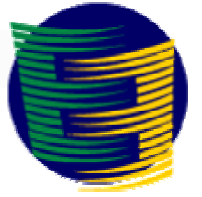


**Seminar on Hydrocarbons Development
and Transportation Across Borders:
Investment, Market Structure, Integration
Damascus, 19 June 2008**

Energy Transit and the Energy Charter

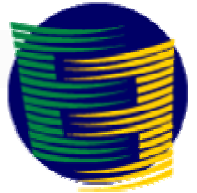
Gürbüz Gönül
Senior Expert
Energy Charter Secretariat



Content

1. Energy Charter on Transit

2. Transit Tariffs and Reliability



ECT Article 7 on Transit

Freedom of Transit

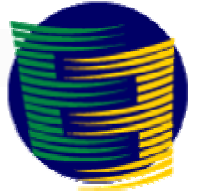
Article V (GATT 1947)

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.



ECT Article 7 on Transit

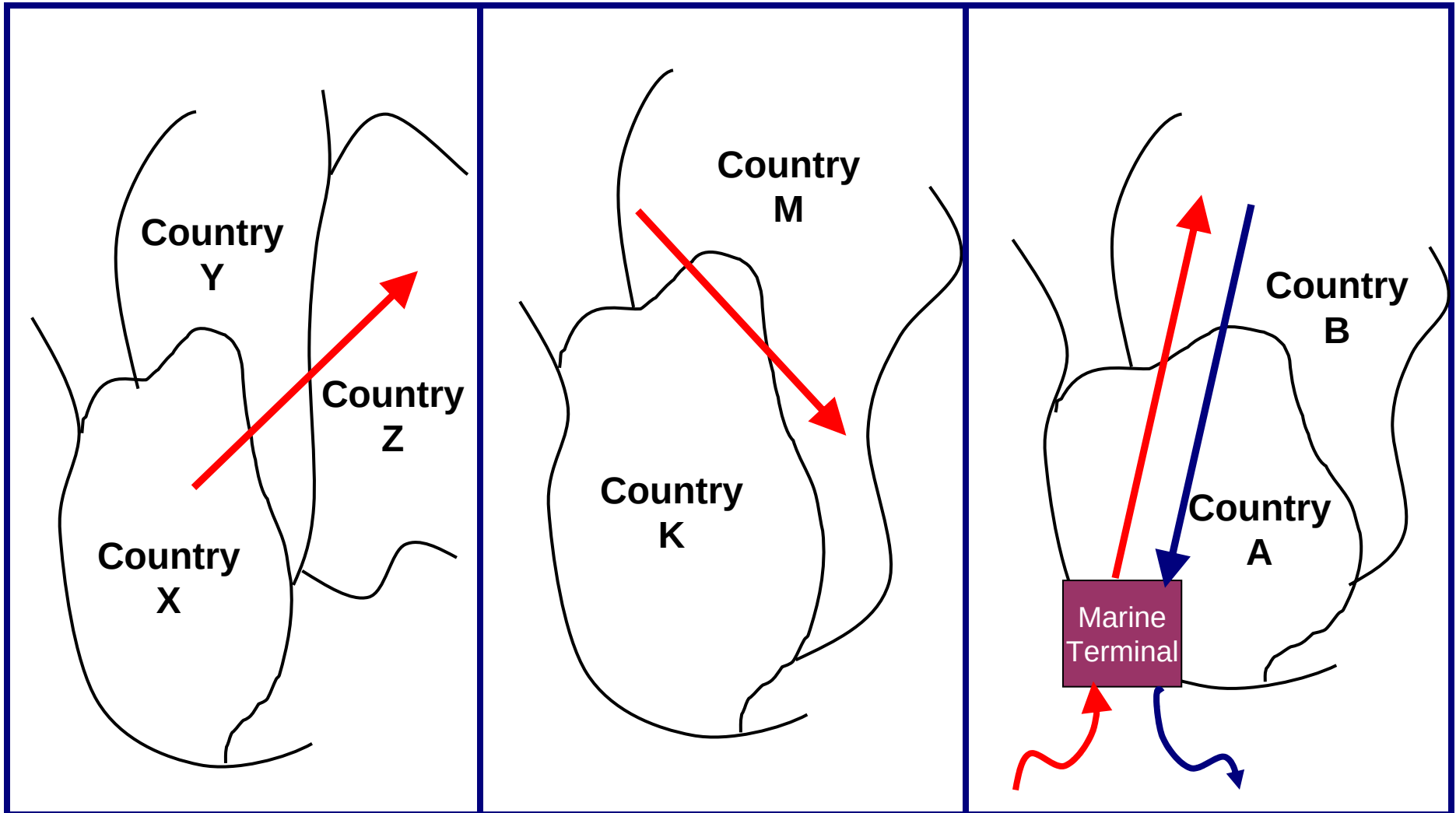
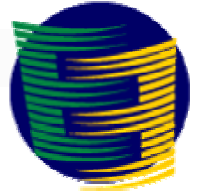
Specifying GATT V



- **Transit of *Energy Materials and Products***
 - Crude oil, oil products, natural gas, electricity, coal
- **Transit through fixed infrastructure (*Energy Transport Facilities*)**
 - High pressure gas pipelines
 - High voltage electricity grids and transmission lines
 - Crude oil transmission lines and product pipelines
 - Coal slurry pipelines
 - Other fixed infrastructure
 - Maritime transport excluded

