

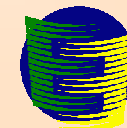
**Overview of the Energy Charter process:
its historical evolution and business role**

Dr. Andrei Konopliank
Deputy Secretary General
The Energy Charter Secretariat

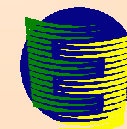
**Seminar for Iranian Authorities on
“Prospective benefits of Iran’s full membership in the Energy Charter Process”
23 February 2004, Tehran, Iran**

CONTENTS

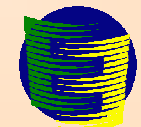
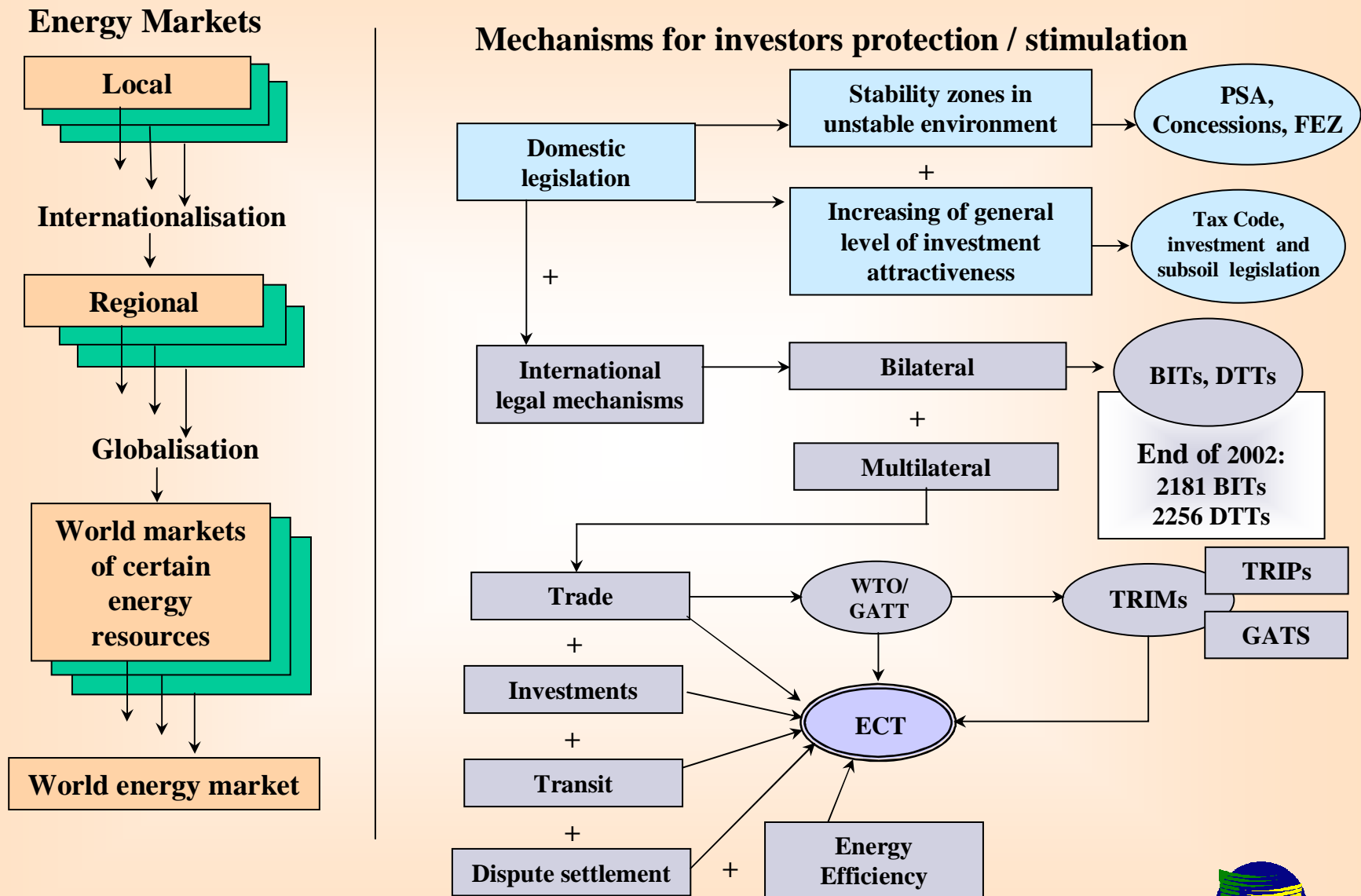
- 1. Development of energy markets and mechanisms of investor's protection & stimulation: the growing role of international law instruments**
- 2. General characteristics of the Energy Charter Process:**
 - **History of the Energy Charter process**
 - **Package of Energy Charter documents**
 - **ECT ratification status and concerns of the opponents to ratification**
 - **Energy Charter emerging geography (expansion)**
 - **Organisation of the Energy Charter Process (Conference and Working Groups)**
 - **Energy Charter Secretariat**
- 3. Business role of the Energy Charter process (with particular emphasis on Iran):**
 - **Financing energy projects: increasing role of risk management**
 - **Credit ratings and risks: comparative picture**
 - **How ECT would diminish the risks, increase the ratings and improve competitiveness**
- 4. Conclusions: Energy Charter process then and now**



1. Development of energy markets and mechanisms of investor's protection & stimulation: the growing role of international law instruments

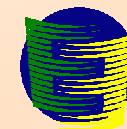


DEVELOPMENT OF ENERGY MARKETS AND MECHANISMS FOR INVESTORS PROTECTION / STIMULATION



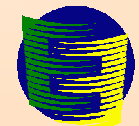
2. General characteristics of the Energy Charter Process:

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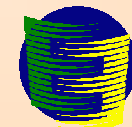
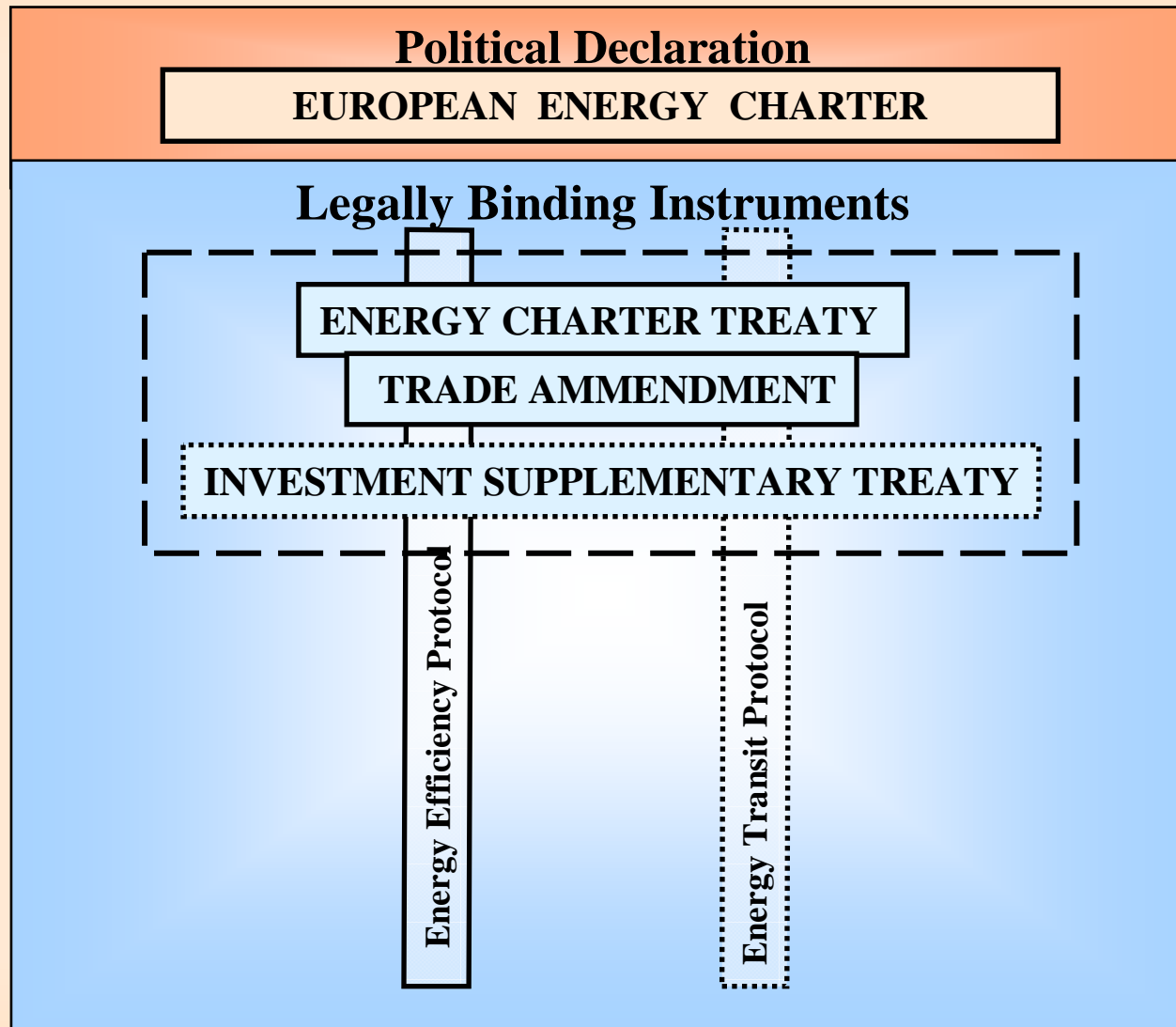


ENERGY CHARTER HISTORY

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 and became an integral part of international law
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

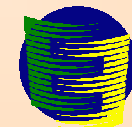


ENERGY CHARTER AND RELATED DOCUMENTS



ECT NON-RATIFIED STATES: REASONS

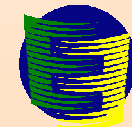
COUNTRY	ARGUMENT
1. Australia	Peripheral problem.
2. Iceland	Peripheral problem. Might be as well an issue of investor – state disputes (similar to Norway). Would most probably ratify after Norway will ratify.
3. Norway	Constitutional prohibition of investor – state disputes. The Government has informed about this constitutional problem while signing ECT. Russia's ratification would speed up solution. Mostly cooperative. One of the major actors in Energy Charter process.
4. Belarus	Depends on Russia's ratification.
5. Russia	<p>Russia has started ratification process in 1996 (RF Government asked RF State Duma for ECT ratification). Evolution of RF State Duma position:</p> <ul style="list-style-type: none"> - 2nd Duma (1997): No – but linked to WTO accession. - 3rd Duma (2001): Russia will ratify ECT, but not yet (depending on Transit Protocol) - 4th Duma (2004-...): ?



