La Rivoluzione Energetica Americana
Incontro con Frank Verrastro

A European regulator's perspective

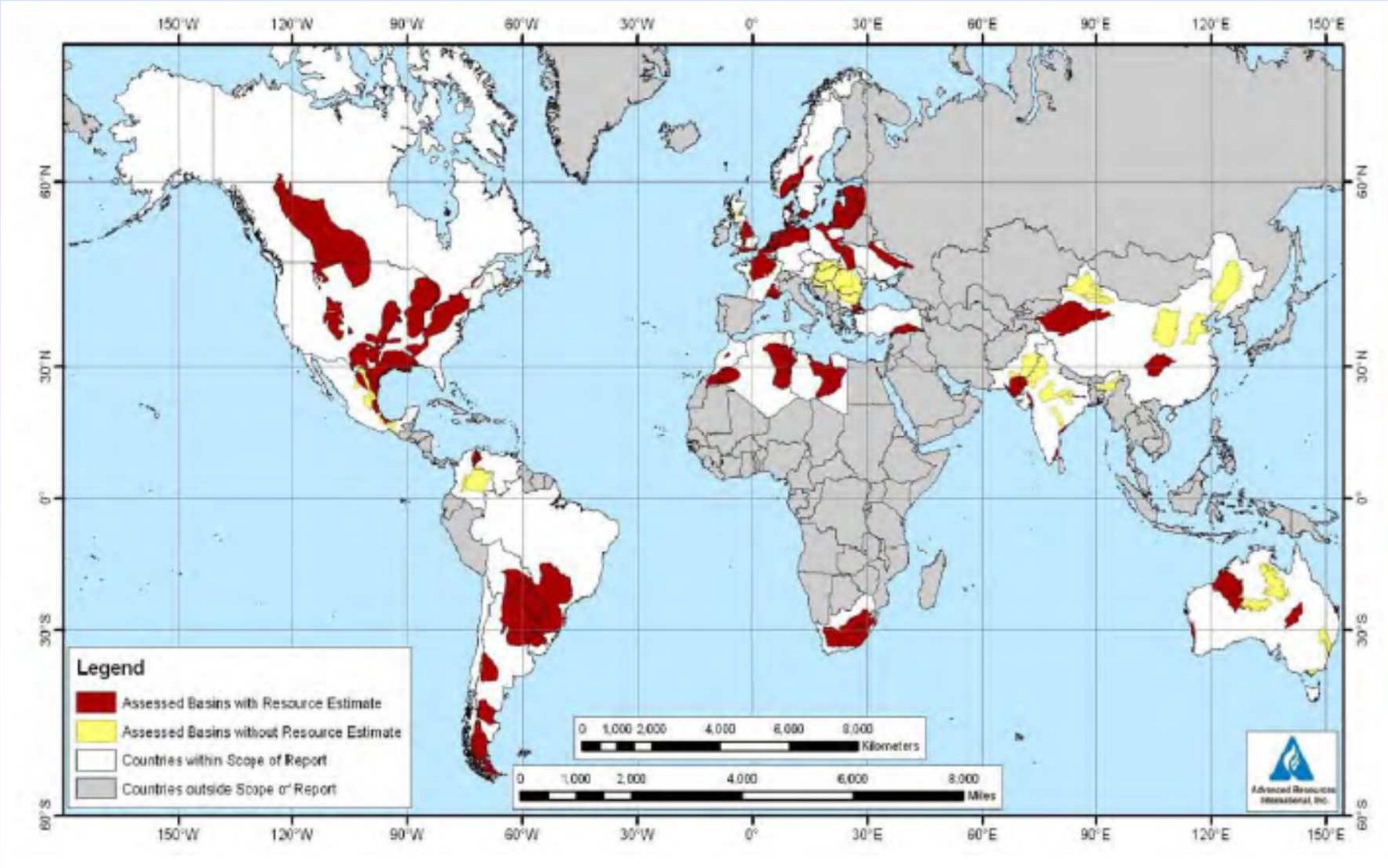
Prof. Valeria Termini

Commissioner, Italian Authority for Electricity and Gas
CEER Vice President
Member of the Board of Regulators, ACER

