FACTS GLOBAL ENERGY

LNG Supply/Demand, Price Forecasts, and Risk Analysis

Study for Australian Energy Market Operator (AEMO)

By FACTS Inc. (Member of the FGE Group of Companies)

September 15, 2016

Executive Summary

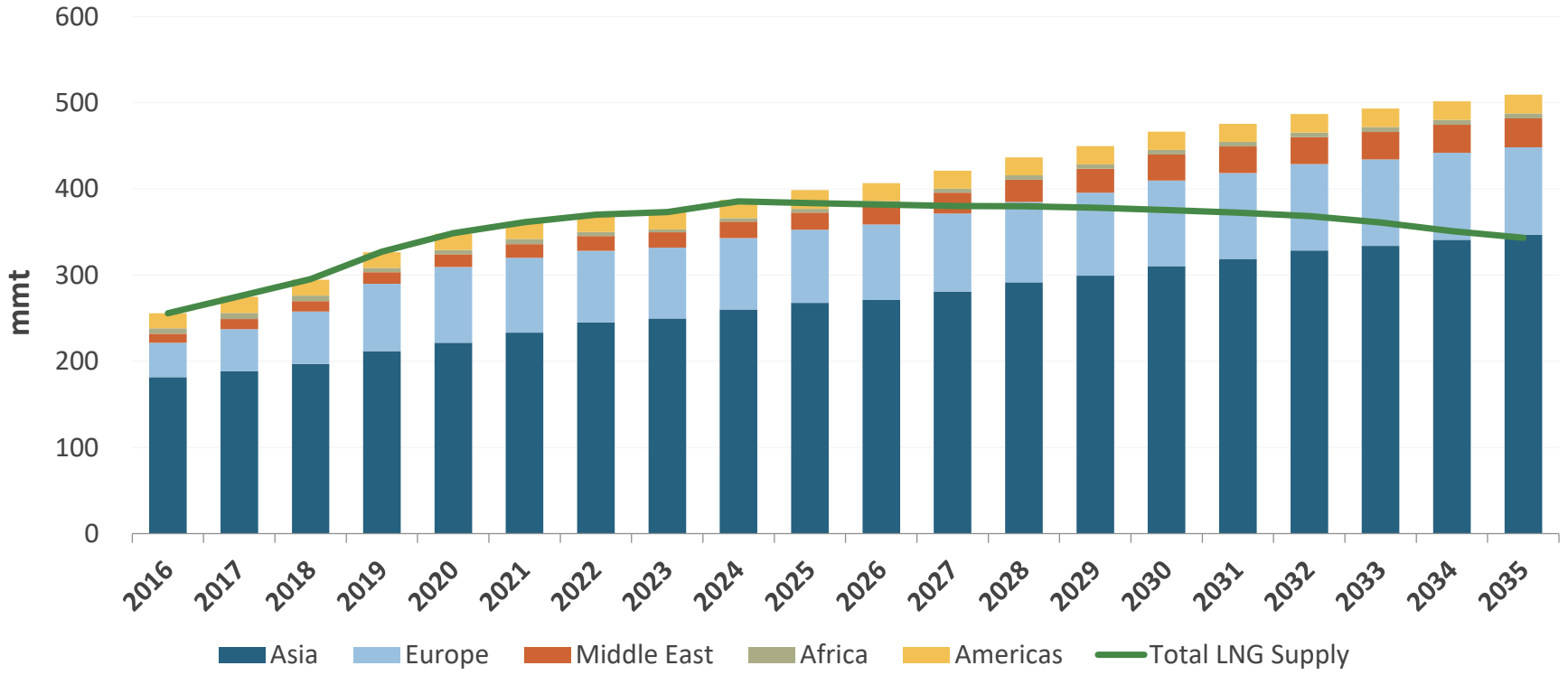
Forecasts in this presentation pack are based on AEMO's current forecasting scenario for the next 20 years:

- Neutral Scenario—AUD/USD exchange rate of 0.75, oil price of US$60/bbl
- Strong Scenario—AUD/USD exchange rate of 0.95, oil price of US$90/bbl
- Weak Scenario—AUD/USD exchange rate of 0.65, oil price of US$30/bbl

Executive Summary—Scenarios

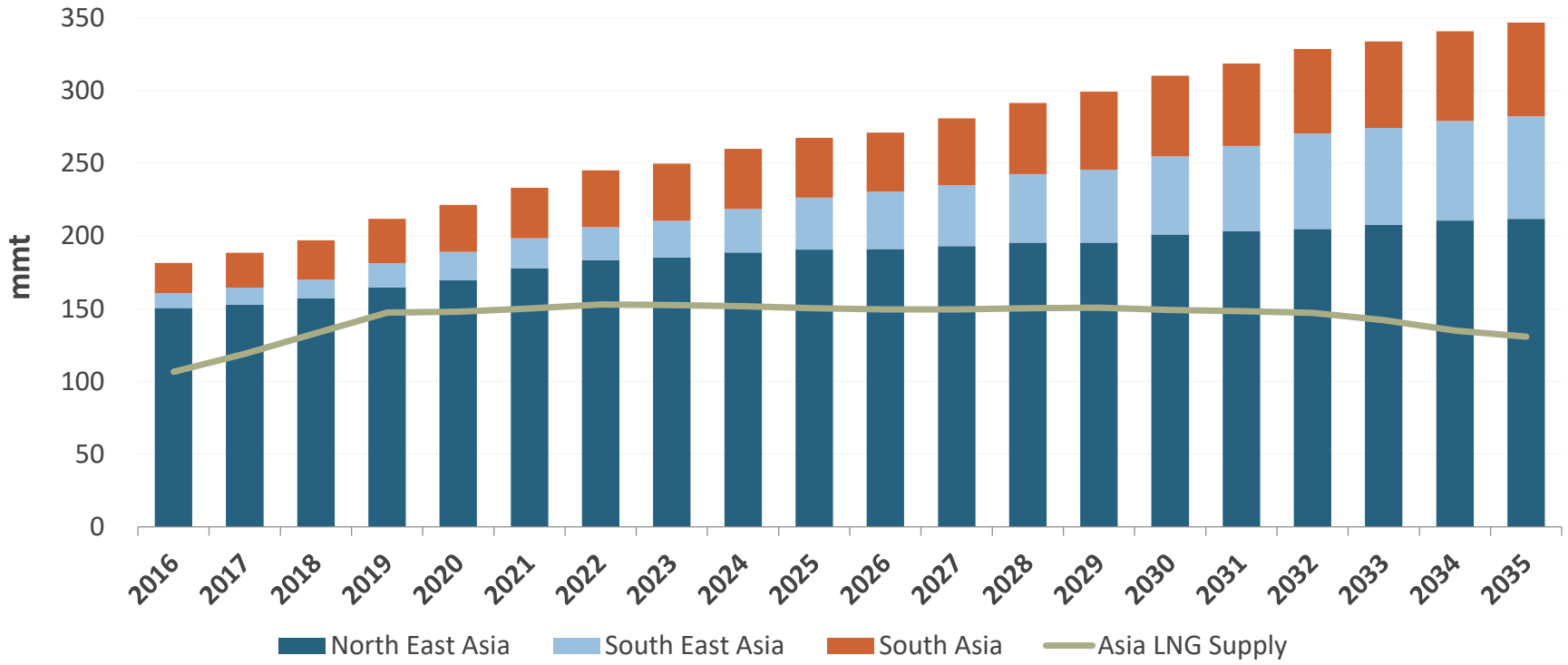
- This report studies LNG supply and demand over the period of 2016-2035.
- It also analyzes long term and spot prices of LNG for the period of 2016-2035 under three distinct scenarios:
  - Neutral Scenario—AUD/USD exchange rate of 0.75, oil price of US$60/bbl
  - Strong Scenario—AUD/USD exchange rate of 0.95, oil price of US$90/bbl
  - Weak Scenario—AUD/USD exchange rate of 0.65, oil price of US$30/bbl
- The study also provides detailed analysis of LNG offtake from Eastern Australia LNG projects under the following scenarios
  - Neutral Scenario—AUD/USD exchange rate of 0.75, oil price of US$60/bbl
  - Strong Scenario—AUD/USD exchange rate of 0.95, oil price of US$90/bbl
  - Weak Scenario—AUD/USD exchange rate of 0.65, oil price of US$30/bbl
    - Case I—LNG cannot compete with cheap alternative liquid fuels
    - Case II—LNG can compete with cheap alternative liquid fuels
- The study also provides a qualitative risk analysis of international, as well as domestic risk factors, and their impact on offtake from Australia LNG projects.

