



Energy Transit : Experience and Perspectives

**IFRI Tuesday Luncheon
Brussels, 18 November 2008**

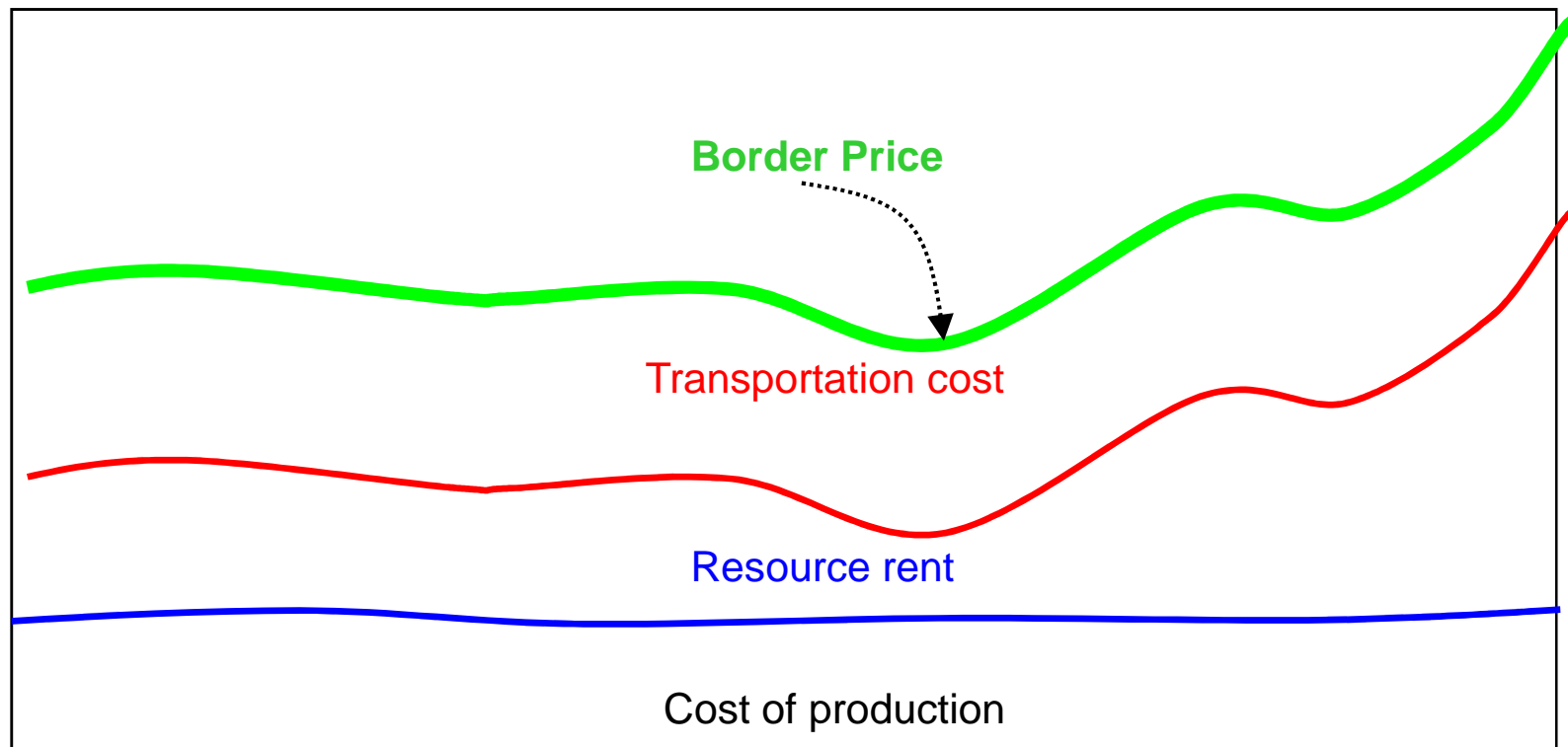
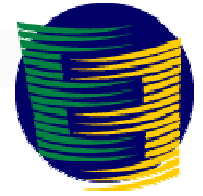
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Energy Transit: Experience and Perspectives

- Basic questions
- The role of economics and politics
transit tariffs / transit fees
- International legal frameworks (WTO, ECT
incl. draft TP)
- Recent development / perspectives

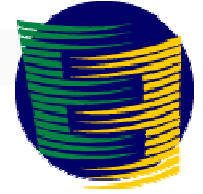
Transportation: Who pays?