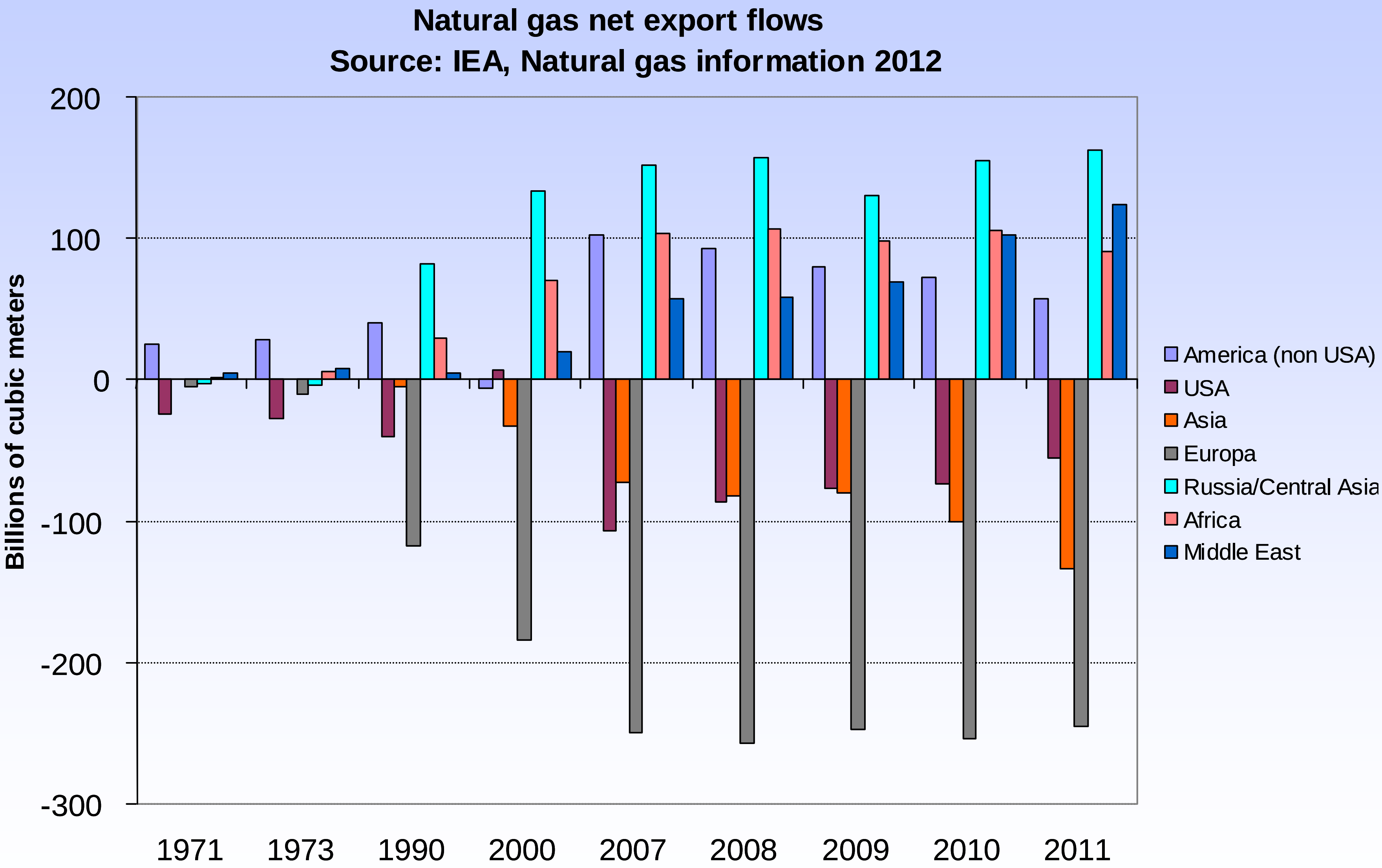
Milano, 21st March 2013

Shale gas potential

- **EIA estimates of 48 basins in 32 countries**

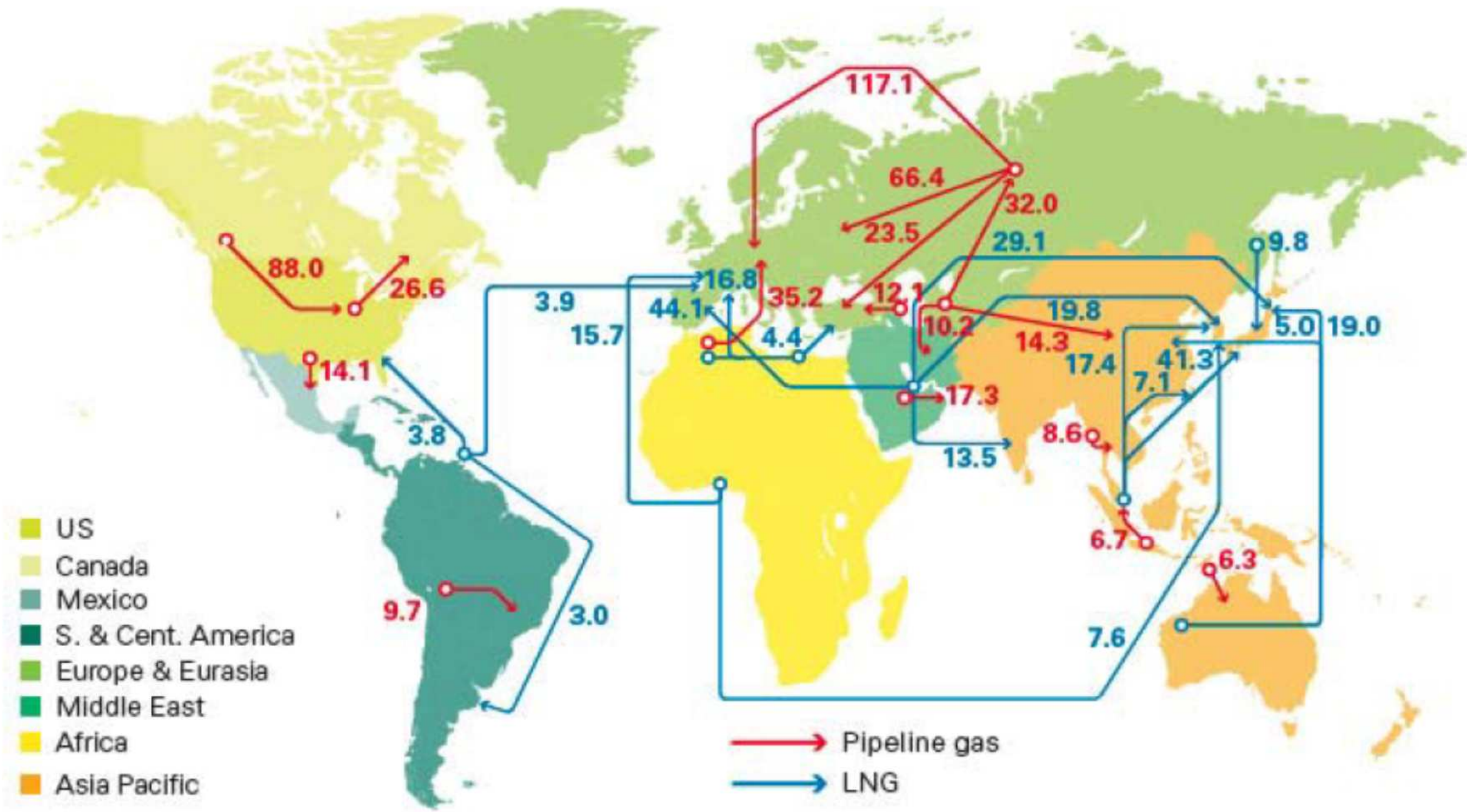


The increase in gas flows



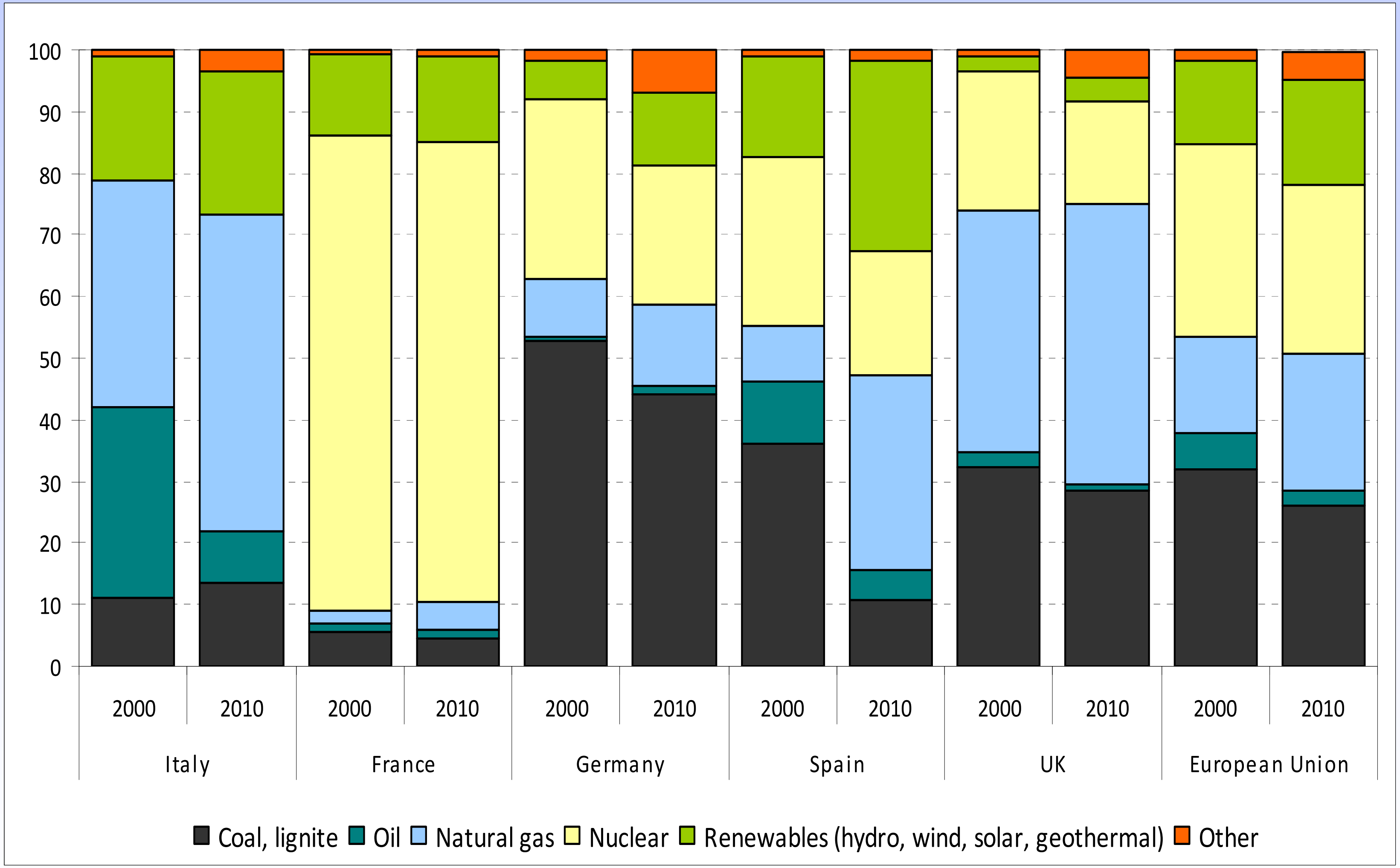
Gas trade flows

Major trade movements 2011
Trade flows worldwide (million tonnes)



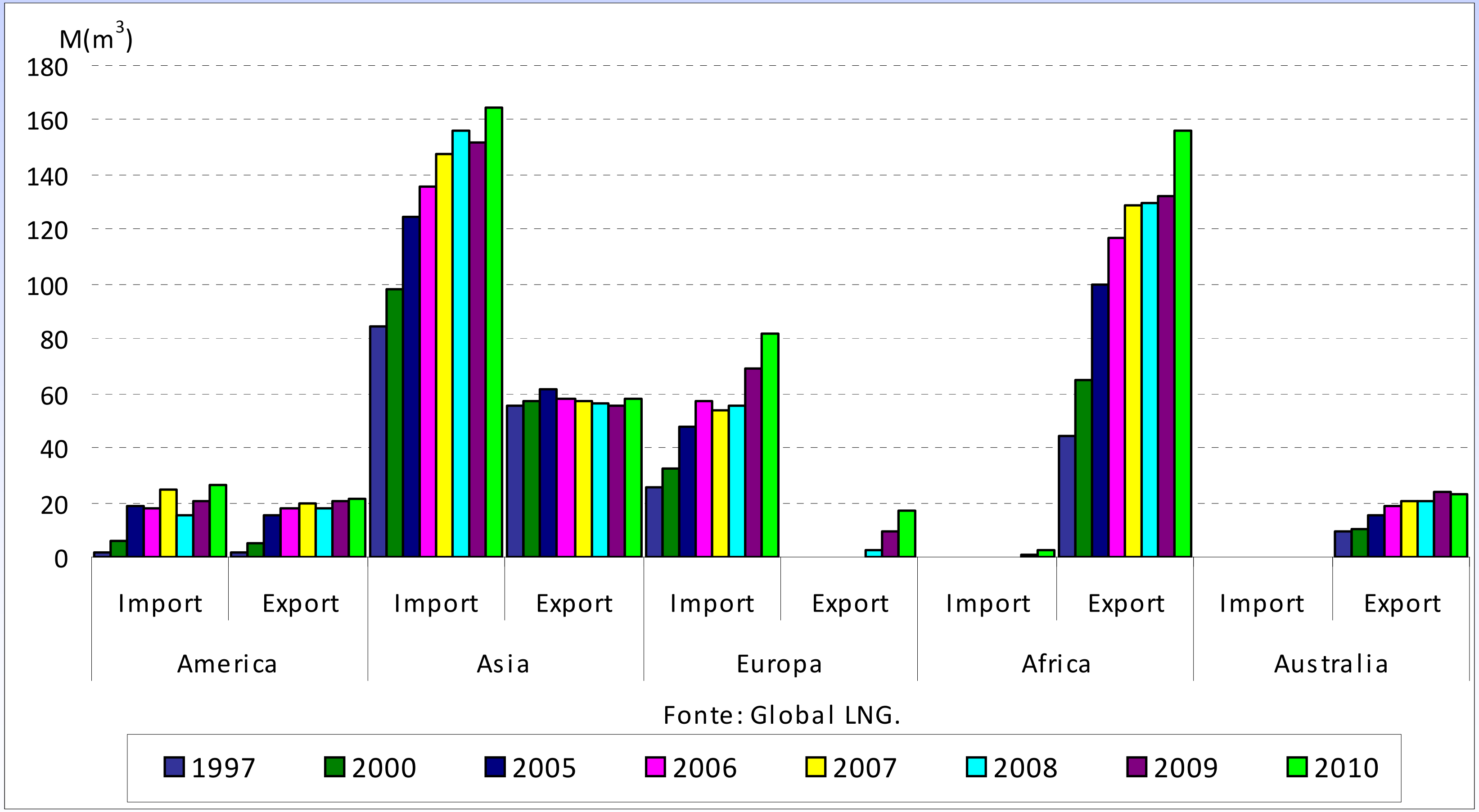
Source: BP

The generation mix: gas and renewables are growing for all (and will grow more)

