

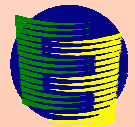
Formation of the Eurasian energy market and Energy Charter process

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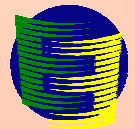
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1. Development of energy markets: some objective trends



NATURAL DEVELOPMENT OF NON-RENEWABLE SOURCES OF ENERGY

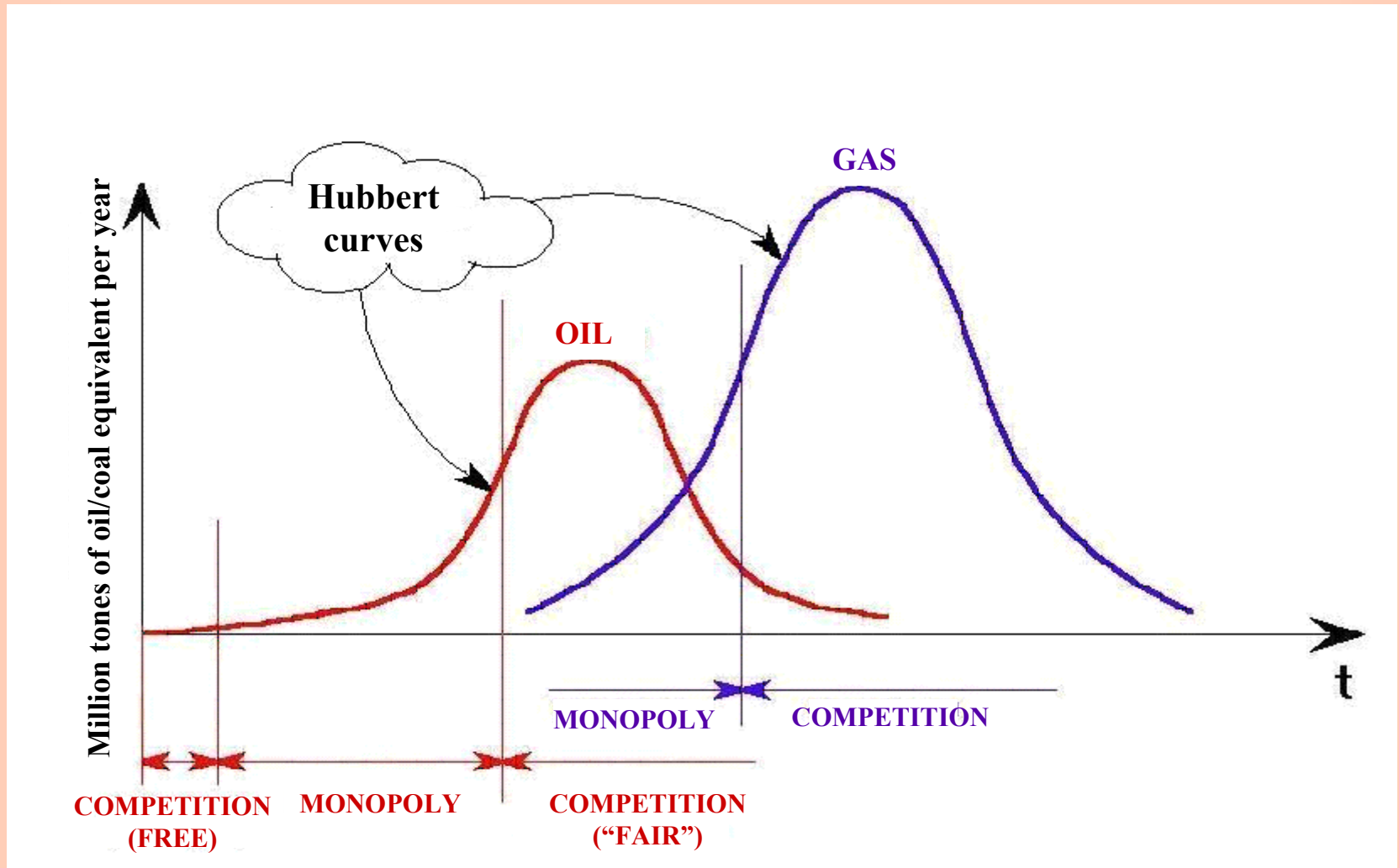
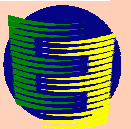


Figure 1



PRICING SYSTEMS AND CONTRACTS TYPES IN OIL AND GAS MARKETS

Market parameters	Pricing stages		
	1 st STAGE	2 nd STAGE	3 rd STAGE
OIL MARKET			
Contracts	Long term	(a) Long-term (b) Short-term	(a) Long-term (b) Short-term (c) Spot, forward, futures
Pricing formula	Cost-plus	(a) Escalation formulas in the competitive sphere of consumption (electricity generation) (b) Cost-plus in the monopoly sphere of consumption (transport)	Buy-back price (oil-to-oil competition)
Price escalation	Marginal production costs	(a) To prices of alternative energy resources (RFO – to coal) (b) To marginal production costs (light petroleum products)	To futures quotations
Price trends	Increase	Increase/decrease	Decrease
GAS MARKET			
Contracts	Long term	(a) Long-term (b) Short-term	(a) Long-term (b) Short-term (c) Spot, forward, futures
Pricing formula	Cost-plus	Escalation formulas	Buy-back price (gas-to-gas competition)
Price escalation	Marginal production costs	To prices of alternative energy resources (gas-to petroleum products, coal, electricity)	To futures quotations
Price trends	Increase	Increase/decrease	Decrease

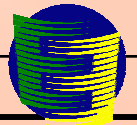
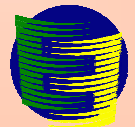


Figure 2

2. What is energy security? Evolution of concepts and dominant instruments on the way from energy independence to energy interdependence



ENERGY SECURITY

ENERGY SECURITY = stable, cheap & environmentally friendly energy cycle (primary supplies + transportation + refining + transformation + final consumption)

ENERGY SECURITY =

- (1) minimum volume risk +
- (2) minimum price risk

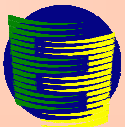
EVOLUTION OF *ENERGY SECURITY* INSTRUMENTS:

- (1) colonies + traditional concessions,
- (2) military instruments + modernized concessions, PSAs, RSCs,
- (3) strategic reserves + stocks,
- (4) international law instruments

EFFECTIVE *ENERGY SECURITY* INSTRUMENTS are different at different stages of energy markets development:

- from monopoly to competition as a driving force of energy markets development,
- from energy independence to energy interdependence,
- from local markets of individual energy resources to global energy market

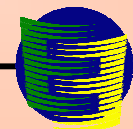
Further to growth of energy interdependence, international law becomes more and more effective (relatively cheap per unit of supplies/final consumption) instrument of providing *energy security*



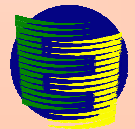
PARTICULAR MECHANISMS OF DIMINISHING VOLUME AND PRICE RISKS UNDER DIFFERENT ENERGY SECURITY INSTRUMENTS

Mechanisms of diminishing:	Colonies	Military instruments	Strategic reserves + stocks	International law
- volume risk	Direct control of supplies (traditional concessions)	Modernized concessions, PSAs, risk-service contracts (LTC for duration of agreement between host-country & foreign company)	Producer states production & export quotas + strategic reserves + stocks in both producer and consumer states (idle producing capacities, float tanker storage vs. SPR, government & company owned commercial stocks) + LTCs	Diversified energy supply infrastructure (multiple supplies concept) + consumers with switching (competitive supplies)
- price risk	Stable & low posted prices + transfer pricing + cost-plus (isolated projects)	Stable & low posted prices + transfer pricing + cost-plus (isolated projects)	Spot + forward pricing = unstable prices; increased price volatility to be compensated by producers export quotas (major exporters = swing producers) + consumers stocks regulation policy + escalation formulas	Exchange pricing = futures + options = unstable prices; increased price volatility to be compensated by hedging (derivatives)
Basis for pricing (traded item)	Physical energy (oil, gas)	Physical energy (oil, gas)	Physical energy (oil, gas)	Paper energy (oil, gas contract)
Driving force of market development	Monopoly (individual consumer states/cartel of private companies)	Monopoly (cartel of private companies)	Monopoly (cartel of producer states/state companies)	Competition

Figure 4



3. Evolution of energy markets and legal instruments of investment protection



DEVELOPMENT OF ENERGY MARKETS AND MECHANISMS FOR INVESTORS PROTECTION / STIMULATION

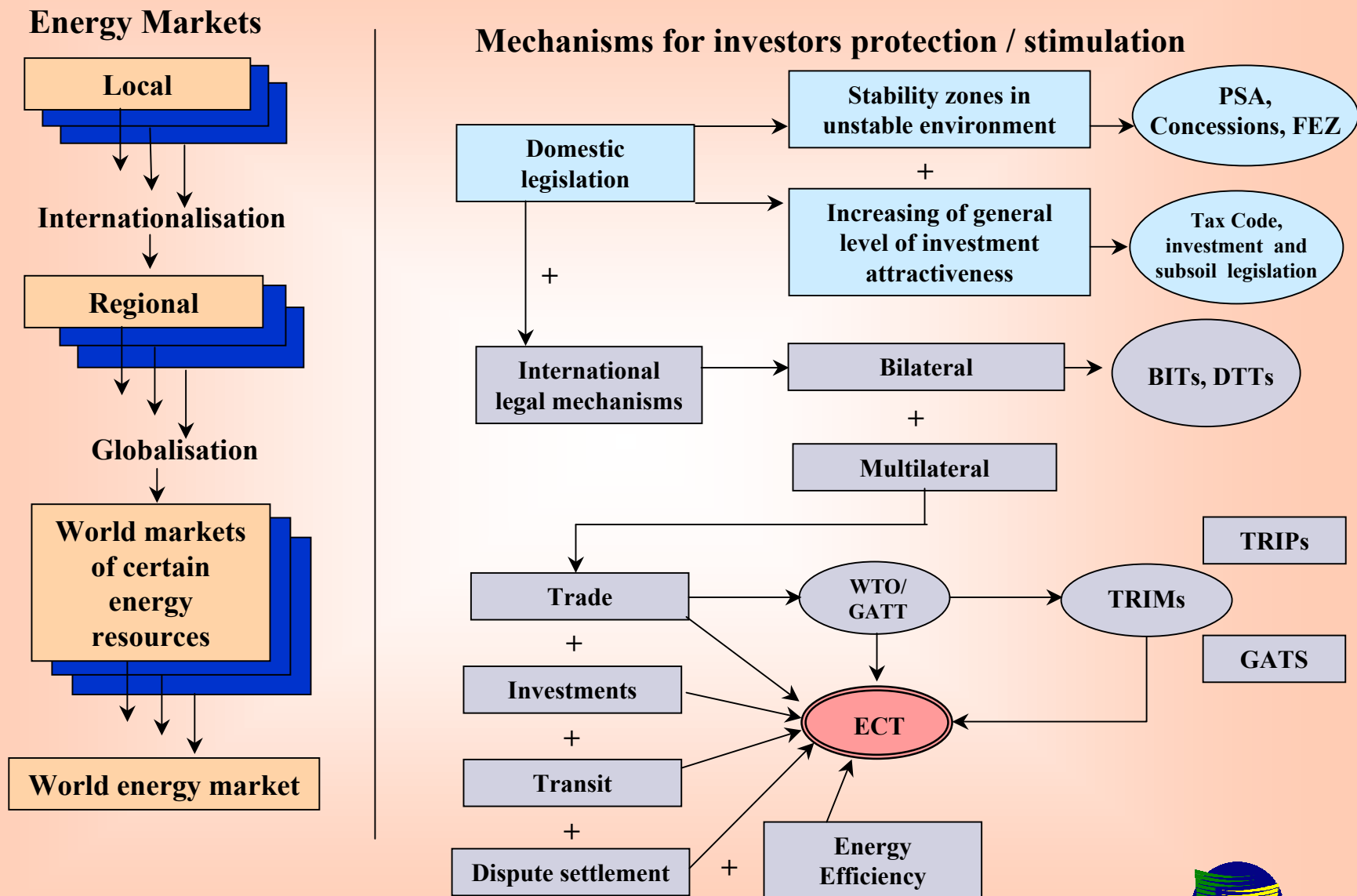
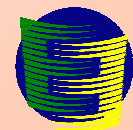
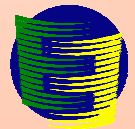


