

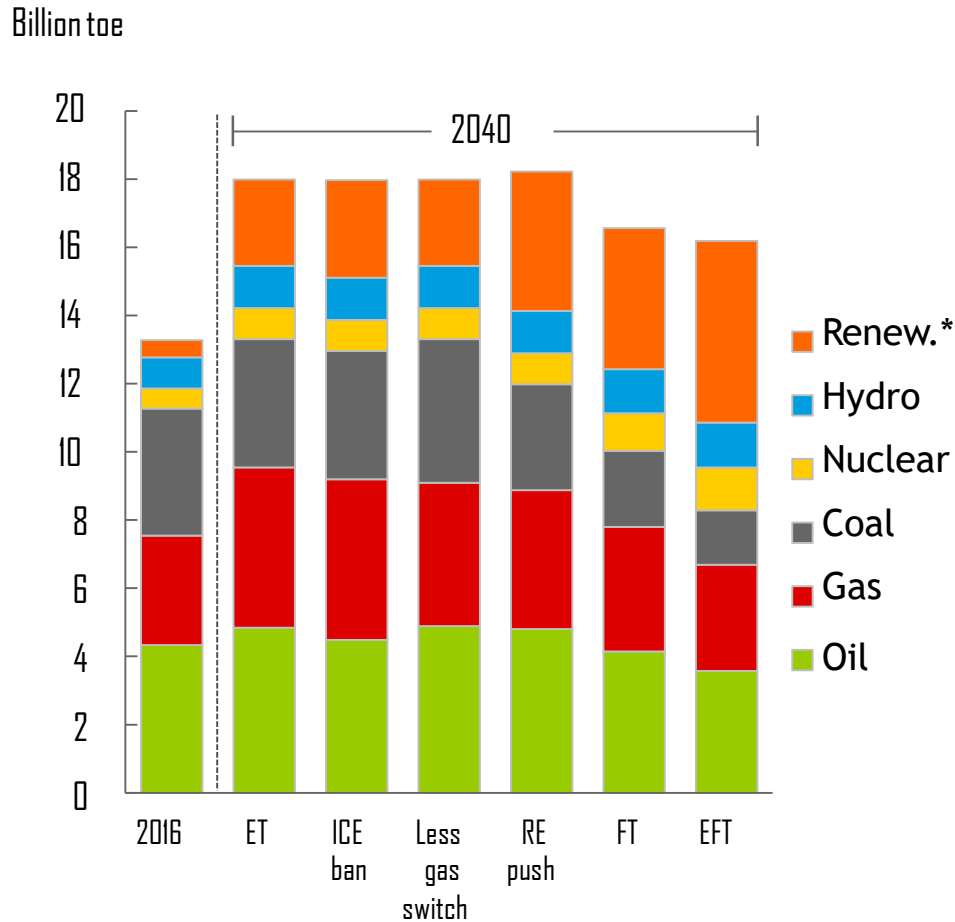
BP Energy | 2018
Outlook | edition

BP energy economics
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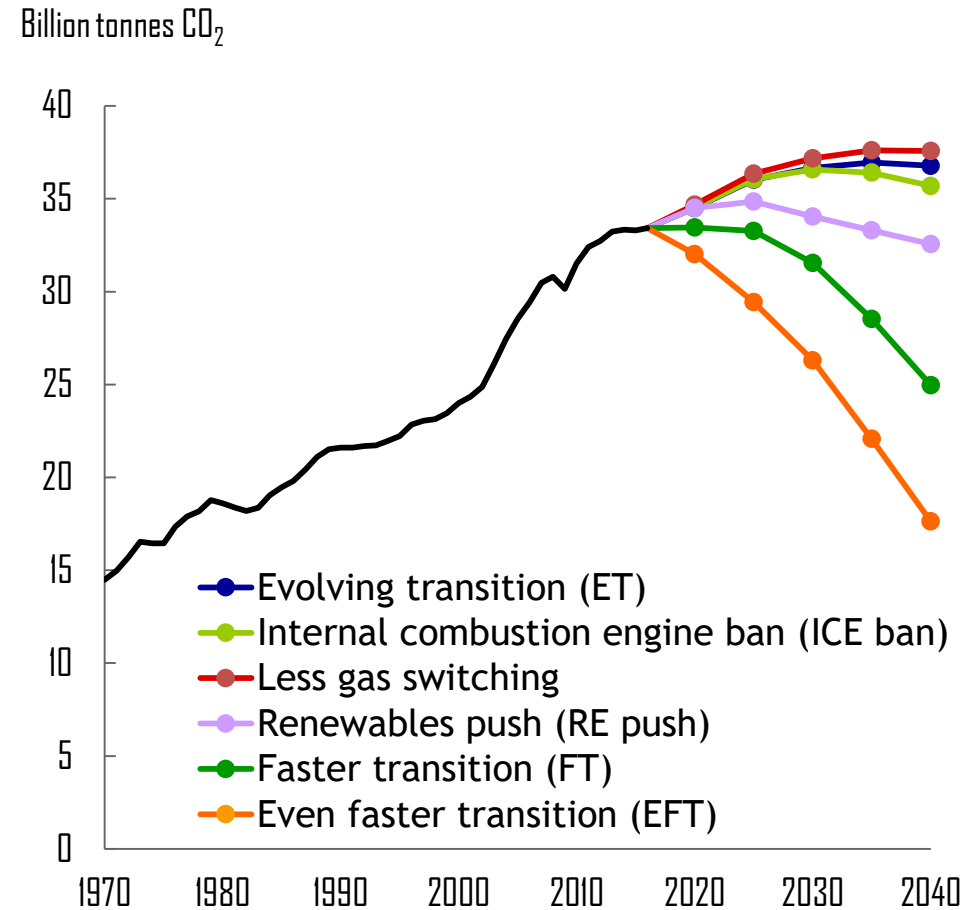


The Energy Outlook considers a range of scenarios...

Primary energy consumption by fuel



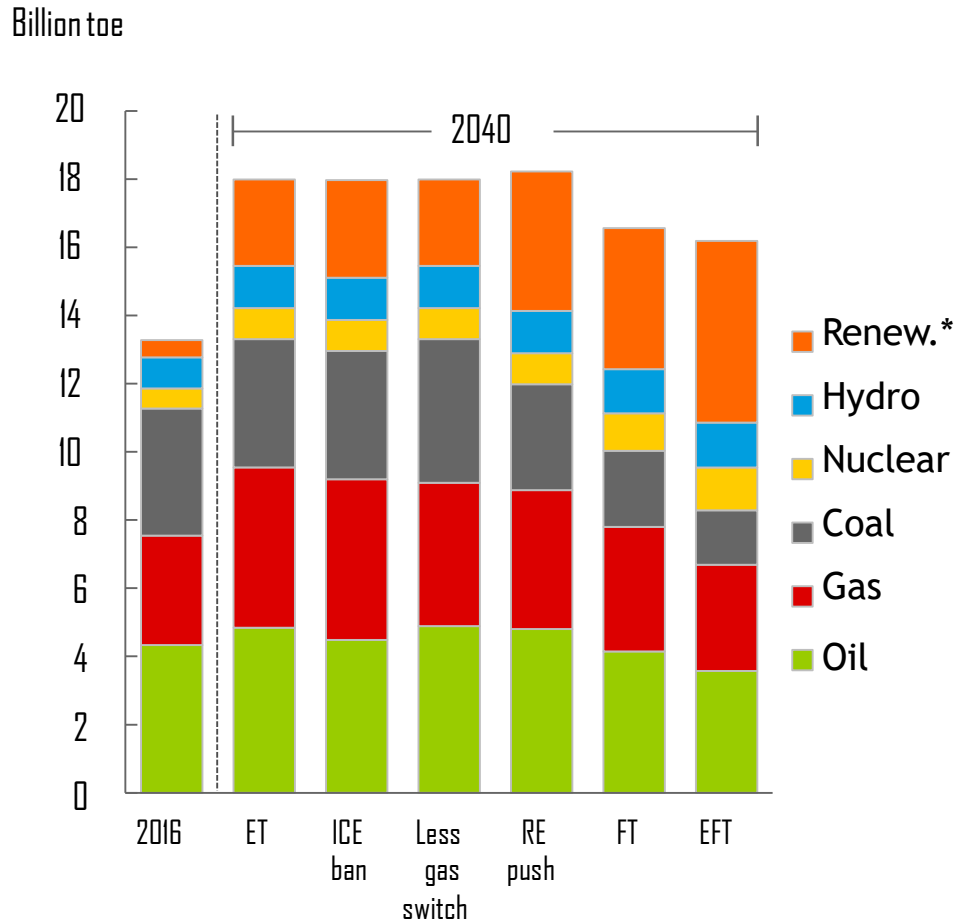
Carbon emissions



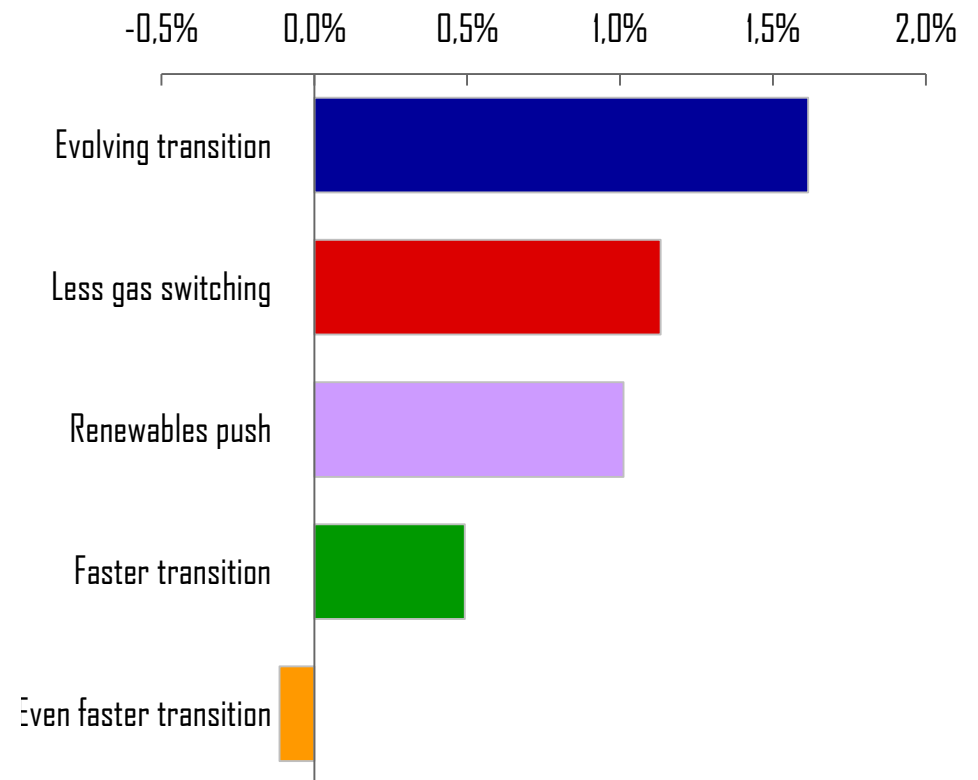
*Renewables includes wind, solar, geothermal, biomass, and biofuels

The Energy Outlook considers a range of scenarios...

Primary energy consumption by fuel



Gas demand growth 2016-2040



*Renewables includes wind, solar, geothermal, biomass, and biofuels

And looks at the energy transition through different lenses

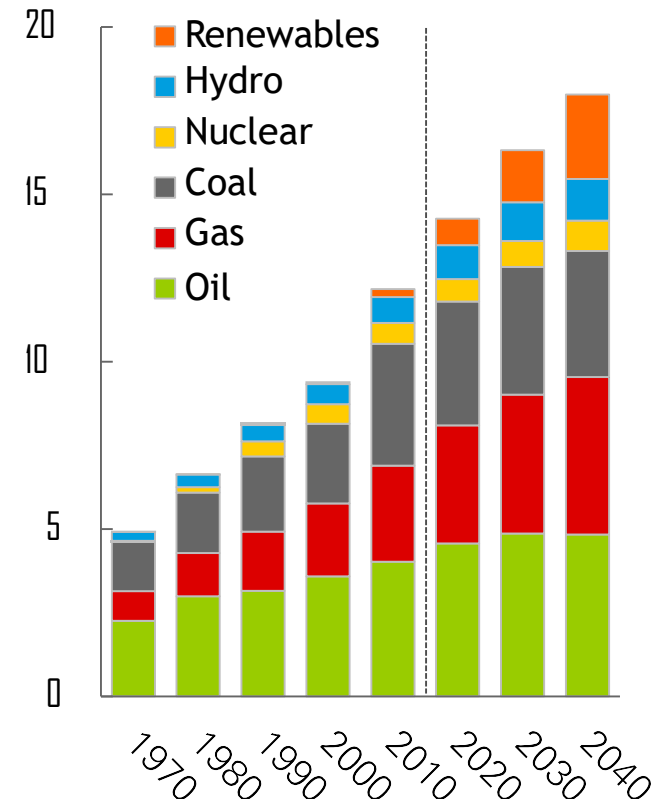
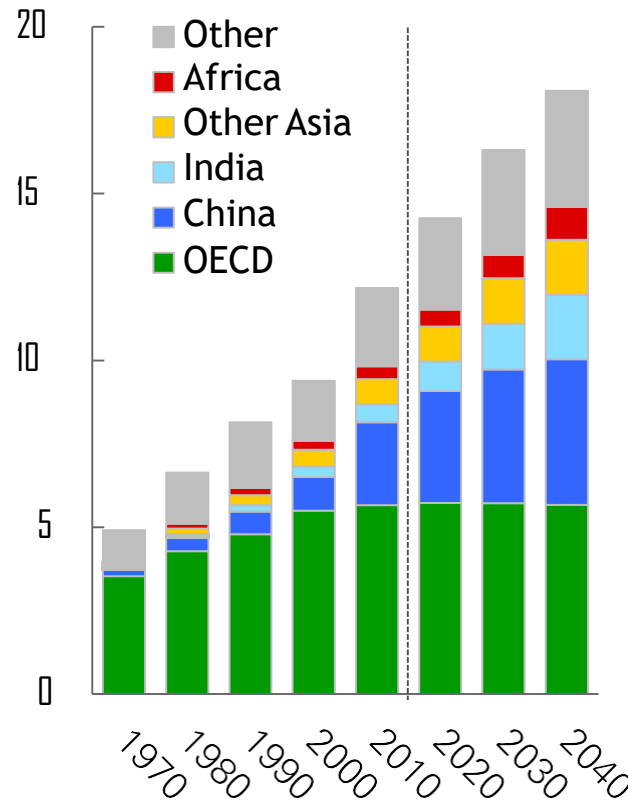
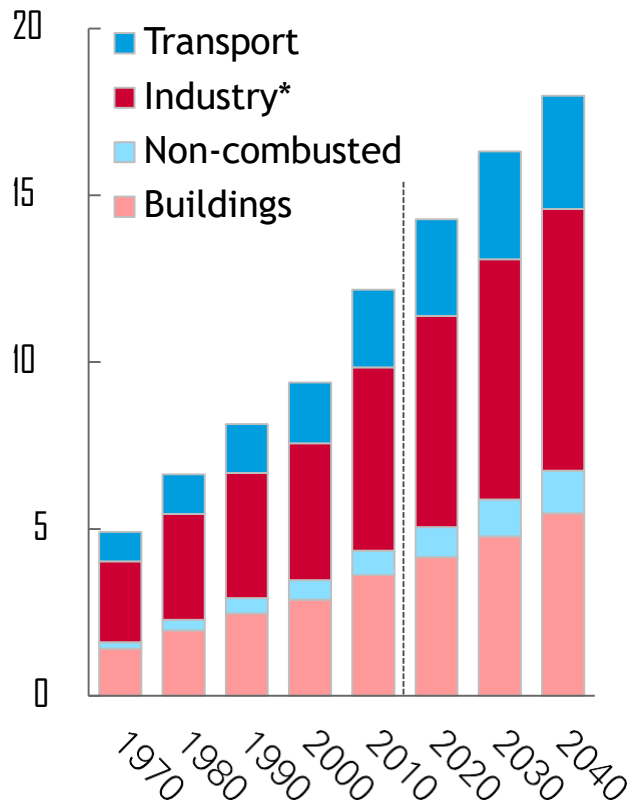
Primary energy demand

End-use sector

Region

Fuel

Billion toe



*Industry excludes non-combusted use of fuels

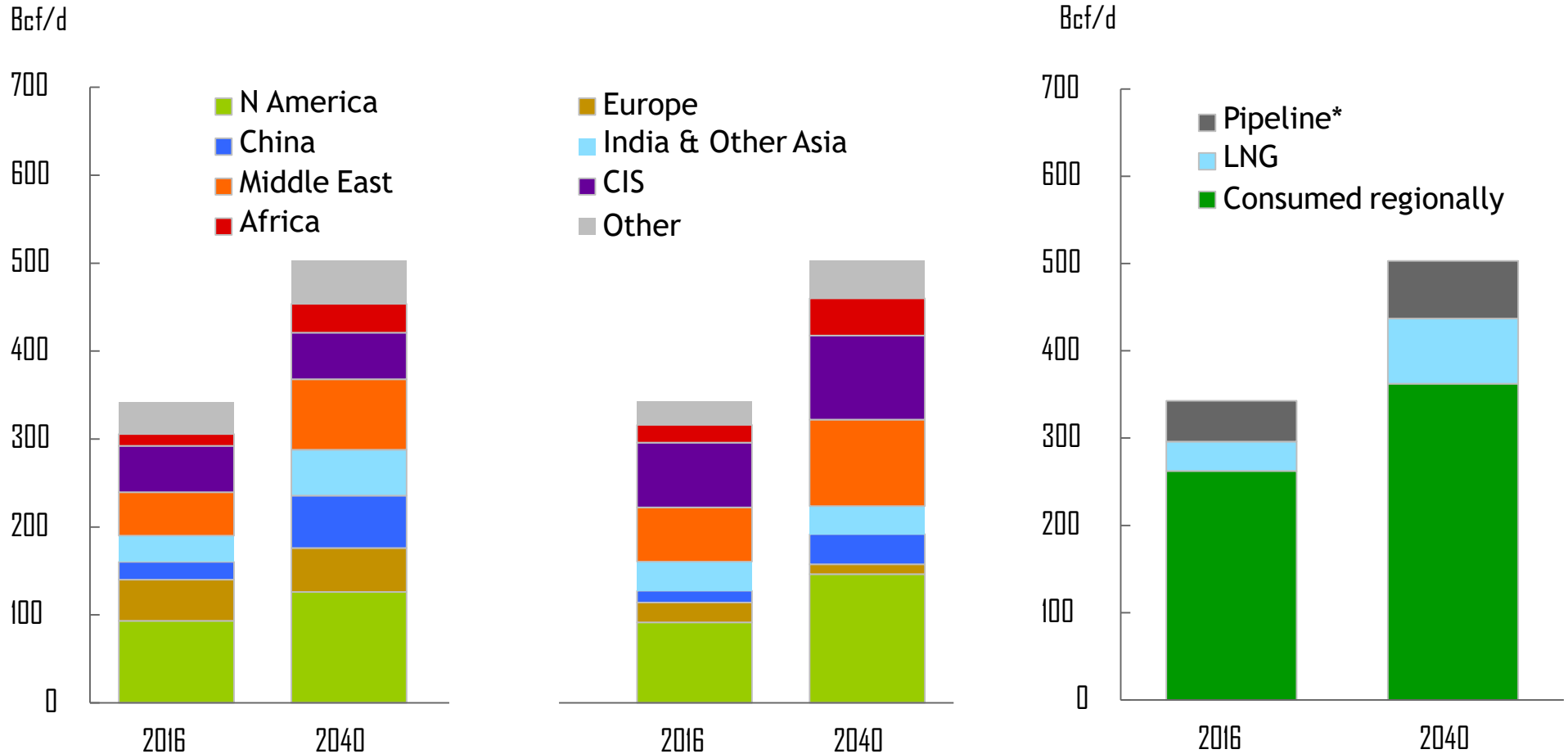
Natural gas grows strongly...

Natural gas

Consumption

Production

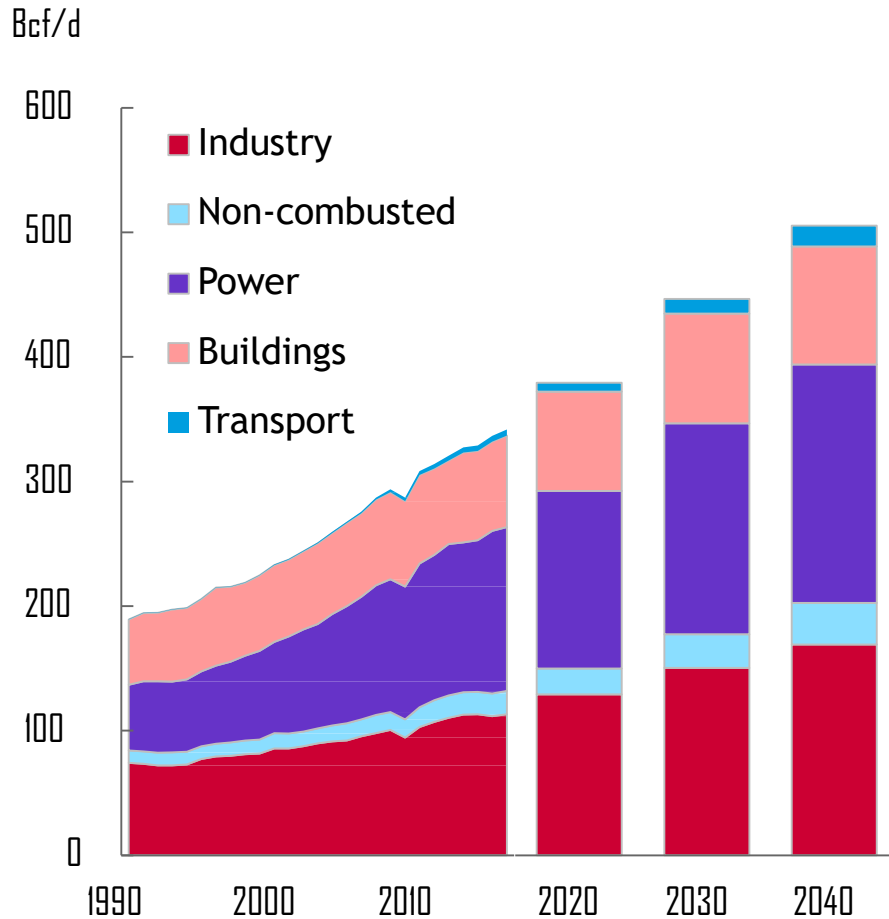
Trade



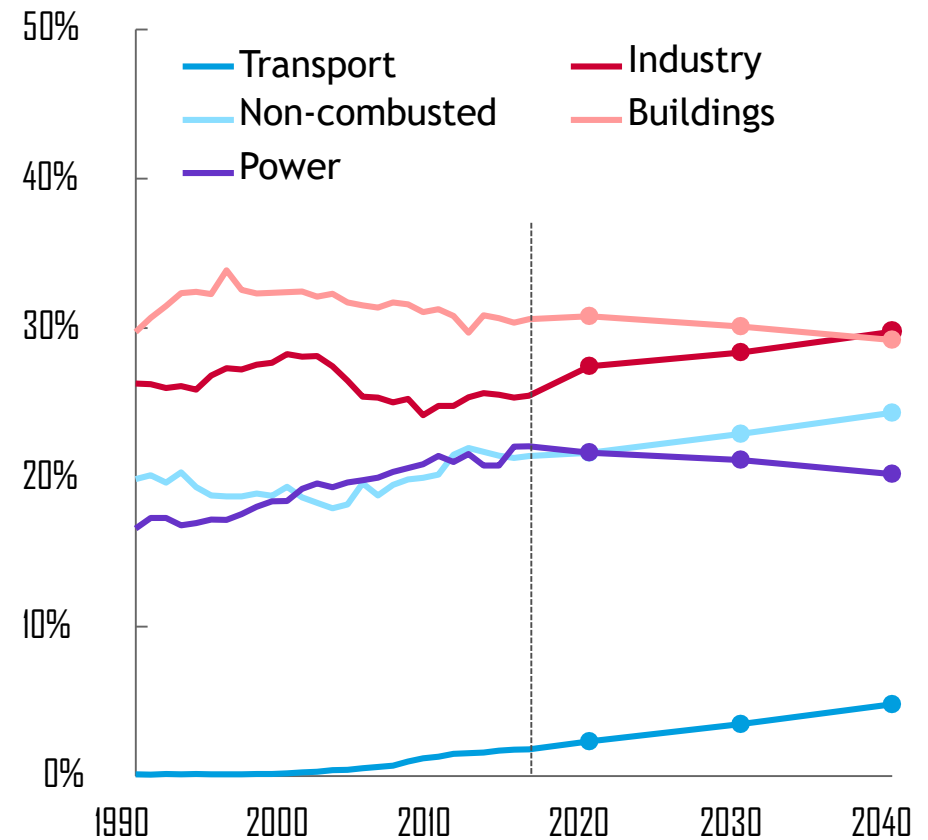
*Pipeline gas refers to inter-regional pipeline trade

Its growth being largely driven by industrial and power sectors

Gas consumption by sector

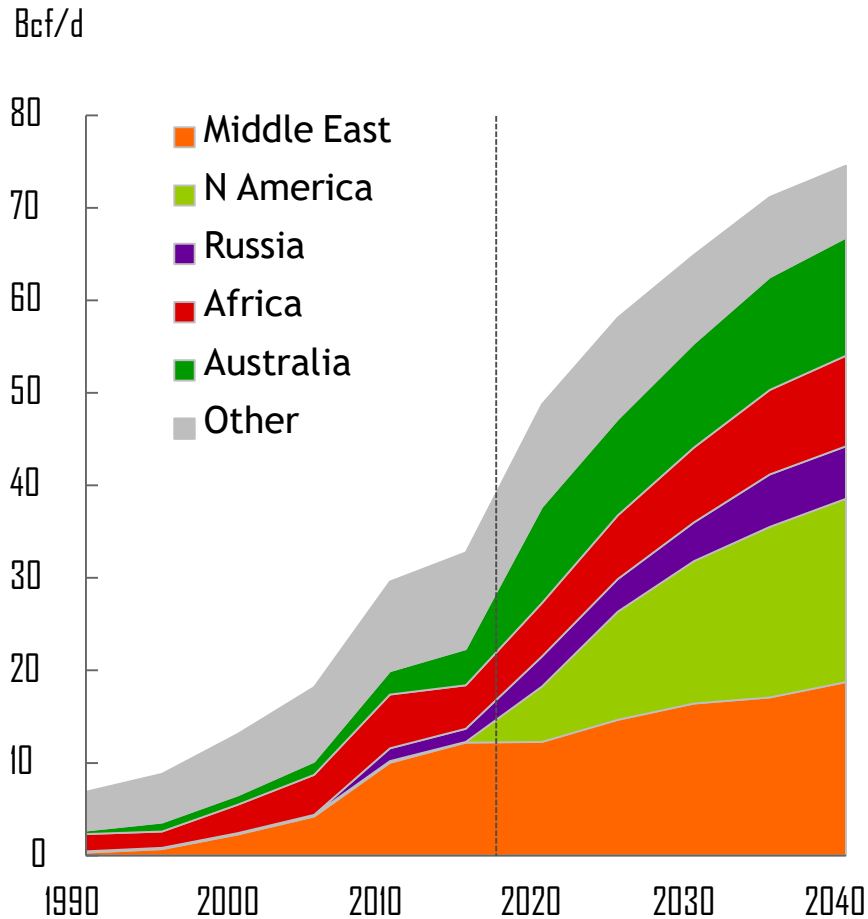


Gas share by sector

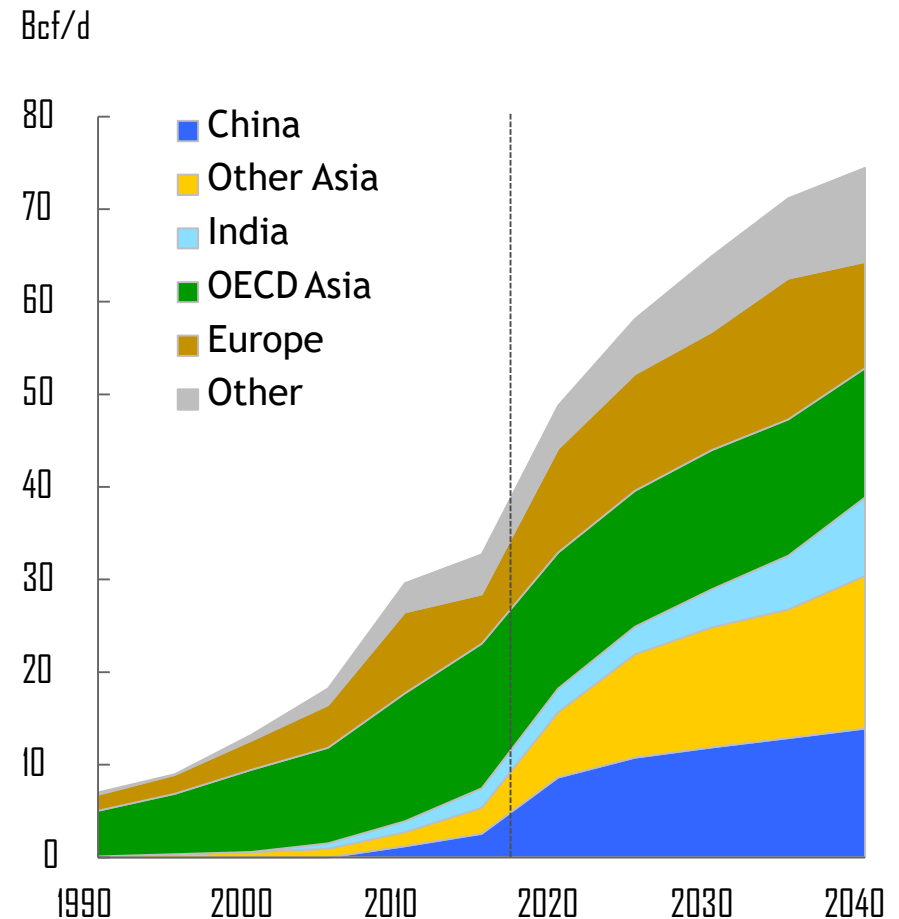


LNG will increase the global availability of gas

LNG exports



LNG imports



What interregional gas trade looked like 20 years ago (1996)

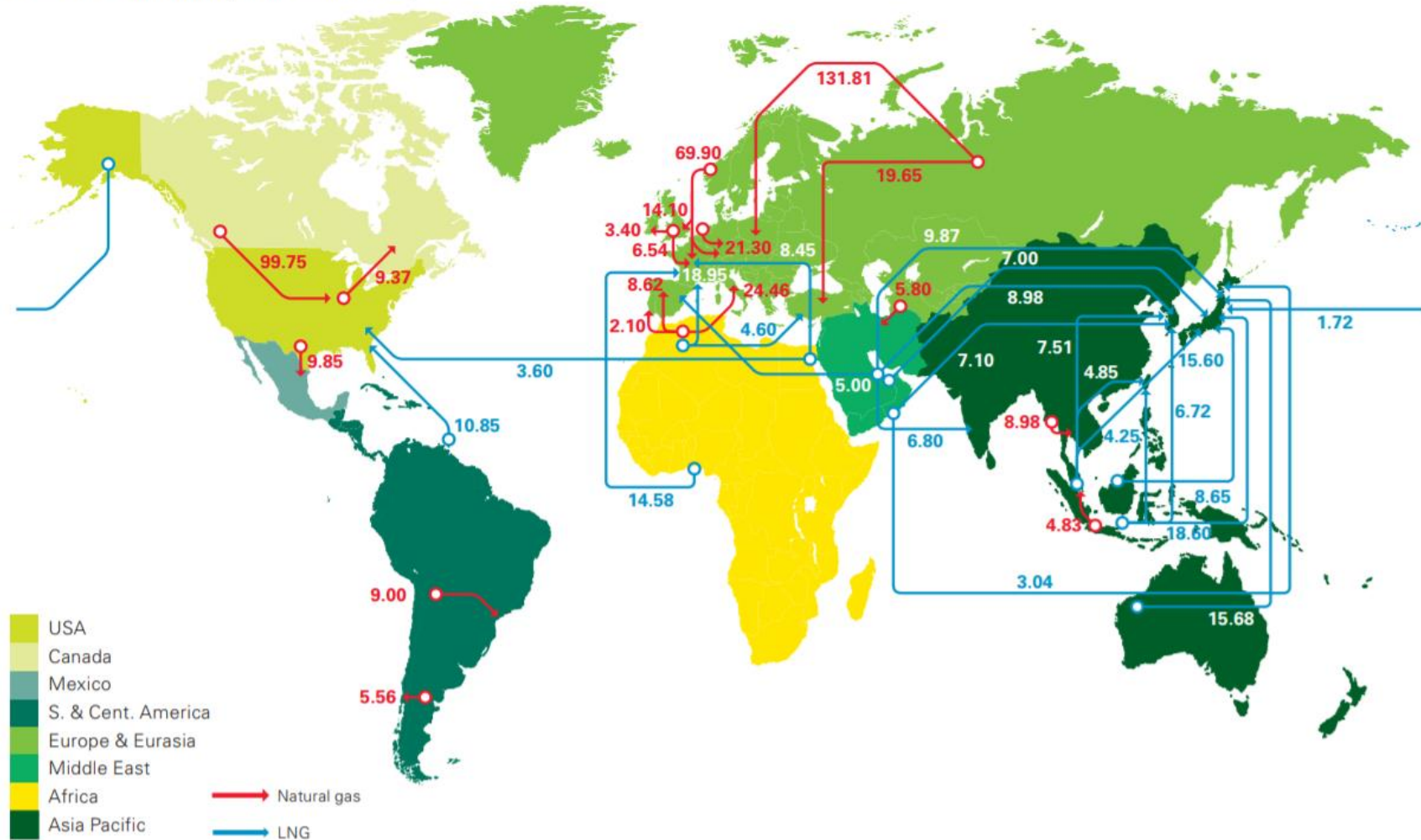
Major trade movements



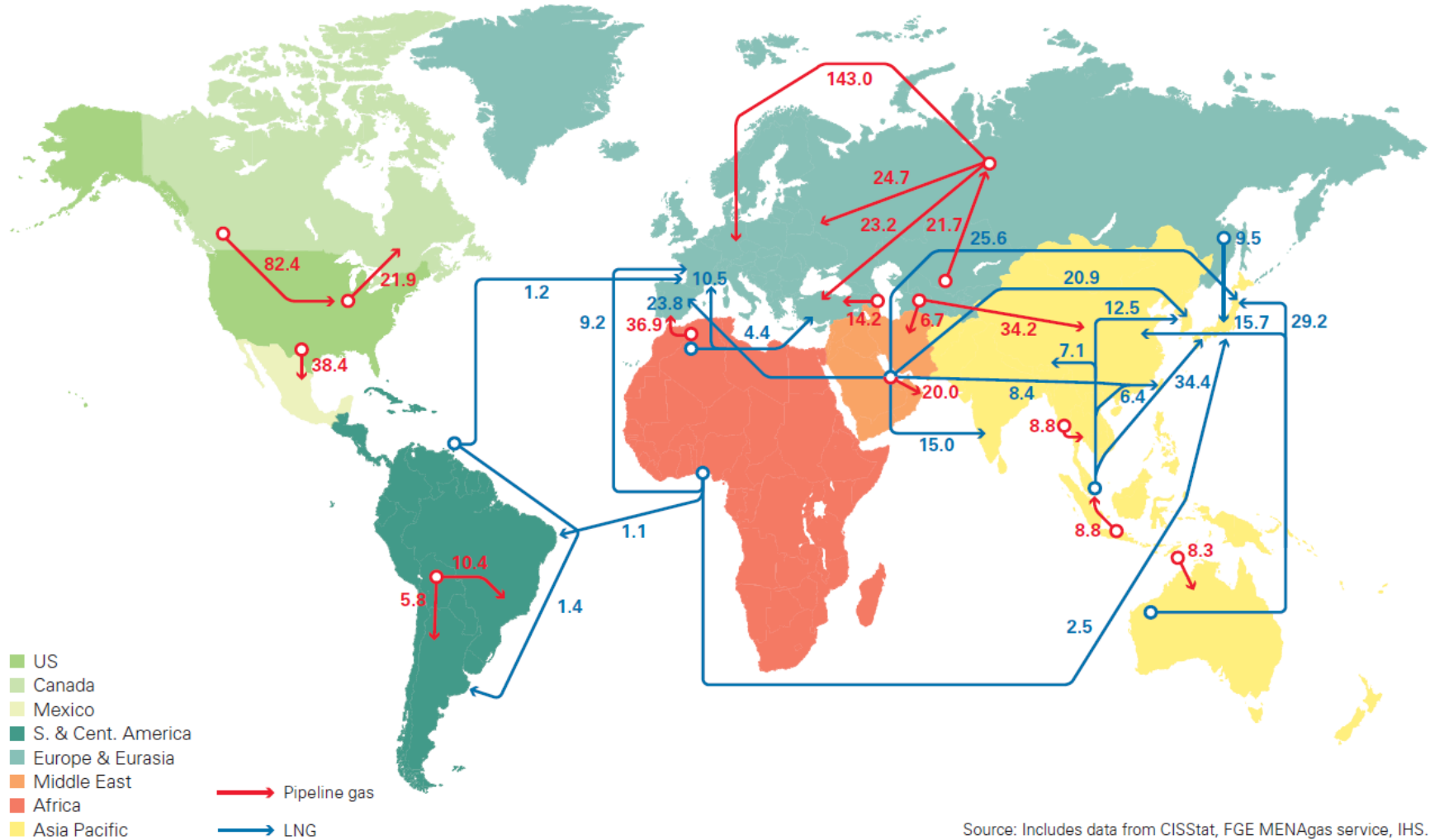
What interregional gas trade looked like 10 years ago (2006)

Major trade movements

Trade flows worldwide (billion cubic metres)



And what it looks like today (2016)



Source: Includes data from CISStat, FGE MENAgas service, IHS.



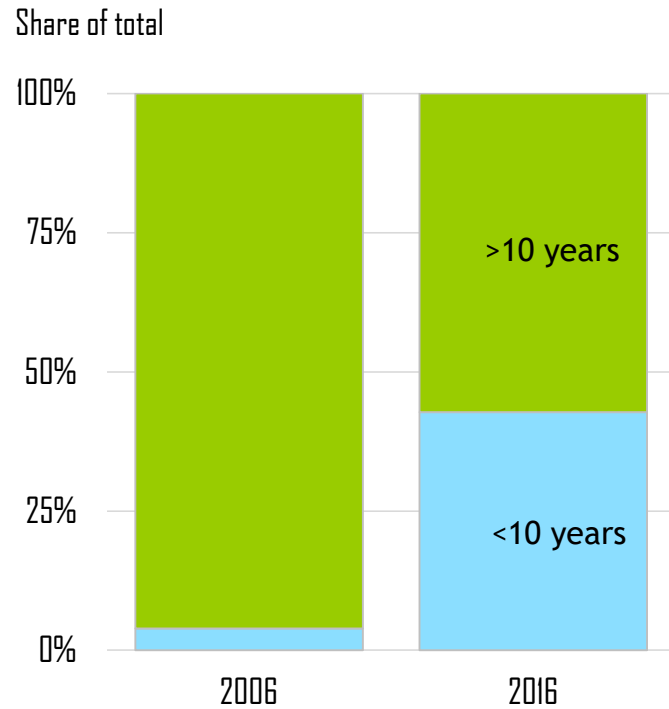
What the LNG industry looks like now*

BP, Sonatrach, JERA, Toho Gas, NGC Trinidad, Tohoku Electric, NationalGrid, Trafigura, Botas, Total, Beijing Gas, Enagas, Kuwait Petroleum, Cheniere, Jovo, PTT, Petronas, Vitol, Uniper, Novatek, Guangzhou Gas, Sempra, INPEX, Shell, ADNOC, Hokkaido Gas, AES, Southern LNG, Pertamina, Hoegh LNG, Gas Natural Fenosa, EGAS, Chevron, BW, ConocoPhillips, Golar, H Energy, Pakistan State Oil, SLNG, GSPC, DEPA, Tokyo Gas, Toho Gas, Fluxys LNG, Excelerate, YPF, Statoil, Gazprom, Egegaz, BHP, Kogas, Mitsubishi, RWE, Osaka Gas, Chugoku Electric, Santos, ExxonMobil, Anadarko, Samsung, Woodside, Sonangol, Glencore, PLN, CPC, QatarPetroleum, EDF, SK Corp, NNPC, Vopak, Pavillion, Hunt Oil, GAIL, Huadian Corporation, Marathon, Kansai Electric, Ophir, Mitsui, Itochu, Kinder Morgan, CNOOC, Gasunie, CNPC, Polskie LNG, Indian Oil, Engro Corp, Repsol, Sinopec, Petronet

