

Russia-Ukraine-EU: Lessons learned from January 2009 gas crisis – economics of transition to new contractual & pricing structures in Europe/FSU

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Three key gas pricing mechanisms

- **Cost-plus (net-forward) pricing:**
 - **Ricardian** rent (long-term difference between costs & marginal costs => utilized at physical market)
- **(Net-back) replacement-value-based pricing:**
 - **Ricardian** rent *plus*
 - **Hotelling** rent (long-term difference between marginal cost & replacement value of competing fuel(s) => utilized at physical market)
- **Exchange (commodities) pricing (futures / options):**
 - **Ricardian** rent *plus*
 - **Hotelling** rent *plus/minus*
 - **Windfall** profits/losses (to cover short-term supply/demand imbalances; difference between supply/demand "equilibrium" price & replacement value => utilized at paper market)
 - UK 2007: while contractual price at physical gas market in Cont.Europe 350 USD/mcm, UK spot price fluctuate in between 1000+USD/mcm & negative prices (less 0 USD/mcm)

Non-renewable energy pricing: economic & legal background

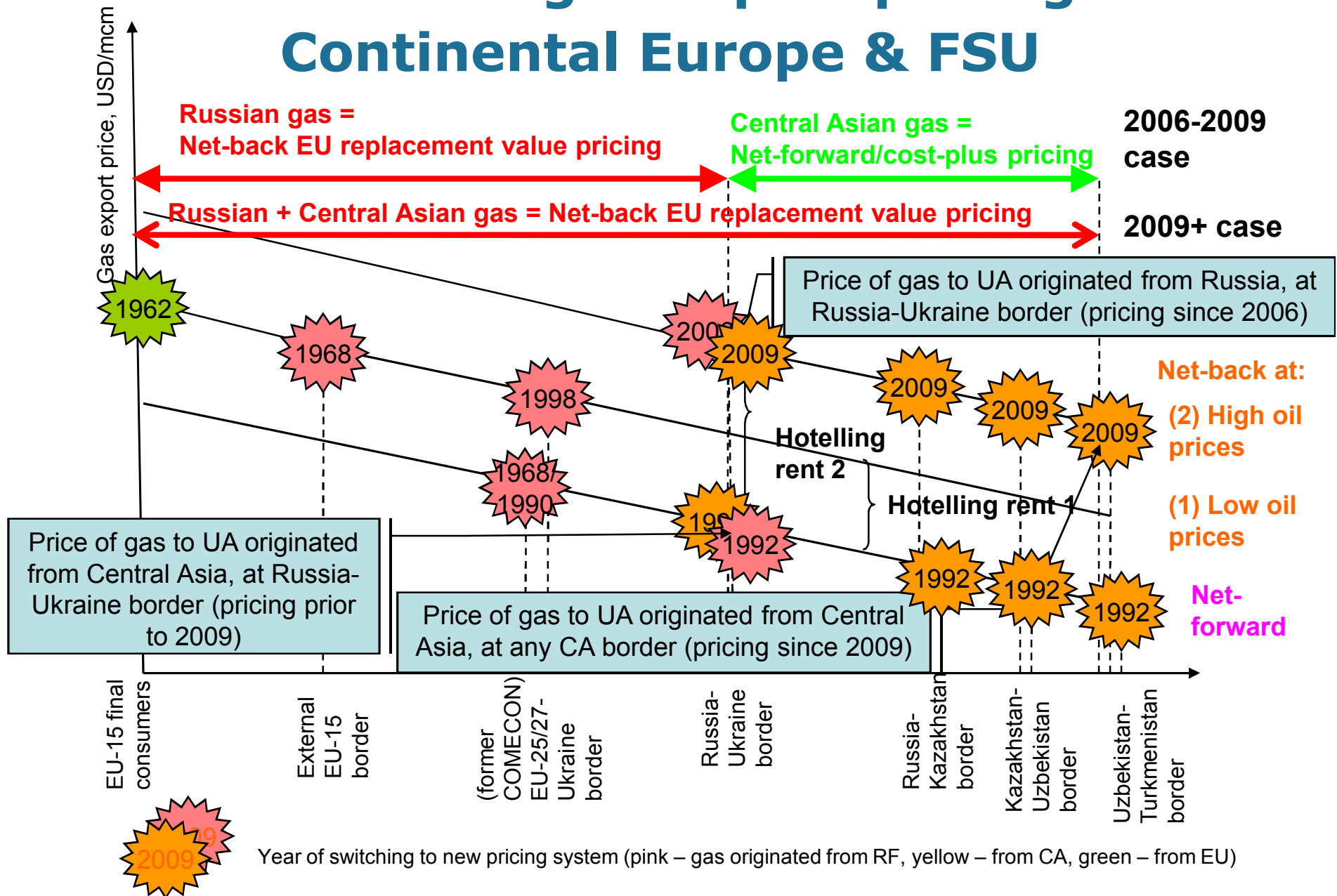
- Resource owning state: **to maximize long-term resource rent** => sell gas to export market with highest replacement value (USSR/Russia => EU)
 - **Economic:** Groningen concept of LTGEC (1962) = long-term contract + pricing formula linked to gas replacement values (prices of replacement fuels) + price review (+ net-back to delivery point)
 - **Legal:** UNGA Res.1803 (1962) + ECT Art.18 (1994/98) = state sovereignty on natural/energy resources
 - => **Sovereign right** of exporter/resource-owning state to give or not to give to importer politically-motivated economic concessions in form of discounted export pricing/prices (to share its resource rent with foreign state)
- Cost-plus-based instead of replacement-value-based export pricing = **political export pricing** => Russia-Ukraine 1992-2006

