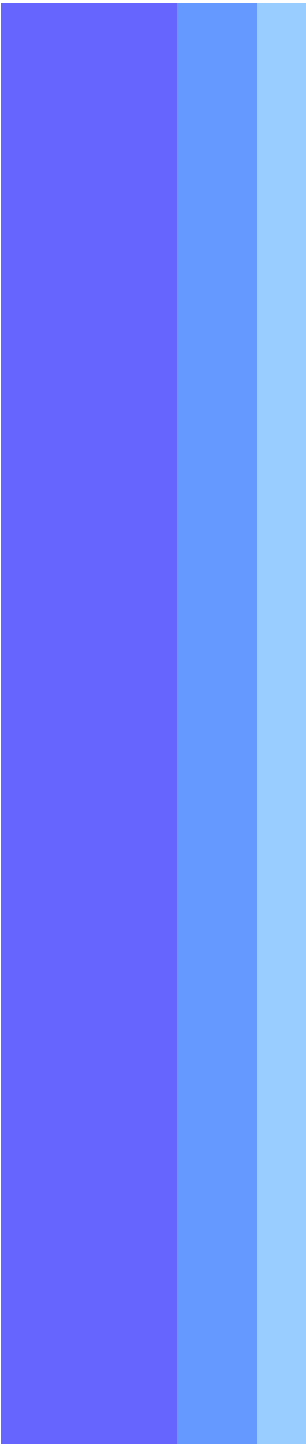




LNG Carriers Market

Shigemi KURAHARA
Japan Marine United Corporation

JECKU Top Executive Meeting
Okinawa, Japan | 14 November 2013



1. Introduction

World Economy:

- Showing a recovery trend

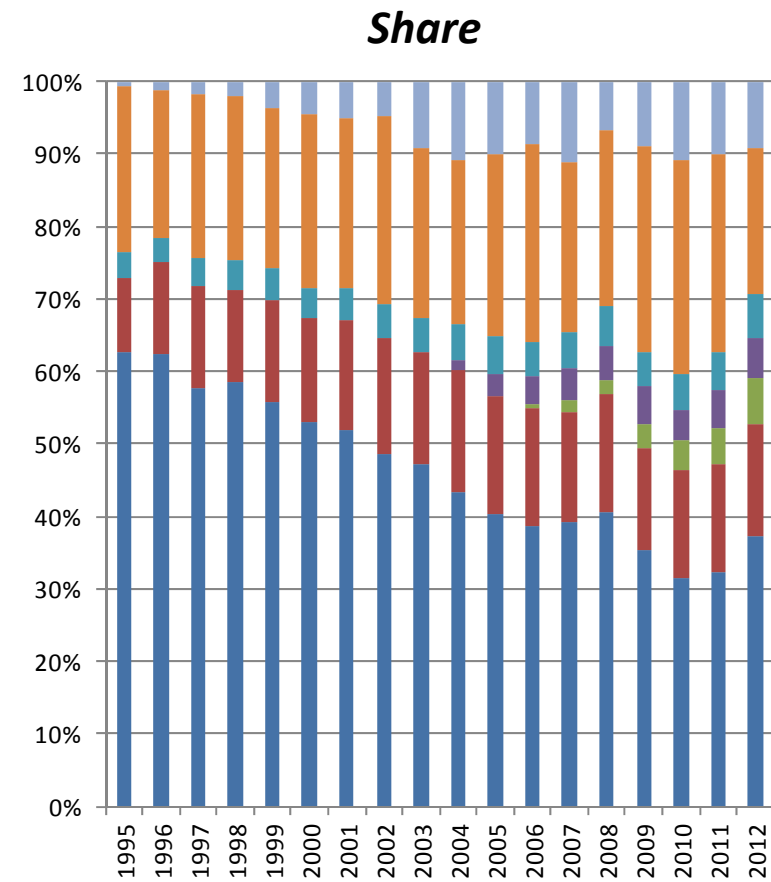
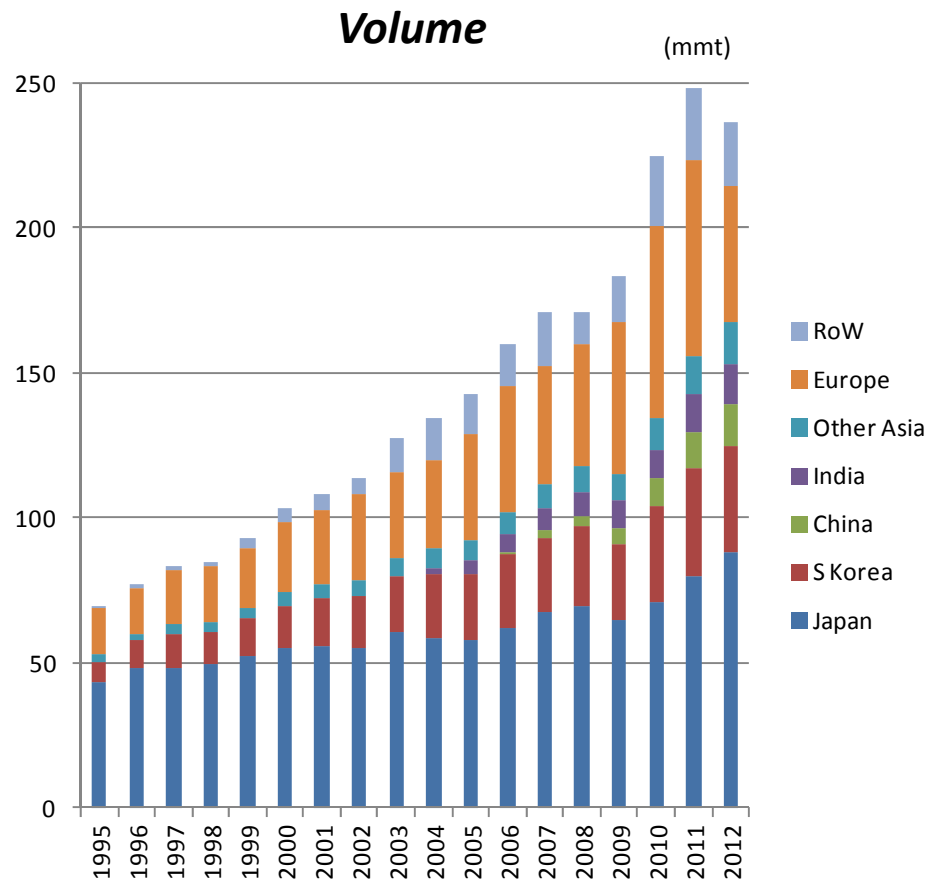
Given the current development of economy and energy

