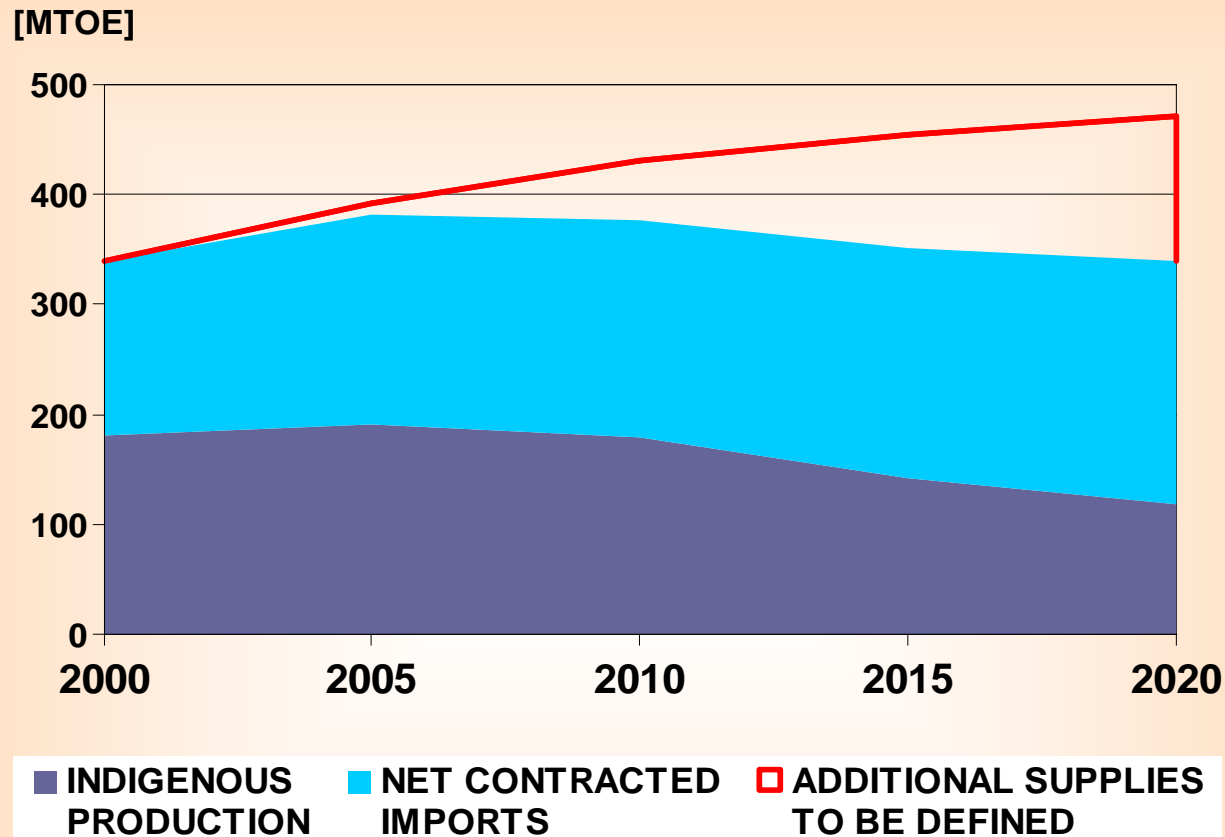


**RUSSIAN GAS TO EUROPE:
POSSIBLE RISKS AND MECHANISMS OF THEIR
PREVENTION/MITIGATION**

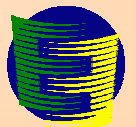
**Dr. Andrei A. Konoplyanik
Deputy Secretary General
Energy Charter Secretariat (Brussels)**

