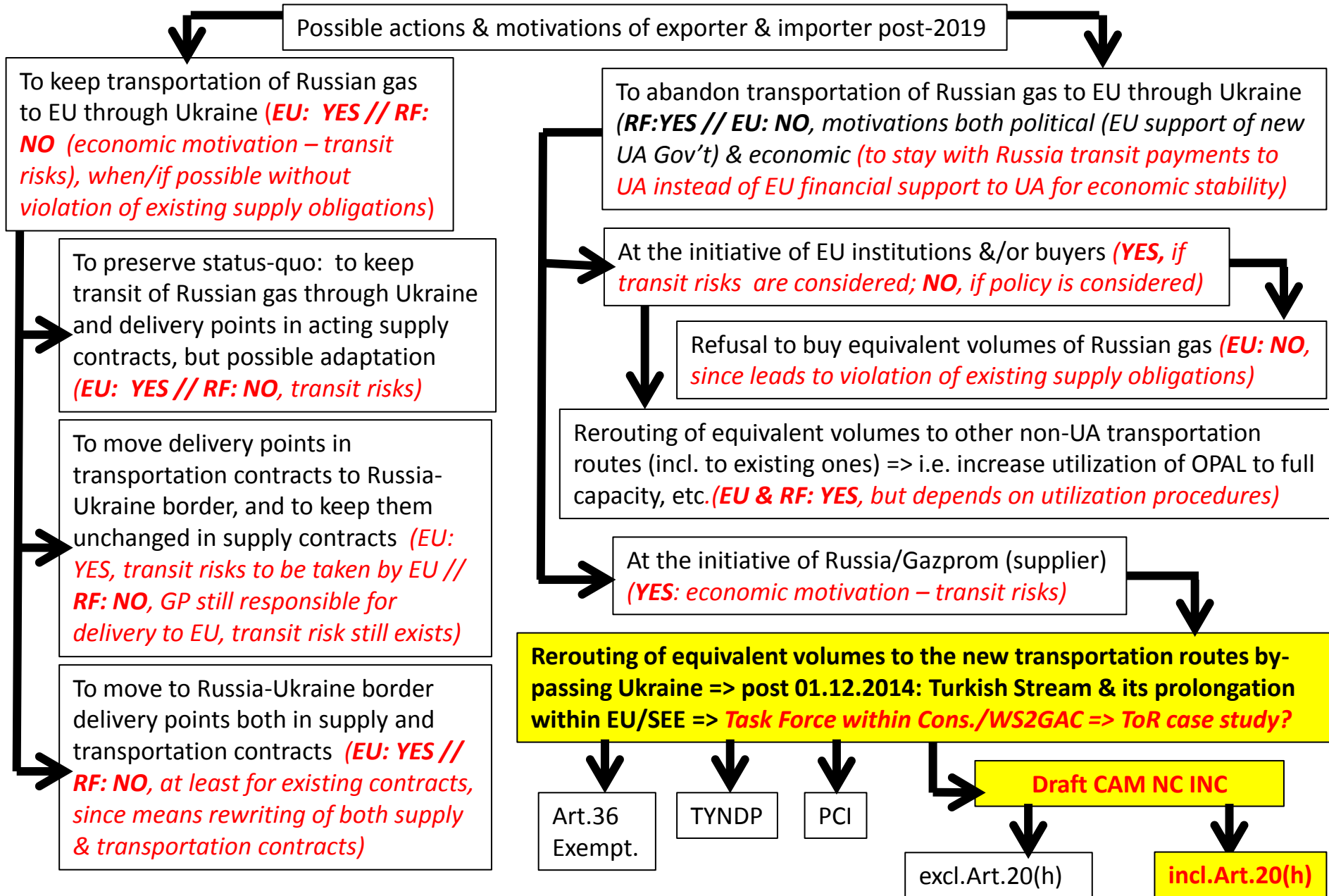


Draft vision/proposal on how WS2GAC expert group can best effectively compare existing & new options for creating new gas transportation capacity in EU in the given circumstances

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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



