# *Long term contracts and oil indexation*

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The material in this presentation is for discussion only amongst the participants of the GAC Gas Pricing Workshop of 15th May 2013 in Brussels, and subject to Chatham House rules.

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**EU-Russia Gas Advisory Council's Pricing Workshop,**
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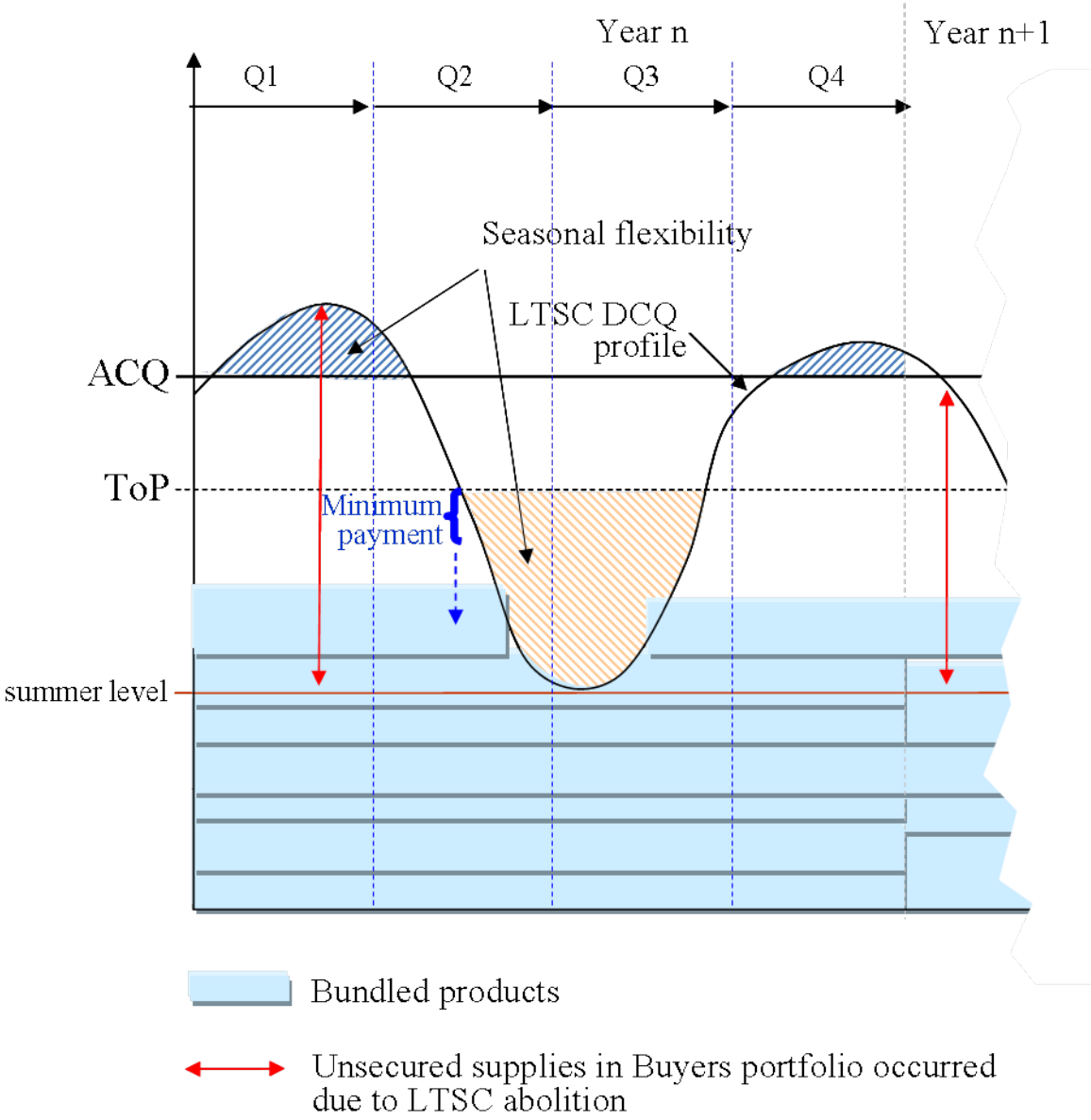
# Long-term Gas Sales Contract Structure

**Daily flexibility** (buyers upside) – blue dashed zone – is a buyer nominated flexibility. In daily term it means that according to LTSC provisions Buyer is namely entitled but not oblige to take daily volumes.

