



Dynamic Challenges and Opportunities In The Global Oil and Gas Industries

**Presented at:
The 32nd JCCP International Symposium**

By

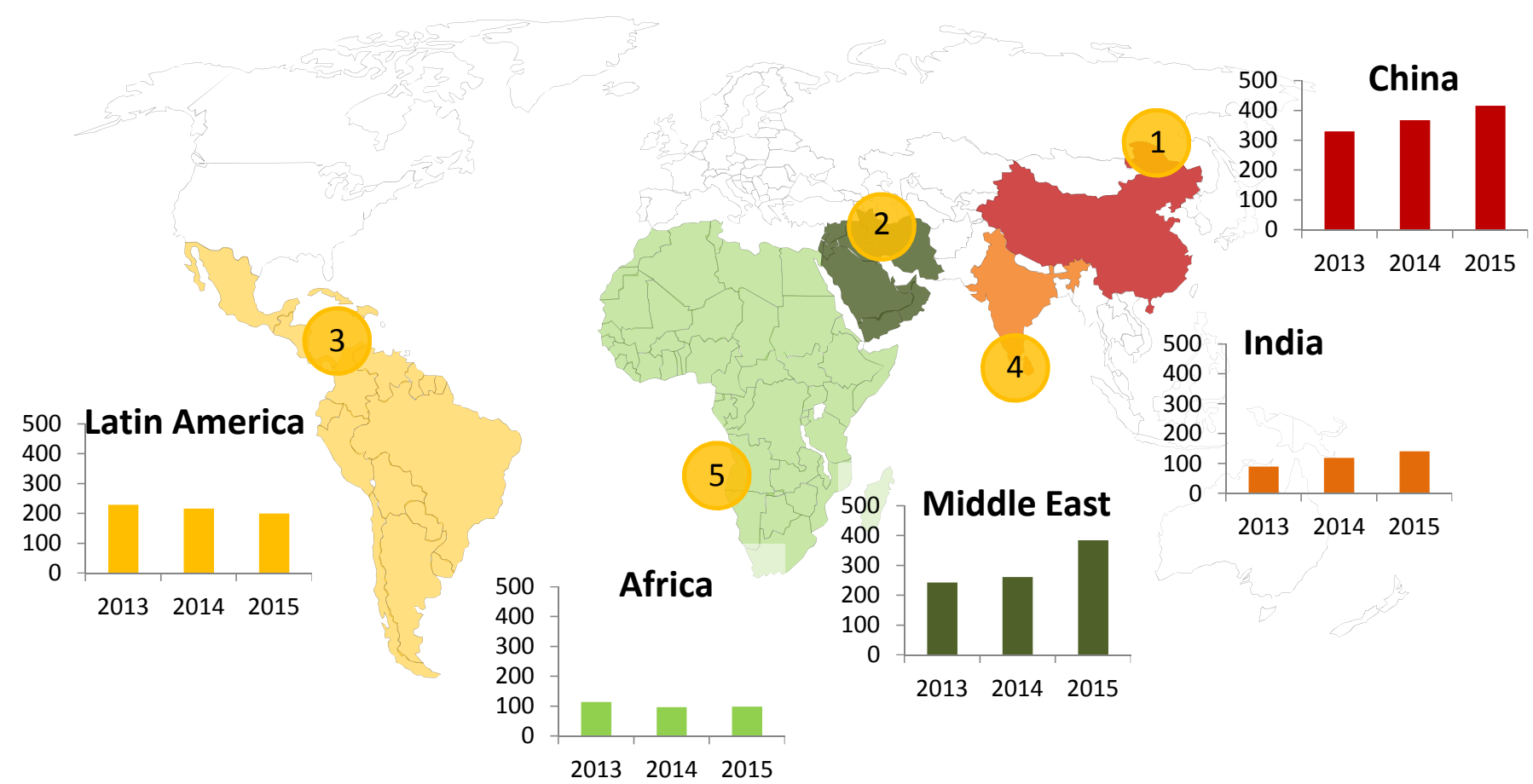
**Dr. Fereidun Fesharaki
Chairman**

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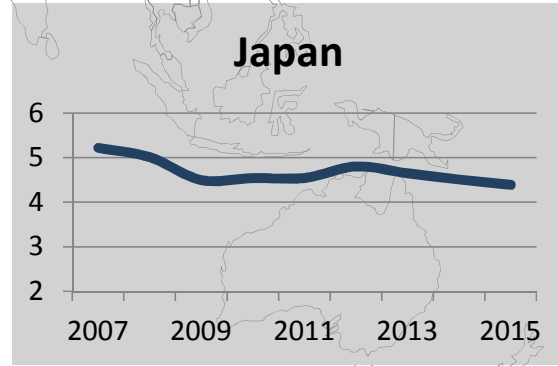
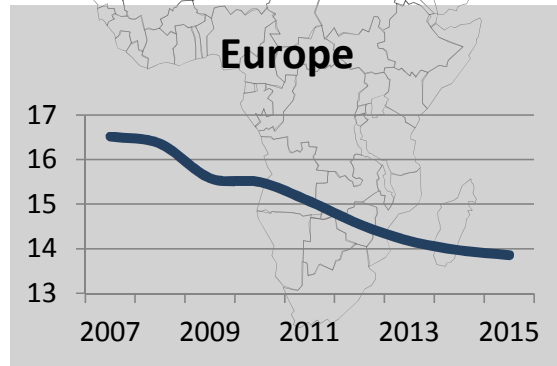
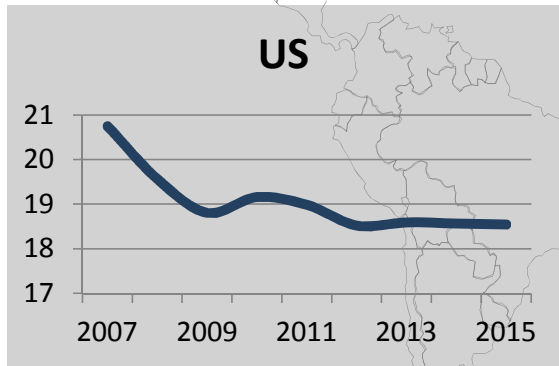
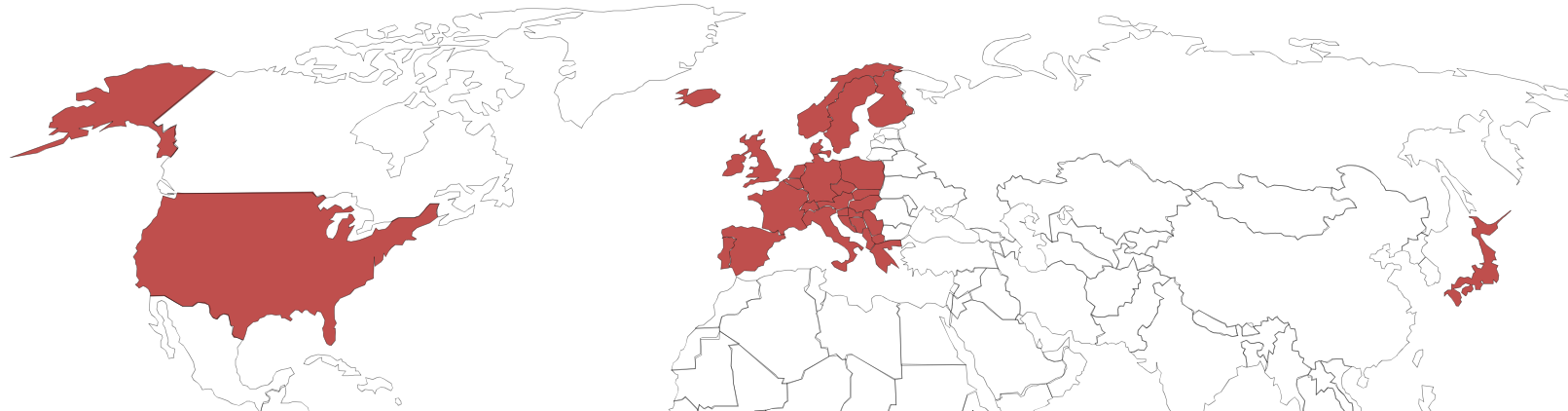
Five Key Oil Demand Growth Centers

