

# **Russian gas within “Broader Energy Europe” and in emerging Eurasian gas market: adaptation to new post-2009 realities**

**(to understand current objective interests of the interdependent parties as a precondition for their yet-to-be-developed policies to be aimed to reach balance of common interests)**

**Prof. Dr. Andrey A. Konoplyanik,**

**Advisor to the Director General, Gazprom export LLC,**

**Professor, Chair “International Oil & Gas Business”,**

**Russian State Gubkin Oil & Gas University,**

**Co-chair, Work Stream 2 “Internal market”, Russia-EU Gas Advisory Council /**

**Informal Russia-EU Expert Consultations on Third EU Energy Package issues**

**[www.konoplyanik.ru](http://www.konoplyanik.ru)**

**Quest Lecture at the Secretariat of the Gas Exporting Countries Forum (GECF),  
Doha, Qatar, 24 March 2015**

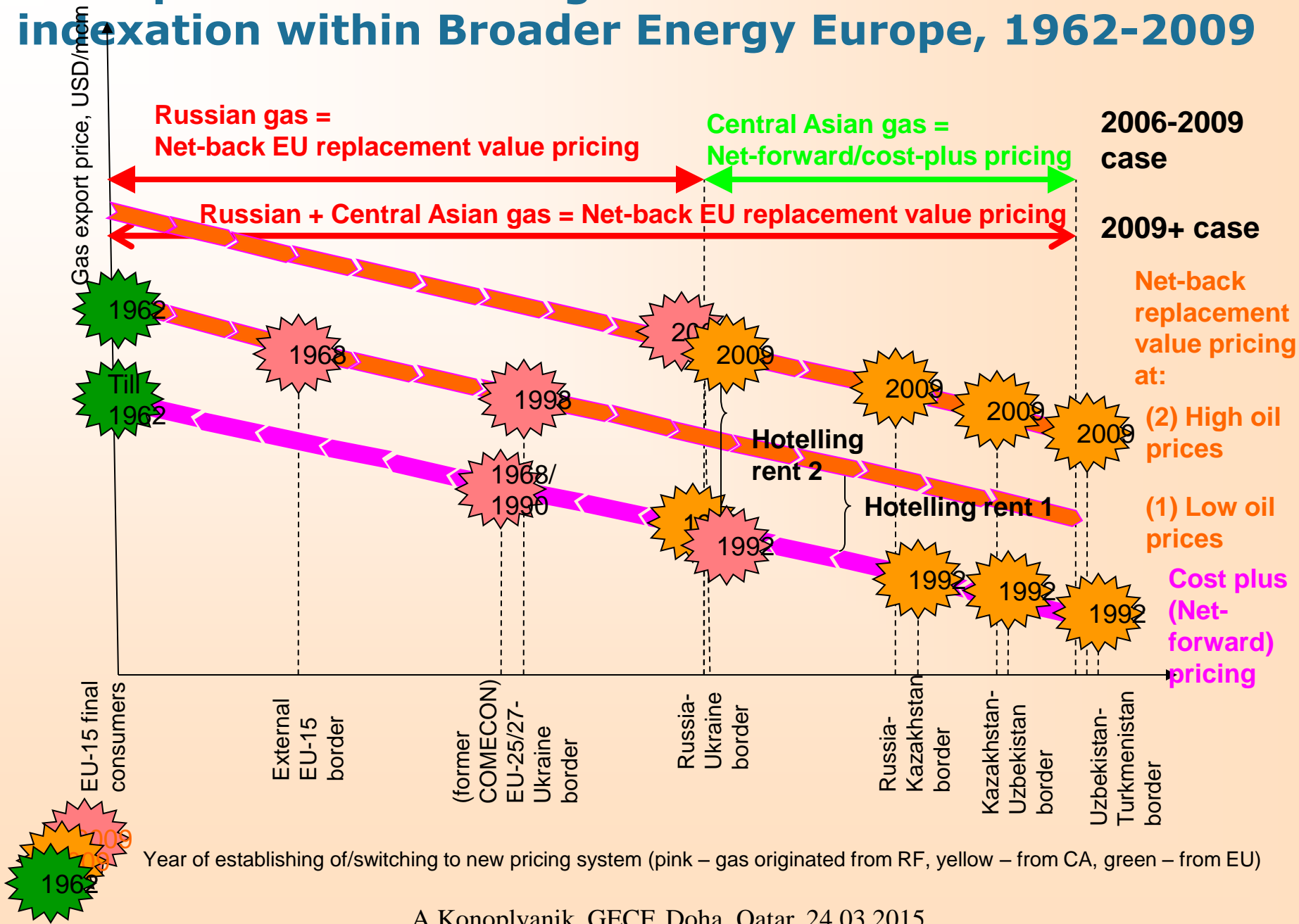
# Why “Broader Energy Europe”? What’s that?

- The sovereign states in Western part of Eurasia which are united by fixed (immobile) cross-border long-distance capital intensive long-term energy infrastructure (grids, pipelines) =>
- “Broader Energy Europe” = whole geographical Europe + Northern Africa + Western Siberia + Central Asia
  - in the future: + Middle East
  - in more distant future: from “Broader Energy Europe” to “Energy Eurasia”
- Any institutional changes in any part of the area have its “domino effect” on other parties in the area

# Table of contents

- 1) **Pre-2009 gas market developments in “Broader Energy Europe”**
- 2) New post-2009 gas market & its material & perceived realities in “Broader Energy Europe”
  - a) From Groningen model LTGEC to Third EU Energy Package in gas (new institutional structure of supplies to/within EU)
- 3) EU’s respond to new realities: diversification (importer’s angle)
  - a. NWE vs CEE: two different EUs in technological preparedness for diversification (density of infrastructure)
- 4) Ukraine’s respond to new realities: diversification (transit state angle)
  - a. Russia-Ukraine supply contract: price & payment issue
  - b. Reverse flows issue: conflict of contractual vs public law
- 5) Russia’s respond to new realities: diversification (exporter’s angle)
  - a. Adaptation within new EU gas market architecture (new supply flexibility)
  - b. Diversity of pipelines routes (“multiple pipelines” concept)
  - c. Specificity of Russia’s “multiple pipelines” concept in Asia Pacific

# Expansion of Groningen LTGEC model with PP-indexation within Broader Energy Europe, 1962-2009



# Table of contents

- 1) Pre-2009 gas market developments in “Broader Energy Europe”
- 2) **New post-2009 gas market & its material & perceived realities in “Broader Energy Europe”**
  - a) From Groningen model LTGEC to Third EU Energy Package in gas (new institutional structure of supplies to/within EU)
- 3) EU’s respond to new realities: diversification (importer’s angle)
  - a. NWE vs CEE: two different EUs in technological preparedness for diversification (density of infrastructure)
- 4) Ukraine’s respond to new realities: diversification (transit state angle)
  - a. Russia-Ukraine supply contract: price & payment issue
  - b. Reverse flows issue: conflict of contractual vs public law
- 5) Russia’s respond to new realities: diversification (exporter’s angle)
  - a. Adaptation within new EU gas market architecture (new supply flexibility)
  - b. Diversity of pipelines routes (“multiple pipelines” concept)
  - c. Specificity of Russia’s “multiple pipelines” concept in Asia Pacific

# New post-2009 gas world & its European dimension within “Broader Energy Europe”

## 1) Oversupply in EU due to:

### a) Demand-side => market niche for gas narrowed in EU:

- i. overall decline/slowdown = (i) economic crisis + (ii) energy efficiency
- ii. gas substitution = (i) subsidized RES vs (oil-indexed) gas + (ii) cheap US imported coal (*US shale gas domino effect #2*) vs (oil-indexed) gas

### b) Supply-side => competition within this narrowed market niche for gas in EU increased:

- i. Qatari LNG to EU prior to Fukushima (*US shale gas domino effect #1*)

## 2) Institutional EU => 3rd EU Energy Package => concurrent with EU oversupply situation which triggered liberalization (upside-down gas reforms)

## 3) Political => RF-UA gas transit crises => consequences for EU/Ukraine/Russia & whole “Broader Energy Europe”

# 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 to EU =>
  - 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 by each party?

