INTERNATIONAL ENERGY SECURITY & INTERNATIONAL LAW

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ENERGY MARKETS DEVELOPMENT: EVOLUTION OF CONTRACTUAL STRUCTURES

“Physical energy” markets =

Long-term contracts

+ Short-term contracts

+ Spot

+ Forward

+ “Paper energy” markets =

+ Forward

+ Futures

+ Options

+ …

TOWARDS MORE RISKY ENERGY MARKETS ?

- Energy markets:
  - from ***in***dependent to ***inter***dependent & complimentary
  - from monopolistic/monopsonic towards competitive
  - to more liquid (trade, short-term) => not necessary means more competitive (resource vs. markets asymmetry, few import supply sources, long-term) & secure (investment, long-term)
  - to more cross-border energy trade & investment
- Diversification (multi-dimensional) in energy economy:
  - energy mix, suppliers, routes, markets, contractual & business (corporate) structures, pricing mechanisms
  - investments => diversification => competition => efficiency => competitiveness
- Energy pricing:
  - cost-plus (fixed prices, negotiated levels) => replacement values (flexible prices, based on fixed but adaptable & negotiated formulas) => exchange-based pricing (flexible prices, based on flexible perceptions of two groups of players with opposite interests: hedgers & speculators with increasing role of speculators)
- Price behaviour:
  - Commodities markets: based on global perceptions, increasing volatility, more transparent (results, but not driving forces) => less predictable
  - liquid & competitive markets not necessarily lead to price decrease (oil)

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INTERNATIONAL ENERGY SECURITY (1)

➢ ***INTERNATIONAL ENERGY SECURITY*** **= to provide stable, cost-affordable & environmentally friendly cross-border energy cycle (primary supplies + transportation + refining + transformation + final consumption)**

➢ ***"Energy Security = The steady availability of energy supplies in a way that ensures economic growth in both producing and consuming countries with the lowest social cost and the lowest price volatility".*** (A.F.Alhajji, MEES, 14.01.2008)

➢ ***INTERNATIONAL ENERGY SECURITY*** **=> to minimize supply risks at affordable costs for all participants of the cross-border supply chain =>**

- **minimum volume risk +**
- **minimum price risk**

INTERNATIONAL ENERGY SECURITY (2)

EVOLUTION OF *INTERNATINAL ENERGY SECURITY* INSTRUMENTS:

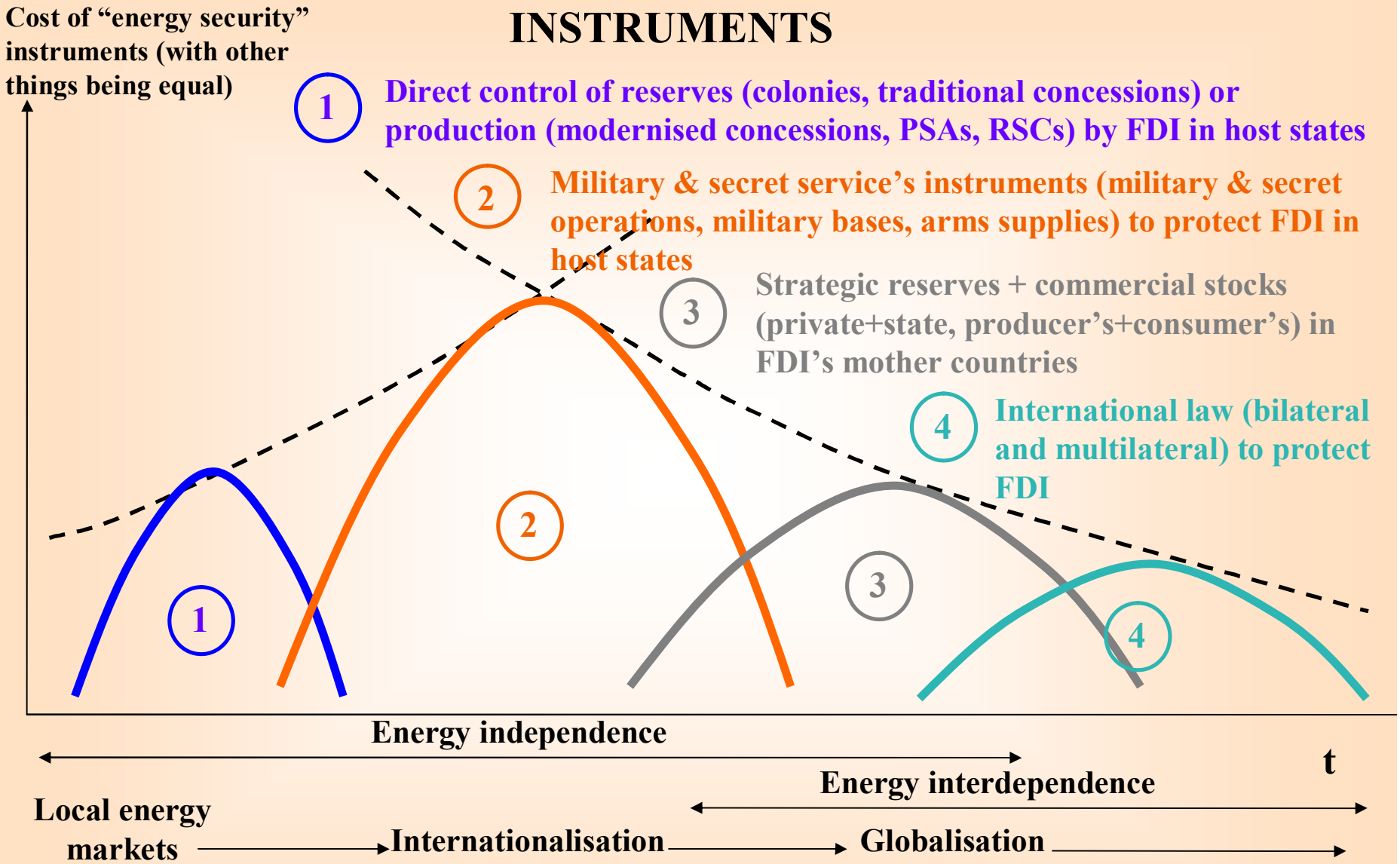
(1) colonies + traditional concessions,
(2) modernized concessions, PSAs, RSCs => + military instruments
(3) strategic reserves + stocks,
(4) international law instruments