Global LNG Supply and Demand Forecast—Neutral Scenario



- There exists an LNG glut over the 2017-2023 period.
- More LNG will have to be pushed into Europe and lower utilization of liquefaction are needed to balance the market over 2017-2023.
- Post-2023 the supply glut clears out and new supplies are needed.

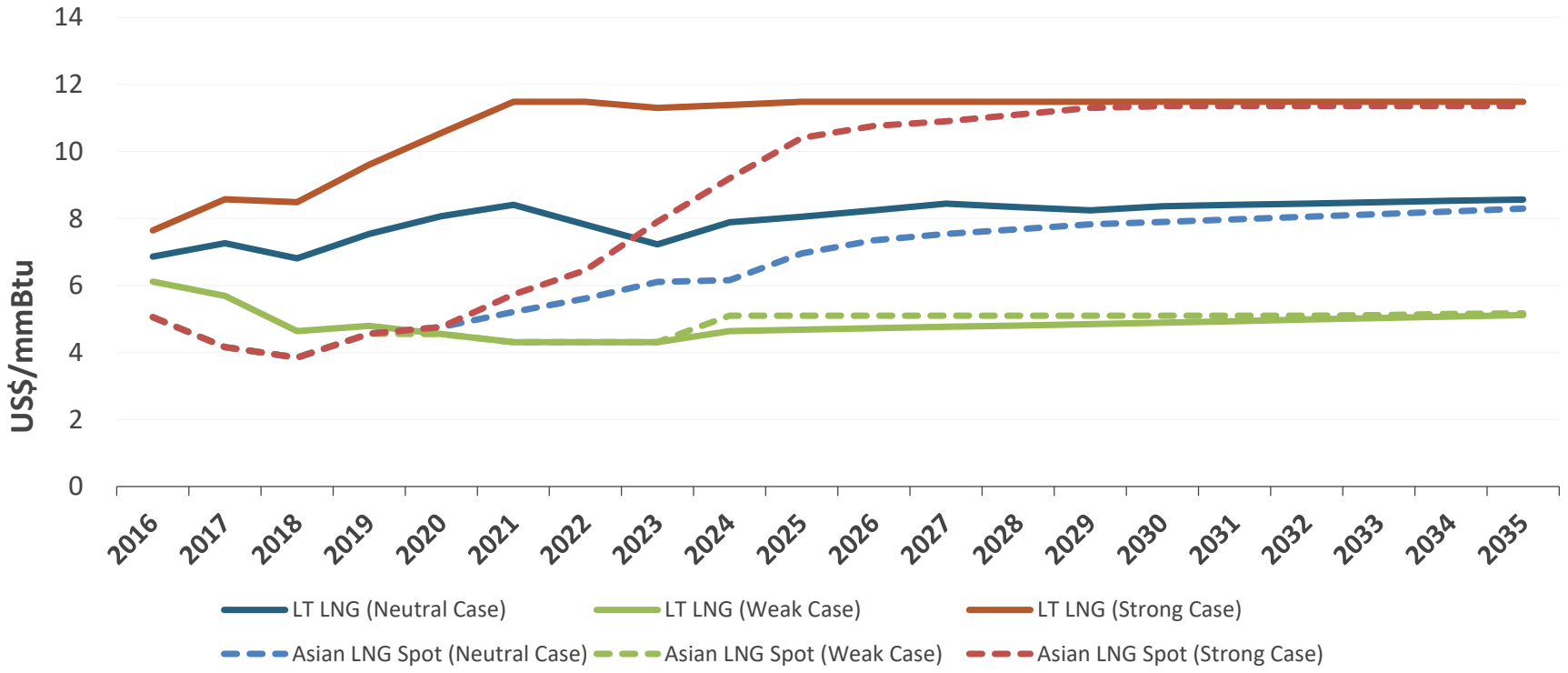
Asia LNG Supply and Demand Forecast—Neutral Scenario



Notes: *NE Asia includes Japan, South Korea, Taiwan, and China.*
SE Asia includes Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam.
South Asia includes India, Pakistan and Bangladesh.
Supply from Australia LNG projects, Sakhalin II, and PNG LNG are included in Asia LNG supply above.

- Growth in North East Asia LNG demand is driven largely by China.
- Growth in South East Asia LNG demand is driven by Thailand in the near term, and by Indonesia and Malaysia further out.

Asia Long-Term and Spot LNG Price Forecasts



- Spot prices remain disconnected from long-term oil-linked pricing this decade as the market remains oversupplied due to new liquefaction project start-ups.
- Post-2023, the LNG glut starts to clear, resulting in a decreasing spread between spot and LT LNG prices. Spot LNG prices for the weak case are capped by Brent parity.

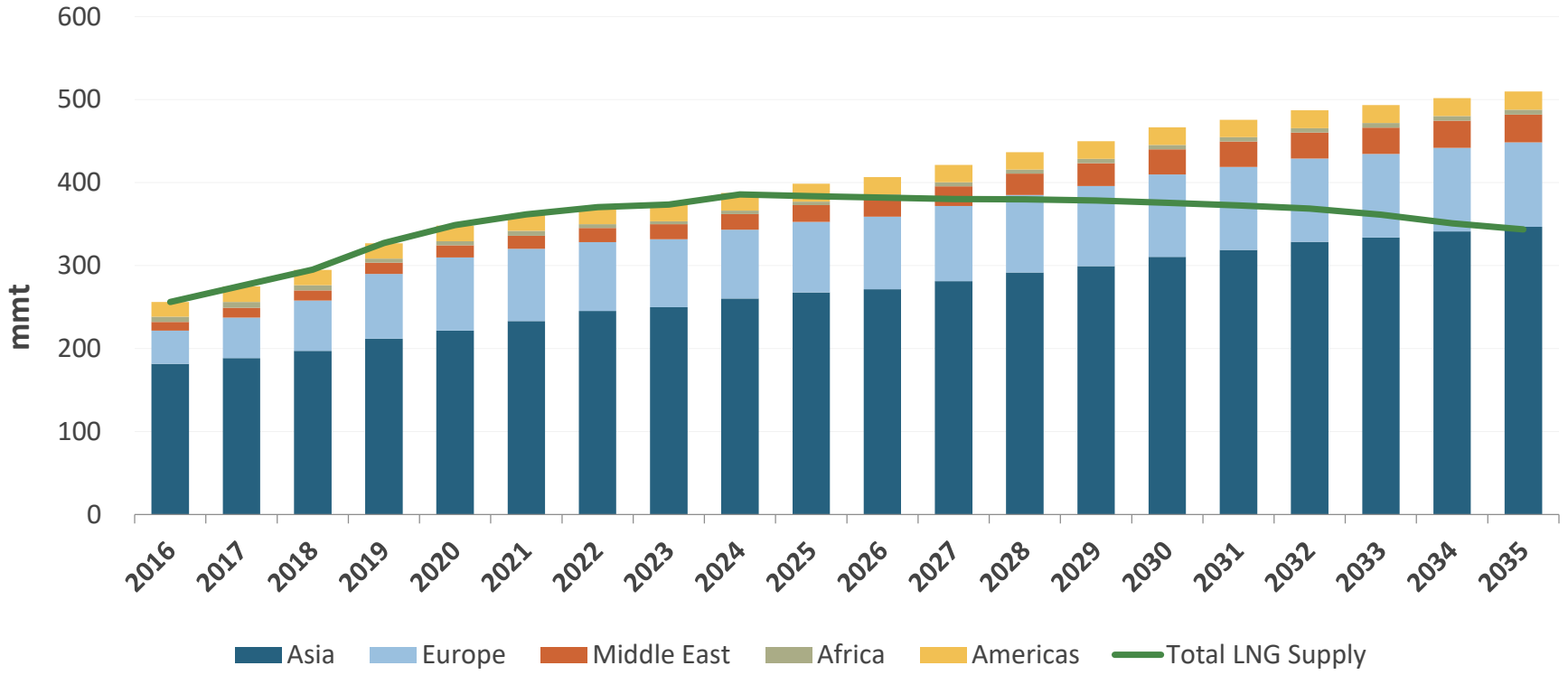
LNG Offtake Scenario from East Coast Australia

- **Neutral Scenario**
  - Reduced LNG offtake from East Coast Australia over 2017-2021.
  - From 2022 to 2032, LNG plants are assumed to produce flat out at 8.6 mmtpa for APLNG, 7.2 mmtpa for GLNG, and 8.0 mmtpa for QCLNG.
  - Declines from GLNG are expected from 2033 due to insufficient upstream gas reserves.
- **Strong Scenario**
  - Higher LNG prices due to high oil price.
  - 110% utilization for East Coast Australia LNG projects.
- **Weak Scenario Case I**
  - LNG cannot compete with alternative fuels and hence lower demand for LNG.
  - Offtakers will exercise their DQT to lift less LNG.
- **Weak Scenario Case II**
  - LNG can compete with alternative fuels and hence higher demand for LNG.
  - Liquid fuels impose a ceiling of LNG demand and prices.
  - 100% utilization post 2023.