**8th Schlangenbad Meeting
Schlangenbad, Germany, 28-30 April 2005**

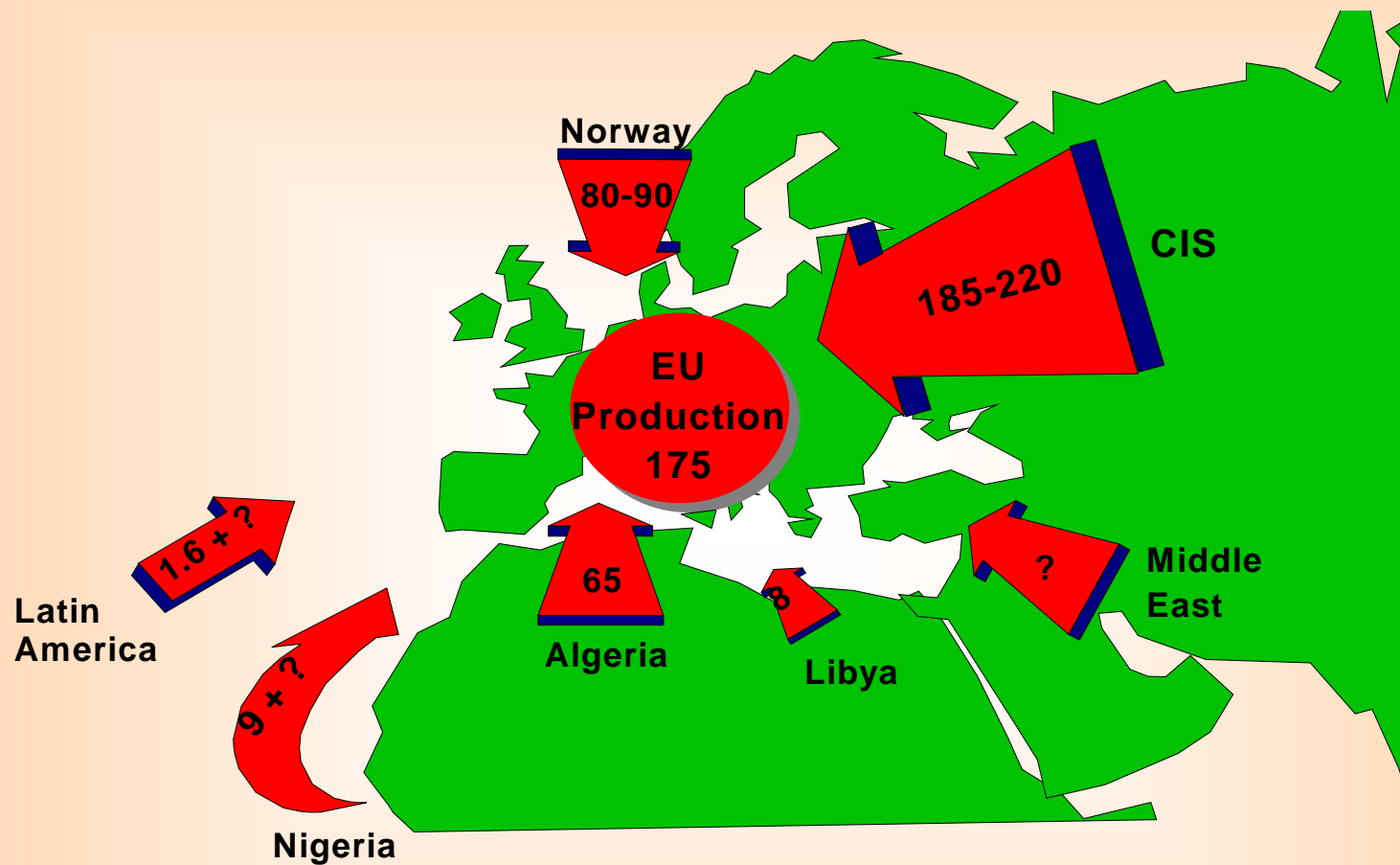
EU NATURAL GAS SUPPLY AND DEMAND, 2000-2020



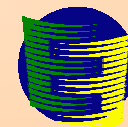
Source: S.Furlan, Scuola E.Mattei – ENI Corporate University
26th IAEE Conference, 4-6 June 2003, Prague



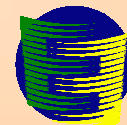
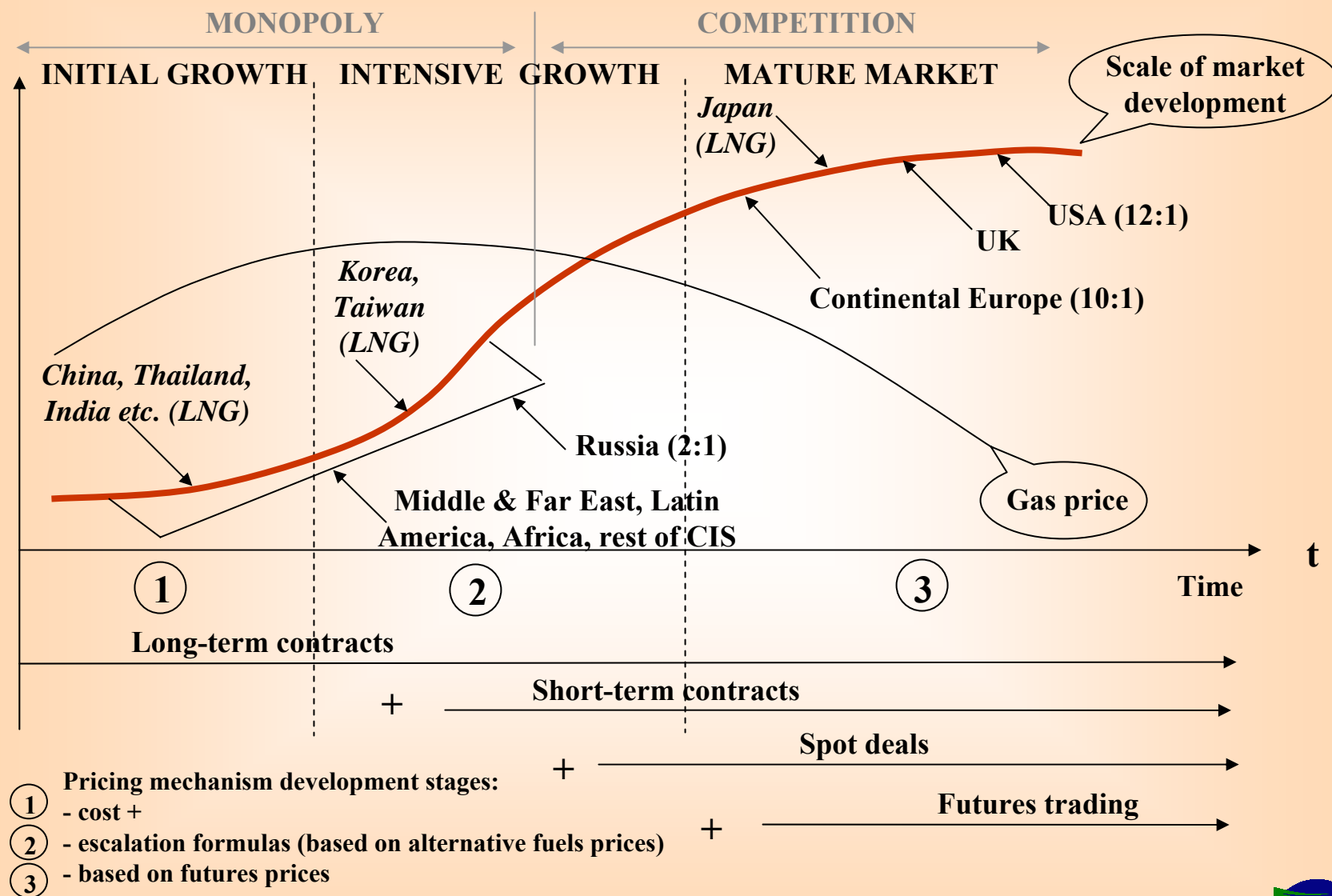
GAS SUPPLIES TO WESTERN EUROPE IN 2010-2020 гг. (bcm/y)