EFFECTIVE *INTERNATIONAL 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*

EVOLUTION & RELATIVE COSTS OF ENERGY SECURITY INSTRUMENTS



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

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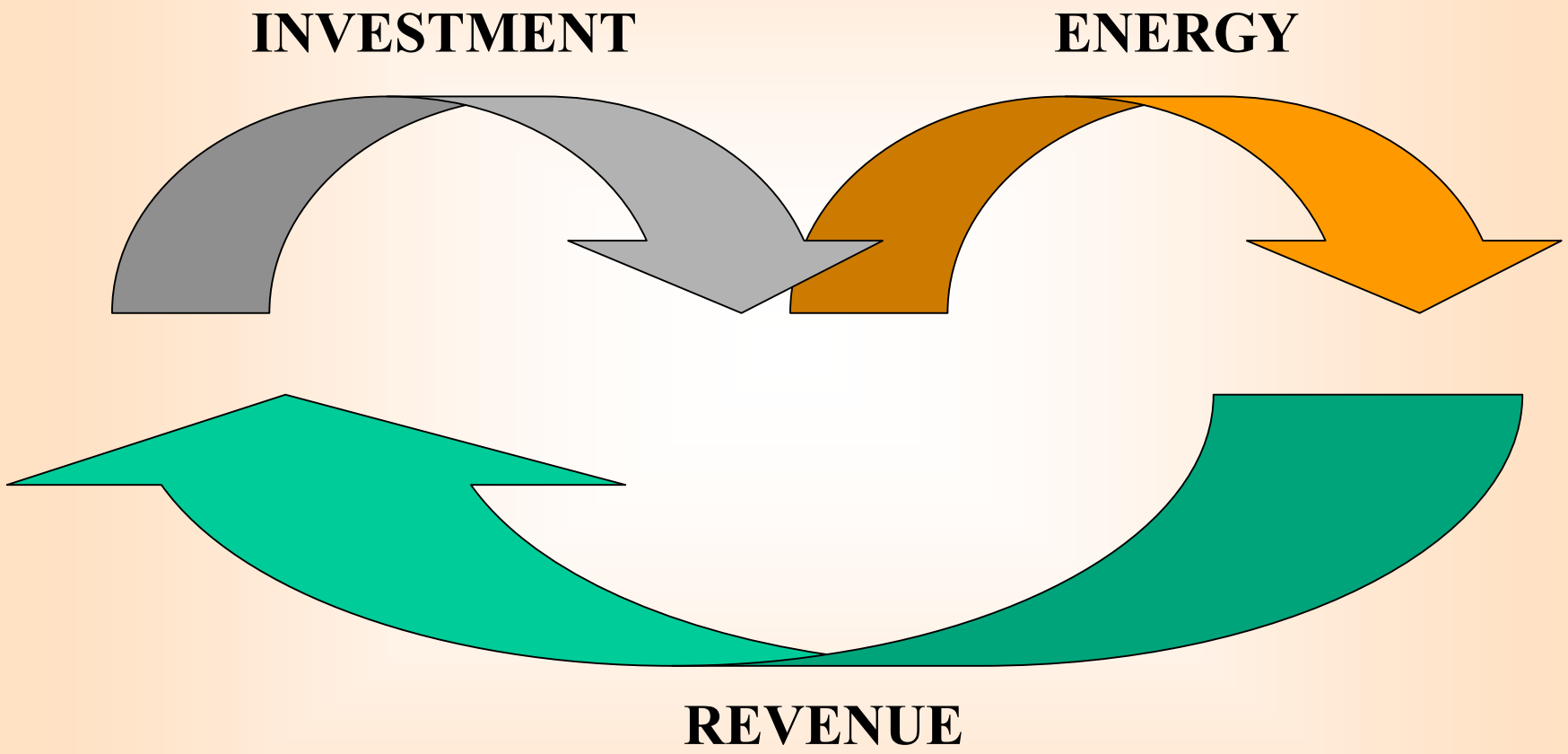
ENERGY SECURITY AND DIVERSIFICATION (MODERN APPROACH)

Diversification:

- of supply routes ("multiple pipelines")
- of sources of supplies ("multiple suppliers")
- of markets and routes to access them

to be based on balance of interests of all players throughout whole energy value chain

ECONOMIC “CIRCLE OF LIFE” OF ENERGY PROJECTS



THREE MODERN FACETS OF ENERGY SECURITY

Energy Security =

Security of supply +

Security of infrastructure +

Security of demand

incl.:

access to resources +

access to transportations +

access to markets

Transparency is a key

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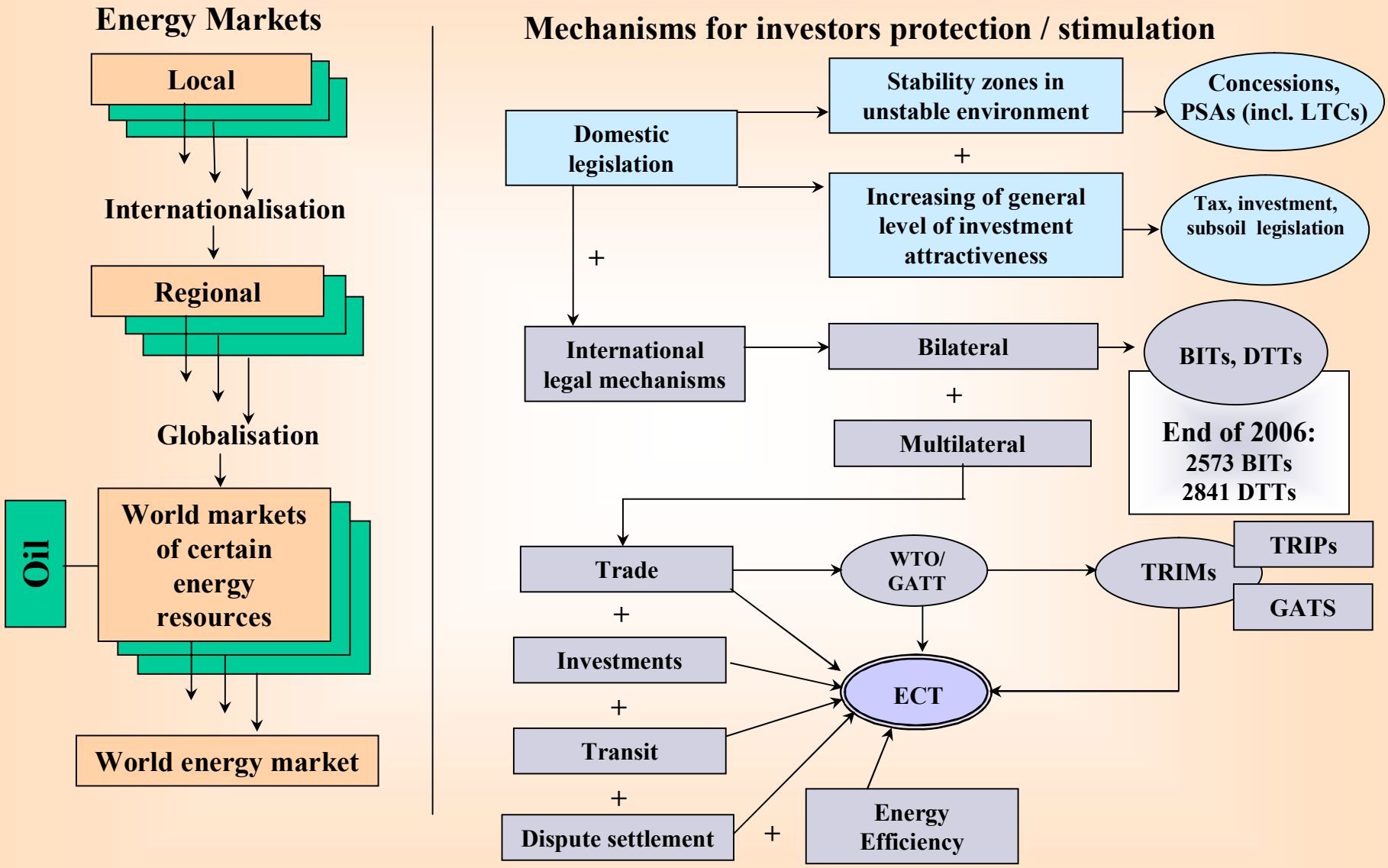
ENERGY ECONOMY: DEMAND FOR QUALITY OF REGULATORY FRAMEWORK

Energy projects (compared to other industries):

- Highest capital intensity (absolute & unit CAPEX per project),
- Longest project life-cycles,
- Longest pay-back periods,
- Geology risks (+ immobile infrastructure, etc.),
- Highest demand for legal & tax stability,
- Role of risk management

=> Higher demand for “quality” of legal and regulatory framework compared to other industries