**Major driving force of gas
(energy) markets
development =
struggle/fight for Hotelling
rent !!!**

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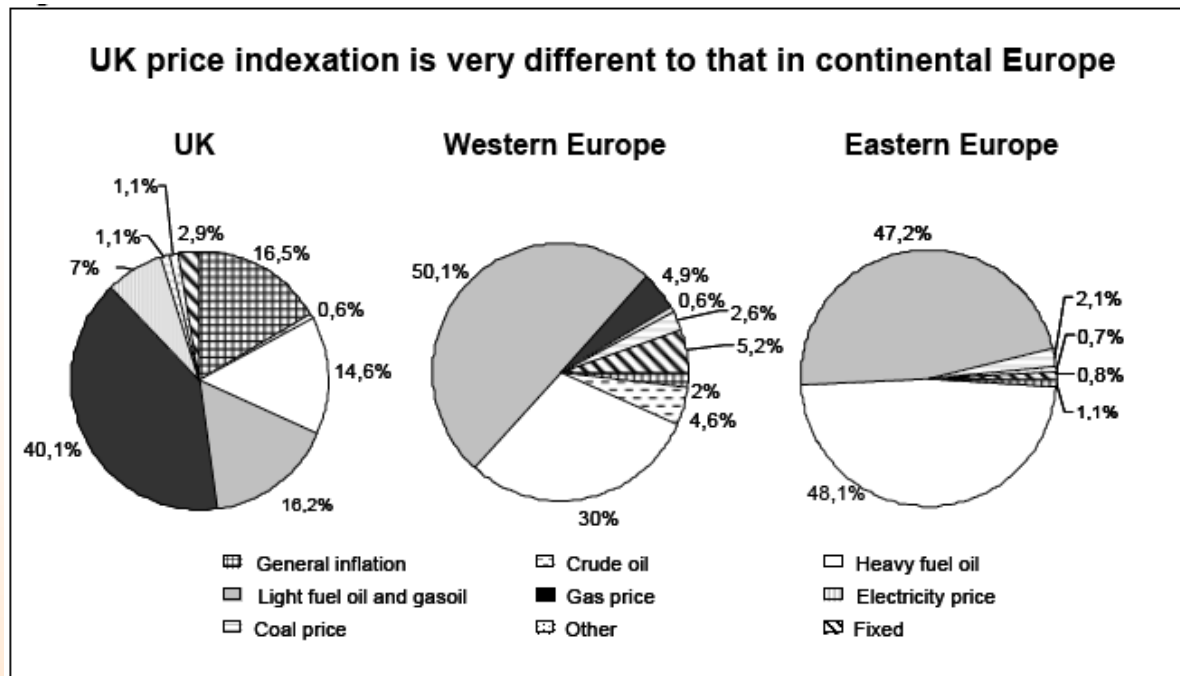
Evolution of gas export pricing in Continental Europe & FSU