Source: S.Furlan, Scuola E.Mattei – ENI Corporate University
26th IAEE Conference, 4-6 June 2003, Prague



“EVOLUTION CURVE” OF GAS MARKETS DEVELOPMENT AND CURRENT POSITION OF DIFFERENT COUNTRIES AT THAT CURVE

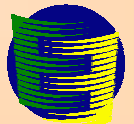


MAJOR ELEMENTS OF RUSSIAN GAS EXPORTS TO EUROPE:

- Long-term “take and/or pay” contracts
- On-border (EU-15) sales
- “Destination clauses” (territorial sales restrictions)
- Key role of transit

ENERGY SECURITY =

- (1) stable, cheap & environmentally friendly energy cycle**
- (2) minimum volume risk + minimum price risk**



GAS: DIFFERENT PROJECTS – DIFFERENT CONTRACTS

(1) New projects in mature regions with existing infrastructure, with available transportation capacities (usually less capital-intensive projects, relatively small to the existing market) =

(a) short-term contracts (“take and/or pay”) – for the duration of payback period (?)

(b) spot deals – when payback period is over (?):

- dated

- forward

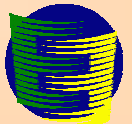
- futures

Regions: Western, Central & Eastern Europe

(2) New projects in new regions with no/lack-of infrastructure for both production and transportation (usually more capital-intensive projects, relatively big to the existing market, or just forming/establishing the market) =

(a) long-term “take and/or pay” contracts

Regions: Russia, CIS, Asia



LONG-TERM TAKE AND/OR PAY GAS CONTRACTS (LTC TOP) AND PROJECT FINANCING RISKS

$$\text{Financing} = f(\text{revenue}) = f(\text{volume} \times \text{price})$$

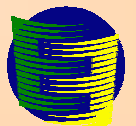
(1) LTC TOP = mechanism of supply risks («volume» risks) reduction

(2) LTC TOP + adequate pricing mechanism = mechanism of “price” risks reduction:

- prior to exchange pricing: escalation formulas
- exchange pricing: spot/futures/options + hedging

(1) + (2) = mechanism of project financing risks reduction in long-term capital-intensive Greenfield projects, especially in new regions with no (lack of) production & transportation infrastructure

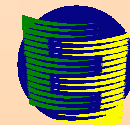
LTC TOP in gas has yet no alternative at the forming and emerging markets