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

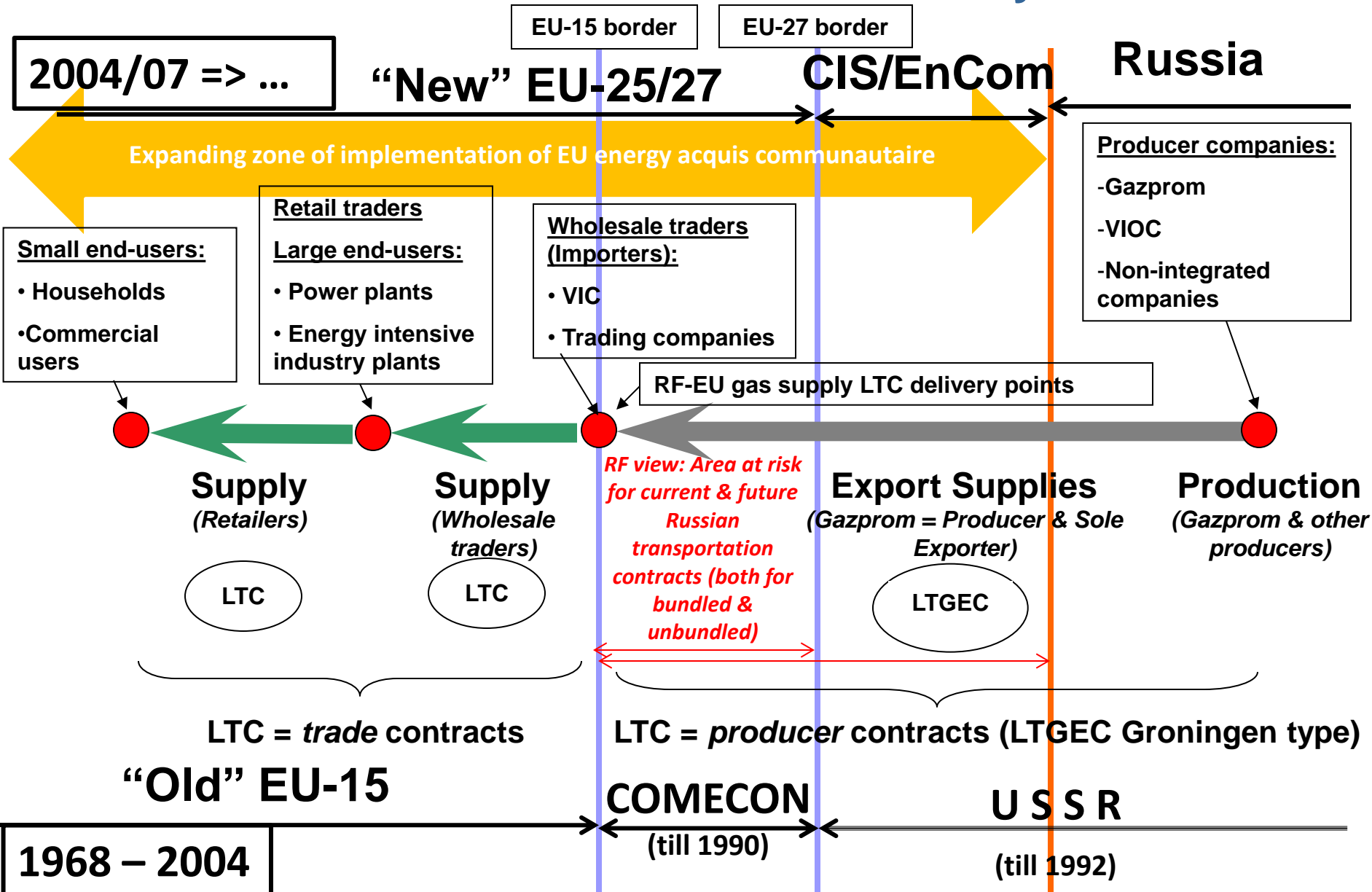
- **EU:** *to diminish dominant role of Russia as major gas supplier*
- **Ukraine:** *to escape monopoly of Russia as one single gas supplier*
- **Russia:** *to escape monopoly of Ukraine as one dominant gas transit route*
- The aims seems to be totally different => to find new equilibrium within multidirectional individually enforced changes
- Technical, economic, legal, political dimensions...
  - Narrowing corridor for new equilibrium – but it is still there (technical, economic, legal dimensions) **based on objective interdependence of the parties within “Broader Energy Europe”**, though =>
  - (political dimension) “a long & winding road” to new compromise... if a goodwill is there => significant slowdown in current political environment



# Table of contents

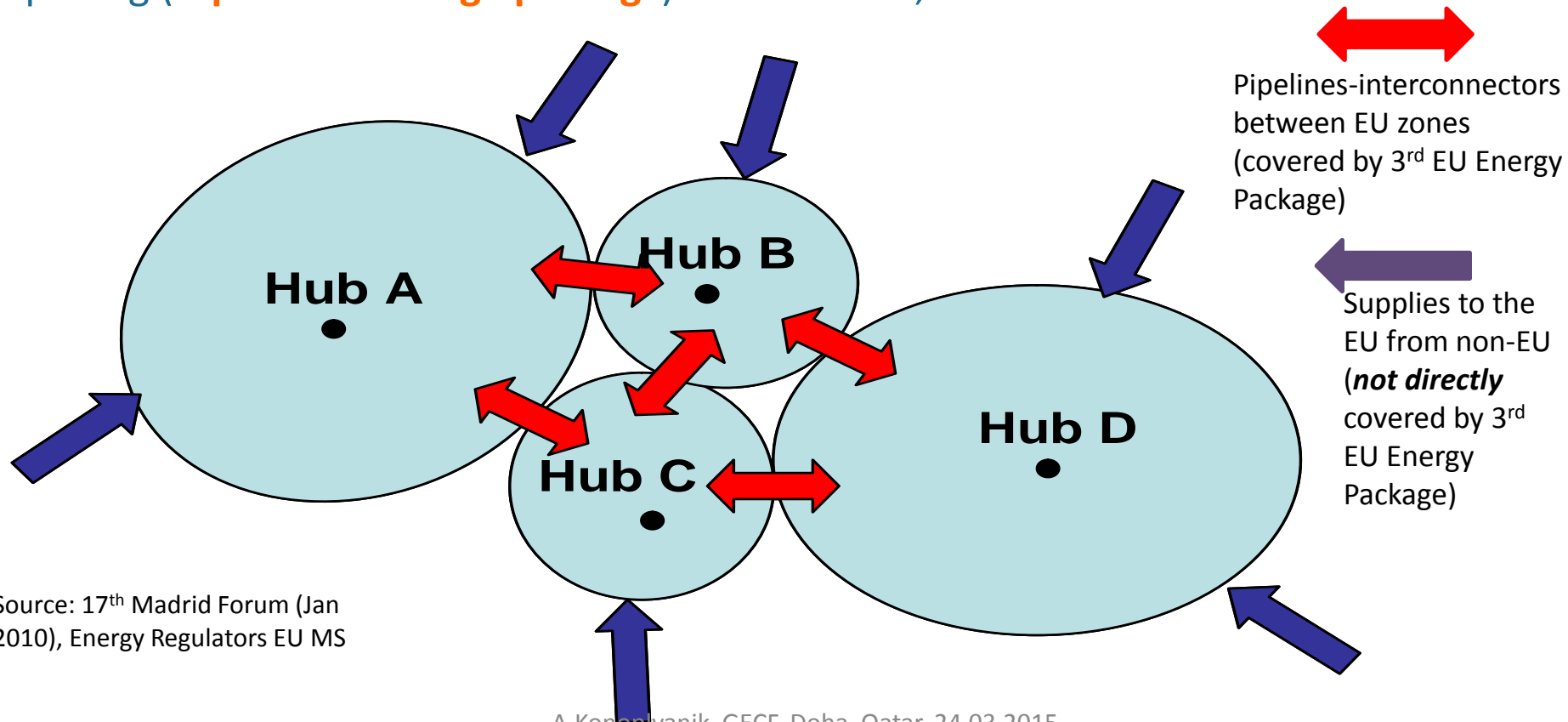
- 1) Pre-2009 gas market developments in “Broader Energy Europe”
- 2) New post-2009 gas market & its material & perceived realities in “Broader Energy Europe”
  - a) **From Groningen model LTGEC to Third EU Energy Package in gas (new institutional structure of supplies to/within EU)**
- 3) EU’s respond to new realities: diversification (importer’s angle)
  - a. NWE vs CEE: two different EUs in technological preparedness for diversification (density of infrastructure)
- 4) Ukraine’s respond to new realities: diversification (transit state angle)
  - a. Russia-Ukraine supply contract: price & payment issue
  - b. Reverse flows issue: conflict of contractual vs public law
- 5) Russia’s respond to new realities: diversification (exporter’s angle)
  - a. Adaptation within new EU gas market architecture (new supply flexibility)
  - b. Diversity of pipelines routes (“multiple pipelines” concept)
  - c. Specificity of Russia’s “multiple pipelines” concept in Asia Pacific

# Russia-EU gas value chain: three-step LTC Groningen-type structure since 1968 till nowadays



# Organization of (emerging) internal EU gas market according to Third EU Energy Package: radical change of previous wholesale EU gas market architecture

- No single (homogenous) internal EU gas market in the near future even as economic model
- All market areas to be organized as **entry–exit zones** with **virtual (aimed to be) liquid hubs** => Towards uniform capacity allocation (“**bundled products**”) & gas pricing (“**spot & exchange pricing**”) mechanisms;



