New Leaders, New Challenges and New Pitfalls: Implication for the Global Oil Market

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Trump Administration's Energy Policies: What We Know and What We Do Not Know

President Trump has been long on generalities and short on specifics. As such, no one really knows any details—probably because he has no detailed plans.

Policy impacts of the Trump Administration can been seen in two scenarios. If he is a one-term President, he may not be able to achieve his goals. But, if he is in the White House for eight years, there could be tectonic changes in US energy policy affecting the global market dramatically.

What We Know

- He likes oil! And gas! And coal too!
- He does not like global warming and carbon tax. He said global warming is “a hoax invented by the Chinese.”
- He wants higher US oil production and higher oil prices!
- He will likely provide tax relief for conventional and tight oil.
- He plans to open wildlife refuge and other areas closed by the Obama Administration to oil production.
- He will likely encourage coal production and slow down the move away from coal in power generation.
- He has pledged to approve the Keystone XL Pipeline, although the US may no longer need it.
- He will probably attempt to stretch the CAFE standards timelines and slow down efficiency standards for automobiles.
- He will likely reduce funding for renewable energy, try to repeal tax relief for solar, and move away from the focus on efficiency standards.
- He may withdraw the Obama Administration’s commitments for COP 21 or at least slow down the US compliance.
- He plans not to allow a carbon tax in the United States and no cap and trade.

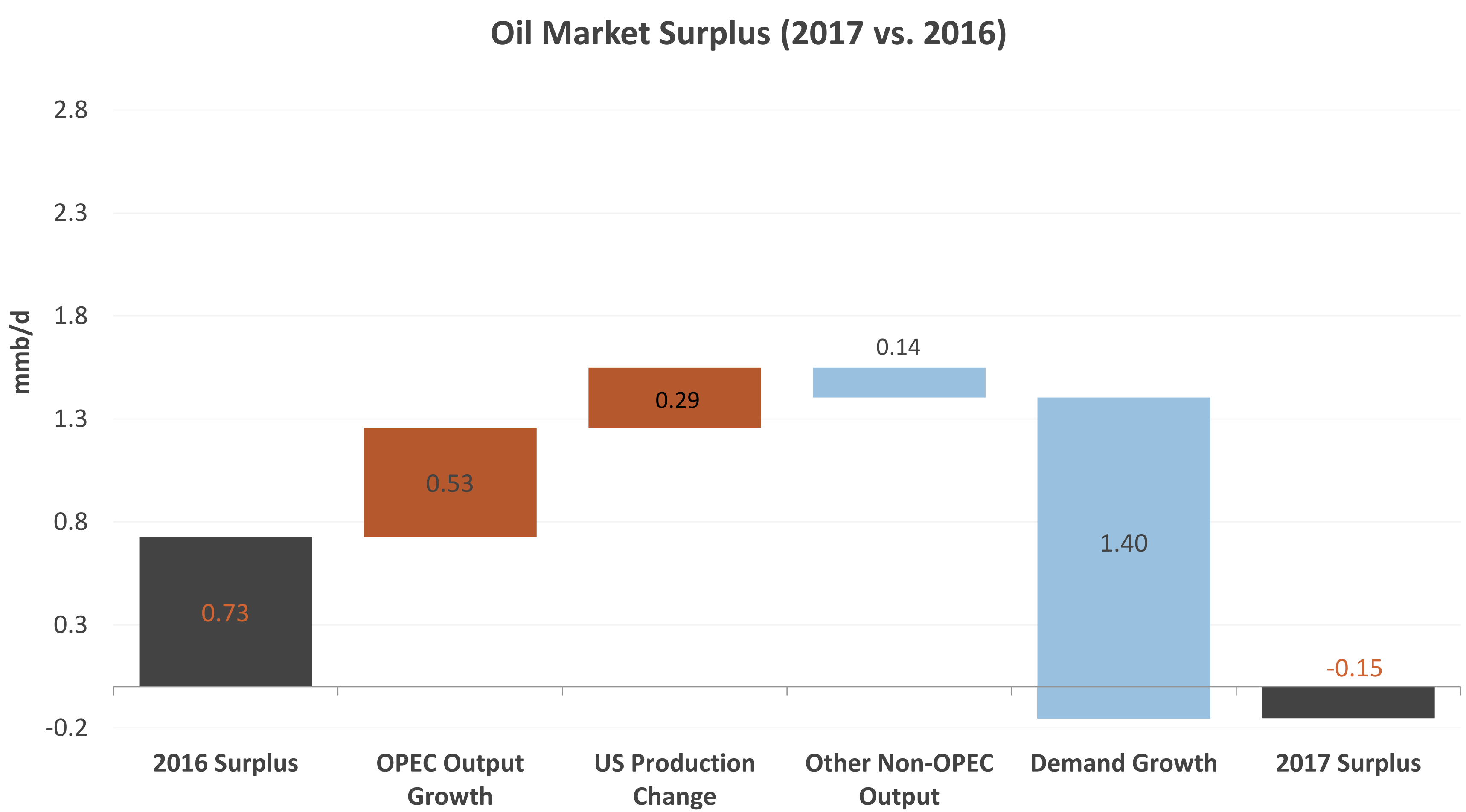
What We Know (continued)

- He will probably signal to the world generally, and to Asia specifically, that the US is not committed to carbon dioxide control. This will likely slow down China, India, Japan, and other Asian countries' move towards a global reduction in carbon dioxide.
- He will implicitly support any OPEC move to raise oil prices.
- He likes Russia, but does not like China. He may remove all sanctions against Russian energy business and encourage the Europeans to do the same. This will boost both oil and exports for Russia—specially help LNG projects.
- He may not allow China to buy any US assets and might ask for existing assets owned by CNOOC and Sinopec to be disposed of.
- The close US energy cooperation with Mexico and Canada will be re-examined and might be slowed down, though existing projects with Mexico are unlikely to be cancelled. Basically, private sector initiatives will continue, but Mr. Trump will not see eye to eye with Prime Minister Trudeau.
- He does not seem to like Iran and Saudi Arabia—or the whole Muslim world. He seems to respond positively to Israel, but the end game is not as yet clear.
- Appointment of Rex Tillerson as Secretary of State signals a foreign policy which is pro-Russia and pro-oil/gas.