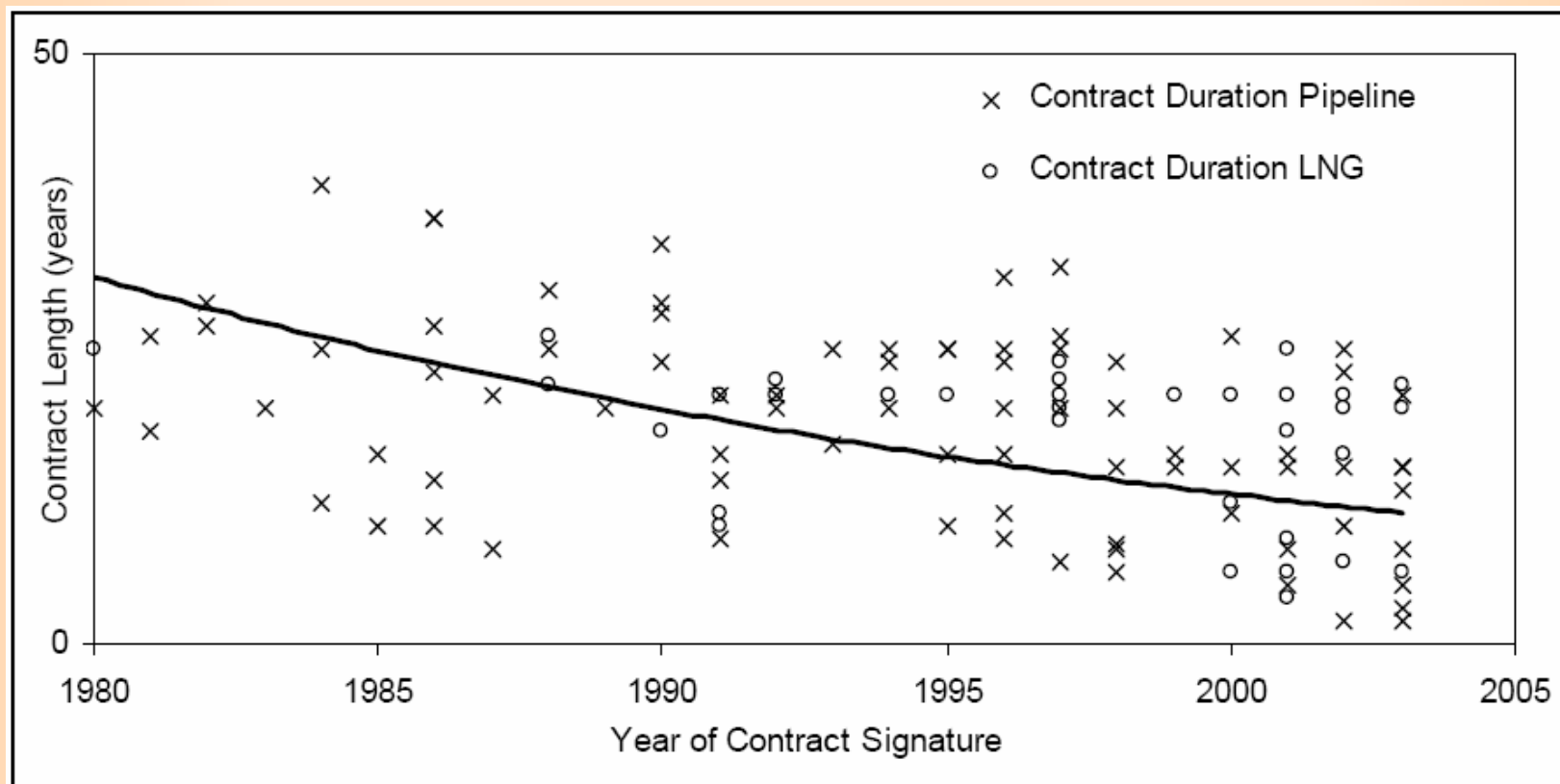
ROLE OF LONG-TERM CONTRACTS IN GAS SUPPLIES TO EU MEMBER-STATES: AS OF TODAY ...

	Italy	France	Germany	Spain	Belgium	Greece
Total supplies in 2002 (BCM)	72.5	44.2	94	23	17.5	2.1
Share of imports in total supply (%)	80	96	82	99.5	100	100
Share of LTC in total supply (%)	NA	94	NA	44	91	100
Average residual duration of contracts (years)	14	15	11	NA	NA	13

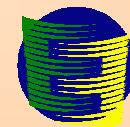
Source: ECS calculations



DISTRIBUTION OF CONTRACTS STRUCK IN OECD EUROPE SINCE 1980



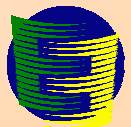
Source: C.Hirschhausen, A.Neumann. Less Long-Term Gas to Europe. A Quantitative Analysis of European Long-Term Gas Supply Contracts. [www.gasandoil.com/ogel/Vol. 3, issue 1, March 2005](http://www.gasandoil.com/ogel/Vol.3,issue1,March2005)



ROLE OF LONG-TERM CONTRACTS IN GAS SUPPLIES TO EU MEMBER-STATES: ... AND AS OF TOMORROW

Item 25: “Long-term contracts will continue to be an important part of the gas supply of Member States and should be maintained as an option for gas supply undertakings in so far as they do not undermine the objectives of this Directive and are compatible with the Treaty [of Rome, 1958 - AK], including competition rules. It is therefore necessary to take them into account in the planning of supply and transportation capacities of gas undertakings.”