Source: 17<sup>th</sup> Madrid Forum (Jan 2010), Energy Regulators EU MS

# Table of contents

- 1) Pre-2009 gas market developments in “Broader Energy Europe”
- 2) New post-2009 gas market & its material & perceived realities in “Broader Energy Europe”
  - a) From Groningen model LTGEC to Third EU Energy Package in gas (new institutional structure of supplies to/within EU)
- 3) EU’s respond to new realities: diversification (importer’s angle)**
  - a. NWE vs CEE: two different EUs in technological preparedness for diversification (density of infrastructure)
- 4) Ukraine’s respond to new realities: diversification (transit state angle)
  - a. Russia-Ukraine supply contract: price & payment issue
  - b. Reverse flows issue: conflict of contractual vs public law
- 5) Russia’s respond to new realities: diversification (exporter’s angle)
  - a. Adaptation within new EU gas market architecture (new supply flexibility)
  - b. Diversity of pipelines routes (“multiple pipelines” concept)
  - c. Specificity of Russia’s “multiple pipelines” concept in Asia Pacific

# 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 (diminish dominant role of Russia as major supplier):**
  - **Alternatives to Russian gas (supply side):** SOS Directive => Reg.994/2010 (3+ gas supply sources/MS, ‘N-1’ rule, etc.), LNG, shale gas, UGS
  - **Alternatives to (Russian) gas (demand side):** climate change => decarbonization => RES, energy efficiency => shrinking gas share in fuel mix => the loser would be a less competitive gas supplier
    - General perception in EU: this will be most distant & costly in production & oil-indexed-priced **Russian gas** which will be a loser in competitive game
- **BUT** (in: “Reducing European Dependence on Russian Gas: distinguishing natural gas security from geopolitics,” (ed.) J.Stern, OIES, October 2014):
  - **“The main finding of this paper is that there is limited scope for significantly reducing overall European dependence on Russian gas before the mid-2020s. ...**
  - **Russian gas deliveries to Europe will be highly competitive with all other pipeline gas and LNG (including US LNG) supplies throughout the period to 2030, and Gazprom’s market power to impact European hub prices may be considerable. ”**

# 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 with reverse flows, spot trade, requests (incl. through arbitrations) for softening LTGEC provisions (TOP, indexation vs hub-based pricing) => new market organization => Third EU Energy Package
- Third EU 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/in the making => Gas Target Model + 12 Framework Guidelines + 12 Network Codes + ...
- => **“No return” point has been passed by EU as a whole !!!**
- **BUT:** economic realities (& their technical background) in NWE & CEE differ significantly => infrastructure density issue...

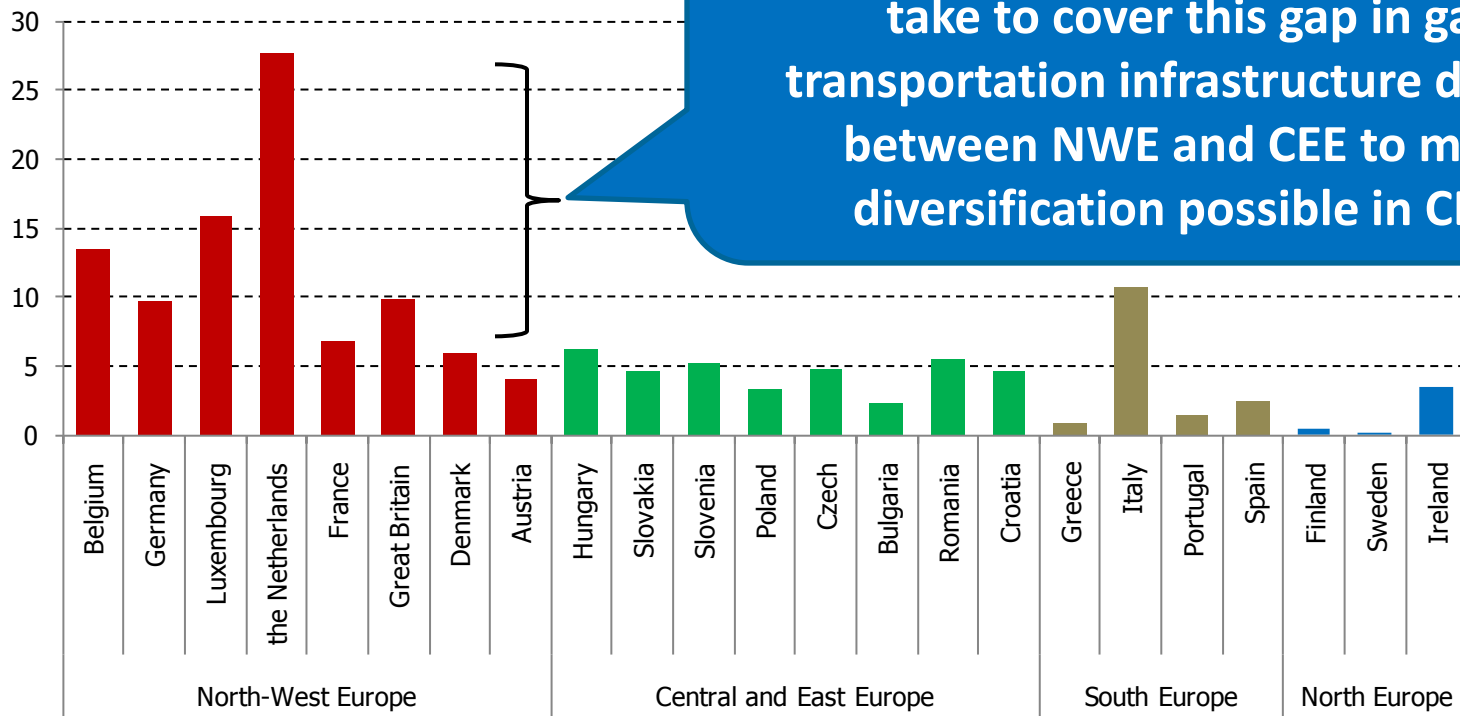
# Table of contents

- 1) Pre-2009 gas market developments in “Broader Energy Europe”
- 2) New post-2009 gas market & its material & perceived realities in “Broader Energy Europe”
  - a) From Groningen model LTGEC to Third EU Energy Package in gas (new institutional structure of supplies to/within EU)
- 3) EU’s respond to new realities: diversification (importer’s angle)
  - a. **NWE vs CEE: two different EUs in technological preparedness for diversification (density of infrastructure)**
- 4) Ukraine’s respond to new realities: diversification (transit state angle)
  - a. Russia-Ukraine supply contract: price & payment issue
  - b. Reverse flows issue: conflict of contractual vs public law
- 5) Russia’s respond to new realities: diversification (exporter’s angle)
  - a. Adaptation within new EU gas market architecture (new supply flexibility)
  - b. Diversity of pipelines routes (“multiple pipelines” concept)
  - c. Specificity of Russia’s “multiple pipelines” concept in Asia Pacific



# Gas transportation infrastructure density in the EU\* (*trunk lines only, km/100 km<sup>2</sup>*)

How much will it cost and how long will it take to cover this gap in gas transportation infrastructure density between NWE and CEE to make diversification possible in CEE?