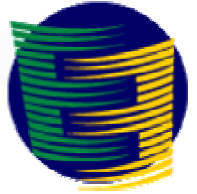
ECT Article 7 on Transit

3 different cases of transit

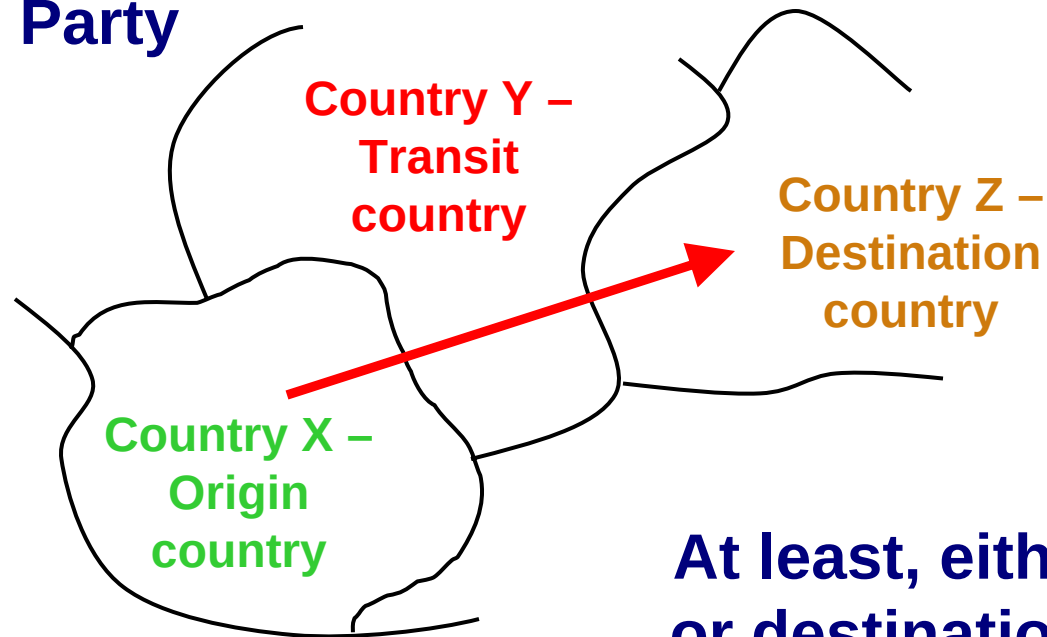


ECT Article 7 on Transit

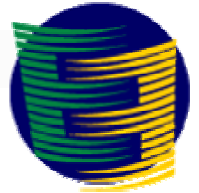
What constitutes transit



**Transit country
must be an ECT
Contracting Party**



**At least, either source
or destination country
must be an ECT
Contracting Party**



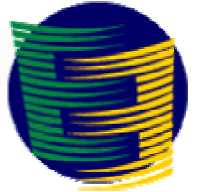
ECT Article 7 on Transit

Facilitation of transit based on non-discriminatory & transparent rules

- ☐ Non-discrimination as to origin, destination, ownership or pricing
- ☐ No obstacles to the creation of new capacity
- ☐ Security of established transit flows
- ☐ Non-interruption of transit flows until dispute is settled
- ☐ Conciliation procedure for transit disputes



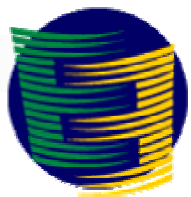
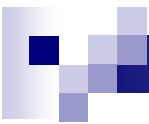
Draft Transit Protocol



Further elaborate and detail ECT Article 7 on Transit

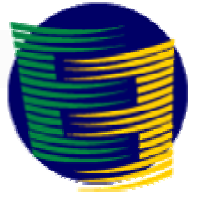
- Discussions on basic text finalised at the end of 2002*
- Considerable progress:
 - Definition for available capacity
 - Principles of transit tariffication
 - Detailed provisions for new capacity creation
- Remaining 3 open issues discussed in bilateral consultations between the EU and Russian Federation
- Multilateral consultations restarted in 2008

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



Energy Charter Principles on Transit Tariffs

- Objective
- Reasonable
- Transparent
- Non–discriminatory
- Cost–based
 - Operational and investment costs,
including a reasonable rate of return



1. Energy Charter on Transit

2. Transit Tariffs and Reliability



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.



Transit tariffs generally higher than domestic tariffs

Country	Type	Tariff (€/m ³ /h/y)	Pipeline Diameter (in)	Methodology	Source
Austria (Penta West)	transit	96	28	Distance-based capacity	Published-indicative
Austria	domestic	50	>36	Distance-based capacity	Published
Belgium (Fluxys)	transit	78	>36	Distance-based capacity	Published-indicative
Belgium (Fluxys)*	domestic	28			Published
Germany (Wingas)	transit	63	>40	Distance-based capacity	Published
Germany (Wingas)	domestic	63			
Germany (high)	domestic	96	28>D>40	Various	Published
Germany (low)	domestic	60	>40		
Poland (Yamal)	transit	71	>36 (56)	Distance-based commodity	Estimate
Poland (Yamal-future)	transit	26			
Poland	domestic	30	>36	Distance-based commodity	Published
Slovakia	transit	62	>36	Entry-exit	Published
Slovakia	domestic	48			
Russia	transit	28*	>36	Commodity	Estimate
Russia	domestic	18	various	Distance-based commodity	Published