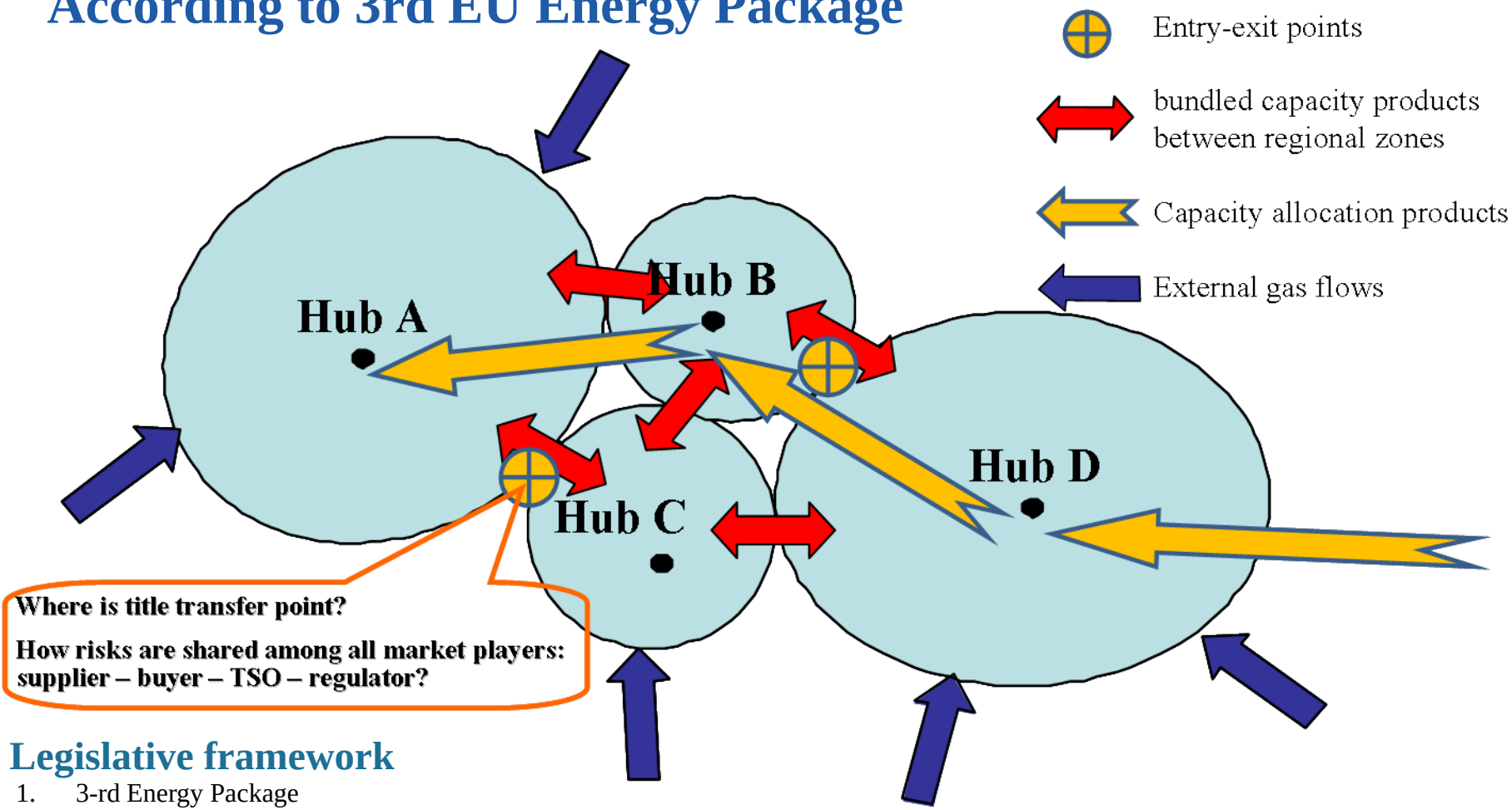
This provision provides to the Buyer in connection with the right of "principal" nomination, the possibility to operate his purchase portfolio flexibly and generate to the Buyer a value added by means of such actions.

**Minimum payment** – is one of the key elements of LTSC that **guarantee the security of demand for the Seller**. This security guarantee scheme is **acknowledged by banks for crediting in frames of project financing** the large-scale infrastructure projects for gas production (upstream) and transportation.

**Make-up** – back-side of Minimum payment is the reflection of a long run Buyer's flexibility which could be treated as several years virtual storage and provide to Buyer **long-term security of supply**



# Future Organization of Common Internal EU Gas Market According to 3rd EU Energy Package




## Legislative framework

1. 3-rd Energy Package
2. Regulation (EC) No 713(2009) - establishing an Agency for the Cooperation of Energy Regulators
3. Regulation (EC) No 715(2009) - on conditions for access to the natural gas transmission networks
4. CAM NC – Capacity allocation mechanism Network Code (Suppl. to Reg. 715)
5. CMP – Congestion management procedures (Annex to Reg. 715)
6. 10YNGP - 10-year network development plan for gas
7. Other Network Codes (10+), etc.

