

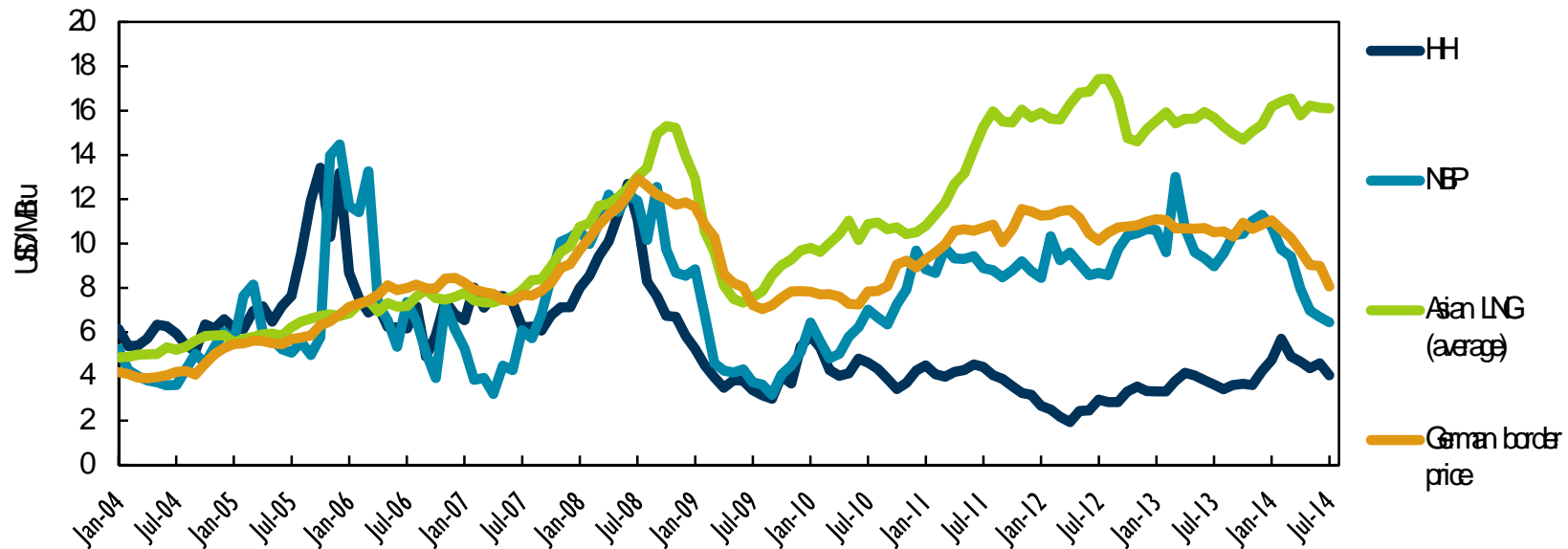


The Asian Quest for LNG in a Globalising Market

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What is making Asian gas price so high?

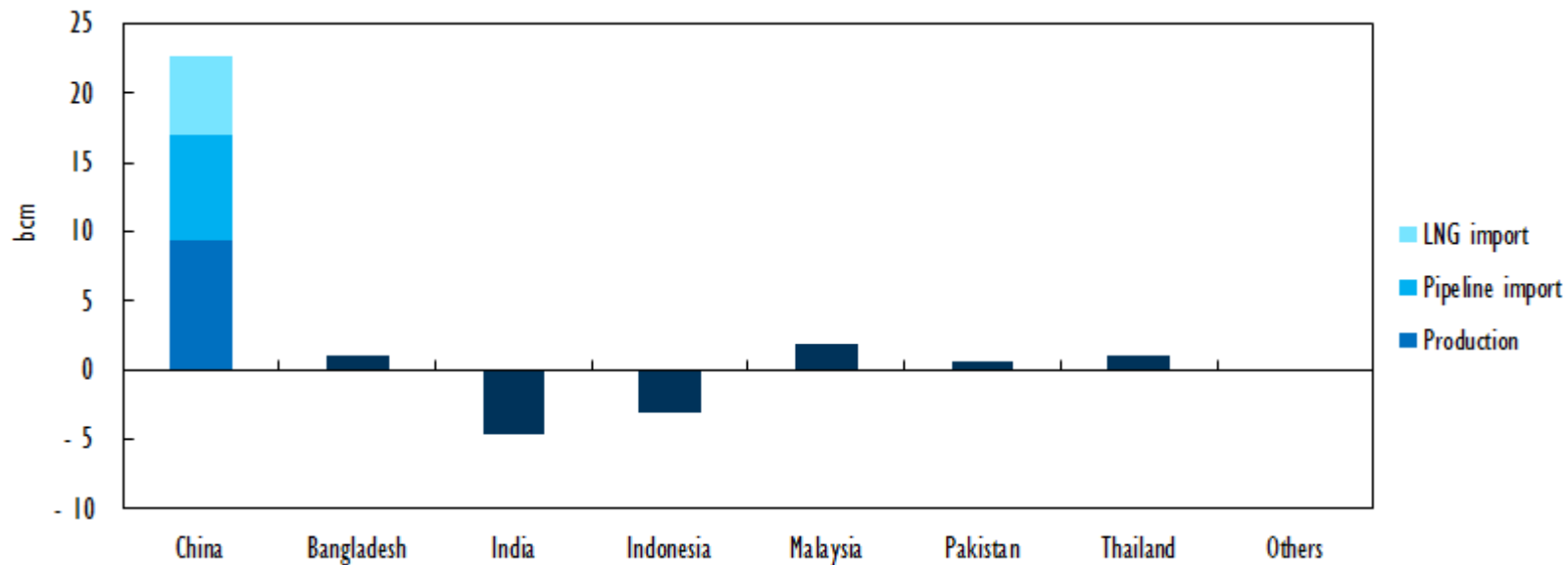
Evolution of regional gas prices



- Wide price gap has been seen for several years among major regional gas markets with no convergence.
- Not only as being the fastest-growing gas market, Asia is even more attractive for producers as Asian buyers pay the highest prices.