Seaborne Trade:

- Promising future expected in gas transport

- Japan's nuclear reactor shutdown
- US turns to net gas exporter

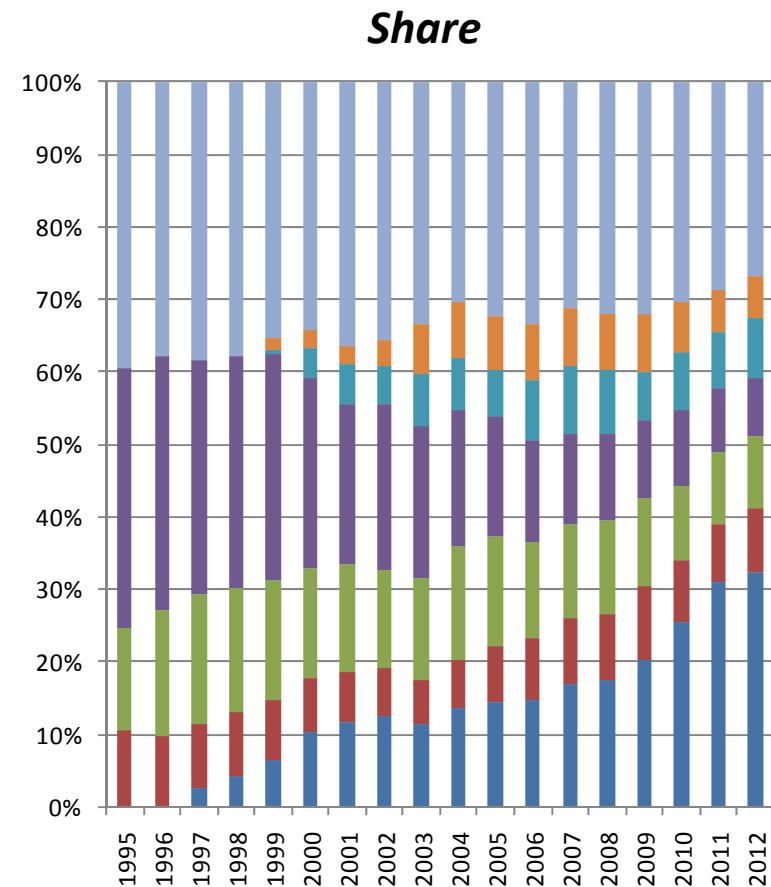
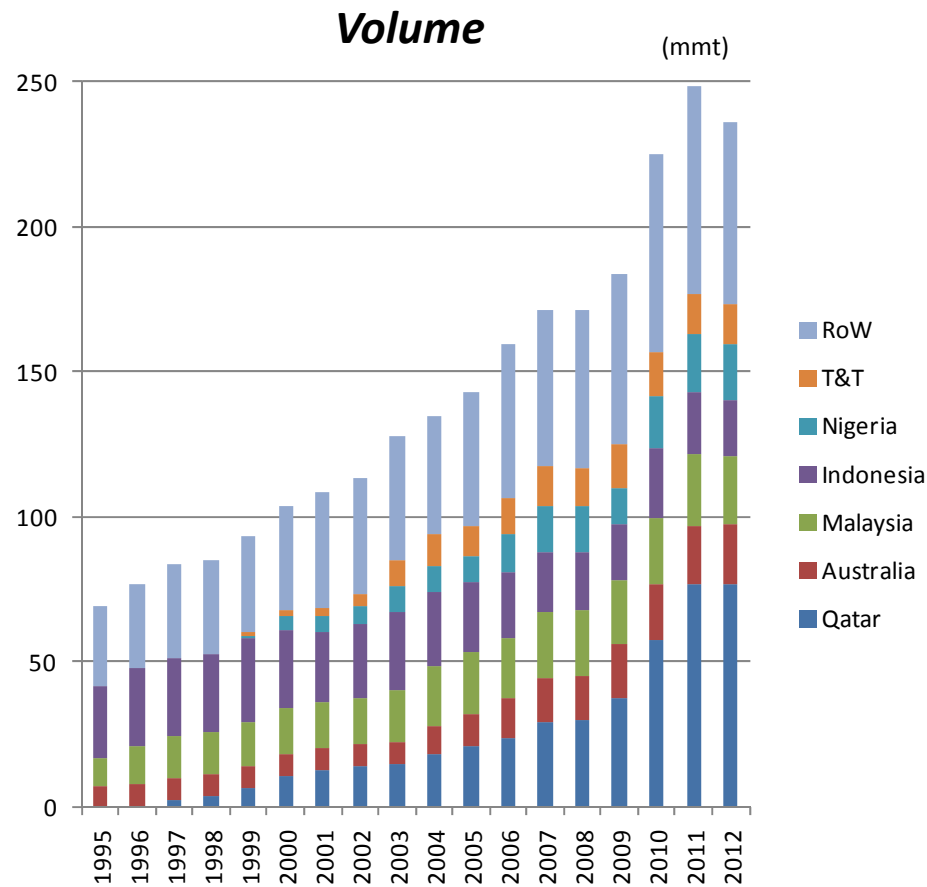
2. LNG Imports



Source: BP and GIIGNL

- ✓ Japanese imports are increasing but its share is on decreasing trend.
- ✓ Chinese and Indian imports have surged since around 2005.