# Long-term Gas Sales Contract Structure

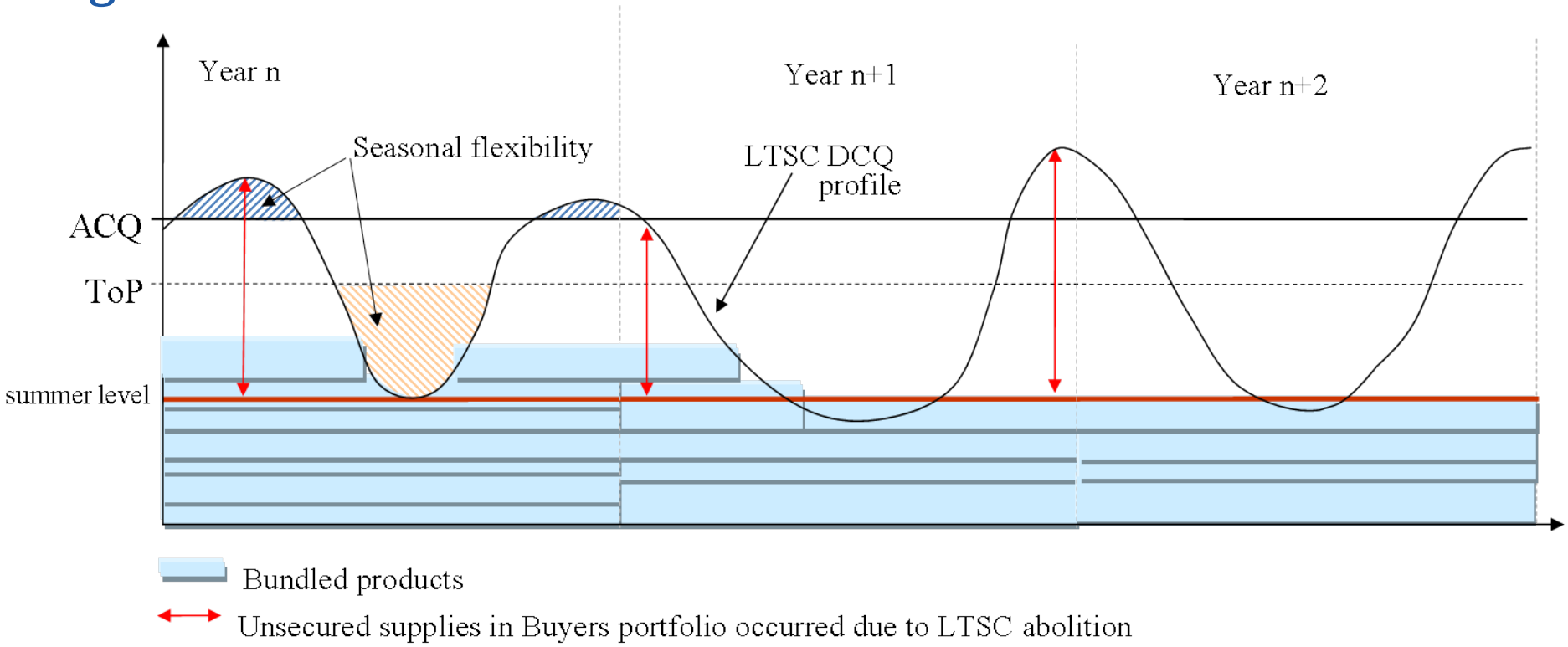


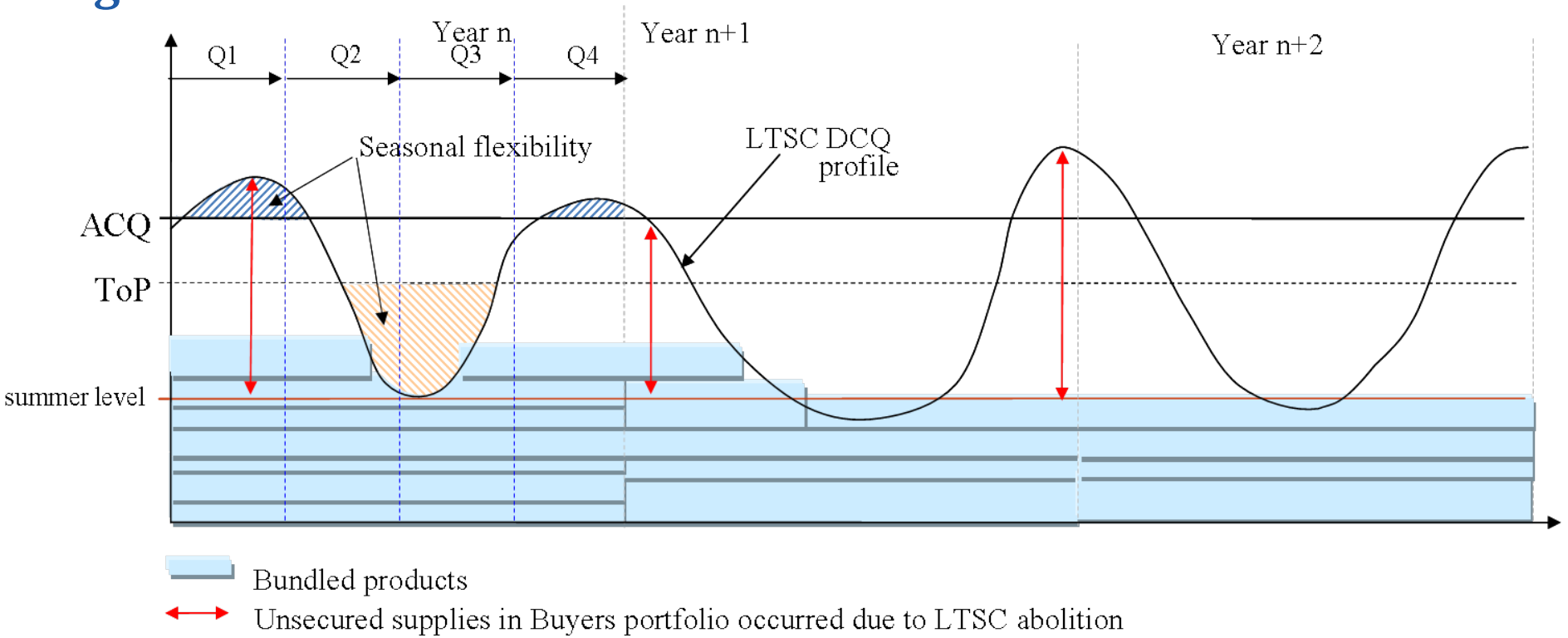

**Illustration of how the sport gas contracts (left column) correlate with LTSC's flexibility (right column):**

| | |
|---|---|
| • Big amount of small contracts between players with different creditworthiness | few big contracts between prudent parties with excellent creditworthiness |
| • Contracts differ by volumes and length | agreed yearly profile and Buyers right of "principal" daily nomination |
| • Volatile and unpredictable Hub prises | negotiated price formula – predictable and acceptable by banks for project financing |
| • Increment of unsecured (i.e. noncontracted) volumes | ToP clause - guarantees the **security of demand** for Seller and Make-up gas provides a long-run flexibility to Buyer (several years virtual storage) and **security of supply** |

# Is there Flexibility on the Market?

- Is there enough fast acting storage capacity in Europe to cope with the flexibility needed for peak demand days?
- Introducing pricing volatility into flexibility market will mean that, at times, customers will end up paying more for their gas
- Is there on the market enough seasonal flexibility to cover the deficit of the seasonal flexibility provided in the long-term contracts? How much storage capacities Europe is needed?
- What happens in markets where is insufficient liquidity/ no market to cover changes in demand?
- Will there be any risks to security of supply, especially in countries with inadequate storage capacity?

# Long-term Gas Sales Contract Structure




- Long-term contracts contain buyer nominated flexibility
  - DCQ = ACQ / (365*k), where k = daily flexibility coefficient (< 1)
  - The Seller has to hold along all transit route a transportation capacity to cope with the Buyer's peak daily offtake – to secure the whole amount of DCQ during any day of contractual year
- The LTSC pricing structure is such that physical flexibility is settled by the Parties at the point of contract signing and not affected by any price volatility
- Take or pay is necessary for the Seller to ***obtain secure demand***, which helps to get financing from banks for new infrastructure projects (upstream and transit)
- The LTSC-s are important for the Buyer as it allow them to access daily and seasonal flexibility and provide them ***security of supply*** and virtual storage via Make-up gas mechanism

