Energy Security and Development of International Energy Markets
(with particular role of the Energy Charter process)

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- Evolution of energy markets and energy security instruments
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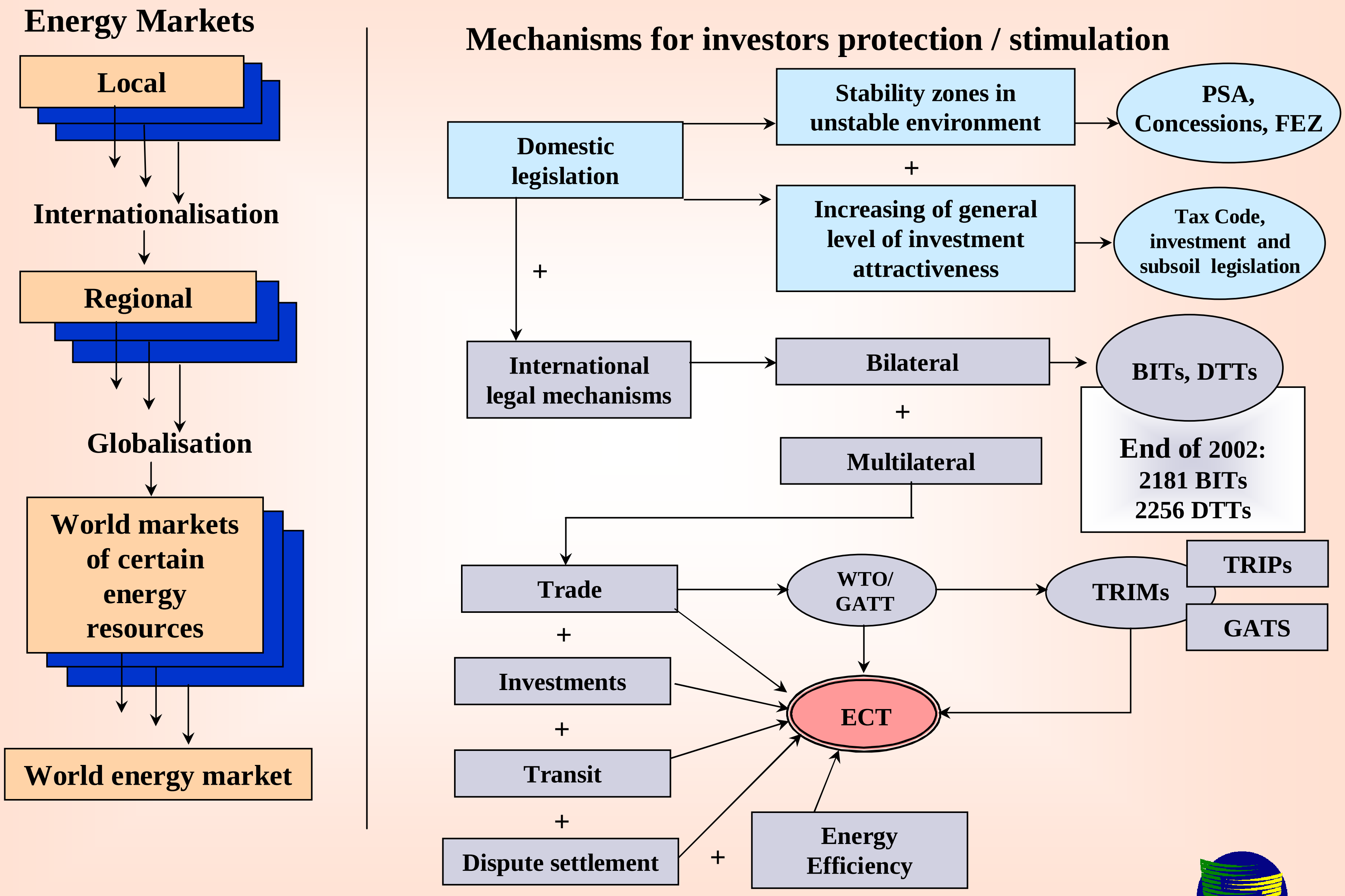
DEVELOPMENT OF ENERGY MARKETS AND MECHANISMS FOR INVESTORS PROTECTION / STIMULATION