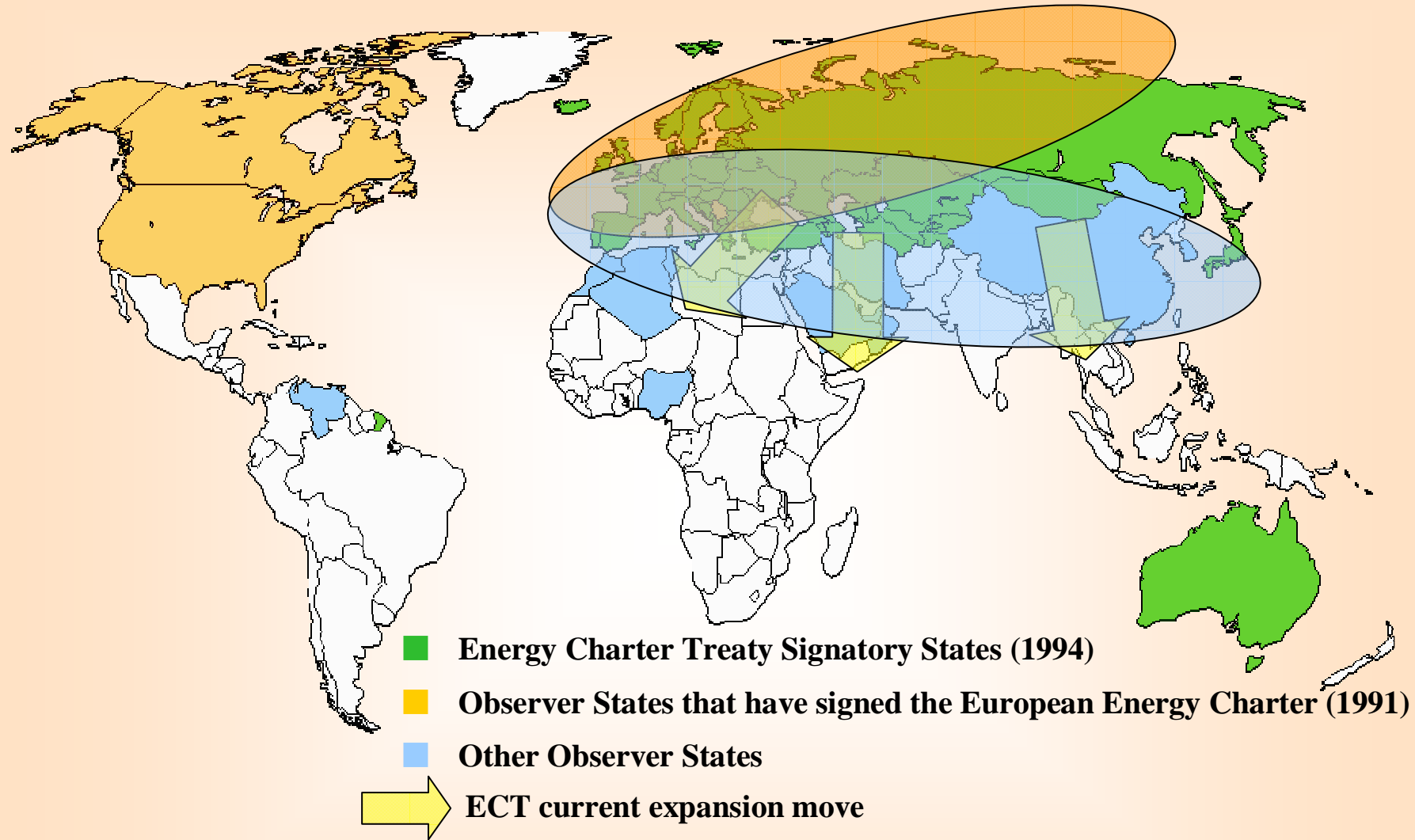
ECT MAJOR OPPONENTS IN RUSSIA AND THEIR ARGUMENTS

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



ENERGY CHARTER TREATY: EMERGING GEOGRAPHY

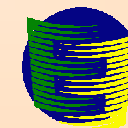
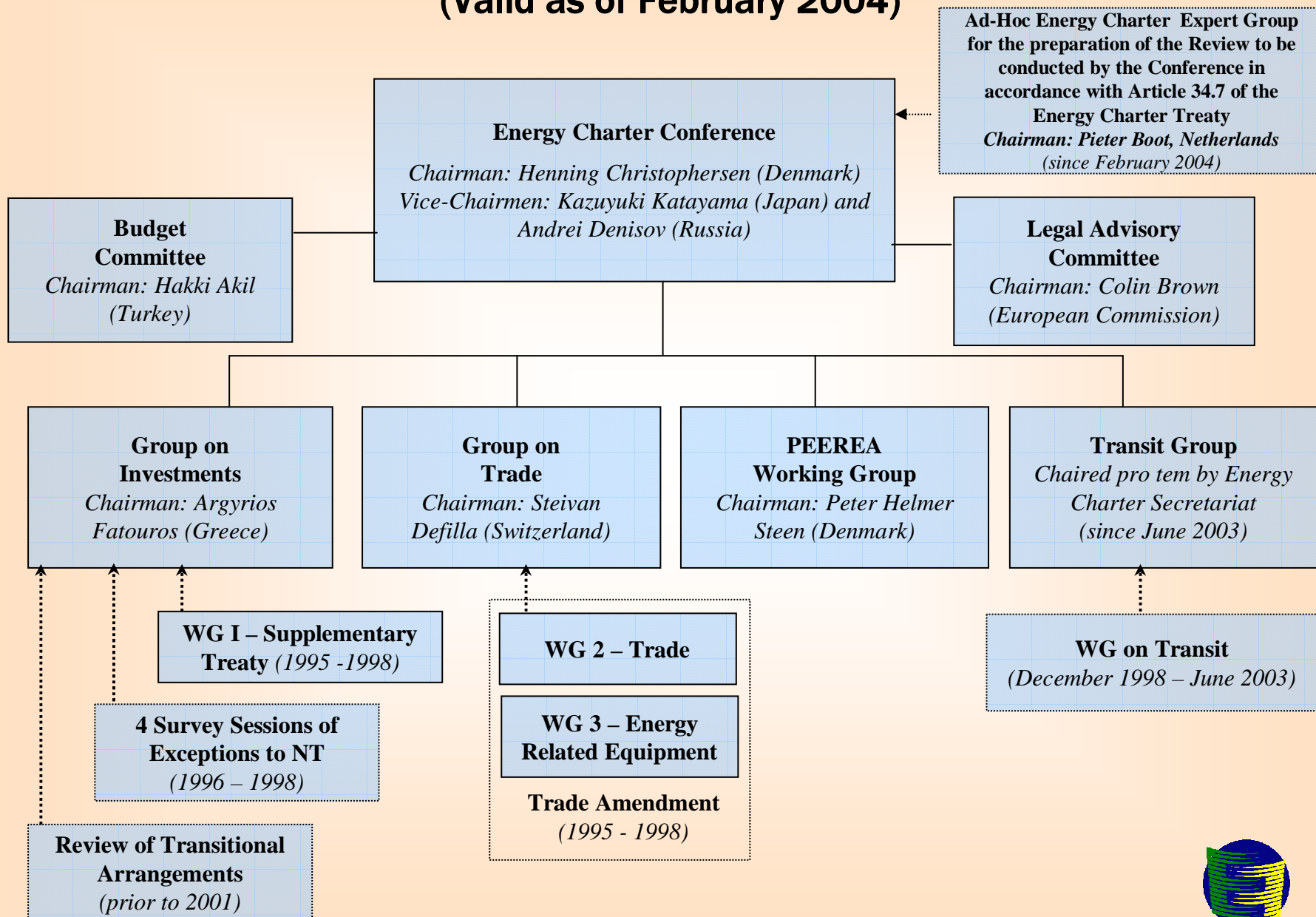


1. From trans-Atlantic political declaration to broader Eurasian single energy market
2. ECT expansion is an objective and logical process based on economic and financial reasons

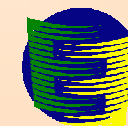
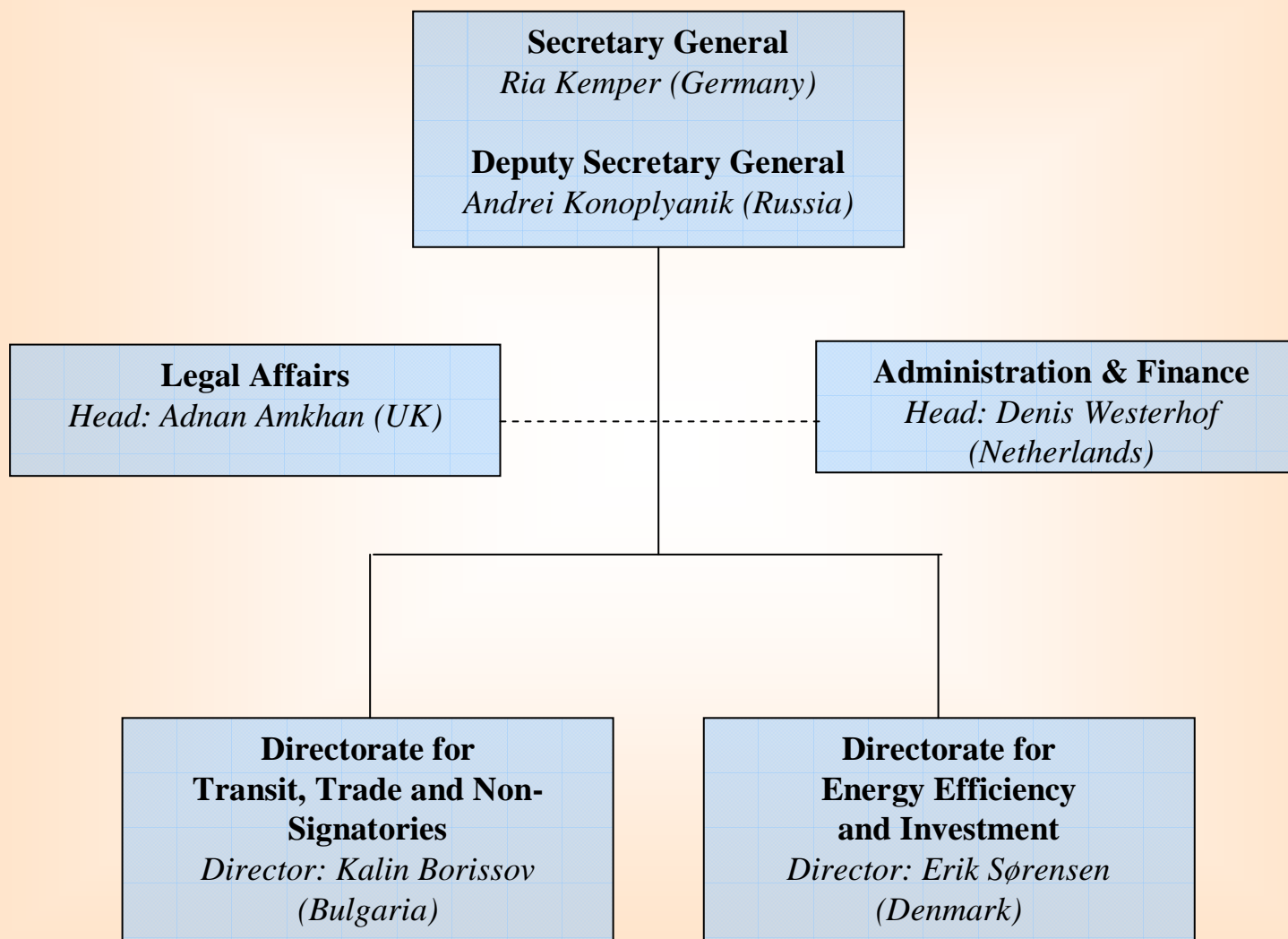


