

“Russia and the EU in search of new equilibrium within the new post-2009 gas world”

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GTS: comparative economics

New post-2009 gas world & its European dimension

- **Oversupply due to:**
 - **Demand-side** => market niche for gas narrowed:
 - overall decline = economic crisis + energy efficiency
 - gas substitution = subsidized RES vs (oil-indexed) gas + cheap US imported coal (US shale gas domino effect #2) vs (oil-indexed) gas
 - **Supply-side** => competition within this narrowed market niche increases:
 - Qatari “garbage gas” to EU prior to Fukushima (US shale gas domino effect #1)
- **Institutional** => 3rd EU Energy Package => concurrent with EU oversupply situation which triggered liberalization (upside-down gas reforms)
- **Political** => RF-UA gas transit crises => consequences for EU/Ukraine/Russia

Russia-EU-Ukraine's new circumstances: 22 days vs. 40+ years => RF-UA vs RF-EU

- Ukraine as integral element of Russia-EU gas supply chain =>
- “Matrix effects” & “Domino effects” of Russia-UA Jan’06/09 gas crises for Russia-EU gas relations/supply chain:
 - 22 days of interruptions of Russian gas supplies to the EU via Ukraine = 3 days in Jan’2006 + 19 days in Jan’2009:
 - has overbalanced previous 40+ years (since 1968) of stable & non-interruptible supplies =>
 - has changed *perceptions* within all three parties on stability & non-interruptible character of future gas supply through this chain => each party has its own vision & answers & lines of actions
- New perceptions as starting points for objective “domino effects”:
 - political statements & decisions => legal documents => investment decisions aimed at new *perceived* equilibrium to be reached
 - when investments are made, ‘no return’ points are passed through
- **“No return” points for each party** => What are they? Whether they are reached/ passed through already?

EU-Ukraine-Russia: in search for new post-2009 equilibrium with different aims & responds & lines of actions

- **EU:** *to diminish dominant role of Russia as major gas supplier*
- **Ukraine:** *to escape monopoly of Russia as one single gas supplier*
- **Russia:** *to escape monopoly of Ukraine as one dominant gas transit route*
- The aims seems to be totally different (are they?) => to find new equilibrium within multidirectional individually enforced changes
- Narrowing corridor for new equilibrium – but it is still there => a long & winding road to new compromise... (if a goodwill is there)

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New risks, new challenges, new responds, “no return” points: the EU (1)

- Perception: *as if* non-reliable future supplies from Russia via Ukraine to EU =>
- Responds: organization of new internal EU gas market architecture with **multiple supplies** & (high) **flexibility**
- **Multiple supplies** by:
 - **Alternatives to Russian gas (supply side)**: SOS Directive (3 gas supply sources/MS, etc.), LNG, shale gas, UGS => **to diminish dominant role of Russia as major supplier**
 - **Alternatives to (RUS) gas (demand side)**: climate change => decarbonization => RES, energy efficiency => shrinking gas share in fuel mix => the loser would be a less competitive gas supplier (perception: most distant & costly in production & oil-indexed-priced Russian gas ?)