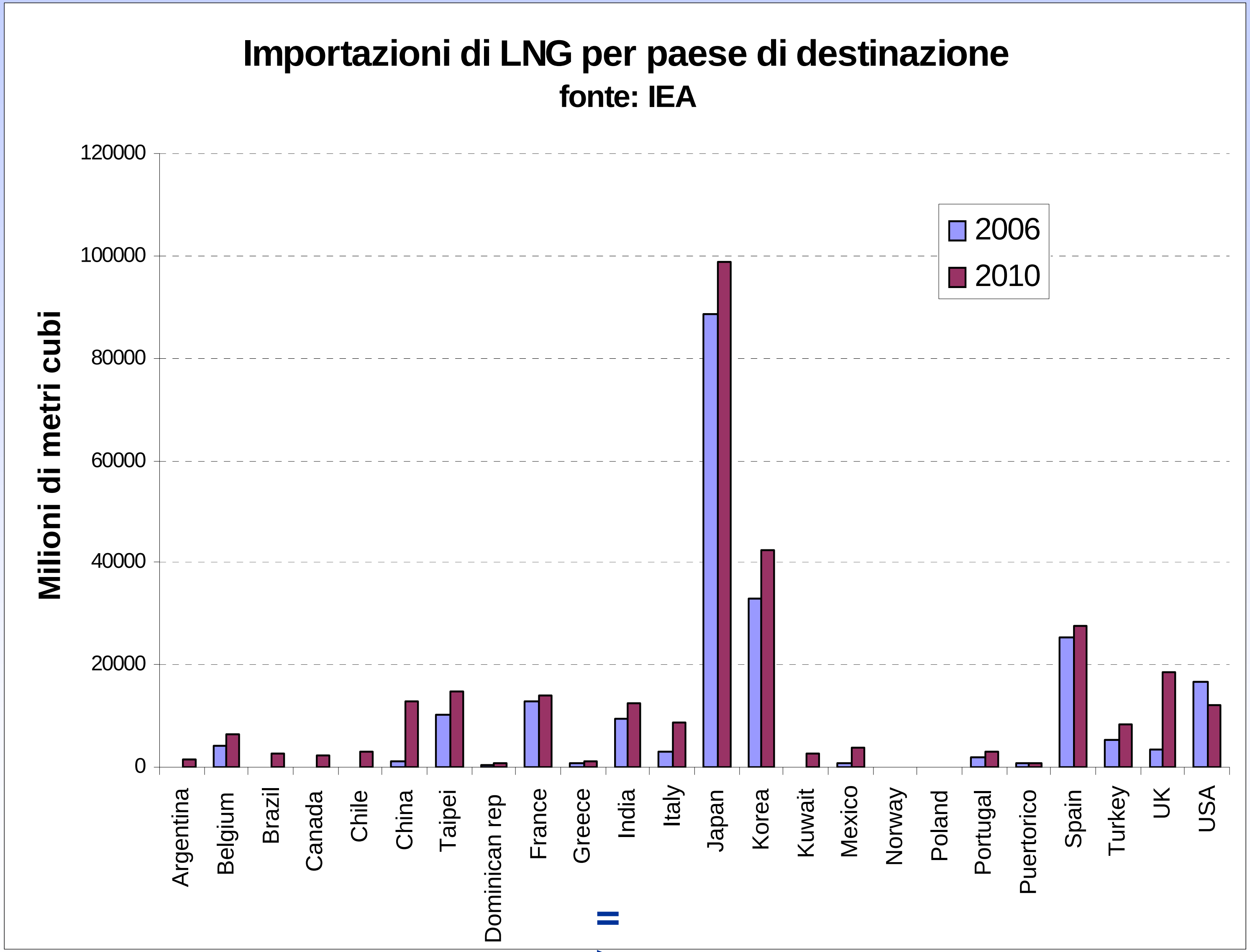


Fonte: Enerdata

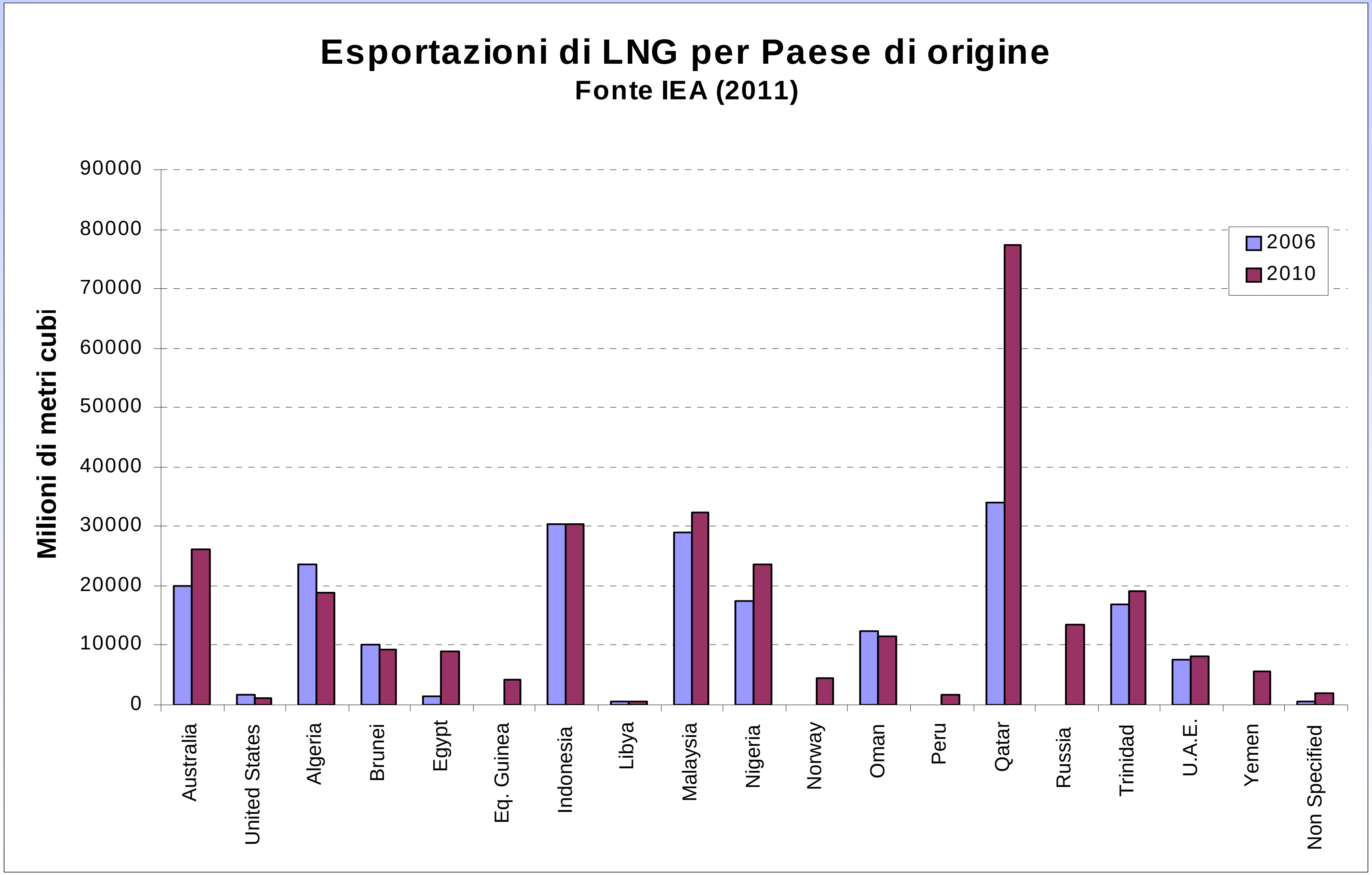
LNG global import and export



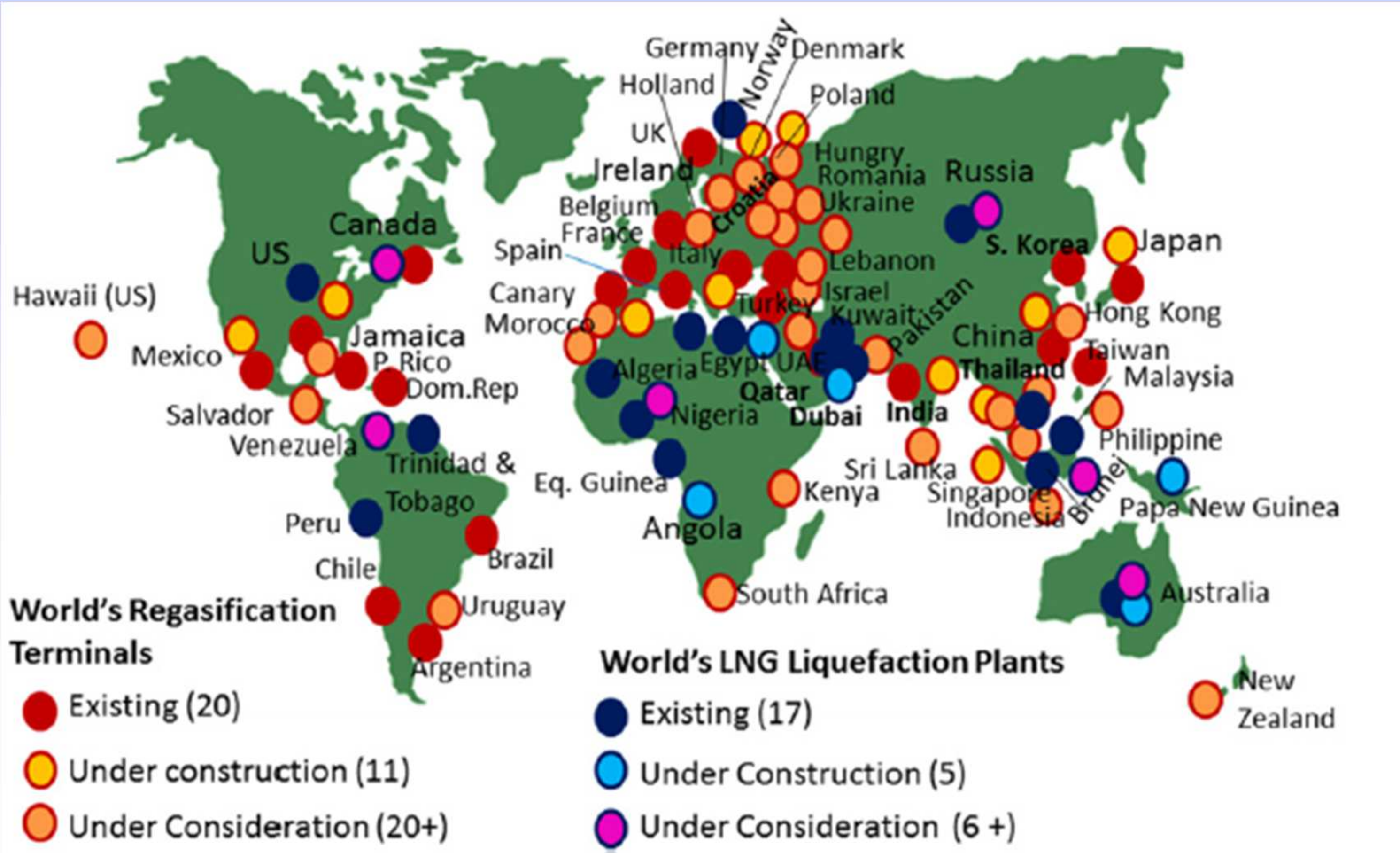
Where does LNG go ?



Where does LNG come from?