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

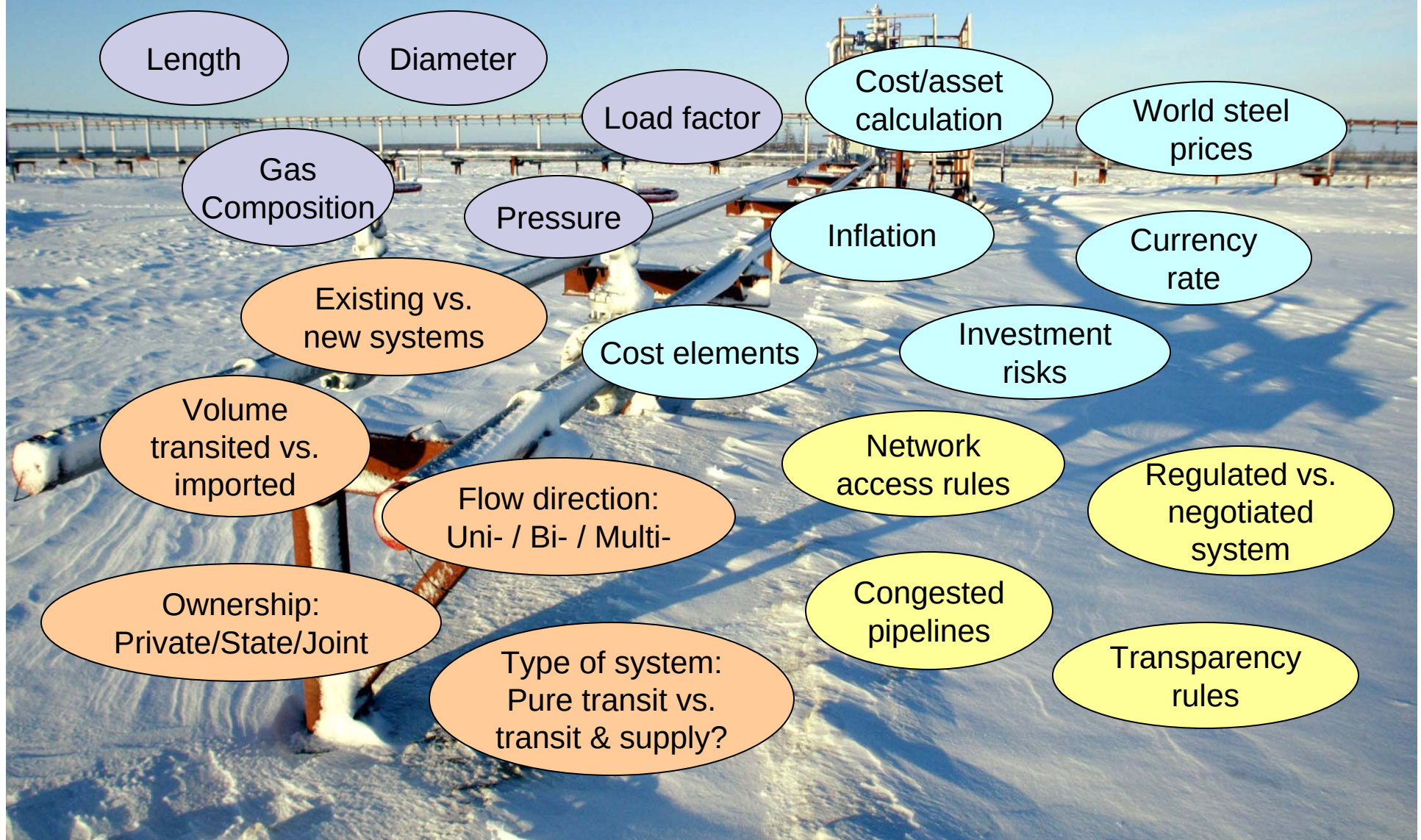
* For movement over 350 km.

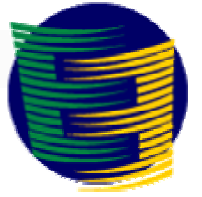


Most immediate challenges for Transit States

- to improve transparency of transit tariffs and access to transit infrastructure
(legal and regulatory aspects)
- to ensure operational reliability of transit flows
(technical aspects)

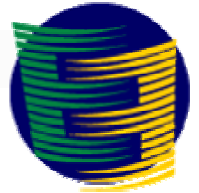
“One size fits all” NOT possible as too many variables





Possible Measures for Better Transparency

- Clearer institutional set-up for transit
- A one-stop-shop for all administrative issues
- More transparent intergovernmental negotiations

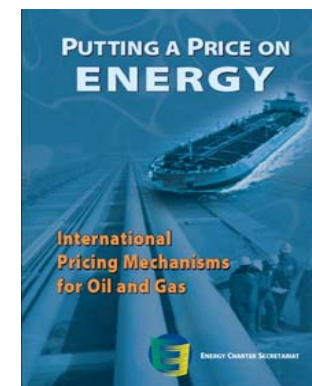
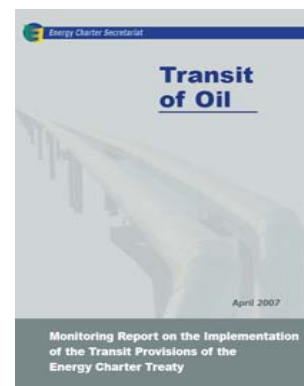
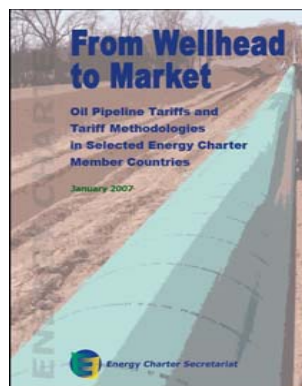
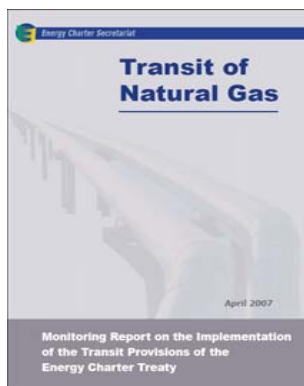
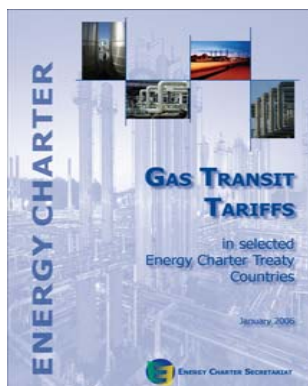