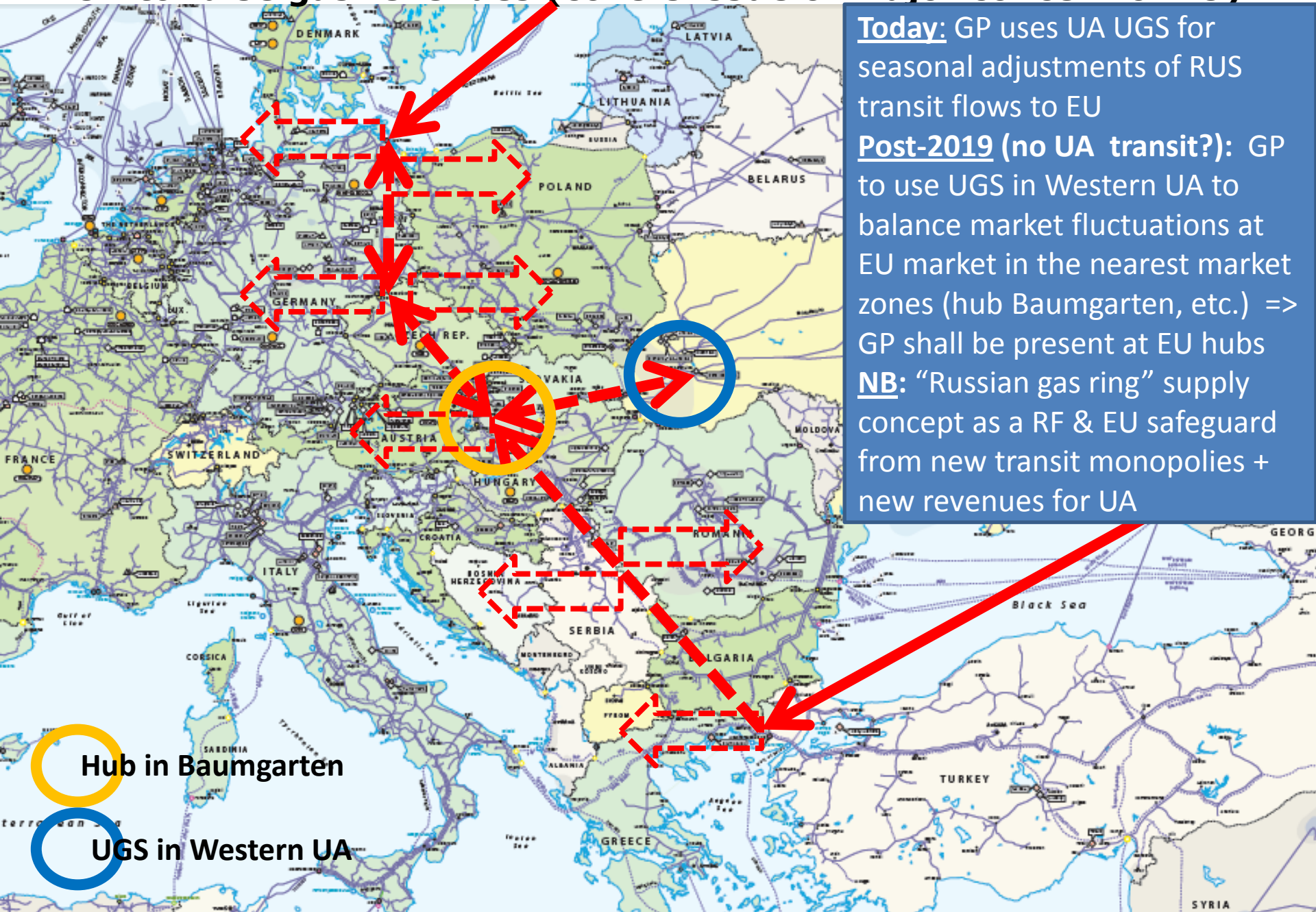
EU support for transit via Ukraine: the end or the means? (1)