In International Gas Pricing based on **Replacement Value / Net Back Principle**:

- Higher transportation cost is at the expense of resource rent;
- therefore, the cost of infrastructure matters predominantly for the resource owner.

Model Transportation Costs



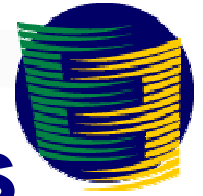
MODEL PIPELINES

	<u>Pipe A</u>	<u>Pipe B</u>	<u>Pipe C</u>	<u>Pipe D</u>
Diameter (in)	56	40	56	40
Pressure outlet (bar)	120	120	55	55
Pressure inlet (bar)	90	90	35	35
Nr of compressors	4	4	7	6
Distance (km)	1500	1500	1500	1500
Optimized max throughput (bcm/y)	31.7	13.5	20.5	8.0
Utilization rate (%)	80	80	80	80

AVERAGE COST OF TRANSPORTATION Index (\$/1000m³)

<u>Depreciation (%)</u>	<u>Pipe A</u>	<u>Pipe B</u>	<u>Pipe C</u>	<u>Pipe D</u>
0	20.7	31.5	35.2	56.3
25	16.8	24.9	28.7	44.3
50	12.8	18.1	22.2	32.1

Large variations in gas transit tariffs

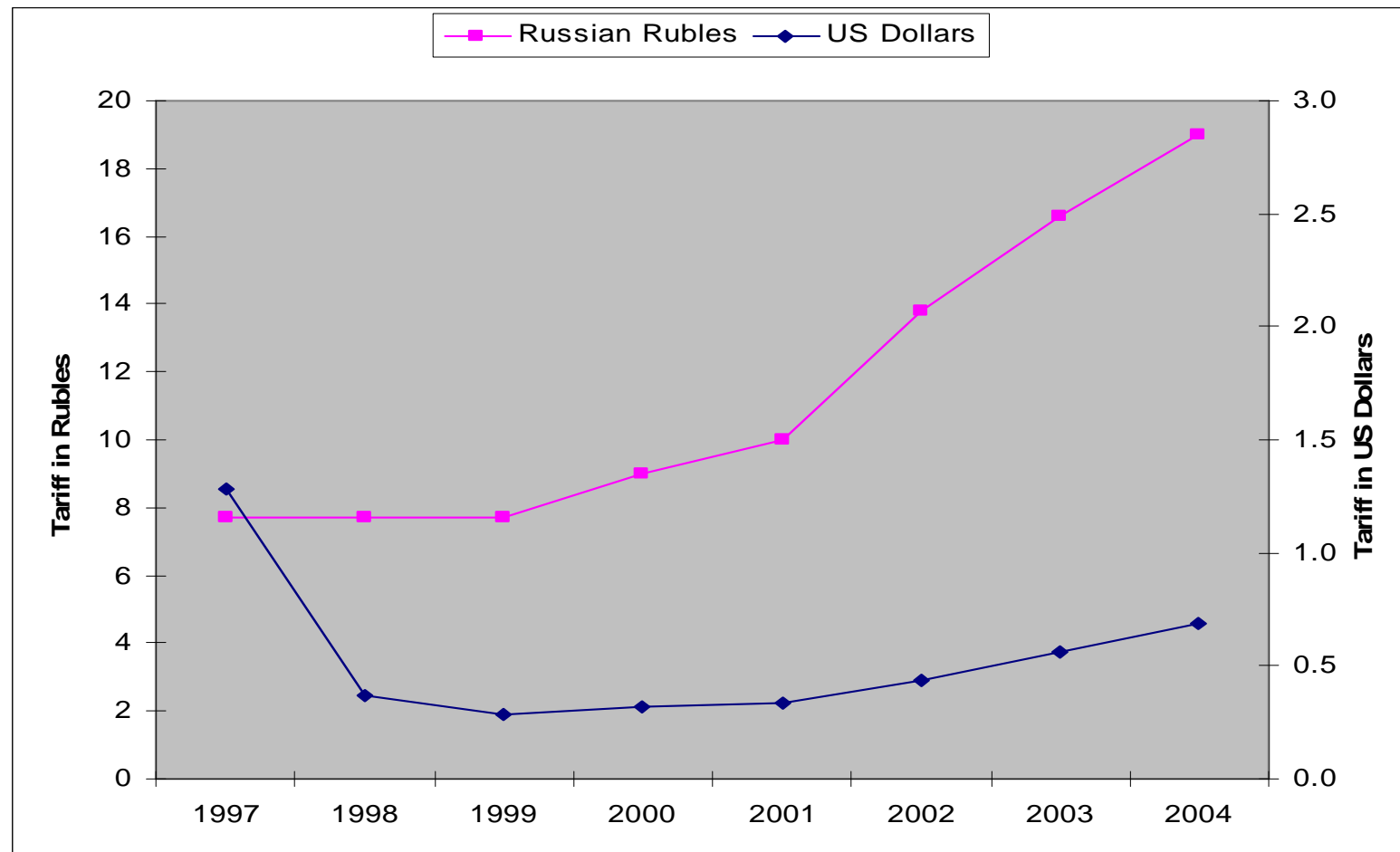
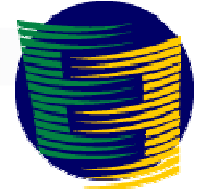