ENERGY CHARTER CONFERENCE ORGANISATION CHART

(Valid as of February 2004)

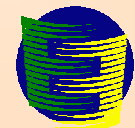


ORGANISATION CHART – ENERGY CHARTER SECRETARIAT (Valid as of 1st January 2004)

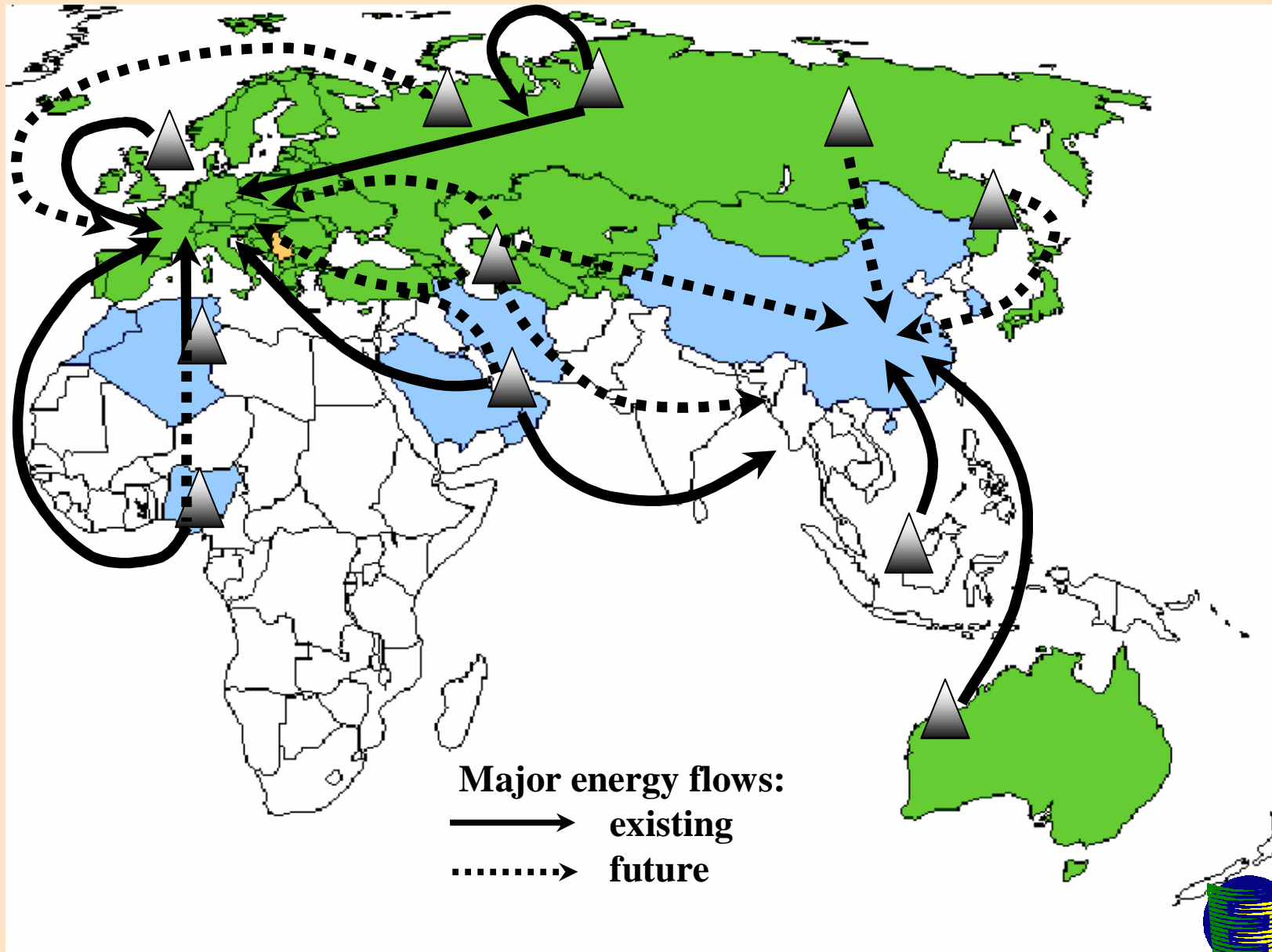


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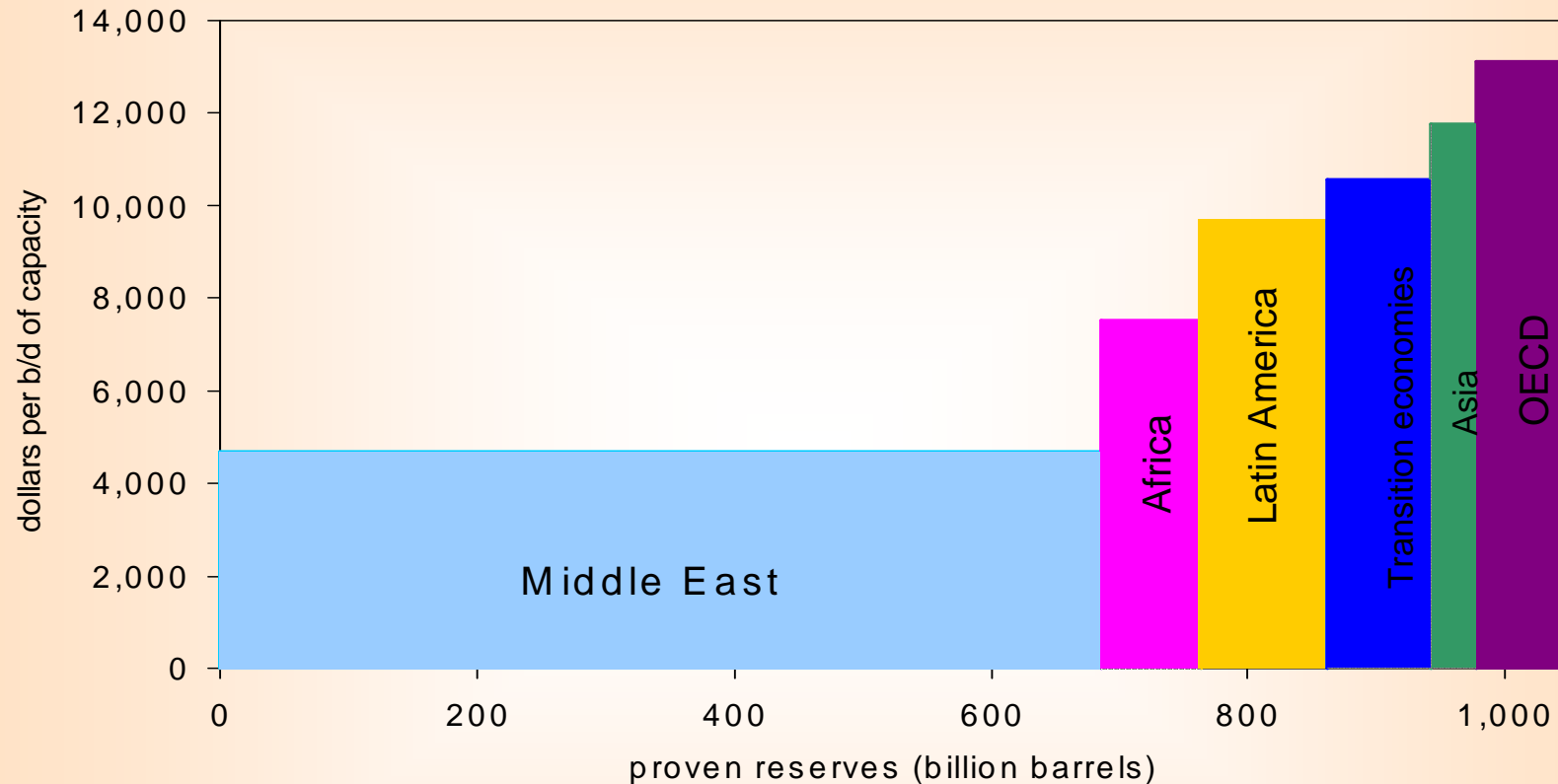


ENERGY CHARTER WORLD AND MAJOR ENERGY FLOWS IN THE EASTERN HEMISPHERE