ENERGY SECURITY: CONCEPT

***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 SPECIFIC *ENERGY SECURITY* INSTRUMENTS:

(1) colonies (non-energy raw materials),

(2) concession system,

(3) strategic reserves + stocks,

(4) international law instruments

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

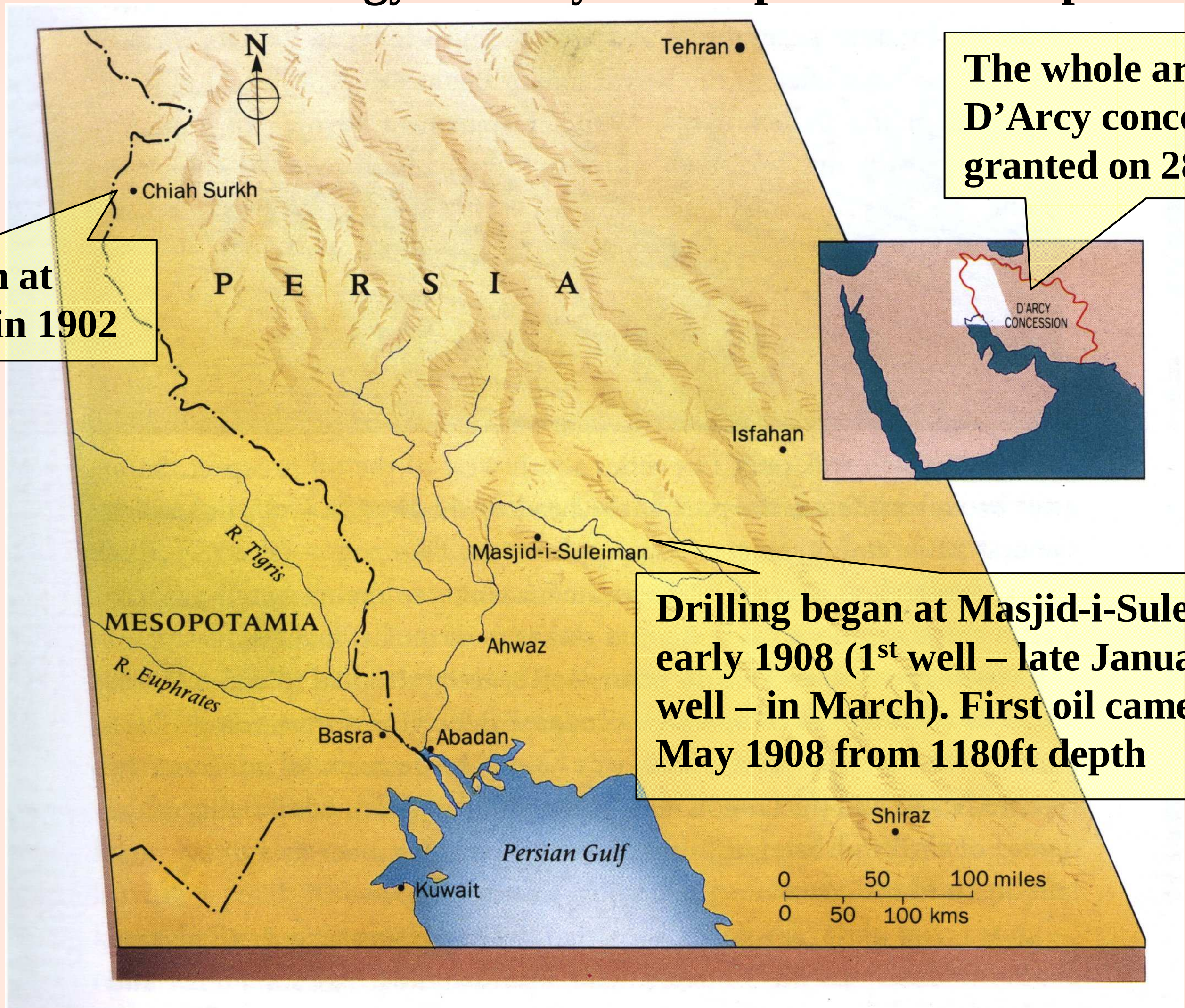
- **from monopoly to competition as a driving force of energy markets development,**
- **from energy independence to energy interdependence,**
- **from local markets of individual energy resources to global energy market**

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:	**Concession system**	**Strategic reserves + stocks**	**International law**
- volume risk	Traditional & modernized concessions, PSAs, risk-service contracts (direct control of supplies via 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)	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)	Paper energy (oil, gas contract)
Driving force of market development	Monopoly (individual consumer states/cartel of private companies)	Monopoly (cartel of producer states/state companies)	Competition

D’ARCY CONCESSION GEOGRAPHY
(the place where “energy security” concept was first implemented)



The whole area of D’Arcy concession granted on 28 May 1901

Drilling began at Chiah Surkh in 1902

Drilling began at Masjid-i-Suleiman in early 1908 (1st well – late January, 2nd well – in March). First oil came on 26 May 1908 from 1180ft depth