\* Preliminary results

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

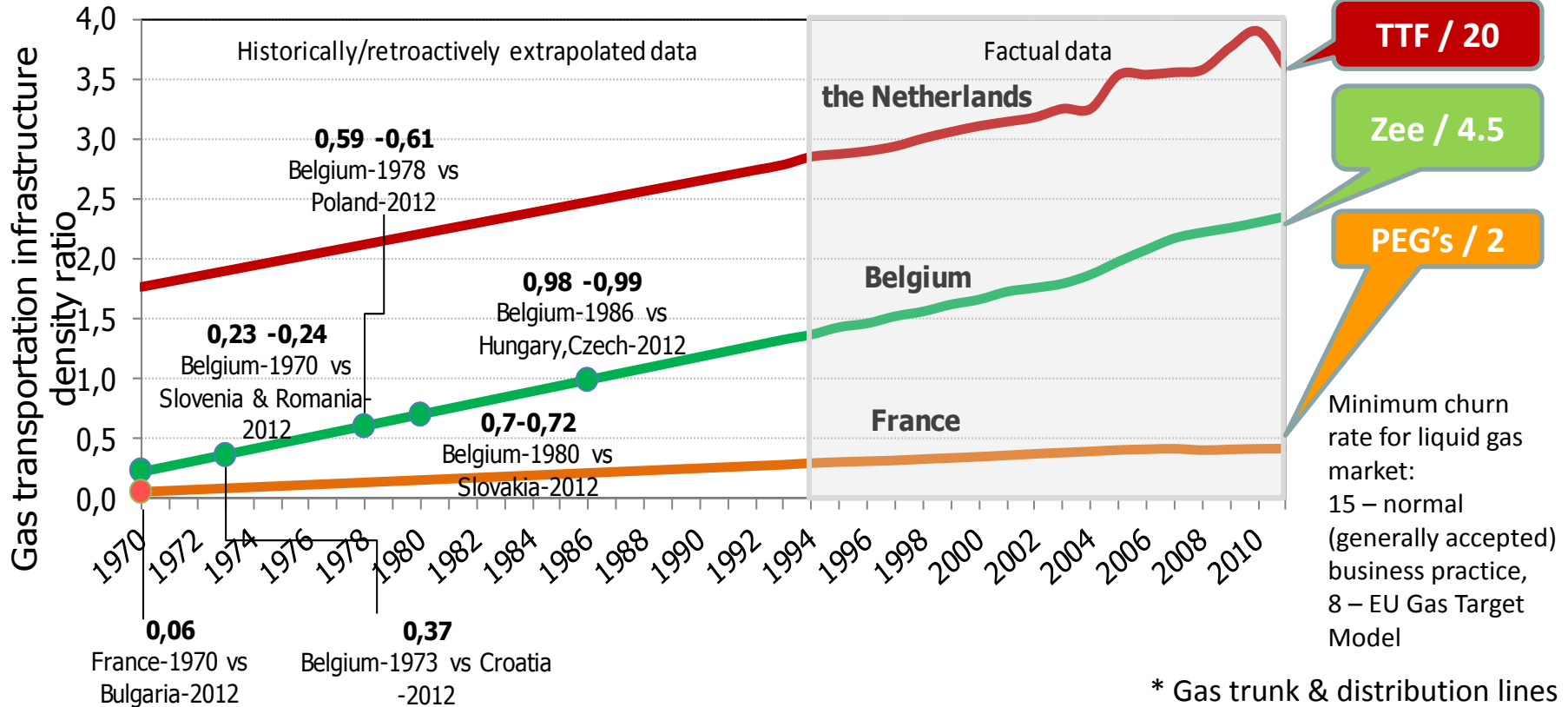
Source: [A.Konoplyanik-E.Orlova-13 WS2 GAC/20 Consultations, Vienna, 15.07.2014](#)





# CEE vs NWE gas transportation infrastructure\* density ratios (km/km<sup>2</sup>)

## - time gap measured by decades (CEE 2012 = NWE 1970s/mid-1980s)



\* Gas trunk & distribution lines

Calculations made by E.Orlova, PHD postgraduate student, Chair "International Oil and Gas Business", Russian State University of Oil and Gas, based on the data 2011/2012, kindly provided by ENTSOG, Eurogas; Churn rates: ICIS Heren European Gas Hub Report October 2013

Source: [A.Konoplyanik-E.Orlova-13 WS2 GAC/20 Consultations-Vienna-15.07.2014](#)

[A.Konoplyanik, GECF, Doha, Qatar, 24.03.2015](#)

# Table of contents

- 1) Pre-2009 gas market developments in “Broader Energy Europe”
- 2) New post-2009 gas market & its material & perceived realities in “Broader Energy Europe”
  - a) From Groningen model LTGEC to Third EU Energy Package in gas (new institutional structure of supplies to/within EU)
- 3) EU’s respond to new realities: diversification (importer’s angle)
  - a. NWE vs CEE: two different EUs in technological preparedness for diversification (density of infrastructure)
- 4) Ukraine’s respond to new realities: diversification (transit state angle)**
  - a. Russia-Ukraine supply contract: price & payment issue
  - b. Reverse flows issue: conflict of contractual vs public law
- 5) Russia’s respond to new realities: diversification (exporter’s angle)
  - a. Adaptation within new EU gas market architecture (new supply flexibility)
  - b. Diversity of pipelines routes (“multiple pipelines” concept)
  - c. Specificity of Russia’s “multiple pipelines” concept in Asia Pacific

# 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
- UA 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 (to diminish resource rent collection) since no alternative sources of supply in UA yet (no price review for UA – though price concessions) stipulated 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 reached? “Yes” – in policy, “No” – in results, but** – is it just a matter of time since trend “away from Russian gas” is not to be changed in UA, at least under this G’t

# Table of contents

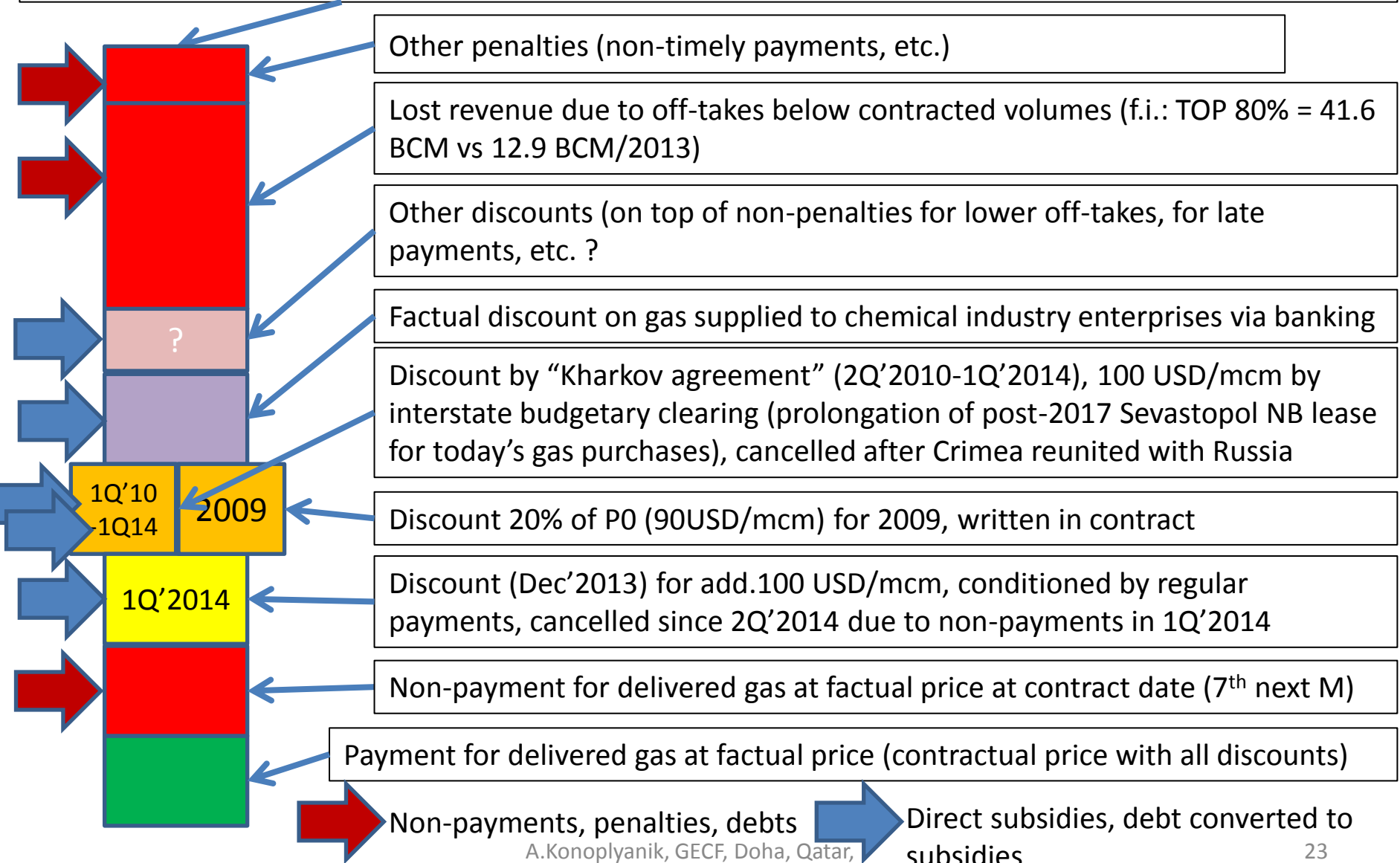
- 1) Pre-2009 gas market developments in “Broader Energy Europe”
- 2) New post-2009 gas market & its material & perceived realities in “Broader Energy Europe”
  - a) From Groningen model LTGEC to Third EU Energy Package in gas (new institutional structure of supplies to/within EU)
- 3) EU’s respond to new realities: diversification (importer’s angle)
  - a. NWE vs CEE: two different EUs in technological preparedness for diversification (density of infrastructure)
- 4) Ukraine’s respond to new realities: diversification (transit state angle)
  - a. **Russia-Ukraine supply contract: price & payment issue**
  - b. Reverse flows issue: conflict of contractual vs public law
- 5) Russia’s respond to new realities: diversification (exporter’s angle)
  - a. Adaptation within new EU gas market architecture (new supply flexibility)
  - b. Diversity of pipelines routes (“multiple pipelines” concept)
  - c. Specificity of Russia’s “multiple pipelines” concept in Asia Pacific