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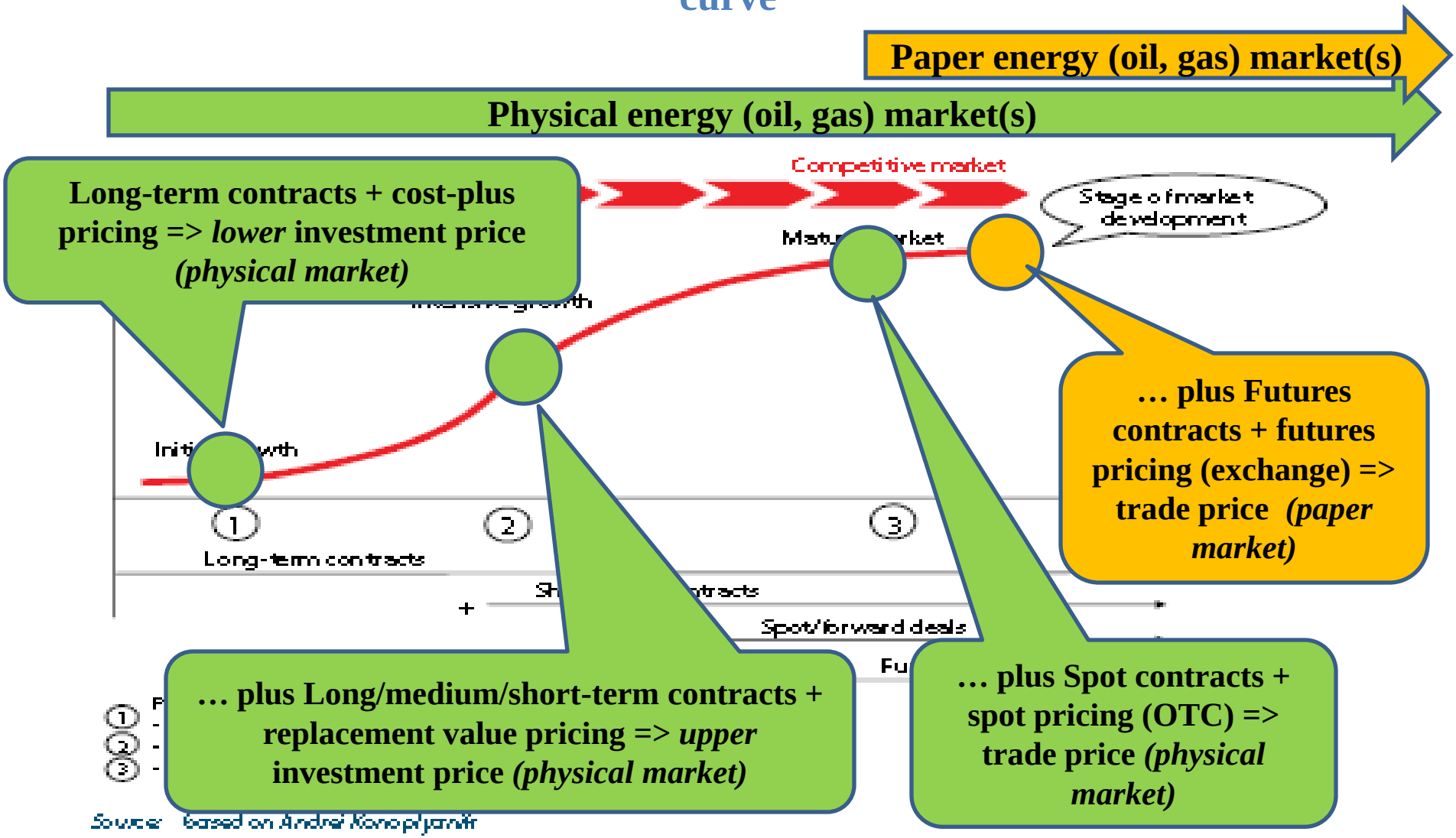
# Evolution of oil & gas markets: correlation of development stages, contractual structures, pricing mechanisms on the left (upward-growing) wing of Hubbet's curve



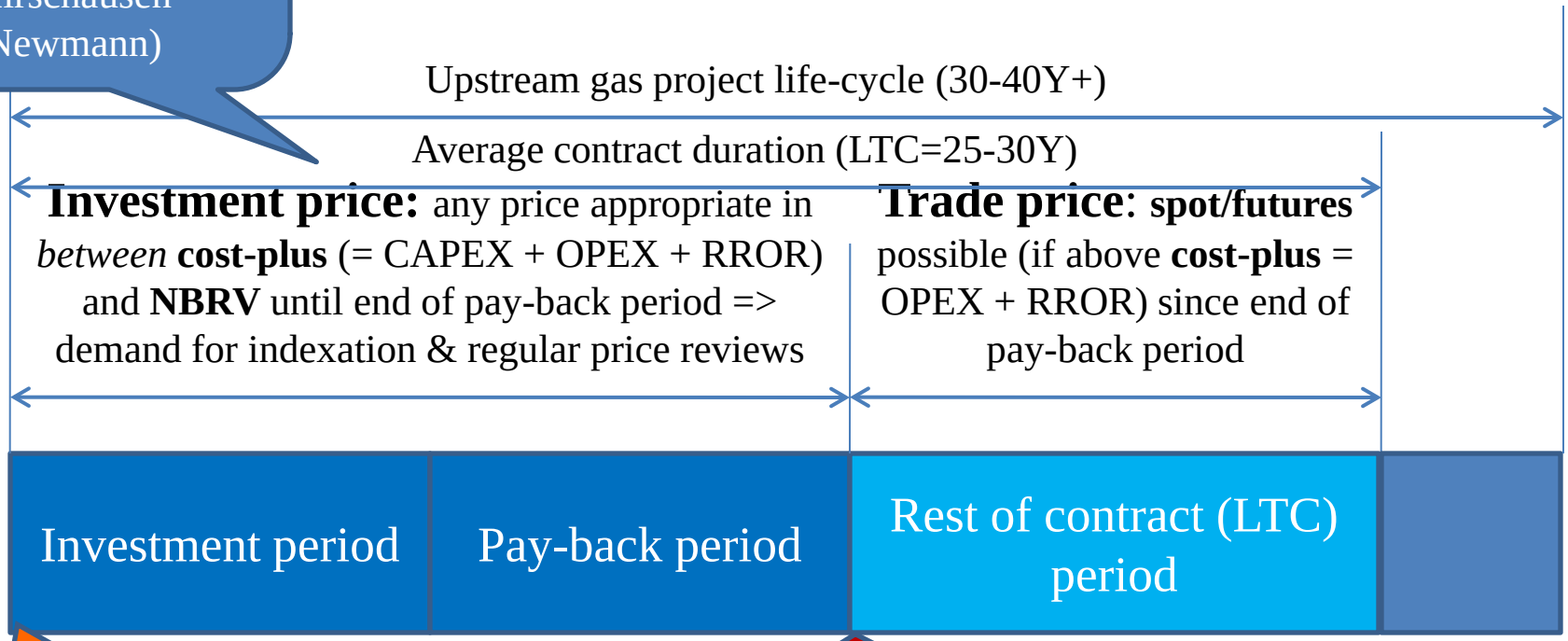

**The principle: in addition to – not instead of!!!**

# Non-renewable energy pricing: legal & economic facets of LTGEC

- Legal basis: UNGA Res.1803 (1962) + ECT Art.18 (1994/98) = (permanent) State sovereignty on natural/energy resources = Governments should use their natural (non-renewable !) resources to the benefit of their population =>
- Resource-owning state: to maximize its long-term resource rent (rent income) for depletion of non-renewable natural resource => price as high as possible => *competitive* => commodity is just *marketable* => replacement value principle (lowest price among competing fuels & suppliers) =>
- Sovereign right of exporter/resource-owning state to sell gas to export market with highest replacement value (utilize both Ricardian & Hotelling rents) => EU market for USSR/Russia
- Economic mechanism: Groningen concept of LTGEC (1962, Nota de Pous) = long-term TOP contract (to pay-back upstream CAPEX) + pricing formula (price indexation) linked to gas replacement values (prices of replacing fuels within competitive energy market) + net-back to delivery point + regular price review + destination clauses => to market gas within evolving market structure & competitive pricing environment to the mutual benefit of both producer & consumer => at maximum (upper) investment price