High prices could affect the gas demand in Asia

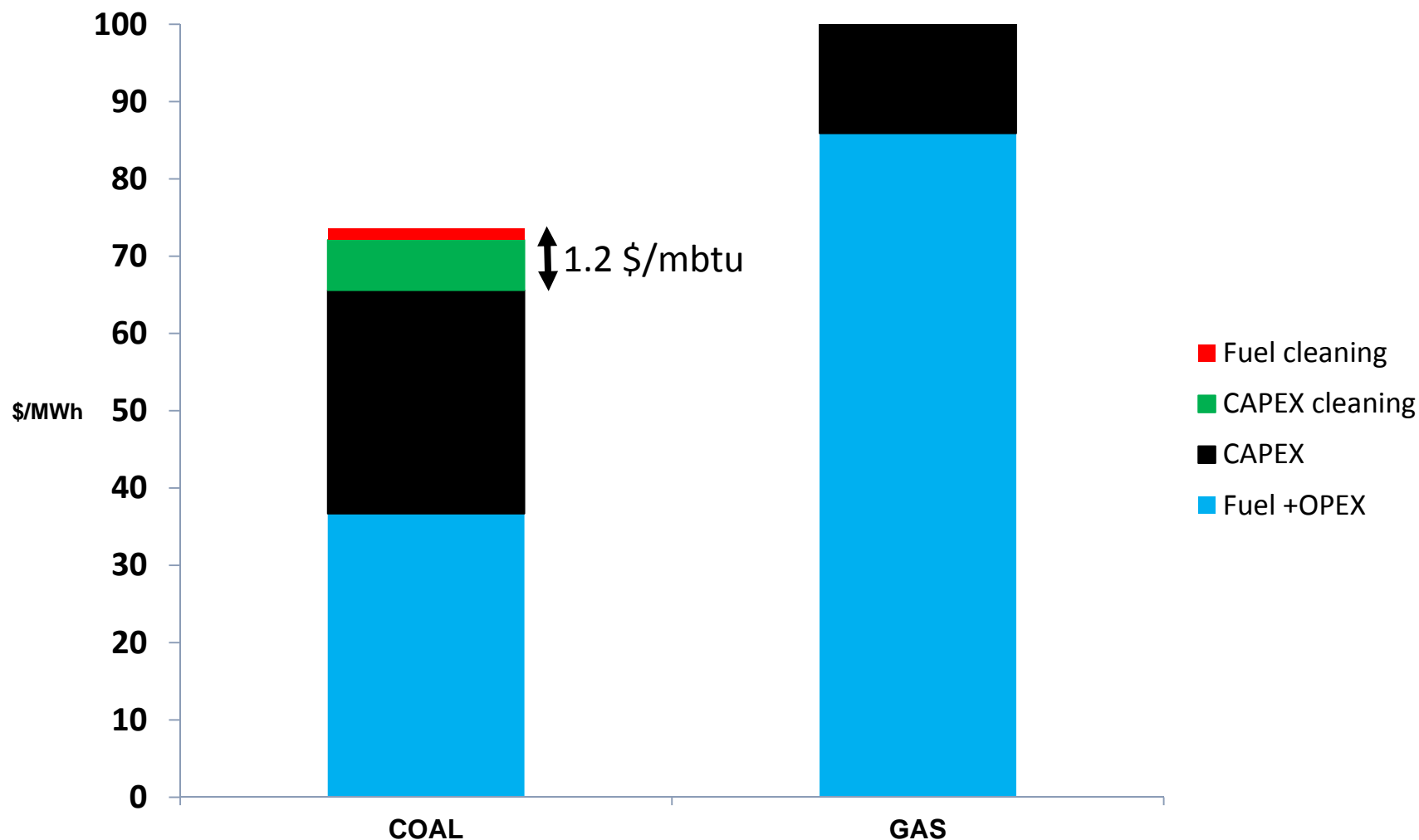
Changes in demand in Asia, 2012 vs 2013



- Asia's demand in 2013 was generally flat, and even declining in India and Indonesia.
- The overall increase in demand in the region was mainly driven by strong demand from China.

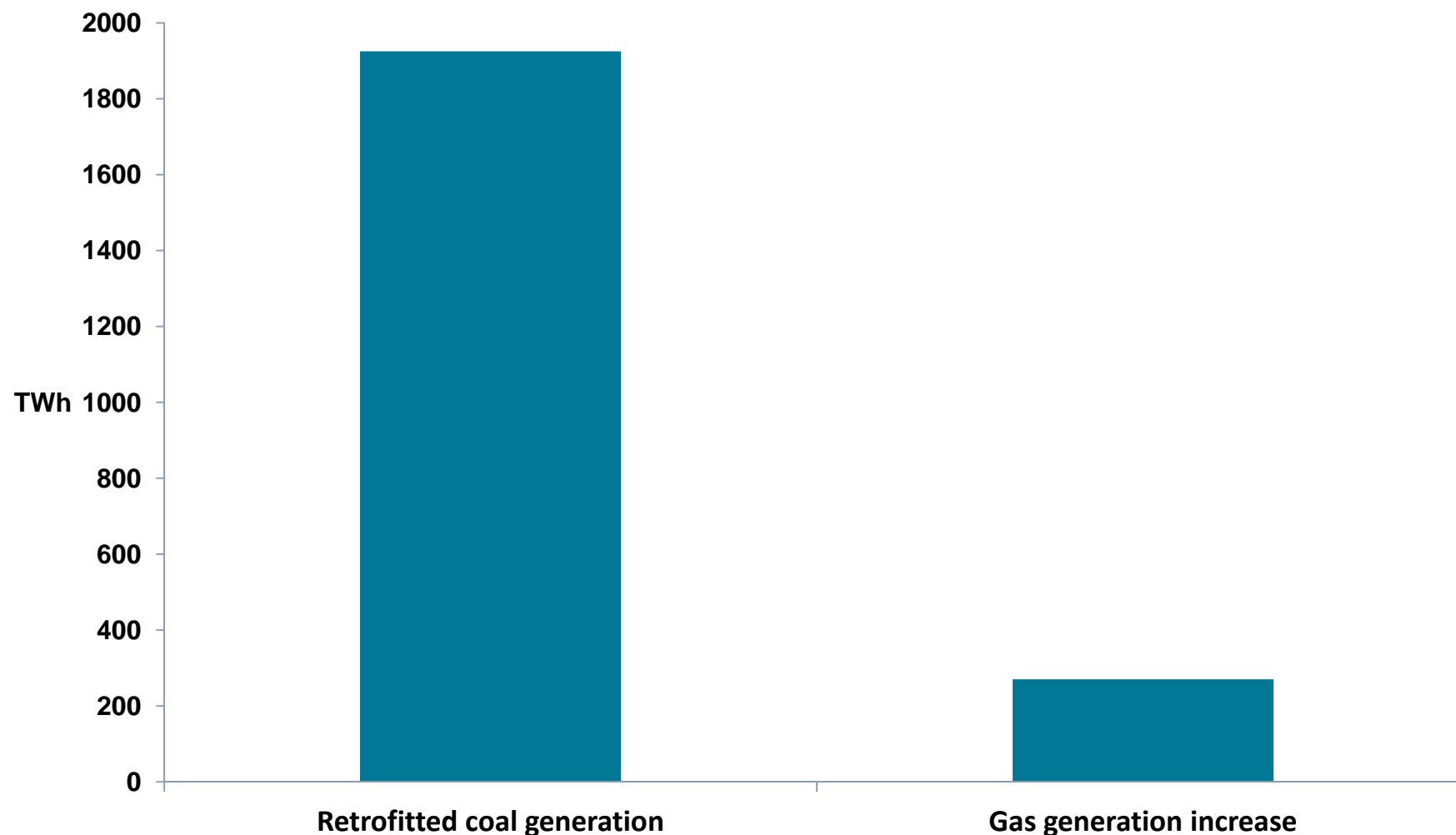
Gas is not necessarily the cheapest option to tackle air pollution