- 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

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

CESEC – Projects in the region



Connectivity - CESEC

An Overall Plan
Sofia, 9 February 2015

Directorate General for Energy



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

Energy

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

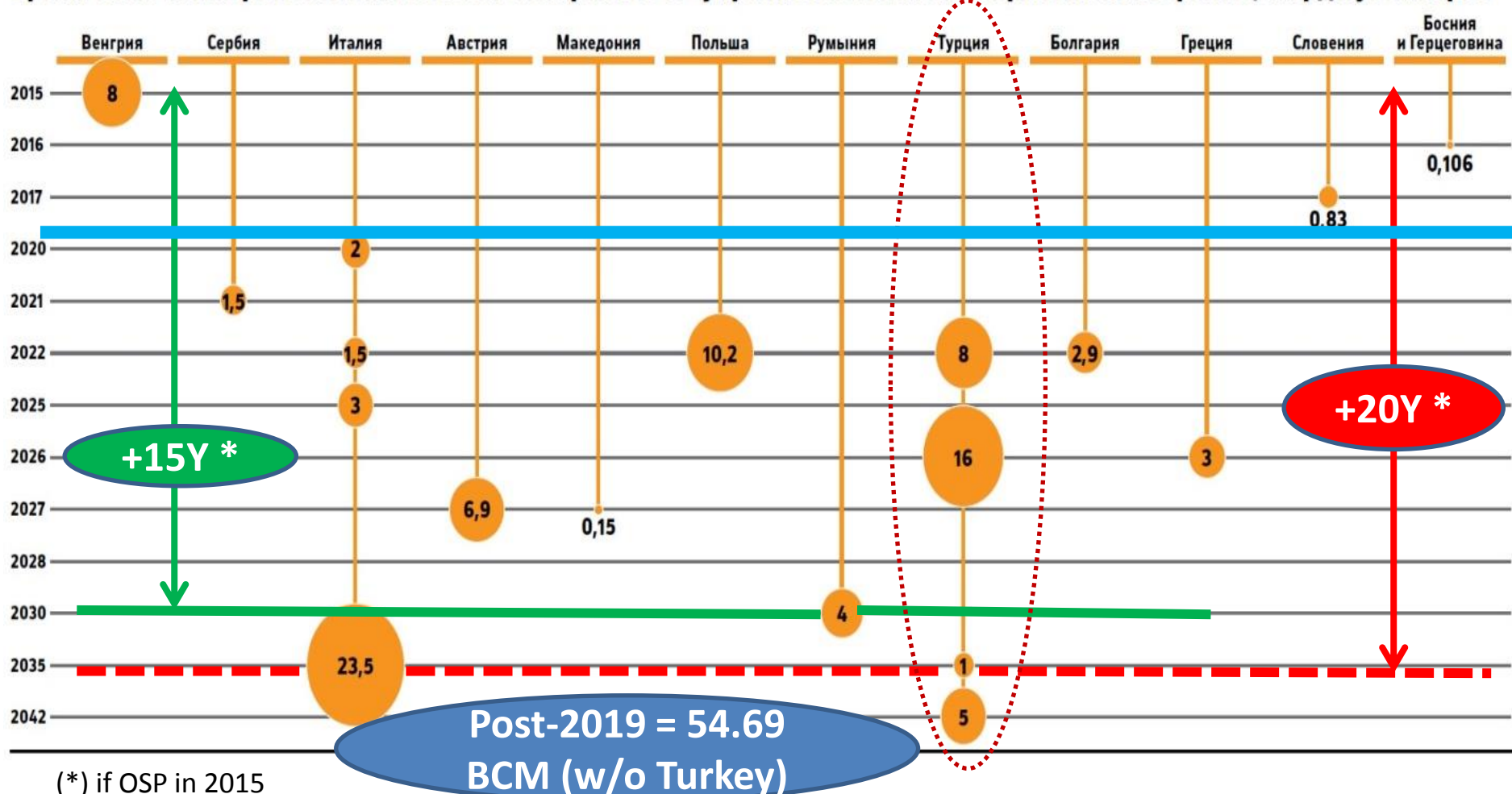
Market Insight

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

2010

2011

2012

2013

2014

2015

2016

2017

2018

2019

2020

2021

2022

2023

2024

2025

2026

2027

2028

2029

2030

2031

2032

2033

2034

2035

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

NPV1 < NPV2

NPV2 > NPV1

- Denmark
- Switzerland
- Slovak Republic
- Poland
- Netherlands
- Italy
- Hungary
- Germany
- France
- Finland
- Czech Republic
- Austria
- Turkey
- Greece

$\sum V1 = \sum V2$
= 47 BCM

$\sum V2 = \sum V1$
= 47 BCM

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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