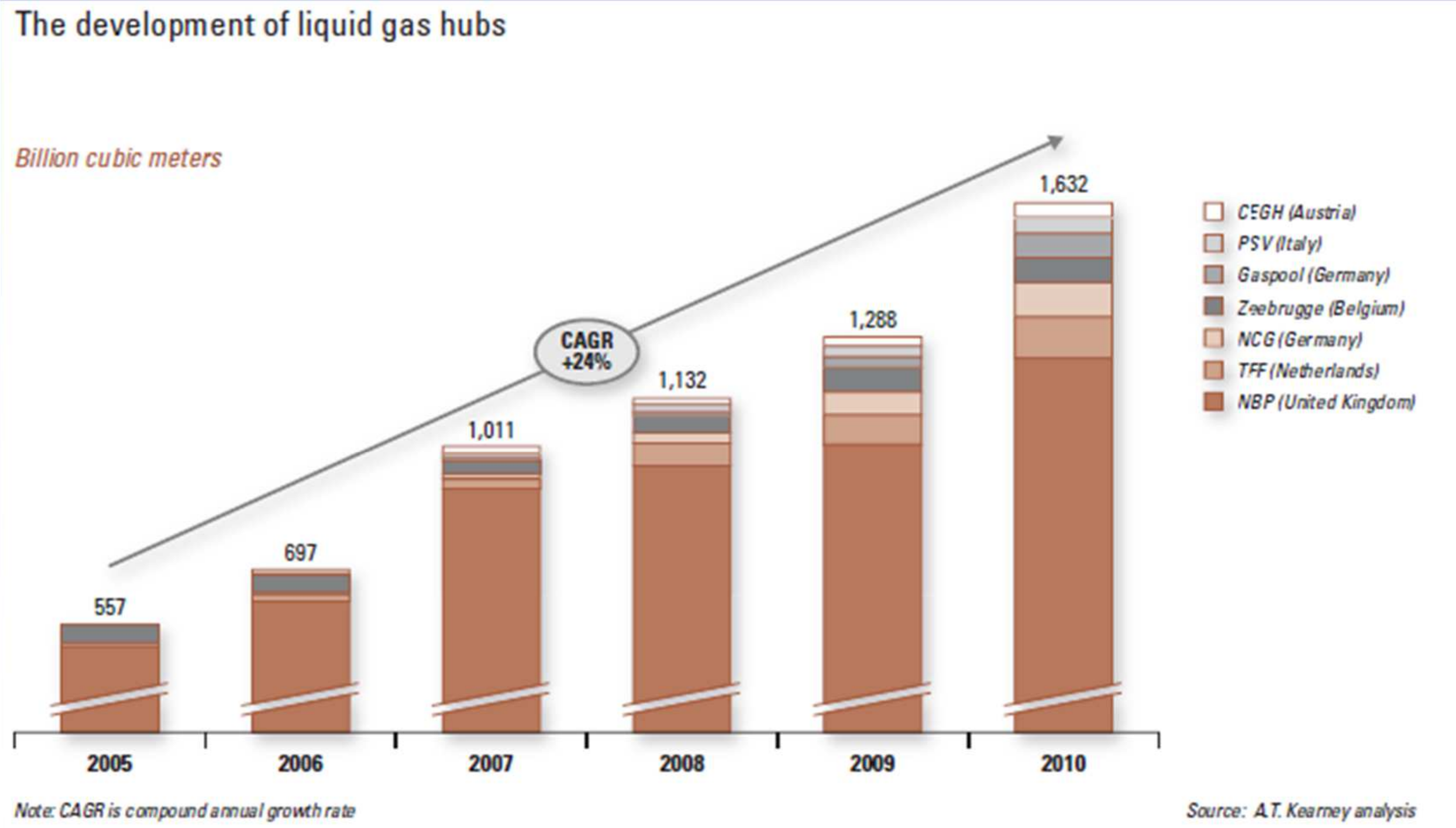


World's major LNG exporting and importing countries



Source: BG group

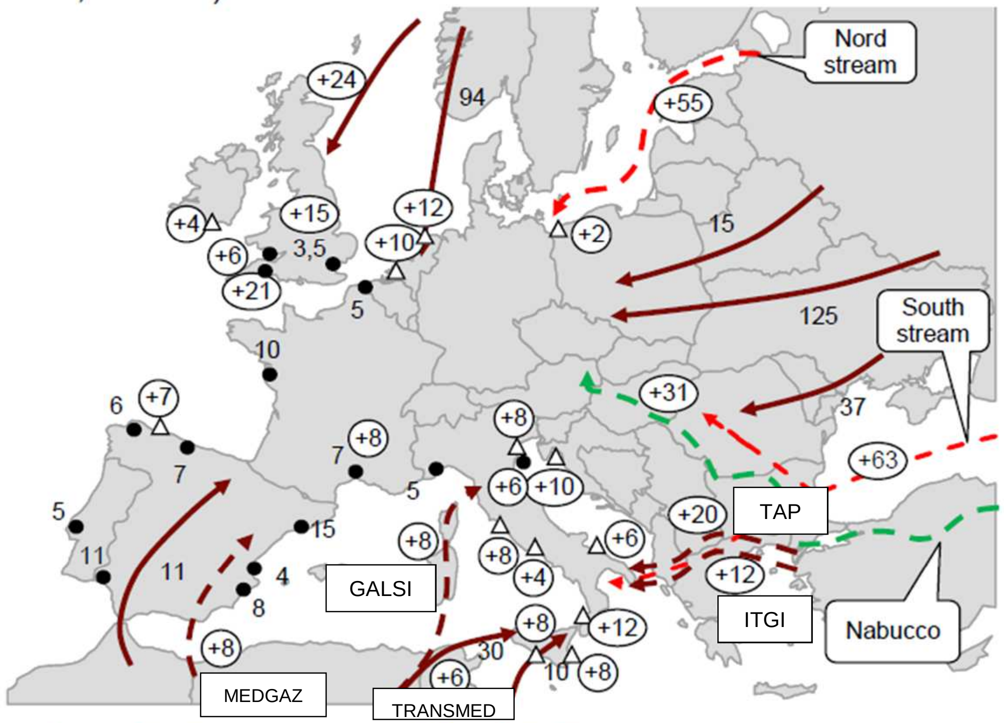
The emergence of gas hubs in Europe



[2] With the exception of the United Kingdom, where gas prices are mainly indexed to competitive gas (and less than 20 percent to oil products).

Where does gas come from?

Capacities of gas import pipelines and LNG 2020 1) – EU27
(2011, in bcm)



Existing Pipeline — — Planned Pipeline
● Existing LNG-Terminals △ Planned LNG-Terminals

1) Doubtful, speculative projects not considered
2) Final expected capacity for EU27 in 2nd phase (capacity 1st phase)
Sources: Wingas, EU, E.ON, King & Spalding, Petroleum Economist, IEA, A.T. Kearney

Pipeline (planned/new/extensions)	Capacity 2) (in bcm)
Medgaz (in operation since Apr11)	8
Nord Stream	55 (27.5)
Nabucco	*31 (8)*
Galsi	8
South Stream	*63*
ITG/IGI	*12*
TAP	*20 (10)*
Transmed	6

LNG Terminal (planned/new/extensions)	Capacity (in bcm)
South Hook LNG (04/10)	21.2 (10.5)
Grain LNG [Expansion] (12/10)	14.8 (4.4)
Fos-sur-Mer (Caveau) (09/10)	8.25
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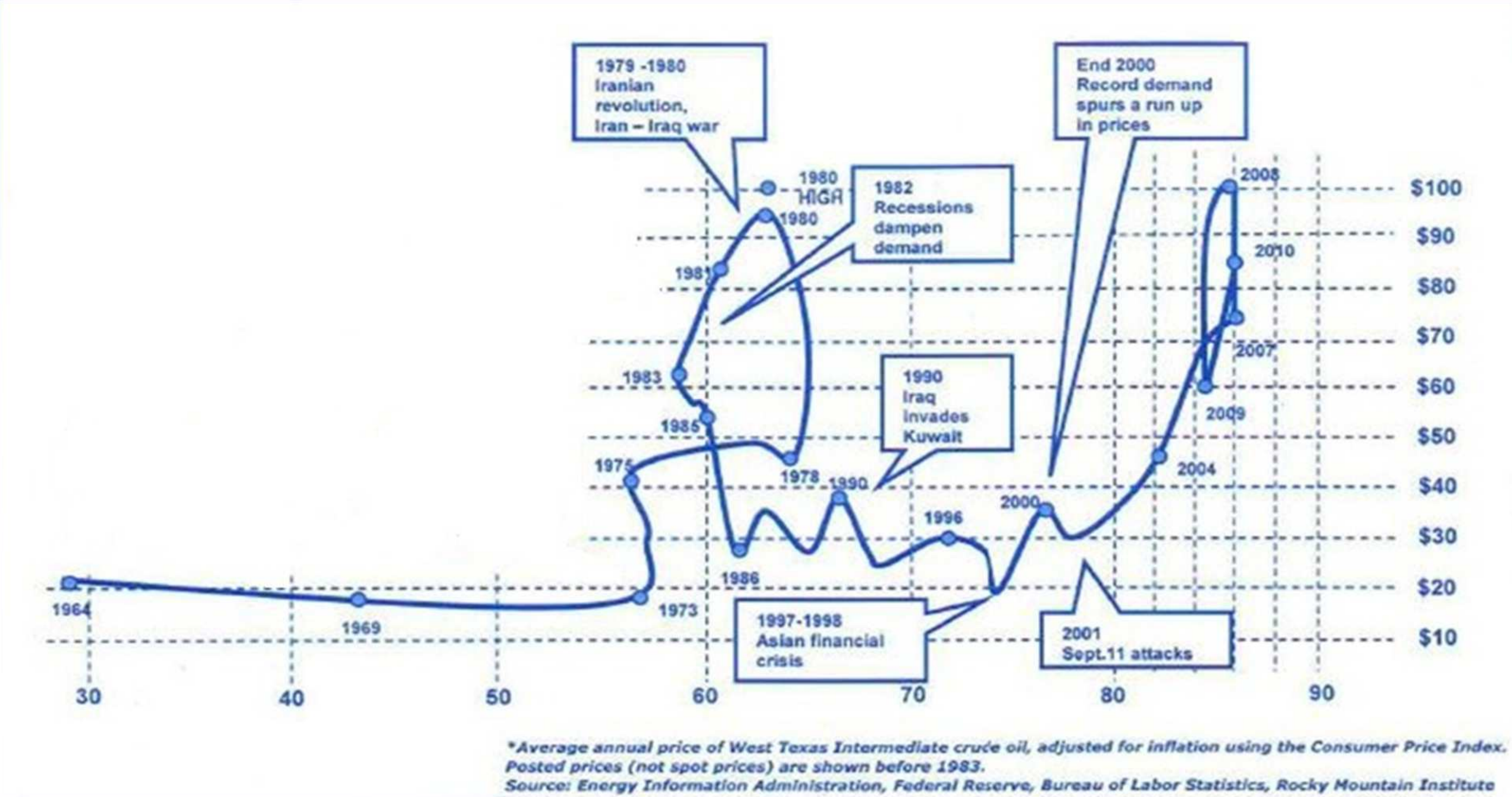
Gioia Tauro (Medgas) LNG	12
Krk Island	10
Dunkirk LNG	10
Porto Empedocle LNG	8
Rosignano Marittimo	8
Priolo (Augusta) LNG	8
Trieste LNG	8
El Musel LNG	7
Other projects	25.6

