PLENARY SESSION 3

ENHANCING GAS SUPPLY SECURITY AND DIVERSIFICATION: NEW SOURCES AND MARKETS
NATURAL GAS MARKET LONG-TERM OUTLOOK

- Natural gas demand to increase at 1.6% pa in IEA's New Policies Scenario (45% growth to 2040)
- Natural gas overpasses coal to become the second energy source by 2030
- China is the largest growth demand center for natural gas, and will have higher LNG imports than Japan by 2040
- Other emerging Asian economies represent the second largest source of gas demand growth
- Share of LNG in gas trade expands from 42% today to 60% by 2040

Source: WEO 2018
THE LNG DIVERSIFICATION (1990-2017)

Source: IHS Markit, IEA, IGU
DIFFERENT GROWTH RATES AMONGST LNG IMPORT MARKETS

2. "Niche" markets
   - 44 bcma demand
   - 49% yoy growth\(^2\)

3. Established markets
   - 288 bcma demand
   - <1% yoy growth\(^2\)

China
   - 52 bcma demand
   - 20% yoy growth\(^2\)

1. "Niche" markets defined as new LNG importers since 2009; 2. Average annual growth in LNG demand from 2013-17

Source: BCG, Cedigaz
LNG LIQUEFACTION CAPACITY TO INCREASE BY A THIRD IN 2016-21…

Source: Cedigaz, Platts, BCG analysis
... BUT MORE IS REQUIRED BEYOND 2022

Post-2022 LNG supply growth yet to be sanctioned...

LNG supply forecast (mtpa)

LNG demand - 5% pa growth
+87 mtpa

LNG demand - 3% pa growth

2018 2019 2020 2021 2022 2023 2024 2025

New source: Pre-FID Producing
New source: Post-FID

... Requiring $110-160bn capital

Pre-FID capital requirement (Sbn)

110
160

Low case High case

1. Only includes capex for liquefaction capacity - based on estimate range of $1,000-1,500/mtpa capacity
Source: Rystad, IHS, BCG analysis
A MAJOR INFRASTRUCTURE INVESTMENT IS REQUIRED FOR GAS ACCESS IN CITIES

Source: IEA, BCG, DW
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