Power generation costs



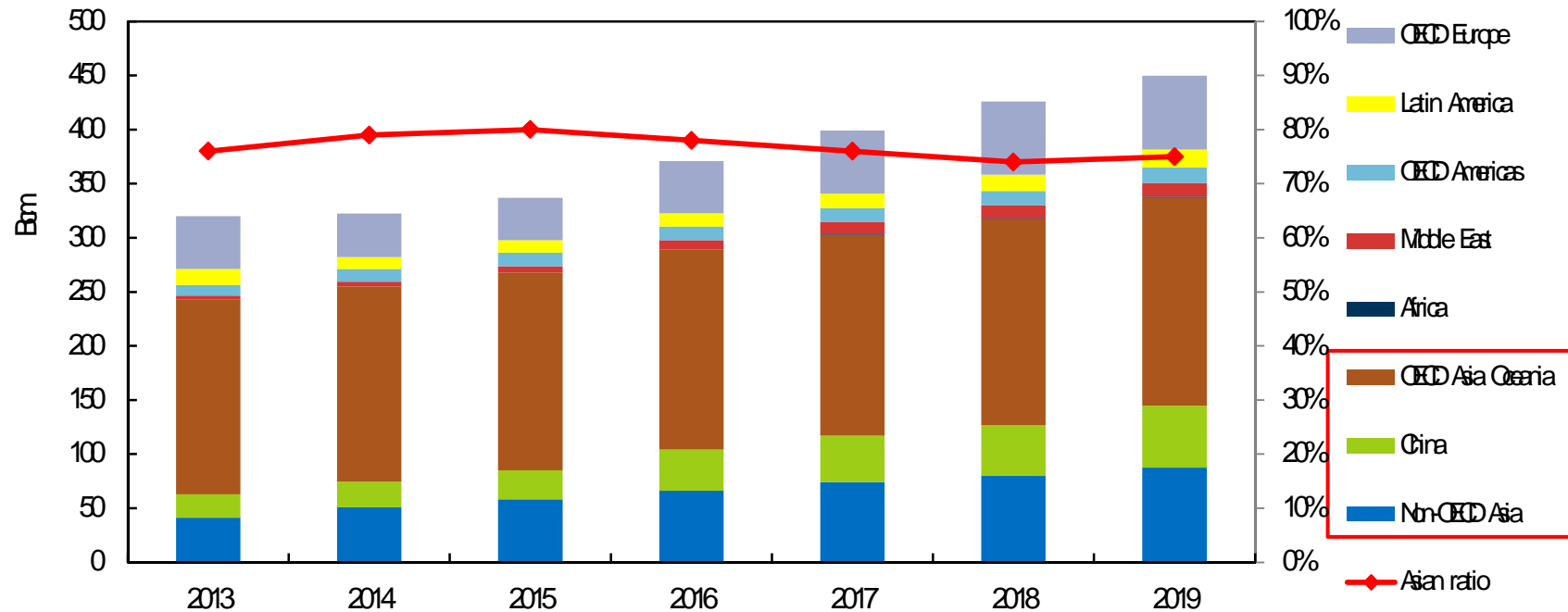
Coal remains a backbone in China

Gas and retrofitted coal plants generation in China



Asia will continue to be the center of global LNG trade

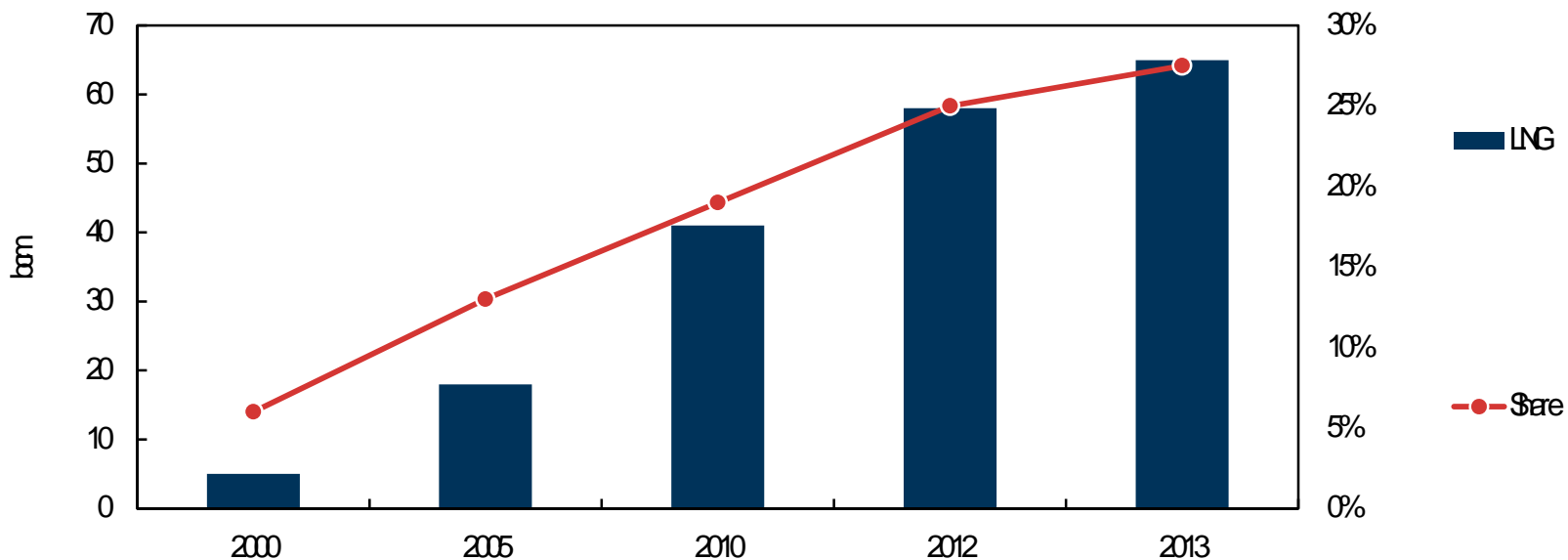
Evolution of LNG imports



- Global LNG trade is set to expand by one-third to 450 bcm by 2019 and likely to increase further.
- Increase of global LNG trade will be supported by Asia, mostly by strong demand of China and non-OECD Asia.

The transition to more flexible markets is already under way

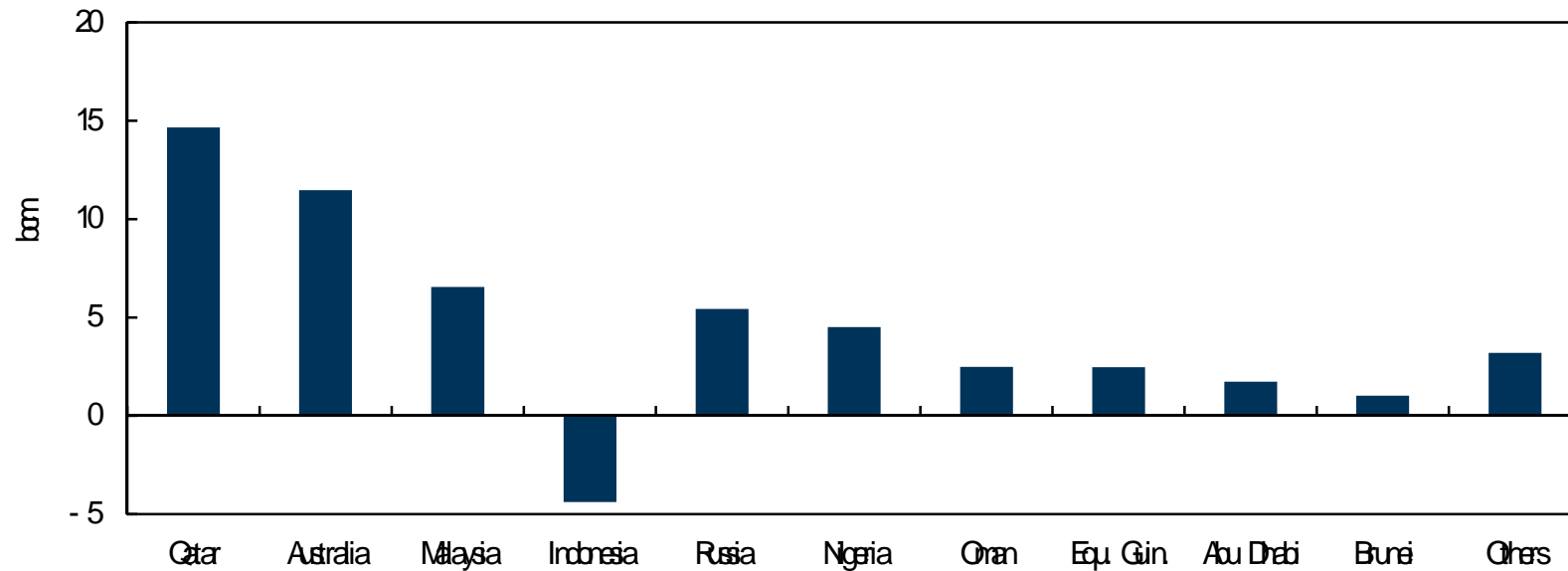
Spot and short-term LNG trade and share of total LNG trade



Source: GIIGNL, 2014

- Due to capital intensive nature of project, LNG trade had been historically based on bilateral long-term contract.
- Number of spot and short-term contracts are growing year by year, with many cargoes losing their way to US and redirected to spot market.

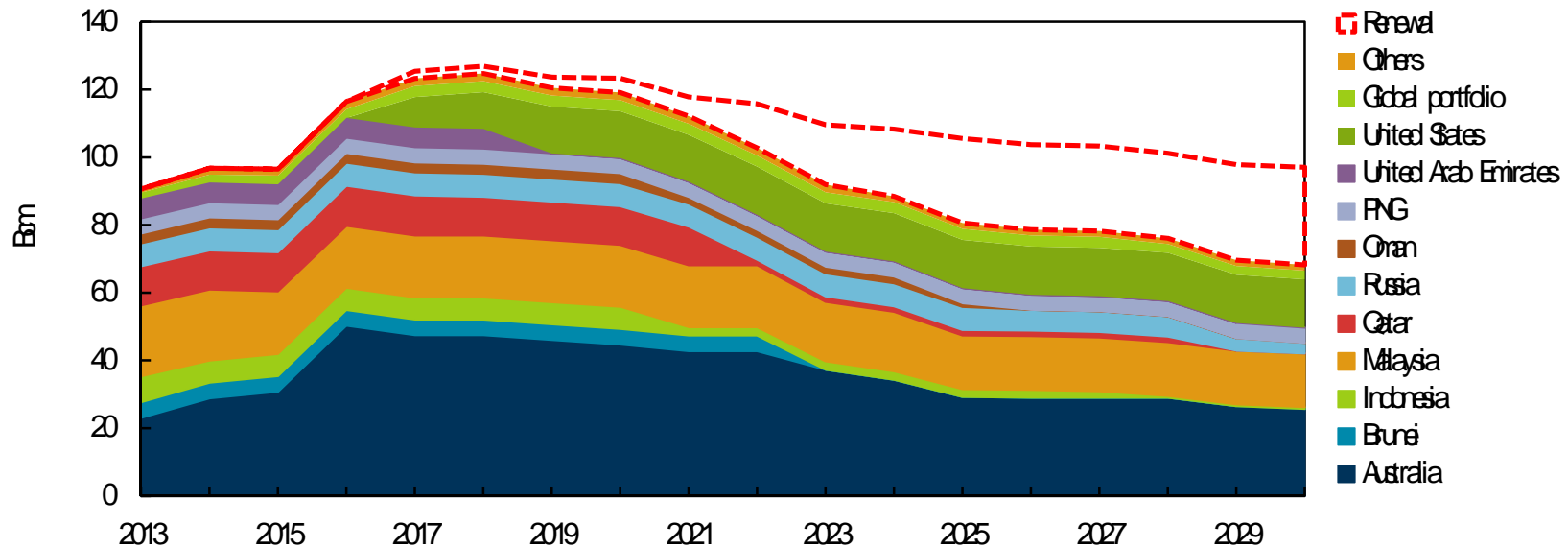
Japan LNG imports, 2010 vs 2013



- Increase in Japanese LNG imports by 50 bcm, supported by all exporters except Indonesia.
- Mainly contributed by the three big exporters; Qatar, Australia and Malaysia.

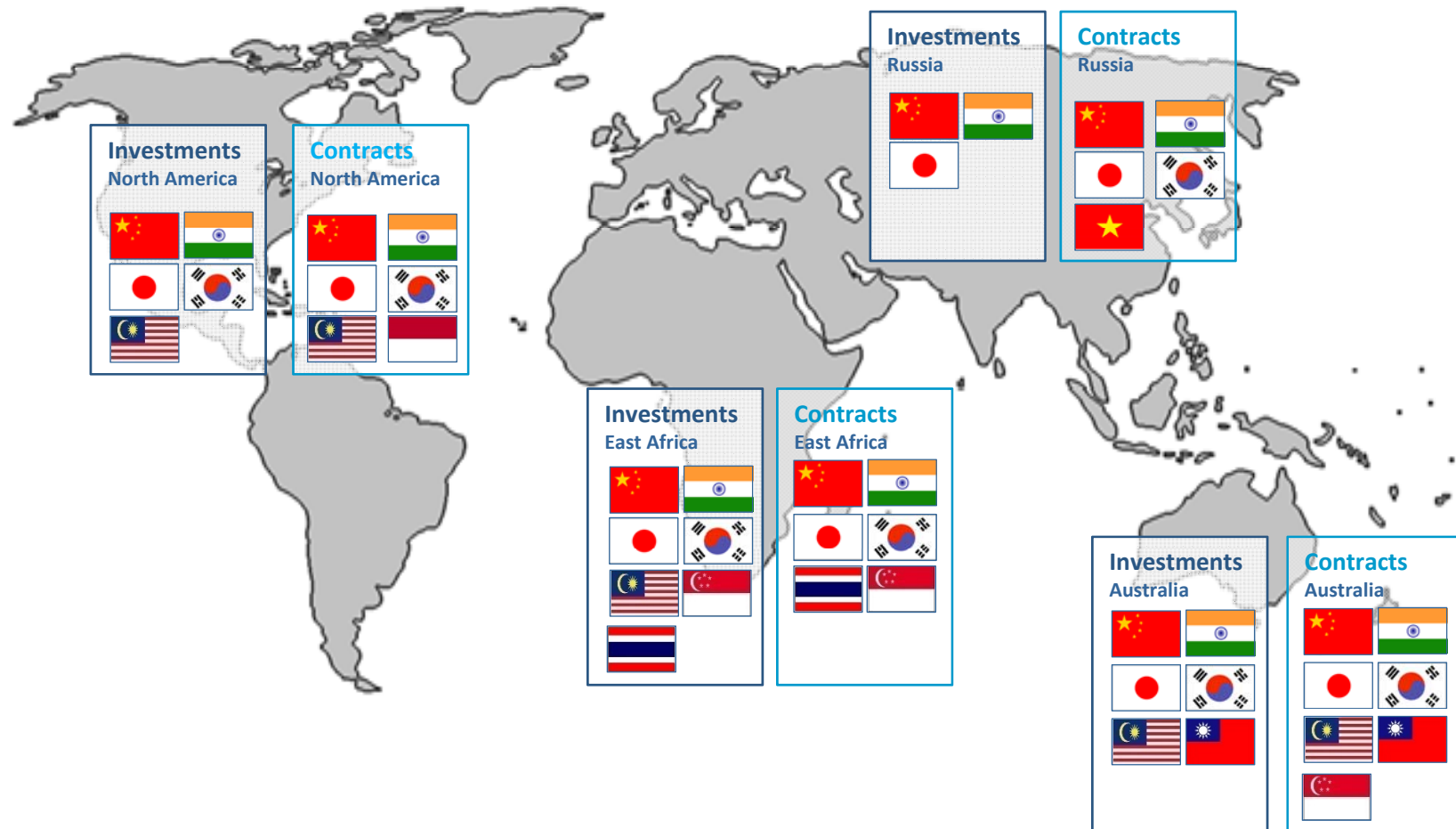
Less tight LNG spot market when new contracts start

Contracted gas supplies by Japan



- Several LNG contracts will expire over the coming years, and will be replaced by new LNG contracts.
- Japanese LNG contracts seem slightly over-contracted over the period of 2017-18.

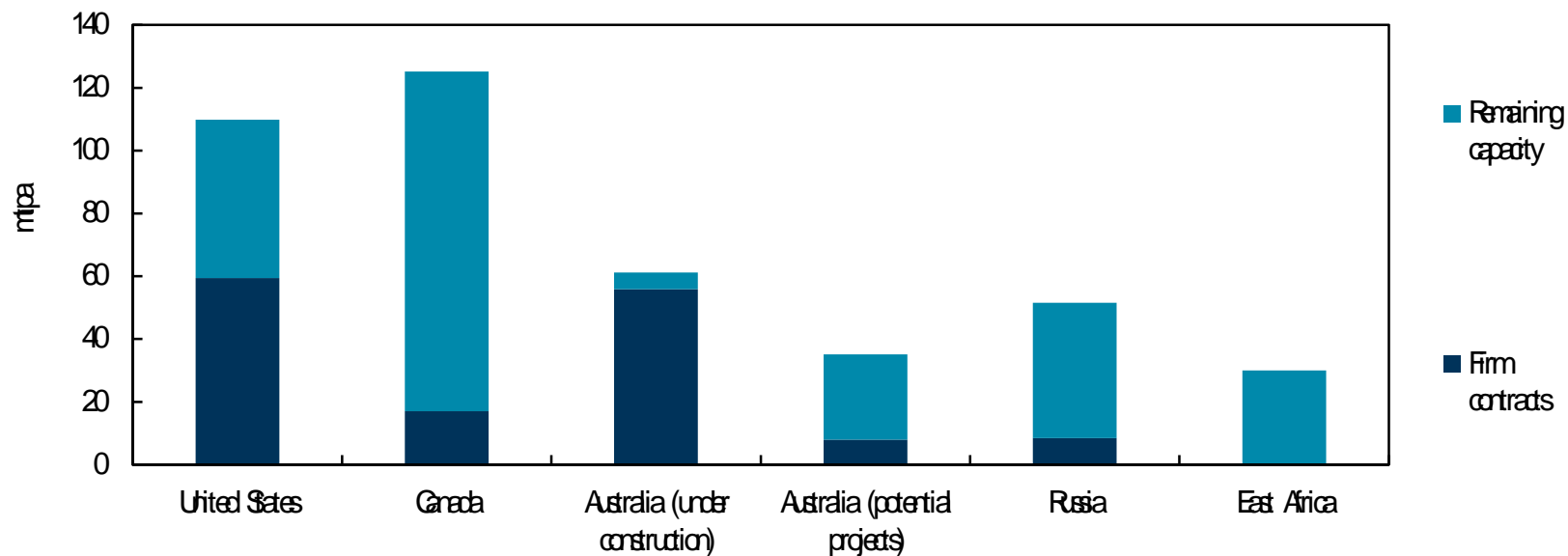
Investments and contracts from Asian countries



- Instead of just buying LNG, Asian companies are more advancing into overseas upstream projects for their investment nowadays.

How are potential new LNG projects contracted?

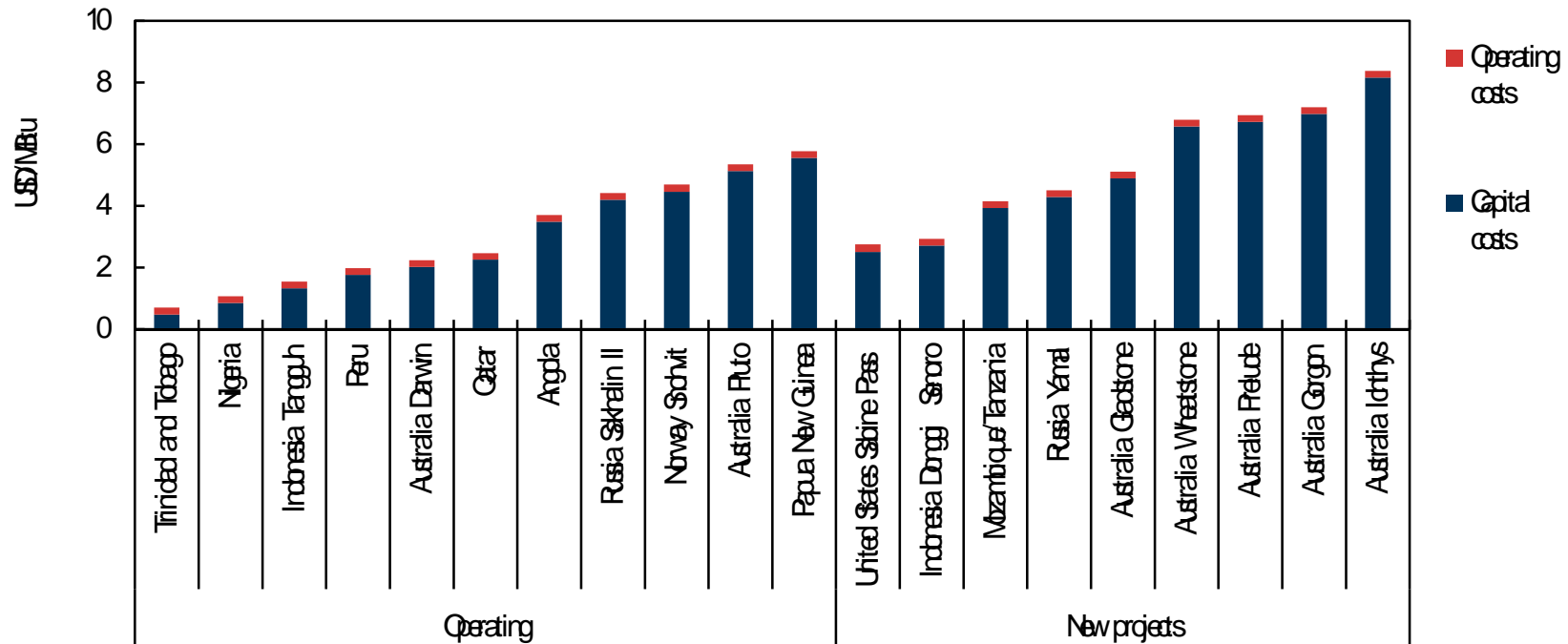
LNG contracted by region



- 90% of Australian LNG projects under construction has been contracted, with Japan and China represent the lion’s share.
- While oil-indexed prices remain dominant in the Australian LNG contracts, Asian buyers are now turning to US projects for possibly lower LNG prices through Henry Hub indexation.

LNG is capital and energy intensive

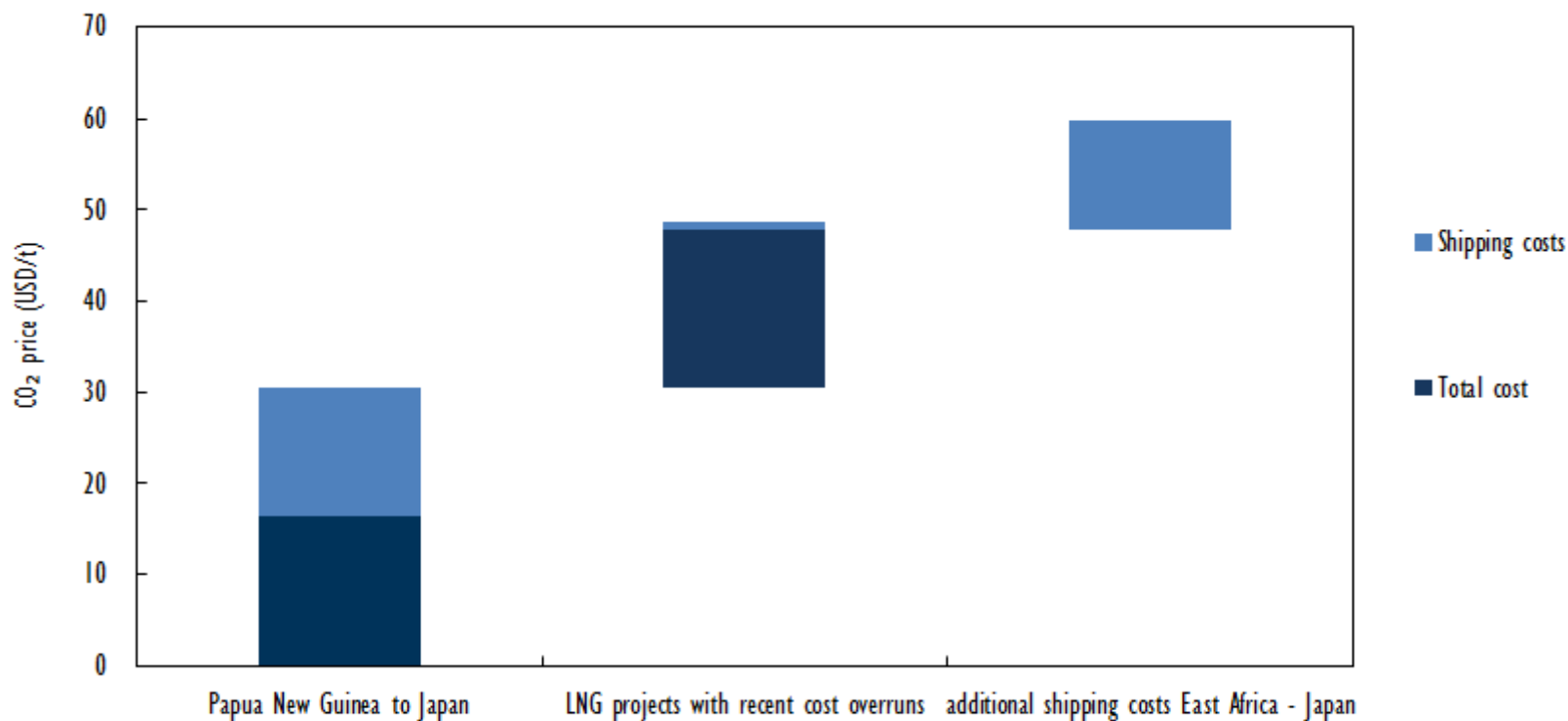
Capital costs of different LNG projects



- Global LNG development costs varies depending on several factors such as the location, design, labour cost and construction periods.
- The higher costs can be attributed to the greenfield nature of the projects and the environmental and regulatory difficulties.

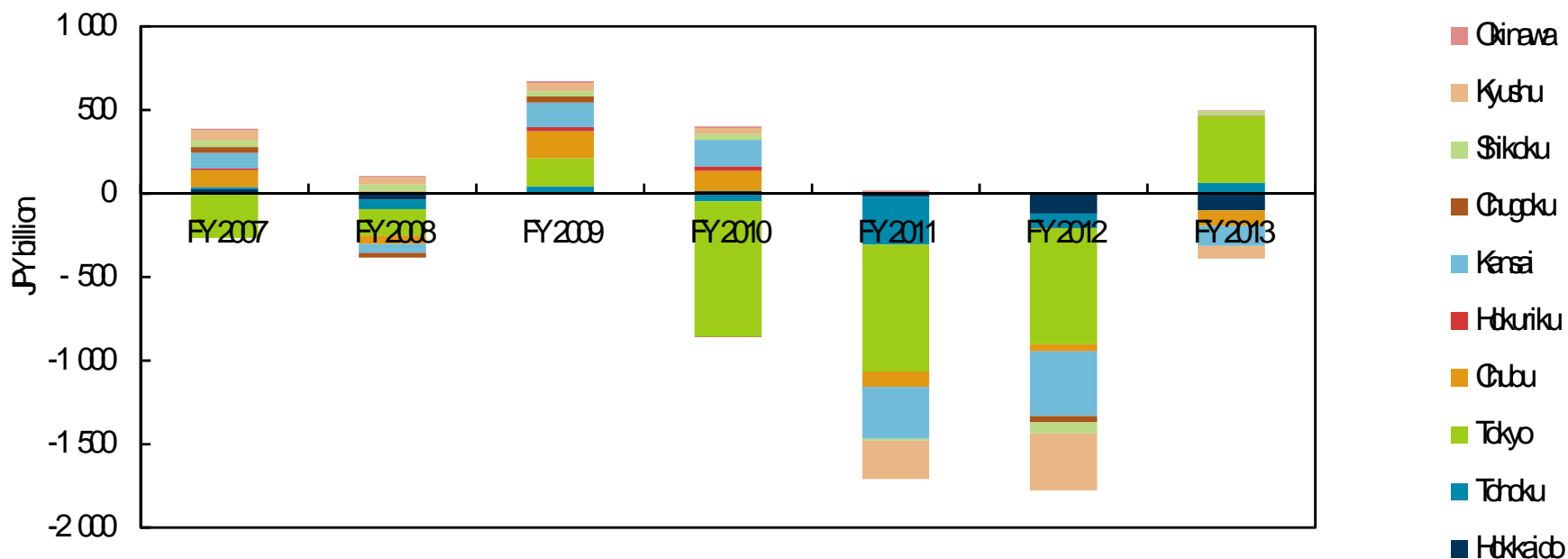
Project costs have a major impact of the attractiveness of LNG as a clean energy option

Capital costs of different LNG projects



Companies cannot always pass through the costs to the end users

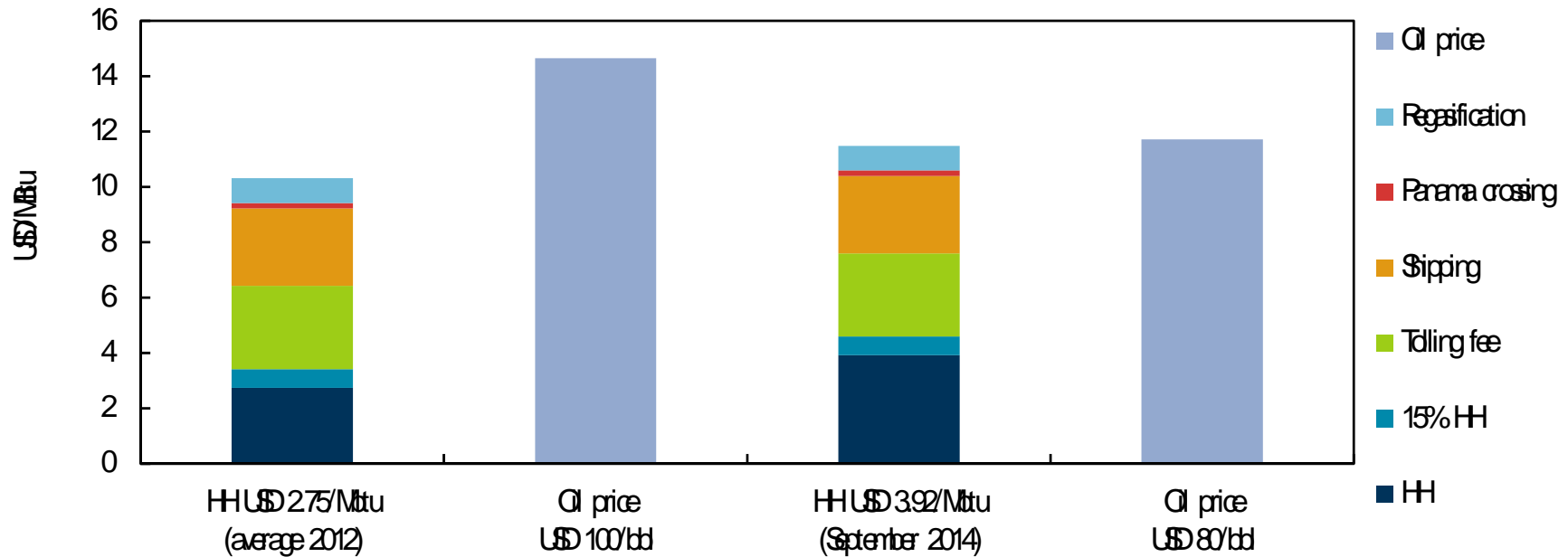
Profits and losses of Japanese power companies



- High import prices create challenges as the price is quite often higher than prevailing domestic gas prices.
- Japanese power companies have been incurring losses since 2010.