Country	Tariff (€/m ³ /h/y)	Pipeline Diameter (in)	Methodology	Source
Model new 56"	37	56	Distance-based capacity	Estimate
Model new 40"	78	40	Distance-based capacity	Estimate
Austria (Penta West)	96	28	Distance-based capacity	Published-indicative
Belgium (Fluxys)	78	>36	Distance-based capacity	Published-indicative
Poland (Yamal)	71	>36 (56)	Distance-based commodity	Estimate
Germany (Wingas)	63	>40	Distance-based capacity	Published
Slovakia (SPP)	62	>36	Entry-exit	Published
Interconnector	55	>36 (40)	Distance-based commodity	Estimate
Bulgaria	43	>36	Distance-based commodity	Estimate
Russia	28*	>36	Commodity	Estimate
Ukraine	28*	>36	Distance-based commodity	Published
Poland (Yamal-future)	26	>36 (56)	Distance-based commodity	Estimate
Belarus (Yamal)	19	>36	Distance-based commodity	Estimate
Belarus (N. Lights)	12	>36	Distance-based commodity	Estimate

° New transit tariff through Russia and Ukraine: 41 €/m³/h/y

* For movement over 350 km.

Russian Gas Transport Tariffs: Impact of exchange rates



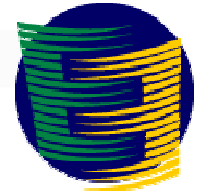


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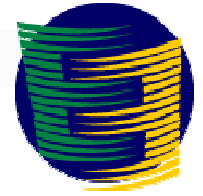


Article V (GATT 1947)



Freedom of Transit

1.
2. **There shall be freedom of transit through the territory of each contracting party, via the routes most convenient for international transit**, for traffic in transit to or from the territory of other contracting parties. **No distinction shall be made which is based on the flag of vessels, the place of origin, departure, entry, exit or destination**, or on any circumstances relating to the ownership or goods, of vessels or of other means of transport.
3. Any contracting party may require that traffic in transit through its territory be entered at the proper custom house, but, except in cases of failure to comply with applicable customs laws and regulations, such traffic coming from or going to the territory of other contracting parties shall not be subject to any unnecessary delays or restrictions and **shall be exempt from customs duties and from all transit duties or other charges imposed in respect of transit, except charges for transportation or those commensurate with administrative expenses entailed by transit or with the cost of services rendered.**
4.



Freedom of Transit for Grid Bound Energy

Trade issue

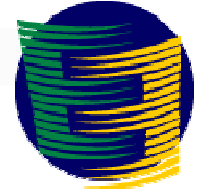
But also (NOT covered by WTO) issue of Enabling transit by fixed infrastructure by

- building of new infrastructure or
- access to existing infrastructure

Freedom of transit:

No absolute freedom but

freedom within defined rules /framework (e.g. HSE)



ECT / Article 7 on Transit

Specifies GATT V

- for Energy Materials and Products and
- for grid bound energies
- Facilitate transit (via Energy transport facilities)
- Non-discrimination
 - As to ORIGIN, DESTINATION or OWNERSHIP
 - As to PRICING
 - No unreasonable delays, restrictions or charges
- Not to impede the creation of new capacity
 - Lacking infrastructure
 - Insufficient available capacity
- Secure the established transit flows
- Non-interruption of transit flows until dispute is settled