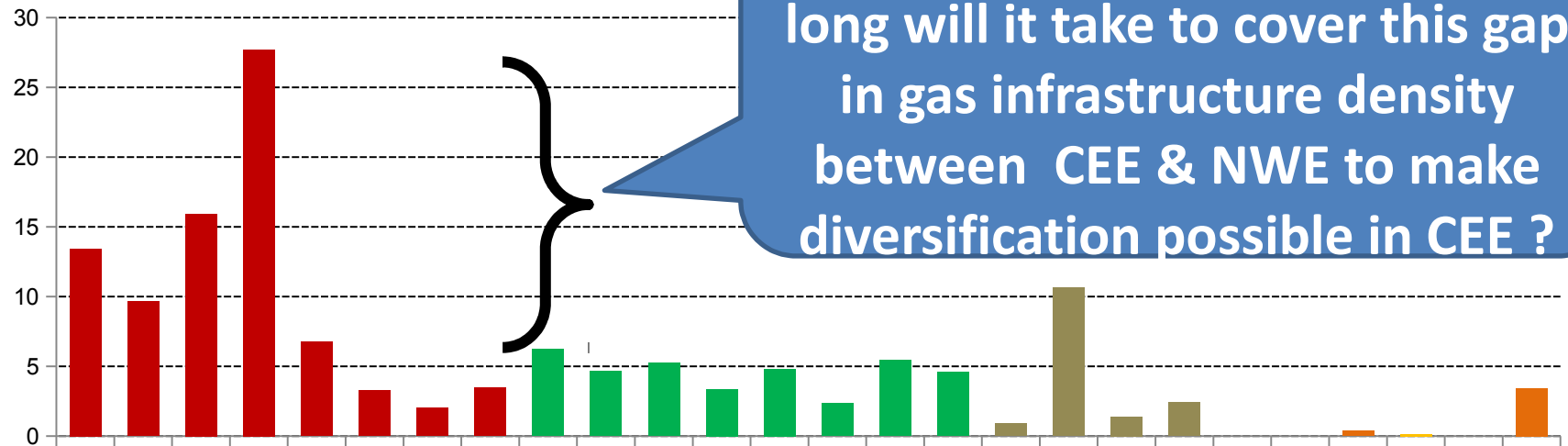
New risks, new challenges, new responds, “no return” points: the EU (2)

- (High) *flexibility* by:
 - Diminishing barriers for gas flows: CMP rules (UIOLI, SoP), interconnectors, reverse flows, spot trade, demand for softening LTGEC provisions (TOP), ..., new market organization => Third Energy Package
- Third Energy Package (03.09.2009 => 03.03.2011):
 - Set of legal instruments providing *multiple supplies* & *flexibility* within EU (28) & Energy Community Treaty (28+9) area based on new principles of internal market organization
 - from a chain of 3 consecutive LTCs (1968-2009) – to Entry-Exit zones with Virtual Trading Points (hubs) (2009-onwards)
 - New architecture of EU gas market under development => Gas Target Model + 12 Framework Guidelines + 12 Network Codes + ...
 - => **“No return” point has been passed by EU as a whole !!!**
 - **BUT:** economic realities in NWE & CEE are different => not possible to implement EU legally binding decisions on diversification in synchronized manner

EU is not homogenous: CEE & NWE are different

- NWE & CEE: huge gap in infrastructure density => differently prepared for diversification
- EU: Instead of investing in growth of infrastructure density since fall of COMECON (end-1980-ies, when CEE started preparation for joining EU), and/or post-2004 (when CEE joined EU), EU authorities has been trying to limit/discriminate Gazprom in its contractual rights for infrastructure in CEE/former COMECON (esp.post-2003 – under unbundled EU gas market) which Gazprom has financed & constructed earlier within bundled gas EU market (pre-2003, even through USSR times) => contractual mismatches, etc.
- Only post-2006/2009 some investment measures in EU in increasing infrastructure density, incl. in CEE

Density (saturation) of gas transportation infrastructure in the EU (*trunk* pipelines only, km/100 km²), (preliminary results – the comparative order does matter)



Figures for UK & Denmark should be much higher if offshore pipelines are added (to be done at the next step of analysis)

Calculations made by E.Orlova, PHD postgraduate student, Chair “International Oil & Gas Business”, Russian State Gubkin Oil & Gas University, based on the data for 2011/2012, kindly provided by ENTSOG

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New risks, new challenges, new responds, “no return” points: Ukraine (1)