Operational Reliability

- Differences between the East and the West
 - Physical system design
 - Operational practices
- Major operational issues
 - Gas quantity (units, metering)
 - Gas quality (composition, quality measurement)
 - Business practices (interconnections, capacity allocation, balancing, communication)
- EASEE-Gas* harmonization work
- Energy Charter is working on possibilities for a more harmonized operational framework across the Energy Charter constituency

* European Association for the Streamlining of
Energy Exchange - Gas

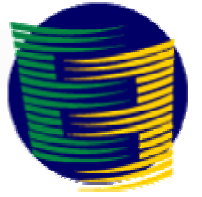
Energy Charter Secretariat



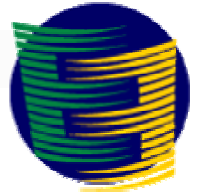
All publications also available in Russian

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Reserve slides



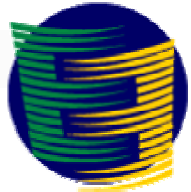
Model Transportation Costs

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)

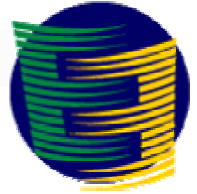
<u>Depreciation (%)</u>	<u>Pipe A</u>	<u>Pipe B</u>	<u>Pipe C</u>	<u>Pipe D</u>
0	20.7	31.5	35.2	56.3
25	16.8	24.9	28.7	44.3
50	12.8	18.1	22.2	32.1



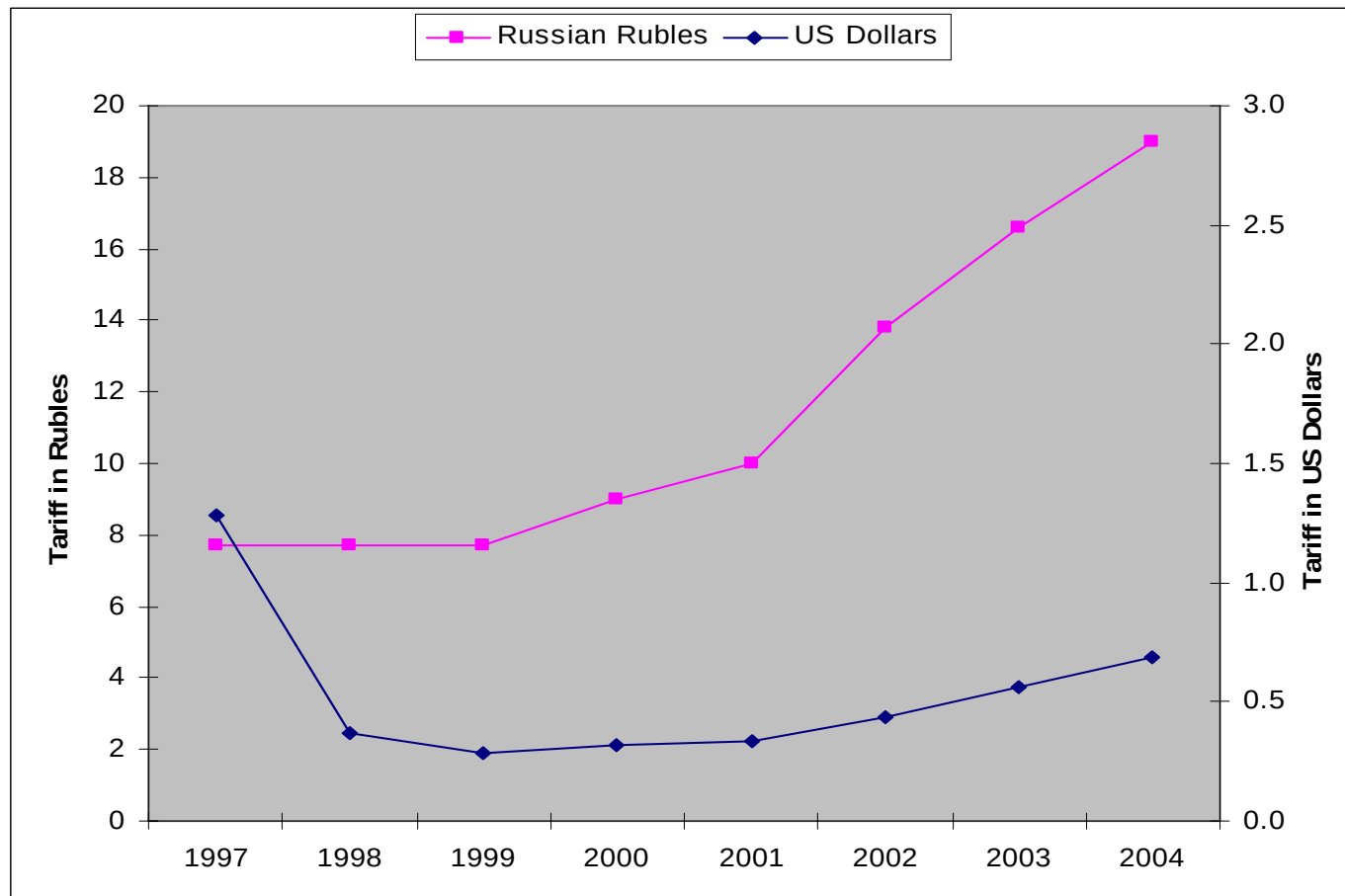
Different tariff methodologies available