(Year-on-year Oil Demand Growth, kb/d)

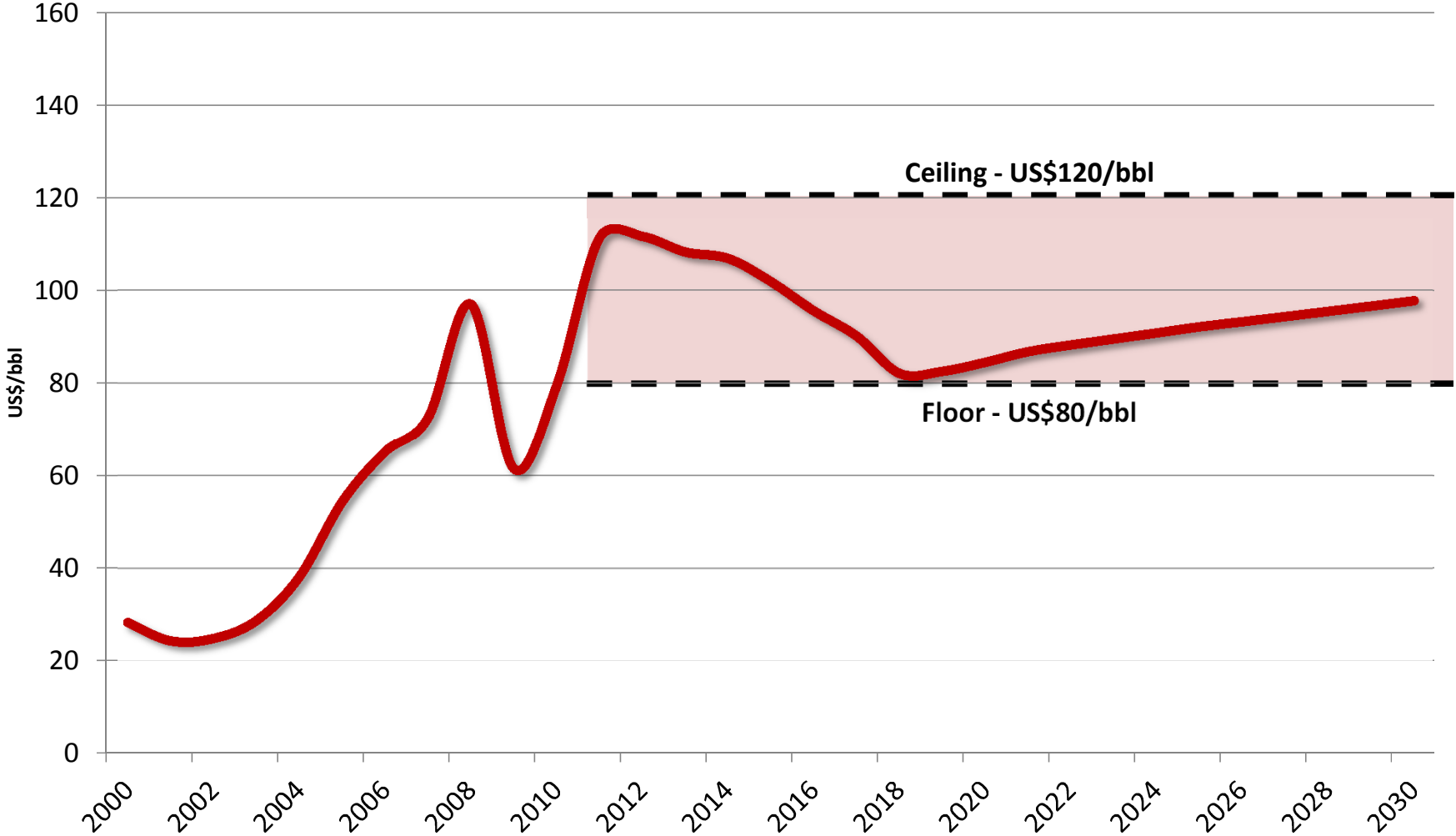


Three Centers of Oil Demand Loss

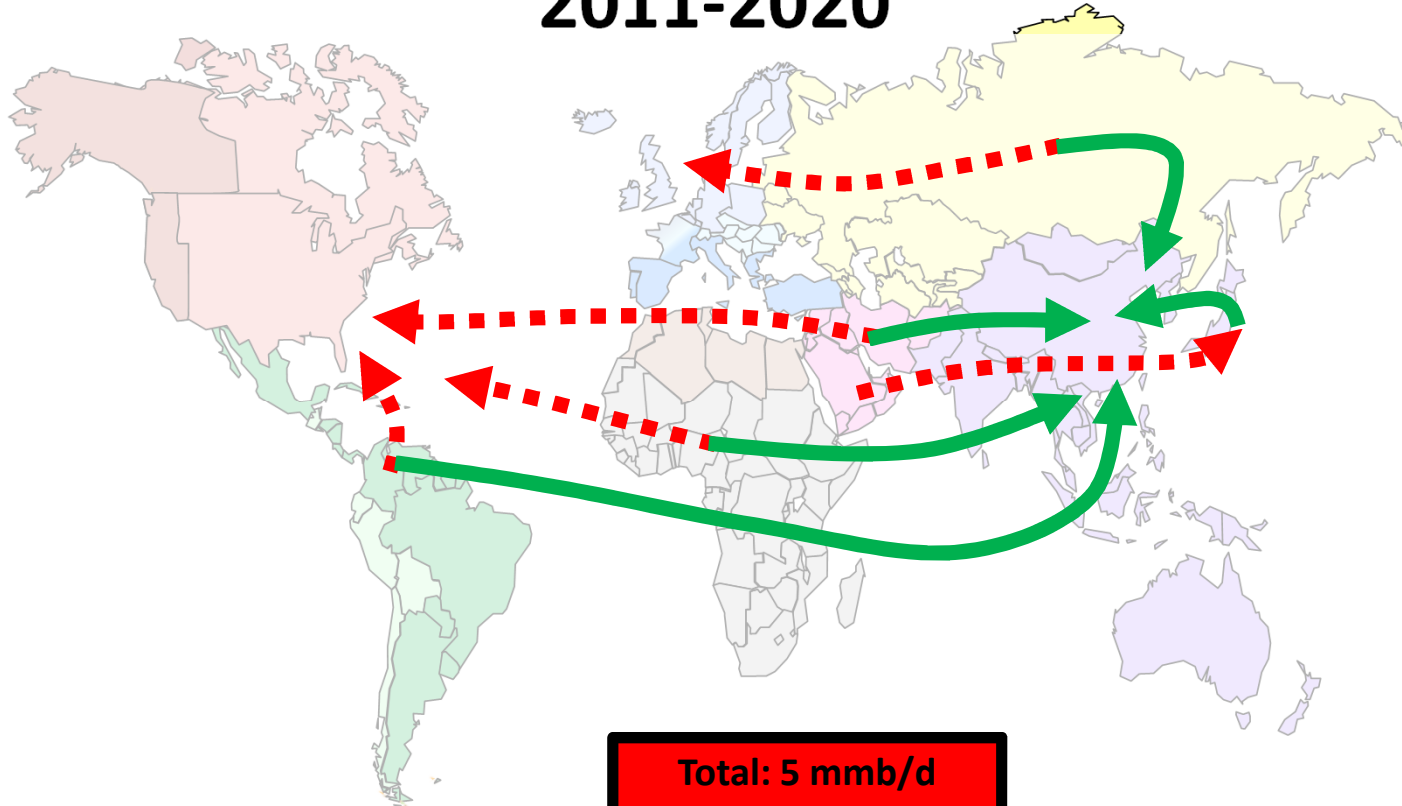
(Total Oil Demand, kb/d)



Long-Term Brent Oil Price Outlook



More Crude to be Diverted from West to East, 2011-2020