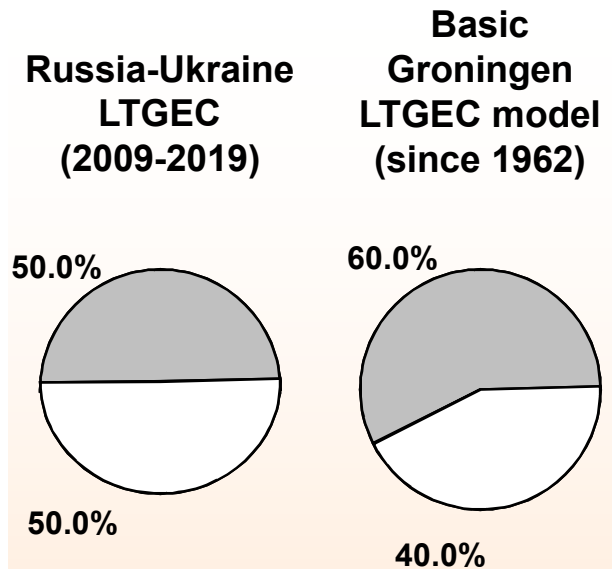
Gas export pricing: Russia-Ukraine case

- 2006-2010: step-by-step transition from political to market-based gas export pricing (from cost-plus to net-back replacement value principle):
 - Jan.2006 - Jan.2009:
 - NBRV pricing for gas originated from Russia to UA
 - CP pricing for gas originated from CA to Russia - to UA
 - 2009: market-based pricing minus 20% discount (formula pricing)
 - Since 2010: non-discounted market-based pricing (formula pricing)
- Since 2006 RF-UA gas export pricing & transit tariff methodologies are legally (contractually) & economically unbundled (as elsewhere in Europe); these methodologies are different => more flexible prices & more stable transit tariffs:
 - Export prices: linked to RV => commodities (LFO + HFO) => more frequent price review (by formula)
 - Transit tariffs: CAPEX + OPEX + RRR
- Transition to market-based export gas pricing:
 - commercial reasons dominate => to understand the market =>
 - unfavourable timing for transition (economics): 2003-2008 growing oil prices => growing gas replacement values =>
 - no politics – but political tensions (due to price increases),
- To get used to new contractual structures now in place

LTGEC: current indexation by EU Region, Russia-UA 2009 & basic Groningen 1962 case



Source: Energy Sector Inquiry 2005/2006



Russia-Ukraine 2009 LTGEC contractual structure rationale: more practical (understandable & sustainable) to start with less sophisticated pricing formula