3. LNG Exports



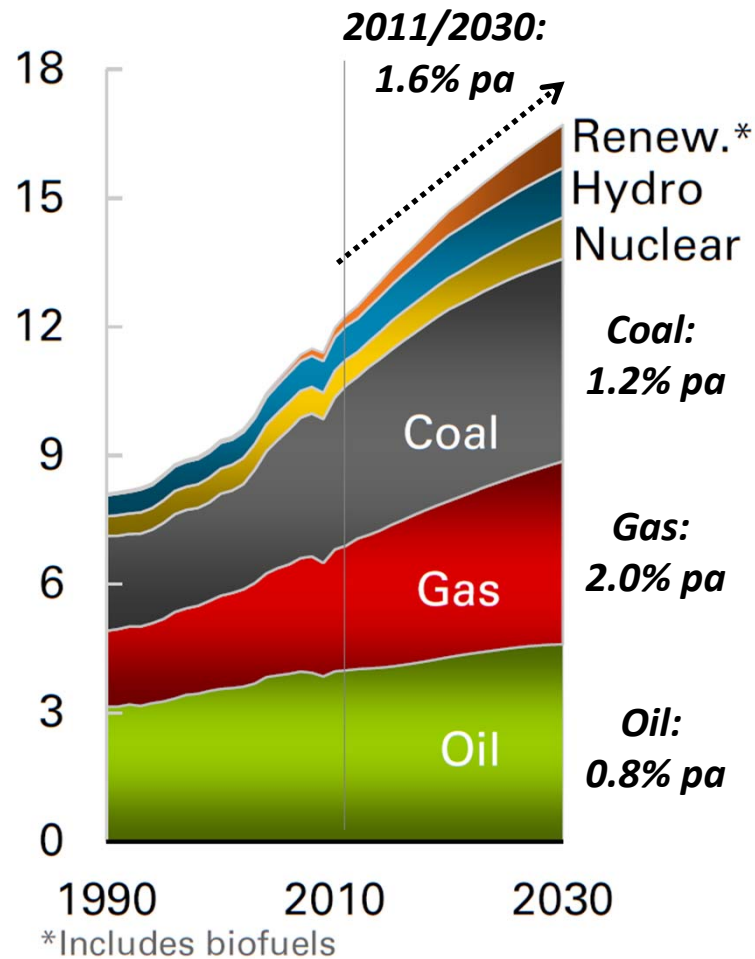
Source: BP and GIIGNL

- ✓ Qatari both exports and share have surged.
- ✓ Indonesian exports shrunk.