Supply and Demand—2016 to 2035

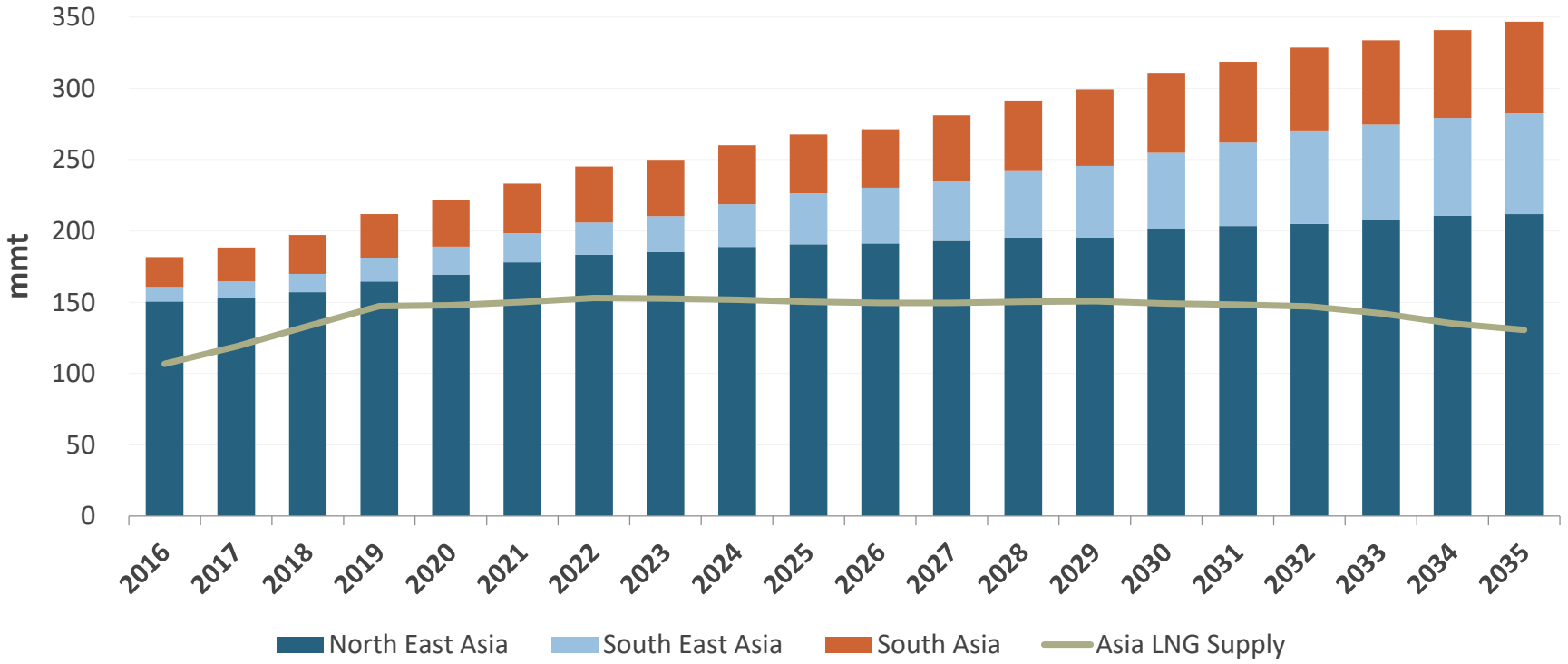
- Neutral Case—AUD/USD exchange rate of 0.75, oil price of US$60/bbl

Global LNG Supply and Demand Forecast—Neutral Scenario



- Global LNG demand takes into consideration some amount of LNG being pushed into Europe (about 22 mmt above natural demand in 2020) and some other price-sensitive countries such as India taking more LNG over 2017-2023 due to the forecast low LNG spot prices.
- Global LNG supply takes into consideration lower utilization of some US and Australia LNG projects over 2017-2023, in order to clear the LNG surplus and balance the LNG market.

Asia LNG Supply and Demand Forecast—Neutral Scenario



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Asia's Long-Term and Spot LNG Price Forecast—2016 to 2035

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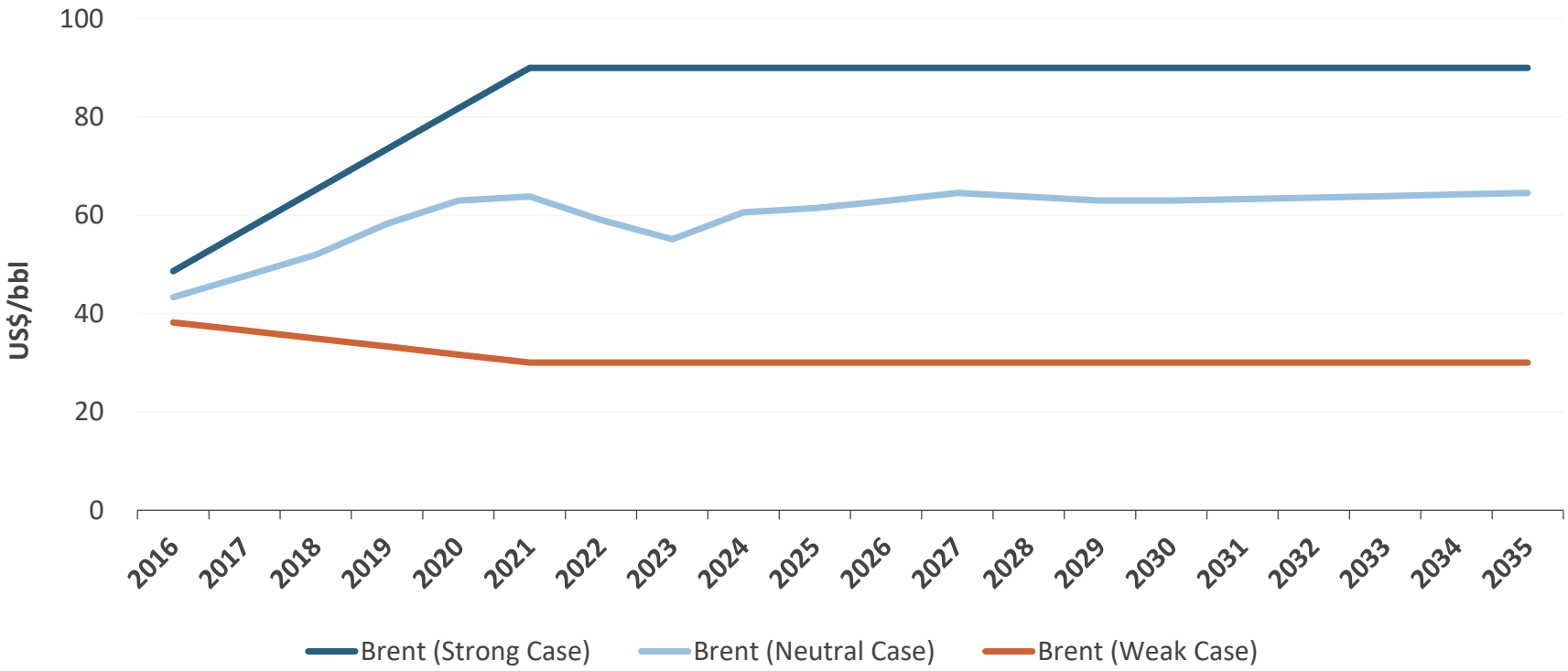
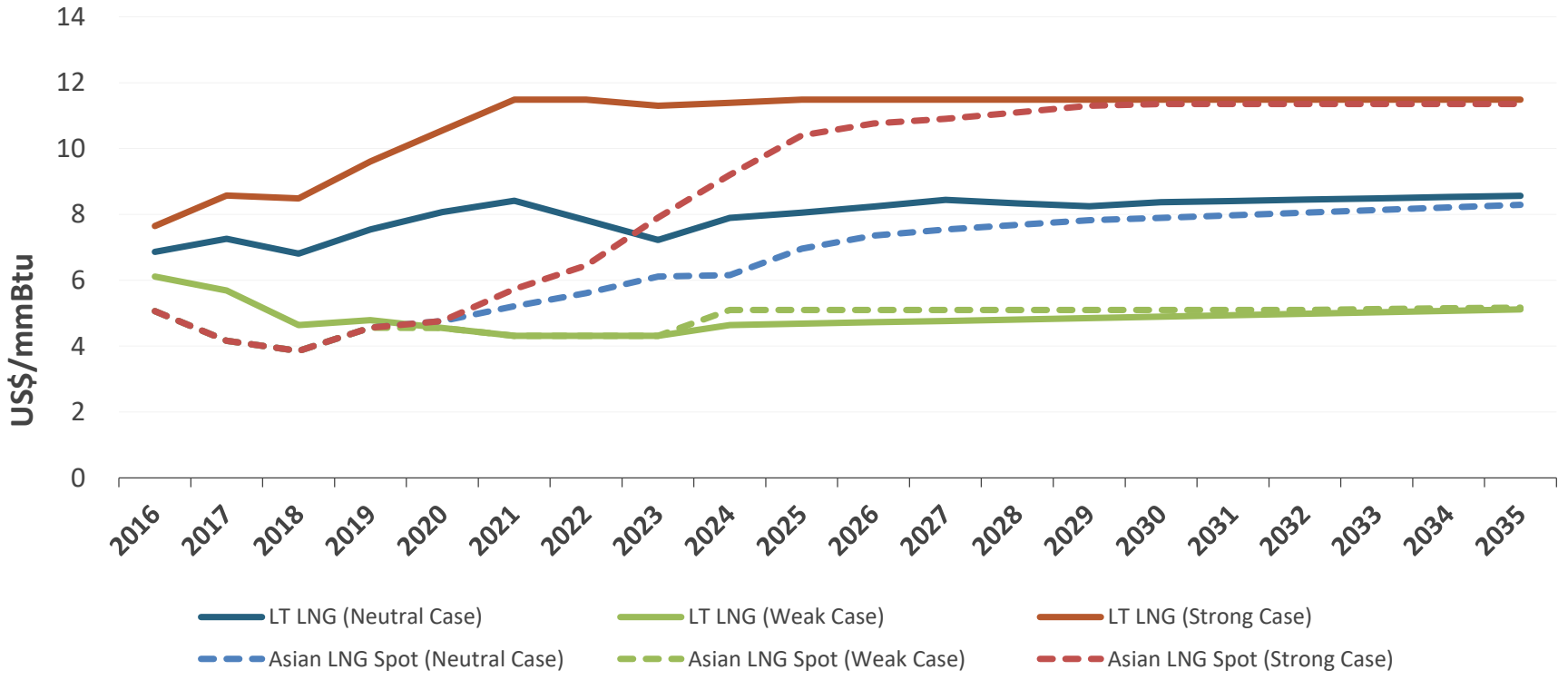
AEMO Brent Price Forecast