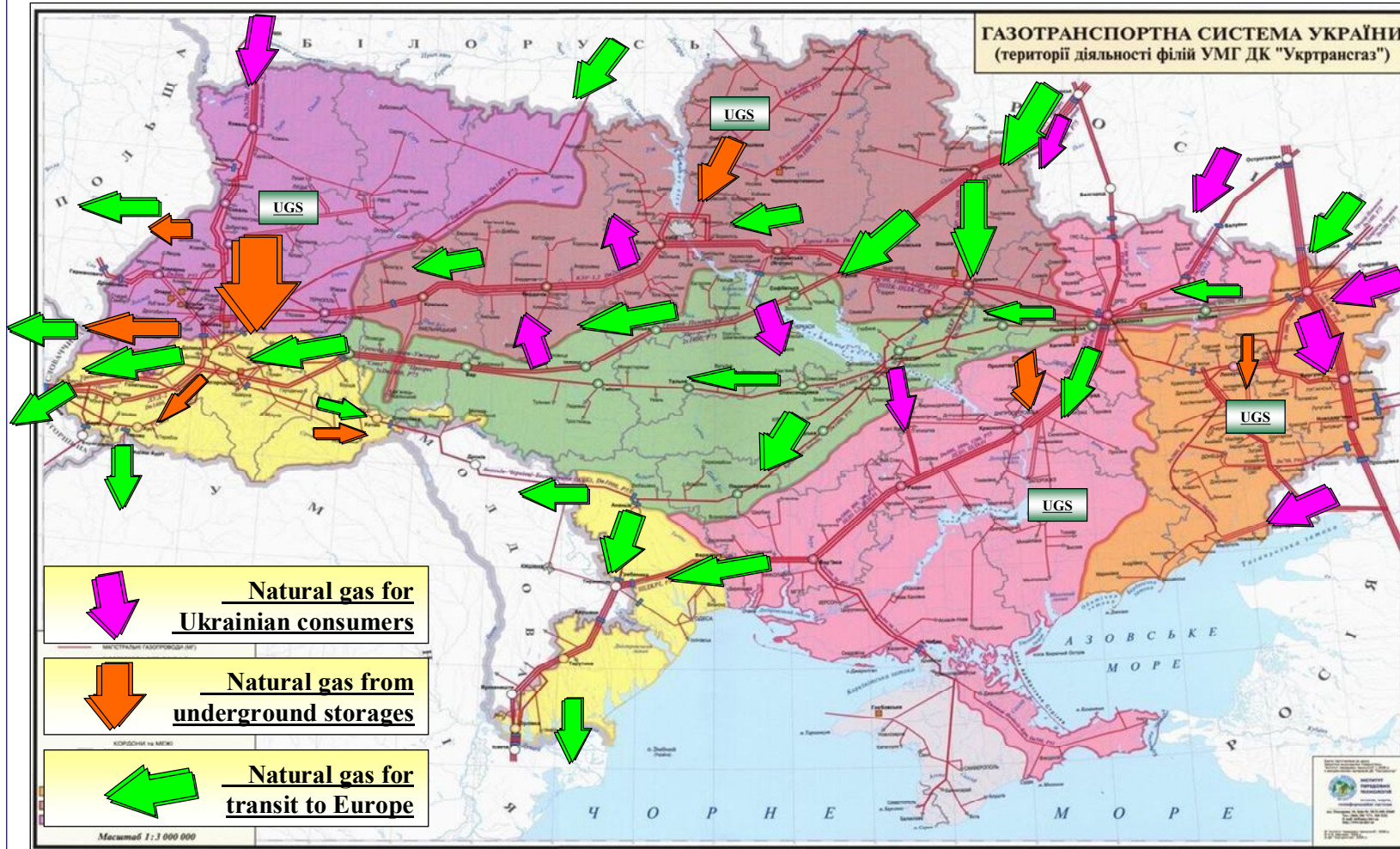
Further development (most likely): towards EE-type => WE-type => UK-type price indexation

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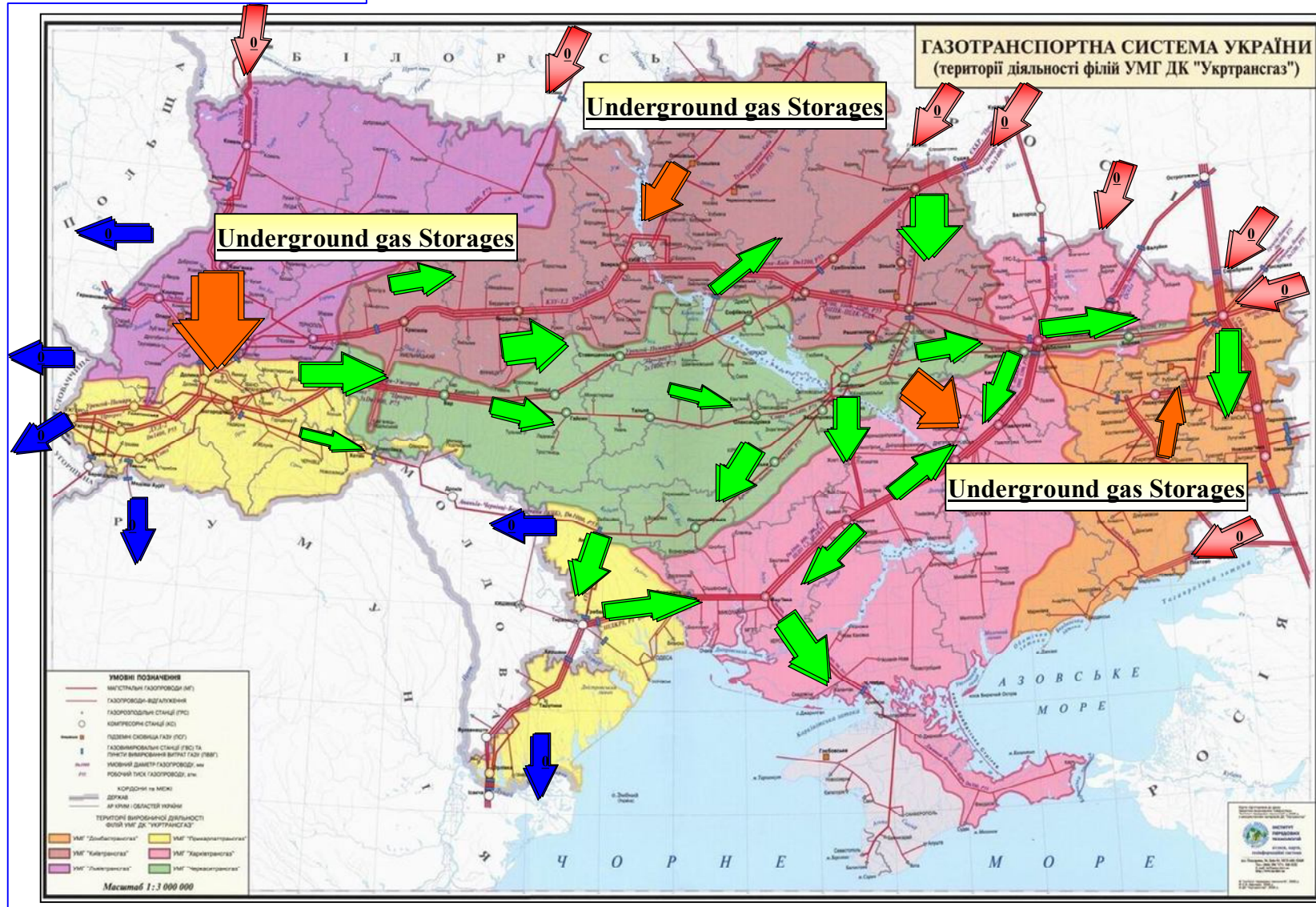
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Russia-Ukraine: whether transit risks are still there?

- 2009/10 Winter: soft temperatures expected + high UGS volumes accumulated => good objectives to escape problems
- Y. Timoshenko: “model of gas accumulation created by Ukrainian Government will help the country to escape gas crises in the future”:
 - UA UGS: 26.34 BCM (05.10.09, end-filling) vs. 31 BCM (capacity),
 - “UA need not expect any winter crises since UA has strategic agreement with Gazprom, for direct gas supplies, without intermediaries. The price changes each month”.
- **But:** No gas crisis at domestic UA market does *NOT* mean no (risk of) (possible) crisis in transit supplies through UA to EU
- Major reasons for gas transit crises (past & most recent experience) => diminishment/break of export gas supplies to UA if there is:
 - no contract (“**legal risk**”); if contract in place, then (due to contract):
 - payment discipline (“**non-payment risk**”),
 - off-take discipline (“**TOP risk**”) (imported volumes vs TOP provision)
- “**Legal risk**” (*Jan. 2009*): absence of export/import RF-UA contract at 01.01.2009 => no legal basis for export supplies to UA => no export to UA => supplies from UA UGS to UA domestic market began => reverse of dominant flows within UA GTS => break-up of transit flows to EU



Source: UkrTransGas presentation at the Energy Charter meeting of the Trade & Transit Group, Brussels, 12 February 2009



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Russia-Ukraine: evaluation of transit risks

- **“Legal risk” (Jan. 2010) (now minimal):** long-term legal/contractual solution found => 10-year LTGEC (based on Groningen model) as of 19.01.2009 (though repeatedly disputed by some UA politicians), *but*
- New crisis possible in case of violation of contract provisions:
 - **“TOP risk” (still exists):** Diminishment of import requests below contracted volumes (less than 80% TOP obligation) is to the detriment of supplier =>
 - contractual provision: 6 months advanced changes => acceptance of Naftogaz payments for factual deliveries is Russia’s “goodwill” since
 - should TOP obligation be implemented in full, legally justified contractual discipline by Russia/Gazprom can further worsen Naftogaz financial problems (currently in technical default) => this will increase “non-payment risk”
 - **“Non-payment risk” (still exists):** Payment discipline: non-payment in time for at least one month for imported gas => contractual sanctions:
 - move to prepayment for ordered monthly volumes since next month till end-contract in 2019 => further worsening of Naftogaz financial problems => if to be followed by diminishment of supplies to prepaid volumes only, then (if *negative* scenario) =>
 - diminishment/break of monthly supplies to UA possible => lack of imported gas for domestic market => supplies from UA UGS to domestic market begins => reverse of dominant flows within UA GTS => break of transit (repetition of Jan.2009 case ?), *but* (if *most likely* scenario) =>