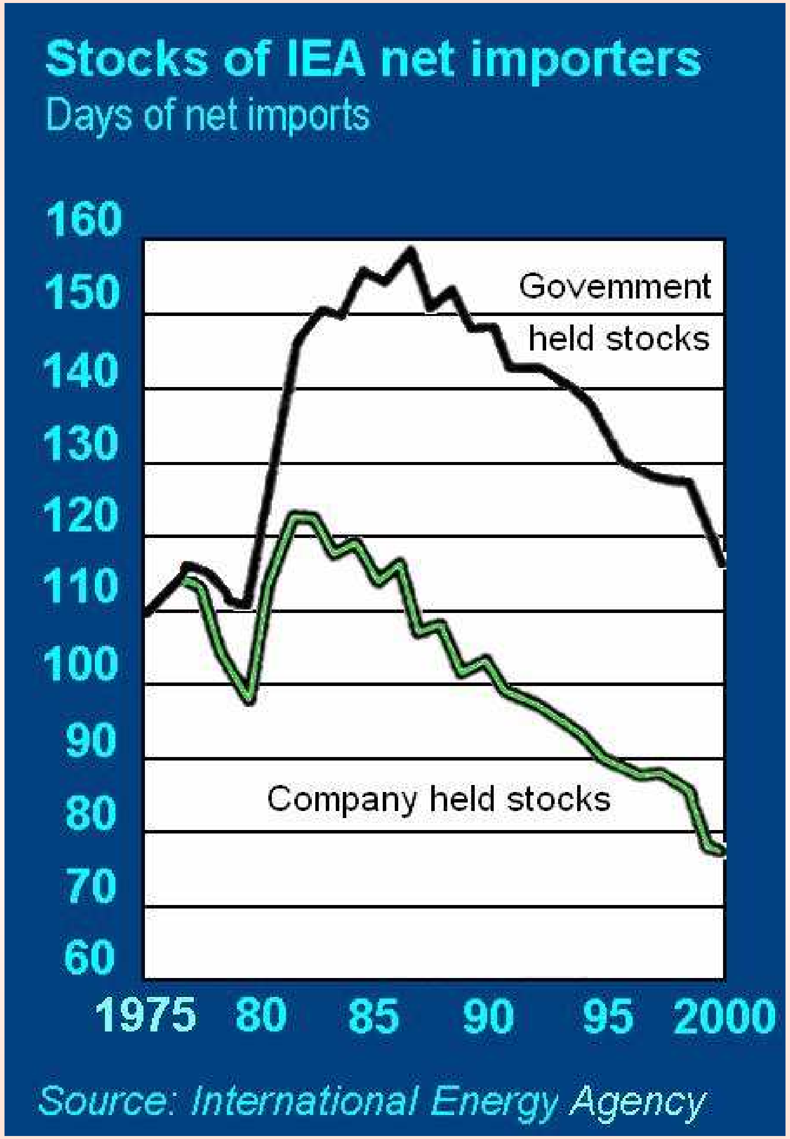
Source: Berry Ritchie. Portrait in Oil. An Illustrated History of BP. James&James (Publ.) Ltd., 1995

APPROXIMATE EXPIRY DATES OF FORMER CONCESSIONS IN SOME OPEC COUNTRIES

Middle East	Abu-Dhabi	2014 – 2018
	Iran	1994
	Iraq	2000 – 2013
	Kuwait	2003 – 2026
	Qatar	2010 – 2027
	Saudi Arabia	1999 – 2000
Africa	Libya	2011 – 2016
	Nigeria	1989 - 1999

Source: When do the concessions end? – “Petroleum Press Service”, December 1971, p.449-450

OIL STOCKS OF IEA NET IMPORTERS



ENERGY (AND OTHER COMMODITIES) SECURITY TOOLS FOR PRODUCING COUNTRIES: STABILIZATION FUNDS

Country, State	Fund title	Official aim	Est. date	Accumulation rules	Utilization rules
Kuwait (I)	General Reserve Fund	Stabilization & Savings	1960	Residual budget proficit	Discretion transfers to budget
Kuwait (II)	Reserve Fund for Future Generations	Savings	1976	10% of all state revenues	Discretion transfers to budget (approved by National Assembly)
USA, Alaska	Permanent Fund of Alaska	Savings	1976	50% of particular revenues from mineral resources (25% prior to 1980)	Main sum of the Fund has been continuously invested. Profit utilization decided by Governor and legislative body
Oman	Non-Specified Reserve Fund	Savings	1980	Oil revenues above planned for the budget	Discretion transfers to budget
Chile (copper)	Stabilization Copper Fund	Stabilization	1985	Dependent on “basis price” defined by government	Transfers to budget (and non-budget credits) dependent on “basis price”
Norway	State Oil Fund	Stabilization & Savings	1990	All state revenues from oil	Discretion transfers to budget to finance non-oil deficit
Venezuela	Fund for Macroeconomic Stabilization	Stabilization	1998	50% oil revenues (100% prior to 1999) if exceed basic parameters	Discretion transfers (government decided, parliamentary agreed)
Russia (I)	Financial Reserve	Stabilization	2002	All extra budget revenues under \$22.5/bbl “cut-off price” concept	Government decisions (to repay state foreign debt, etc.)
Russia (II) (draft)	Stabilization Fund of RF	Stabilization	First draft in 2003	Extra export duties on crude and products plus extra MRPT under \$20/bbl “cut-off price” concept; plus state budget’ residuals to be transferred to next year budget	Fund revenues to be invested in the first-class foreign state bonds, and can be used only on financing budget deficit (not on foreign debt repayment)