# Economic preconditions for different pricing mechanisms at different stages of investment project life-cycle

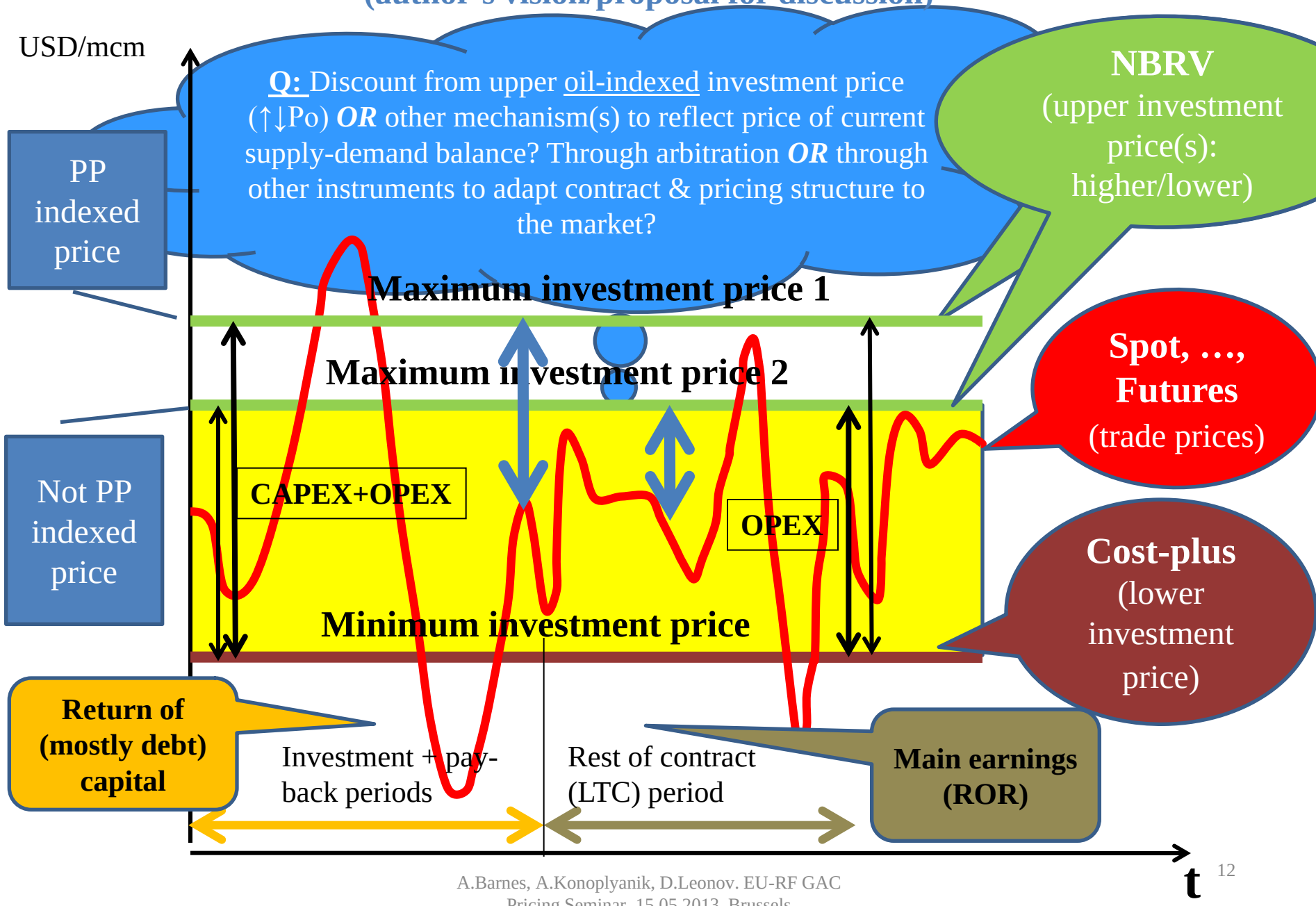
EU import LTC signed (pipeline + LNG): 1980 (30Y) => 2004 (15Y), (Hirschausen-Newmann)




Energy resource enters the market; upfront CAPEX & OPEX assessment incl. risks for acceptable ROR; higher price needed

Energy resource is already at the market; CAPEX recouped; technological possibilities to switch between competing energies in end-use; OPEX determines benchmark price level; lower price needed to stay with acceptable ROR

# S-curve approach for indexation in Continental Europe within contractual pricing (author's vision/proposal for discussion)



# Maximum investment price: historical & new levels for EU

- Historical = Max investment price 1 (higher) = PP-indexed:
  - High oil prices, but:
    - dependent on oil derivatives market,
    - can be manipulated upward & downward by global financial speculators
- New = Max investment price 2 (lower) = not PP-indexed:
  - Spot gas => EU oversupply (whether short-term or long-term?)
  - Coal => US shale gas effect + low CO2 market (for how long?)
  - RES => must-run + subsidies (long-run policy, but corr. w WTO?)
  - Electricity => influence of gas prices (spark spread)
- If market behaviour unclear (what level of upper investment price?), flexible contractual structure is needed to diminish risks & uncertainties to the tolerable level?
- Competitive niche for LTC (incl. with PP-indexation) within two-segment EU gas market structure depends on their adaptability & flexibility… => ???
- What arguments if favour & against oil-indexed LTC (that will influence on their market niche within term segment)?