A.Miller/V.Putin on RF-UA (Oct.-Nov.2009)

- “Ukraine can and must pay for gas in line with signed contract... Should UA pay for export supplies for UA domestic consumption – they will receive export gas for domestic consumption. Should they not pay for deliveries for domestic market in UA – they will not receive export gas for domestic consumption...”
- “As monthly payments shows, Ukraine has money”:
 - Russia has prepaid annual cost of gas transit until end-Q1-2010, +
 - IMF loans to UA consider necessity to pay for Russian gas supplies, +
 - UA gold & hard currency state reserves, +
 - Naftogaz UA = 100% state-owned company =>
- Ukraine has adequate “safety pillow”, but: “Another matter that each month our Ukrainian friends-colleagues try to tell us what big problems they face with payments. On the other hand, we see that UA accurately and in time pays”
 - => Political demonstration to UA citizens by UA authorities of their efforts to provide electricity & heat to the UA people despite all difficulties (at the eve of elections) ?
- “We see that our partners execute their contracts, pay for Russian gas deliveries, and our understanding is that at New Year eve we will not face anything radically sharp – ... the money will come at our accounts from Naftogaz UA in full (means: for factual deliveries – V.Putin), and we will continue to work on the basis of signed contract”.

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Early warning system for emergencies in gas transit – options & chronology (1)

- **September 2006:** Energy Charter “Gas Transparency Initiative”
 - To expand GIE experience/mechanism to the non-EU community of Energy Charter; should cover all parties involved
- **Autumn 2008:** Russia/Gazprom informed EU (road-show) on possible Russia-Ukraine gas problems coming Winter
 - information from one-side only/not taken seriously
- **Dec.2008:** US-UA memorandum, incl. on reconstruction of UA GTS
 - Not a solution, addressed to only one party in potential dispute
- **Jan.2009:** EU GCG/monitoring mission to Ukraine;
 - EU did not possess adequate instruments, GCG had mandate for internal issues only, but was used since its forthcoming meeting
 - Lack of success in establishing tri-lateral RF-UA-EU monitoring instrument/framework
- **Jan. 2009:** early warning instruments from some military/semi-military international organizations mentioned as possible solution (SG ECS)
 - When missions of organizations are different, the instruments can not be the same to be effective

Early warning system for emergencies in gas transit – options & chronology (2)