Figure 5



4. Energy Charter process and Eurasian energy market geography



ENERGY CHARTER HISTORY

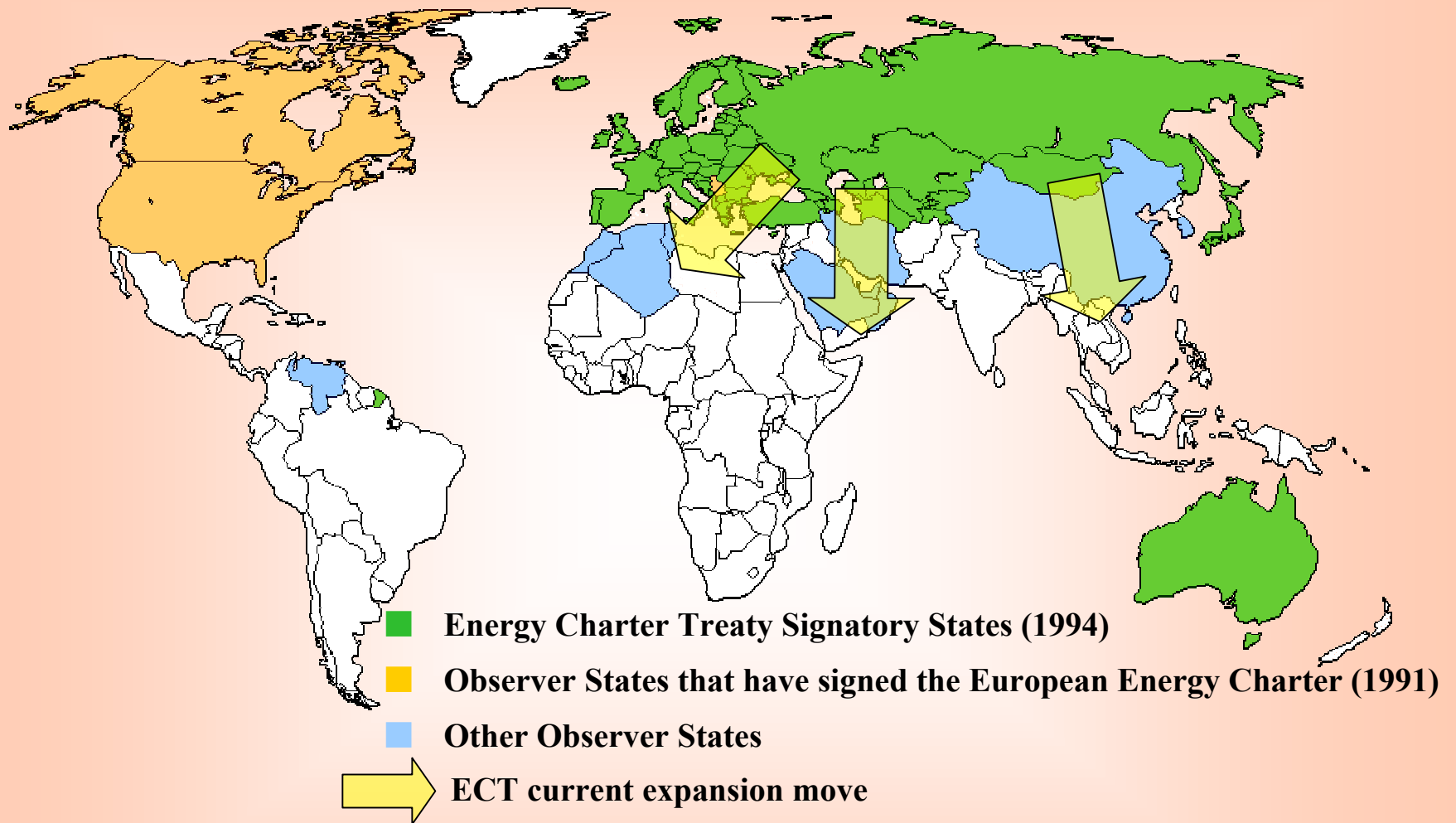
June 25, 1990	Lubbers' initiative on common broader European energy space presented to the European Council
December 17, 1991	European Energy Charter signed
December 17, 1994	Energy Charter Treaty (ECT) and Protocol on Energy Efficiency and Related Environmental Aspects (PEEREA) signed
16 April, 1998	ECT enters into force
As of today	<ul style="list-style-type: none">• ECT signed by 51 states + European Communities = 52 ECT signatories• ECT ratified by 46 states + EC (excl. 5 countries: Russia, Belarus, Iceland, Australia, Norway)• Russia and Belarus : provisional application of ECT

Russia has started ratification process in 1996

RF State Duma (2001): Russia will ratify ECT, but not yet (depending on Transit Protocol)

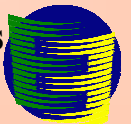


ENERGY CHARTER TREATY: GEOGRAPHY



1. From trans-Atlantic political declaration to broader Eurasian single energy market
2. ECT expansion is an objective and logical process based on economic and financial reasons