# Why it is NOT justifiable (from economic & legal standpoint) to import NWE spot prices into RF-UA gas supply contract

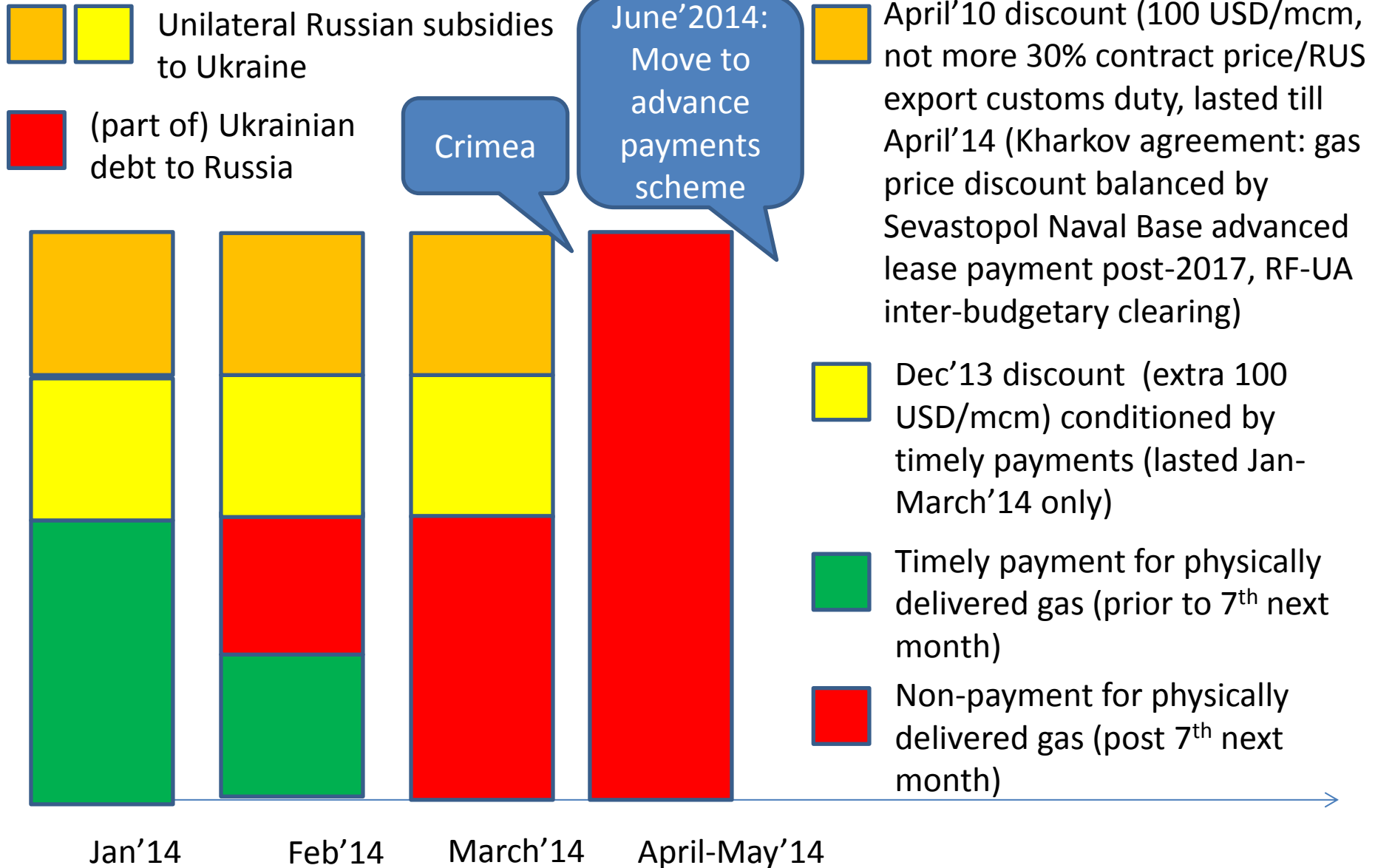
- **EU/UA view:** to take as a basis for UA imported RUS gas price a NWE spot price index which reflects competitive character of the NWE market where:
  - Multiple supplies/suppliers,
  - Contractual/physical oversupply (excessive spot gas, inter alia, is mostly RUS/Gazprom TOP gas)
- **BUT =>** UA (yet): non-competitive market, no alternative to RUS gas (except secondary RUS gas via reverse flows);
- => Until there is no alternative to RUS gas, RF/Gazprom has a legal right to obtain maximum marketable resource rent via diff. mechanisms, incl. PP-indexation (*European formulas*)
  - International legal protection: UN GA Res.1803 (1962), ECT Art.18 (1994/98) – on sovereignty on natural/energy resources
- **BUT =>** RF/Gazprom long providing multiple unilateral discounts to UA to soften its transition to *European formulas*
- **AND:** the higher the import price, more stimuli for importer to substitute/deviate from... (oil market case 1970/80-ies)

# Russia-Ukraine gas supply contract: contractual & factual payments vs. non-payments & subsidies

“European formula”-based market price (net-back replacement value, petroleum-product indexation)



# Structure of Russian gas price to Ukraine in 2014 & move to advanced payment scheme

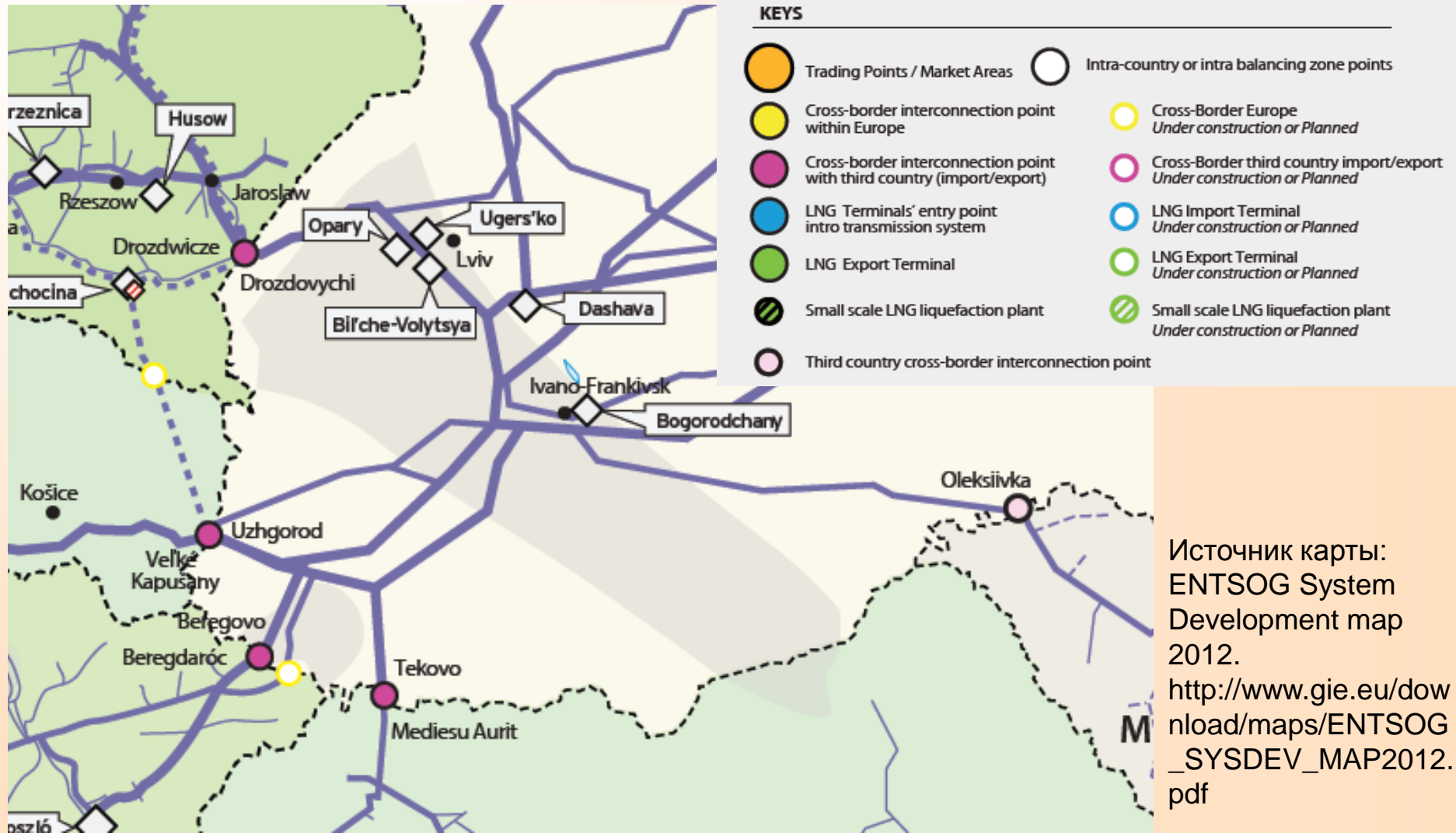




# Table of contents

- 1) Pre-2009 gas market developments in “Broader Energy Europe”
- 2) New post-2009 gas market & its material & perceived realities in “Broader Energy Europe”
  - a) From Groningen model LTGEC to Third EU Energy Package in gas (new institutional structure of supplies to/within EU)
- 3) EU’s respond to new realities: diversification (importer’s angle)
  - a. NWE vs CEE: two different EUs in technological preparedness for diversification (density of infrastructure)
- 4) Ukraine’s respond to new realities: diversification (transit state angle)
  - a. Russia-Ukraine supply contract: price & payment issue
  - b. Reverse flows issue: conflict of contractual vs public law**
- 5) Russia’s respond to new realities: diversification (exporter’s angle)
  - a. Adaptation within new EU gas market architecture (new supply flexibility)
  - b. Diversity of pipelines routes (“multiple pipelines” concept)
  - c. Specificity of Russia’s “multiple pipelines” concept in Asia Pacific