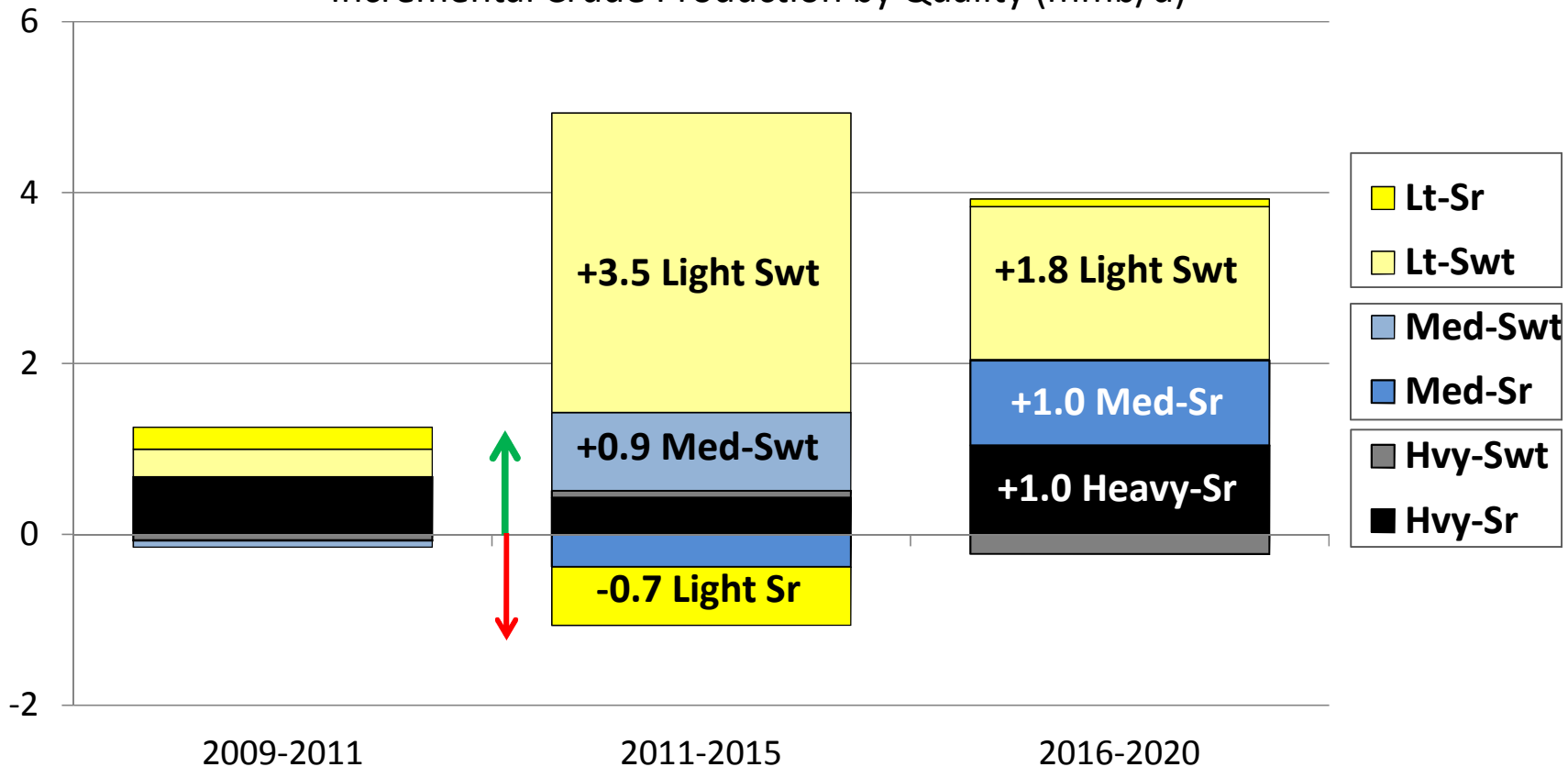


**Total: 5 mmb/d
diverted from West
to East**

—→ Increasing Trade
- - -→ Decreasing Trade

Crude Quality Lightens to 2015, Then Static to 2020

Incremental Crude Production by Quality (mmb/d)