Draft Transit Protocol

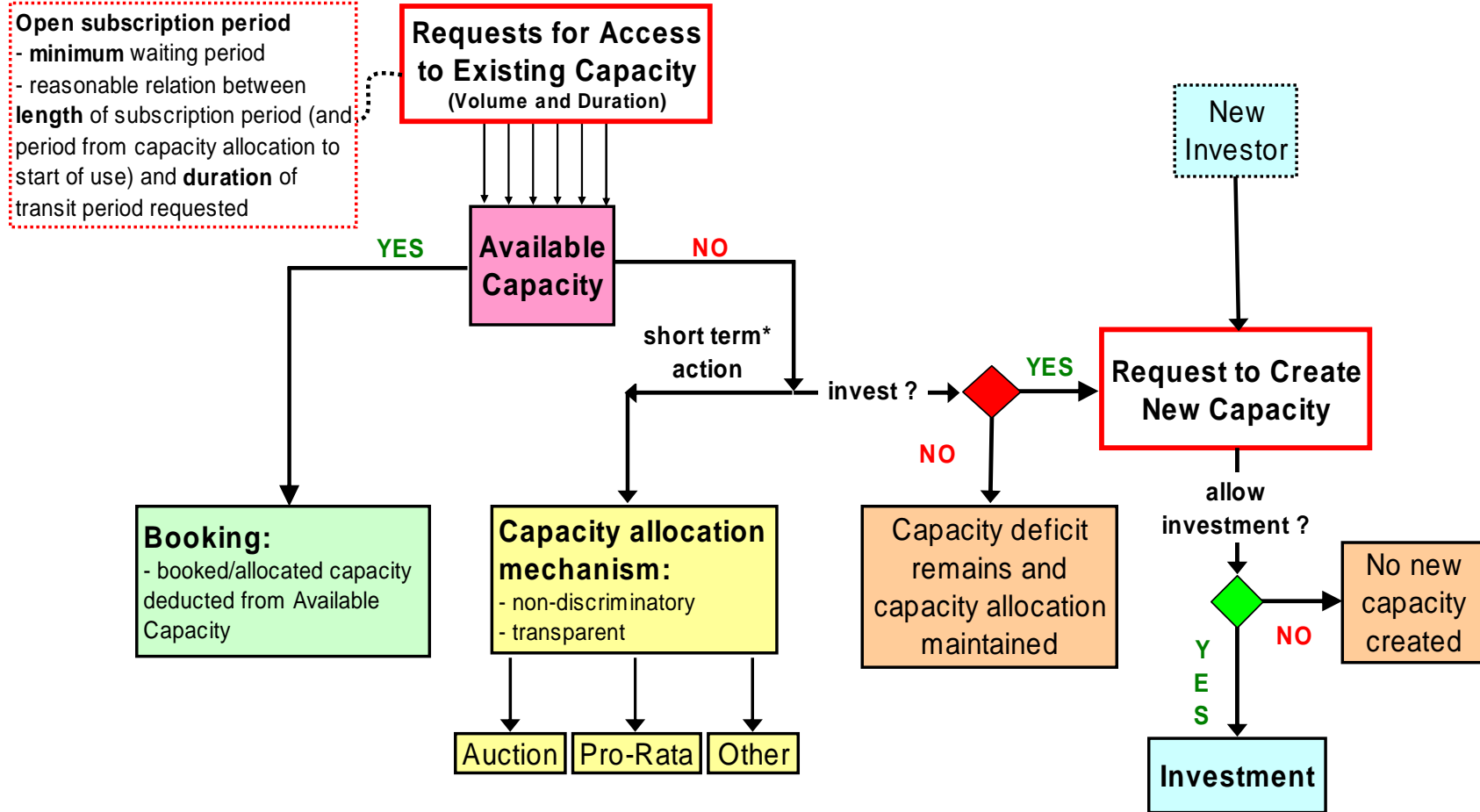
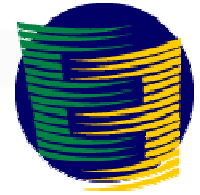