- FGE has modified its detailed neutral case Brent forecast in order to meet AEMO's assumption of US$60/bbl average oil price.
- The weak case reaches US$30/bbl and the strong case reaches US$90/bbl, following a 5-year glide path.

Asia Long-Term and Spot LNG Price Forecasts



- Spot prices remain disconnected from long-term oil-linked pricing this decade as the market remains oversupplied due to new liquefaction project start-ups.
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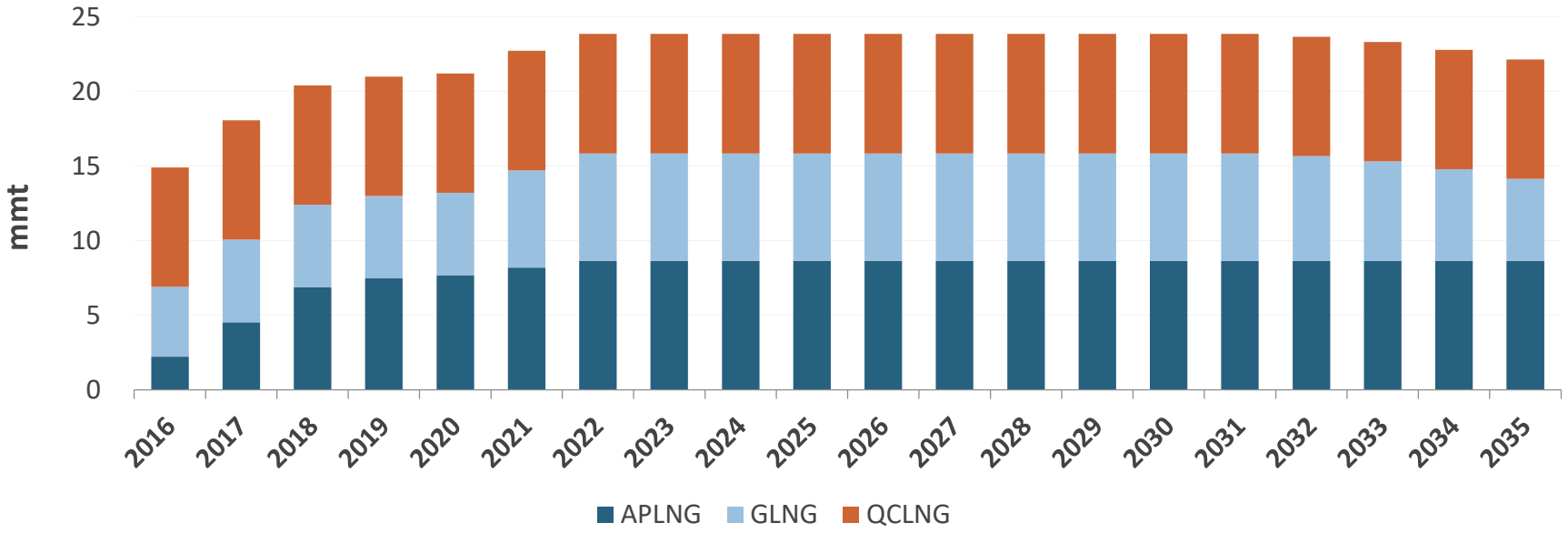
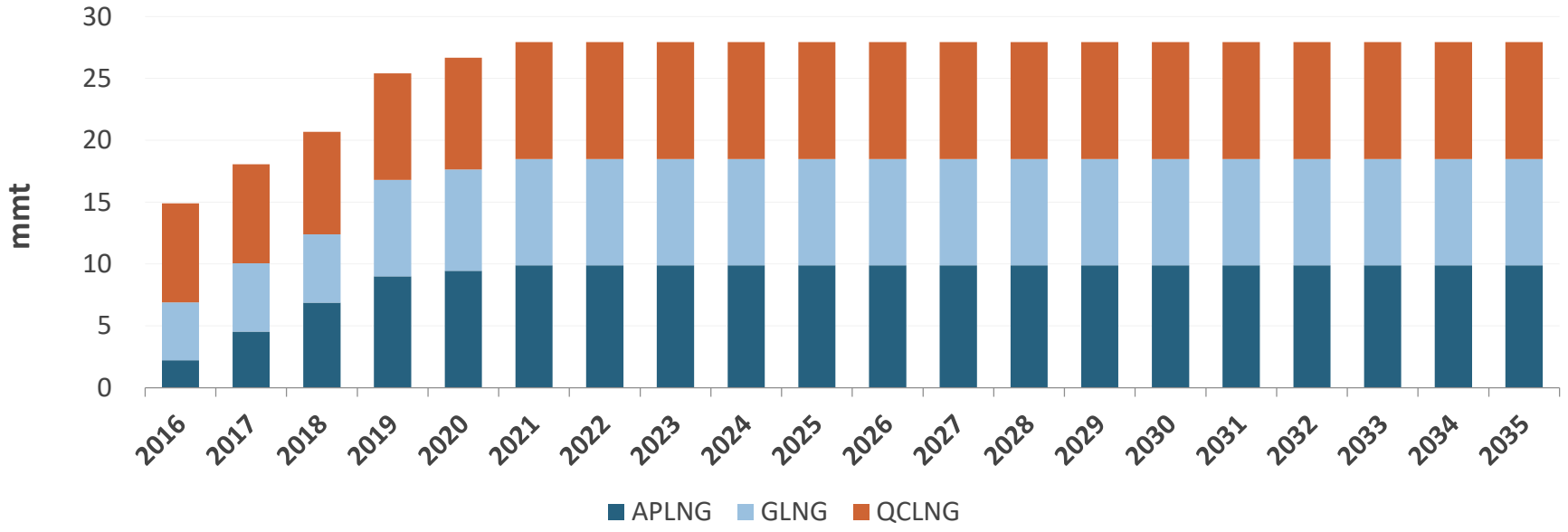
  - Case II—LNG can compete with cheap alternative liquid fuels