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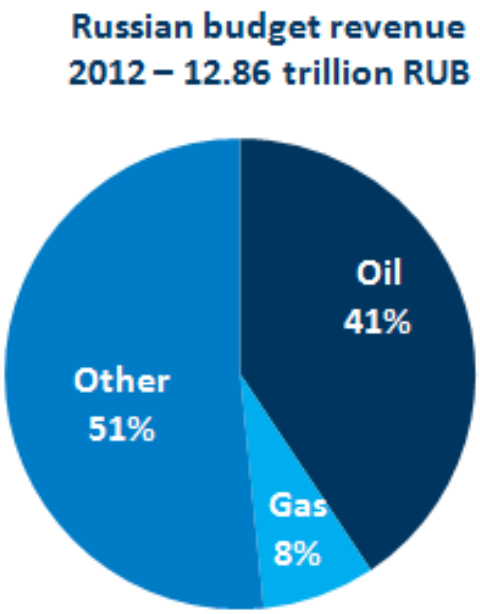
# Oil indexation: arguments “in favour” and “against”

| “In favour” | “Against” |
|---|---|
| 1. Contract parties can not manipulate<br>2. Worked out in practice for 50 years => convenient for users (they got used to it)<br>3. Narrows corridor of price fluctuations, increases price predictability, minimizes investment risks<br>4. Convenient (well developed) tool for financial institutions => hedging => softens debt financing risks<br>5. High oil prices good for project financiers => shorter pay-back periods<br>6. Professional, homogenous, stable and narrow circle of wholesale market participants => transparent and understandable pricing mechanism (for professionals)<br>7. Proposed alternative (spot/futures) is not better today: gas hubs - low liquidity (EU) => high possibility for manipulations | 1. Liquid fuel ceased to be a replacement fuel for gas in industry, electricity generation, but just a reserve (back-up) fuel<br>2. Conservation without changes does not correspond to evolution of “replacement value-based” mechanism within LTGEC (based on inter-fuel competition) => increasing gap between contractual practice & real life<br>3. Withhold gas price below oil parity (price of oil in energy equivalent)<br>4. Links gas price to highly liquid, but manipulated and unpredictable futures oil/derivatives market => ***multiple risks for RF budget earnings***<br>5. RF Gov’t aim to diminish oil dependency => oil-indexation increases/holds oil-dependency<br>6. Confidentiality, thus closed and non-transparent for the public<br>7. Post-2009: higher contractual prices compared to spot transactions |

**Area of continued debate => How to find a compromise (volume flexibility X price flexibility)? Whether it can be found? What can it possibly be alike? No marginal view to win!!!**

# Budgetary risks of oil-indexation for Russia




- <u>If EU gas price fall 20%</u> (even if all gas export sales were hub-indexed):
  - 400 => 320 USD/mcm
  - 13 trln.Rb X 8% X 50% X 20% = 100 bln.Rb = **0.8%**
- <u>If oil price fall 20%</u> (if all gas export sales are oil-indexed):
  - 100 => 80 USD/bbl
  - 13 trln.Rb X (41+8)% X 100% X 20% = 1.3 trln.Rb = **10%**
  - Plus negative multiple effects for:
    - pre-election (Dec'11 & March'12) social & other promises of the State => converted to obligations by May'12 Presidential Decrees,
    - state investments (today are the key),
    - credit ratings => lower FDI inflow, higher cost of capital
    - etc…

- How to find balance between short-term (high selling price) and long-term (market share) within rest of long (6+6?) political cycle & predicted upcoming recession?
- How to update contractual structure with tolerable risks & uncertainties? To be actively present at each market segment? To combine more sophisticated portfolio? (one of possible options - see presentation of GM&T)
- The key to adapt is outside gas sphere => no quick & radical changes in gas possible?

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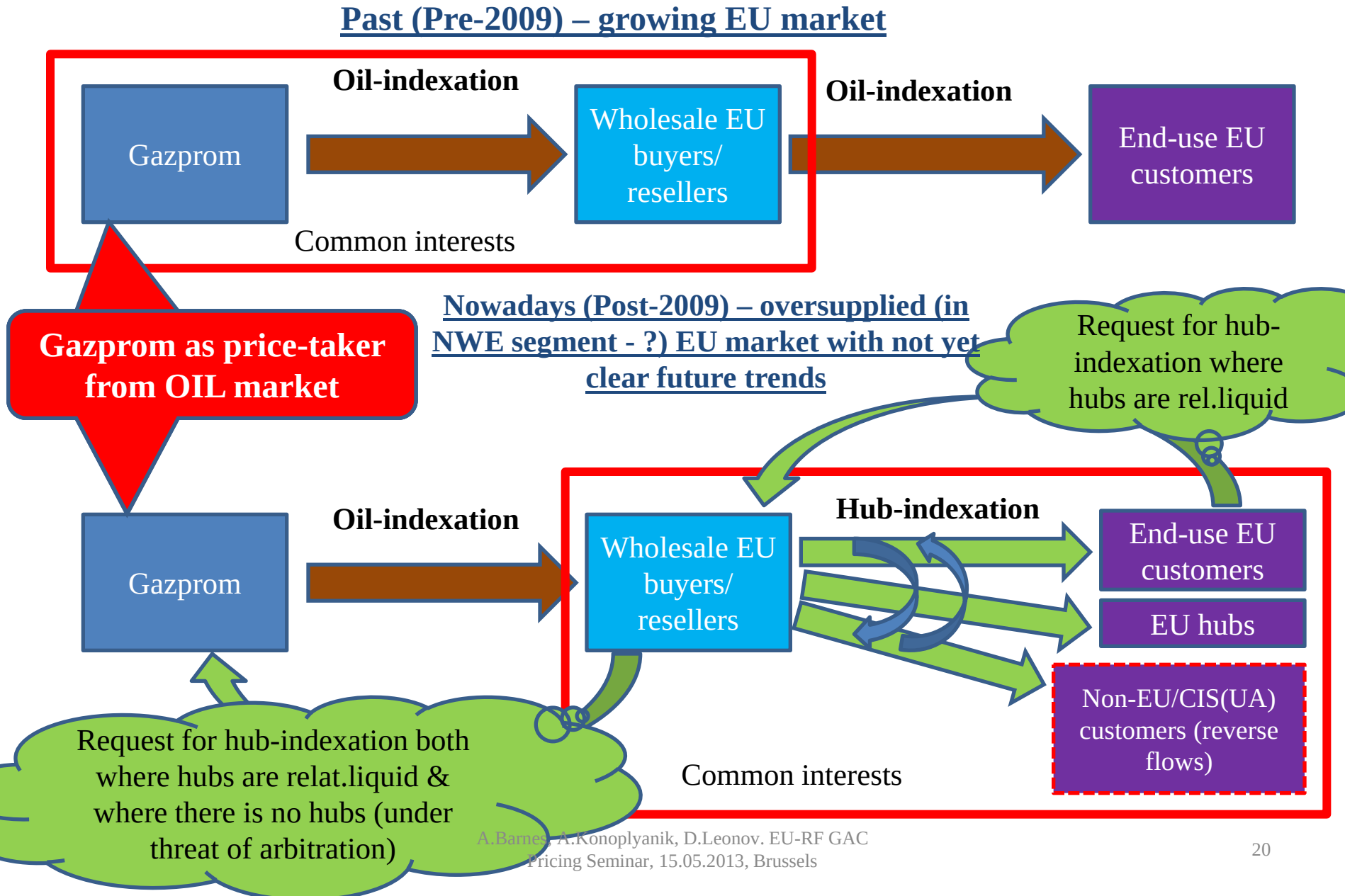
# From single to multiple contractual structure (1)