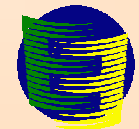
Dr. A. Konoplianiuk, 23 February 2004, Tehran - Figure 9

INDICATIVE OIL DEVELOPMENT COSTS & PROVEN RESERVES BY REGION, 2001

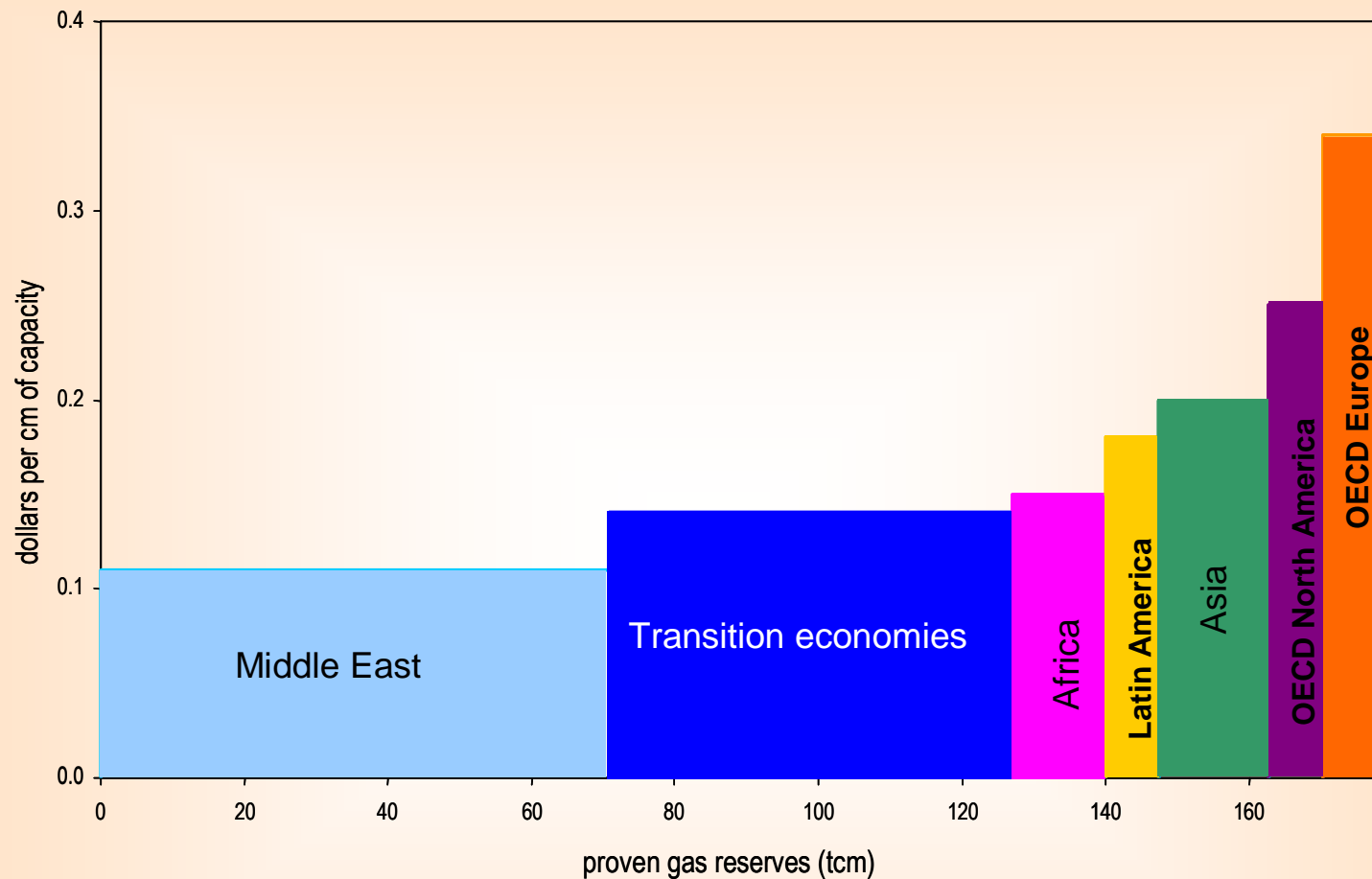


Development costs are lowest in the Middle East – which holds most of the world’s remaining reserves

Source: World Energy Investment Outlook – 2003 Insights,
International Energy Agency – IEA, 2003, p.108