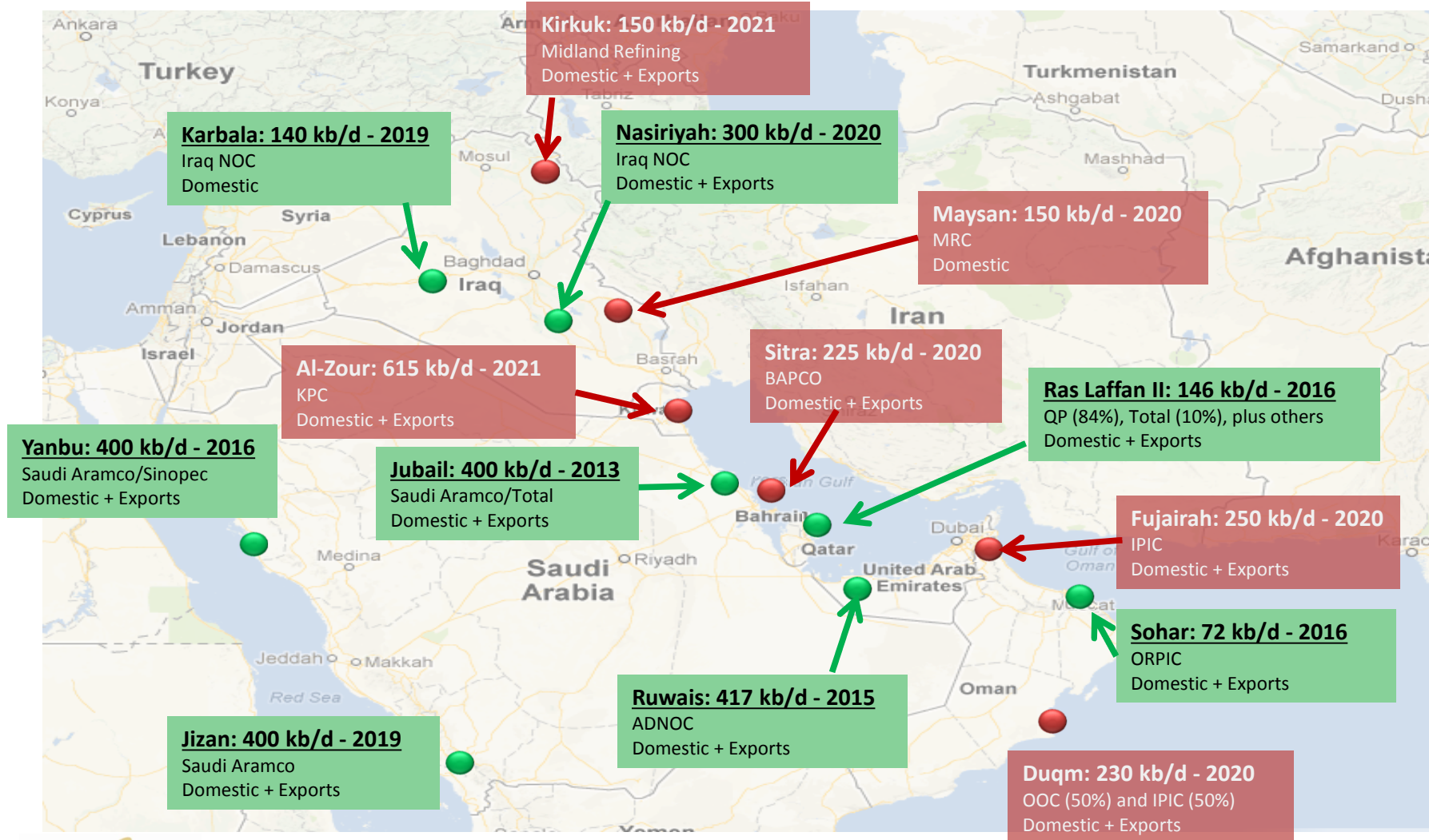
- +0.8 mmb/d heavy
- +0.6 mmb/d light

- +2.8 mmb/d light crude (net)
- +0.5 medium (LatAm)
- +0.5 heavy

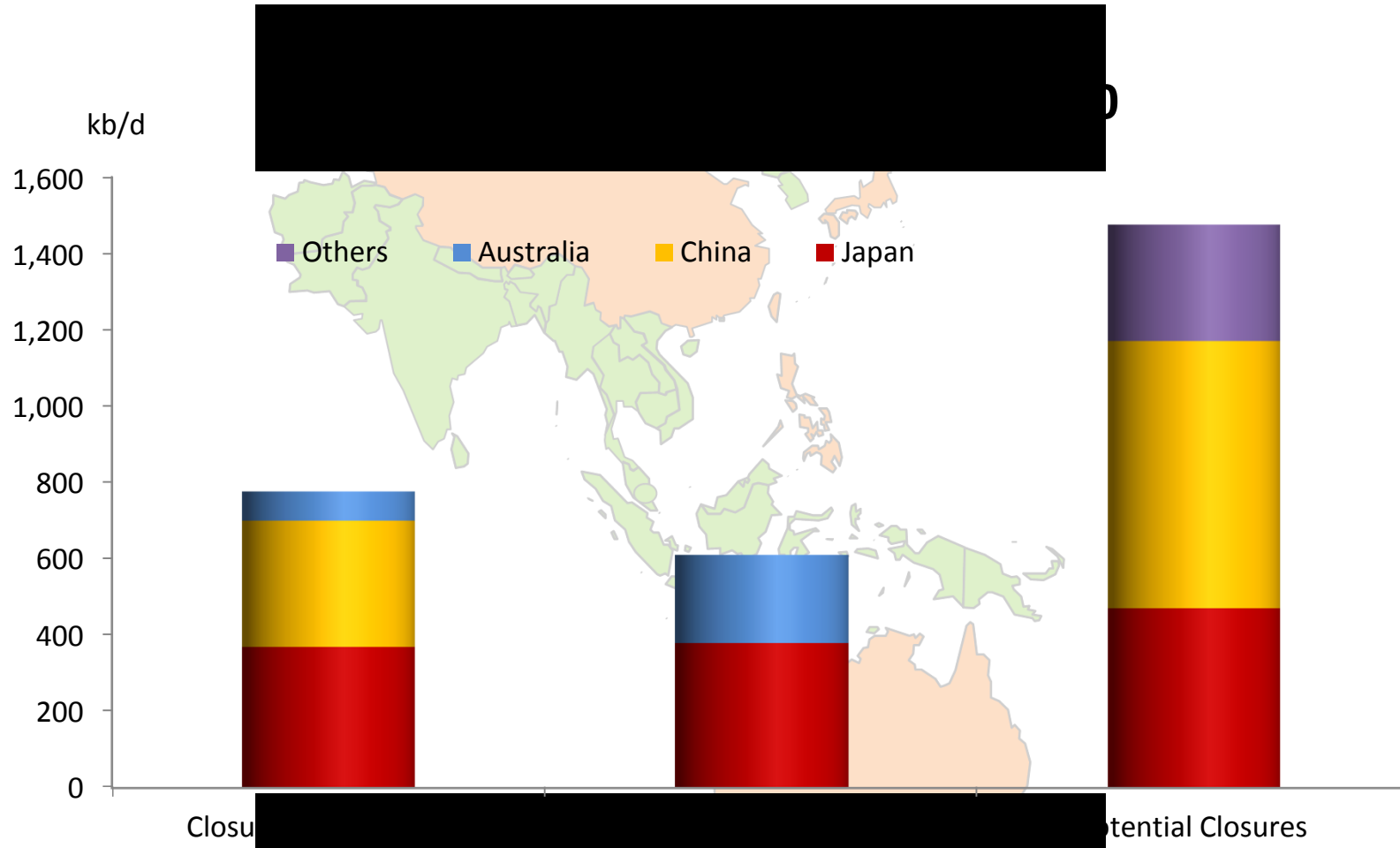
- +1.9 light