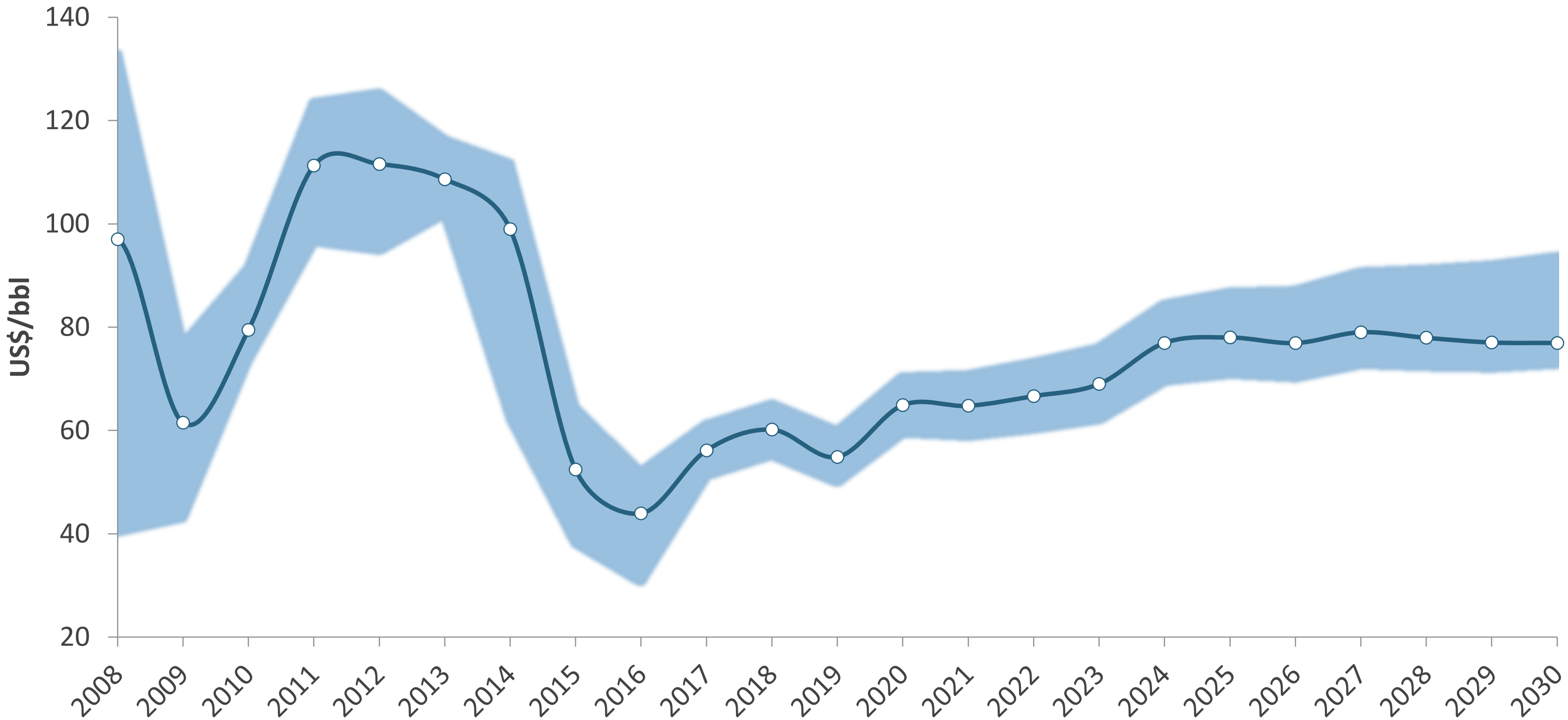
What We Do Not Know

- How will the Trump Administration implement policies which are often in contradiction with each other?
- How will his administration fight environmental lobbyists through the court system?
- How will the Trump Administration reverse legal obligations created by the previous administration for UN commitment to COP negotiation or EPA standards?
- What will he do with the Iran nuclear accord? Will he pursue a US-only campaign against Iran's oil exports and international investments in Iran? Will he use the US Treasury through OFAC to pressure Iran and the Europeans/Asians?
- He had said he might sanction Saudi Arabia. Will he support JASTA? Will he reduce US troops in the Middle East? Will he try to mediate conflicts between Iran and Saudi Arabia? Will he give an open hand to Russia?
- Is he going to change his mind on many election promises? Is he going to leave the details to be worked out by his Cabinet officials or intervene personally?
- There are numerous "ifs" and very little clarity. Nonetheless, no US President in modern times has had Trump's authority. He can do things Bush, Obama, and Clinton could never do.

Evolution of Market Surplus: 2017 vs. 2016

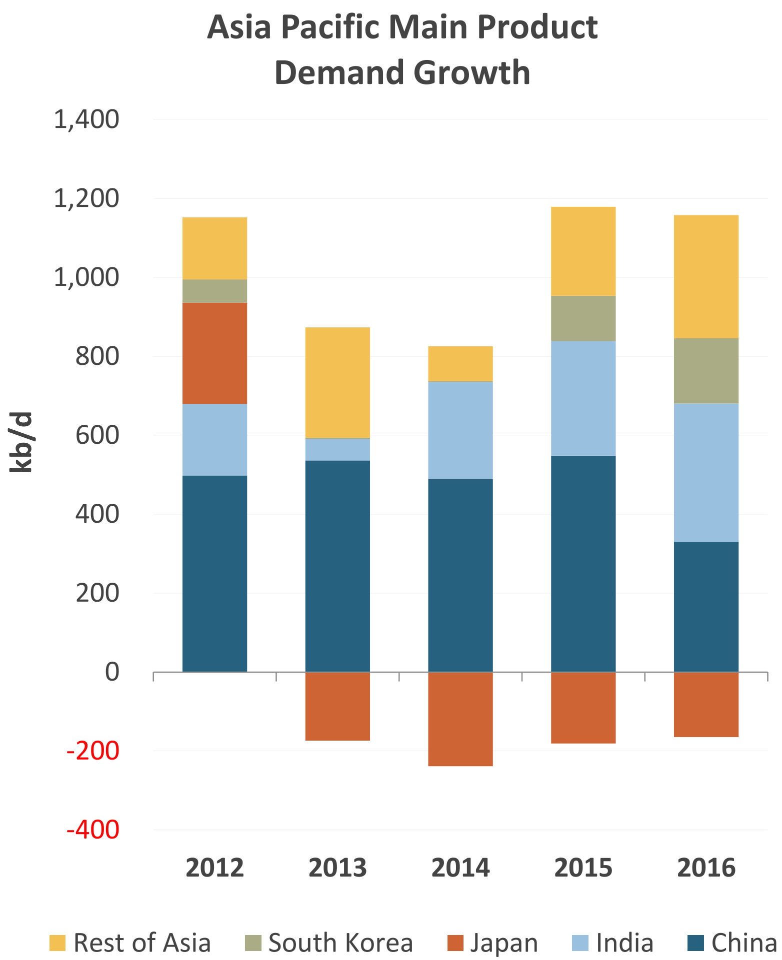


Base-Case Brent Crude Outlook



Nominal prices shown before 2016 and real prices for forecast.