Figure 7



ENERGY CHARTER WORLD AND MAJOR ENERGY FLOWS IN THE EASTERN HEMISPHERE

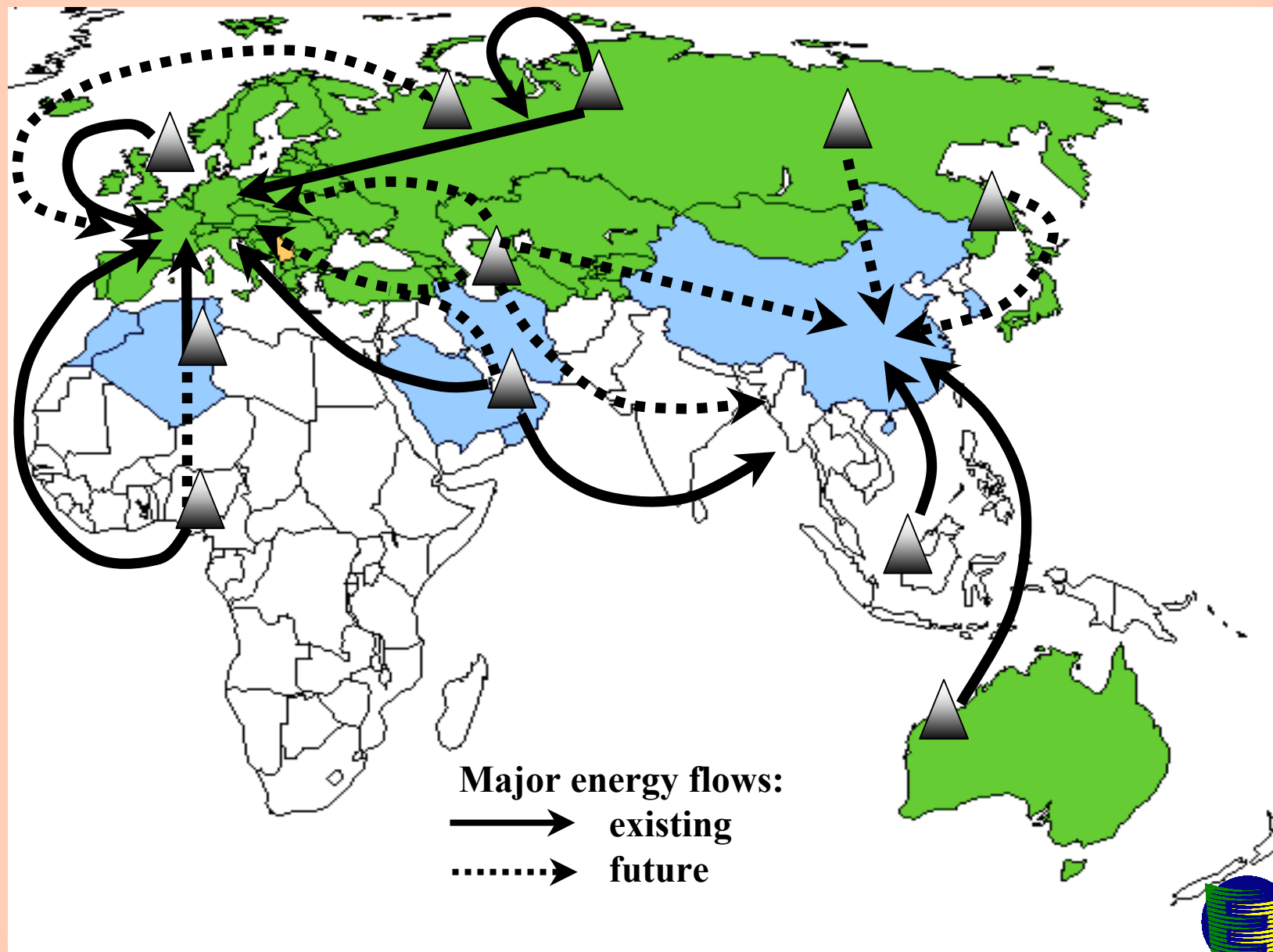
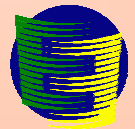


Figure 8

4. Energy Charter instruments



ENERGY CHARTER AND RELATED DOCUMENTS

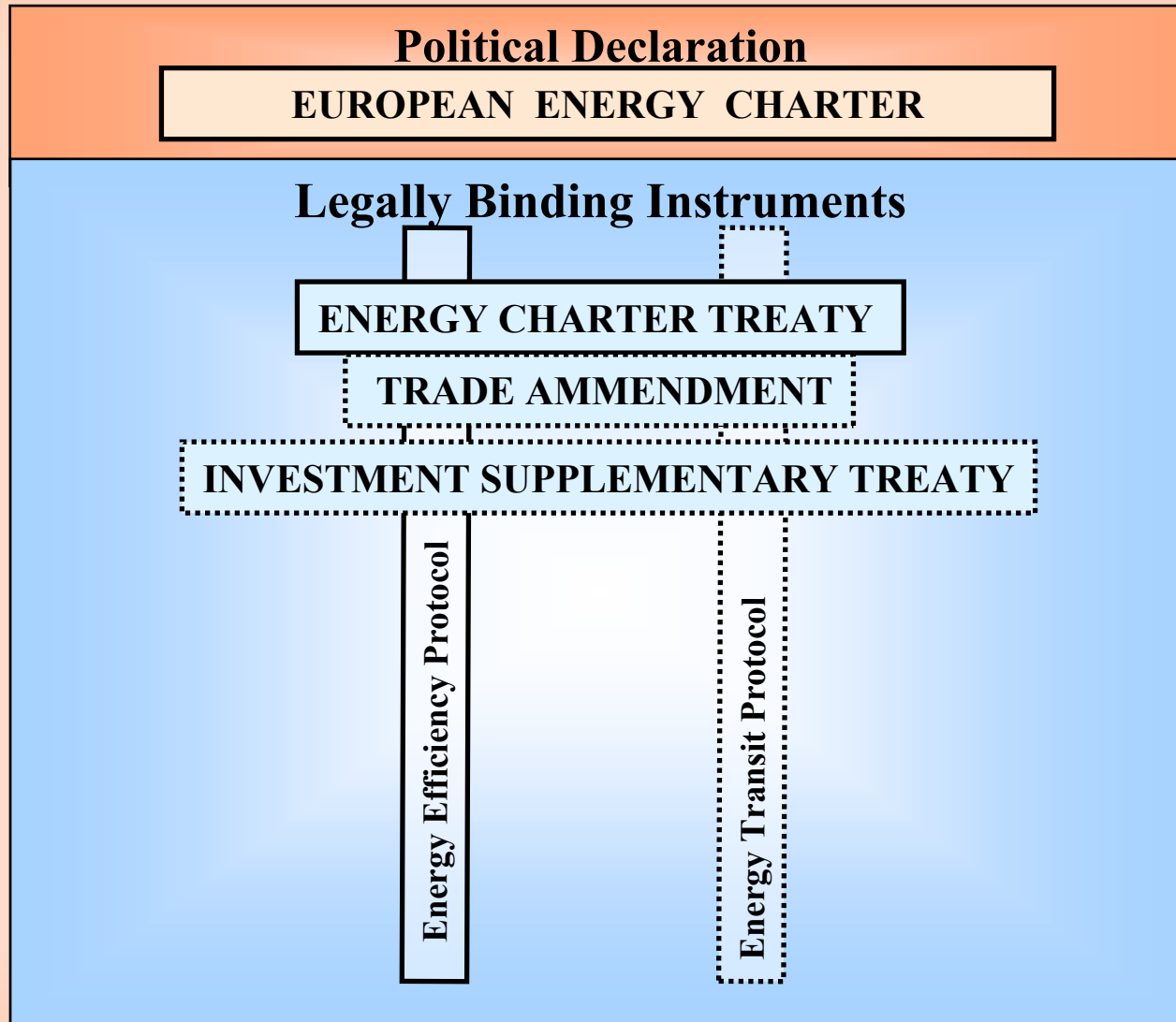
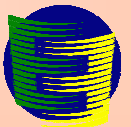