- +2 mmb/d med/heavy sour

Major Refining Projects in the Middle East

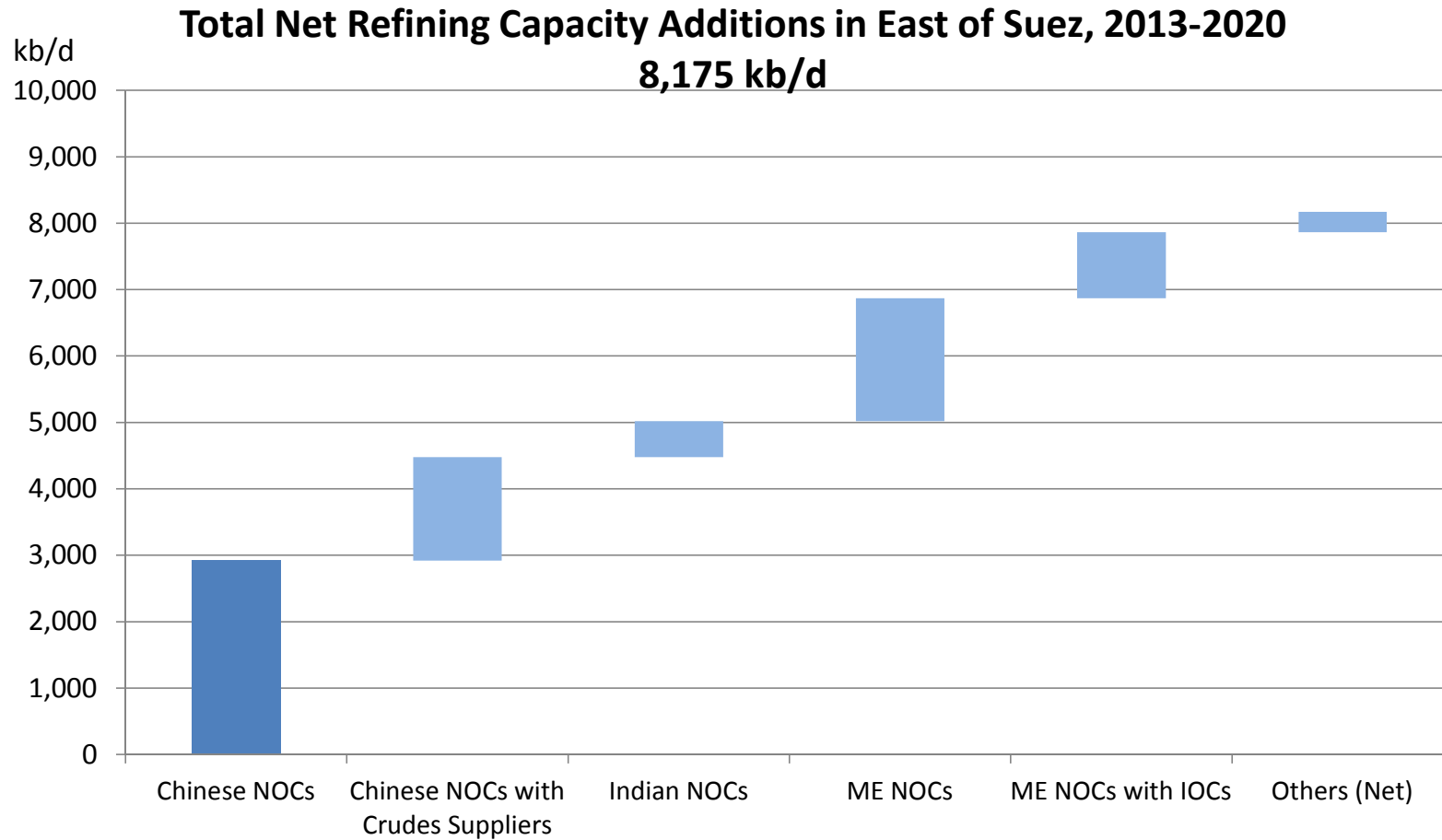
Key: **Firm/likely by 2020** **Not included in September 2013 product balances**