# Ukraine: cross-border points where it obliged to possess physical reverse flow capacity due to its membership in Energy Community



Источник карты:  
 ENTSOG System Development map 2012.  
[http://www.gie.eu/download/maps/ENTSOG\\_SYSDEV\\_MAP2012.pdf](http://www.gie.eu/download/maps/ENTSOG_SYSDEV_MAP2012.pdf)

# UA reverse gas flows: conflict of public & contractual law, not a technical issue

- **RF-UA Contractual law obligations (since Jan'1, 2009):**
  - TOP mutual obligations (52BCM => 80%TOP => 41.6 BCM)
- **UA Public law obligations (since Dec'3, 2013):**
  - UA joined Energy Community Treaty since Feb'1, 2011 => obligation to apply EU energy acquis within UA (since 2015), incl. Regulation 994/2010 (inter alia, Art. 6.5 on reverse flows – “03.12.2013 at latest”)
- **Conflict between two legal obligations for UA with different enforcement dates = direct economic losses for producer/gas resource owner (RF):**
  - Reverse flows (from West) to substitute contract flows (from East); while both flows are de facto of the same (Russian) origin
  - Lower UA off-takes (13.9 BCM in 2013) prevent pay-back of earlier Gazprom CAPEX in advanced upstream developments aimed at guaranteeing fulfillment of its contractual supply obligations to UA
- **The earlier obligation prevails (Pacta sunt servanda)**

# Table of contents

- 1) Pre-2009 gas market developments in “Broader Energy Europe”
- 2) New post-2009 gas market & its material & perceived realities in “Broader Energy Europe”
  - a) From Groningen model LTGEC to Third EU Energy Package in gas (new institutional structure of supplies to/within EU)
- 3) EU’s respond to new realities: diversification (importer’s angle)
  - a. NWE vs CEE: two different EUs in technological preparedness for diversification (density of infrastructure)
- 4) Ukraine’s respond to new realities: diversification (transit state angle)
  - a. Russia-Ukraine supply contract: price & payment issue
  - b. Reverse flows issue: conflict of contractual vs public law
- 5) Russia’s respond to new realities: diversification (exporter’s angle)**
  - a. Adaptation within new EU gas market architecture (new supply flexibility)
  - b. Diversity of pipelines routes (“multiple pipelines” concept)
  - c. Specificity of Russia’s “multiple pipelines” concept in Asia Pacific

# Preconditions for new Russian gas supply model to Europe (1/2)

## 1) Changing contracting structures & pricing mechanisms – operation within new EU gas market architecture:

- a. From the **chain of three consecutive LTC** with (first bundled, then unbundled, but to be mutually correlated) supply and transportation contracts - to the system of “**entry-exit**” **market zones** with VTP (hubs) within unbundled commodity and capacity markets
- b. Unbundled **capacity** market: supplier as a shipper only, capacity allocation – mostly by auctions, in rare cases – “open seasons”
- c. Unbundled **commodity** market: mature & oversupplied (either contractually or physically) market, “gas-to-gas” competition, two market segments – contractual & spot – in competitive coexistence

# Preconditions for new Russian gas supply model to Europe (2/2)

2) Diversification of routes/means of supplies: from former GOSPLAN's “no more than one pipe to each market” to current “no less than two pipes/means of supply to each market”:

- a. Change of the concept of risk assessment/minimization: from (cheaper) central planning & direct control on each export route through to delivery point – to (costlier) competitive choice among few routes/means of supply (taking into consideration comparative costs & risks)
- b. Economic justification of new pipelines/means of supply to mature markets: not new gas, but transit risk mitigation & liquidation of transit monopoly

# Table of contents

- 1) Pre-2009 gas market developments in “Broader Energy Europe”
- 2) New post-2009 gas market & its material & perceived realities in “Broader Energy Europe”
  - a) From Groningen model LTGEC to Third EU Energy Package in gas (new institutional structure of supplies to/within EU)
- 3) EU’s respond to new realities: diversification (importer’s angle)
  - a. NWE vs CEE: two different EUs in technological preparedness for diversification (density of infrastructure)
- 4) Ukraine’s respond to new realities: diversification (transit state angle)
  - a. Russia-Ukraine supply contract: price & payment issue
  - b. Reverse flows issue: conflict of contractual vs public law
- 5) Russia’s respond to new realities: diversification (exporter’s angle)
  - a. **Adaptation within new EU gas market architecture (new supply flexibility)**
  - b. Diversity of pipelines routes (“multiple pipelines” concept)
  - c. Specificity of Russia’s “multiple pipelines” concept in Asia Pacific



# New model for EU: Evolution of gas value chain & pricing mechanism of Russian gas to EU (1)

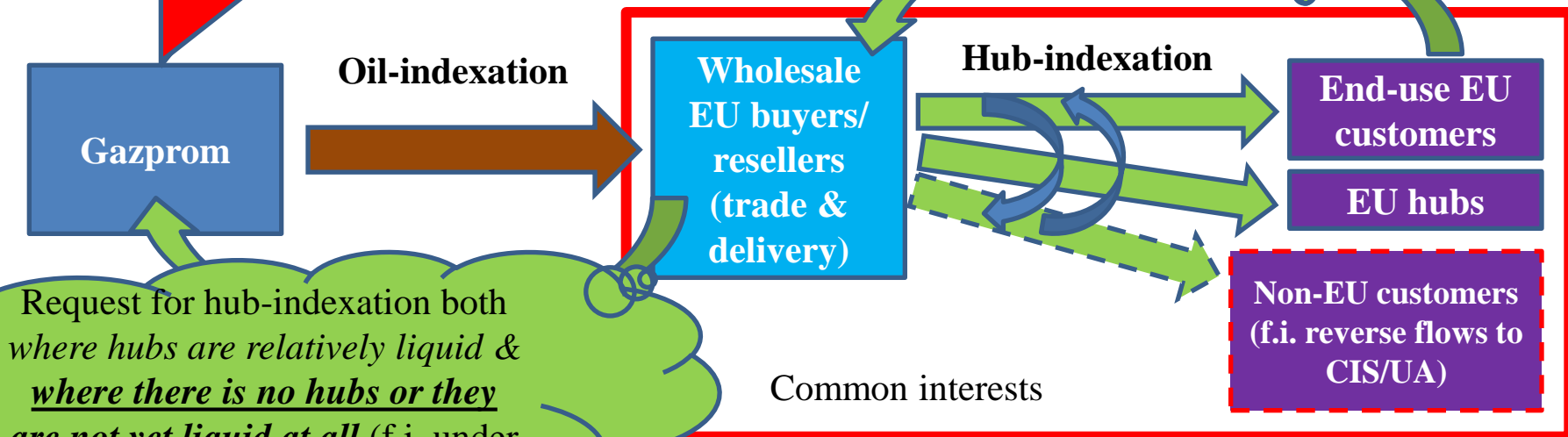
Past (Pre-2009) – growing EU market



Nowadays (Post-2009) – oversupplied (in NWE segment -?)  
EU market with not yet clear future trends

**Gazprom as price-taker from OIL market**

Request for hub-indexation *where hubs are relatively liquid*



Request for hub-indexation both *where hubs are relatively liquid & where there is no hubs or they are not yet liquid at all* (f.i. under threat of arbitration)