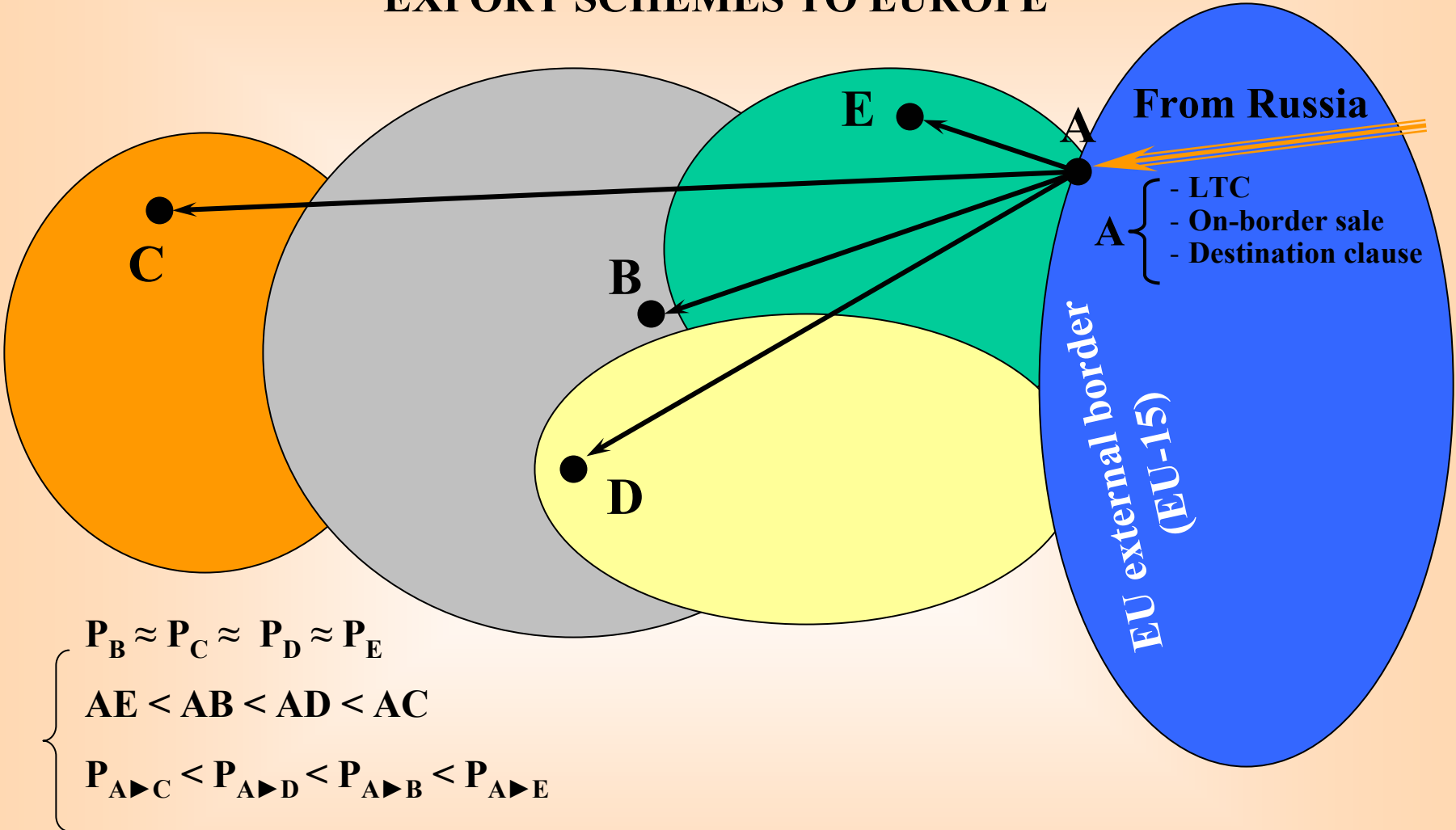
Source: DIRECTIVE 2003/55/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 June 2003 concerning common rules for the internal market in natural gas and repealing Directive 98/30/EC



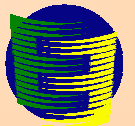
RUSSIAN GAS EXPORT TO EUROPE: ON-BORDER SALES AND TRANSIT ARMS



DESTINATION CLAUSES = TERRITORIAL SALES RESTRICTIONS = ECONOMICALLY MOTIVATED INTEGRAL PART OF EXISTING RUSSIAN EXPORT SCHEMES TO EUROPE

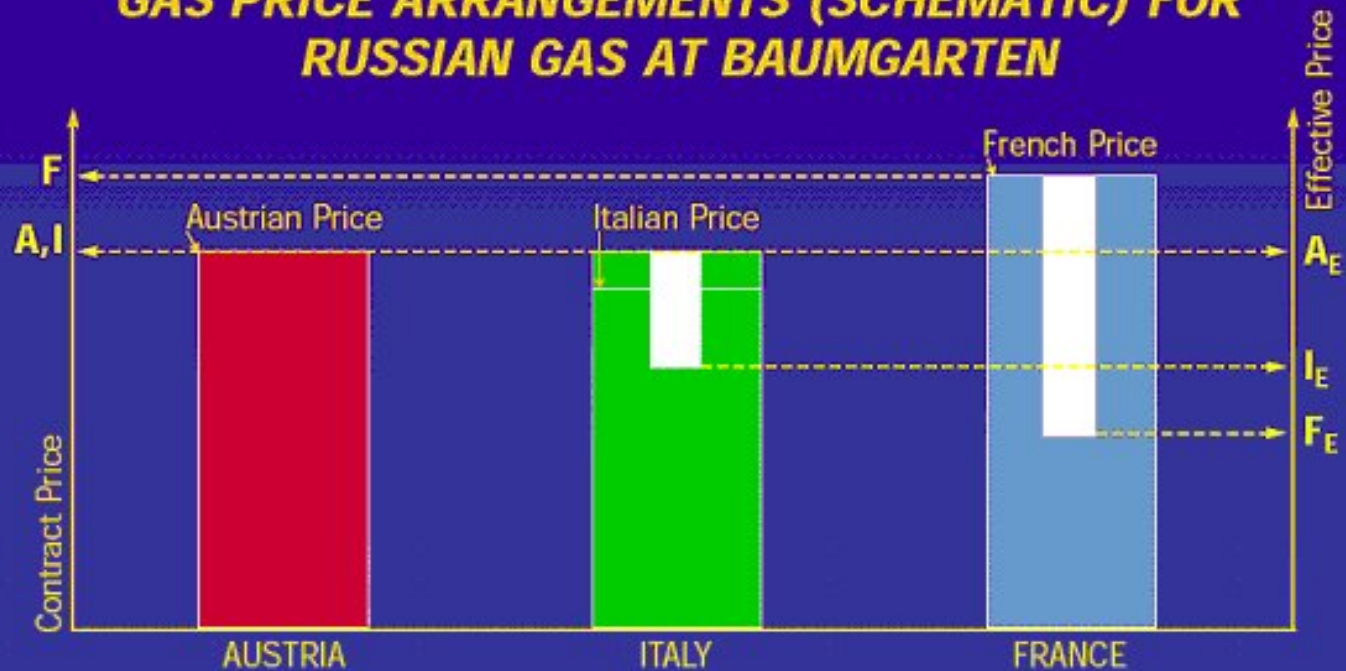


“Destination clauses” allowed gas supplier to sell gas to different buyers at different prices and conditions at one and the same delivery point.



3.4 DESTINATION CLAUSES

GAS PRICE ARRANGEMENTS (SCHEMATIC) FOR RUSSIAN GAS AT BAUMGARTEN



$F - F_E$ = French transportation adjustment
 $A_E - F_E$ = French Baumgarten "discount"

$I - I_E$ = Italian transportation adjustment
 $I_E - F_E$ = Italian Baumgarten "discount"



5.2 CONCLUSIONS

- ▲ The removal of destination clauses should be strictly tied to and be conditional upon the introduction of full and unrestricted TPA in the EU gas transmission system
- ▲ Removal of destination clauses without unrestricted transmission system TPA would give gas importers undue advantages over gas exporters

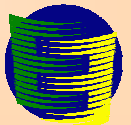


EUROPEAN GAS COMMUNITY VIEWS ON THE PROSPECTS OF INTERNAL EU GAS MARKET DEVELOPMENTS (FLAME 2004)

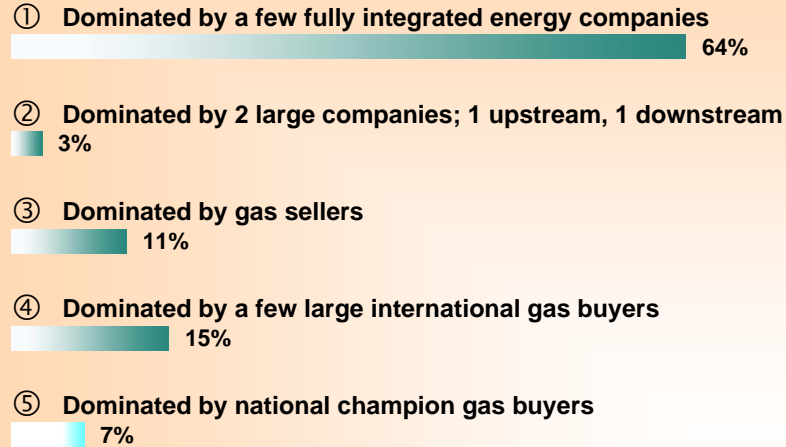
Questions:

- **How would you characterise Europe's gas market in 10 years time?**
- **When do you believe that European long term contract gas prices will become decoupled from oil and determined by spot/futures prices?**
- **By the end of 2008 what will be the volume of gas sold at hubs as a percentage of total EU gas sales?**
- **Why do you think that traded markets across Europe lack liquidity?**

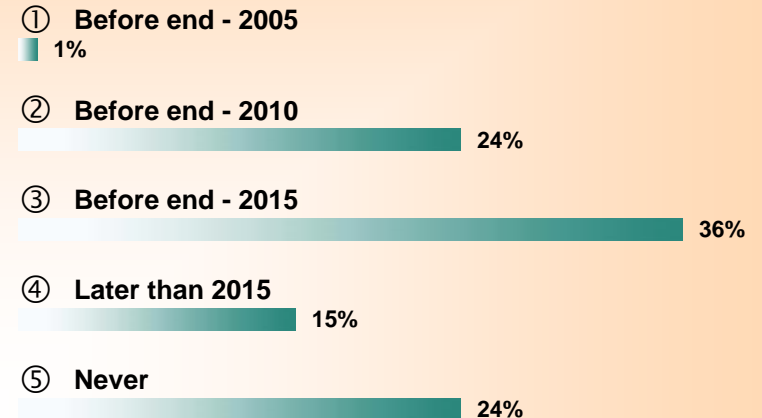
FLAME 2004 Polling Session that involved about 250 Conference delegates from all the segments of European gas business community



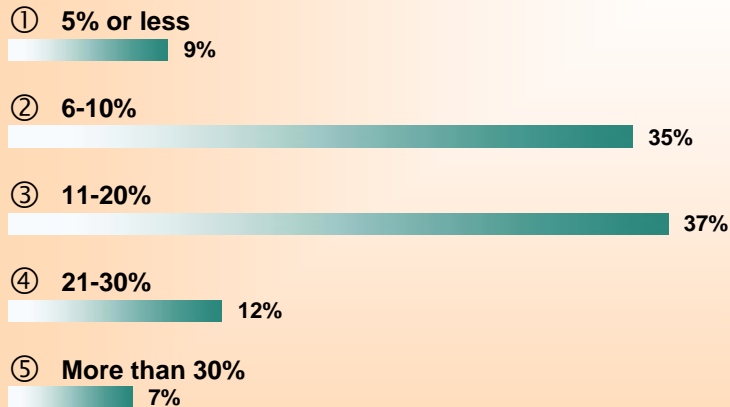
How would you characterise Europe's gas market in 10 years time?



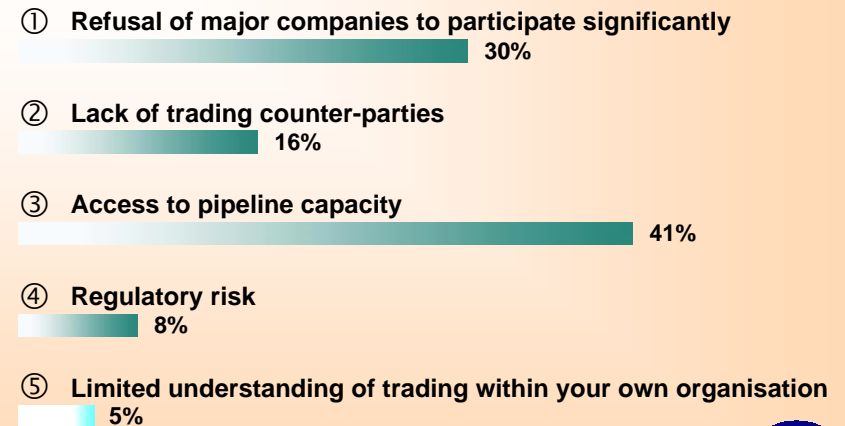
When do you believe that European long term contract gas prices will become decoupled from oil and determined by spot/futures prices?



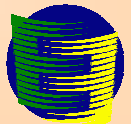
By the end of 2008 what will be the volume of gas sold at hubs as a percentage of total EU gas sales?



Why do you think that traded markets across Europe lack liquidity?



Source: Flame 2004 Conference Polling Session



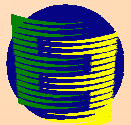
CONSEQUENCES OF “DESTINATION CLAUSES” LIQUIDATION IN GASPROM LONG-TERM CONTRACTS TO EUROPE

2004 OMV-Gasprom deal:

No immediate negative consequences for Gazprom since its “effective” gas price in Baumgarten for deliveries to Austria is the highest compared to deliveries to France and Italy.

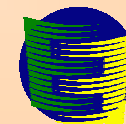
2003 EU Commission-ENI-Gasprom deal:

Negative consequences for Gasprom since its “effective” gas price in Baumgarten for deliveries to Italy is lower compared to that of deliveries to Austria?