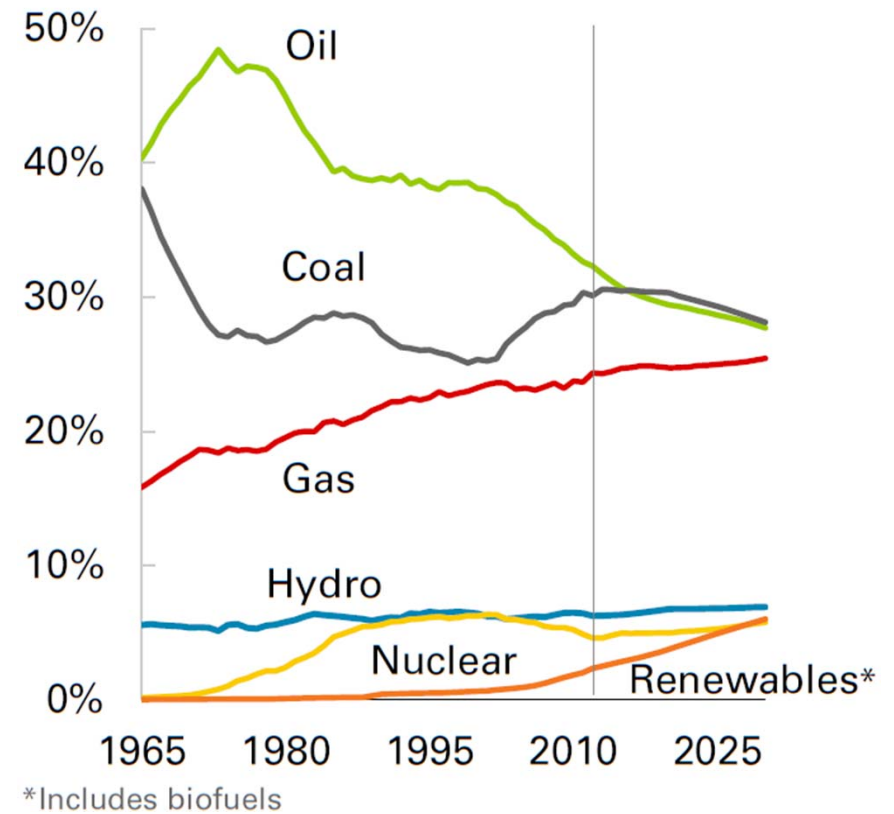
4. Primary Energy Consumption

By fuel

Billion toe

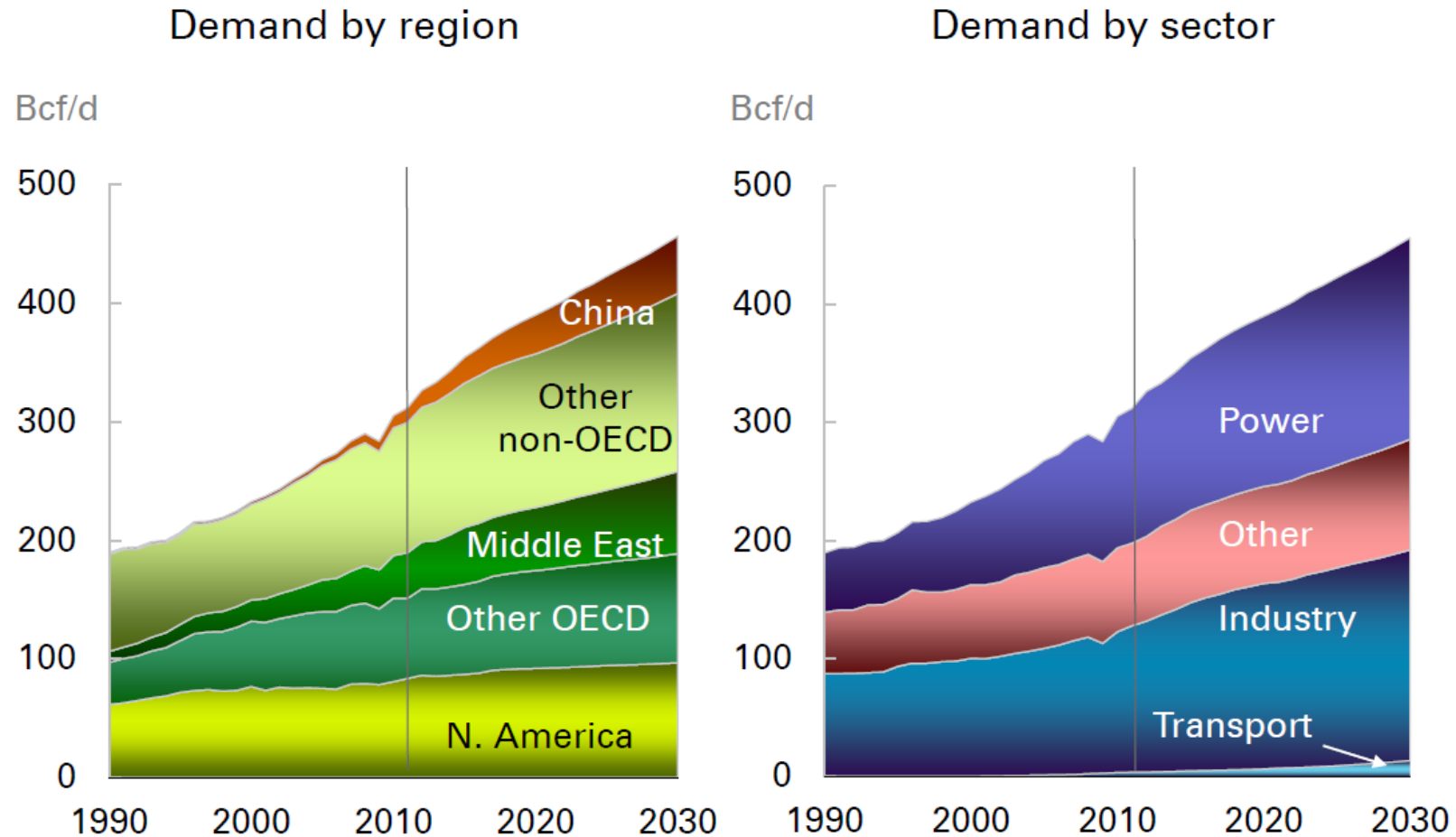


Shares of world primary energy



Source: BP Energy Outlook 2030

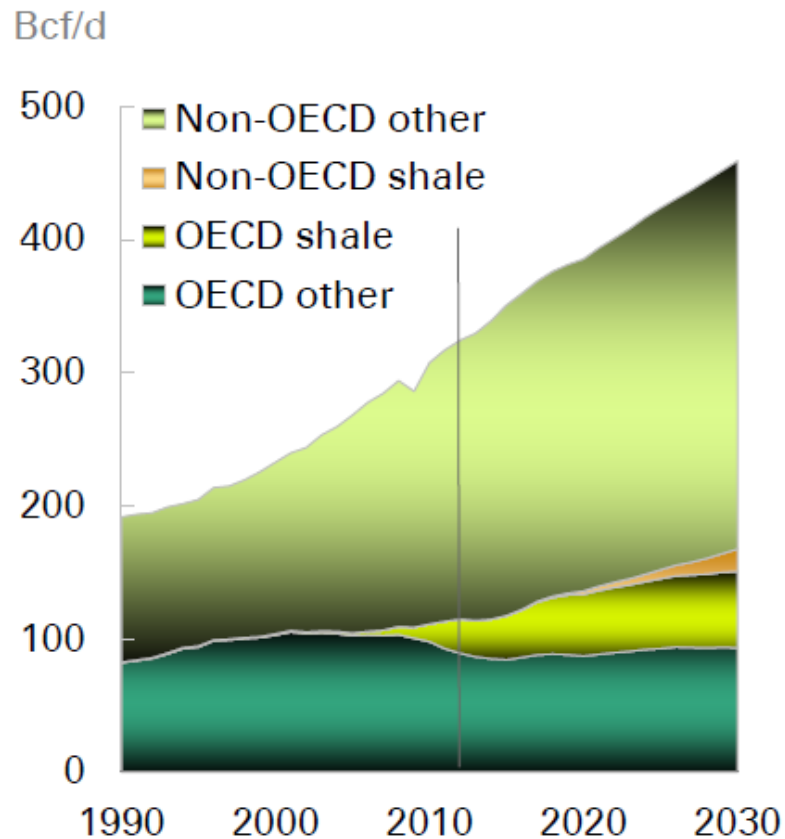
5. Gas Demand by region and sector



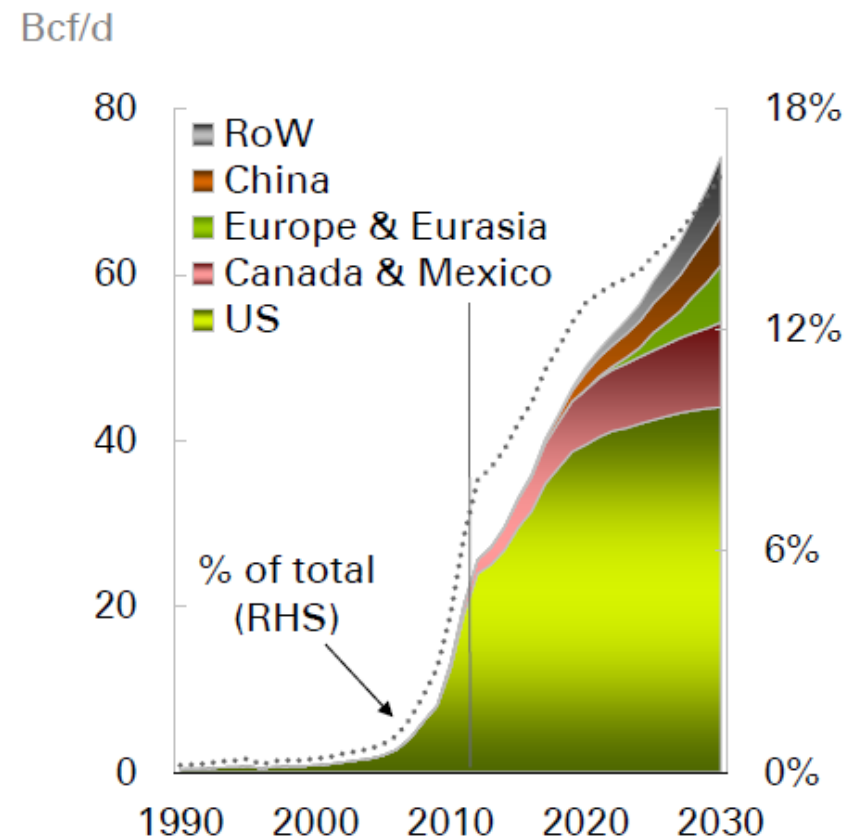
Source: BP Energy Outlook 2030

6. Gas and Shale Gas Production

Gas production by type and region

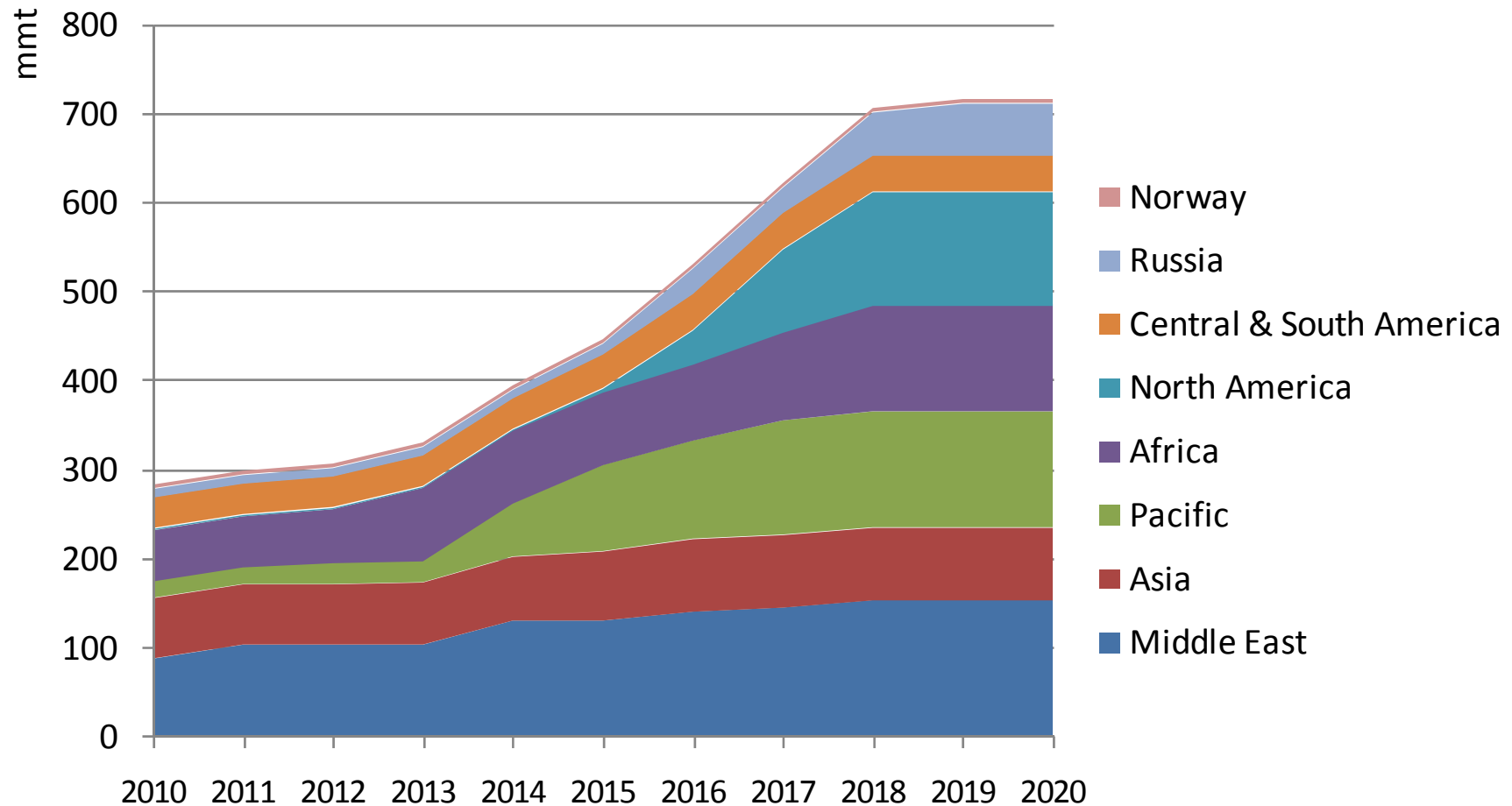


Shale gas production



Source: BP Energy Outlook 2030

7. LNG Projects (liquefaction capacity)

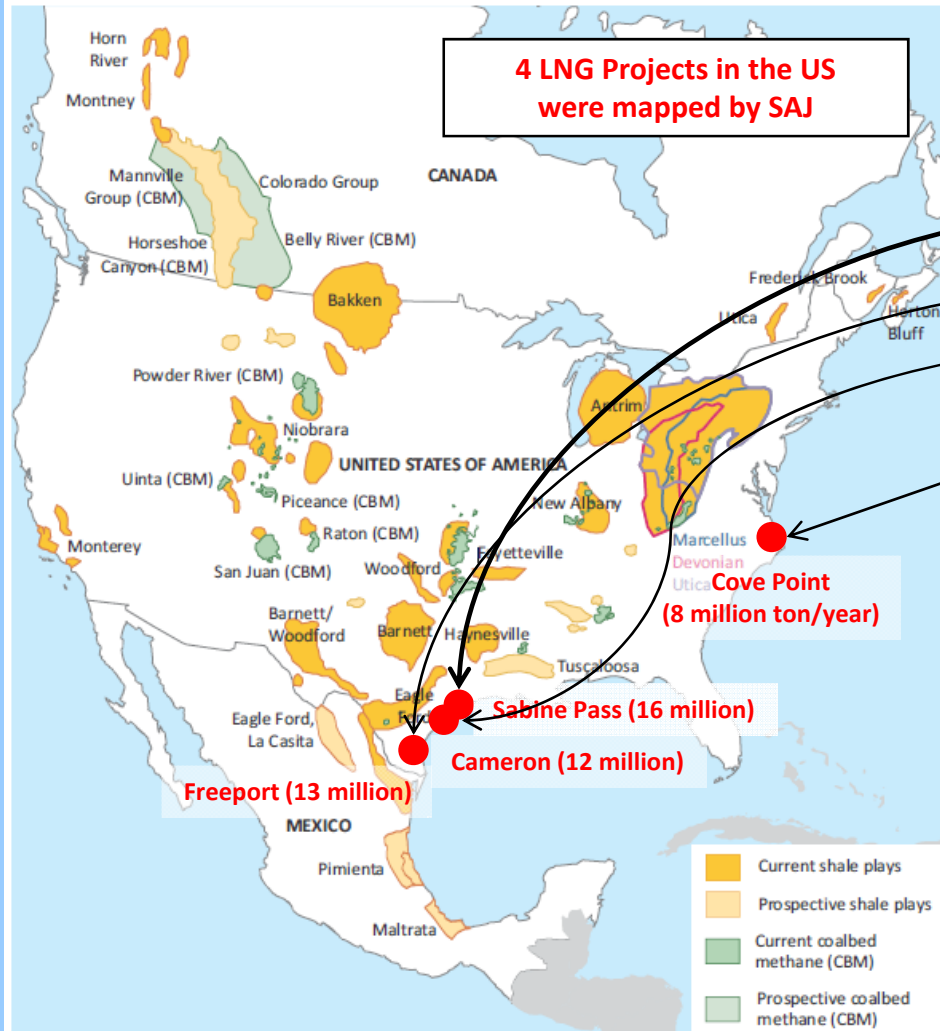


Total liquefaction capacity in 2020 would be 717 million tons IF all projects materialise.

Source: BREE, GIIGNL, Clarkson, JOGMEC and media report, compiled by SAJ (as of May 2013)

8. Shale Gas Projects in North America

Figure 3.1 ▷ Major unconventional natural gas resources in North America



Source: IEA "WEO2012 Golden Rules Report"

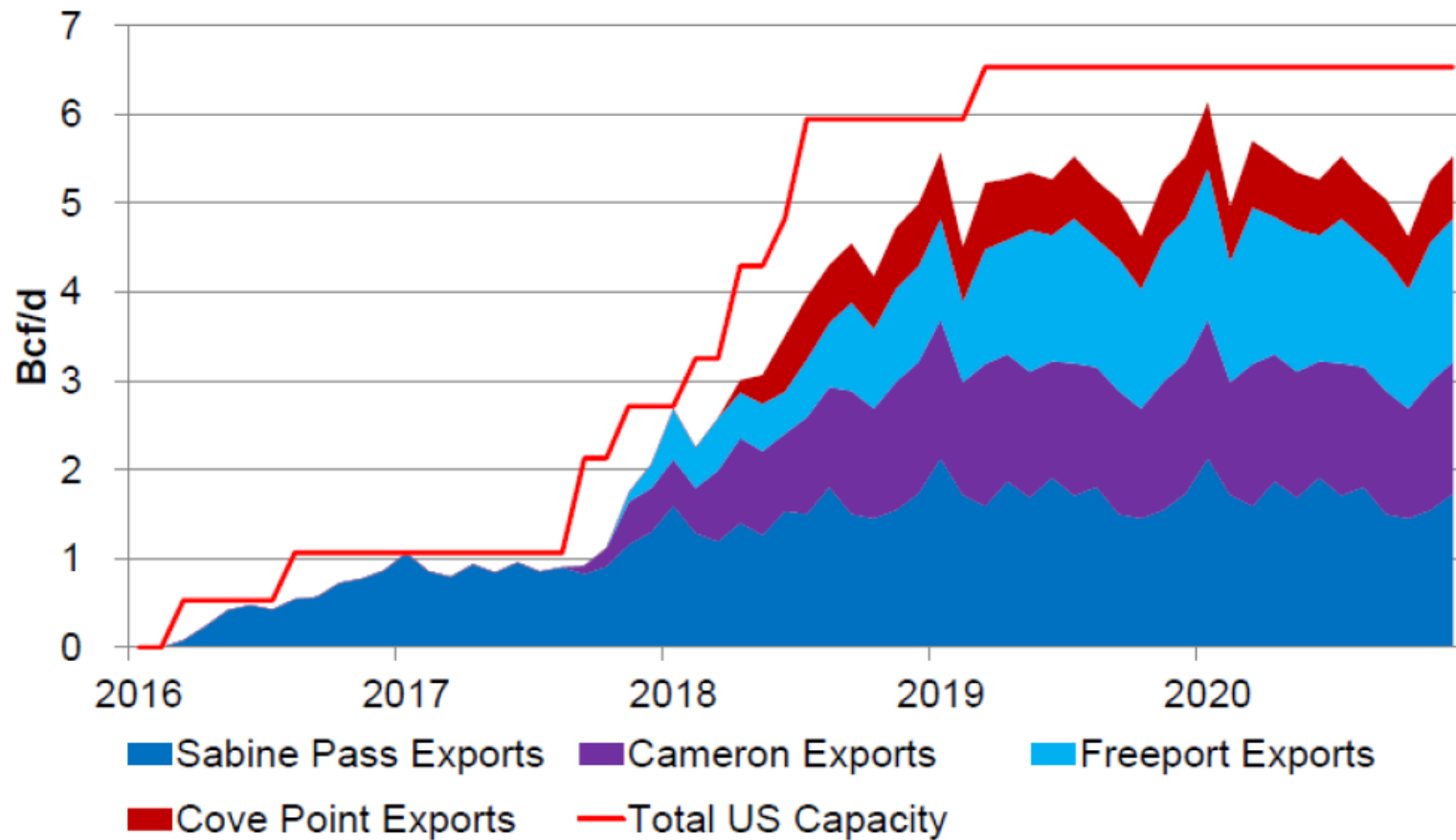
Possible Projects in North America

Country	Project	Start	Capacity (mmtpa)	Exports to FTA countries
USA	Sabine Pass	2016	16	Approved
	Freeport	2017	13	Approved
	Cameron	2017	12	Approved
	Cove Point	2017	8	Approved
	Golden Pass	?	15	?
	(Total projects in USA: 103.5)			
Canada	Kitimat	2016	5	
	LNG Canada	2018	12	
	(Total projects in Canada: 24)			

Source: BREE, GIIGNL and Nikkei, compiled by SAJ

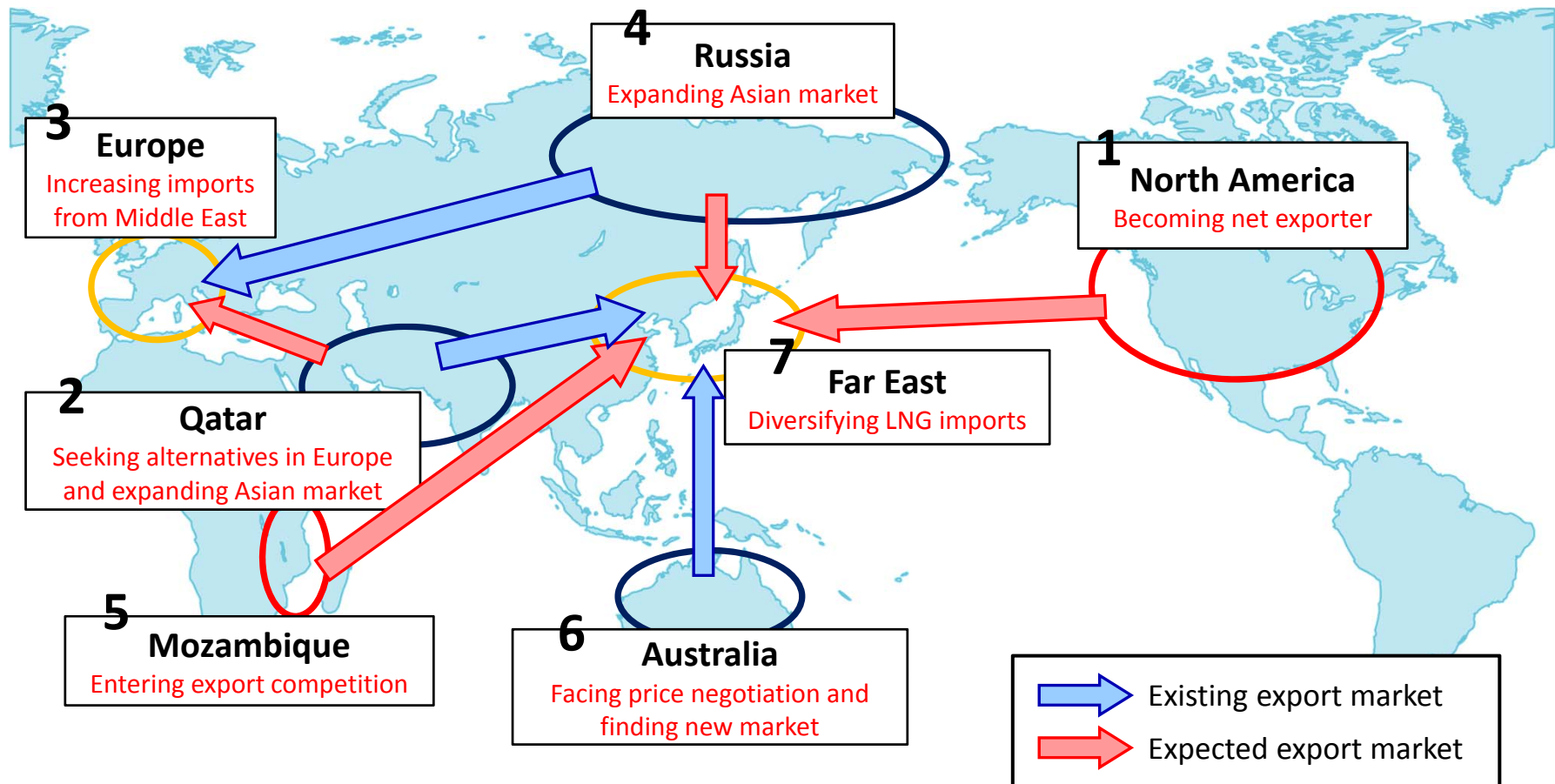
9. When Will the US Start to Export Shale Gas?

Possible Timing of Four LNG Export Projects



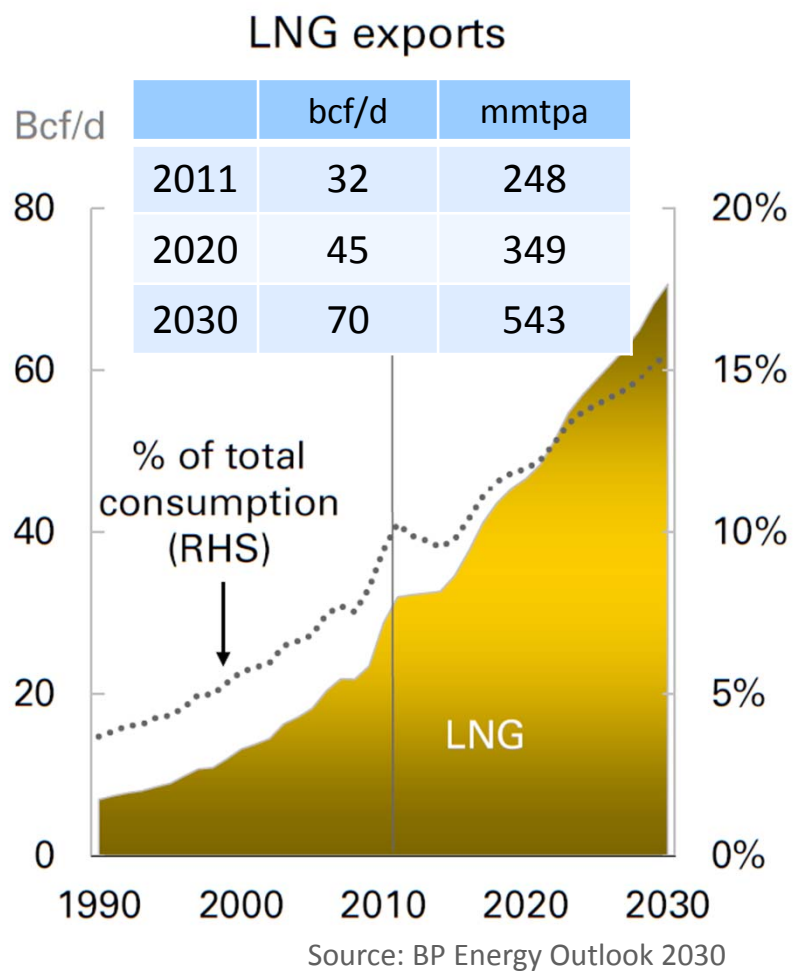
Source: The Energy Policy Research Foundation, Inc. (EPRINC)

10. Shale Gas Revolution Scenarios



Source: Agency for Natural Resources and Energy (Japan)

11. LNG Trade Outlook



Outlook of

Japanese Shipping Companies

	NYK	MOL	K-Line	(ref.) SAJ
2020	400	350 - 400	380	380

Source: Kaiji Press (30 July to 1 August 2013)

12. Outlook of LNG Carrier Requirement

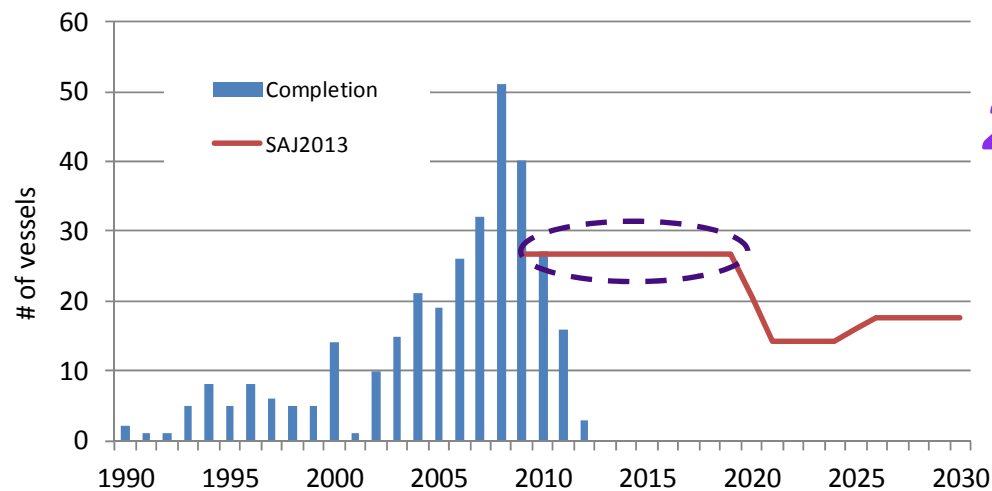
Outlook of Japanese Shipping Companies

(number of vessels)

	NYK	MOL	K-Line
Additional requirement in 2020	150	70 - 80	120 - 130
Per annum (6.5 years)	23	11 - 12	18 - 20

Source: Kaiji Press (30 July to 1 August 2013), vessels per annum were calculated by SAJ

SAJ2013 forecast



27 vessels per annum
during 2009 - 2020.

Thank you.