- More diversified contractual mix as a trend:
  - Within two-segment EU **physical** gas market (term & spot) – each with its own mechanisms for providing volume flexibility
  - With multiplicity of pricing mechanisms - to provide competitiveness of supplies within given market area
- One of key issues: how to balance volume flexibility vs pricing flexibility (price attractiveness) within more sophisticated contractual mix =>
  - to stay within corridor of attractiveness for all group of old & new buyers => not necessarily for wholesale buyers only (current customers), but both to wholesale & (new) end-users =>
  - potential benefits of the Third EU Energy Package for all group of sellers (in addition to proclaimed benefits for buyers)

# From single to multiple contractual structure (2)

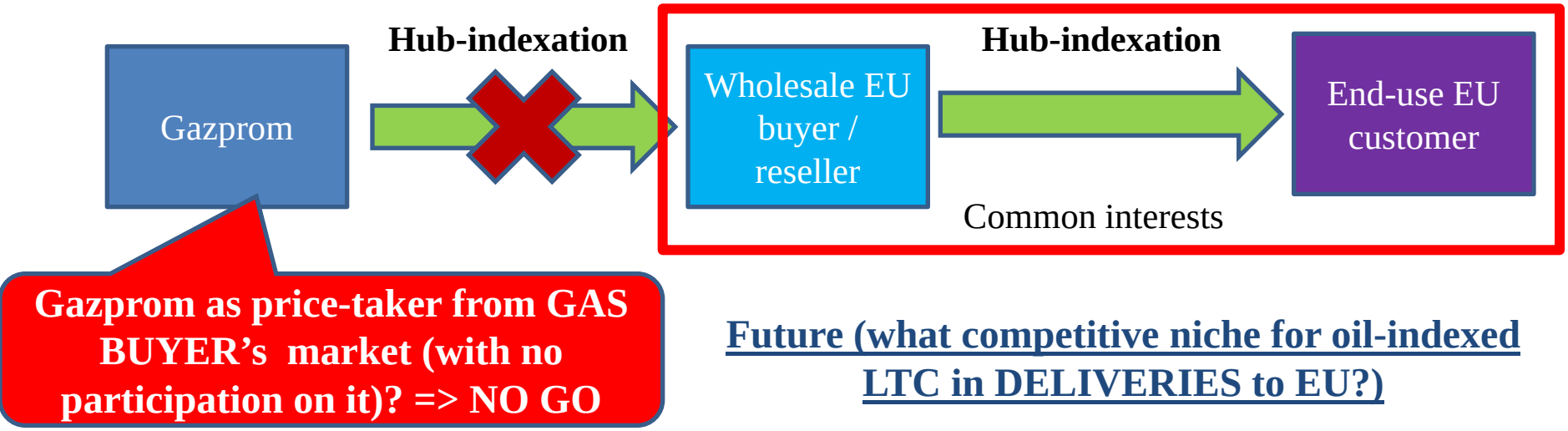
- Competitive niche of LTC depends on its comparative attractiveness:
  - Volumes flexibility: contractual (LTC renominations + make-up gas as virtual storage) vs hub-based (NC CAM restricts renominations + yet limited UGS)
  - Attractive/competitive price levels: if no competitive supplies – foreign producer/exporter has legal (sovereign) right to utilize maximum resource rent unless it depress demand => balance of short/long-term sovereign (!) interests
  - It's for market players to decide based on their evaluation of comparative volume & price combined effect
- No **forced** (administrative levers) transition away from oil-indexation towards hub-indexation in LTC (***commodities market***) through EU ***capacities market*** instruments (NC CAM, etc.) => potential risks of, f.i. (possibility – not necessary real intentions):
  - merger of E-E/VTP zones: f.i. Austria (East) + Czech Rep. + Hungary + Slovakia => to link CEE without TPs & without alternative supplies to Baumgarten (VTP) within most radical Austrian model of TEP implementation
  - soft "sunset clause": debate on DP => proposed adaptation of existing LTC (move DP to VTP) => LTC then no more "existing" but "new" => obligatory bundling => obligatory VTP pricing
- No way of staying with current supply scheme (with wholesale intermediaries) & moving to hub-indexation within existing LTC