East Coast Australia Offtake—Neutral Scenario



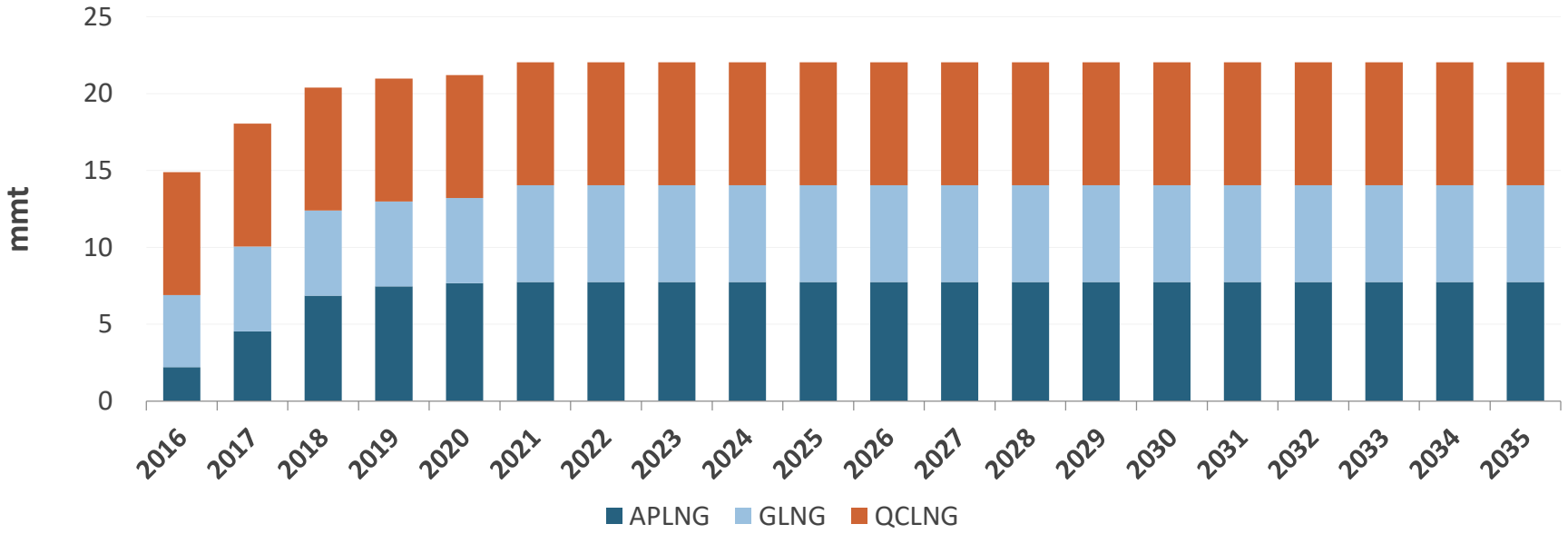
- Based on the neutral case global supply/demand balance, LNG offtake from East Coast Australia (primarily GLNG and APLNG) will be reduced over 2017-2021. As a result, ramp-up from GLNG is also taken as flat from 2017 through 2020. Production from QCLNG is not reduced on the assumption that Shell absorbs these volumes into its global LNG portfolio, and is able to market its LNG.
- From 2022 to 2032, LNG plants are assumed to produce flat out at 8.6 mmtpa for APLNG, 7.2 mmtpa for GLNG, and 8.0 mmtpa for QCLNG. Declines from GLNG are expected from 2033 due to insufficient upstream gas reserves.

East Coast Australia Offtake—Strong Scenario



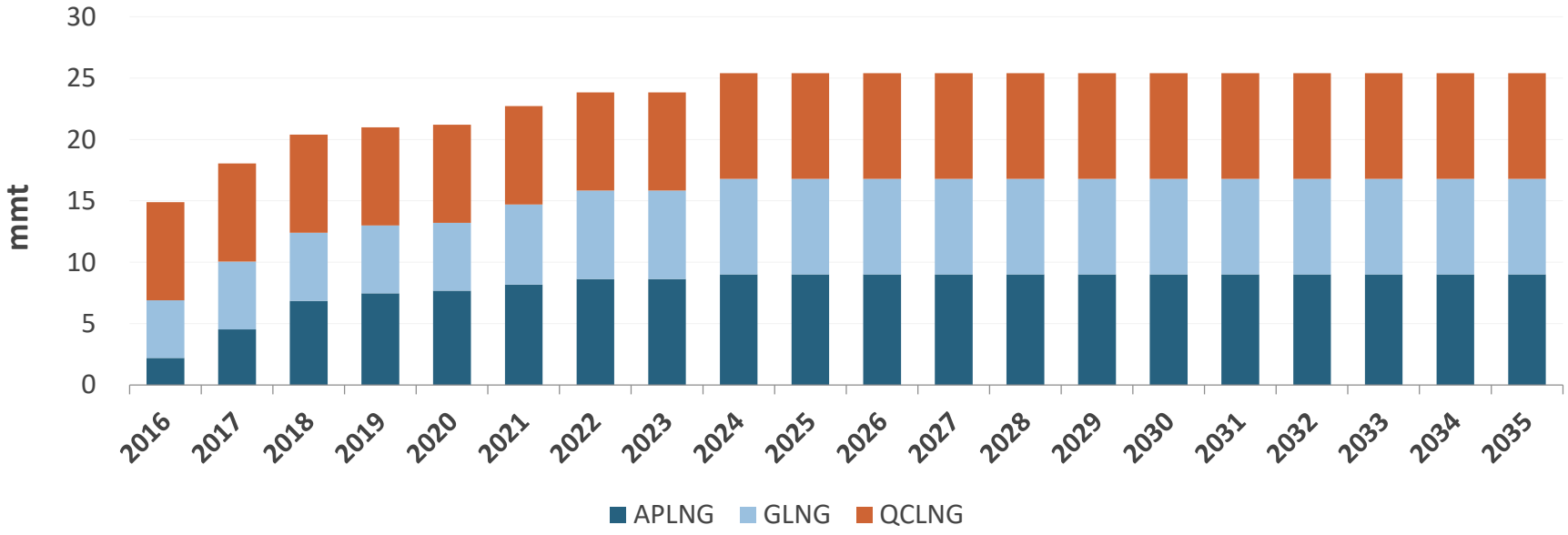
- In the strong-case scenario, high oil price of US$90/bbl would in turn result in high Asian long-term LNG prices, and likely strong spot LNG prices. Projects in East Coast Australia will be incentivized to produce at higher than nameplate capacity.
- Above offtake scenario considers 110% utilization of capacity for all three East Coast Australia LNG projects by 2021 when oil prices reach US$90/bbl.
- A 7th CSG-LNG train is not considered to be built in Eastern Australia in this scenario, as LNG brownfield developments are perceived to be more competitive in other countries such as US, Qatar, PNG, etc., which has lower manpower costs and ample availability of feedgas.

East Coast Australia Offtake—Weak Scenario Case I



- In weak scenario case I, LNG cannot compete with alternative liquid fuels. This results in lower LNG demand and some of East Coast Australia's LNG offtakers may reduce their lifting.
- Over the supply glut period of 2017-2023, plant utilization will be reduced.
- Post-2023, plant utilization will plateau at 90% of contractual quantity (for APLNG and GLNG) assuming LNG offtakers would exercise the "typical" 10% DQT allowance on contractual quantity.
- This scenario builds in the assumption that at low oil prices, sufficient cost reduction in drilling technology will offset the poor economics for development of 2P reserves in the low price environment.

East Coast Australia Offtake—Weak Scenario Case II



- In weak scenario case II, LNG can compete with alternative liquid fuels. This results in higher LNG demand and a rise in LNG prices, although bounded from above by the price of liquids.
- Over the supply glut period of 2017-2023, plant utilizations will be reduced.
- Post-2023, plant utilization will plateau at 100% on the back of high LNG prices.

LNG Offtake Scenario from East Coast Australia—Conclusions

- **Neutral Scenario**
  - Reduced LNG offtake from East Coast Australia over 2017-2021.
  - From 2022 to 2032, LNG plants are assumed to produce flat out at 8.6 mmtpa for APLNG, 7.2 mmtpa for GLNG, and 8.0 mmtpa for QCLNG.
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  - Liquid fuels impose a ceiling of LNG demand and prices.
  - 100% utilization post-2023.

Qualitative Overview of International Risks and Uncertainties Affecting Australia's LNG Projects

Risks in International Markets Affecting Australia's LNG Projects

Oil Price & AUD/USD
- Low Oil and Weak AUD
- High Oil and Strong AUD

US LNG
- Impact on Asia
- Impact on Australia

Changes in Qatar's LNG Strategy
- Volumes
- Prices

Europe Recession
- Push into Asia
- Secondary Demand Generation

Deregulation in Domestic Markets of LNG Buyers
- Japan
- South Korea

Nuclear & Renewables
- Japan
- Asia

COP21
- Fuel Replacement

Risk: Oil Price and AUD/USD Exchange Rate

Oil Price & AUD/USD

- Oil=US$90/bbl, AUD/USD=0.95
- Oil=US$30/bbl, AUD/USD=0.65

- LNG Producers:
  - High oil prices will provide incentives for LNG producers to maximize utilization of their liquefaction plants.
  - Strong AUD/USD will increase their operation costs.