A.T. Kearney 15/November 2011/41845d 12

Source: ATKearney

Geopolitica dell'energia: prezzi e consumi del petrolio 1964-2010



•Prezzo del petrolio

•Consumo mondiale di petrolio

•Milioni di barili al giorno

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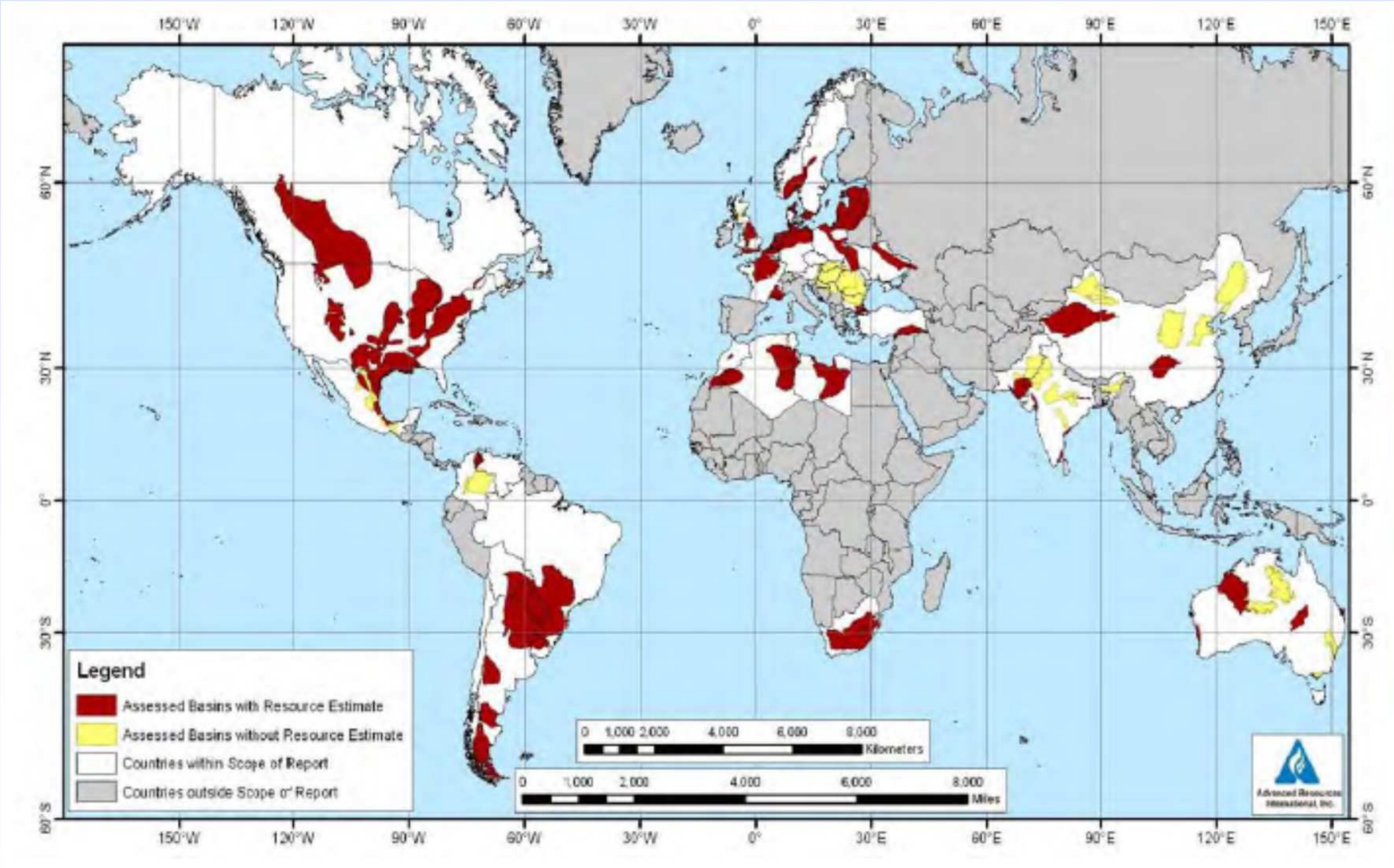

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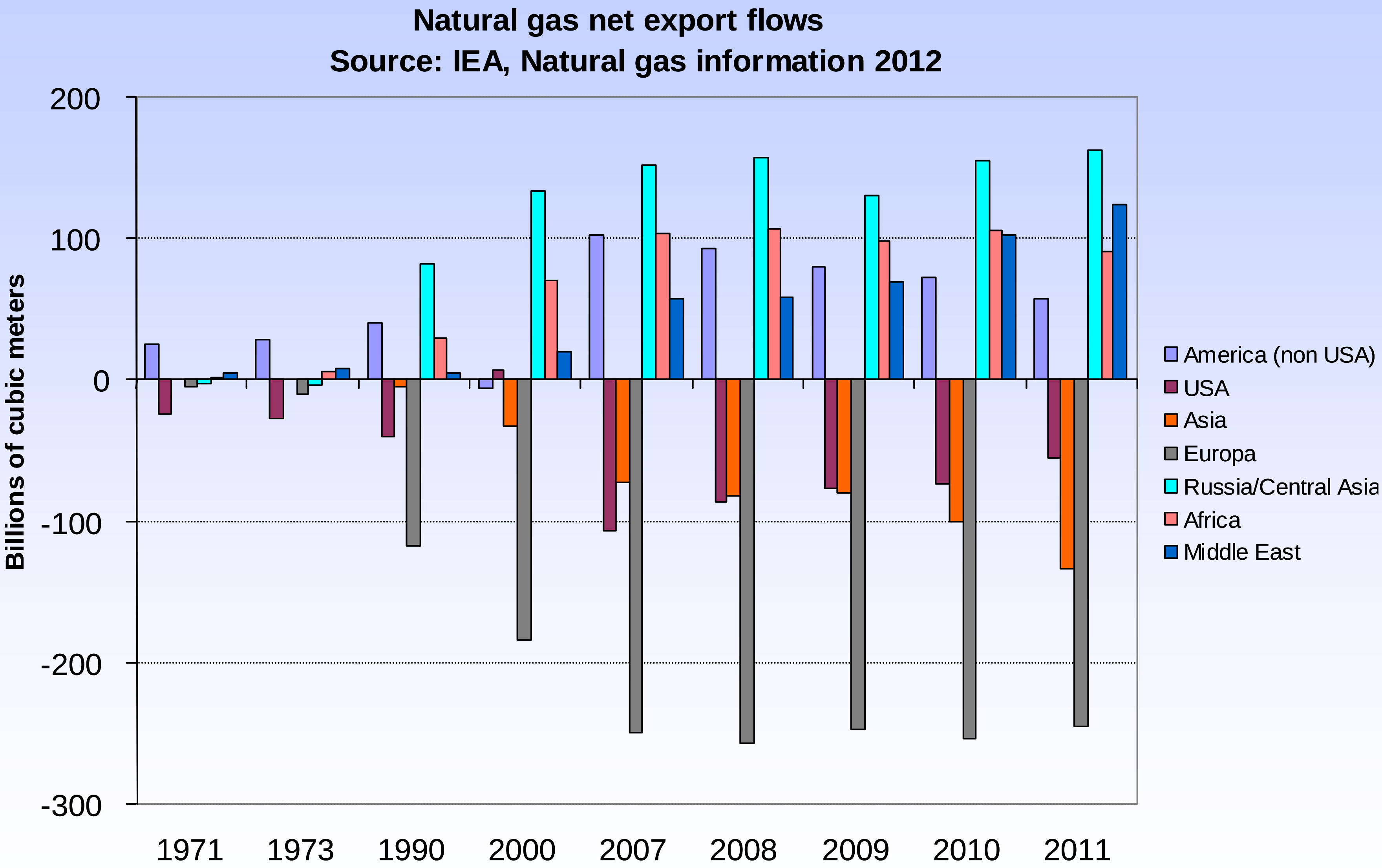