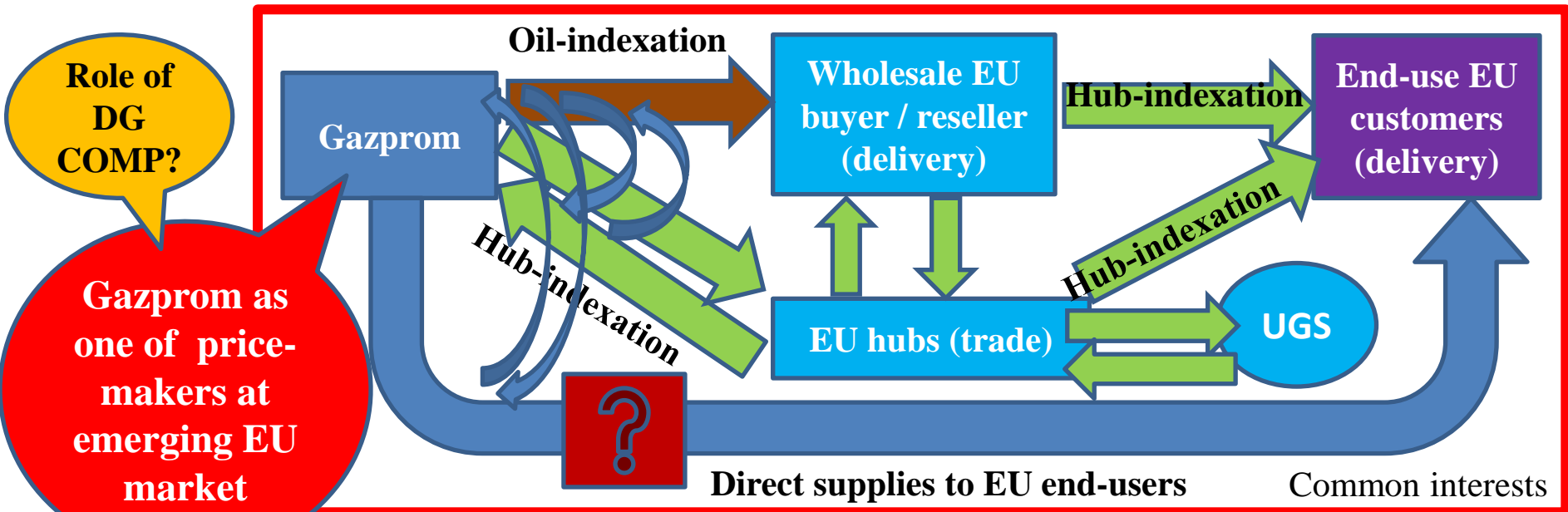
# New model for EU: Evolution of gas value chain & pricing mechanism of Russian gas to EU (2)

Future (“NO GO” contractual scheme under any (?) supply-demand scenario)

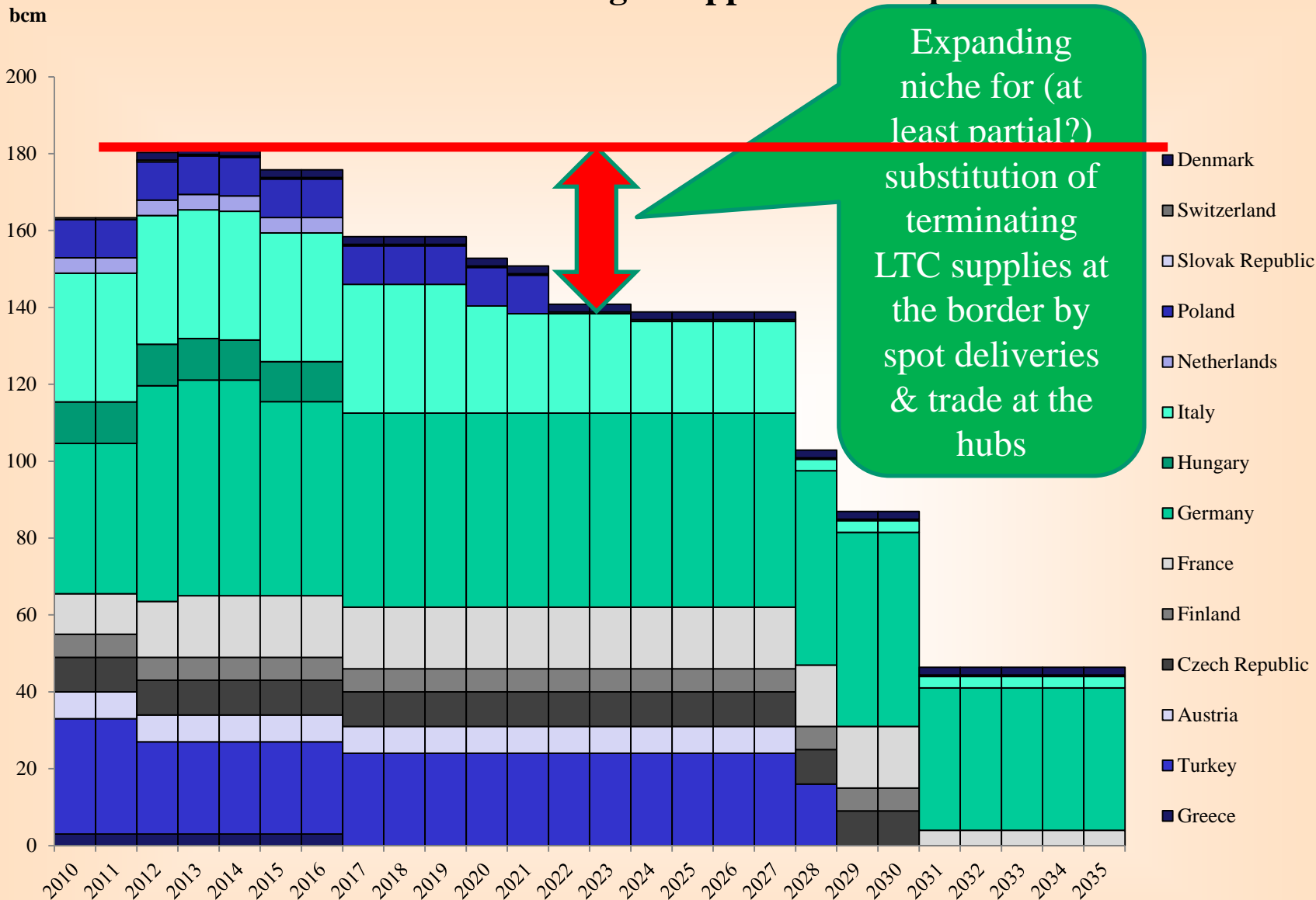


Gazprom as price-taker from GAS BUYER'S market (with no participation on it)? => NO GO

Future (what competitive niche for oil-indexed LTC & spot deliveries & trade to/within EU?)



# Contracted volumes of Russian gas supplies to Europe



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.

# Table of contents

- 1) Pre-2009 gas market developments in “Broader Energy Europe”
- 2) New post-2009 gas market & its material & perceived realities in “Broader Energy Europe”
  - a) From Groningen model LTGEC to Third EU Energy Package in gas (new institutional structure of supplies to/within EU)
- 3) EU’s respond to new realities: diversification (importer’s angle)
  - a. NWE vs CEE: two different EUs in technological preparedness for diversification (density of infrastructure)
- 4) Ukraine’s respond to new realities: diversification (transit state angle)
  - a. Russia-Ukraine supply contract: price & payment issue
  - b. Reverse flows issue: conflict of contractual vs public law
- 5) Russia’s respond to new realities: diversification (exporter’s angle)
  - a. Adaptation within new EU gas market architecture (new supply flexibility)
  - b. Diversity of pipelines routes (“multiple pipelines” concept)**
  - c. Specificity of Russia’s “multiple pipelines” concept in Asia Pacific