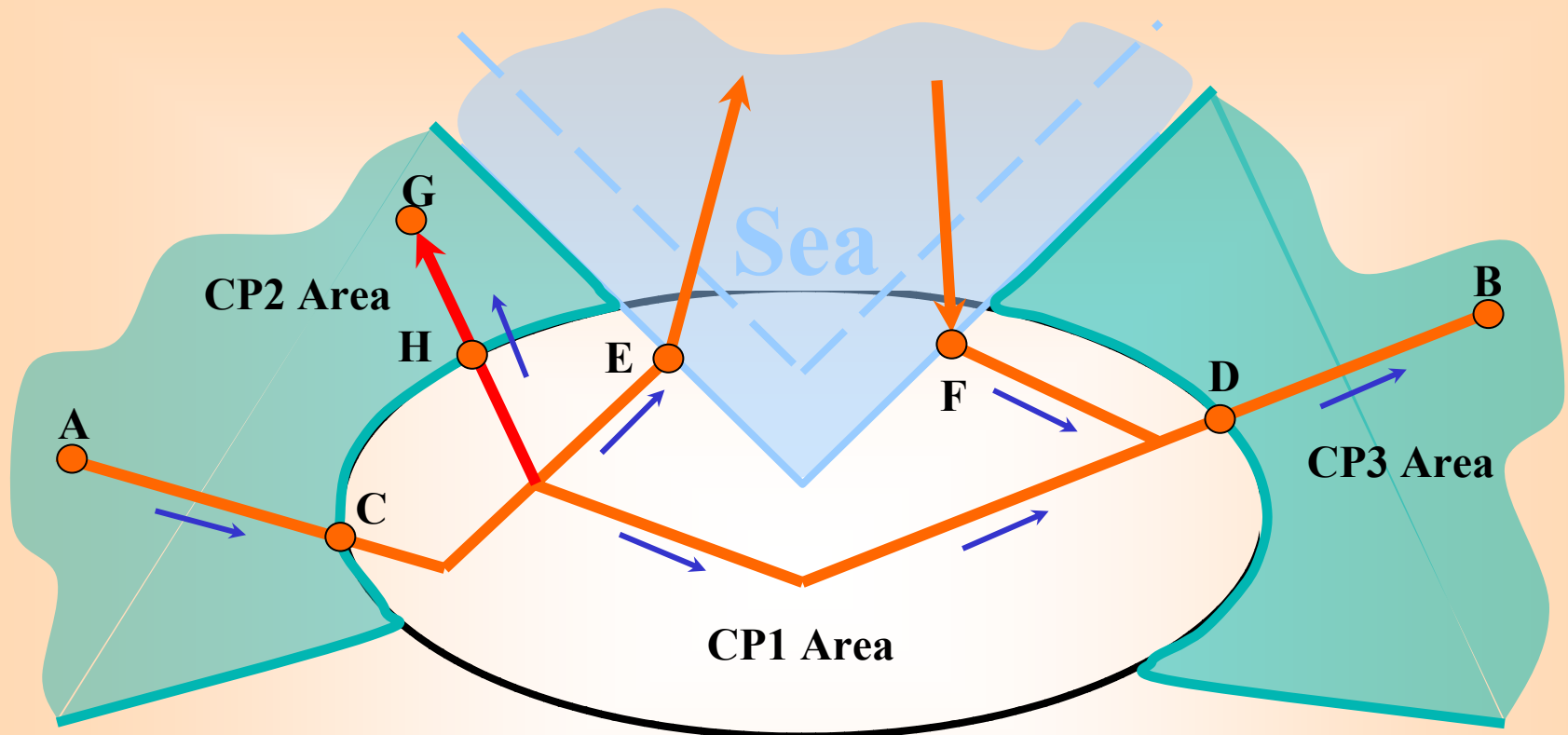


ROLE OF GAS TRANSIT FOR ITS MAIN EXISTING EXPORTERS TO EUROPE (1999)

Country-exporter	Direct supplies, % of volume of exports	Transit through the territory of: % of volume of exports			
		one country	two countries	three countries	four countries
EXISTING EXPORTERS					
Netherlands	76,2	13,8	10,0	-	-
Norway	67,7	7,5	21,4	3,4	-
Algeria	44,9	14,8	9,6	24,3	6,4
Russia	39,5	9,4	11,4	28,1	11,6



TRANSIT IS NOT THE ONLY OPTION ...



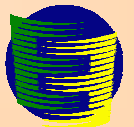
3 possibilities of energy supplies from A to B:

No transit (on-boarder sales at C, D):

RUF-EU, Turkmenistan-RUF, Kazakhstan-RUF, Algeria-Italy, Algeria-Spain;

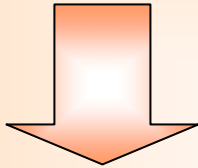
Transit:

- through the pipe owned/leased by shipper: France-Germany, Norway-France, Italy-Austria; planned RUF-CIS/EE;
- through the pipe not owned by shipper



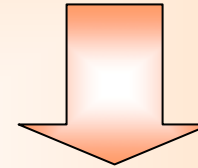
... BUT IT MIGHT BE THE CHEAPEST ONE – IF ADEQUATELY LEGALLY PROTECTED

TWO SCENARIOS OF RUSSIAN GAS EXPANSION FURTHER INTO EUROPE



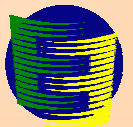
1) Gazprom = owner of pipeline
(construction of new pipeline capacities, purchase of pipeline companies shares)

- More expensive
- Decreasing rights of pipeline owners on decisions for transit/ transportation conditions according to EC legislation



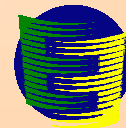
1) Gazprom = shipper (from gas sales at the border to wholesale buyers/resellers → to sales to final consumers within country)

- Less expensive
- Increasing rights of transporters on decisions... according to EC legislation



ECT TRANSIT PROTOCOL: MAJOR ISSUES ADDRESSED

- 1. Obligation to observe Transit Agreements**
- 2. Prohibition of unauthorized taking of EMP in Transit**
- 3. Definition of Available Capacity in Energy Transport Facilities used for Transit**
- 4. Negotiated TPA to Available Capacity (mandatory TPA is excluded)**
- 5. Facilitation of construction, expansion or operation of Energy Transport Facilities used for Transit**
- 6. Transit Tariffs shall be non-discriminating, objective, reasonable and transparent, not affected by market distortions, and cost-based incl. reasonable ROR**
- 7. Technical and accounting standards harmonized by use of internationally accepted standards**
- 8. Energy metering and measuring strengthened at international borders**
- 9. Co-ordination in the event of accidental interruption, reduction or stoppage of Transit**
- 10. Protection of International Energy Swap Agreements**
- 11. Implementation and compliance**
- 12. Dispute settlement**



BENEFITS TO BE EXPECTED OF TRANSIT PROTOCOL IMPLEMENTATION

- **Diminishment of risks related to transit**
- **Better financing terms**
- **Increase of competitiveness of transit supplies;**
- **Improvement of energy security (supplies+ demand+ infrastructure).**