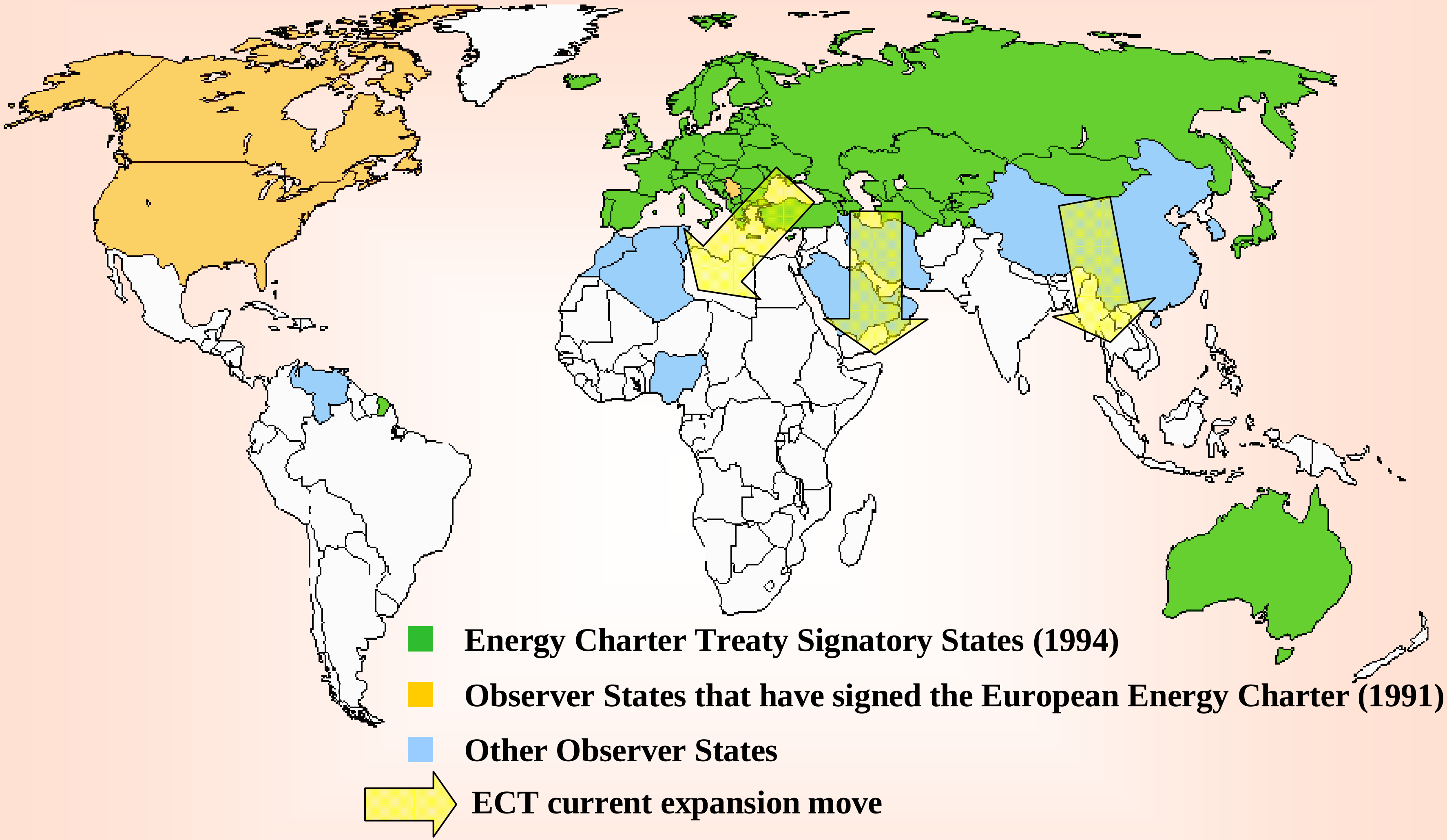
ENERGY CHARTER HISTORY

June 25, 1990	Dutch Prime Minister Ruud 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 internal part of international law
As of today	• 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