# Evolution of gas value chain & pricing mechanism of Russian gas to EU (1)

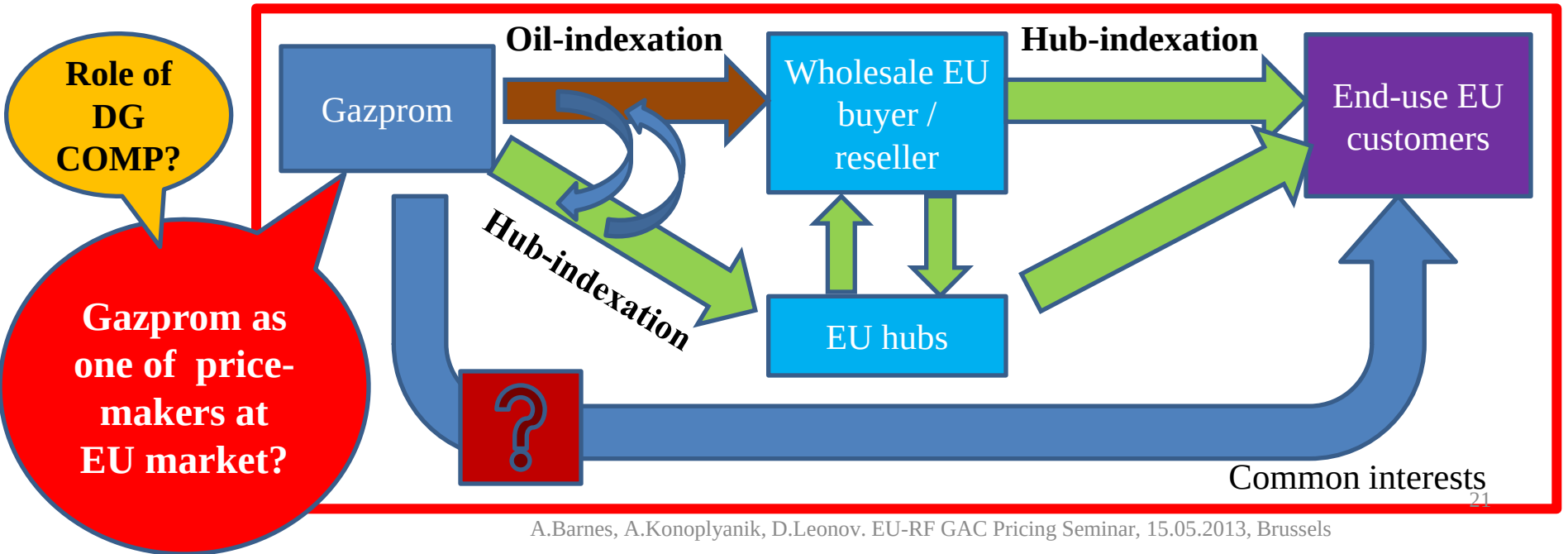


# Evolution of gas value chain & pricing mechanism of Russian gas to EU (2)

## Future ("NO GO" contractual scheme under any (?) supply-demand scenario)




## Future (what competitive niche for oil-indexed LTC in DELIVERIES to EU?)

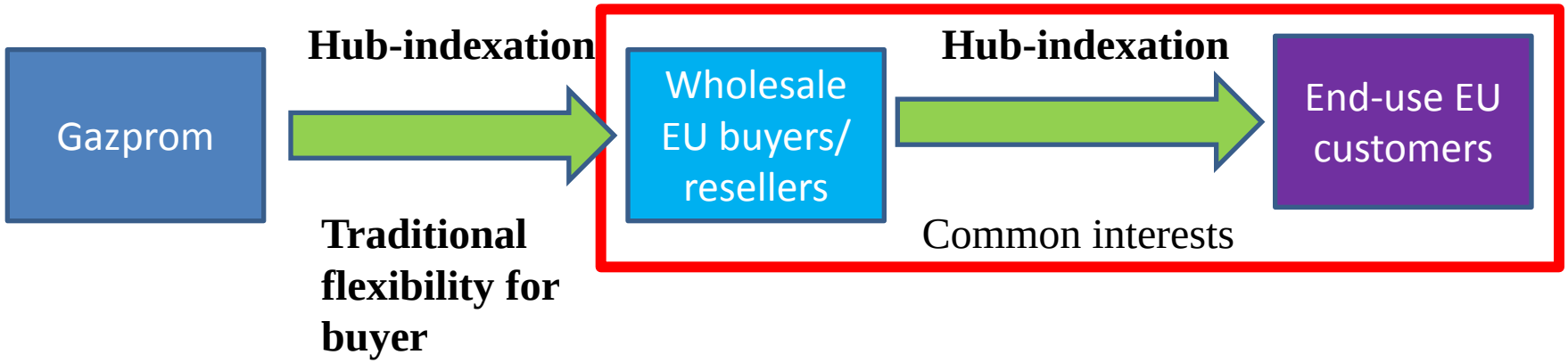


# Oil-indexed LTC: externalities are the key?

- Key risks & uncertainties for oil-indexed LTC – external (non-gas):
  - EU:
    - competitiveness/survival of EU companies – wholesale intermediaries (important budget donors) within in-crisis/slowdown economic environment =>
    - Russian oil-indexed LTC as a nice populist (incl. pre-election) explanation of external origin of (at least part of) EU internal economic problems =>
    - Q1: Whether recent expropriation of bank deposits in Cyprus (violation in EU MS of private ownership rights – one of fundamental EU "values" - in favour of electoral or other considerations in other EU MSs) may not be just a precedent to be exported to other spheres, incl. forced termination of oil-indexed LTC =>
    - Q2: whether DG COMP raid against Gazprom on 04.09.2012 (claim 3 of CEC press-release – on oil-indexation) is not just a possible step in this direction?
  - RF:
    - perceived survival of RF state (Gazprom one of major single budget donors)
  - Both EU & RF are either within recession or facing approaching (predicted) economic crisis/slowdown => both aim to protect budget earnings "by any means"?
- Key risks for oil-indexed LTC adaptation are outside gas sphere, but:
  - EU would wish immediate deviation from oil-indexed LTC,
  - RF cannot afford immediate radical adaptation of oil-indexed LTC,
  - Due to capital-intensive character of gas business & high risk of quick changes, mutual adaptation (on both sides) should be slow and careful
- => No quick & radical changes in gas possible? What is best solution?

# Gas indexation – the producer's nightmare

## Future ("NO GO" contractual scheme under any (?) supply-demand scenario)




- If buyer is large relative to the wholesale market / gas hub then he has market power relative to seller as he controls flows to wholesale market
- In well supplied market buyer can nominate maximum DCQ – more than he requires for own needs
- Gas the buyer does not require is sold onto market at spot price pushing price down, but buyer is indifferent as he buys and sells at same price
- But producer loses out.

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# Key differences between EU and other gas markets

- EU downstream still dominated by large incumbent companies who are also the buyers
  - Simple switch to gas index pricing merely enhances their market power
  - Regulation of end user prices prevents emergence of true competition between suppliers
- Switch to gas indexation in other markets e.g. US and UK caused significant disruption as adjustments made
  - Financial distress of players e.g. Centrica, US gas companies
  - But UK and US were self sufficient in gas unlike EU

# More details on the debate:

- WORKSHOP ON CONTRACTUAL ISSUES RELATED TO ENERGY TRADE, organized jointly by the Energy Charter Secretariat & Hungarian Ministry of National Development, 20 March 2013, Budapest, Hungary, incl. (these & other relative materials available from www.konoplyanik.ru):
  - A.Konoplyanik. “Long-term investments in the gas industry: the role of oil indexation (background to the debate)”,
  - A.Konoplyanik. “A viable gas pricing model for Europe (continuation of the debate)”
- …

# Thank you for your attention

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