Japan Leads Refinery Closures in Asia

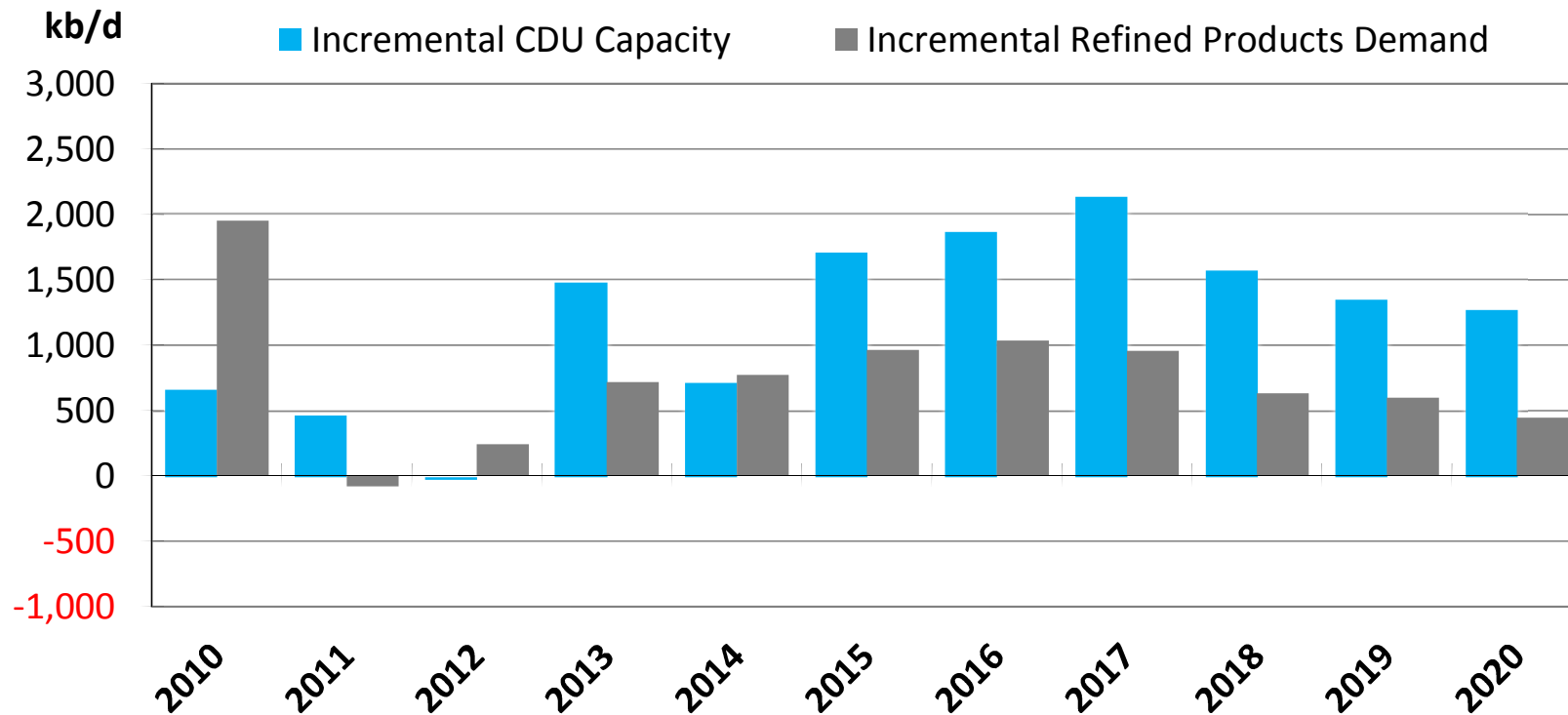


Who is Building East of Suez?...Why?