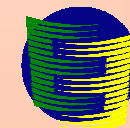
Figure 9



ECT MAJOR OPPONENTS IN RUSSIA AND THEIR ARGUMENTS

Arguments against ECT ratification	Comments
<p><u>Gazprom:</u></p> <ol style="list-style-type: none"> 1) ECT demands mandatory TPA to Gazprom's pipelines for cheap gas from Central Asia 2) Obligation to transit Central Asian gas at low (subsidised) domestic transportation tariffs 3) ECT will "kill" LTCs 	<p>No such obligation. ECT excludes mandatory TPA (ECT Understanding IV.1(b)(i)).</p> <p>No such obligations (ECT Article 7(3)). Transit and transportation are different in non-EU.</p> <p>Not true. ECT documents do not deal with LTC at all. Economic niche for LTCs will become more narrow due to objective reasons, but they will continue to exist as a major instrument of financing greenfield gas projects.</p>
<p><u>Ministry of Nuclear:</u></p> <ol style="list-style-type: none"> 1) Bilateral RF-EU trade in nuclear materials is not regulated by ECT 	<p>Prior to ECT signing in 1994, RF and EU has agreed to regulate nuclear trade bilaterally (P&CA).</p>

Major Russia's concern regarding ECT ratification relates to gas transit issues



RIGHT OF FIRST REFUSAL AND INTEREST OF DIFFERENT COUNTRIES IN ITS APPLICATION IN EUROPE (1)