- Domestic gas consumers:
  - High oil prices make use of alternative fuels uneconomical.
  - Strong AUD/USD increases their buying power.

Risk: High Oil Price and Strong AUD/USD—Conclusions

1. High oil prices will result in higher oil product/fuel prices.
2. Hence LNG can compete with alternative fuels.
3. Thus demand for LNG will rise.
4. Long-term LNG prices will rise and hence, in time, will pull up spot prices.
5. Therefore, LNG plants in East Coast Australia will try to maximize production.
6. LNG plants will reach their maximum utilization, i.e., a few % above their nameplate capacity.
7. This will be a double whammy for domestic gas users in East Coast Australia because of:
   a) Higher gas prices due to maximum LNG output
   b) Higher alternative fuel prices
8. However, a stronger Australian dollar will have a mixed impact:
   a) High Australian $ increases gas production costs and hence reduces LNG producers' profit margins. On the opposite side, domestic sales of gas will fetch higher revenues for LNG producers.
   b) Strong AUD will increase buying power of domestic buyers of gas in Australia.
9. If high oil prices result in liquefaction capacity overbuild, there will be a 2nd wave of low LNG prices.

Risk: Low Oil Price and Weak AUD/USD—Conclusions

1. Oil product prices will be lower than the neutral scenario.
2. Long term LNG contract prices will be lower too.
3. For East Coast Australia's LNG producers:
   a) Their US$ cash flows due to the sale of LNG will fall.
   b) Their AU$ cash flows due to domestic gas sales will fall.
   c) Their AU$ operation costs will be lower.
4. To continue the analysis we consider two mutually exclusive cases:
   a) **Case I:** LNG cannot compete with alternative liquid fluids.
   b) **Case 2:** LNG can compete with alternative liquid fluids.

Risk: Low Oil Price and Weak AUD/USD—Conclusions—Case I

Case I: LNG cannot compete with alternative liquid fluids. Then:

1. Demand for LNG will be lower.
2. Some of East Coast Australia's LNG offtakers may reduce their lifting.
3. Hence, there may be an opportunity for the domestic gas users to buy back a portion of the unused gas from offtakers.
   a) This can only happen if the project structure allows for buybacks.
   b) Weak Australian $ reduces the purchasing power of domestic gas buyers.
4. However, East Coast Australia LNG producers may have the incentive to keep their utilization rates high.
   a) This will raise domestic gas prices in East Coast Australia and hence can compensate the LNG producers for lower cash flows they are incurring due to low LNG prices.
   b) Moreover, since the Australian $ is weak, operation costs of LNG producers will be lower.
5. The extent to which either of the 3 or 4 above may happen will depend on the economics of each plant and on the legislation.

Risk: Low Oil Price and Weak AUD/USD—Conclusions—Case II

Case II: LNG can compete with alternative liquid fluids. Then:

1. Demand for LNG will be higher.
2. LNG price should rise but would still be bounded from above by the price of liquids.
   a) Hence, utilization rates of liquefaction plants will increase but probably not as high as it is for the high oil price case.
   b) Weak Australian $ reduces operation costs and helps the bottom line of producers.
   c) Domestic gas prices will be higher than weak scenario case I.
   d) However, the ceiling imposed by inexpensive liquids will limit the upside for LNG producers.
3. Domestic buyers of gas will need to buy higher priced gas with cheaper Australian $.
   a) Hence, gas purchase will feel more expensive to them.
   b) Yet, some of the local consumers of domestic gas may have the ability to switch to other liquid fuels.
   c) Hence, the price rise in domestic gas may not be as bad as it is for the high oil price case.

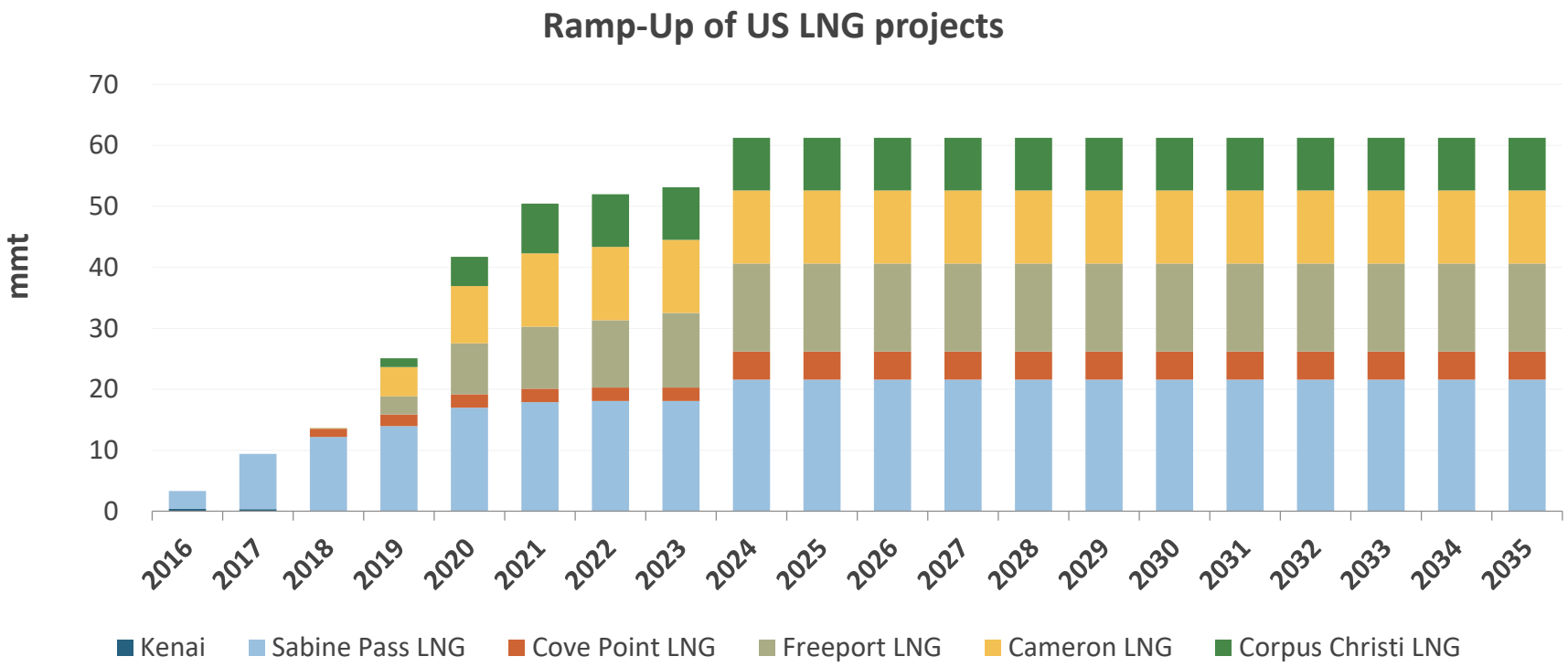
Risk: US LNG

US LNG

- Impact on Asia
- Impact on Australia

- Since US LNG is delivered FOB, it is destination free and is expected to supply markets that offer the best price.
- The destination of US LNG will depend on the differential between Henry Hub gas prices and the price of LNG at the destination, as well as the shipping costs.
- US LNG's arrival in Asia may supply the demand that otherwise would have been fulfilled with Australian LNG.

Risk: US LNG—Buildup



- US LNG projects are expected to ramp-up over 2016-2023 to around 60 mmtpa.
- The chart only considers US LNG projects that are currently operating or under construction, and does not take into account any future projects.

Risk: US LNG—Conclusions

1. In our base case, we assume 22 mmt of US LNG to arrive in Asia by 2022.
2. The only LNG offtaker of East Coast Australia LNG that has contracted for US volumes is KOGAS. KOGAS' total US LNG contracted volumes is for 3.5 mmt for 20 years.
3. Compared with 25.4 mmt of liquefaction capacity in East Coast Australia, KOGAS' US LNG commitment is a small volume.
4. Therefore, most of the US volumes arriving in Asia are not directly competing with East Coast Australia LNG projects.
5. However, the US volumes may supply the demand that would have otherwise been fulfilled with Australian LNG.
6. Depending on the price of Henry Hub and competitiveness of HH-linked LNG into Asia versus Asia LNG prices, there could be two scenarios:
   a) **If US LNG in Asia is competitive:** Presence of US LNG will push back uncommitted LNG from Australia. This reduces LNG production and hence offtake from Australia LNG projects.
   b) **If US LNG in Asia is not competitive:** Pressure on the global supply glut will be reduced. FGE expects negligible impact on the offtake from Australia LNG projects.