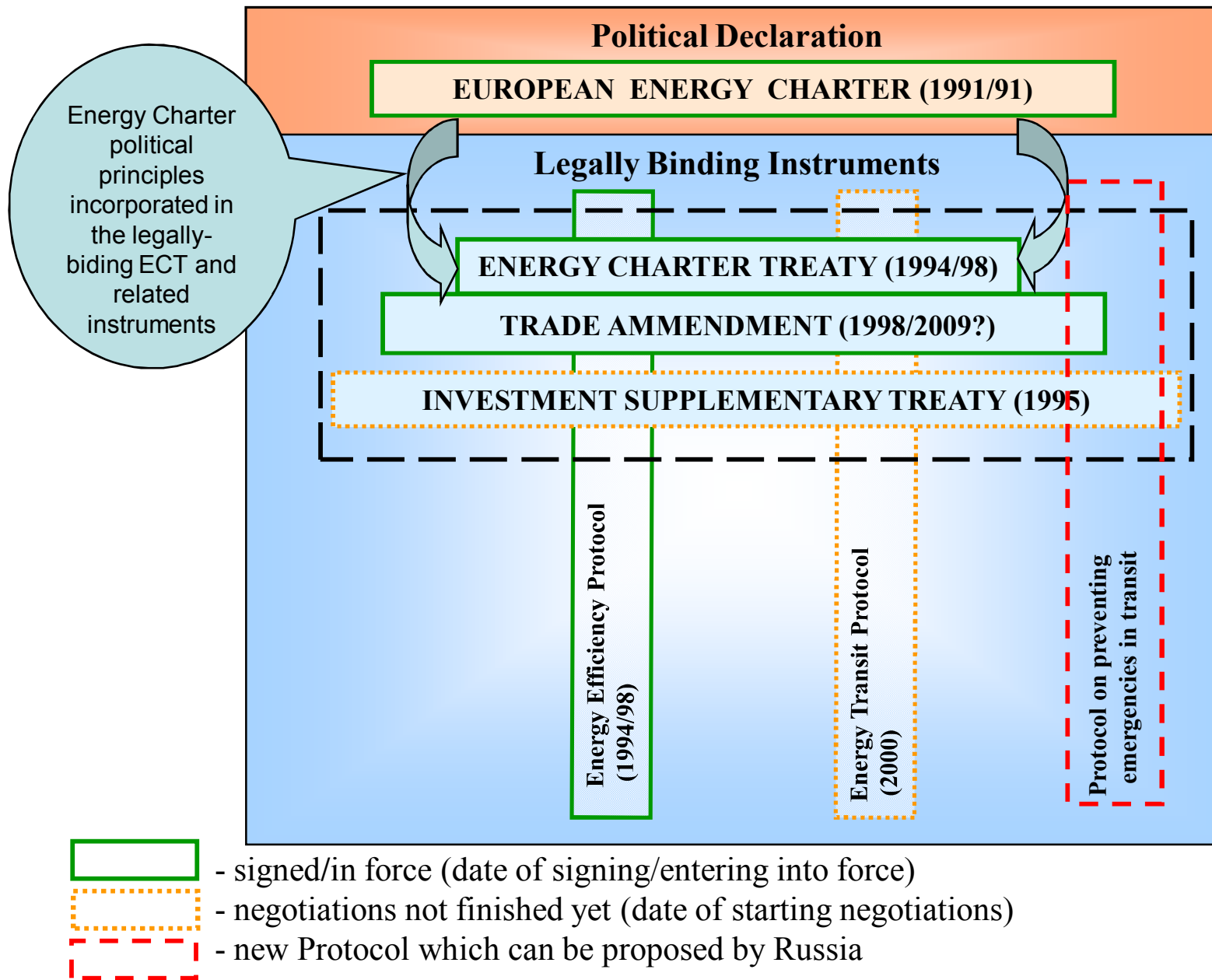
- **Jan. 20, 2009:** RF President D.Medvedev - to Gazprom CEO A.Miller: Energy Charter did not work in RF-UA gas crisis => to modernize it *or* to develop new instrument
- **March 23, 2009:** EU-UA gas investment conference
 - Merged two different topics: initial agenda (prior to Jan.2009 events) – how to adapt UA energy system to EU-SEE Energy Community Treaty, last moment additions to agenda – to react to Jan.2009 gas problems
- **April 21, 2009:** RF President D.Medvedev “New conceptual approach...”
 - Annex 1: instrument on emergencies in transit to be prepared
 - Since then – new Russian initiative *instead of* Energy Charter, *not within* it
- **May 2009:** Russia presented to G-20 states & some international organizations (excl. Energy Charter) draft agreement on emergencies in transit
- **Oct.20, 2009:** Russia terminated from ECT provisional application (but stays as ECT signatory)
- **Nov.18, 2009:** Russia to present draft bilateral RF-EU agreement on emergencies in transit to RF-EU Summit
 - Bilateral instrument will unlikely effectively address multilateral transit issue

Early warning system for emergencies in gas transit

– “Energy Charter plus” as best effective option

- Transit is a multiple task => no effective bilateral solutions
- Best solution is when all parties within cross-border energy value chain are involved
- Draft agreement on preventing emergencies in transit, prepared by Russia/Gazprom, can be used as a starting point for the debate within multilateral community
 - (to add: transit states + legally binding character + ...?)
- Energy Charter is the best available fora
- Russia as ECT signatory has legal right to officially present this instrument as a draft Energy Charter Protocol on Preventing Emergencies in Transit
- Most probably, the Energy Charter community will support this initiative and will develop on its basis new legally binding Protocol
- From “Energy Charter” to “Energy Charter plus”

Figure 1. ENERGY CHARTER AND RELATED DOCUMENTS



**Thank you for your
attention !**

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