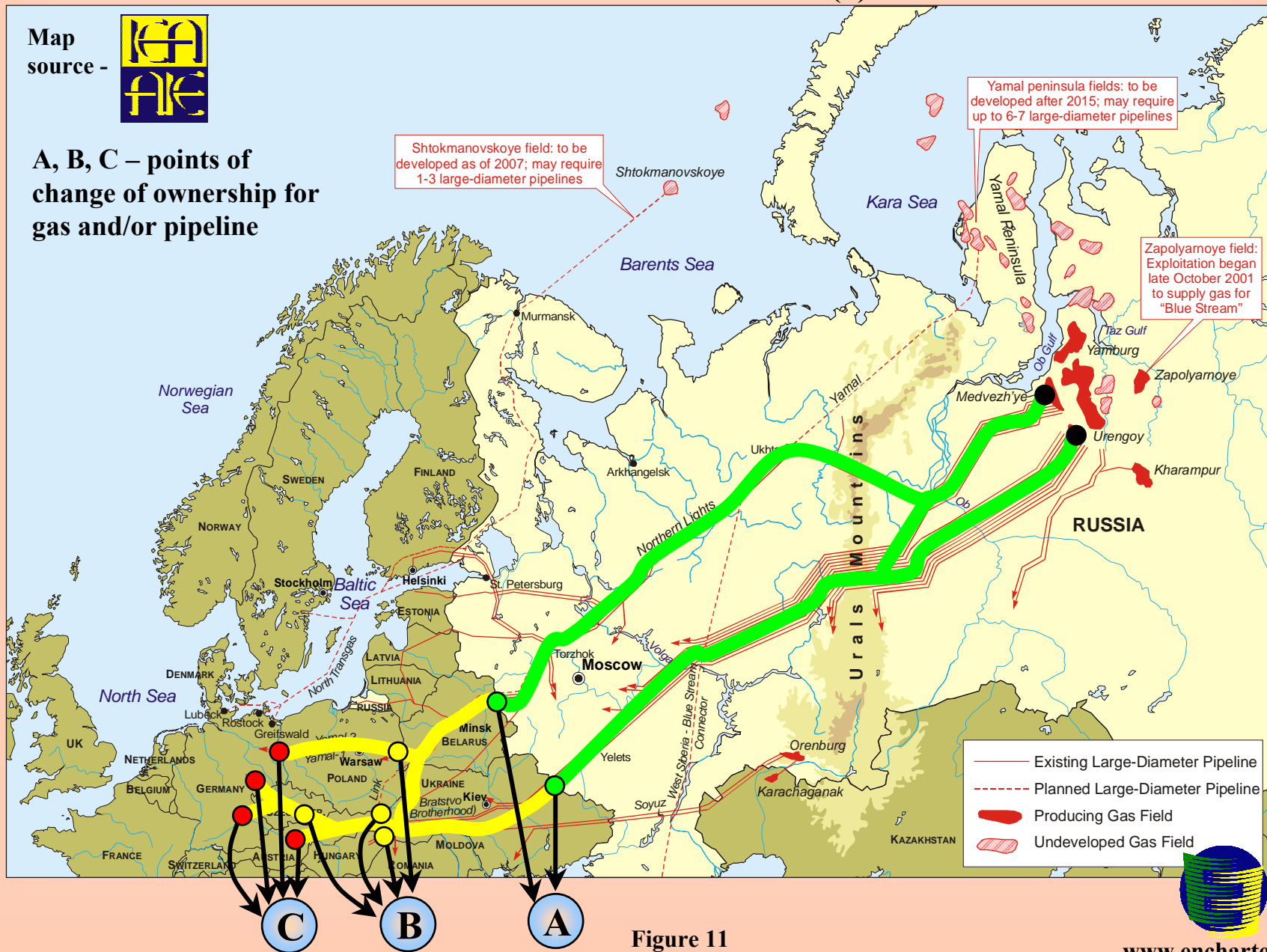
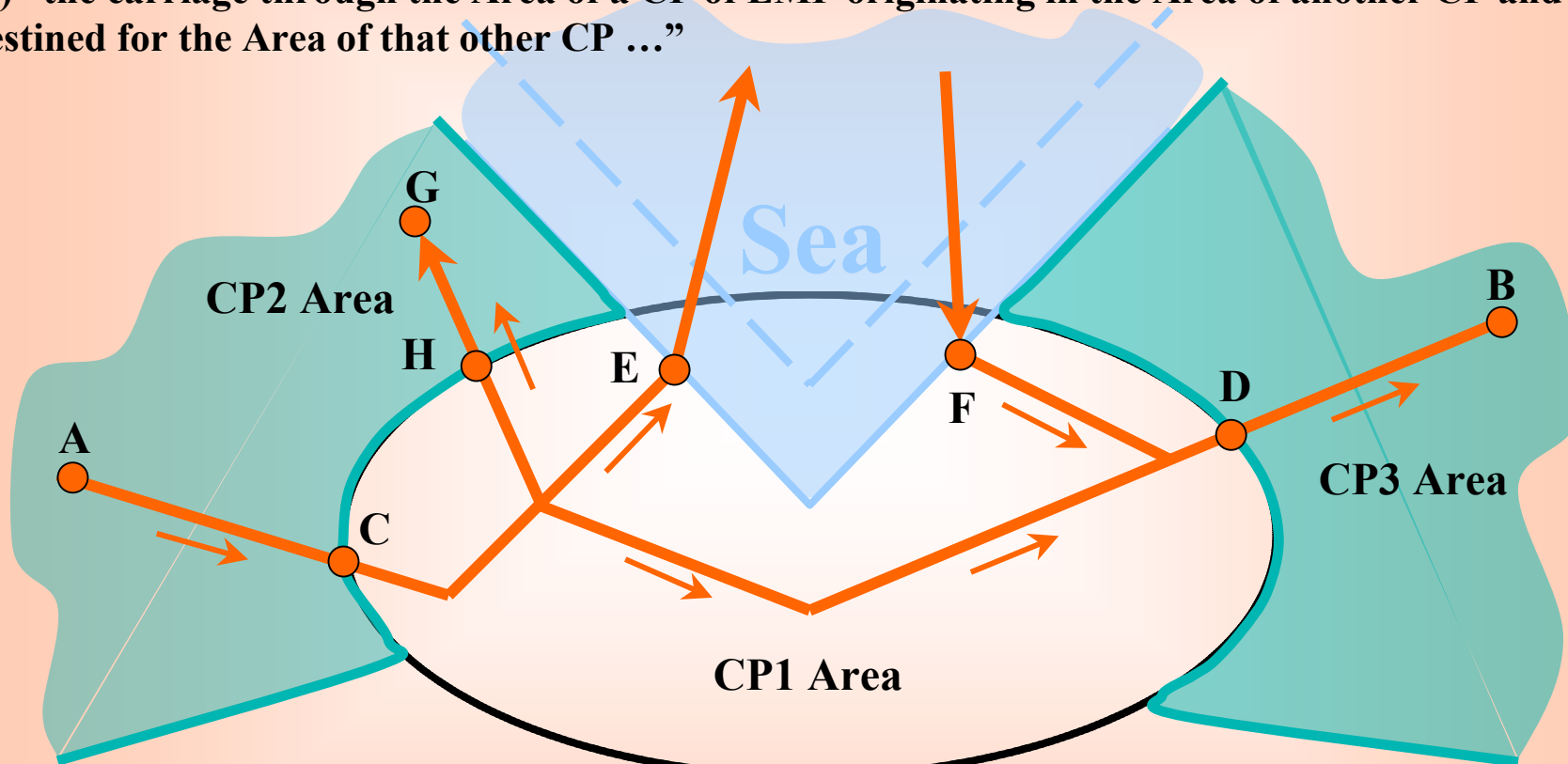


Figure 11

DEFINITION OF TRANSIT (Art. 7(10) ECT)

“...(a) Transit means: (i) the carriage through the Area of a CP, or to or from port facilities in its Area for loading or unloading, of EMP originating in the Area of another state and destined for the Area of a third state, so long as either the other state or the third state is a CP; or (ii) the carriage through the Area of a CP of EMP originating in the Area of another CP and destined for the Area of that other CP ...”

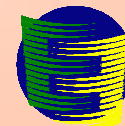


3 possibilities of energy supplies from A to B:

No transit (on-boarder sales at C and D), f.i. RUF-EU, Turkm-RUF, Kaz-RUF

Transit: • through the pipe owned/leased by shipper, f.i. Fr-Germ, Norw-Fr; planned RUF-CIS/EE
• through the pipe not owned by shipper

Figure 12

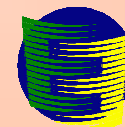


GAS TRANSIT ROLE FOR MAIN EXISTING (1999) AND PROSPECTIVE EXPORTERS TO EUROPE

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
PROSPECTIVE EXPORTERS					
Turkmenistan:					
- NW bound	√	--	--	--	--
- SW bound (x)	--	√	√	√	√
Kazakhstan:					
- NW bound	√	--	--	--	--
- SW bound (x)	--	--	--	--	?
Azerbaijan (x)	--	√	√	√	√
Iran (x)	√	√	√	√	√
Nigeria	--	--	√	√	√

(x) Turkey = market and transit hub

Figure 13

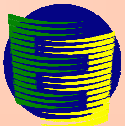


ECT TRANSIT PROTOCOL

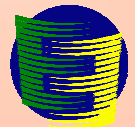
- 1.Obligation to observe Transit Agreements**
- 2.Prohibition of unauthorized taking of Energy Materials and Products in Transit**
- 3.Negotiated access of third parties to Available Capacity in Energy Transport Facilities used for Transit (mandatory access is excluded)**
- 4.Facilitation of construction,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

Result:

- risks & costs related to transit diminishes**
- competitiveness of transit supplies increases**
- improves “energy security” (“security of supplies”+”security of demand”+”security of infrastructure”)**



6. Energy Charter Treaty's role in diminishing risks of financing energy projects



FINANCING ENERGY PROJECTS: FROM EQUITY TO DEBT FINANCING

Equity/debt financing ratio:

Pre-1970's = ~ 100 / ~ 0

Nowadays = ~ 20-40 / ~ 60-80,

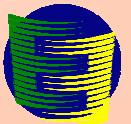
f.i. most recent:

BTC pipeline = 30 / 70

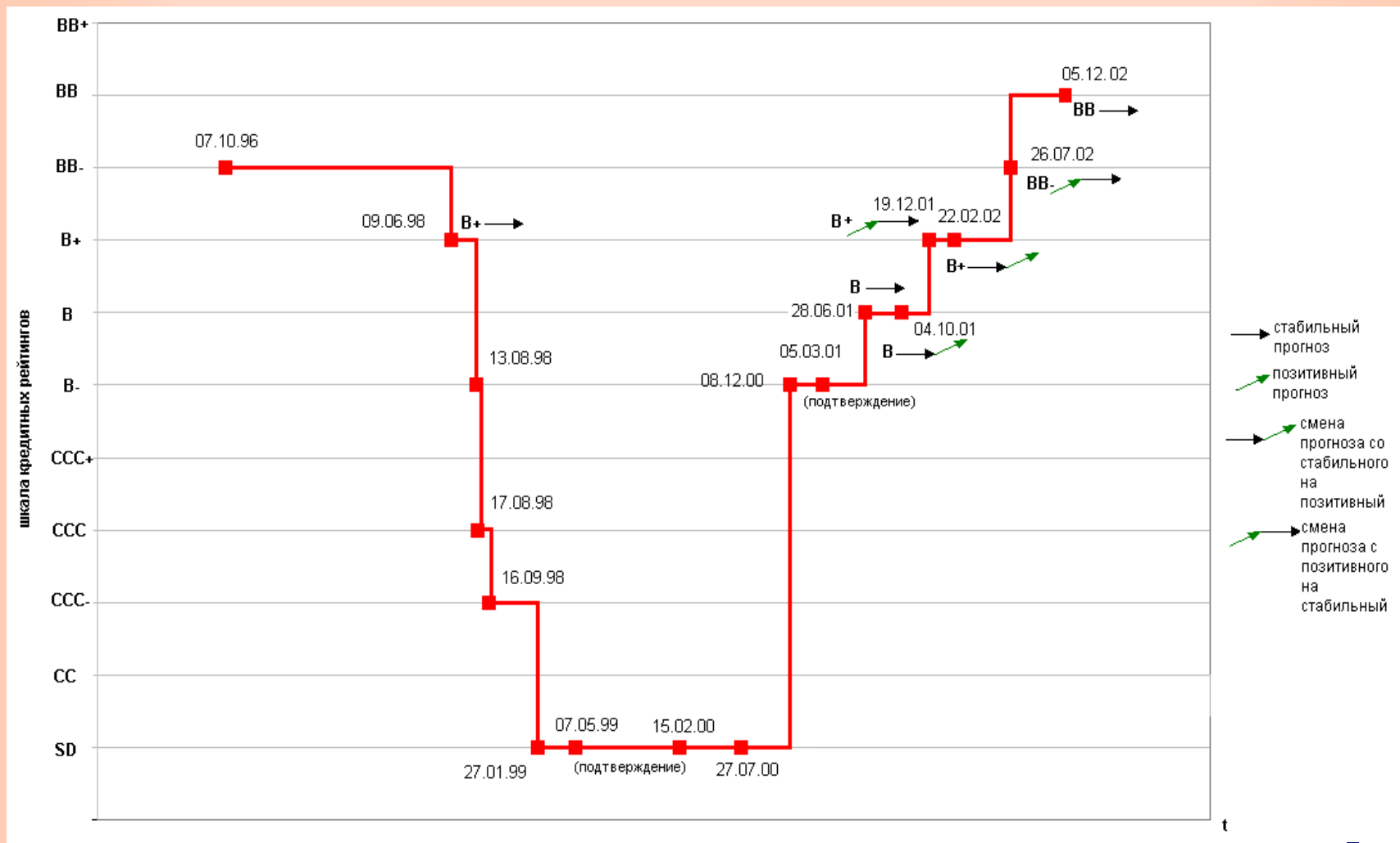
Sakhalin-2 (PSA) = 20 / 80

(2 fields+pipeline+LNG plant)

- ➔ Increased role of financial costs (cost of financing) of the energy projects
- ➔ Availability and cost of raising capital = one of major factors of competitiveness with growing importance in time



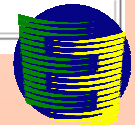
RATING HISTORY OF RUSSIA (STANDARD & POOR'S)



CURRENT POSITION OF RUSSIA AT THE RATING'S SCALE OF MAJOR RATING AGENCIES

(long-term credit ratings)

	Moody's	Standard and Poor's	Fitch IBCA	Краткое описание
“Investment” ratings	Aaa	AAA	AAA	Максимальная степень безопасности
	Aa1	AA+	AA+	Высокая степень надежности
	Aa2	AA	AA	
	Aa3	AA-	AA-	
	A1	A+	A+	Степень надежности выше средней
	A2	A	A	
	A3	A-	A-	
	Baa1	BBB+	BBB+	Степень надежности ниже средней
	Baa2	BBB	BBB	
	Baa3	BBB-	BBB-	
“Speculative” ratings	Ba1	BB+	BB+	Неинвестиционная, спекулятивная степень
	Ba2 (РОССИЯ: рейтинг присвоен 16.12.02)	BB (РОССИЯ: рейтинг присвоен 05.12.02)	BB	
	Ba3	BB-	BB- (РОССИЯ: рейтинг присвоен 02.05.02)	
	B1	B+	B+	Высокоспекулятивная степень
	B2	B	B	
	B3	B-	B-	
	Caа	CCC+	CCC	Существенный риск, эмитент в тяжелом положении
	--	CCC	--	
	--	CCC-	--	
	Ca	CC	--	Сверхспекулятивная степень, возможен отказ от платежей
	C	C	--	Отказ от платежей
	--	--	DDD	
--	SD	DD		