Asian Demand Moderating, But Still Solid Growth



Total Oil Demand Growth,* kb/d					
	2013	2014	2015	2016	2017
China	537	489	548	330	377
India	54	246	290	333	292
Japan	-174	-238	-181	-172	-113
South Korea	3	3	116	166	106
Rest of Asia	280	88	225	312	243
Total	**700**	**587**	**998**	**993**	**905**

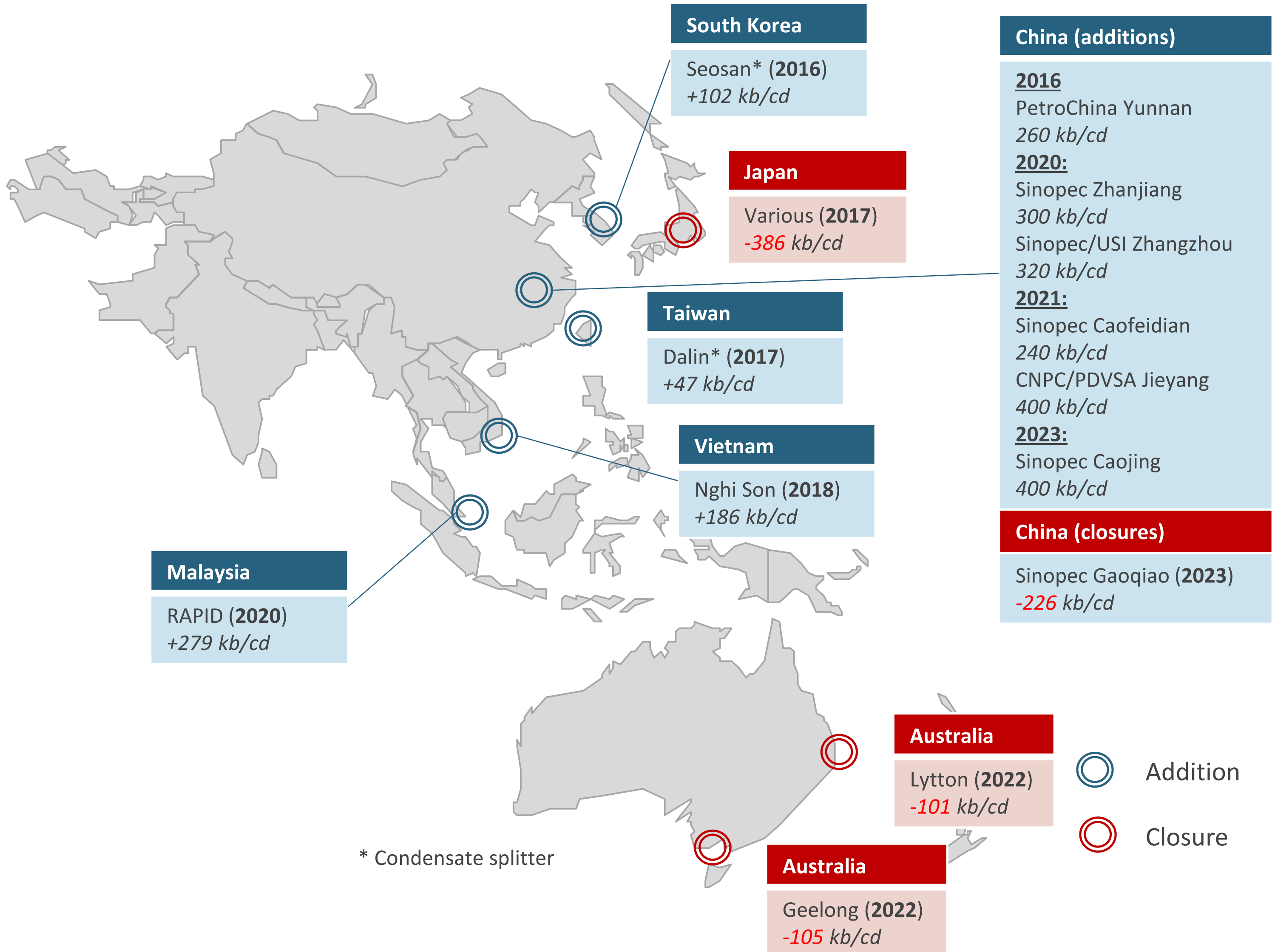
*Including other products and direct crude burn for Japan

Refining: Good News, Bad News, Good News

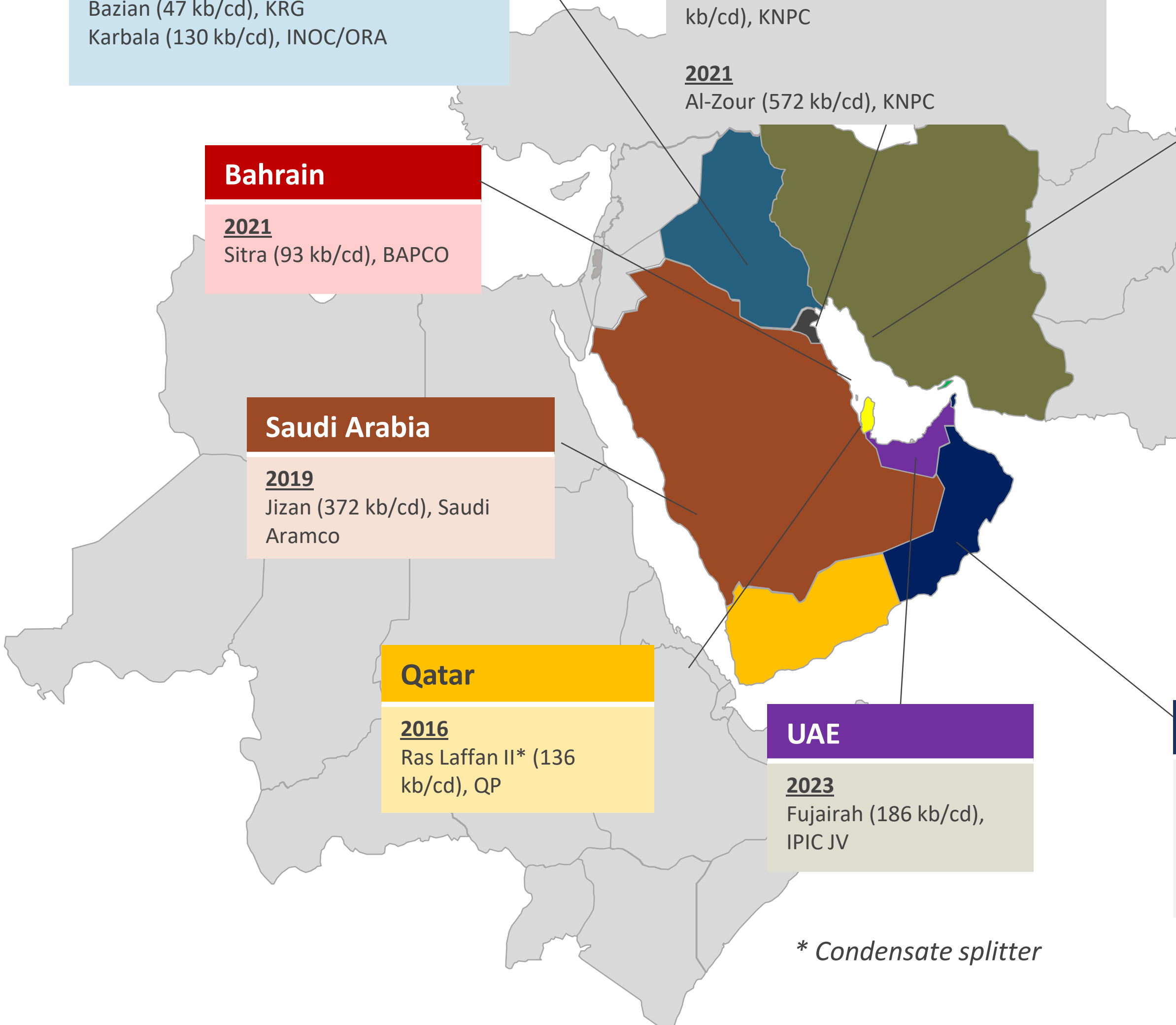
- Great margins in 2015. Pull back early 2016, then rebound. Why?
- Lower crude prices help refining margins.
- Demand surge + refinery cancellations/deferrals/closures tighten balance.
- But…
- Chinese exports surging.
- Complex Mideast refineries fully onstream and condensate splitters coming.
- **Overall: Picture better than it looked a few years ago…with big potential boost from IMO bunker spec change!**

Refinery Additions and Closures, 2016-2025

Asia Grassroots Refineries



Major Refinery Projects in the Middle East (up to 2025)



Iraq

2022
Bazian (47 kb/cd), KRG
Karbala (130 kb/cd), INOC/ORA

Kuwait

2017
Shuaiba (-186 kb/cd), KNPC
MA/MAA Clean Fuels Project (net +60 kb/cd), KNPC

2021
Al-Zour (572 kb/cd), KNPC

Iran

2017
PGS Phase 1 (112 kb/cd),* NIORDC
PGS Phase 2 (112 kb/cd),* NIORDC

2018
PGS Phase 3 (112 kb/cd),* NIORDC

2020
Abadan upgrade (net -38 kb/cd), NIORDC

2023
Pars Condensate Splitter (112 kb/cd),* NIORDC

2022-2025
Siraf Condensate Splitter Complex (224 kb/cd - 4 out of 8),* SRIC + Private Sector

Bahrain

2021
Sitra (93 kb/cd), BAPCO

Saudi Arabia

2019
Jizan (372 kb/cd), Saudi Aramco

Qatar

2016
Ras Laffan II* (136 kb/cd), QP

UAE

2023
Fujairah (186 kb/cd), IPIC JV

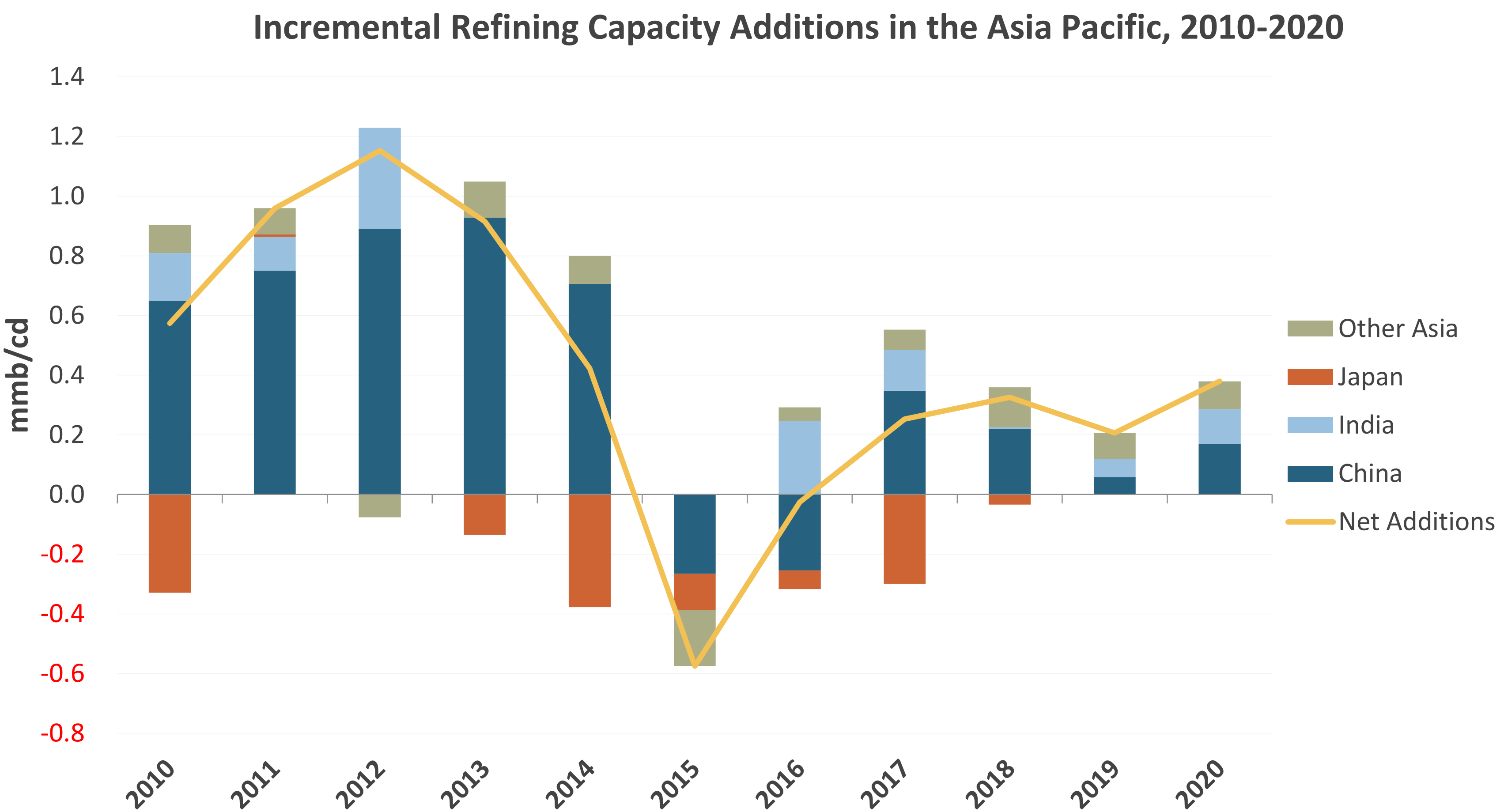
Oman

2017
Sohar (76 kb/cd), ORPIC

2023
Duqm (214 kb/cd), Oman Oil /IPIC

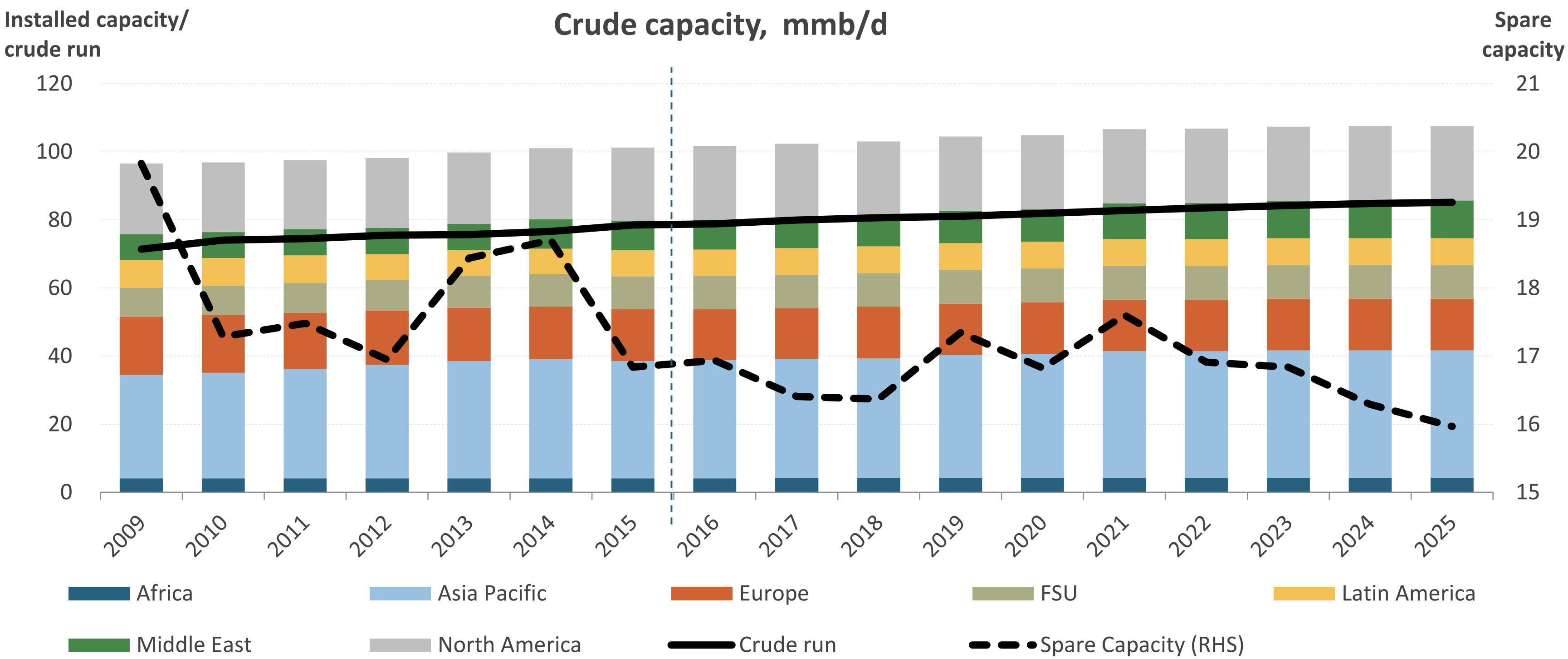
** Condensate splitter*

Asia Pacific Net Refinery Capacity Additions



Global Spare Capacity Eroded Away…

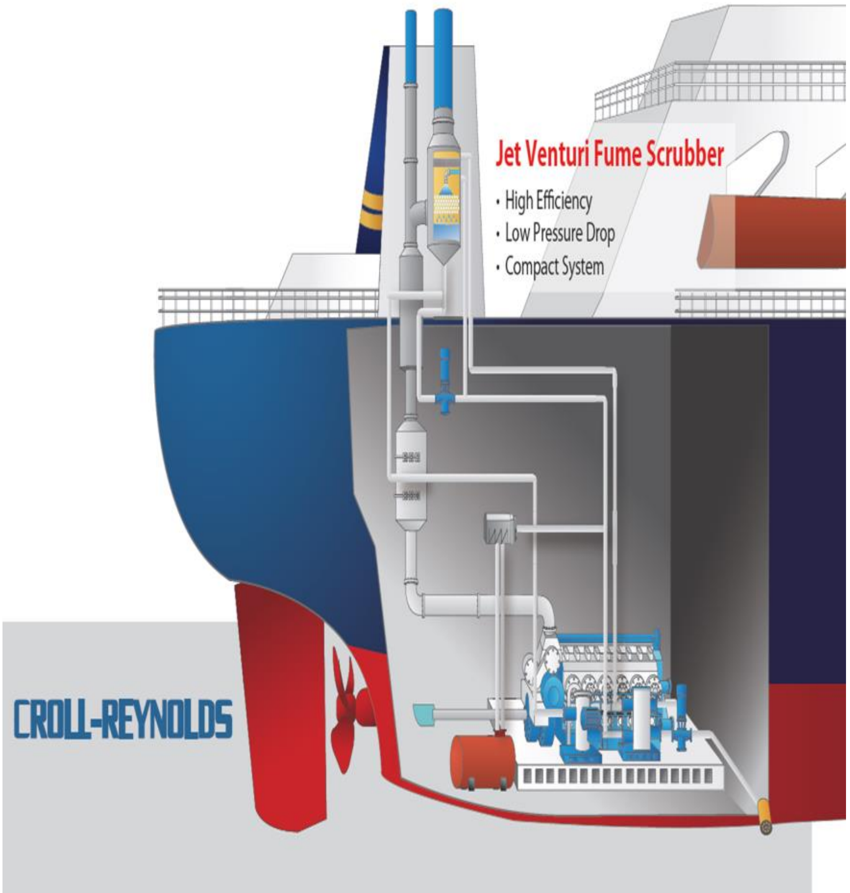
Demand increasing, investment slowing, stalling



- There are potential projects post-2020 which may yet come to fruition (in 2021 onwards) in Asia, but it is too early to be confident.
- Less spare capacity will support refinery margins.

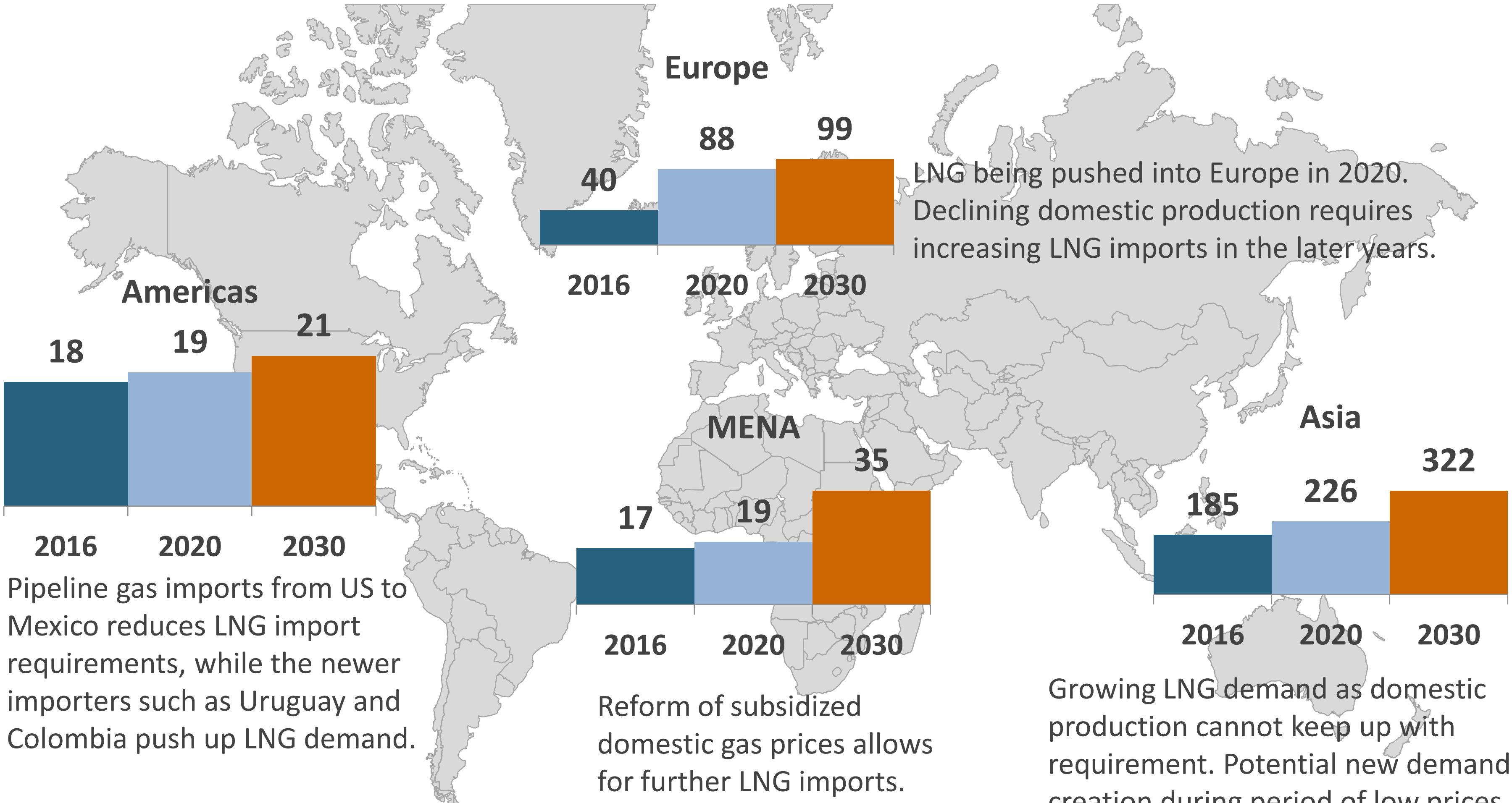
2020: IMO Bunker Spec Changes Will Have a Big Impact

Middle distillate and fuel oil balances will undergo significant change



- In 2020, without flue gas desulfurization, bunker fuel will be limited to 0.5% S max
  - Vs. 3.5% S max today (typically 2.5%)
- Shippers will need to burn compliant fuel or fit flue gas scrubbers
  - 0.1% S within ECAs, 0.5% S elsewhere
  - LNG, LPG, methanol, etc.
- Decision to invest in scrubbers/alternate fuel will be a function of:
  - Distillate/fuel oil price differential
  - Cost of installation including downtime
  - Age of ship
  - Fuel availability
  - Enforcement of the rules and penalties associated with non-compliance
  - View on future legislation; will there be a focus on NOX, PMs? Will FGDS be a stranded investment?