Risk: Qatar's LNG Strategy—Conclusions

1. Since the cost of producing LNG or adding additional brownfield projects are far cheaper for Qatar than Australian projects, Qatar can easily push out Australian LNG.
2. In this case, off-takers of Australian LNG projects with higher prices may reduce their lifting and hence this may result in lower demand from Australian projects.
3. This in turn will result in more gas available for Australia's domestic market.
4. If the price of domestic gas is higher than the cost of gas production, the extra supply of gas to the domestic market will continue.

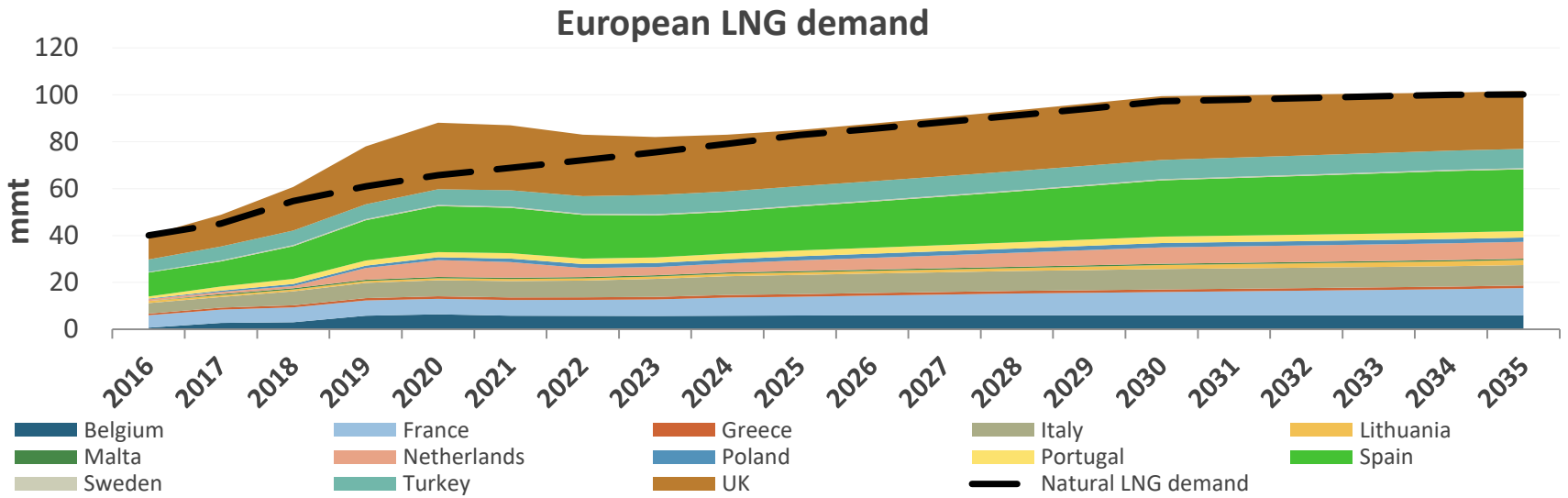
Risk: European Recession

European Recession

- Push into Asia
- Secondary Demand Generation

- So far, Europe has been absorbing the extra LNG supplies that other markets are unable to take.
- A European recession will reduce demand for LNG and hence the price of LNG will fall.

Risk: European Recession



- "Natural LNG demand" line represents the theoretical European LNG demand which would be a function of depleting domestic gas resources, and natural demand growth. FGE's neutral case demand recognizes that lower LNG prices will generate extra demand and hence some LNG will be pushed into Europe over 2017-2023.
- If Europe enters recession, LNG uptake may be even lower than the "natural LNG demand" forecasted. Any LNG not absorbed into Europe will then have to come back into the market, including Asian. Consequently, regional LNG supply increases and exerts downward pressure on spot LNG prices. As a result, selected Australian LNG projects with higher marginal cost of production will have to decide if they still want to produce beyond their long-term contractual commitment.

Risk: European Recession—Conclusions

1. A European recession will reduce demand for LNG and hence the price of LNG will fall.

2. Cheaper LNG may create either or both of the alternatives explained below.
    a) The volumes pushed out of Europe will find a home in Asia, at a reduced price, and nudge out some of the LNG from Australia.
        - This will result in more gas for the domestic markets in Australia.
    b) The low price of short to mid-term LNG will create a demand surge. In this case we may witness a price cycle where the extra demand due to low prices may stabilize the price around equilibrium.
        - We believe, the size of this secondary demand will not fully compensate for the lost original demand. Hence, low LNG prices will prevail and there will be more gas available for the domestic markets in Australia

Risk: Deregulation in Domestic Markets of LNG Buyers

Deregulation in Domestic Markets of LNG Buyers	• Japan • South Korea

- Downstream markets in Japan and Korea are in the process of full deregulation.
- The deregulation has changed the risk profile of the LNG buyers as they cannot pass on the risk to the downstream markets anymore.
- To manage their risks, the LNG buyers are reducing purchases through long-term LNG contracts. Consequently, they try to provide supplies for their minimum base demand via long-term contracts and fill the gap by mid- to short-term LNG.

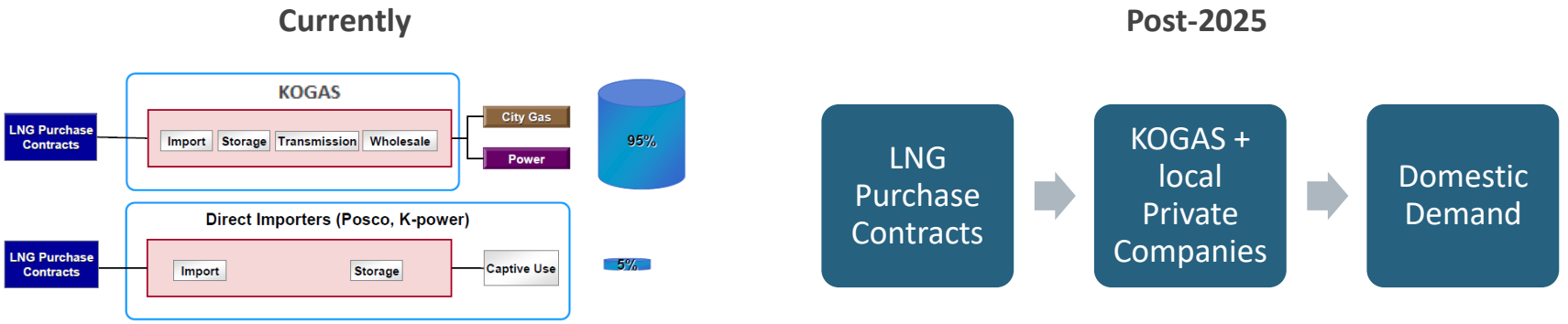
Risk: Deregulation—Japan

1. METI has the mandate to deregulate electricity and city gas markets in Japan.
2. This has resulted in alliances between a few LNG buyers and power generators in Japan.
3. Due to deregulation Japanese buyers face a multitude of uncertainties including:
    a. Demand uncertainty
    b. Price risks
    c. Competition risks
4. The multitudes of risks has made Japanese buyers more cautious.

Risk: Deregulation—Japan Timetable

Policy	METI Intention	Current Status & Outlook
2016 Power Sector	• Full deregulation • Increase competition, weaken monopoly roles of electric power utilities with new entrants • Give consumers a choice of suppliers	• Open the residential sector to new entrants in April 2016 • Split power generation and transmission sections of electric utilities in April 2020
2017 City Gas Sector	• Full deregulation • Increase competition, weaken monopoly roles of city gas utilities with new entrants • Give consumers a choice of suppliers	• Open the residential sector to new entrants in April 2017 • Mandate TG, OG, and Toho Gas (Japan's top 3) to separate their gas pipeline sections into new entities in April 2022

Risk: Deregulation—Korea



Source: Kogas

- The 1998 gas enterprise law allows private companies to import LNG for their own use (POSCO and SK E&S), as long as they build their own storage and use the gas at their own facilities.
- GS Caltex will join POSCO/SK E&S a large-scale private importer. POSCO has its own terminal in Gwangyang. GS Caltex and SK E&S have a joint terminal in Boryeong which is scheduled to be commissioned in 4Q 2016.
- In a statement on June 14, 2016, MOTIE said it would allow local, private companies to import LNG directly and resell in the domestic market from 2025.

Risk: Deregulation—Conclusions

1. FGE believes that deregulation in Japan is not necessarily a disadvantage for the sellers. Sellers who can help the buyers to mitigate their risks can score benefits from Japanese buyers.
2. However, to manage their risks, the LNG buyers are reducing purchases through long-term LNG contracts. Consequently, they try to provide supplies for their minimum base demand via long-term contracts and fill the gap by mid- to short-term LNG.