Further elaborate and detail of ECT Article 7

- Basic text agreed at the end of 2002*
- Considerable progress so far:
 - Definition for available capacity
 - Principles of transit tariffication
 - Detailed provisions for new capacity creation
- Result of multilateral consultations in 2008 on the three remaining open issues:
 - Major progress on
 - Congestion management and
 - Avoidance of mismatch between the duration of supply and transit contracts
 - Major open point: Application of the draft TP inside the EU (as a REIO)
 - Question of integrity of EU legislation vs.
 - Covering Russian interest in LTC deliveries

* See Document CC251 on the Energy Charter website (www.encharter.org)

Suggested Mechanism for Capacity Allocation and Creation



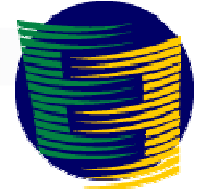
Prevention of speculative hoarding and capacity blocking e.g. operational use-it-or-lose-it

- ◆ decision by investor
- ◆ decision by state based on objective, transparent and non-discriminatory authorisation procedures or legislation (draft TP Art 9)

* short term: capacity increase not possible within given timeframe



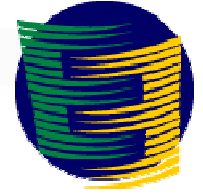
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Recent Transit Developments



Tendency to avoid transit countries

- Blue Stream, Nord Stream, South Stream, Blue Stream II and non-expansion of Yamal-Europe
- Reflection in oil: BPS expansion to avoid Belarus transit

Decoupling of transit from supply arrangements

- **Ukraine (2005/06)**
 - Transit fee fixed until 2010
 - Russian gas at market prices
 - Central Asian gas via an intermediary (RosUkrEnergo)
- **Belarus (2006/07)**
 - Transit fee determined annually
 - Gradual increase of Russian gas price to reach market level by 2011
 - Participation of Gazprom in Beltransgas pipelines



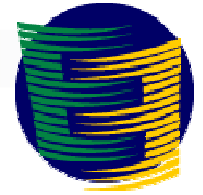
Recent Transit Developments

Source, Route and Market Diversification:

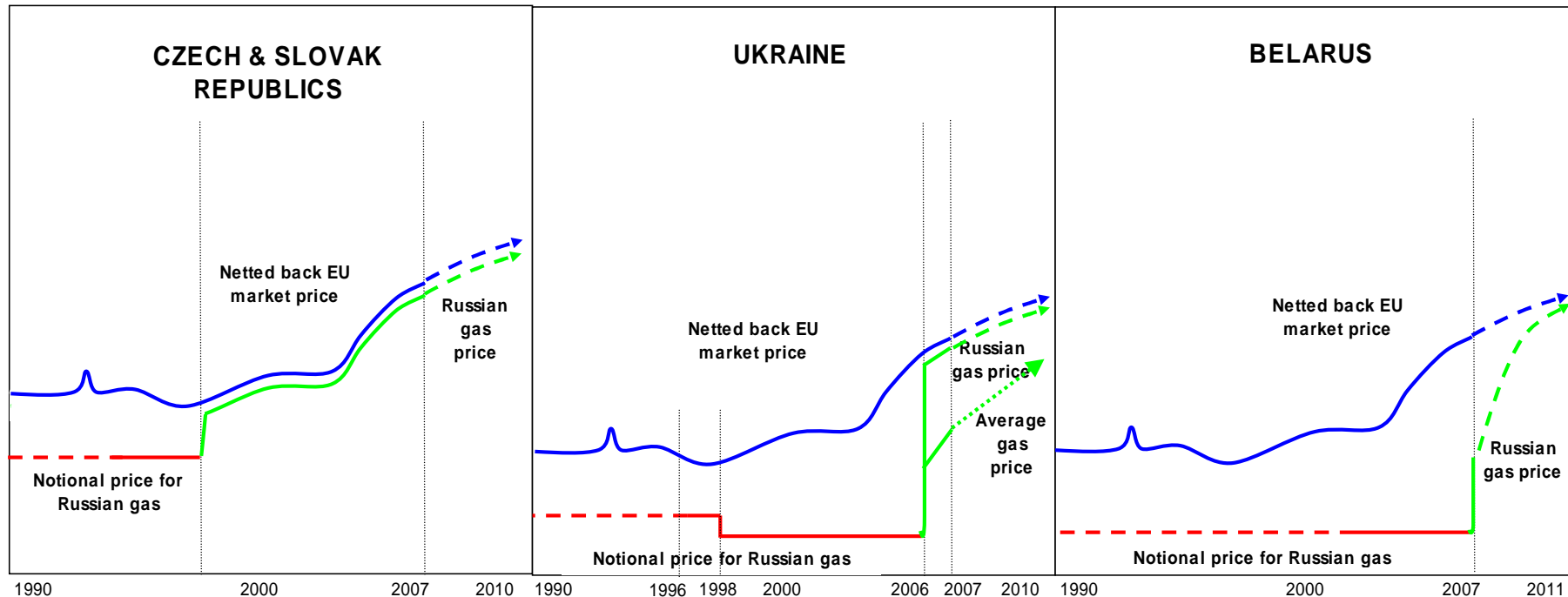
Caspian, Central Asian and Middle Eastern gas to Europe