INDICATIVE GAS EXPLORATION & DEVELOPMENT COSTS AND PROVEN RESERVES BY REGION, 2002

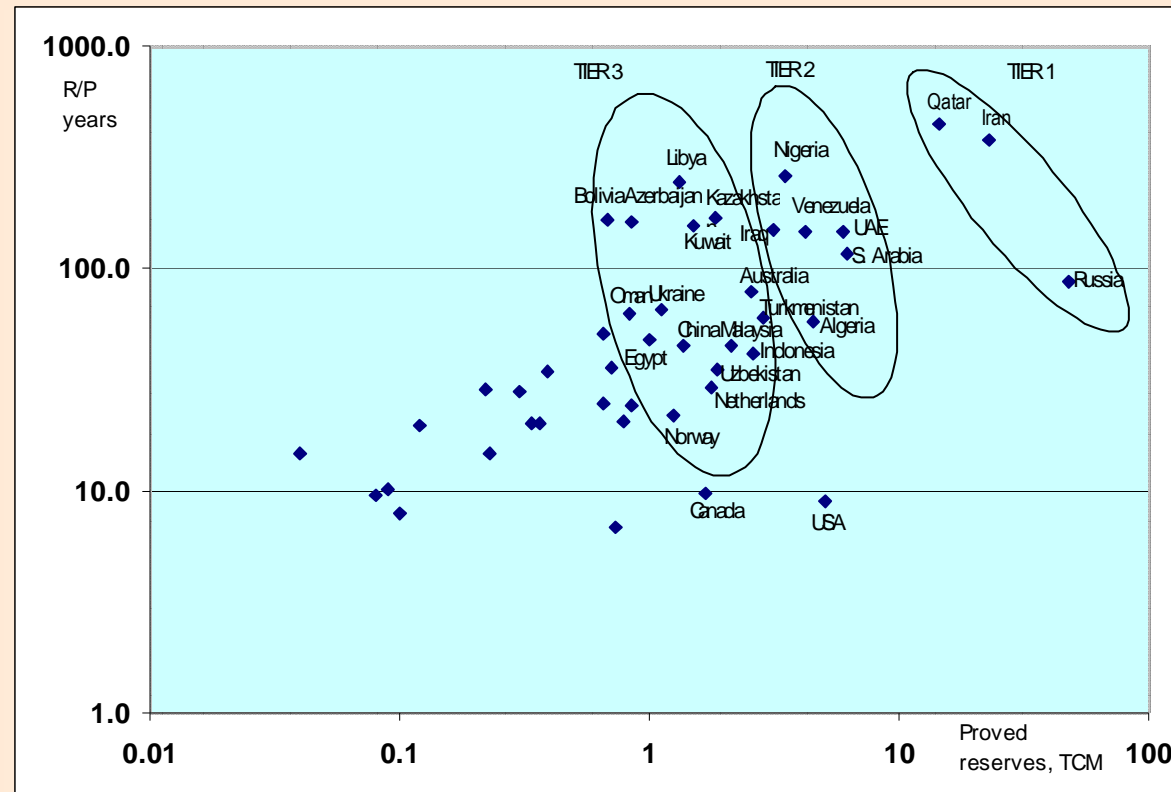


The Middle East and transition economies have the lowest development costs and most remaining gas reserves

Source: World Energy Investment Outlook – 2003 Insights,
International Energy Agency – IEA, 2003, p.199



GAS RESERVES AND R/P RATIOS AS OF END 2001 (log scale)

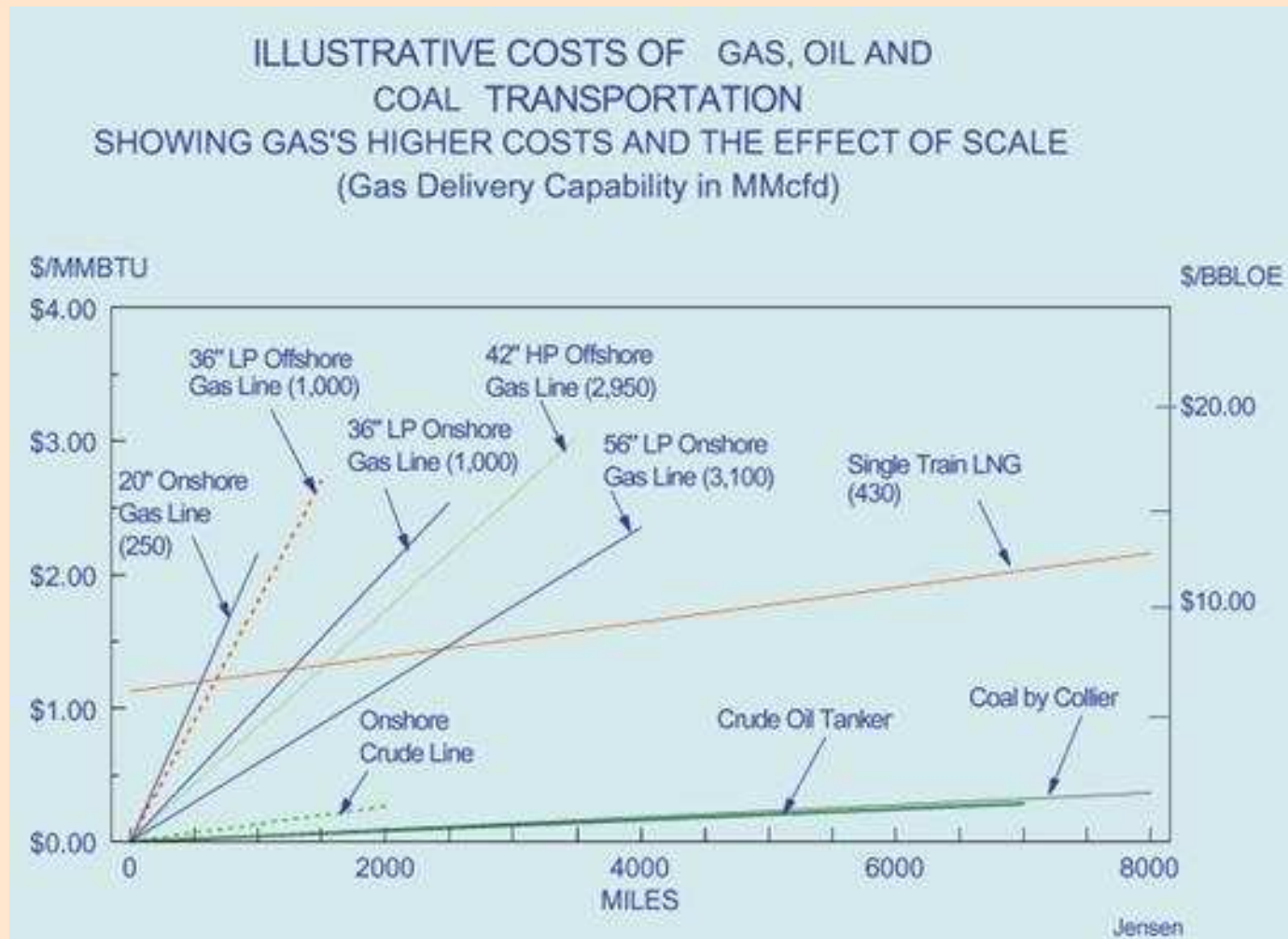


**Data source: BP Statistical Review of World Energy
(except R/P for Iraq, which is an estimate).**

Document IN-27, Energy Charter Secretariat



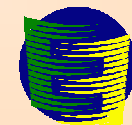
ACTI*) FOR GAS AND OIL PIPELINES AND COLLIERS AS A FUNCTION OF DISTANCE AT VARIOUS PIPE DIAMETERS



*) ACTI –Average Cost of Transportation Index

Source: Jensen Associates, Inc.