Although Europe Acts as the Near-Term LNG Sink, Asian LNG Demand Continues to Dominate Market



LNG being pushed into Europe in 2020. Declining domestic production requires increasing LNG imports in the later years.

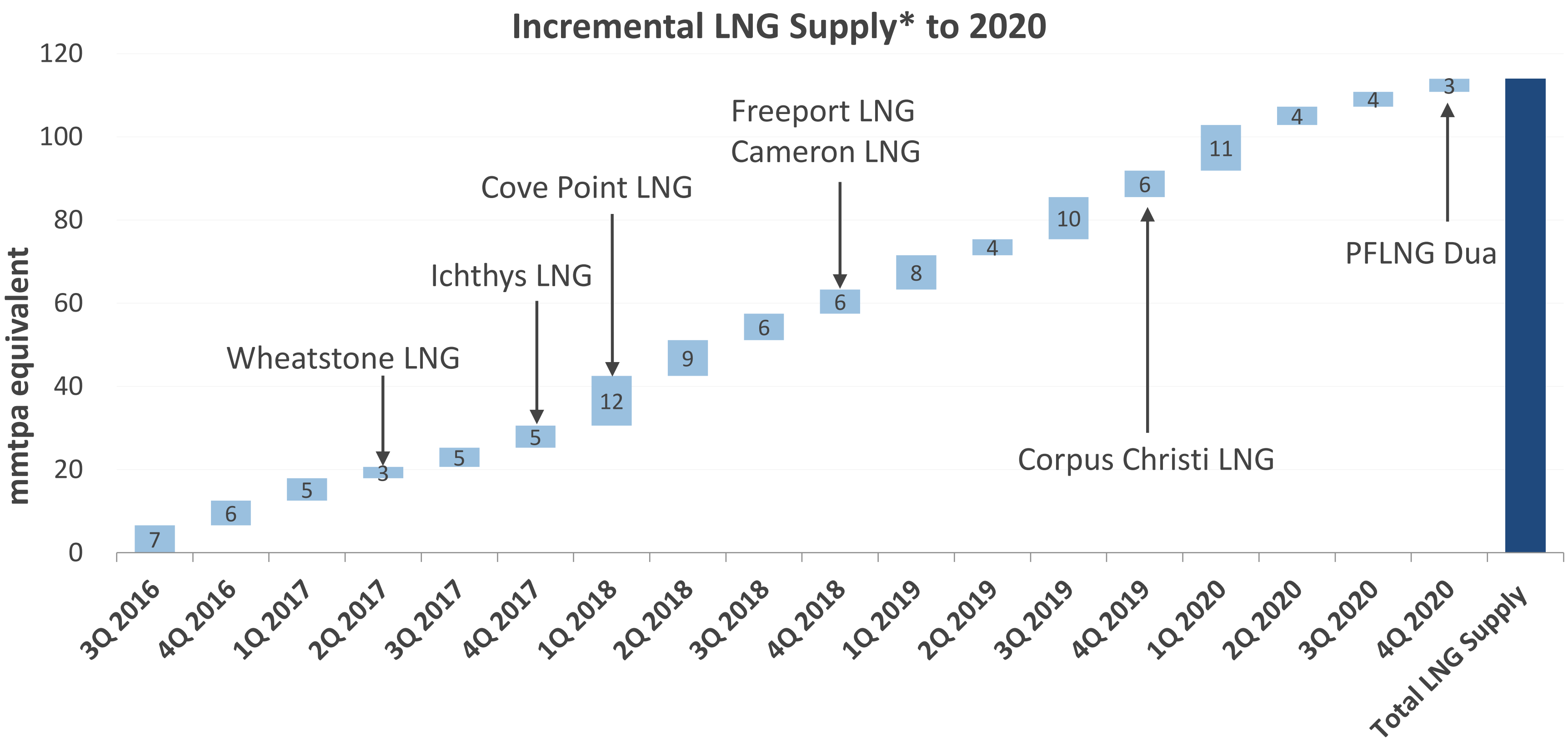
Pipeline gas imports from US to Mexico reduces LNG import requirements, while the newer importers such as Uruguay and Colombia push up LNG demand.

Reform of subsidized domestic gas prices allows for further LNG imports.

Growing LNG demand as domestic production cannot keep up with requirement. Potential new demand creation during period of low prices.

***Note**: The above units are all in mmt of LNG.*

By 2020, Global LNG Supply Will Grow By 40% Due to Australia and US LNG Projects



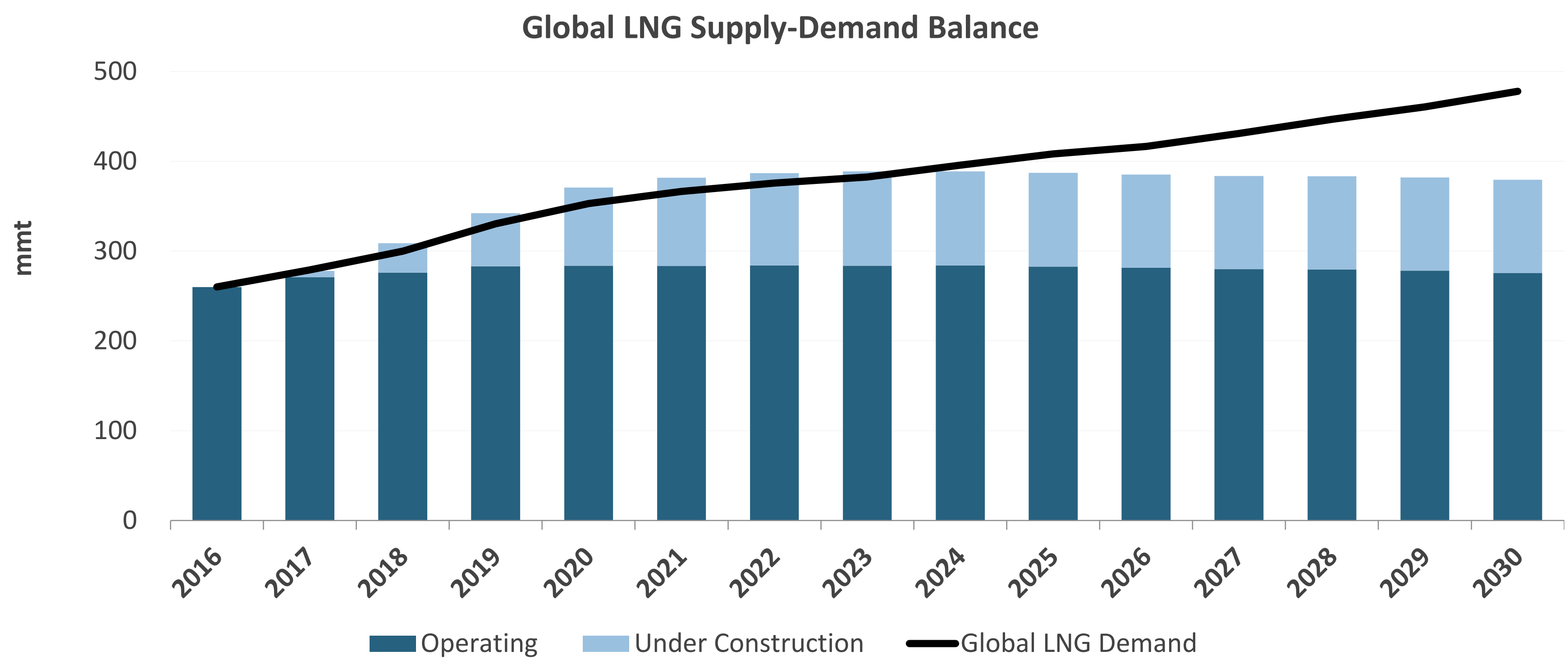
*Numbers reflect LNG output per quarter in mmtpa equivalent.