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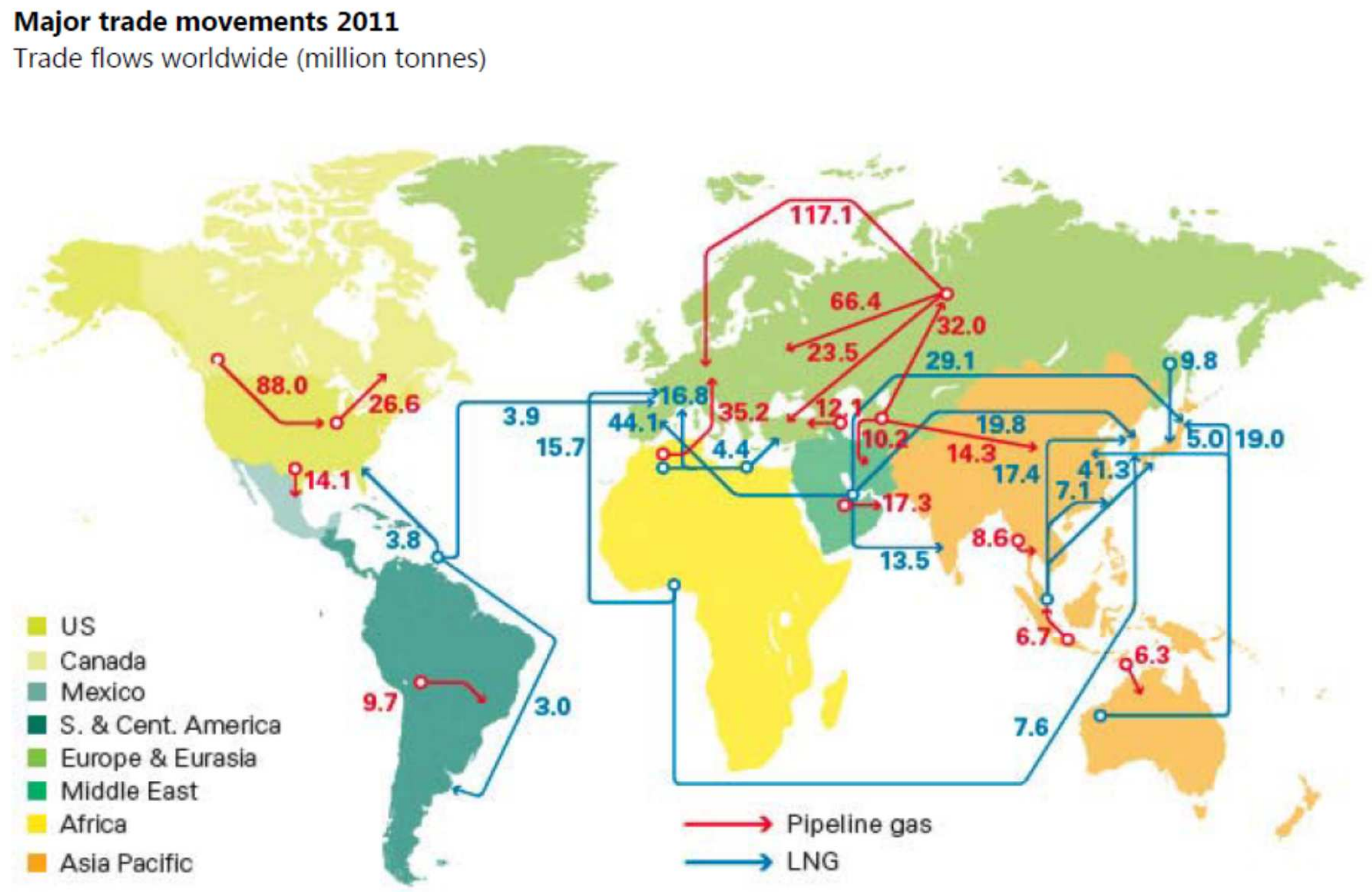

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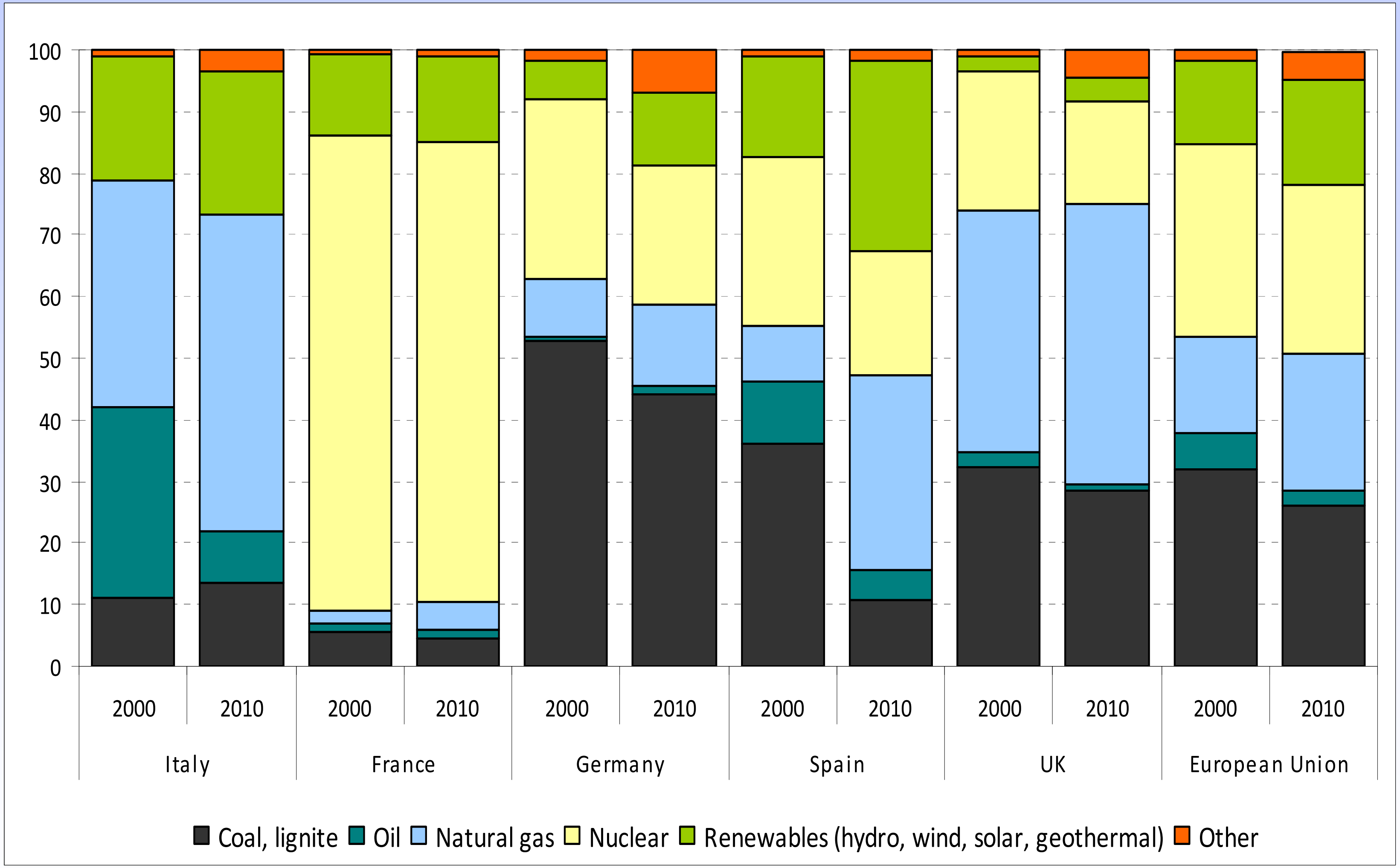

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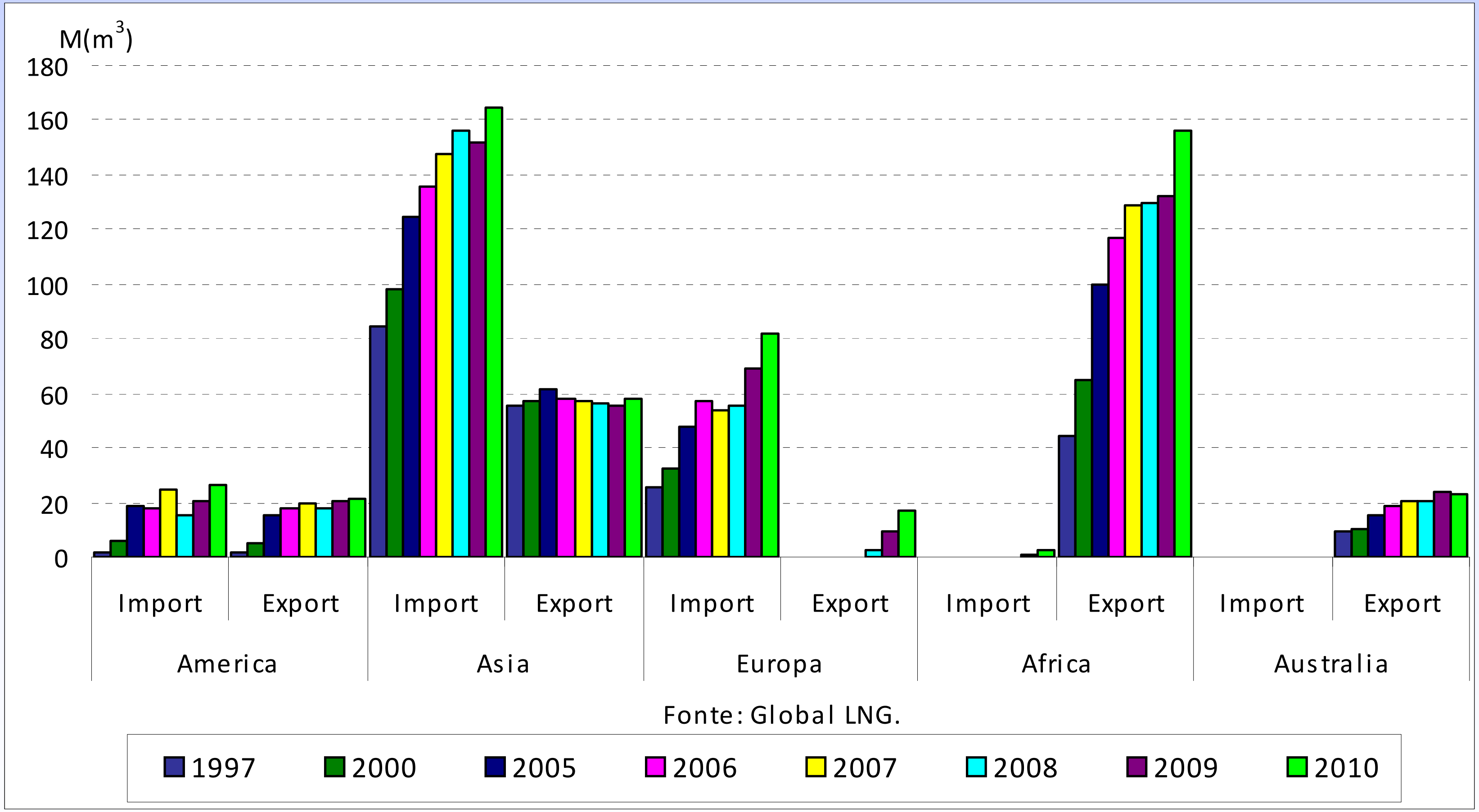