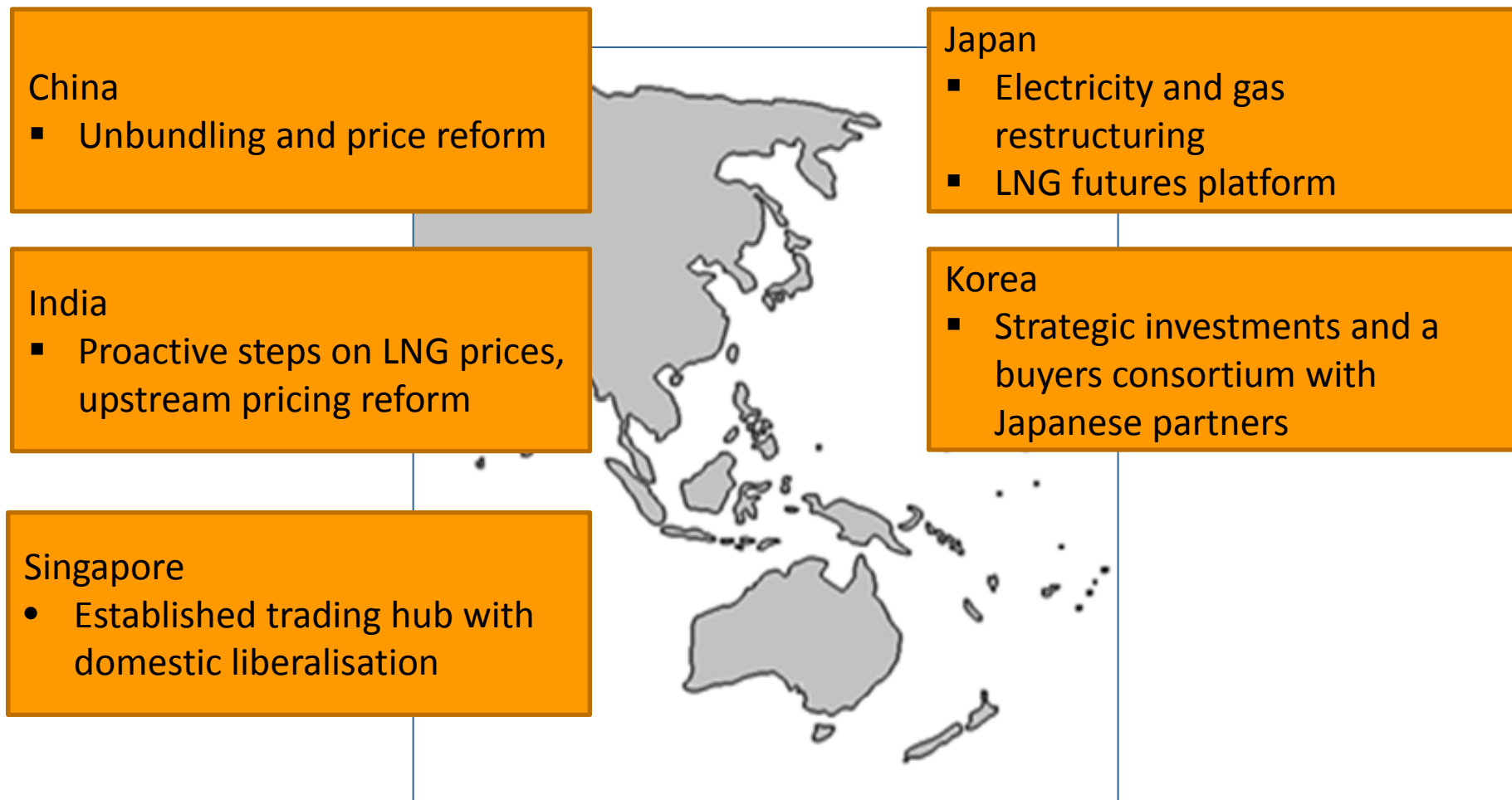
At current oil price, US LNG is still an interesting diversification option

US LNG from the Gulf to Japan, compared to oil prices



- US LNG is at current price levels just competitive after oil price drop.
- The competitiveness gap widened after an increase from the extremely low HH price of 2012 and recent drop in oil prices.

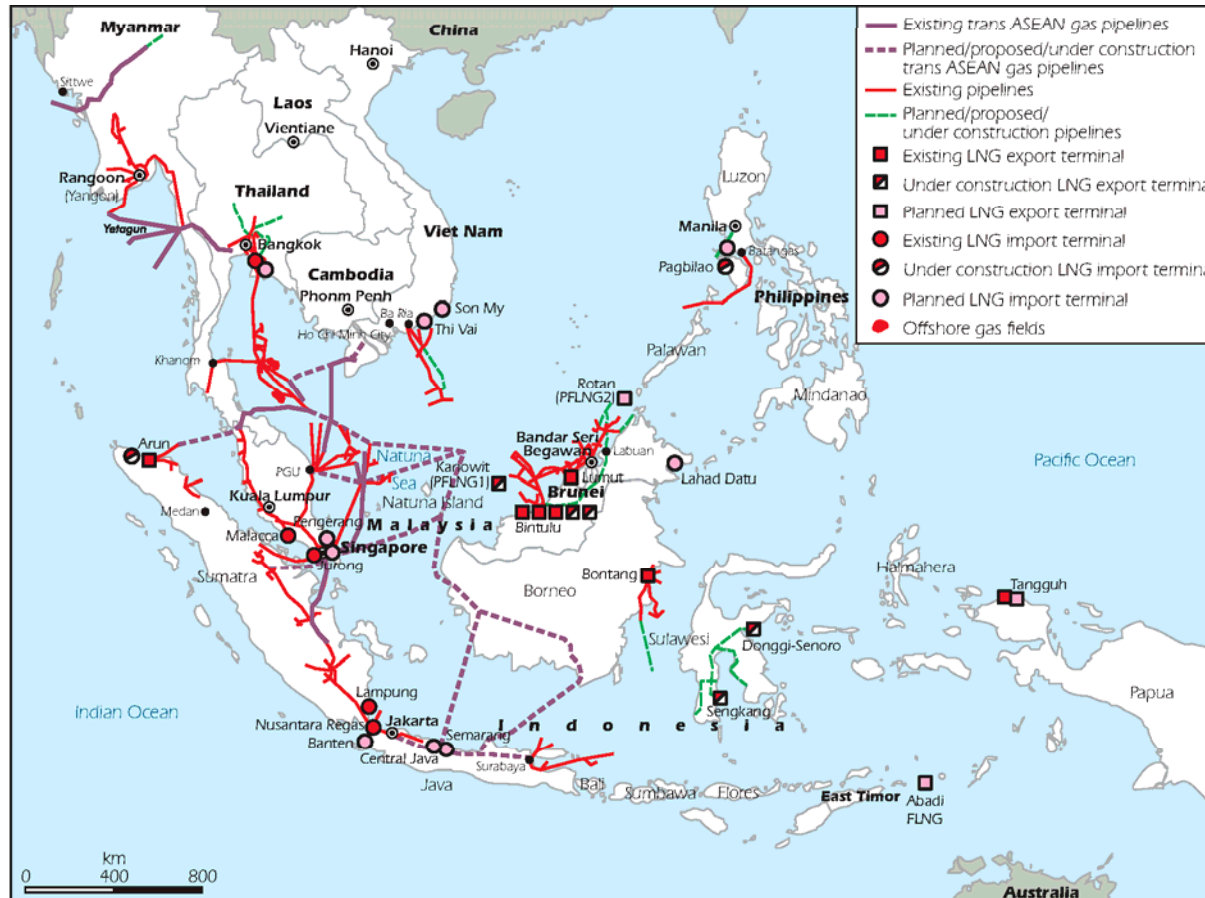
Each Asian countries are looking for more competitive market in itself



- Many Asian countries are currently tackling its own market reforms to enhance market efficiency as well as market competition.

Trading hub – Asian-tailored solution?

TAGP and LNG terminals in Southeast Asia



This map is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

- Southeast Asian countries are already interlinked by pipeline and plan to increase these linkages through Trans ASEAN Gas Pipeline (TAGP) and LNG.



Thank you!