Document IN-27, Energy Charter Secretariat



FINANCING ENERGY PROJECTS: FROM EQUITY TO DEBT FINANCING

Equity/debt financing ratio:

Pre-1970's = ~ 100 / ~ 0

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

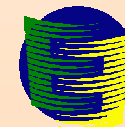
f.i. most recent:

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

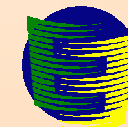


ILLUSTRATIVE COMPOSITE RISK LEVELS IN SOME COUNTRIES (100 = least risky)

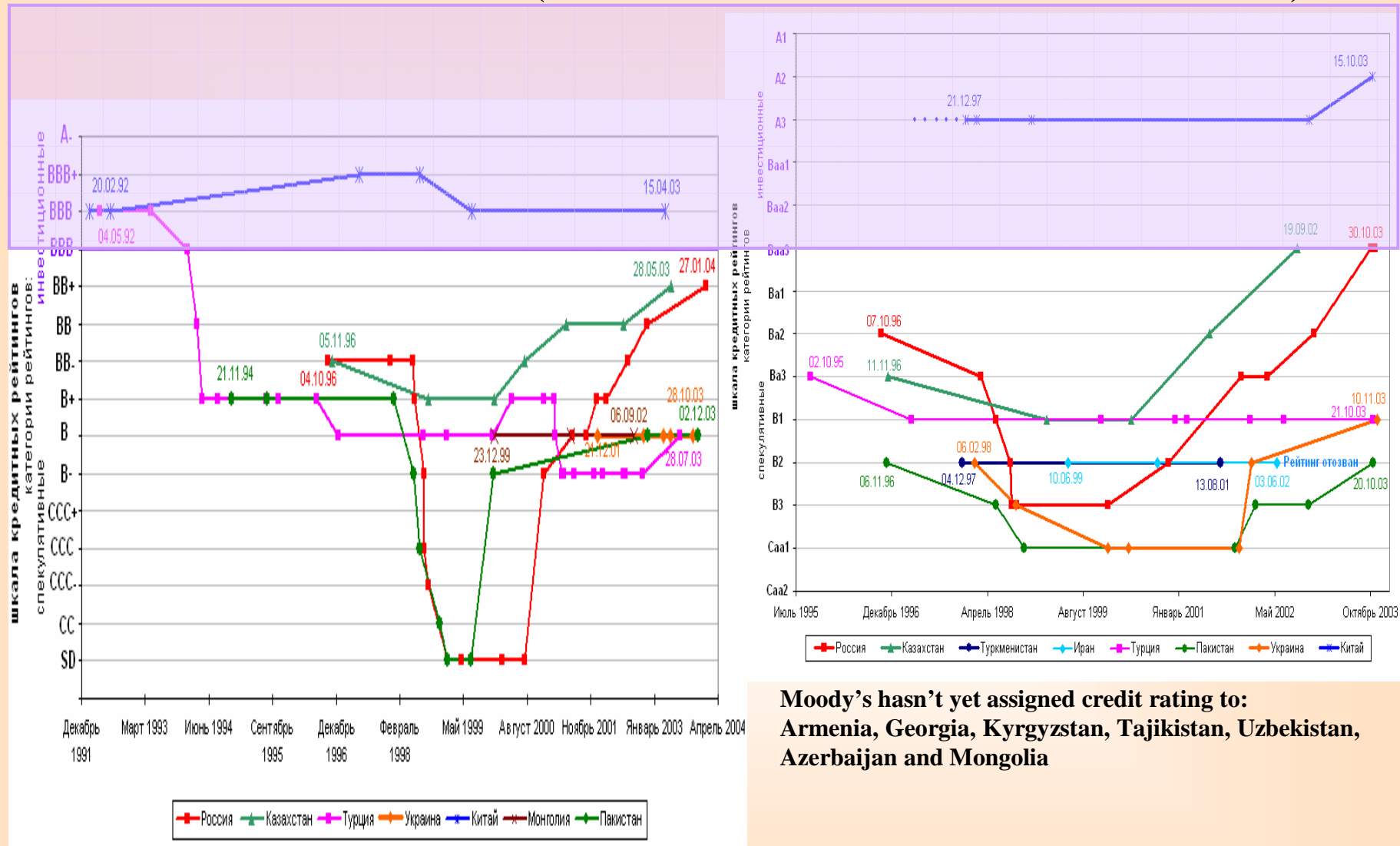
Before invasion →

	Risk rank	Risk category
Turkmenistan	12.8	Very high
Iran	17.0	Very high
Iraq	20.5	Very high
Bangladesh	21.2	Very high
Uzbekistan	22.4	Very high
Indonesia	25.9	Very high
Azerbaijan	26.8	Very high
Ukraine	30.6	Very high
Pakistan	31.0	Very high
Russian Federation	35.0	Very high
Kazakhstan	37.9	Very high
India	40.6	Very high
Thailand	47.4	Very high
Malaysia	51.1	High
Oman	54.5	High
Saudi Arabia	57.3	High
China	59.5	High
Qatar	63.5	Moderate
United Arab Emirates	71.0	Low
Australia	79.3	Low

Source: World Bank Group's
Foreign Investment Advisory
Service (FIAS)
Document IN-27, Energy
Charter Secretariat



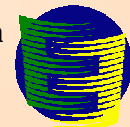
RATING HISTORY OF SOME ECT MEMBER-STATES IN THE CASPIAN AREA AND AROUND (MOODY'S AND STANDARD & POOR'S)



**Moody's hasn't yet assigned credit rating to:
Armenia, Georgia, Kyrgyzstan, Tajikistan, Uzbekistan,
Azerbaijan and Mongolia**

S&P hasn't yet assigned credit rating to:

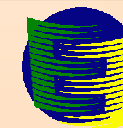
Armenia, Georgia, Kyrgyzstan, Turkmenistan, Tajikistan, Uzbekistan, Azerbaijan, and non-members - Iran and Pakistan



DIFFERENT COUNTRIES POSITIONS AT THE MOODY'S RATINGS SCALE & COST OF FINANCING (long-term credit ratings vs LIBOR+)

	Moody's scale	Short description	2003 spread diapason basic points (1)	Practical example (LIBOR=4%)	
“Investments ratings”	Aaa	Maximum security level	5-25	< 4,25%	Australia (Aaa), Netherlands (Aaa), Norway (Aaa),United Kingdom (Aaa), Qatar (A3)
	Aa1	High security level			
	Aa2				
	Aa3				
	A1	Upper middle security level			
	A2				
	A3				
	Baaa1	Lower middle security level	25-200	< 6%	Malaysia (Baa1), Saudi Arabia (Baa2)
	Baaa2				
Baaa3					
“Speculative ratings”	Ba1	Non-investment, speculative level	200-1000	< 14%	Russia (Baa3)
	Ba2				
	Ba3				
	B1	High speculative level	1000-1500	< 19%	Iran (B2, 10.06.99- 13.06.02, rating was called-back), Turkmenistan (B2), Indonesia (B2)
	B2				
	B3				
	Caa	Significant risk, issuer is facing hard difficulties			
	--				
	--				
	Ca	Highest speculative level, possibility of default			
	C				
	--	Default	1500-2000	< 204%	
--					