- **Postal**
 - single fixed fee used for low-pressure distribution systems
- **Point-to-Point**
 - quoted for every entry-exit pair within the system
- **Distance-Based**
 - commonly used for gas transit in one direction with few off-take points
- **Entry-Exit**
 - suitable for highly meshed systems with many injection & delivery points

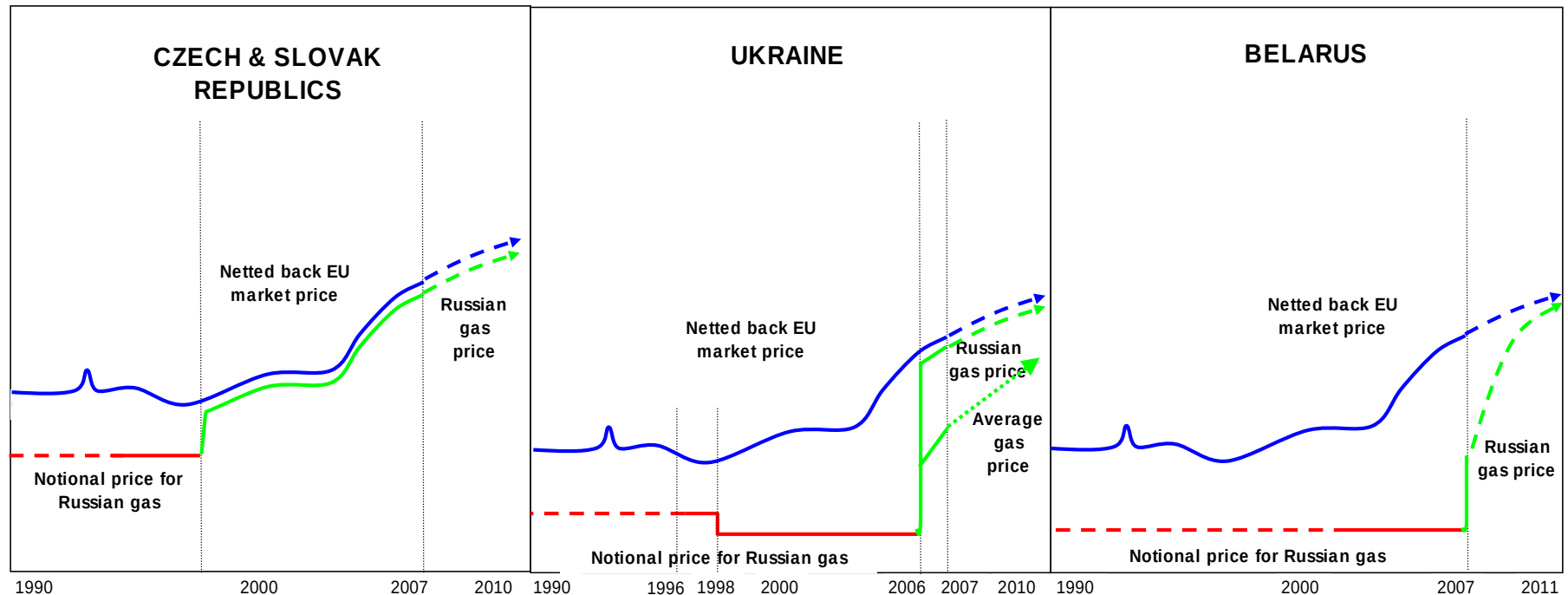
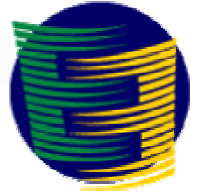
Impact of exchange rates sometimes significant