- **UA: Euro-integration** vs. **CIS-integration** => this “no return” point was passed in 2004 => Euro-integration choice de facto in place **in energy sector** since then =>
- Since Spring'2004 => UA demand to unbundle supply & transit contracts & to move to “European formulas” in RUS-UA gas trade:
 - UA expectations: to receive higher transit rates
 - UA reality: has received higher import prices
- Since 2006/2009: UA disagreement on import pricing formula & price level resulted from the move to “European formulas”=> transit crises Jan'2006 & Jan'2009 resulted, inter alia, from disagreements with “European formulas” in supply contracts
- Perception of further RUS supply risks => search for multiple supplies => ***to escape monopoly of Russia as one single supplier*** =>

New risks, new challenges, new responds, “no return” points: Ukraine (2)

- UA economic & legal motivation to diminish dependence on RUS gas supplies:
 - **Economic:** High import price & RUS/Gazprom unwillingness to soften pricing policy (no price review results achieved yet – though price concessions) stipulates UA search for:
 - **alternatives to RUS gas (supply side):** domestic production – onshore & offshore, shale gas, LNG import, reverse flows & UGS, and
 - **to deviate from (RUS) gas (demand side):** switch gas to coal, nuclear, energy saving & improving efficiency
 - **Legal:** Euro-integration policy, membership in Energy Community Treaty => implementation of EU energy acquis (Second => Third EU Energy Package) in UA => **legal obligations** for alternative supplies, interconnectors, reverse flows, unbundling Naftogas Ukraine, MTPA => **BUT: new & incremental risks for transit via Ukraine (both for RF & EU)**
- **“No return” point is almost reached? If not yet (?)** – is it just a matter of time since trend “away from Russian gas” is not to be changed in UA?

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New risks, new challenges, new responds, “no return” points: Russia (1)

- Supply risks:
 - non-fulfillment of contractual obligations by Ukraine = inter alia, negative upstream investment consequences for Russia
- Transit risks (within UA territory, post-2006/2009) – both materialized & perceived risks,
 - **Materialized:** not sanctioned off-take of gas in transit (at least 2 episodes – Jan’2006 & Jan’2009) => but:
 - it is RUS supplier who is fully responsible for gas delivery to EU delivery point (non-dependent e.g. transit problems) =>
 - risk of legal claims of EU customer against RUS supplier in case of non-delivery (supply contract) even if violation of transit contract =>
 - EU customers have not raised such claims in Jan’2006 / Jan’2009 cases, but what about the future if repeated?
 - **Perceived:** to materialize in near future – result of UA accession to Energy Community Treaty (see above):
 - MTPA vs transit flows (risk of contractual mismatch)
 - Forthcoming unbundling of Naftogas UA => risk of factual unilateral change (disappearance) of one Contracting Party to 10Y-long transit contract
 - Etc.

New risks, new challenges, new responds, “no return” points: Russia (2)

- Change of the whole transit economics for supplier if precedent-based “risk” element included => responds:
 - **to escape monopoly of Ukraine as one dominant transit route** => to create *alternative & non-transit* routes => their economics compared to existing *transit* routes improved by increasing value of transit risks (see next chapter) =>
- Dilemma:
 - **Two routes (incl. transit)** to each major markets (“least radical” scenario):
 - (a) UA GTS + [Nord Stream/OPAL/Gazelle] => to North-West Europe,
 - (b) UA GTS + [South Stream (offshore + onshore)] => to Southern Europe,
 - Supply volumes to be distributed within each pair of routes, or
 - **One direct new (non transit) route** to each major market (“most radical” scenario):
 - (a) Nord Stream/OPAL/Gazelle => to North-West Europe,
 - (b) South Stream (offshore + onshore) => to Southern Europe
 - All transit volumes switched to new routes? => UA GTS dried up?
- **Different “no return” points under different scenarios: some are passed, other – not yet** => no clear final picture yet...