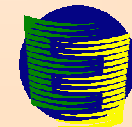
(1) Spread = difference between factual interest rate and the same one for first-class borrower, 100 basic points = 1%



IMPACT OF INCREASED (POLITICAL) RISK OF MINIMUM ACCEPTABLE TARIFFS AND PRICES (REPRESENTATIVE VALUES)

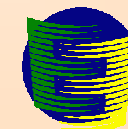
Pipeline length, km	Throughput, billion cubic meters p.a. (32 inch high pressure line)	Wellhead cost of gas, \$/1,000 m ³	Target rate of return (project discount rate for NPV calculations)	Minimum acceptable transportation tariff to secure required NPV and loan coverage ratios, \$/1,000 m ³	Minimum price of delivered gas to secure required NPV and loan coverage ratios, \$/1,000 m ³
3,850	7	50	10	~48-50	~100
3,850	7	50	15	~65	~115
3,850	7	50	20	~82	~132
3,850	7	50	25	~100	~150
3,850	7	50	30	~117	~167

Source: Document IN-27, Energy Charter Secretariat



IRAN'S COMPETITIVE POSITION AT THE GAS MARKET

Competitive advantages	Competitive disadvantages
<ol style="list-style-type: none"> 1. Huge reserves / resources 2. Low E&D costs 3. Placed in the middle between two major markets: Europe and Asia 4. Consumer's "multiple pipeline" concept = natural niche (demand) for new suppliers 5. Alternative (additional) route(s) to Russian supplies 6. Producer & transit state (future transit hub) = niche for swap deals 7. Transit to Europe – via ECT members (less political risk) 	<ol style="list-style-type: none"> 1. Long distances from the markets 2. Need to fight for a market niche (competitive supplies) 3. No existing access to gas markets = need to develop costly new long-distance high pressure transmission pipelines & LNG capacities 4. Transit to Asia – via ECT non-members (more political risk) 5. High country risk assessment = high financial costs + high ROR



NON-RATIFICATION OF ECT BY RUSSIA = ITS COMPETITIVE DISADVANTAGE

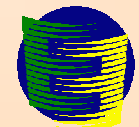
Russia's objective competitive disadvantages: longest distances to markets + falling production at major fields + more complex geology (from Senoman gas of W.Siberia to Valanzhin, Achimov, offshore and Yamal gas) + harsh natural conditions of producing areas

Russia: Highest stimuli to diminish technical and financial costs of production and transportation:

**(a) technical costs ← investments ← legal environment
in host and transit countries**

**(b) financial costs ← cost of capital ← credit ratings (sovereign,
corporate, project) ← legal environment in host
and transit countries**

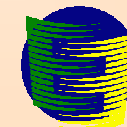
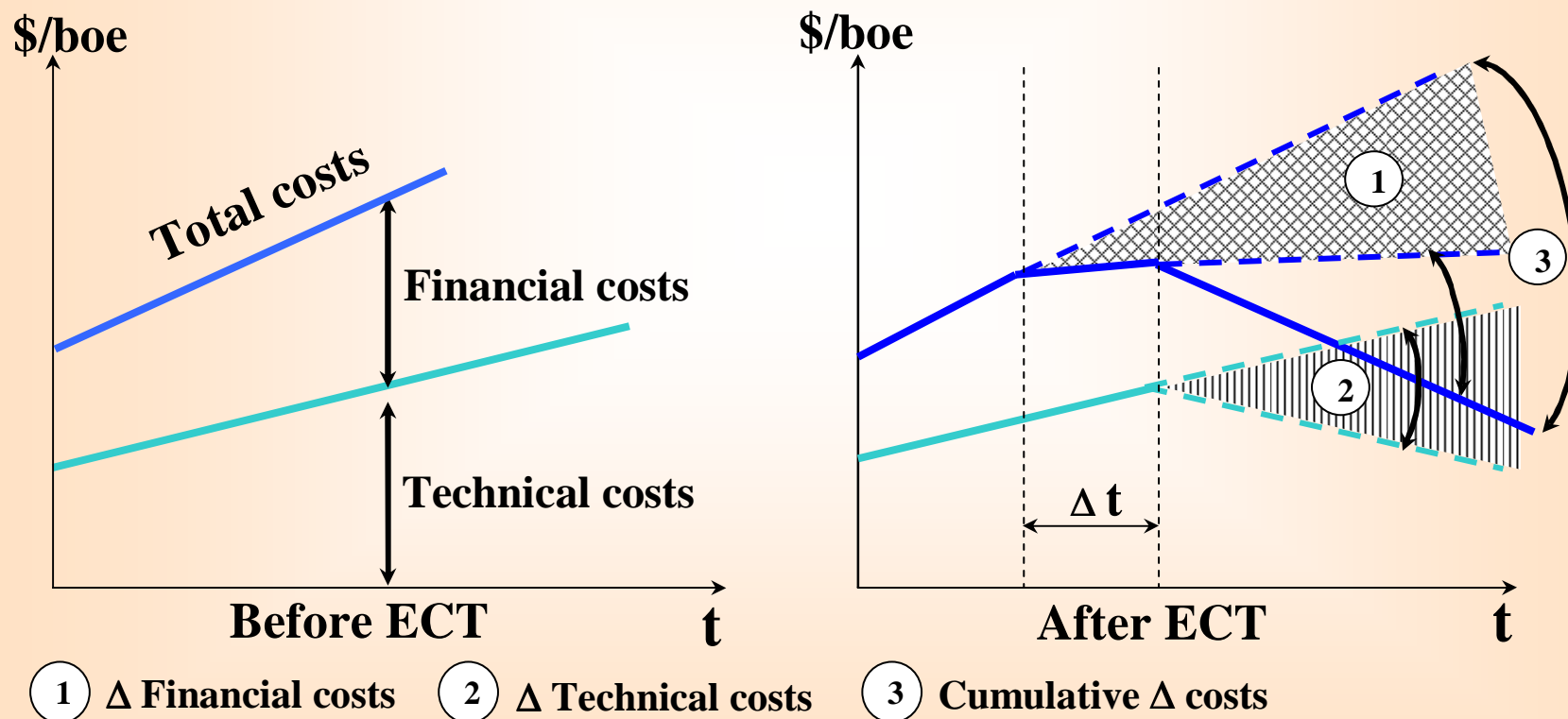
**ECT and related documents (if ratified) = common legal
environment minimizing risks and technical & financial costs**



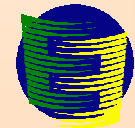
ECT IS BUSINESS-ORIENTED TREATY (how it works)

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

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



4. Conclusions: Energy Charter process then and now



ENERGY CHARTER 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 and legal (business supportive legislation) and not 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