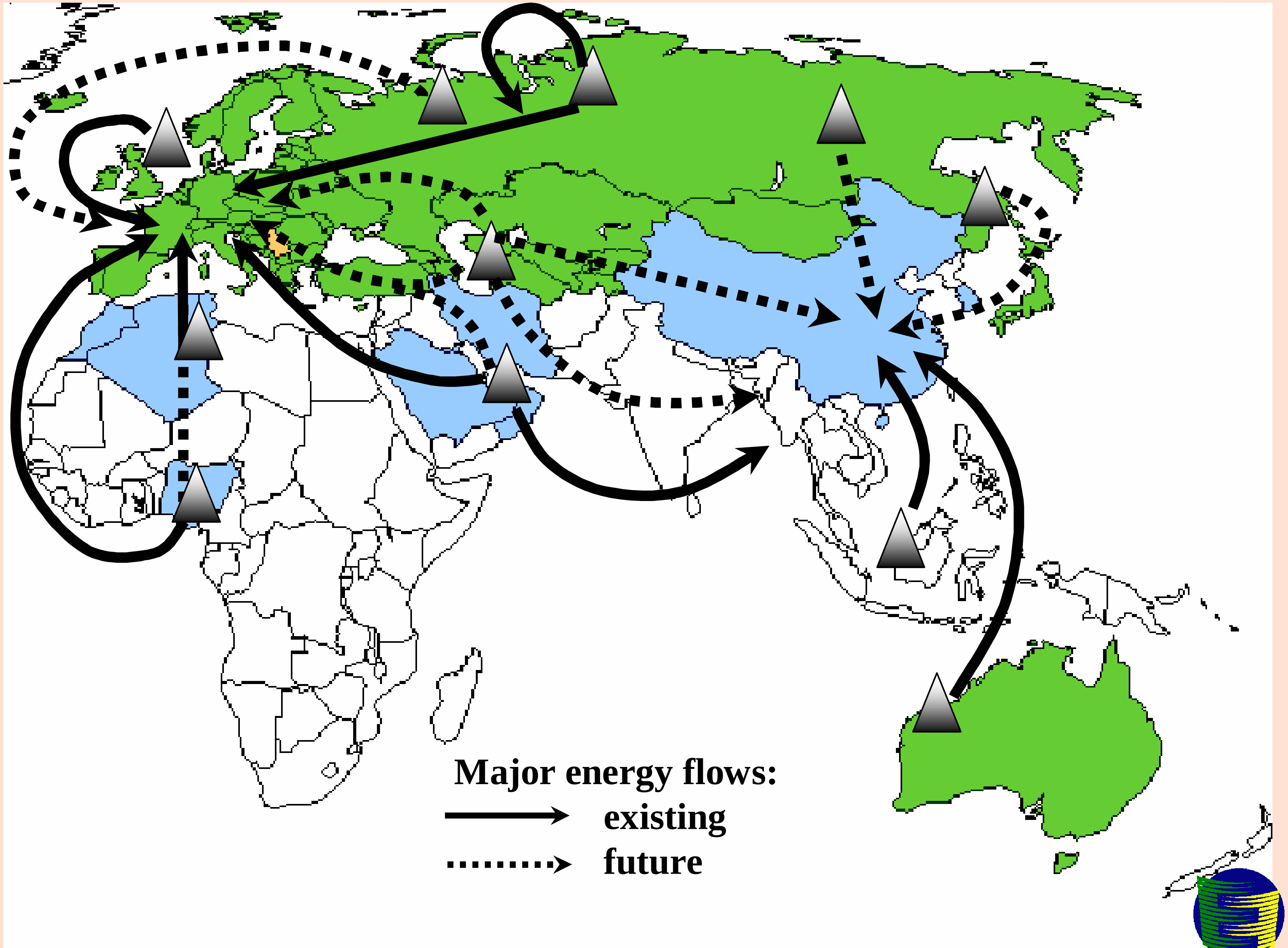
RF State Duma (2001): Russia will ratify ECT, but not yet (depending on Transit Protocol)

