## 

## Deep Dive Gas Midstream

Christopher Delbrück, Chief Financial Officer Keith Martin, Chief Commercial Officer

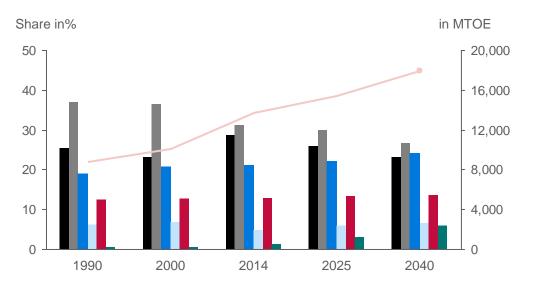


Т.	Gas market trends	Keith Martin
н.	Uniper's Gas Midstream business	Keith Martin
ш.	<b>Composition of earnings</b>	Christopher Delbrück
IV.	Positioning for the future	Keith Martin
V.	Q+A	



## Gas will be key in supporting the transformation to decarbonization

### Shares of primary energy demand



Coal

Gas

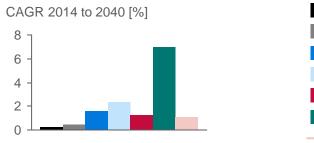
RES

Nuclear

Hydro & Biomass

Total primary energy demand

Oil





**Key highlights** 

Increasing energy demand

#### from non-OECD countries, driven by strong economic growth, particularly in Asia

 Non-OECD Asia, including China and India, accounts for more than half of the world's total increase in energy consumption over the projection period

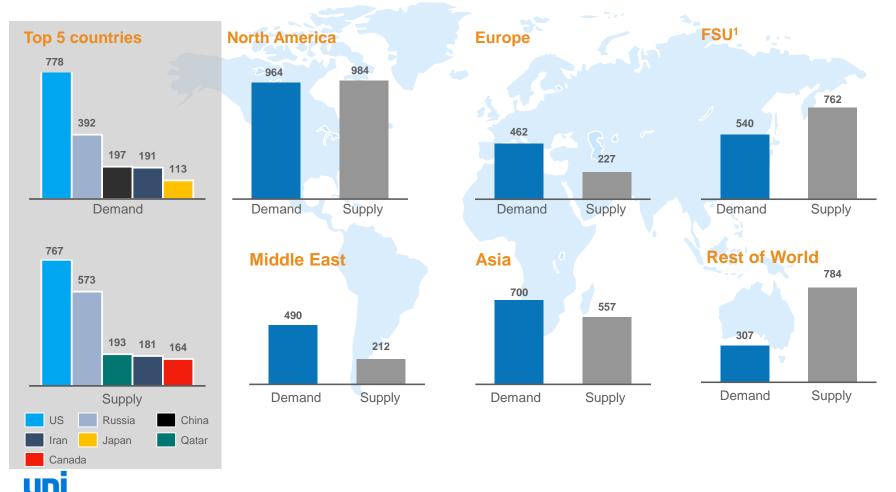
## Natural Gas to benefit from transition to low carbon world

- In a transforming energy world natural gas will play a key role supporting the transition towards a low carbon world based on low carbon footprint
- Natural gas is flexible to react quickly to supply imbalances and demand peaks, hence ideally linked with intermittent renewable options



# Europe, Middle East and Asia need natural gas imports

### Global Demand and Supply (2015, bcm)

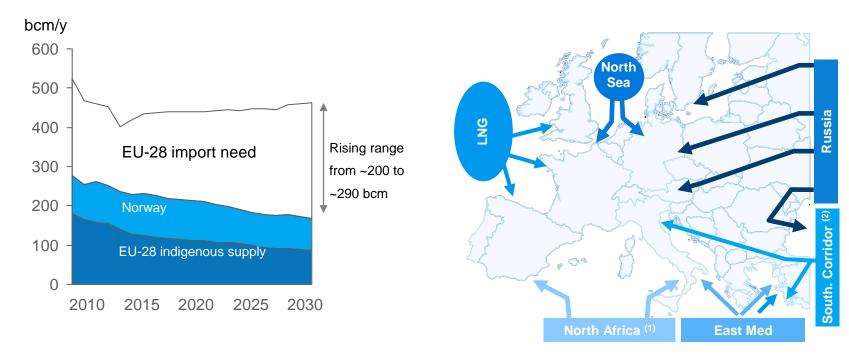


1. Former Soviet Union Source: BP Statistical Review of World Energy 2016

## Increasing European import need driven by decreasing indigenous production

## EU 28 – Indigenous supply, demand scenarios and import requirements

**Current & future supply options** 



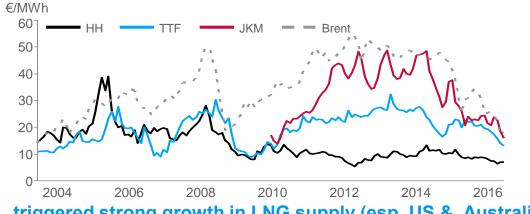
Source: IHS Cera, July 2016. European Long Term Supply & Demand Outlook

1) Pipeline + LNG 2) Azerbaijan, Irak, Iran, Turkmenistan

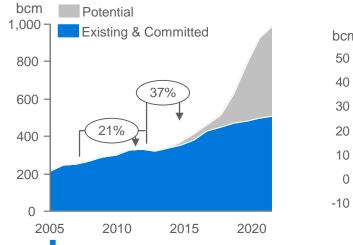


# Depending on price environment this increased import may come from LNG

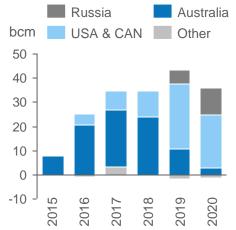
#### Global gas price development driven by Asian demand...



### ...triggered strong growth in LNG supply (esp. US & Australia)



UN



### **Key highlights**

## End of investment cycle expected to bring price upside

- Low prevailing prices
- Reduced demand growth outlook
   and discouraged new FIDs
- ➡ Leading to price upside post 2020

#### LNG can be a source to close supply gap - but only if Europe is setting the price

- The strong growth rate of LNG supply will make new supply available
- But Europe is not alone with its increasing need for gas imports

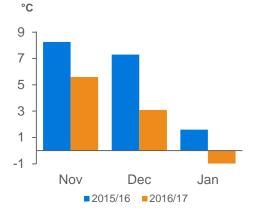
Source: Total, BP; Note: HH (Henry Hub) as reference for the US gas market, TTF (Title Transfer Facility) in the Netherlands for Europe and JKM (Japan Korea Marker) for Asia

# Flexible LNG can divert into Asia triggering need for storage and secure supply in Europe

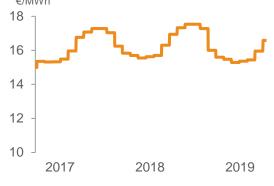
### Gas Spot Prices 2016/17 vs. 2015/16 (TTF)



### Temperatures Winter Season 2016/17 vs. 2015/16 (Germany)



## TTF price forward curve



#### Gas Storages – Fill Levels (Europe)



## Key Highlights

## Security of supply more challenging

- 2016/17 showed the pattern of a 'normal' winter with temperatures 1–2°C below previous year's level
- A cold spell and unforeseen demand for gas fired generation brought European gas reserves to unexpected low levels
- Lower indigenous production in Europe will further increase the challenges in extreme scenarios

## Market does currently not compensate for security of supply

- Summer/ Winter spread at historic lows. Injection in summer only marginally profitable on the curve
- Spreads/ storage earnings will have to pick up to secure security of supply



## Our gas midstream business well positioned to be a key beneficiary

## **Decarbonisation kick-starts gas to power**

- Growing due to long-term coal decommissioning and fuel switching
- > Key driving force for gas demand mid to long term
- Seasonality in gas demand to become even more pronounced
- Gas to power requires safe and flexible gas supply

## EU with increased dependence on gas imports

- Further development and commissioning of gas transport projects of common interest
- LNG share and reliable pipeline gas will increase
- As market conditions determine LNG flows LNG is not reliable for security of supply

## ➡ Importance of gas storage to ensure security of supply





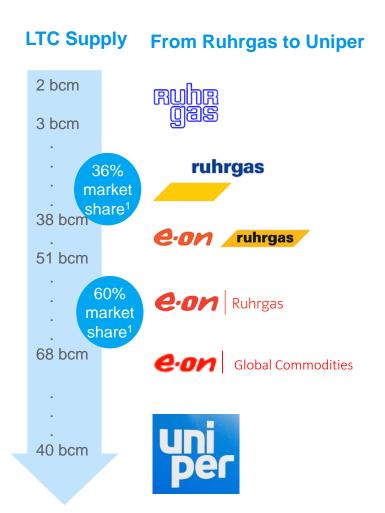
- I. Gas market trends Keith Martin
- II. Uniper's Gas Midstream Keith Martin business
- **III. Composition of earnings** Christopher Delbrück
- IV. Positioning for the future Keith Martin
- V. Q+A



## Uniper – a pioneer in the CE gas sector

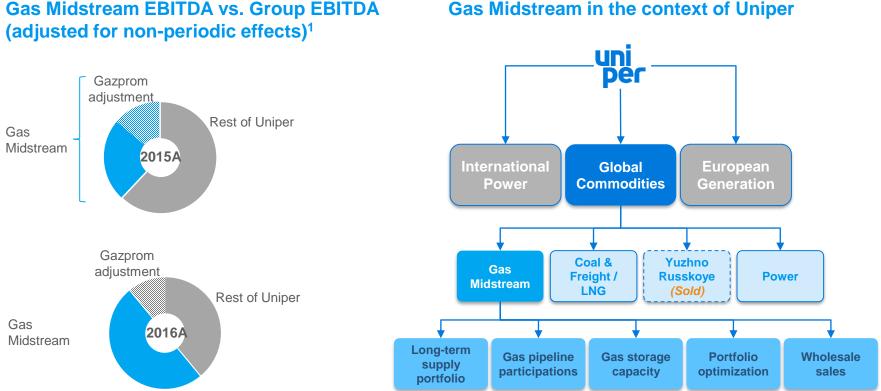
### Year Key Highlight

- 1926 Ruhrgas AG has been founded
- 1966 First gas deliveries from the Netherlands
- 1970 First gas supply contract with Russia (Gazprom),
- 1986 Norway (Troll) and Denmark
- 1998 Supply from the UK
- 2002 Takeover by E.ON
- 2005 Signing of Nord Stream I
- 2009 25% share in Yuzhno Russkoye
- 2013 Merger to E.ON Global Commodities
- 2016 Uniper Global Commodities
- 2017 Sale of Yuzhno Russkoye and support for Nord Stream II





## **Our Gas Midstream business - a strong and** reliable earnings contributor



Gas Midstream in the context of Uniper



Note: the 2016 Gas Midstream result has been lowered by the non-periodic effect of the 2016 provision release for the Gazprom renegotiation. 1. Accordingly 2015 Gas Midstream result has been increased by the relevant value.

## Well positioned along the entire gas value chain

### Strong asset base at the heart of the gas value chain

		Cture shareholdings and b	Vietline Total	
Supply Portfolio	LNG Regas	Transmission	Storage	Sales Portfolio
<ul> <li>Procurement of in total ~1,700 TWh from domestic and foreign producers</li> <li>Thereof roughly 400 TWh contracted long-term with time and volume flex</li> <li>Market-reflective pricing 738TWh</li> </ul>	<ul> <li>Shareholdings in OLT Regasification terminal with regulated earnings</li> <li>LNG bookings in Gate and Grain and access to terminals in Spain with the ability to bring additional volumes into the market</li> </ul>	<ul> <li>Shareholdings in major European transit pipelines</li> <li>Bookings across Europe:         <ul> <li>Hub-to-hub</li> <li>Market entry-exit</li> <li>Storage entry-exit</li> </ul> </li> </ul>	<ul> <li>#3 storage player in Europe with a flexible, diversified storage portfolio</li> <li>8.2 bcm of storage capacity</li> <li>Uniper Market Share ~30% 21% 3% 25bcm</li> <li>8bcm 5bcm</li> </ul>	<ul> <li>Gas Sales of in total ~1,700 TWh, thereof around 20%<sup>2</sup> contracted to traditional sales customers with specific demand patterns</li> <li>More than 1,000 customers, mainly municipal utilities, industrials and power plants</li> <li>Gas, power, energy related services</li> <li>Market share ~40%</li> </ul>



- 1. Reflecting annual contracted quantity (ACQ) and not minimum offtake obligation
- 2. Volume depending on gas to power demand and temperatures

## Integrated business model designed to achieve maximum value based on optionality

#### **Flow**

## Flexible supply portfolio of various sources



### Market access



### **Optimization**

Complex management of the value chain between supplier and customer with optimization of supply agreements, transport, storage, markets and customers offering numerous flexibilities in terms of

- i. Volume
- ii. Timing
- iii. Location



## Market Channels

Wholesale sales portfolio

#### **TSO products**

## Other customers & counterparties

- Hub sales
- Tailored products
- Structured & Options



## Content

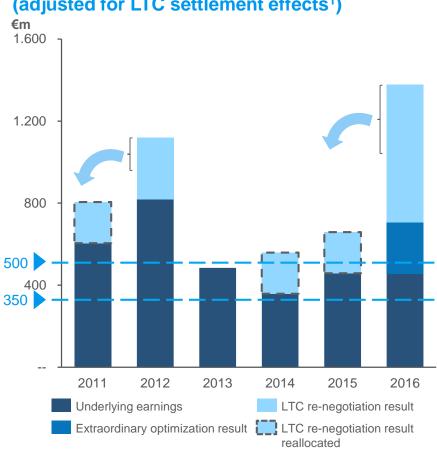
- I. Gas market trends Keith Martin
- II. Uniper's Gas Midstream Keith Martin business

**III. Composition of earnings** Christopher Delbrück

- **IV. Positioning for the future** Keith Martin
- V. Q+A



## Underlying EBITDA level of ~€350 - 500m



## Underlying earnings plateau (adjusted for LTC settlement effects<sup>1</sup>)

#### **Shift of earnings**



#### Portfolio de-risking

• Spread-risk between indexation in gas LTCs and sales contracts has been widely eliminated

#### Reduction of asset value

- Reduction in summer/ winter spreads
- Reduction in volatility

#### Increase of Optimization earnings

- Strong increase in liquidity at trading hubs
- Broader portfolio due to new products/ markets
- Consequent execution of make-or-buy decision

1. To create like-for-like comparison historically reported data has been adjusted. Difference to reported figures based on exclusion of disposals of OGE, SPP and IUK; Nord Stream I included until end of 2015

## Sustainable earnings power



1. Gross Margin does not include any OPEX

2. Note: includes EBT from infrastructure

### Infrastructure

 Stable earnings from long-term marketed infrastructure investments

#### Supply, Sales and Asset Margin

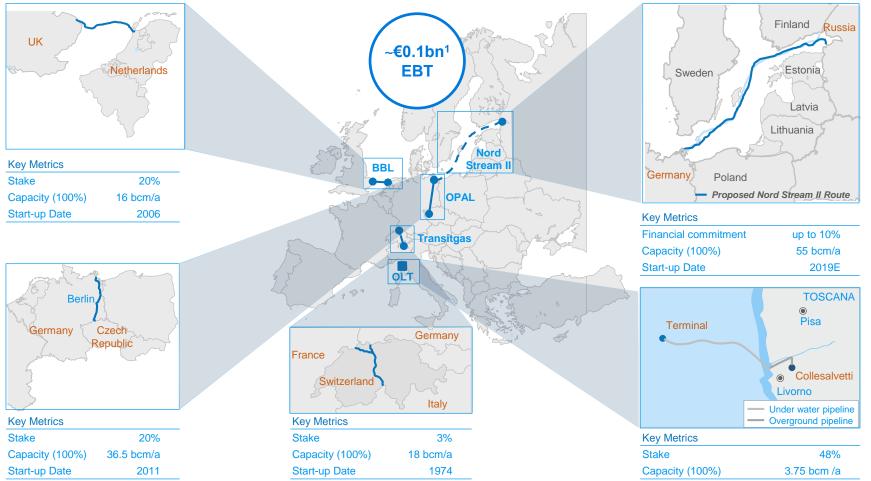
 Structural earnings from supply, sales and asset margin based on commodity margin, value from our storage /transport assets as well as TSO products

#### **Optimization Margin**

 Proven earnings from Optimization Margin based on our portfolio approach including market elements

16

## A Reliable earnings based on minority infrastructure shareholdings



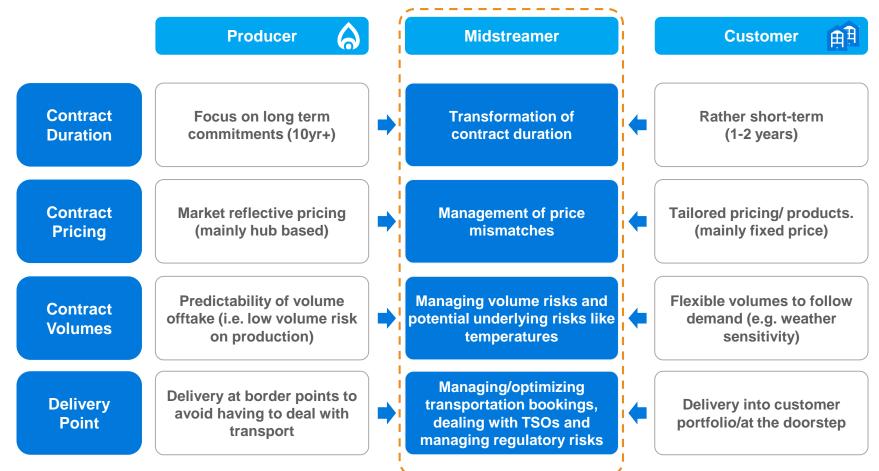


## B Structural earnings from Supply, Sales and Asset Margins

#### 1. Commodity margin 2. Storage: intrinsic value Supply & Sales Business delivers Ability to capture the spread between structural margin on the back of seasons as base driver, complemented by midstream services monthly shape, multi-year and location value Earnings dependent on the magnitude and volatility ~€200 -300m gross margin 4. Earnings from TSO products 3. Transport: intrinsic value Ability to capture spreads between Based on the large and diversified assets • different locations Uniper delivers security of supply for (e.g. NBP/TTF, NCG/AOC) network operators Therefore intrinsic value as part of or Current market regime requires mid and short term services which are offered stable earnings base



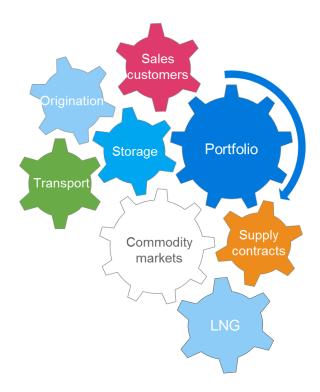
# Value adding function by managing risks between producer and customer products





B

# C Proven earnings power from portfolio optimization of ~€300-400m gross margin



#### **Portfolio Effects**

Broad toolbox and broad portfolio with partly offsetting positions allow to generate additional value at limited risks

### **Structured Optimization of flexibility**

Time (storage) and location (transport) optimization generates additional value

#### **Asset backed Optimization**

Assets enable to take market views on gas prices as well as spreads

## Capturing significant additional value from diversified portfolio



## Content

- I. Gas market trends Keith Martin
- II. Uniper's Gas Midstream Keith Martin business
- III. Composition of earnings Christopher Delbrück
- **IV. Positioning for the future** Keith Martin
- V. Q+A



## **Growth: Origination of new business activities** (examples)

### **New ventures**

#### LNG for Trucks



#### **LNG services**



 Providing Services e.g. to LNG Suppliers, Infrastructure & Hedge Funds

Iveco and Uniper open first

LNG fuelling station for

· Savings on fuel costs and

environmental benefits

trucks in Germany

more pronounced

## New technologies: examining technical and economic Feasibility of green fuels

- Power-to-Gas technology utilizing renewable electricity produces green hydrogen and oxygen (electrolysis)
- Green hydrogen can be fed into the natural gas grid or used directly in refineries and mobility to reduce emissions and to integrate renewables

## **Organic growth**

#### Go East



#### New LNG Opportunities





#### Strategic investment

• Source of very stable longterm cash flows

Expansion of operations into

Eastern Europe to increase

Uniper's market share

based on existing assets

• Expansion of operations into

middle east creating sales

outlets on global LNG-to-

Power & optimizing Regas

#### Shah Deniz LTC



 A long term gas supply has been signed with the Azerbaijani state oil company SOCAR



## Uniper gas midstream – core EBITDA of €350-500m p.a. ...

Well positioned for a decarbonizing world Long-term upsides from recovery of gas storage

Growth potential in global LNG markets

Stable earnings from infrastructure

Reliable margins in midstream core

Additional value creation from optimization

## ... and upside/ growth potential



## Content

- I. Gas market trends Keith Martin
- II. Uniper's Gas Midstream Keith Martin business
- III. Composition of earnings Christopher Delbrück
- **IV. Positioning for the future** Keith Martin
- V. Q+A