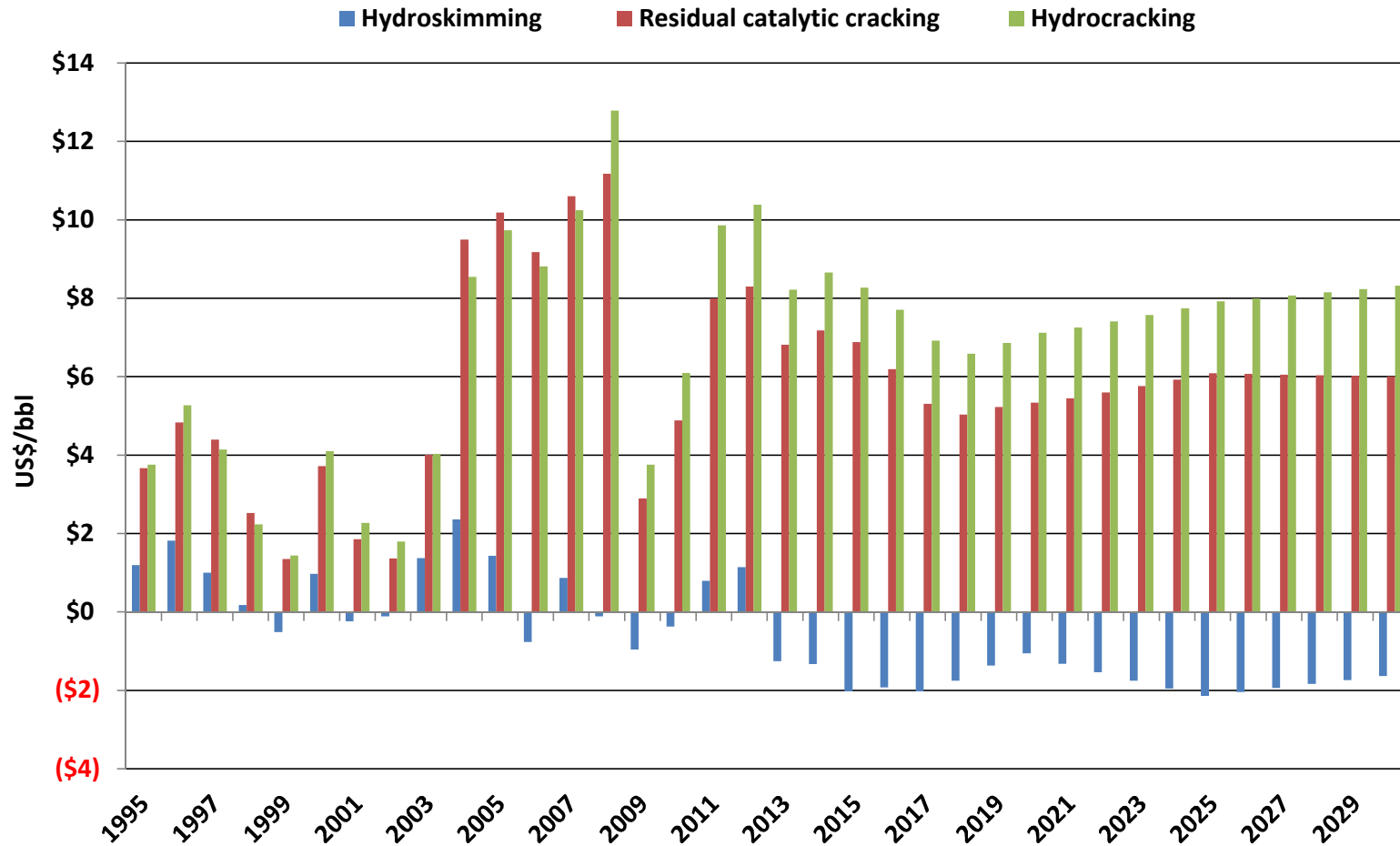


Even with Closures, Global Refinery Capacity Additions Overwhelm Demand Growth

Global CDU Capacity vs Refined Products Demand Growth

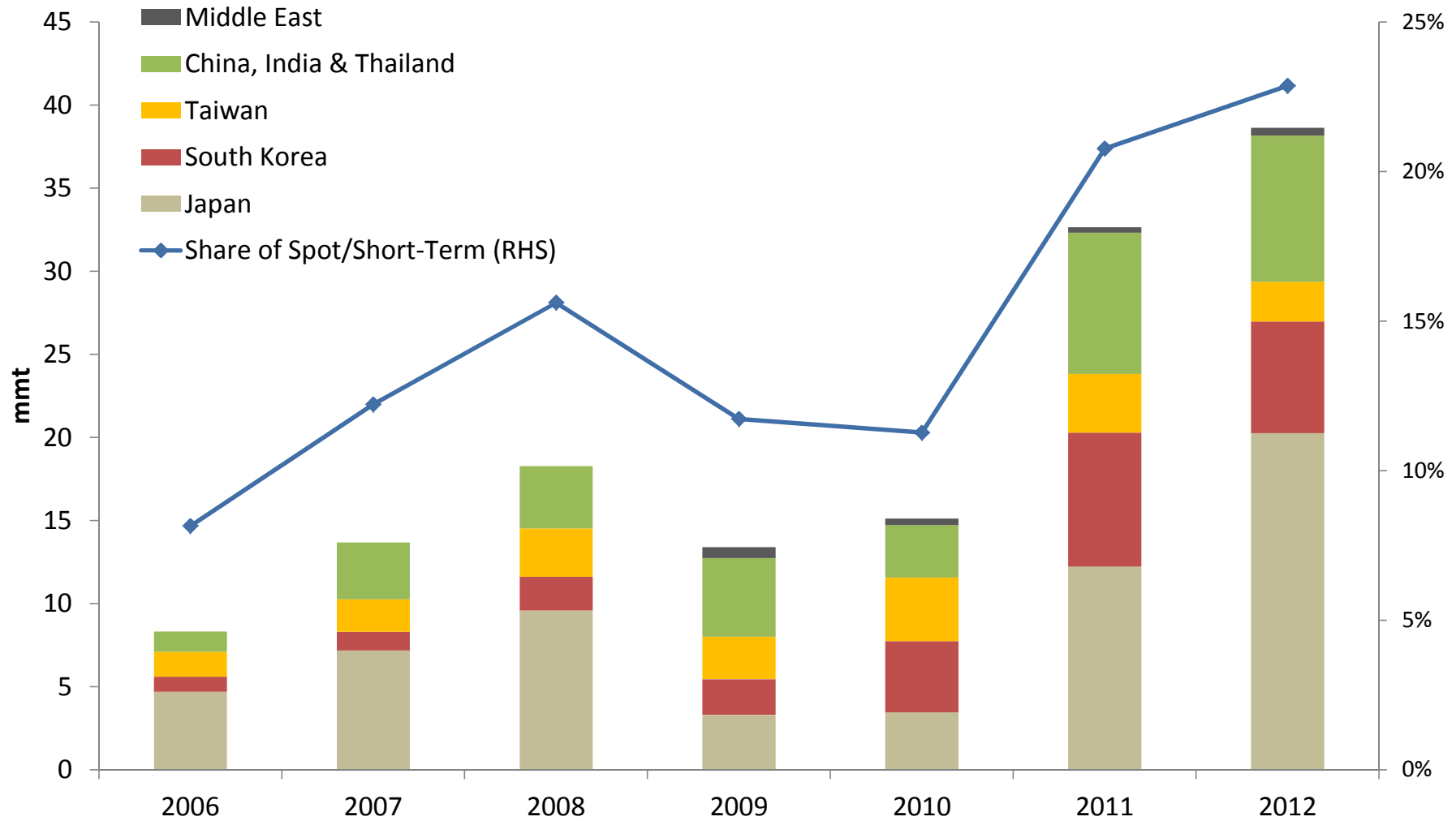


Refinery Margin Outlook



Singapore margins based on actual crude (Dubai) and product prices up to October 2013 and forecasts in \$2013 thereafter

Spot/Short-Term Buying has Risen Substantially



Note: Spot/short-term trade here is represented as a % of total East of Suez trade


New LNG Supplies = Big Bonanza?



Status of US LNG Export Projects

Latest Developments/Agreements Announced:

Sabine Pass Sales Purchase Agreements (SPAs)



5.5 mmtpa (T1-4) 3.5 mmtpa (T2) 3.5 mmtpa (T3)* 3.5 mmtpa (T4) 2 mmtpa (T5) 1.75 mmtpa (T5) 2 mmtpa (T2-4)^

^Up to 2 mmtpa of LNG produced but not committed to third parties.
*0.7 mmtpa sold to Total Gas & power

Cameron LNG Commercial Development Agreements



4 mmtpa (T1)* 4 mmtpa (T2)* 4 mmtpa (T3)

*Mitsubishi & Mitsui will sell 0.8 mmtpa each to Japan's TEPCO; other similar arrangements could follow.


Dominion Cove Terminal Service Agreements



2.3 mmtpa (T1)* 2.3 mmtpa (T2)

*Sumitomo has in turn announced agreement to sell LNG to Tokyo Gas and Kansai Electric.