Risk: Deregulation—Conclusions (Continued)

3. This behavior of buyers may result in complex dynamics:
    a) Periods of demand push and pull where at times it may seems as there is an oversupply of LNG and at other times the market may seem to be short.
    b) This in turn will increase the volatility in demand and hence causes more volatility in price of LNG.
    c) LNG demand volatility may cause domestic gas supplies to ebb and flow in Australia. High LNG demand will cause gas shortage in East Coast Australia whereas low LNG demand will result in more gas supplies for the domestic market.
    d) The resulting volatility in domestic gas will not benefit most of the buyers of domestic gas in Australia. The buyers require stable supply for their long-term business plans at reasonable prices. The sellers would like to sell their gas at fair prices as well. However, volatility makes it difficult to gauge what the fair price should be.

Risk: Nuclear and Renewables

Nuclear & Renewables

- Japan
- Asia

- More nuclear and/or renewable energy will result in less LNG demand.
- Consequently, some of the offtakers of Australia LNG may not take all of their contracted volumes.

Risk: Nuclear and Renewables—Japan

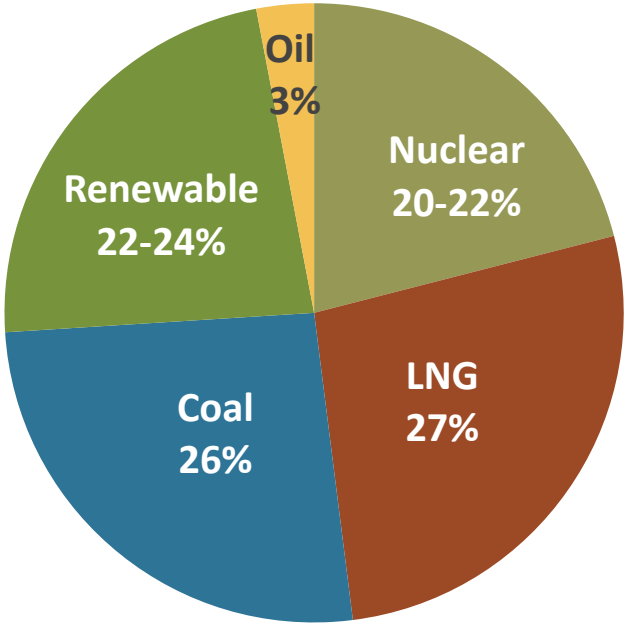
Nuclear & Renewables • Japan

- Japan is the largest LNG buyer in the world by volume.
- Currently, 21% (17 mmt) of Japan's total supply is coming from Australia.
- Therefore, any change in Japan's LNG policy can have a significant impact on Australia LNG.
- At the lower end Japan's demand will dip to 76 mmtpa of LNG in 2020 and will further decrease to 63 mmtpa by 2030.
- For the high case Japan's demand will rise to 80 mmtpa of LNG in 2020 and fluctuate within this range to 2030.

Japan: What Is METI's Generation Mix?

- Nuclear: Base-load capacity
- Coal: Base-load capacity
- LNG: Middle-load capacity
- Oil: Peak-load capacity
- Renewable: Important for environmental and political target

Targets for 2030 Generation Mix



***Note**: METI's generation mix takes into account the effects of deregulation.*

Japan: What Are the Effects of METI's Generation Mix Targets?

1. Under the Abe Administration, there is no long-term energy scenario without nuclear.
2. Under METI's base-case scenario, renewables will make up 22%-24% of the generation mix, whereas nuclear will make up 20%-22%. However, FGE believes that both the renewable and nuclear targets are too ambitious, and LNG will be the only viable and realistic option for Japan to securely supply power demand in the near term.
3. Therefore, the amount of nuclear capacity available for power generation will pose either upside or downside risks to LNG demand.
4. Expectations on restart of nuclear power capacity can be divided into two distinct sections:
    a. Short-term nuclear capacity—2016 to 2017
    b. Long-term nuclear capacity—2017 to 2030

Risks: Nuclear and Renewables—Asia

Nuclear & Renewables

- Asia

- Apart from Japan, Korea and Taiwan are two other important countries whose nuclear policy may affect LNG demand.

Risks: Nuclear and Renewables—Conclusions

1. With more nuclear power and renewables, some of the not-taken LNG volumes will find its way back in Australia's gas market and hence may provide the buyers of domestic gas with more supply.
2. One, however, has to note that, if the push for renewables in Australia is strong enough, the gas demand in Australia may actually drop, because gas is a fossil fuel. In this case:
    a) On the basis that domestic gas supply/demand drives domestic gas prices, given a fall in gas demand with constant gas supply, domestic gas prices in Australia may fall further.
    b) If this price fall pushes the gas prices below their marginal cost of production, some gas production in Australia may shut in.

Risks: COP21

COP21

- Fuel Replacement

- Impacts of COP21 will be different for each country depending which fuels and to what extent they may be replaced by gas.
  - Marine Fuels
  - Oil & Fuel Oil
  - Coal

- Our neutral scenario includes impacts of COP21.

Risks: COP21—Fuel Replacement—Marine Fuels

1. IMO, International Maritime Organization, estimates that international shipping accounts for 2.2% of CO_2 anthropogenic emissions.
2. Implementation of IMO's 0.5% global sulfur cap regulation for international shipping will require moving away from marine fuel oil and using alternative fuels.
3. LNG is one fuel of choice but most of the existing fleet will need to be converted. Such conversions are extremely costly.
4. Alternatively, the shippers could move to cleaner fuels such as gasoil and/or install flue gas scrubbers.
5. We believe, that LNG bunkering will grow over the coming years but its growth will be limited by the availability of gasoil. However, significant policy shifts may change this view.

Risks: COP21—Conclusions

1. Effects of COP21 on LNG demand will depend on each country and its policies.
2. Our neutral scenario has already considered the effects of COP21 on each country's LNG demand, and is reflected in the aggregated Global and Asia LNG demand.

Qualitative Overview of Domestic Risks and Uncertainties Affecting Australia's LNG Projects

Risks in Domestic Markets Affecting Australia's LNG Projects

More Moratorium on Gas Production

Lift of Moratorium on Gas Production

Domestic Market Obligation

Domestic Shale Gas Production

Coal Policy

Domestic Risk: More Moratorium on Gas Production

1. Public opposition or environmental concerns may restrict new developments in gas production.
2. Although, it is difficult to see such restrictions being applied to the existing projects, they may affect any new field additions and hence reduce availability of new gas supplies which could have been tied into existing or even new liquefaction projects.

Domestic Risk: Lift of Moratorium on Gas Production

1. More upstream gas development in the state of Victoria, could potentially supply the surrounding market areas in Australia.
2. In this case, the replaced gas would be pushed back.
3. This in return makes more gas available for liquefaction or for domestic usage.
4. Since, a new wave of LNG plants in East Coast Australia is unlikely, not all of the pushed back gas will be liquefied and hence some could be available for the domestic buyers of gas.

Domestic Risk: Domestic Market Obligation

1. Domestic market obligation is a scheme that earmarks part of the produced gas for domestic consumption only.
2. A well planned DMO will ease supply constraints for the domestic gas and will be beneficial to the buyers of domestic gas.
3. It is unlikely that DMOs will be retroactively implemented on the existing gas production.
4. Therefore, only new supplies may be affected by a DMO plan.

Domestic Risk: Domestic Shale Gas Production

1. Energy Information Administration (EIA) has estimated Australia's recoverable shale gas at around 437 TCF.
2. Moreover, Australia enjoys regulatory and technological know-how of monetizing its shale gas resources.
3. Despite these facts, Australia has not developed its shale gas due to a variety of reasons:
    a) Cost: CSG is well developed in Australia but shale technology is new.
    b) LNG Prices: Existing liquefaction plants already have dedicated supply sources and the current low LNG prices prohibit building new ones.
    c) Poor performance of oil/gas companies due to low oil/gas prices: This resulted in many companies having to cut back shale development due to financial hardships.

Domestic Risk: Coal Policy

1. Currently coal constitutes about 32% of Australia's primary energy consumption (PEC).
2. Moreover, about 61% of electricity generation in Australia is from coal. Gas makes up 22% of power generation, renewables provide 14.9% of power generation and oil's share is 2.1%.
3. Therefore, any change in coal policy may affect natural gas demand significantly. Significant increases in domestic gas demand could potentially trigger changes to policies with regards to new gas production for LNG projects, so as to reduce their offtake and divert the gas to meet domestic gas requirement.

FACTS GLOBAL ENERGY

Thank You

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