Ukrainian by-passes: alternative gas pipelines to major RUS markets in EU (2 routes for each market)

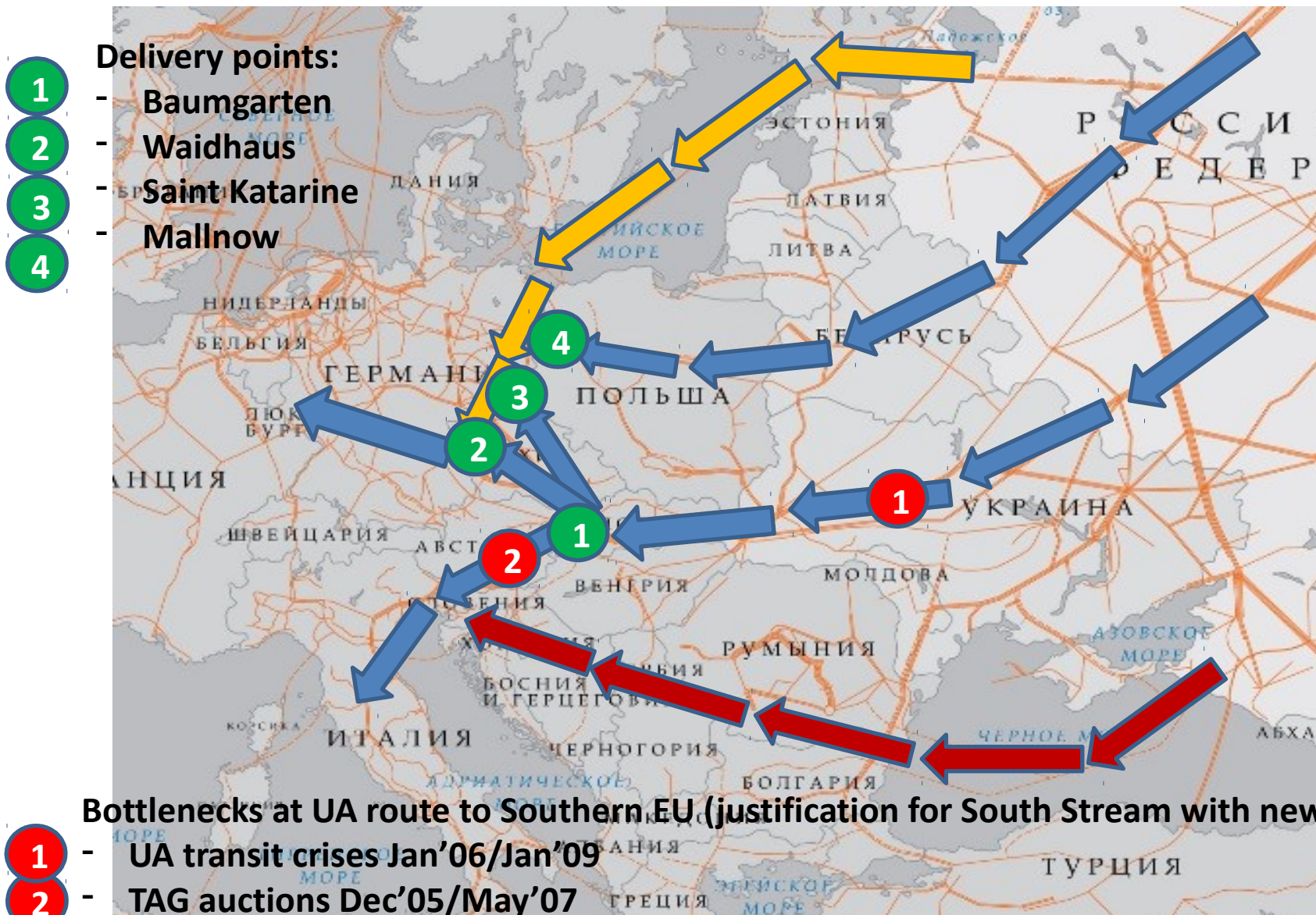


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Alternative pipelines: problems to be solved (Nord Stream/OPAL/Gazelle)

- No EU permission yet for 100% utilization of OPAL capacity (worsens whole project economics - 2Y non-pay-back) though no 3rd party suppliers:
 - BNetzA decision on OPAL changed 3 times (3rd one as of 18.11.2013); deadline for final EU decision (was preliminary positive & mutually acceptable) was 10.03.2014;
 - Oettinger: it is postponed => de facto politically-motivated EU embargo?
 - 07.03 EU decision: 1st level sanctions on Russia; EU to decide whether to come on 17.03 to 2nd level sanctions; but OPAL non-decision – de facto 3rd level sanctions (trade restrictions; usually implemented in case of war) => ???