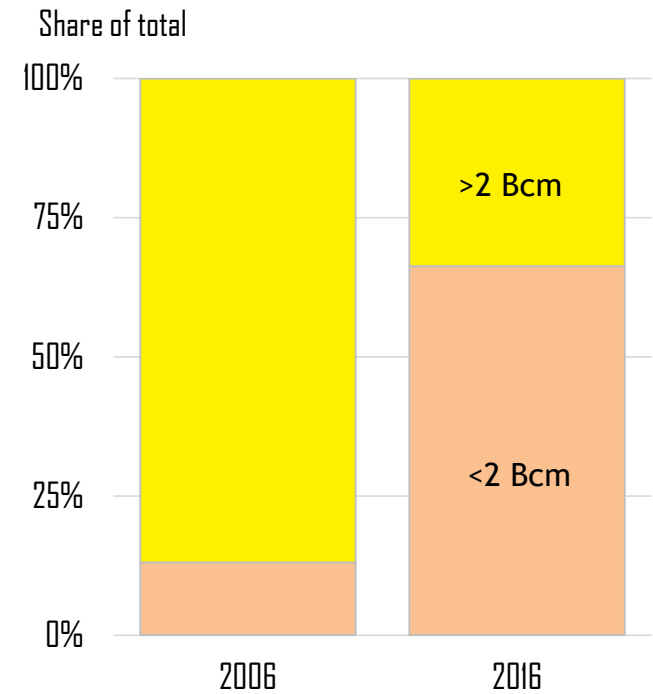
*List non exhaustive

LNG markets characteristics have changed

Contract length

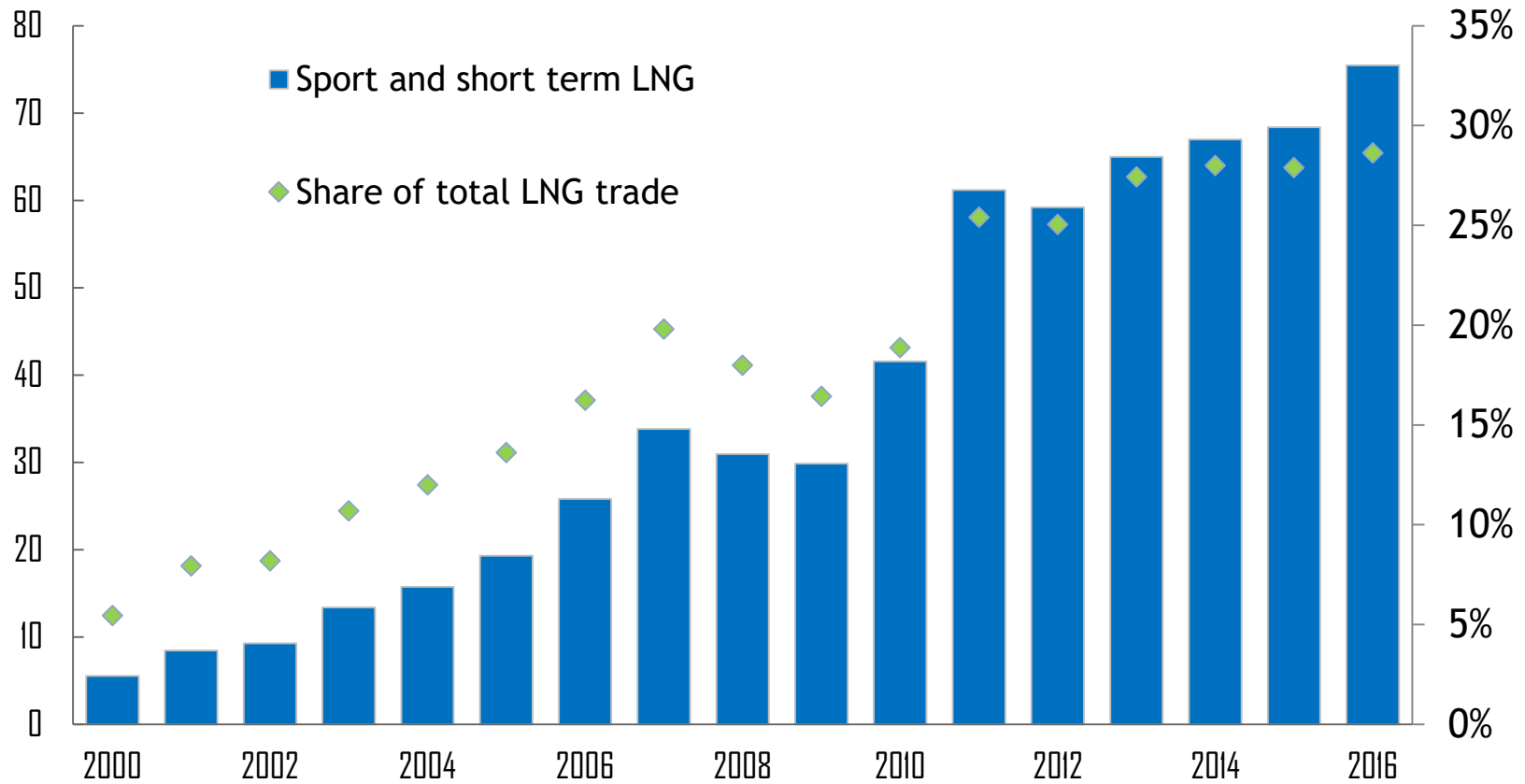


Contract size



Source: IHS, PIRA

As LNG trade becomes more flexible

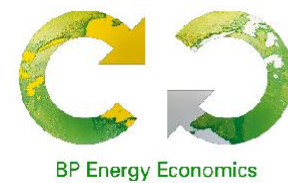


Source GIIGNL annual reports
 Short term LNG is defined as contracts of less than 4 years

Disclaimer



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