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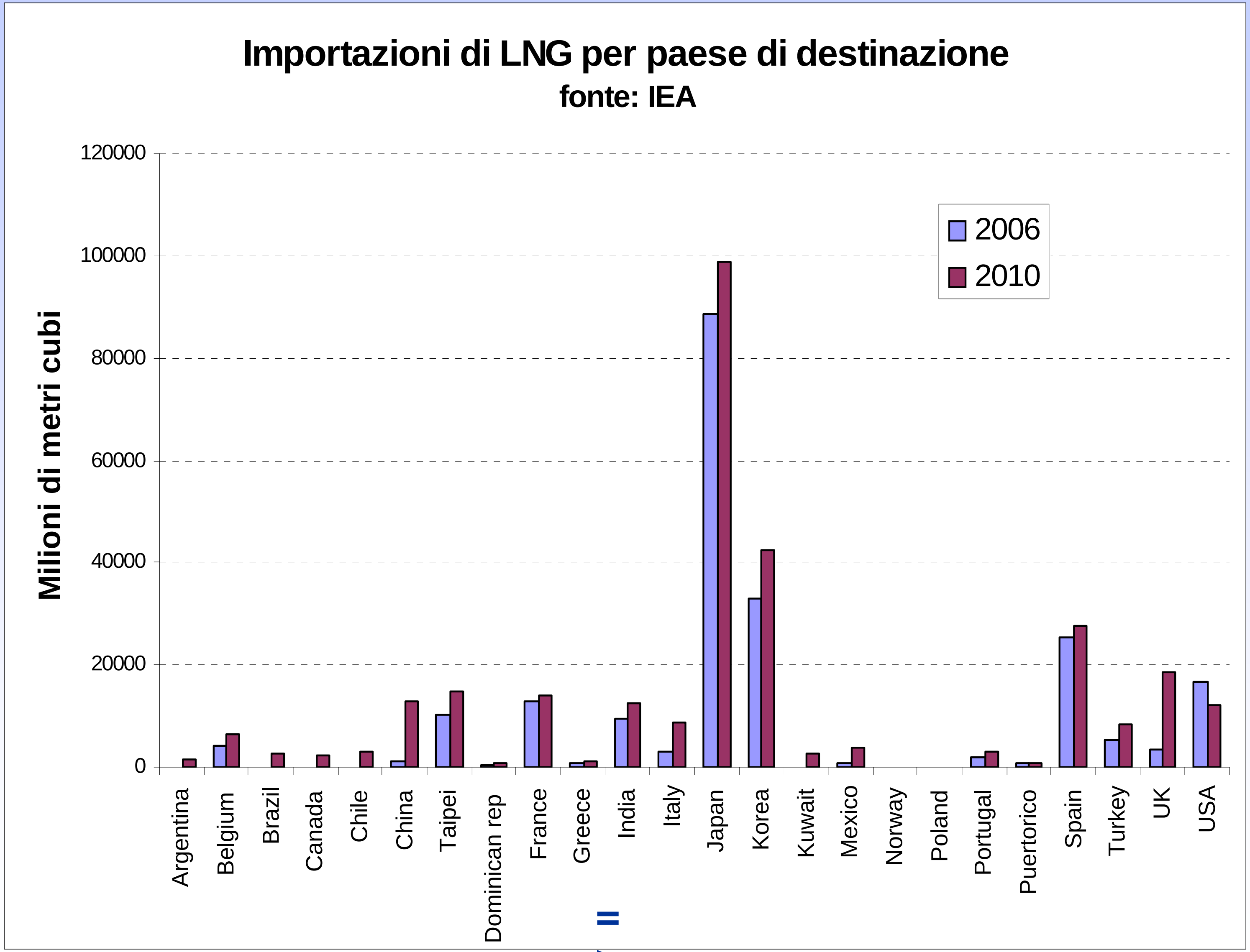

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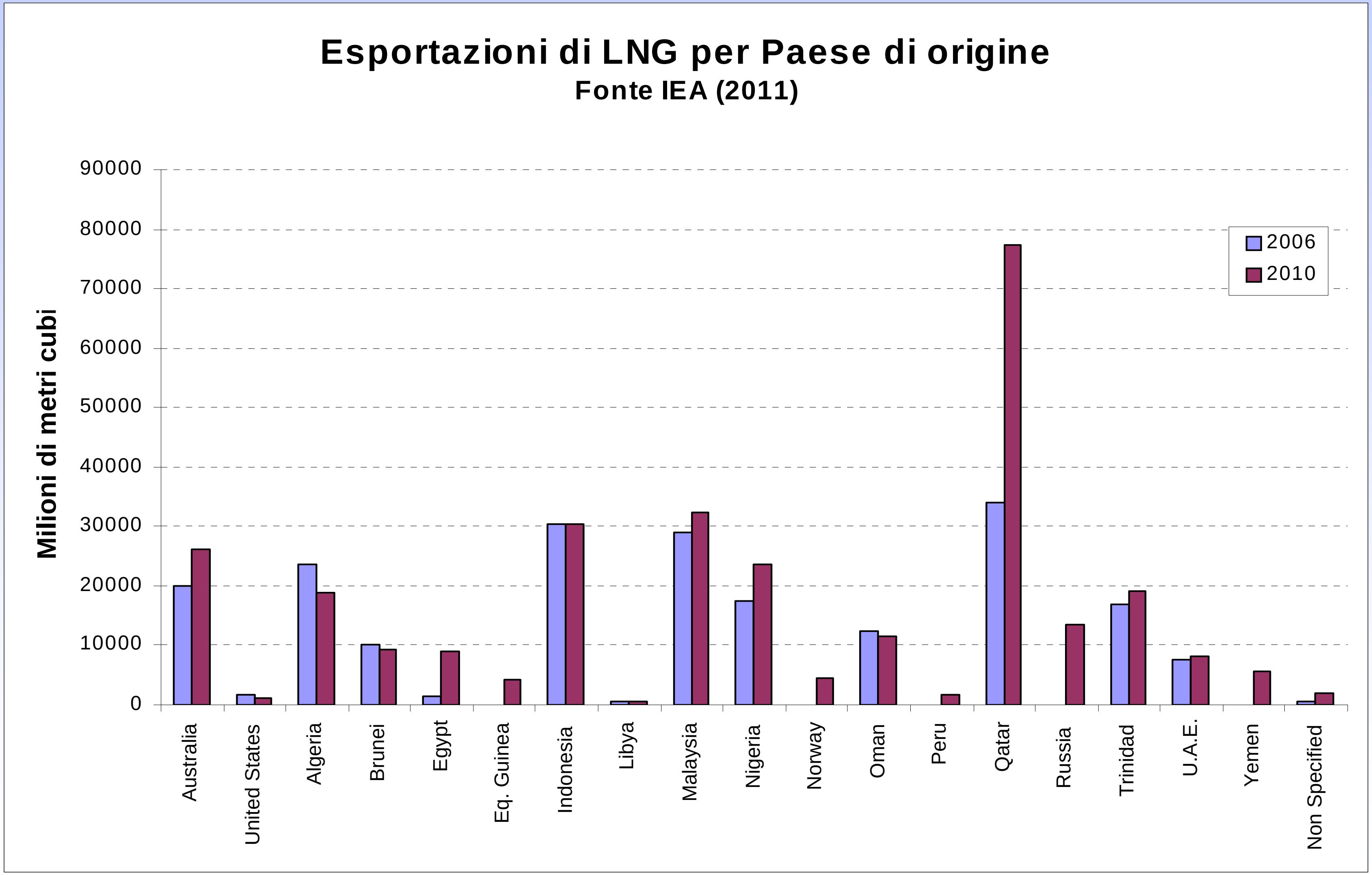

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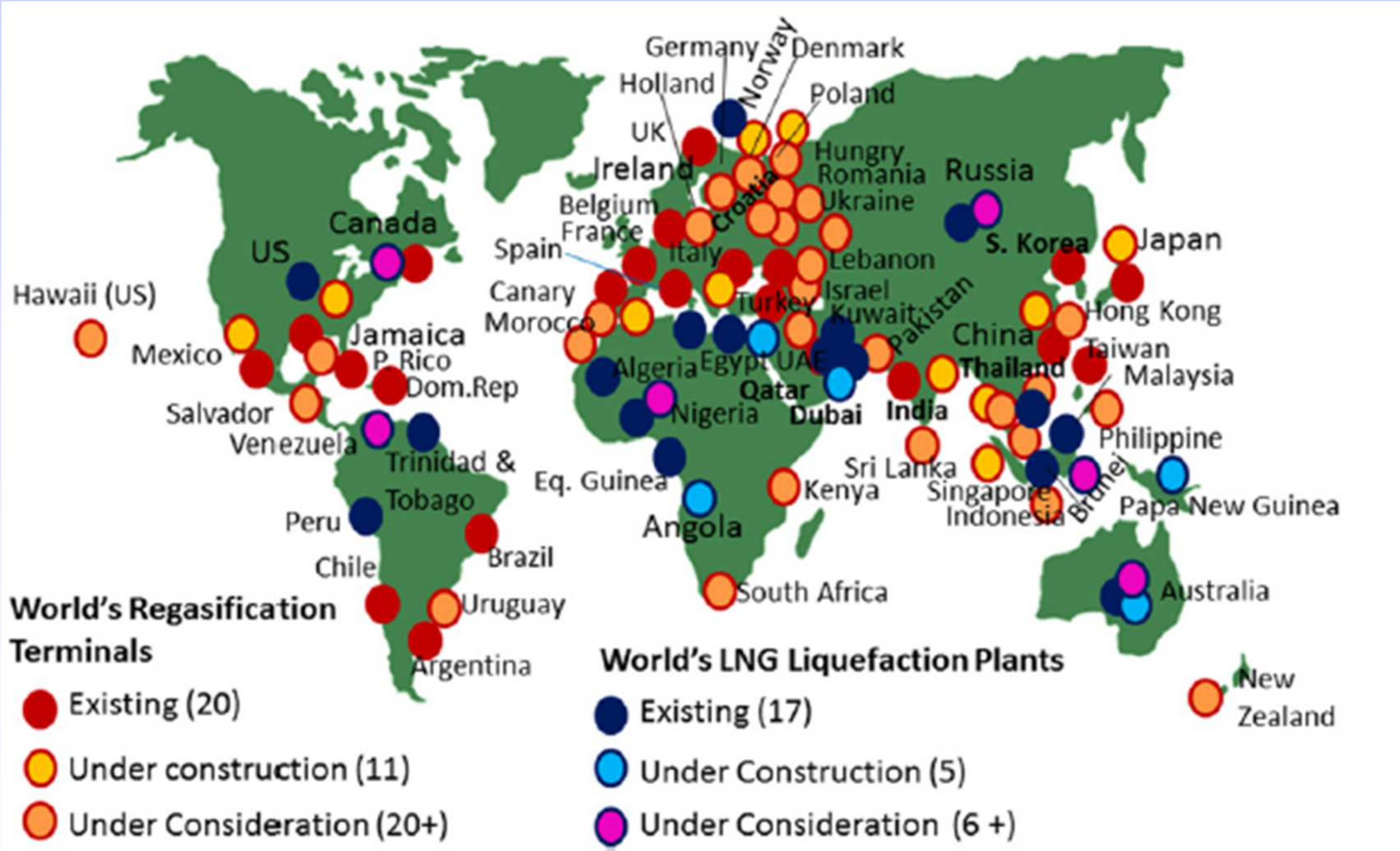