Alternative pipelines: problems to be solved (South Stream/offshore & onshore)

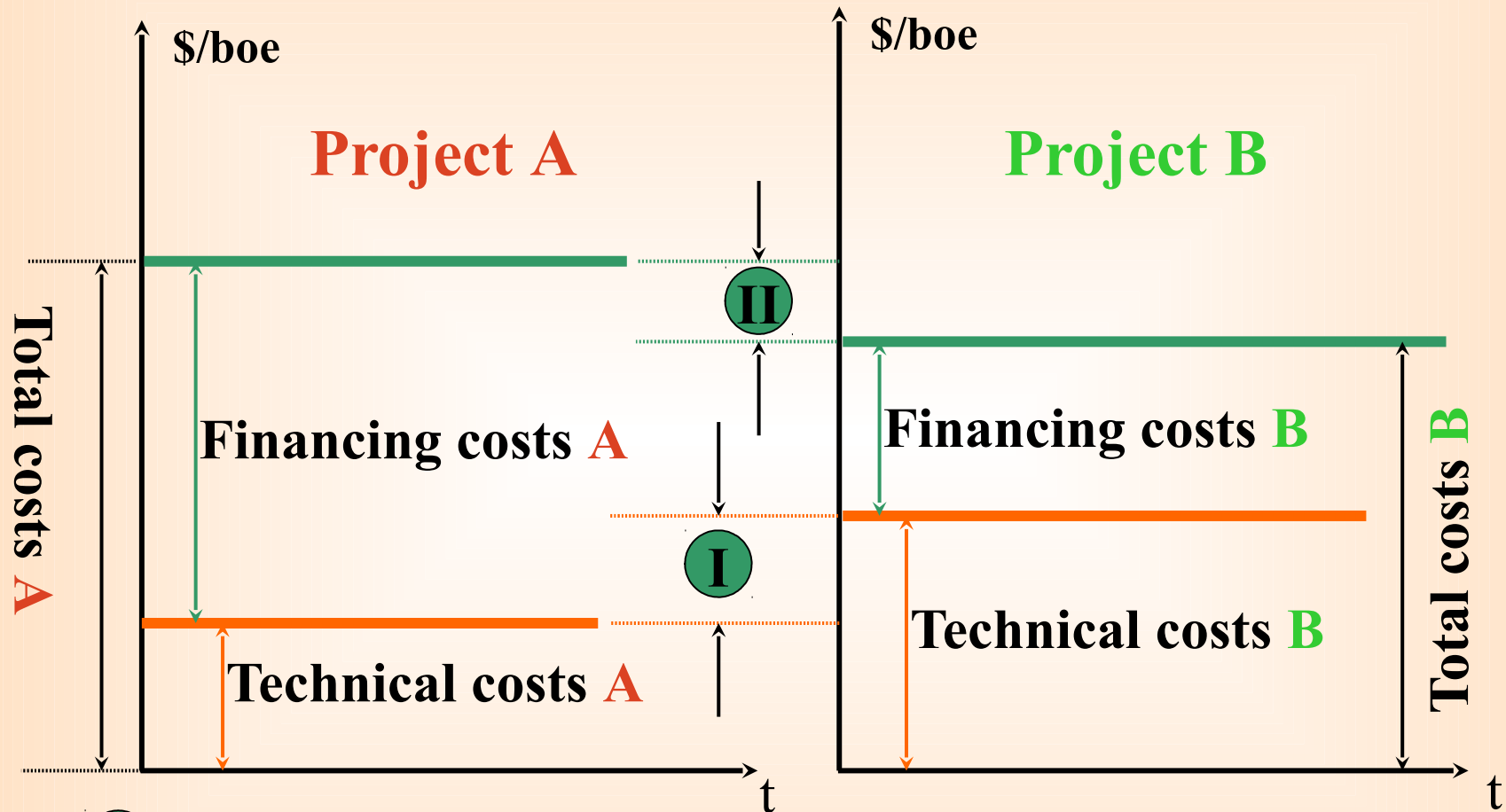
- No clear view on procedure onshore EU yet. Options:
- bilateral RUS-EU MSs agreements (IGAs) => debate with CEC continued, **but** “no go” for EU as multiply & clearly stated,
- RF-EU bilateral infrastructure agreement => RF presented its draft to EU long ago => low interest from EU => “a long & winding road” & low probability
- Art.36: derogations from EU acquis if Gazprom is shipper & TSO => too late: FID already taken/construction started
- Art.13.2: no derogations needed if Gazprom as shipper only => “TSO shall invest” in case of market demand for capacity =>
 - RF-EU GAC: such procedures does not exist in EU => GAC WS2 “Strawman” proposal to ACER (17.09.2013) => RUS/GG among “Prime movers” of ENTSOG “Incremental Proposal” => proposed solution: “coordinated open season” for “new” cross-border capacity
 - Whether EU will accept/insert in CAM NC such proposal in workable format (to provide financeability & cross-border TSO coordination) ? =>
 - Reserve option that might become a mainstream procedure
- **BUT:** Oettinger statement to freeze RF-EU consultations on