ENERGY CHARTER TREATY: GEOGRAPHY

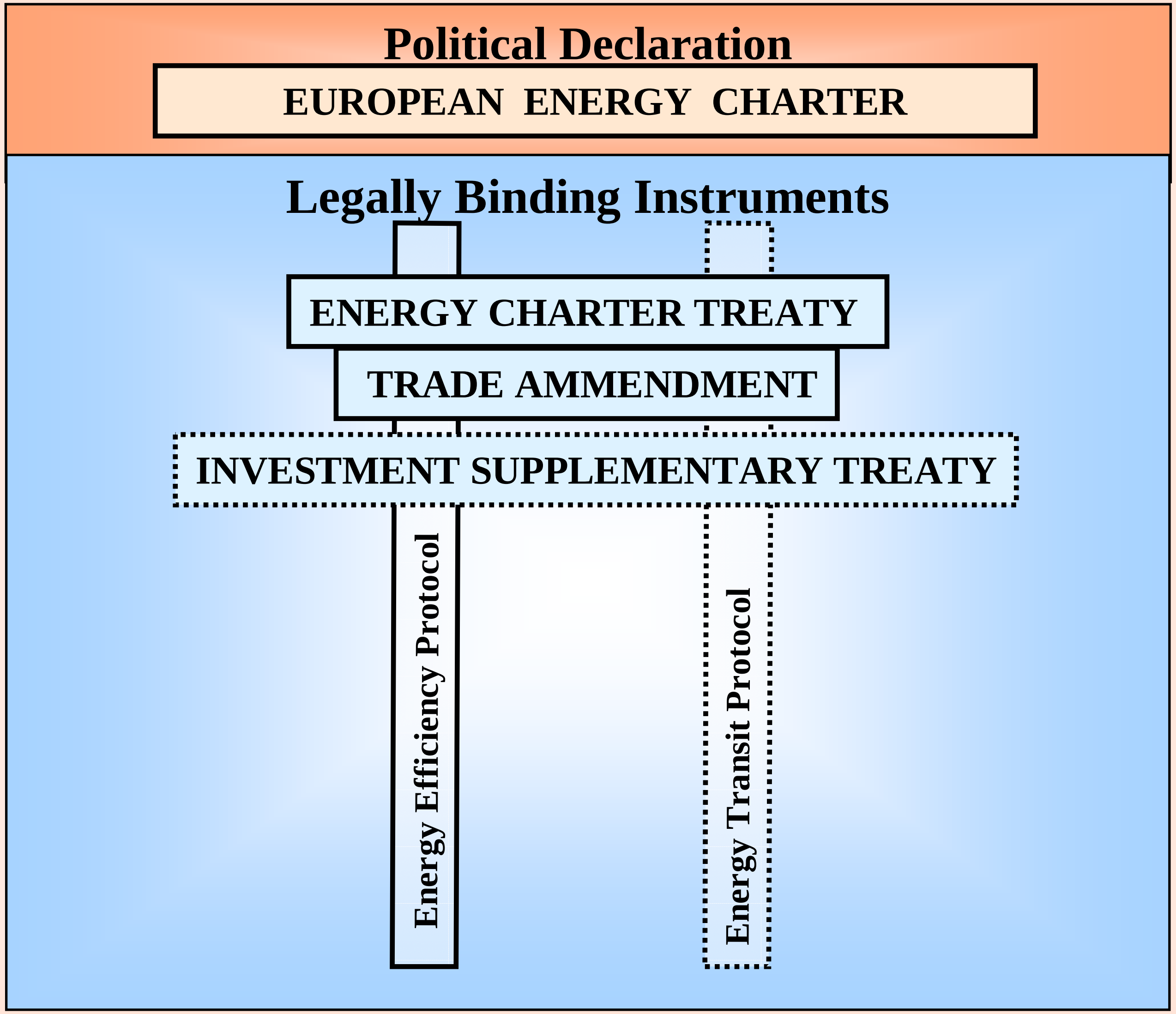


1. From trans-Atlantic political declaration to broader Eurasian single energy market
2. ECT expansion is an objective and logical process based on economic and financial reasons