DEVELOPMENT OF ENERGY MARKETS & MECHANISMS FOR INVESTORS PROTECTION/STIMULATION



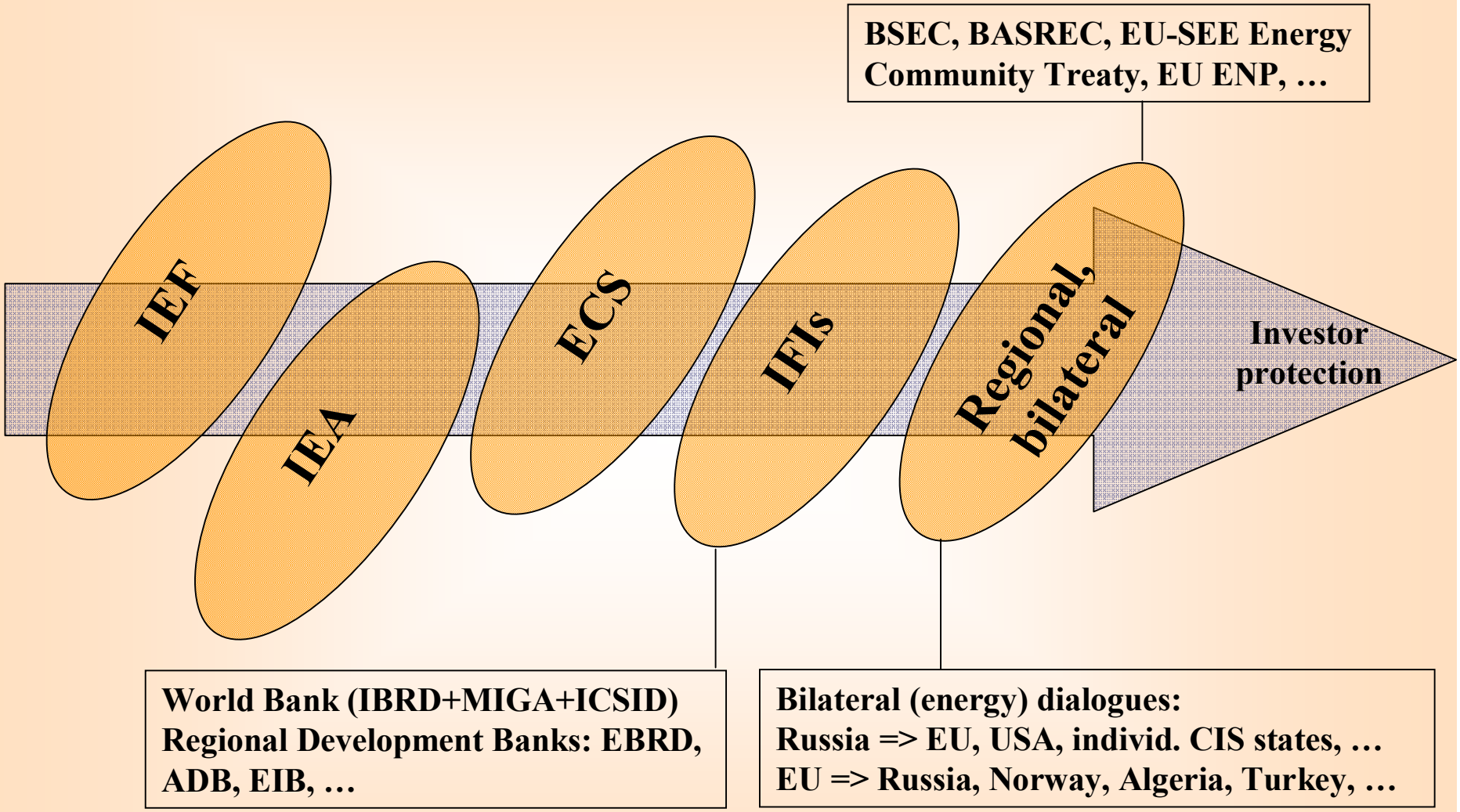
SELECTED INTERNATIONAL INVESTMENT-RELATED AGREEMENTS

Organisation (member-states/CPs)	Legal Status	Scope	Investment	Trade	Transit	Energy Efficiency	Dispute Settlement
ECT (51/52)	**LB**	**Energy**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
WTO (149)	LB	General	(Yes?) (Services)	Yes	*Yes/No**	*No*	Yes
NAFTA (3)	LB	General	Yes	Yes	*No*	*No*	Yes
MERCOSUR (4)	LB	General	Yes	Yes	*No*	*No*	Yes
OECD (30)	LB	General	Yes	*No*	*No*	*No*	*No*
APEC (21)	*Non-* LB	General	Yes	Yes	*No*	*No*	*No*

*** application of GATT Art.V to grid-bound transportation systems is under debate**

Plus specialised energy-related organisations: OPEC, IEA, IEF, UN ECE (partly), IAEA, …
Plus specialised "regional" organisations: BSEC, BASREC, …

ENERGY INVESTMENT PROTECTION: COMPLIMENTARITY OF ENERGY-RELATED INTERNATIONAL ORGANISATIONS



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MATURE & GROWING ENERGY MARKETS ARE DIFFERENT => TO DISTINGUISH THEM