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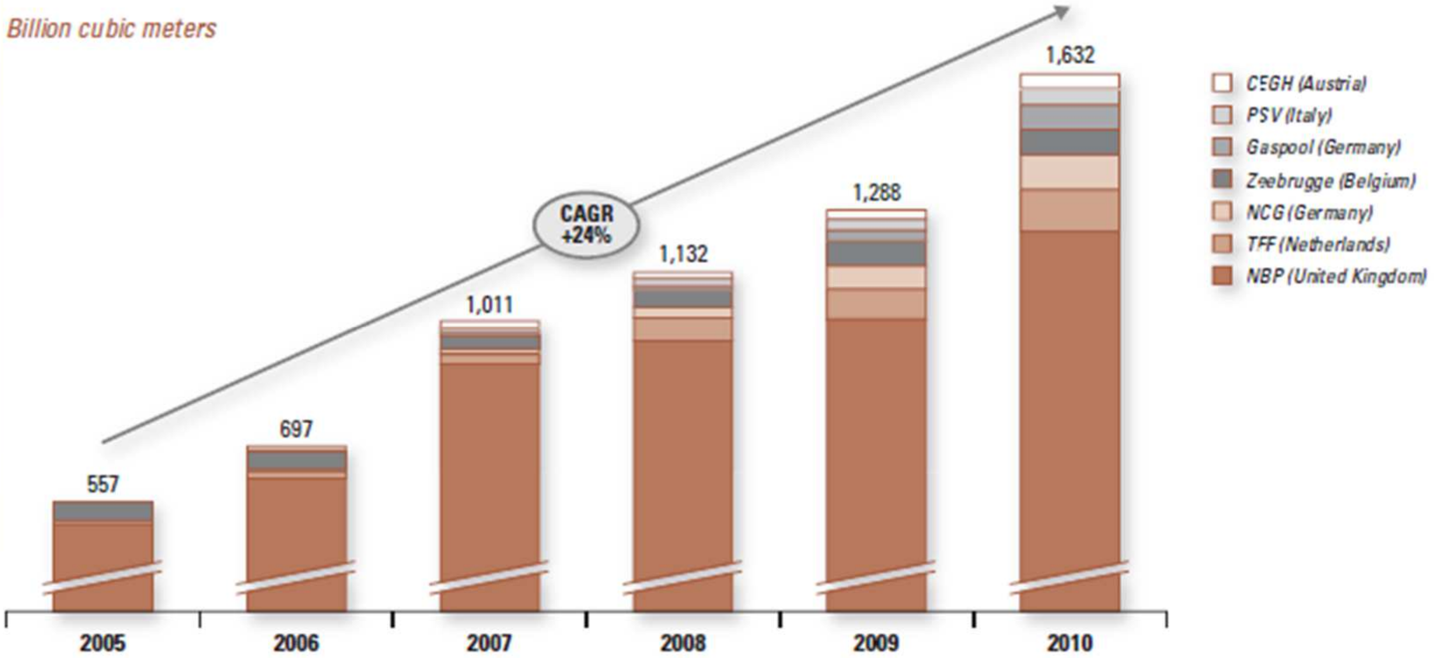
The emergence of gas hubs in Europe

The development of liquid gas hubs



Note: CAGR is compound annual growth rate

Source: A.T. Kearney analysis

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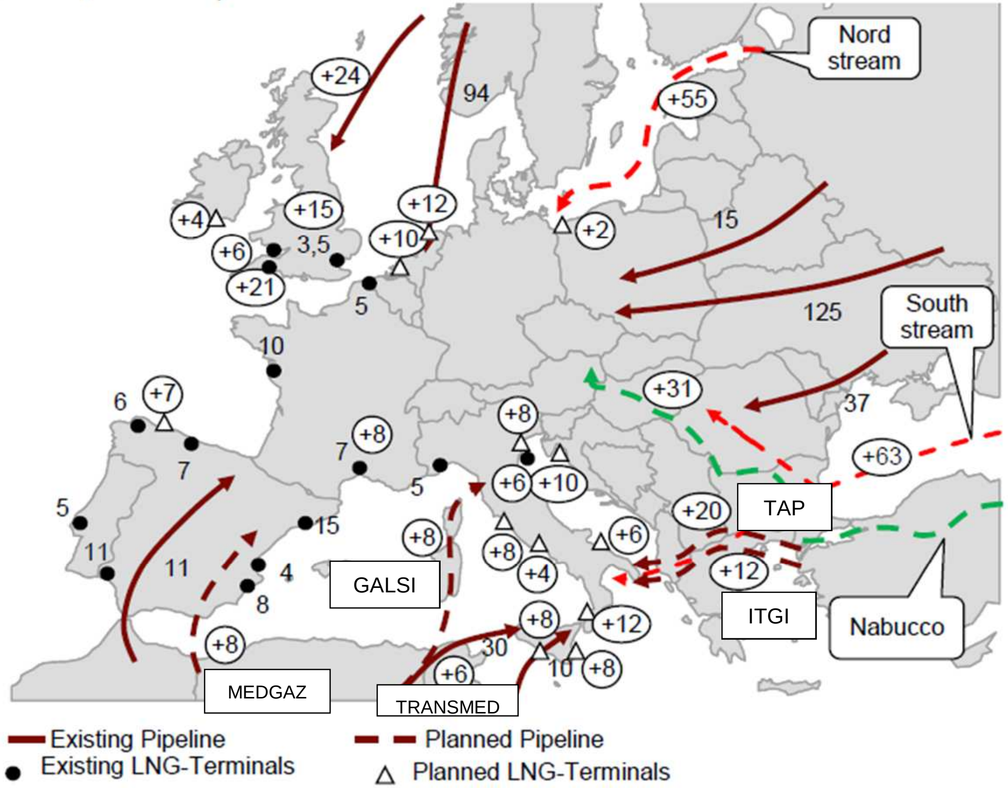

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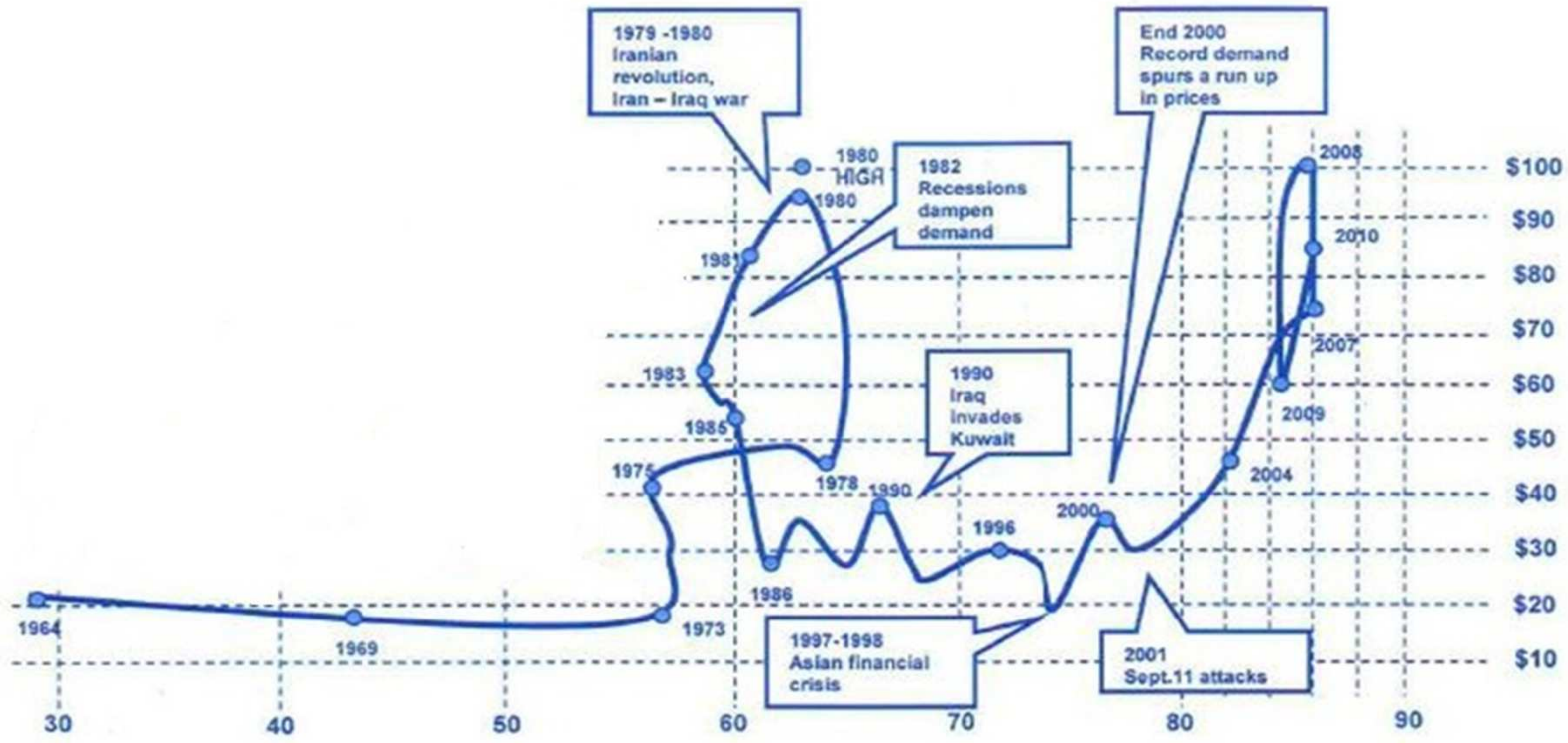

**Average annual price of West Texas Intermediate crude oil, adjusted for inflation using the Consumer Price Index. Posted prices (not spot prices) are shown before 1983.*
Source: Energy Information Administration, Federal Reserve, Bureau of Labor Statistics, Rocky Mountain Institute

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