Russian Gas Transport Tariffs

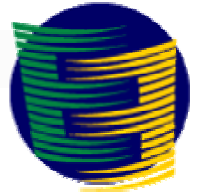


Russian Gas Prices to the EU and Countries Along the Pipe

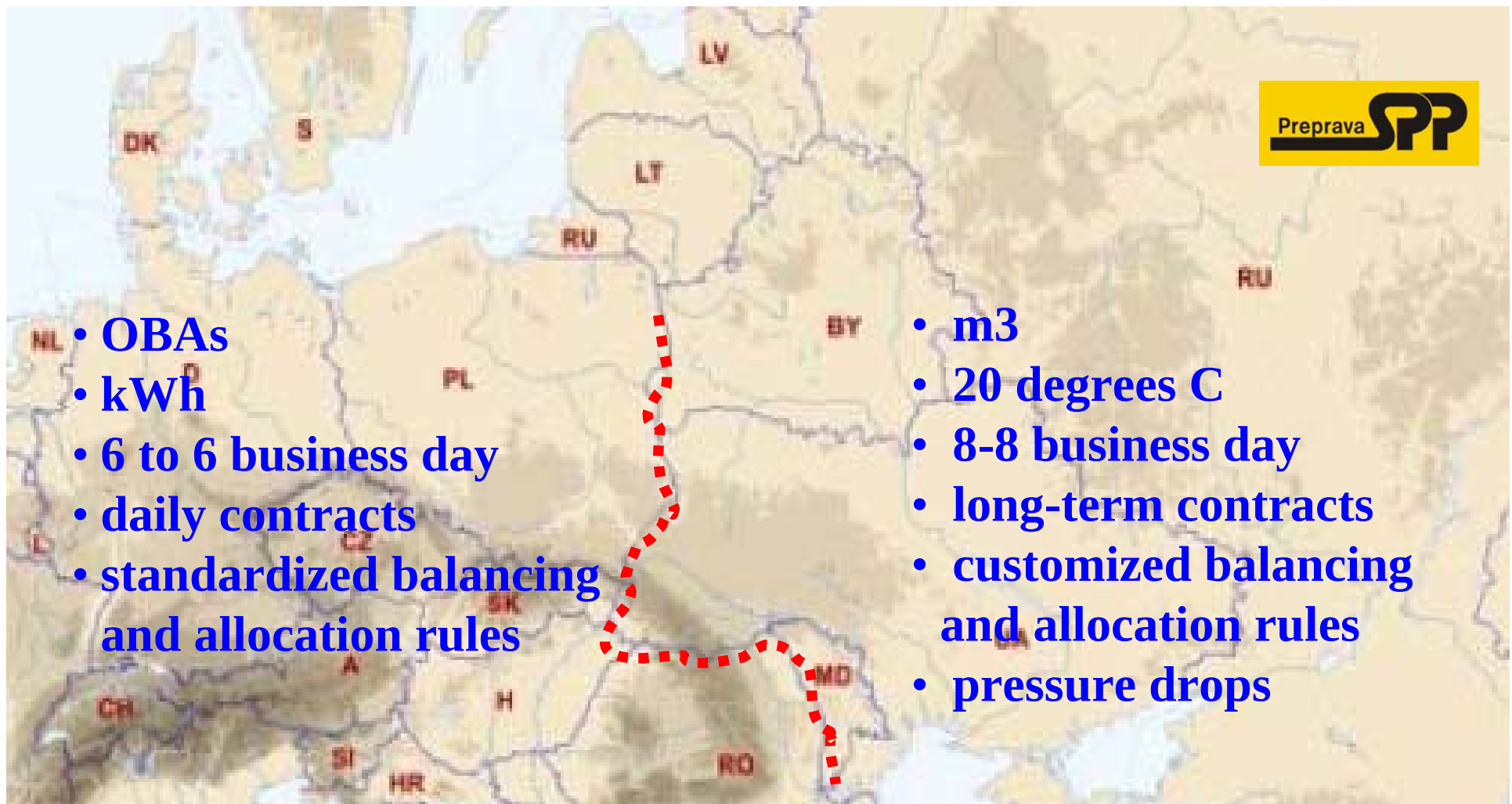


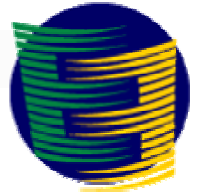
- Remarks:**
- 1- The figures are entirely for illustration purposes and, therefore, may not fully reflect the actual price levels and movements
 - 2- The illustration for "Netted back EU market prices" are based on the IEA's World Energy Outlook, 2006
 - 3- Estimates for future gas price movements beyond 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- Notinal 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



Operational Issues on EU Borders



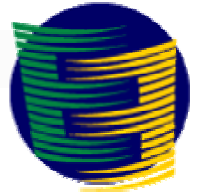


Separate transit from gas supply

- Transit often affiliated to supply issues and sometimes to infrastructure ownership
- Contractual separation of transit and gas supply arrangements
 - Enable more transparency of tarification
 - Allow cost-reflective tariffs

EU treatment for gas transit

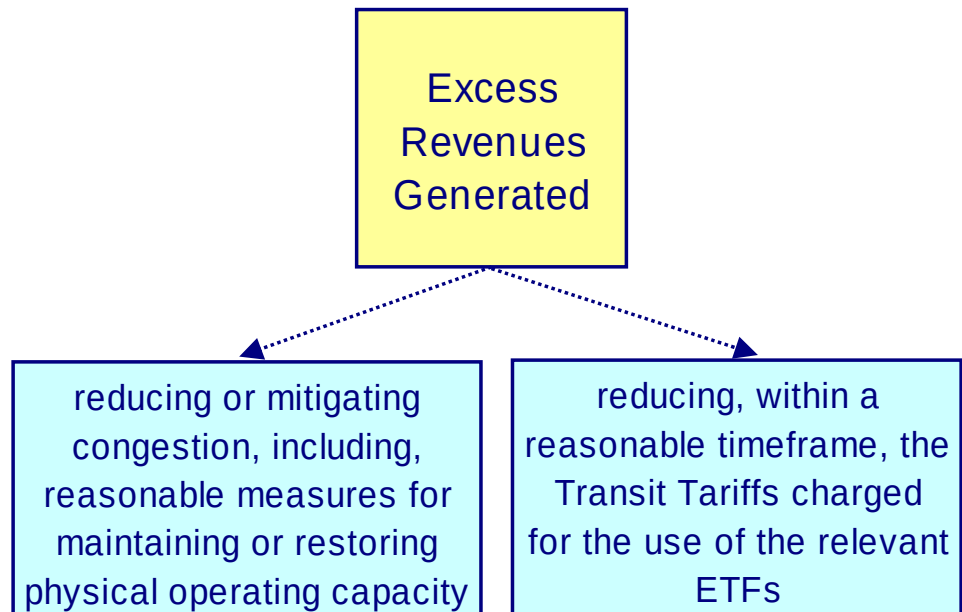
- No separate rules for transit, but transport within a single market
- Transit through single EU states: transit volumes separated from domestic flows
- Further discussion of transit within the EU: the Madrid Forum