GROWING MARKETS:

- Aim: to develop markets to mature stage = to tie together different segments of energy value chain = to create new energy infrastructure => investment stimuli for domestic & foreign investors regarding creation basic infrastructure
- Basic (most costly/risky) infrastructure is being/to be developed and pay-back periods are still ahead
- Creation of basic infrastructure => aimed to develop access to resources and markets = most costly/risky (pioneering) projects with longest pay-back periods (+ macroeconomic costs usually imputed to these projects)

MATURE MARKETS:

- Aim: to improve their operational efficiency within existing infrastructure/established energy value chains => open & competitive markets, multiple choice & access to diversified infrastructure (both for producers/suppliers & consumers)
- Basic (most costly/risky) infrastructure has been already developed & pay-back periods are over
- Expansion (diversification) of existing basic infrastructure => aimed to provide multiple choice for market participants = less costly/risky projects with shorter pay-back periods

=> Demand for different legal instruments at different stages of market development

INTERNATIONAL ENERGY LAW: WHOM TO PROTECT FIRST - TRADERS/SPECULATORS *OR* INVESTORS/PRODUCERS/HEDGERS?

Competition rules – most important for **mature** markets (?), since aimed mostly on suppliers-traders (speculators) who:

- work at "paper energy" markets
- interested in liquid & volatile market (short-term)
- make money from providing financial services, not energies (money=>money)
- create bubbles & financial crises (when "paper" value exceed too much "physical" value of the market)

Investment rules – most important for **growing** markets (?), since aimed mostly on suppliers-producers (hedgers) who:

- work at "physical energy" markets
- interested in stable & predictable market (longer-term)
- make money from providing goods & non-financial services to energy consumers (money=>goods=>money)

Whom international law is aimed to protect first/more: financial speculators *or* suppliers of goods & services ?

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THEN AND NOW: CHANGING ROLE OF FDI?

To develop its natural resources (projects) resource-owning state needs:

- **money/finance:** *then* – VIOC/FDI, *now* – NOC (both equity & debt + sovereign budget financing)
- **capital (technologies/innovations):** *then* – VIOC/FDI, *now* – NOC via OECD service companies
- **skilled labour:** *then* VIOC/FDI, *now* – NOC (domestic blue-collars)
- **managerial skills:** *then* VIOC/FDI, *now* – NOC (OECD-originated & domestic white-collars)
- Changing role of FDI !?

New challenges?: Diminishing role of traditional FDI in energy (OECD to non-OECD)? New FDI in energy are developing (non-OECD to OECD & to non-OECD)?

INTERNATIONAL ENERGY LAW: CHANGING PRIORITIES OVER TIME (1)?

Then:

- **Aim:** to continue develop fossil fuel energy economy =>
- access to resources of fossil fuels outside of OECD by FDI/IOC from OECD ("security of supplies"/SoS concept) =>
- international energy law reflects SoS concepts developed in OECD to protect FDI/VIOC from OECD in non-OECD => dominated by "Western" priorities, ***but =>***

Now (1):

- whether these FDI-supportive "Western"/OECD concepts incorporated in international law still acceptable for OECD states when they face capital-exporting intentions of non-OECD "Eastern" energy producers (NOC) to invest in OECD? =>
- protectionist measures in "open & competitive" OECD markets against FDI (NOC) from "Eastern" (non-OECD) energy producers?

Changing role of FDI? => move away from open investment rules?

INTERNATIONAL ENERGY LAW: CHANGING PRIORITIES OVER TIME (2)?

Now (2):

- **Aim:** to shift to non-fossil fuel energy economy =>
- Energy Efficiency & Climate Change =>
- new challenges & models for international energy law to reflect further transition *from* specific country/regional energy markets, united by cross-border flows of energy & investment, *to* global energy markets/market =>
- emphasis shifts from protection of individual companies of consumer states in international trade & investment (FDI) to creation of global instruments common & acceptable for all states & companies within cross-border energy value chains?

Changing role of FDI? => changing priorities for international legal instruments? => international rule-making towards supra-national governance (global energy markets) vs. sovereign prerogative (state sovereignty on natural resources)?