ECT IS BUSINESS-ORIENTED TREATY

ECT/Legislation → ↓ risks → ↓ financial costs (cost of capital) = (1) →
 ↑ inflow of investments (i.e. ↑ FDI, ↓ capital flight) → ↑ CAPEX → ↓ technical costs = (2) →
 (1) + (2) = (3) → ↑ pre-tax profit → ↑ IRR (if adequate tax system) → ↑ competitiveness →
 ↑ market share → ↑ sales volumes → ↑ revenue volumes

ECT provides multiplier legal effect in diminishing risks with consequential economic results in cost reduction and increase of revenues and profits

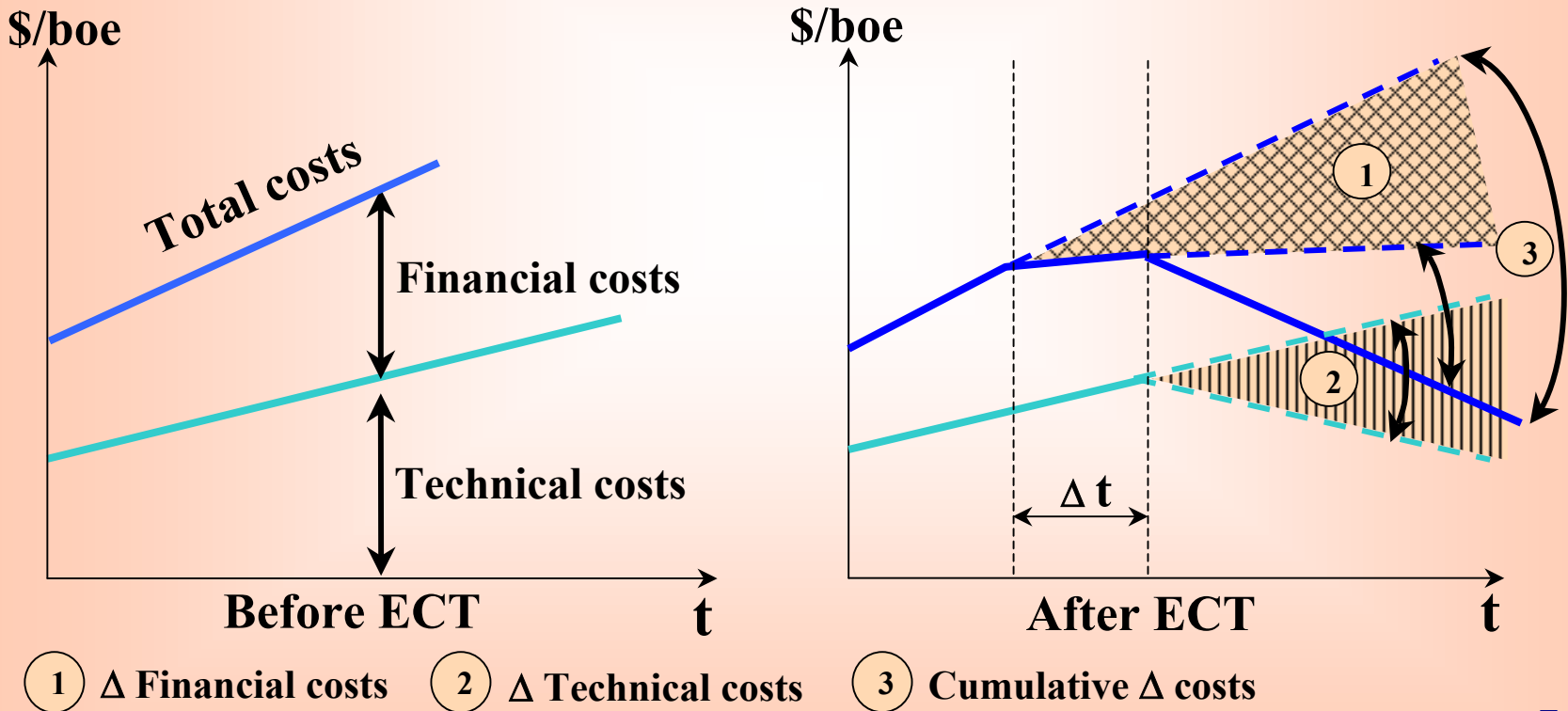
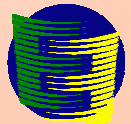
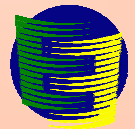


Figure 18



7. Energy Charter Treaty: security of supplies vs. security of demand



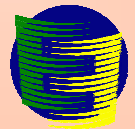
ECT PROCESS: THEN & NOW

	INITIALLY	CURRENTLY
Driving force	Motivated & dominated by interests of consumers	Consumer-producer balance of interests
Policy vs. economy dominance	Politically initiated	Economically driven
Approach to energy security	Physical security of supplies from economies in transition	Security of supplies + security of demand (by economic, nor administrative means)
Geography	<p>(1) “Trans-Atlantic” Europe (i.e. in political / OSCE terms)</p> <p>(2) OECD+CIS+EE</p>	<p>(1) Broader Eurasia, incl. North Africa, Australasia (i.e. in energy & economic terms)</p> <p>(2) OECD+CIS+EE+others</p>
Competitiveness	To decrease final energy prices to consumers even by diminishing producer’s ROR	To decrease full investment-cycle risks → to diminish both technical & financial costs → to increase competitiveness and protect adequate ROR at each step of energy & investment cycle

Figure 19



8. Conclusions



THE ENERGY CHARTER TREATY

ARTICLE 2

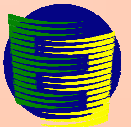
PURPOSE OF THE TREATY

This Treaty establishes a legal framework in order to promote long-term cooperation in the energy field, based on complementarities and mutual benefits, in accordance with the objectives and principles of the Charter.

ARTICLE 3

INTERNATIONAL MARKETS

The Contracting Parties shall work to promote access to international markets on commercial terms, and generally to develop an open and competitive market, for Energy Materials and Products.



MOST RECENT PUBLICATIONS ON ECT:

