

# Global Natural Gas

## Aspen Energy Week



Summer 2018



# Cautionary statements

## Forward-looking statements

The information in this presentation includes “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements other than statements of historical fact are forward-looking statements. The words “anticipate,” “assume,” “believe,” “budget,” “estimate,” “expect,” “forecast,” “initial,” “intend,” “may,” “plan,” “potential,” “project,” “should,” “will,” “would,” and similar expressions are intended to identify forward-looking statements. The forward-looking statements in this presentation relate to, among other things, gas production and costs, shipping activity, LNG derivative transactions, future demand and supply affecting LNG, and general energy markets and other aspects of our business and our prospects and those of other industry participants.

Our forward-looking statements are based on assumptions and analyses made by us in light of our experience and our perception of historical trends, current conditions, expected future developments, and other factors that we believe are appropriate under the circumstances. These statements are subject to numerous known and unknown risks and uncertainties, which may cause actual results to be materially different from any future results or performance expressed or implied by the forward-looking statements. These risks and uncertainties include those described in the “Risk Factors” section of our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 filed with the Securities and Exchange Commission (the “SEC”) on March 15, 2018 and other filings with the SEC, which are incorporated by reference in this presentation. Many of the forward-looking statements in this presentation relate to events or developments anticipated to occur numerous years in the future, which increases the likelihood that actual results will differ materially from those indicated in such forward-looking statements.

The forward-looking statements made in or in connection with this presentation speak only as of the date hereof. Although we may from time to time voluntarily update our prior forward-looking statements, we disclaim any commitment to do so except as required by securities laws.

# Today's discussion



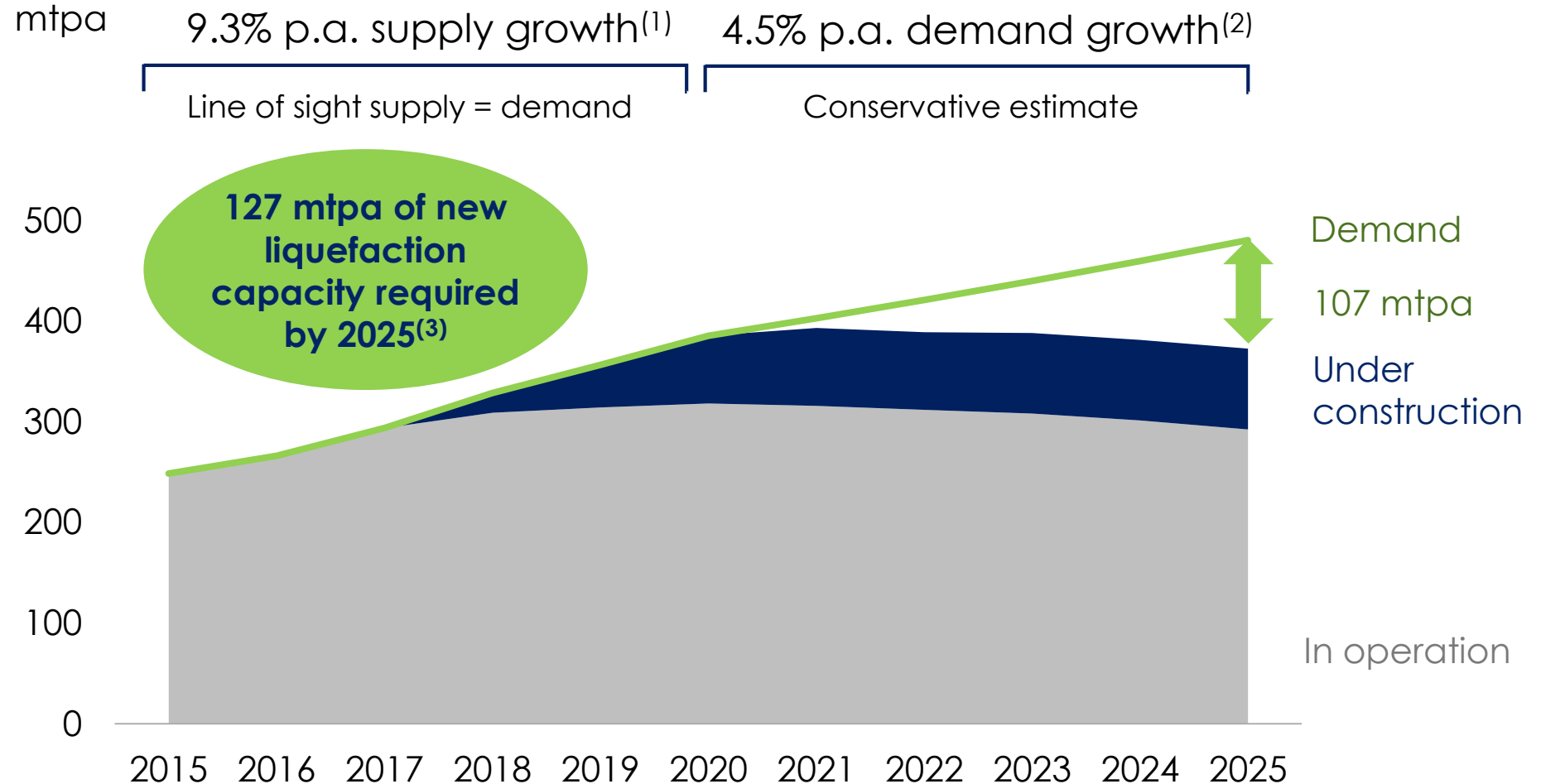
- **Growing global demand for gas**
- **Gas as disrupting fuel – decarbonizing the UK**
- **LNG – natural gas is more transportable than ever**
- **Gas is rapidly becoming a global commodity**

# Growing global demand for gas

## Key drivers



## Demand outlook

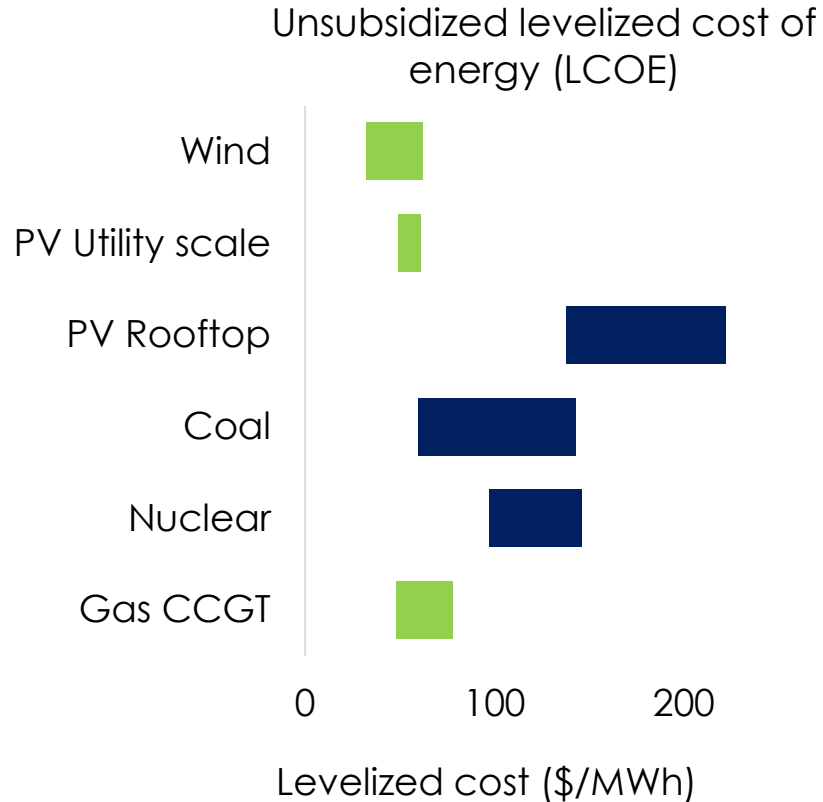


Sources: Wood Mackenzie, Tellurian Research.

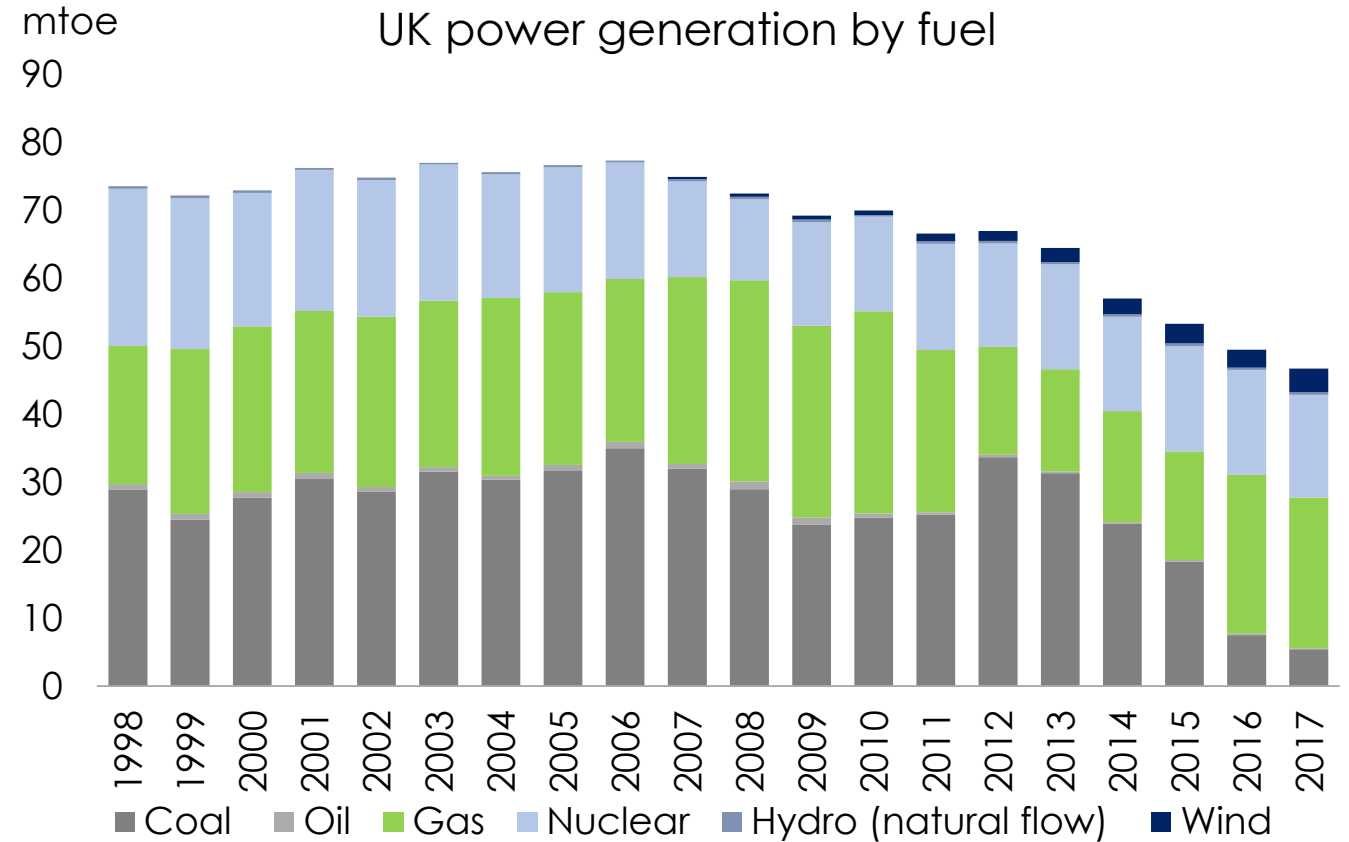
Notes: (1) Estimated supply from existing and under-construction projects.  
 (2) Based on assumption that LNG demand grows at 4.5% p.a. post-2020.  
 (3) Assumes 85% utilization rate.

# NG as disrupting fuel – decarbonizing the UK

Gas-fired power generation is a cleaner, more affordable, and reliable backup to renewables

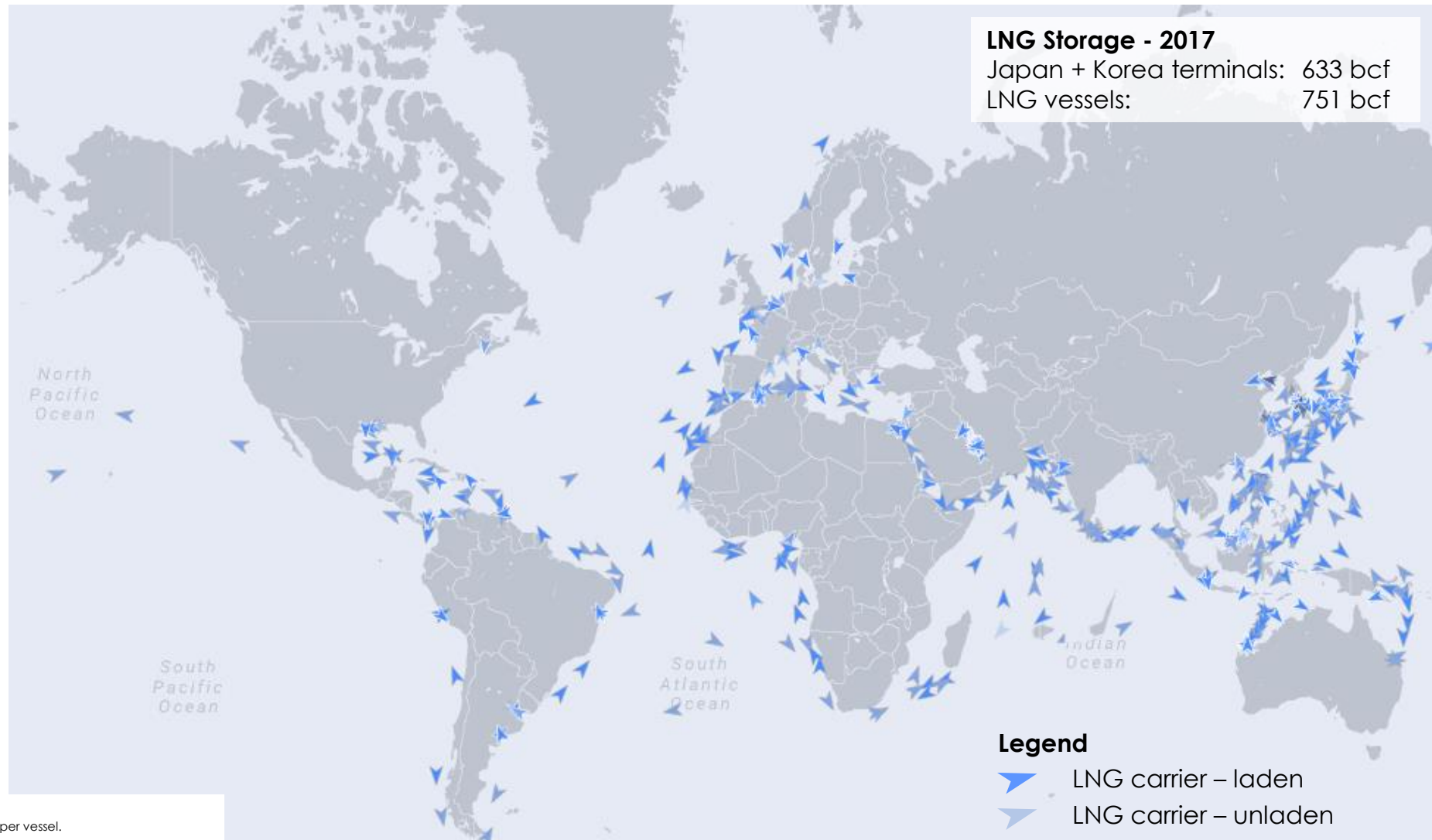
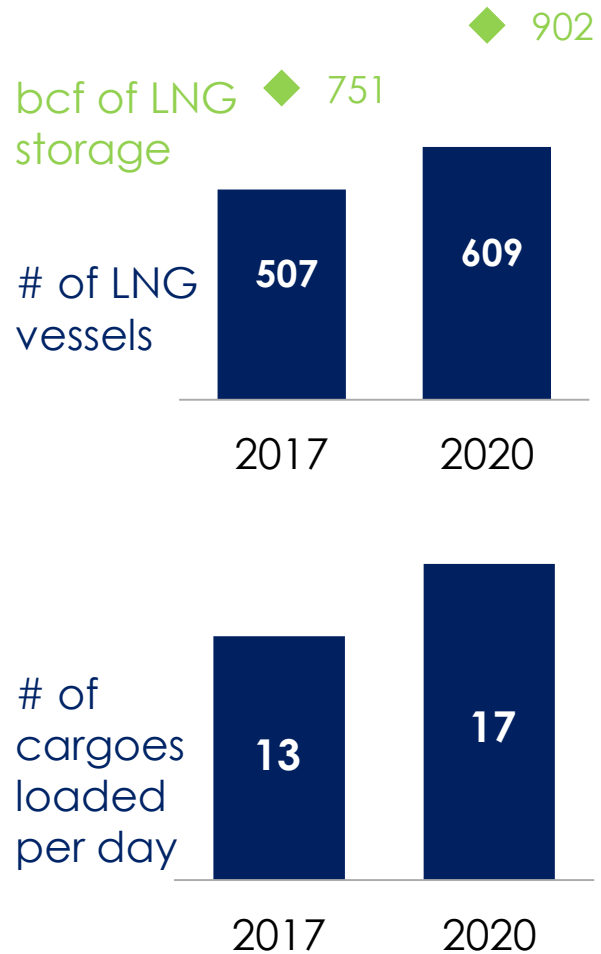


Natural gas share in UK's power mix grew to 42% as higher CO2 prices incentivized dispatch of cleaner fuels; Europe considering similar policies



Source: Lazard, UK Department for Business, Energy and Industrial Strategy (2018).

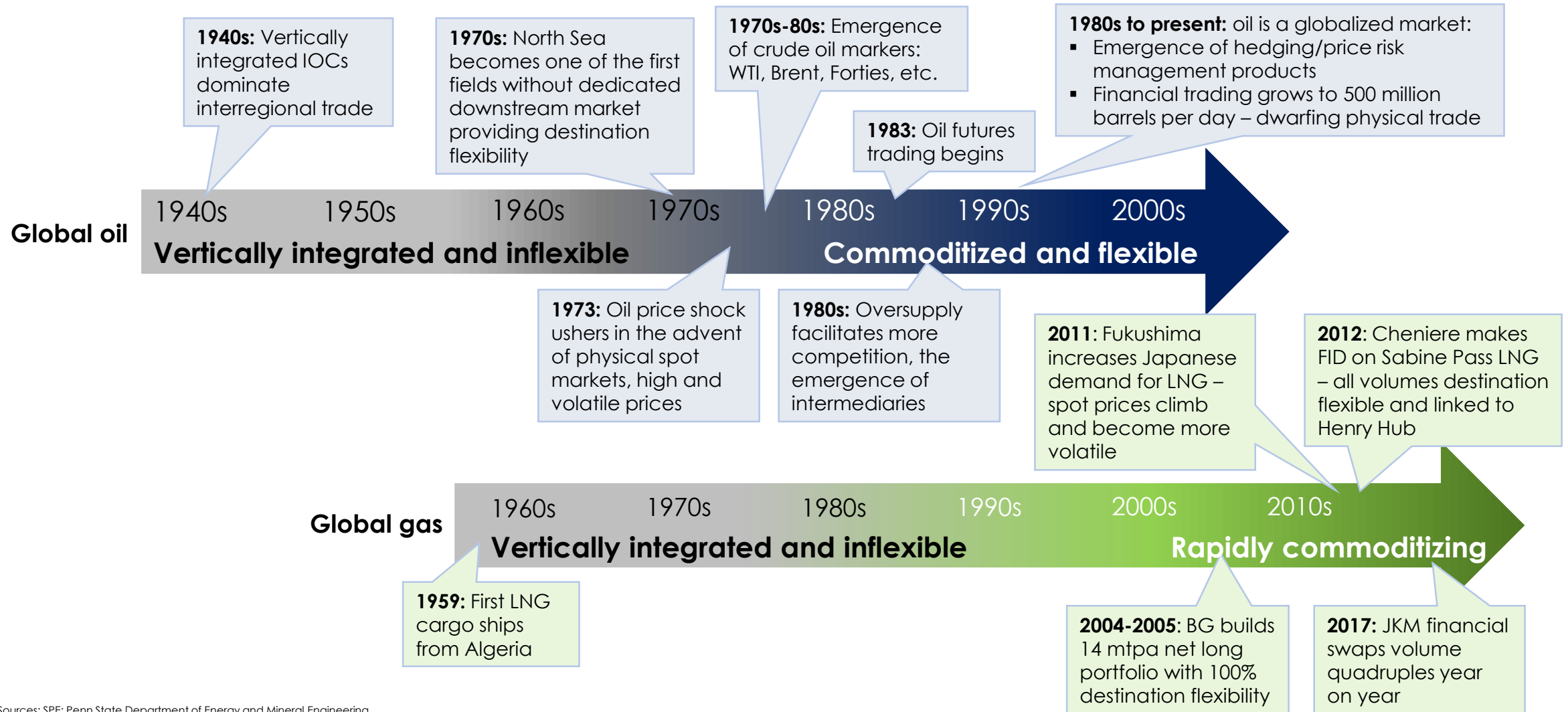
# LNG – gas is more transportable than ever



Sources: Kpler, Maran Gas, IHS, Wood Mackenzie.  
 Notes: LNG storage assumes half of fleet is in ballast, 2.9 bcf capacity per vessel.  
 Average cargo size ~2.9 bcf, assuming 150,000 m<sup>3</sup> ship.  
 In 2017, approximately a third of all LNG cargoes are estimated to be spot volumes.  
 Based on line of sight supply through 2020.

# Gas is rapidly becoming a global commodity

Today's LNG market exhibits remarkable similarities to the global oil market of late 20<sup>th</sup> century



Sources: SPE; Penn State Department of Energy and Mineral Engineering.

# Commoditization – growing liquidity

Long-term contracts are less prevalent

Short-term<sup>1</sup> LNG trade represents ~30% of market

## Aggregate contract quantity by duration

mtpa

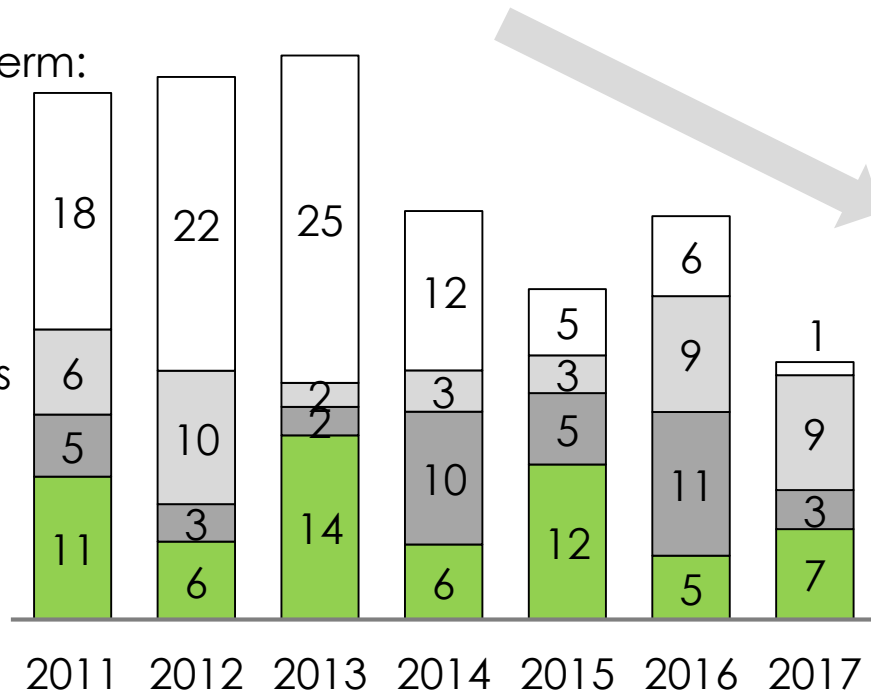
Contract term:

≥ 20 years

11-19 years

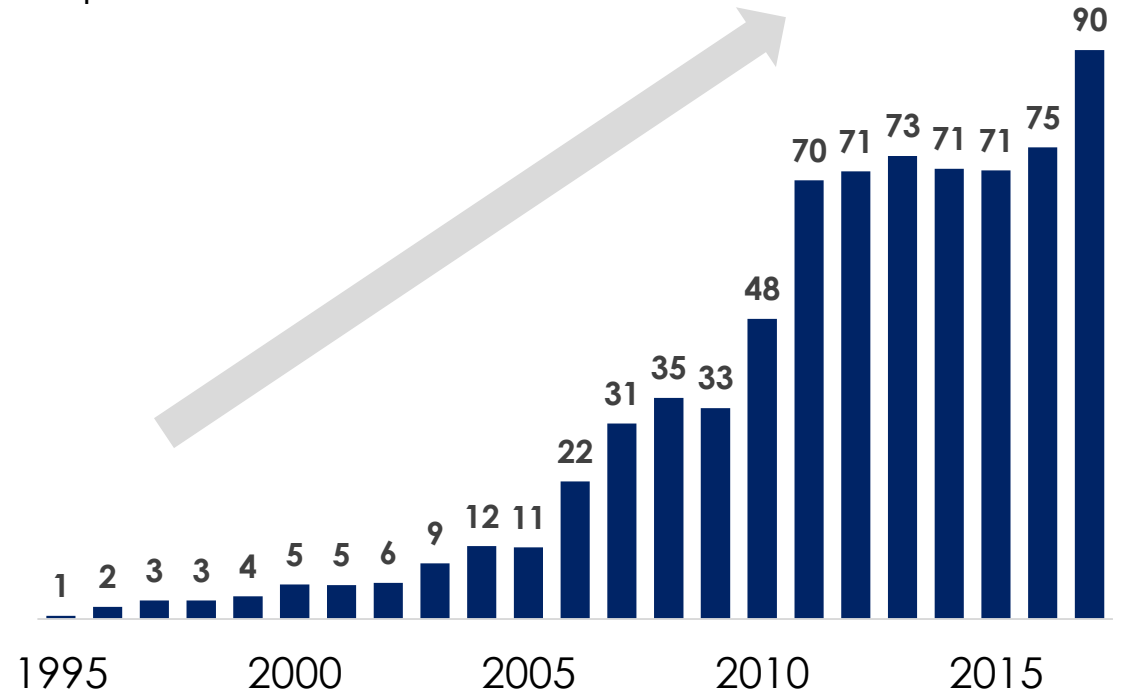
5-10 years

< 5 years



## Short-term transactions

mtpa



Sources: Wood Mackenzie, IHS.  
Notes: 1) Non long-term LNG trade – less than 2 years.

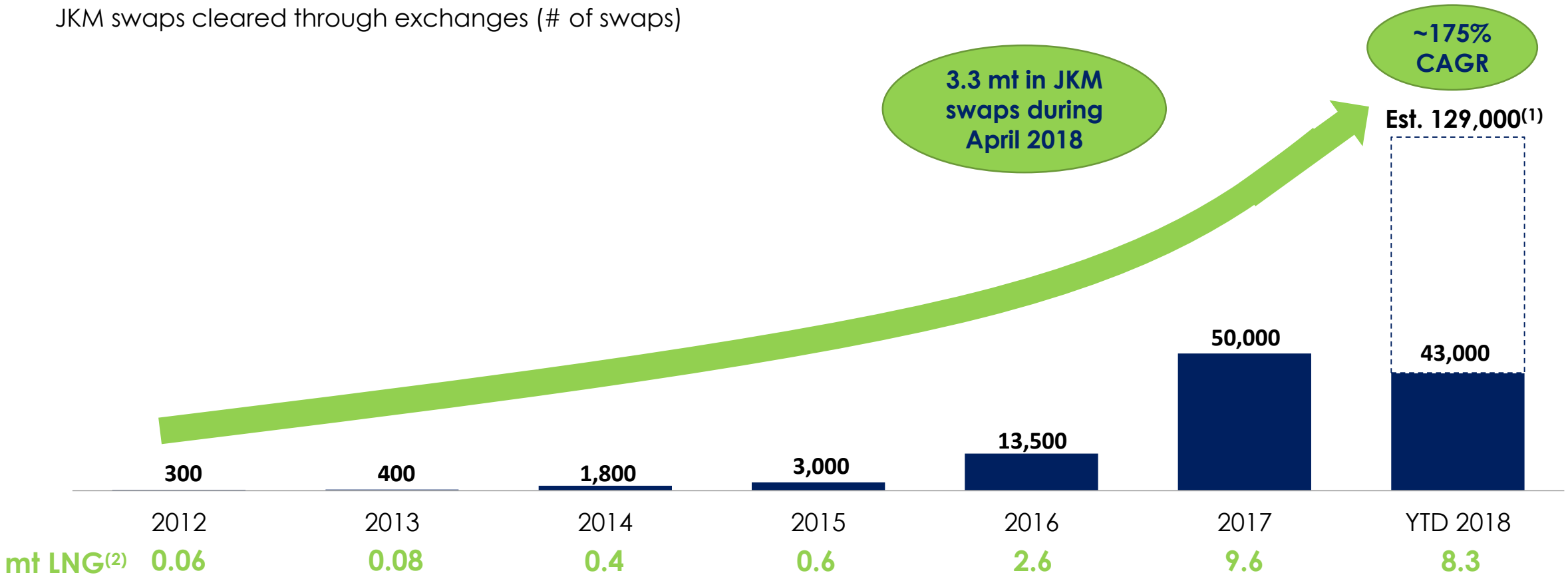


# Commoditization – growing financial markets

JKM swaps cleared through exchanges have grown at 175% p.a.

## Asian LNG derivative volumes

JKM swaps cleared through exchanges (# of swaps)



Sources: S&P Global Platts, ICE, CME.  
 Notes: (1) Based on year-to-date swaps through April 2018  
 (2) Assumes 1 lot = 10,000 mmbtus