ENERGY CHARTER WORLD AND MAJOR ENERGY FLOWS IN THE EASTERN HEMISPHERE



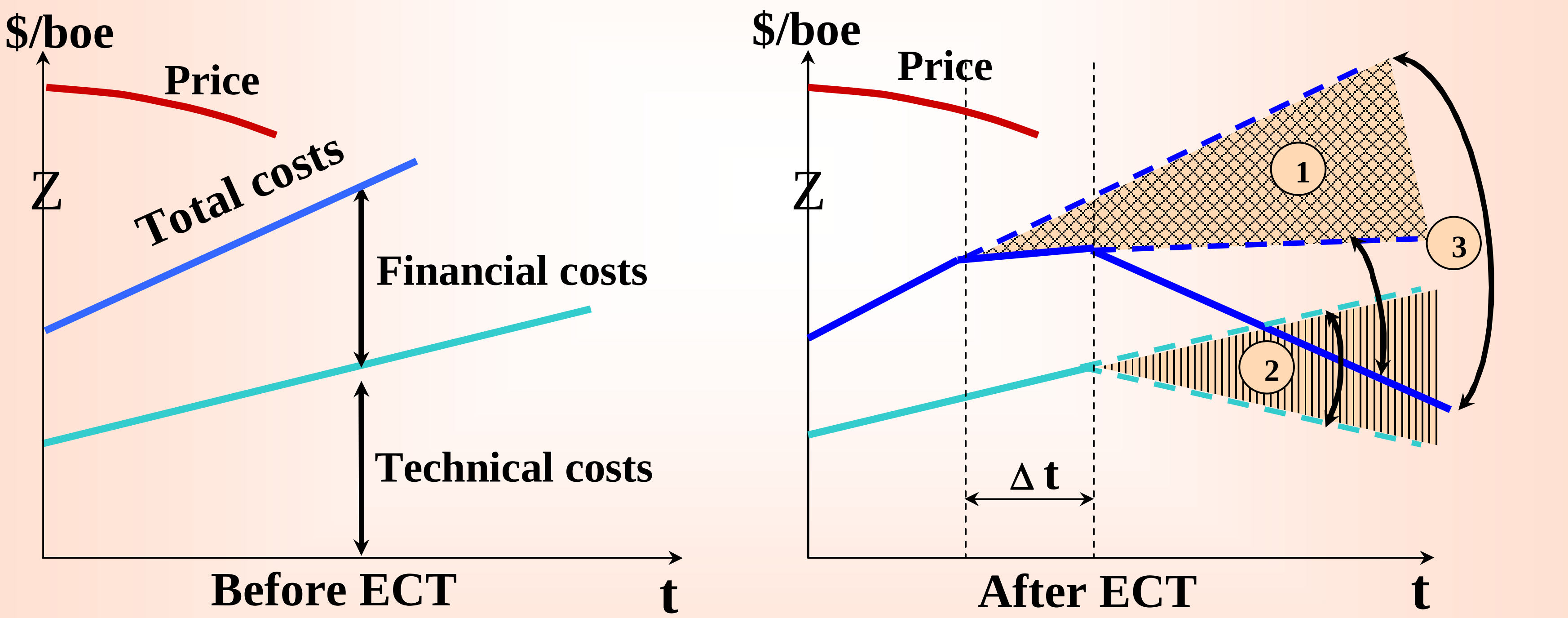
ENERGY CHARTER AND RELATED DOCUMENTS



ECT IS BUSINESS-ORIENTED TREATY

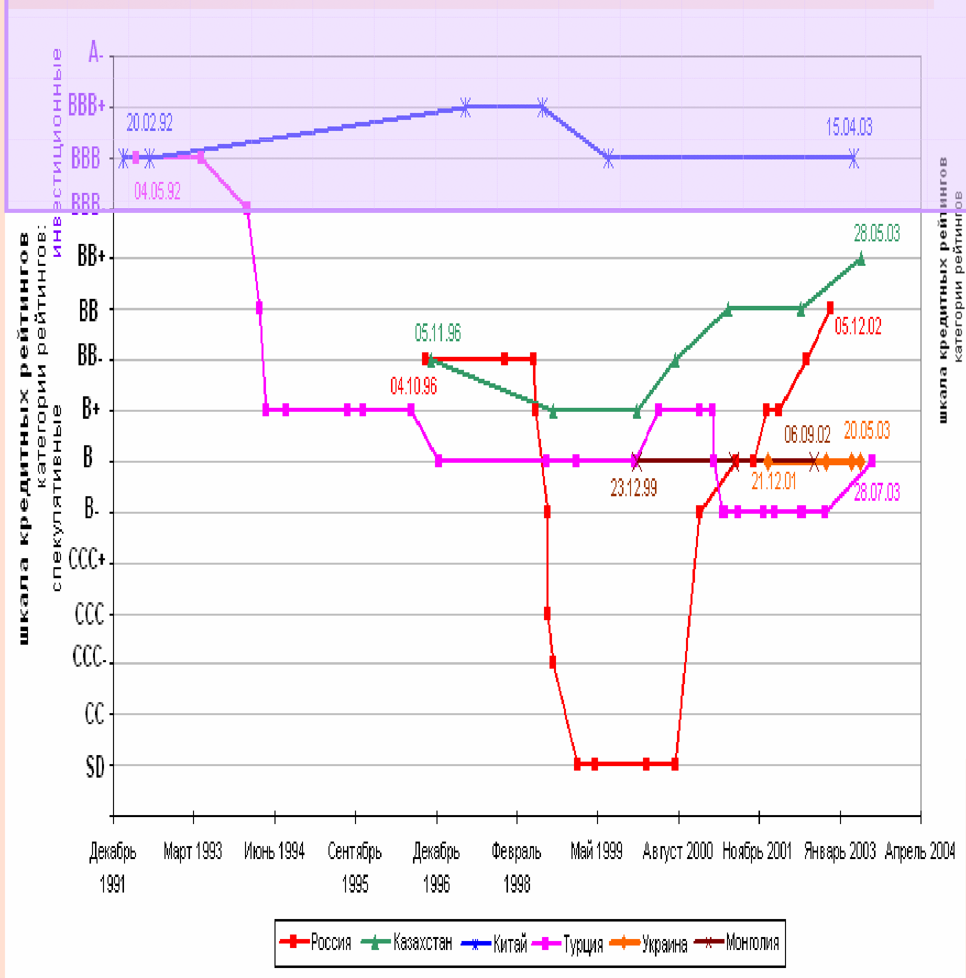
**ECT/Legislation → ↓ risks → ↓ financial costs (cost of capital) = 1 →
↑ inflow of investments (i.e. ↑ FDI, ↓ capital flight) → ↑ CAPEX → ↓ technical costs = 2 →
1 + 2 = 3 → ↑ pre-tax profit → ↑ IRR (if adequate tax system) → ↑ competitiveness →
↑ market share → ↑ sales volumes → ↑ revenue volumes**

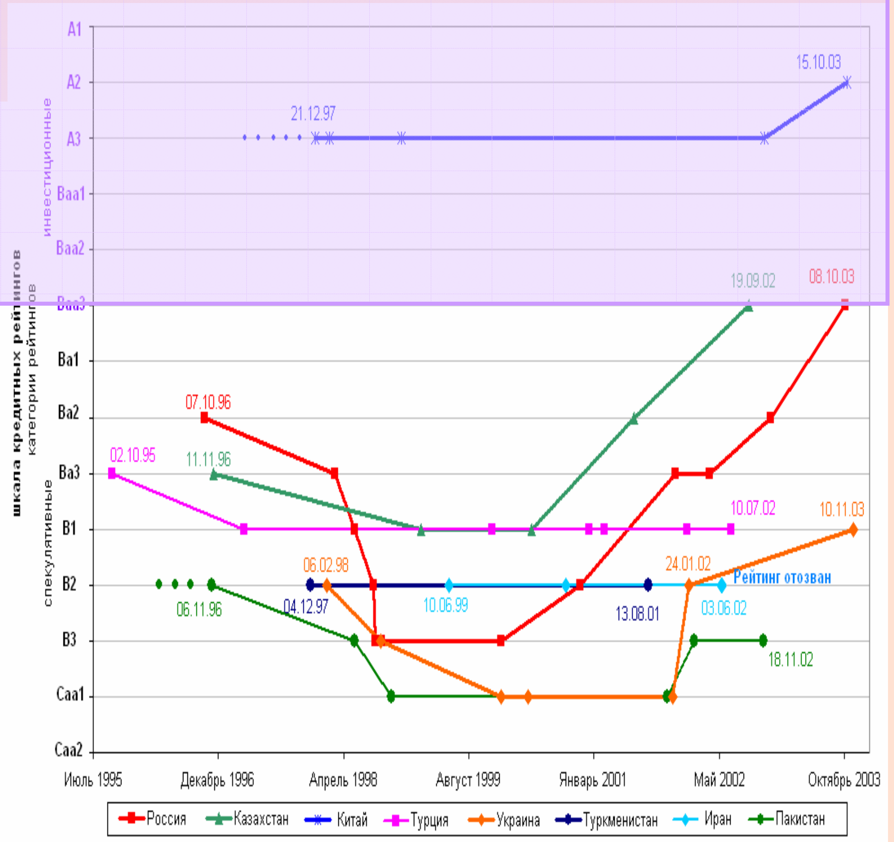
ECT provides multiplier legal effect in diminishing risks with consequential economic results in cost reduction and increase of revenues and profits



1 Δ Financial costs   2 Δ Technical costs   3 Cumulative Δ costs

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

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
Geography	Broader “Trans-Atlantic” Europe (i.e. in political / OSCE terms) = OECD+FSU/CIS+EE	Broader Eurasia, incl. North Africa, Australasia (i.e. in energy & economic terms) = OECD+FSU/CIS+EE+Asia+Africa+…
Approach to energy security	Physical security of supplies from (FSU/CIS) and through (Eastern Europe) economies in transition to the West (Western Europe)	Security of supplies + security of demand (by economic, nor administrative means) throughout broader Eurasian common energy space
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