Note: All the above shaded areas are FGE's project start-up dates assumptions and FGE's utilization rates assumptions.

***Source**: FGE estimates*

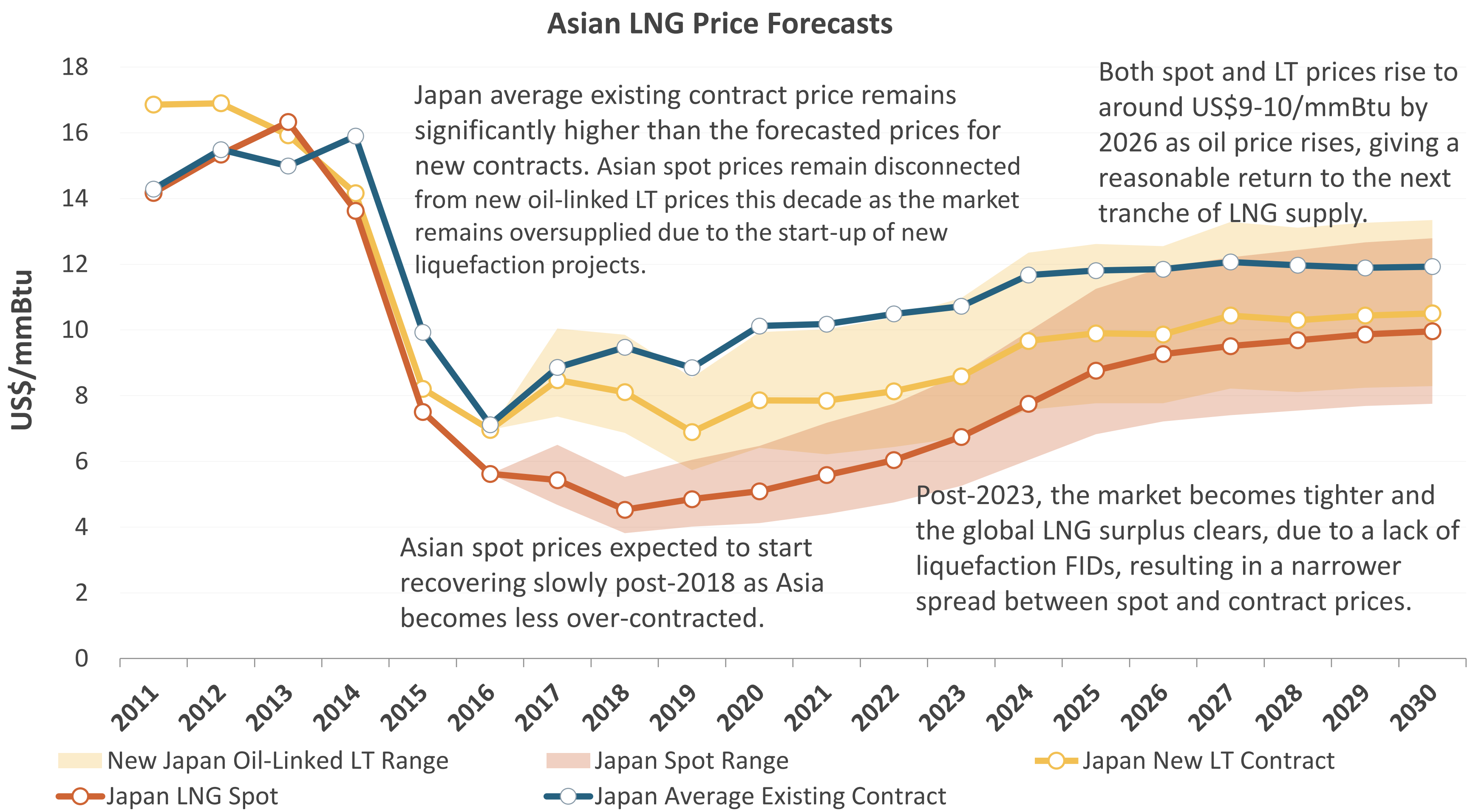
- LNG supply additions from Australia and US Gulf Coast will increase current global LNG supply (+250 mmtpa) by more than 40%.

Supply Glut Through 2023 Pushes LNG into Sink Markets, Causes Shut-in of Liquefaction Plants, and Creates New Demand



- With Australian and US Gulf Coast projects starting, LNG market surplus will peak around 2020.
- FGE's forecast of LNG demand considers LNG being pushed into Europe. Excess supply over 2017-2023 will also need to be cleared through shut-in of liquefaction plants, lower plant utilization, and/or new demand creation.

New Long-Term Contracts and Spot LNG Prices in Asia Remain Disconnected in the Near-Term Due to an Oversupplied Market



***Note**: Forecasts from 2016 are in 2016$ real terms.*
Note that defining long-term contract prices is not trivial as price outcomes are driven by current year oil/gas prices, but formulas are negotiated earlier. Our oil-linked price projection is based on current year oil price and our view on price formulas negotiated 2-4 years earlier. These formulas vary over time depending on market conditions.

Thank You

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