- **4th Gas Corridor**
 - Baku-Tbilisi-Erzurum: already operational
 - Trans-Caspian: pending – status of Caspian Sea still disputed
 - Turkmen-Iran-Turkey: new impetus despite the US concerns
 - Nabucco: secured Art 22 exemption
 - Turkey-Greece and Italy-Greece Interconnectors, Trans Adriatic pipeline
- **New routes via Russia**
 - Turkmen-Kazakh-Russia pipeline (Pricaspian)
 - CAC expansion
- **Black Sea crossings**
 - White Stream
 - South Stream, Blue Stream expansion (Russian gas)

Gas to China and India



New Russian Gas Pricing: Netted back along the Pipe



Remarks: 1- The figures are entirely for illustration purposes and, therefore, may not fully reflect the actual price levels and movements

2- The illustration for "Netted back EU market prices" are based on the IEA's World Energy Outlook, 2006

3- Estimates for future gas price movements beyond 2007 are entirely illustrative.

4- Recent actual price figures for Ukraine and Belarus, based on information from public sources, are as follows:

For Ukraine - Russian gas price: 230 \$/mcm (2006) ; Average gas price (for a mixture of Russian / Central Asian gas): 95 and 135 \$/mcm (2006 and 2007, respectively)

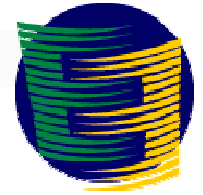
For Belarus - Russian gas price: 100 \$/mcm (2007) It will reach market price level by 2011 in agreed upon steps (67, 80, 90 and 100% from 2008 to 2011)

5- Notional prices for Russian gas were used to determine volumes of gas as compensation for transit services.

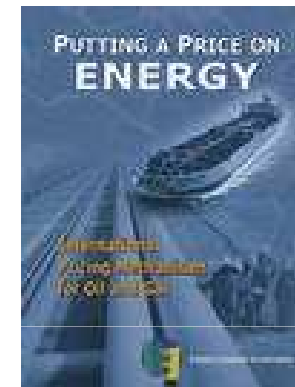
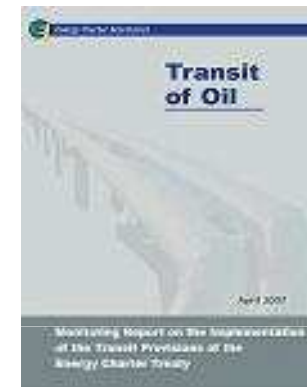
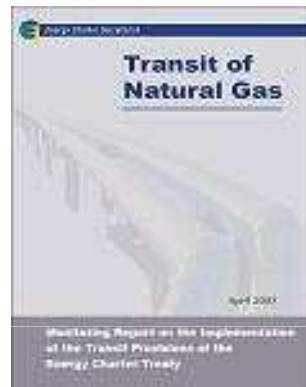
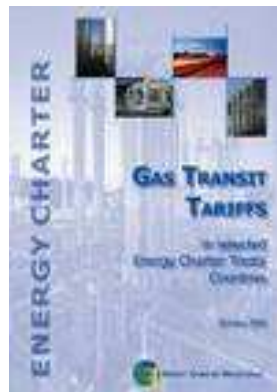
For Ukraine: 80 \$/mcm until 1998; 50 \$/mcm from 1998 to 2006

For Belarus: 47 \$/mcm most recently until 2007

**Source: Putting a Price on Energy - International Pricing Mechanisms for Oil and Gas
Energy Charter Secretariat, March 2007**



Publications by ECS



All publications also available in Russian
Free download at www.encharter.org

Publication by World Bank ESMAP Technical Paper

**Cross-Border Oil and Gas Pipelines:
Problems and Prospects**

June 2003