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



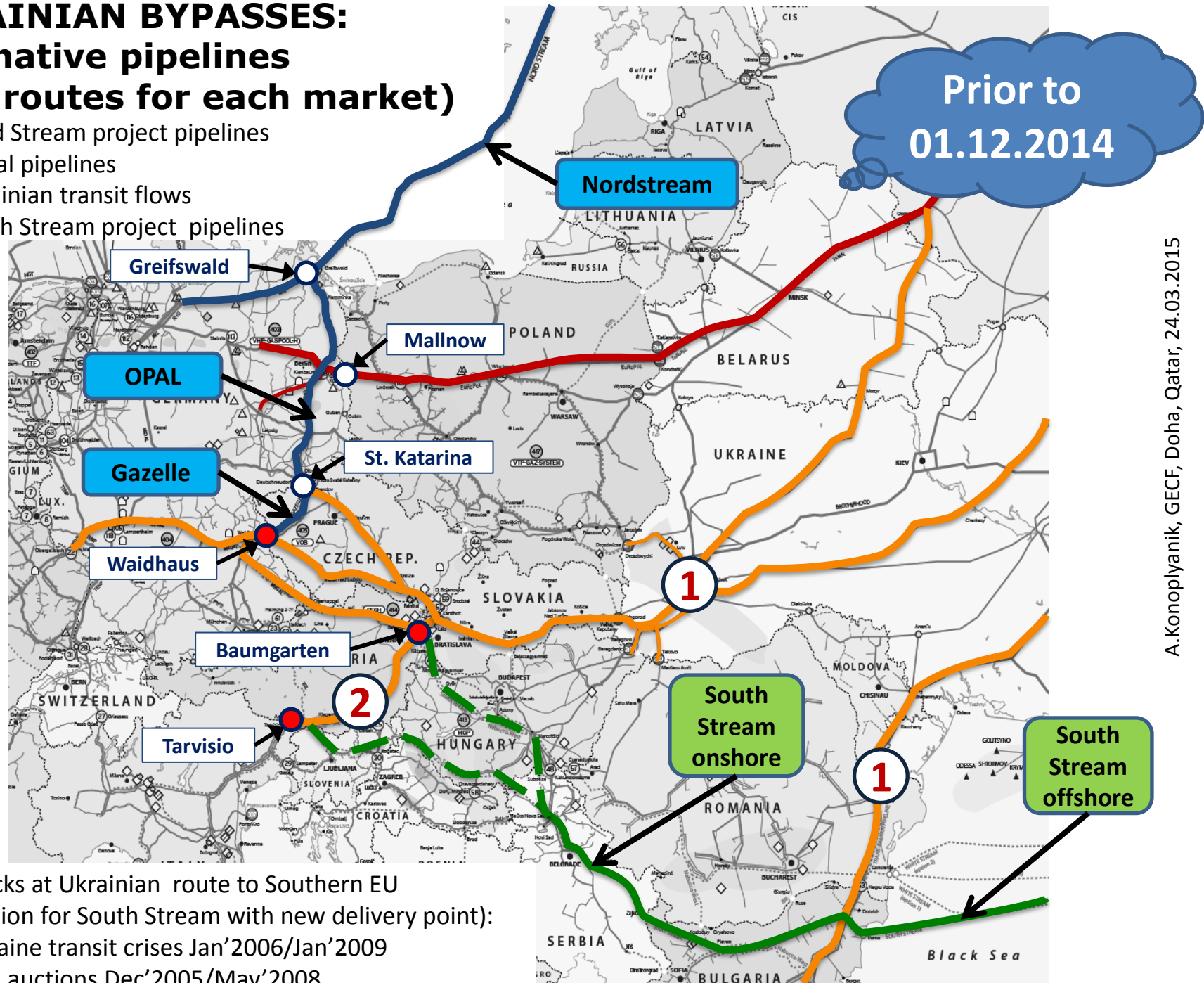
The very fact that two states cannot solve issues between them bilaterally and (at least one of them) need third party (as mediator/conciliator/arbiter) for searching temporary compromises, means a systematic mistrust => one can't leave under constant stress (uncertainty) => permanent transit risk for supplier since it is his responsibility to provide timely delivery of contracted volumes to delivery points deep inside the EU non-dependent issues with third parties => sovereign right of resource owner to evaluate such risk

# 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 =>
- 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 picture till 01.12.2014

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

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



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



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

- Nord Stream project pipelines
- Yamal pipelines
- Ukrainian transit flows
- Turkish Stream project pipelines



47BCM  
at 2019:  
How to  
move  
from  
here  
acc.to  
EU  
rules?

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

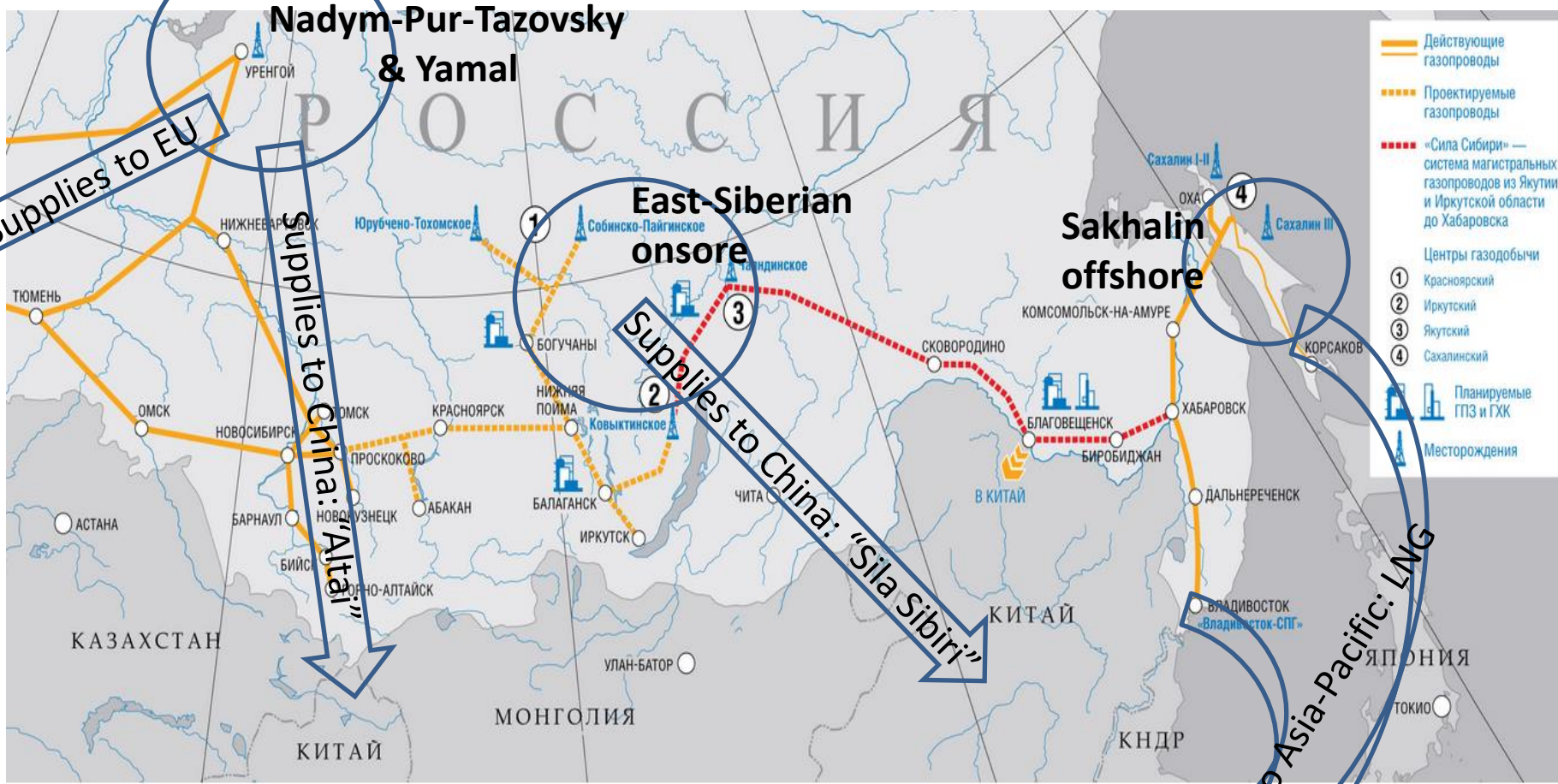
- ① Ukraine transit crises Jan'2006/Jan'2009
- ② TAG auctions Dec'2005/May'2008

# Table of contents

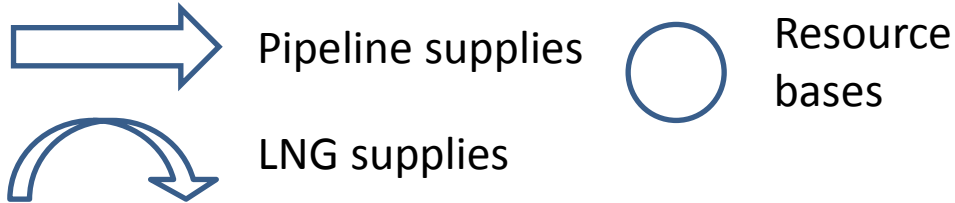
- 1) Pre-2009 gas market developments in “Broader Energy Europe”
- 2) New post-2009 gas market & its material & perceived realities in “Broader Energy Europe”
  - a) From Groningen model LTGEC to Third EU Energy Package in gas (new institutional structure of supplies to/within EU)
- 3) EU’s respond to new realities: diversification (importer’s angle)
  - a. NWE vs CEE: two different EUs in technological preparedness for diversification (density of infrastructure)
- 4) Ukraine’s respond to new realities: diversification (transit state angle)
  - a. Russia-Ukraine supply contract: price & payment issue
  - b. Reverse flows issue: conflict of contractual vs public law
- 5) Russia’s respond to new realities: diversification (exporter’s angle)
  - a. Adaptation within new EU gas market architecture (new supply flexibility)
  - b. Diversity of pipelines routes (“multiple pipelines” concept)
  - c. Specificity of Russia’s “multiple pipelines” concept in Asia Pacific**



# Russia & Europe *in the past* vs Russia & Europe & Asia *in the future* (new factual Russia's gas export model)



Source of original map: <http://www.gazprom.ru/about/production/projects/pipelines/ykv/>



# 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)

**Disclaimer:** Views expressed in this presentation do not necessarily reflect (may/should reflect) and/or coincide (may/should be consistent) with official position of Gazprom Group (incl. Gazprom JSC and/or Gazprom export LLC), its stockholders and/or its/their affiliated persons, and are within full personal responsibility of the author of this presentation.