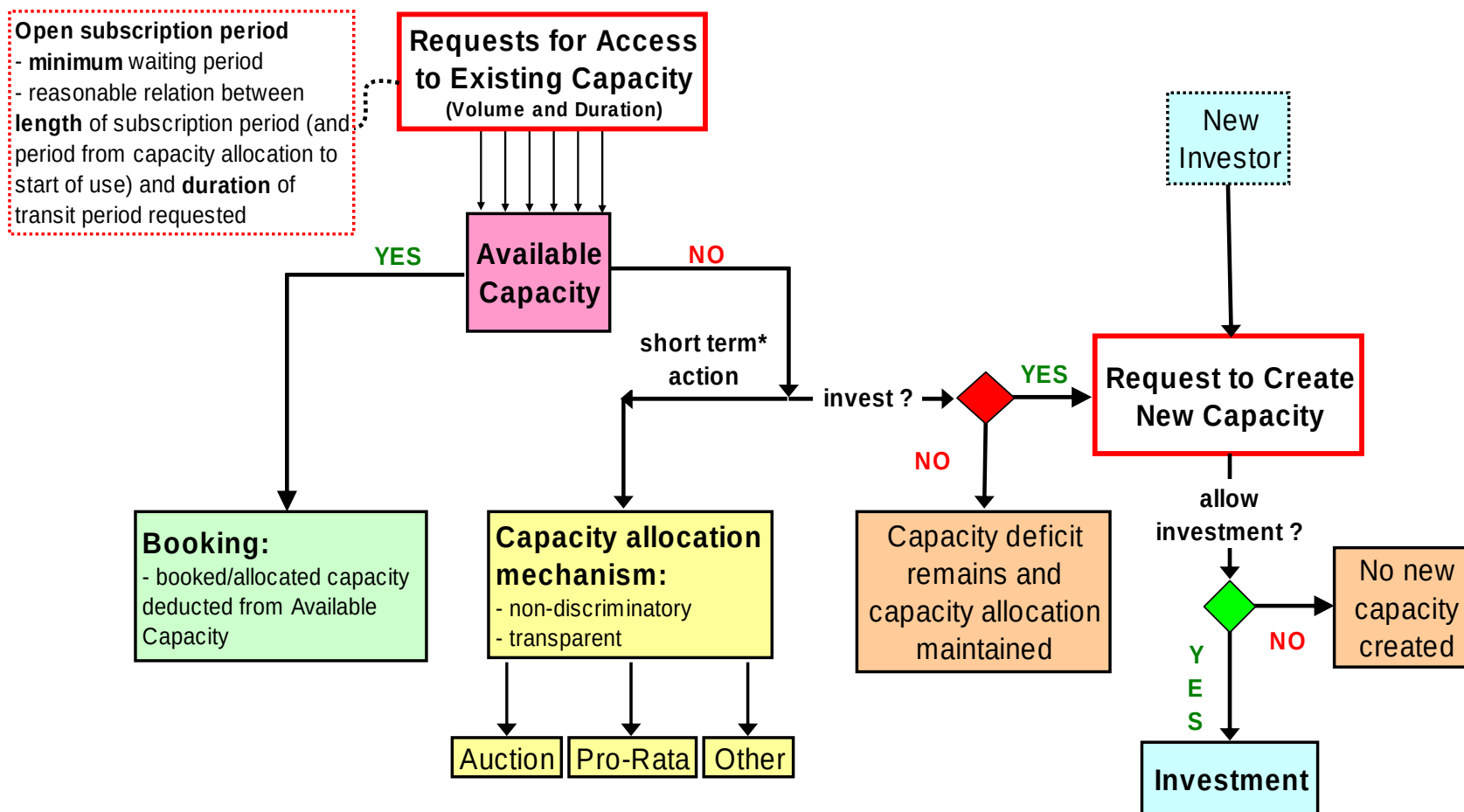
Suggested Principles on Transit Tariffs

- Objective
- Reasonable
- Transparent
- Non-discriminatory
- Cost-based
 - Operational and investment costs, including a reasonable rate of return

Use of Excess Revenues from Auctions



Suggested Mechanism for Capacity Allocation and Creation

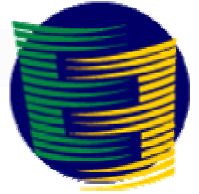


Prevention of speculative hoarding and capacity blocking e.g. operational use-it-or-lose-it

◆ decision by investor

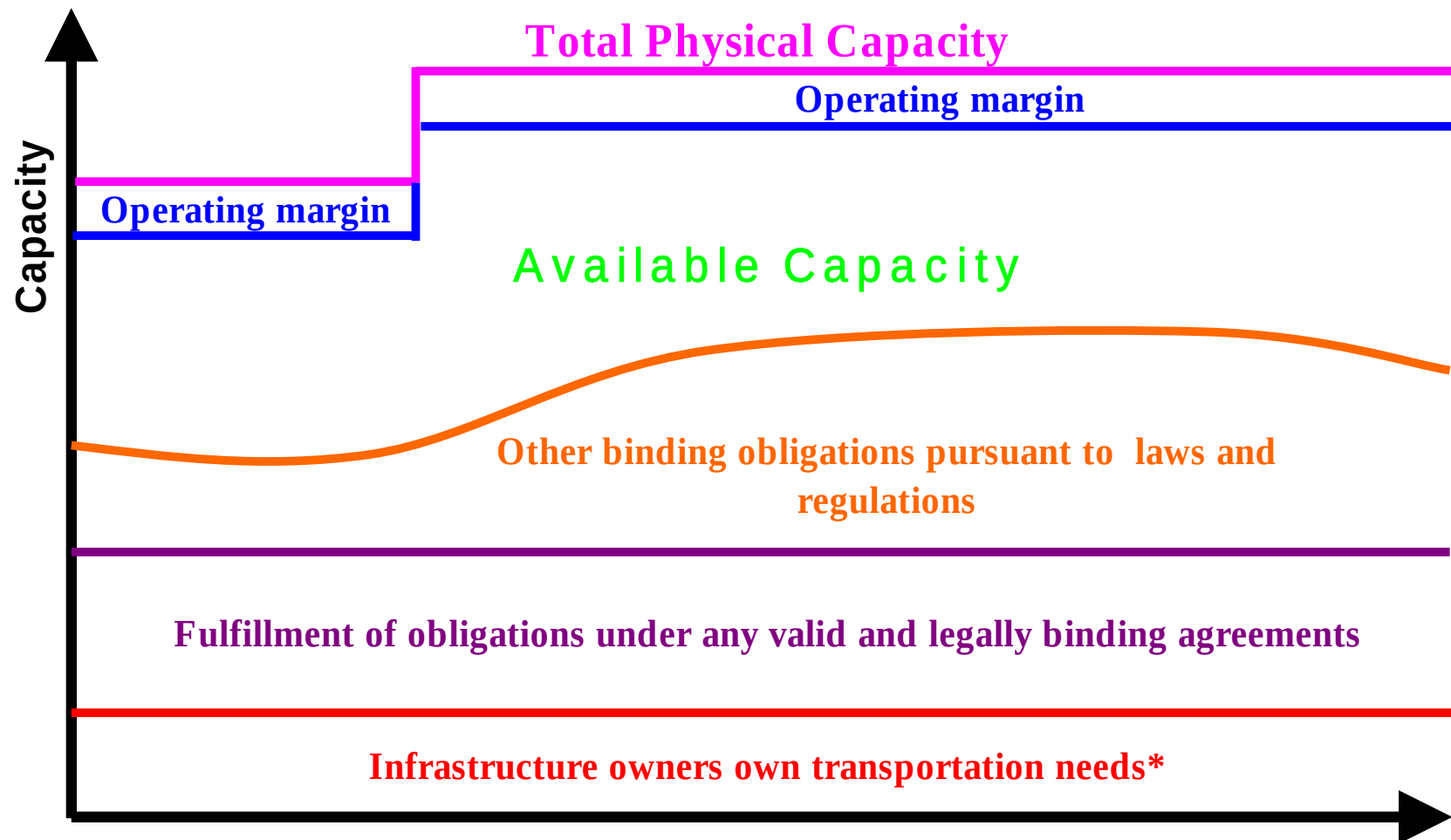
◆ decision by state based on objective, transparent and non-discriminatory authorisation procedures or legislation (draft TP Art 9)

* short term: capacity increase not possible within given timeframe



Definition of Available Capacity

(Draft TP Article 1.2 -- CC 251)



* "Subject to requirements for access to ETFs applicable within a CP" -- EU

Time

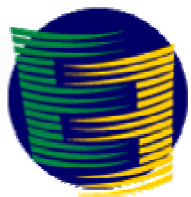


Energy Charter and the Black Sea region



Energy Charter to foster the development of energy infrastructure

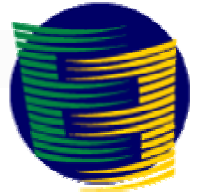
- Growing need for energy investments in the region
- Various cross border oil and gas pipeline projects under consideration
- Energy transit region
- ECT to provide basic legal framework
- Energy Charter Model Agreements to provide a balanced starting point for project agreements (IGA, HGA) for new cross-border and transit infrastructure



Energy Charter's Initiatives relevant for the Black Sea region

- Illustration of projected oil flows and transport capacity in the Caspian and Black Sea area
 - Based on actual data and low and high case scenarios for production and pipeline development
 - Discussed at the last Trade and Transit Group in Feb. 08
 - Presented in Baku (March 08) and Istanbul (April 08)

[see website?]
- Operational issues for reliable gas transit
 - Harmonization work under the EASEE-gas umbrella
 - Challenges at the EU / non-EU interface points
 - Workshop envisaged in Ukraine



Energy Charter's Initiatives relevant for the Black Sea region (cont.)

- **Underground gas storage (study in progress)**
 - Transit related aspects of UGS
 - Storage tariffication
 - Case studies: Ukraine, Slovakia ...
- **Publications on Oil and Gas transit tariffs/methodologies**
 - Compilation of actual tariffs and methodologies for oil and gas transit across Eurasia
 - Comparison of transit and domestic transport tariffs
 - To be updated this year
- **Next Trade and Transit Group in June in Sofia, Bulgaria**