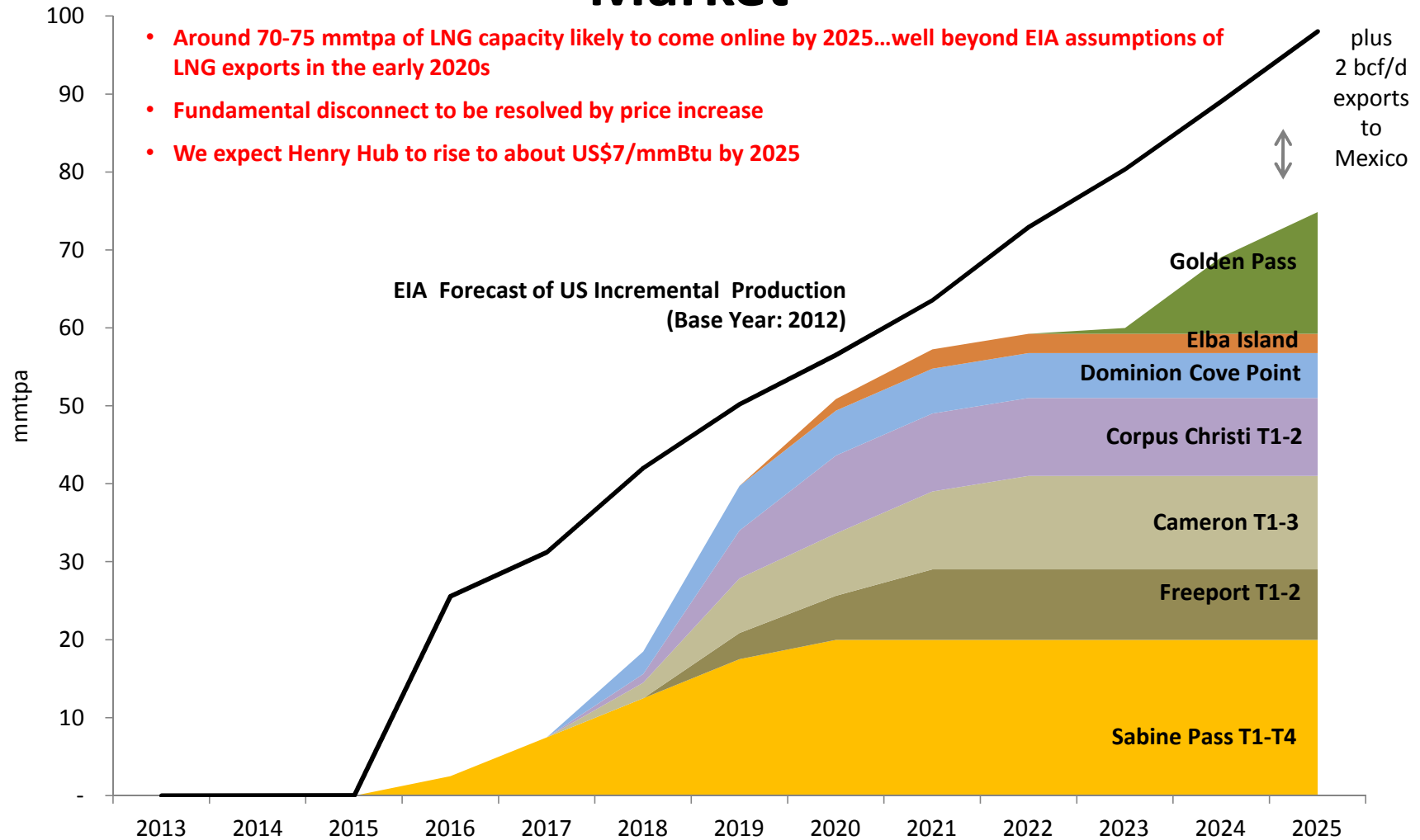
Freeport LNG 20-year tolling agreements



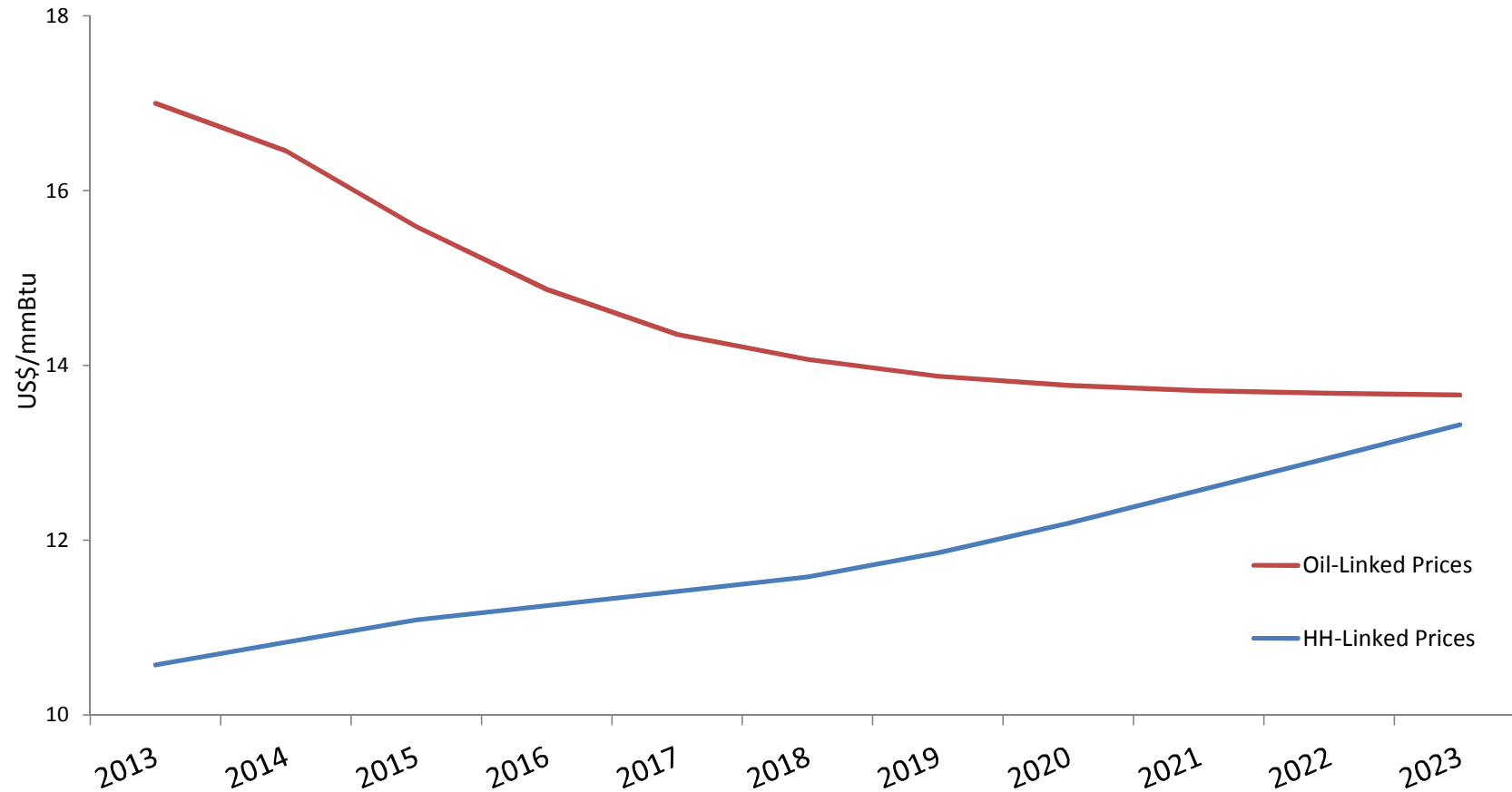
4.4 mmtpa (T1) 4.4 mmtpa (T2) 2.2 mmtpa each (T3)

Jointly lift the volumes. Entire volume of Train 2

FGE's US LNG Export Outlook Suggests Tighter US Market



Forward Views: Henry Hub vs Oil-Linked Indexation



Thank You

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