adaptation South Stream to 3rd EU energy Package rules =>?

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"NATURAL" VS. "FINAL" COMPETITIVE ADVANTAGES OF ENERGY PROJECTS



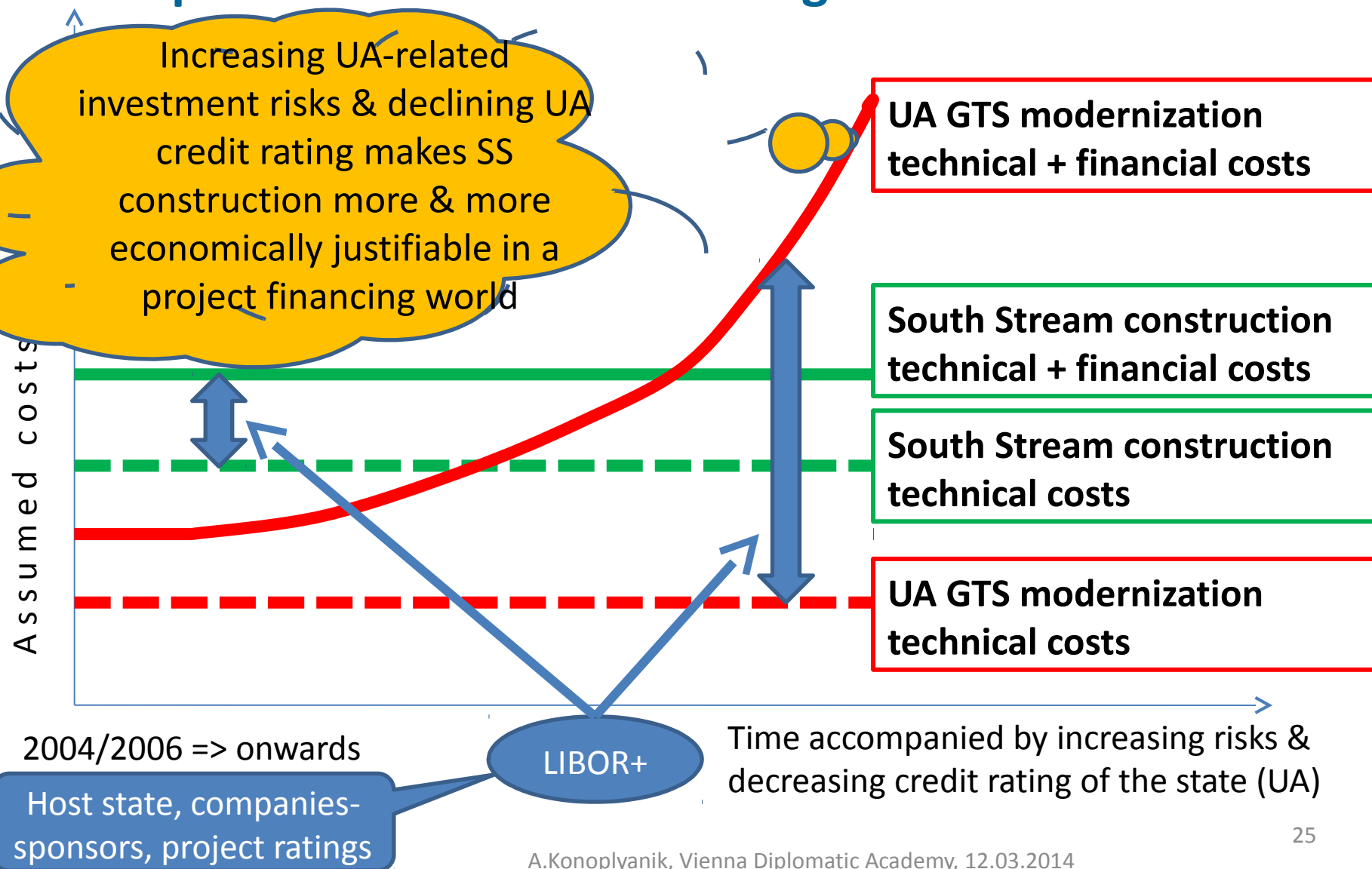
- I** "Natural advantage" of project A over project B ($A < B$)
- II** Final competitive *dis*advantage of project A over project B ($A > B$)

Russia & Ukraine at the scale of major international rating agencies (long-term investment credit ratings in foreign currency)

	Moody's	Standard & Poor's	Fitch IBCA	Short description	LIBOR+
Investment grades	Aaa	AAA	AAA	Maximum safety level	Up to 4,25%
	Aa1	AA+	AA+	High level of reliability	
	Aa2	AA	AA		
	Aa3	AA-	AA-		
	A1	A+	A+	Reliability above medium	
	A2	A	A		
	A3	A-	A-		
	Baa1 (RUSSIA: rating awarded 08.10.2008)	BBB+	BBB+	Reliability below medium	
Baa2	BBB (RUSSIA: rating confirmed 31.08.2011)	BBB (RUSSIA: rating confirmed 02.09.2011)			
Speculative grades	Ba1	BB+	BB+	Non-investment, speculative grade	Up to 14%
	Ba2	BB	BB		
	Ba3	BB-	BB-		
	B1	B+	B+	Highly speculative grade	Up to 19%
	B2	B (UA, 07.12.2012)	B		
	B3 (UA, 05.12.2012)	B-	B-		
	Caa	CCC+	CCC (UA, 28.02.2014)	High risk, emitter is in difficult situation	Up to 19%
	--	CCC	--		
	--	CCC-	--	Highest speculative rating, default possible	Up to 204%
	Ca	CC	--		
--	C	--	Default		
--	--	DDD			
--	SD	DD			
--	D	D			
--	--	--			

**09.11.2012,
LIBOR 1Y:
USD=0.86,
EUR=0.52,
GBP=1.07**

UA GTS modernization vs 'South Stream': illustrative example of 'project financing' cost comparison, incl. comparative risks & credit ratings within time frame



**Thank you for your
attention!**

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