



argus

argusmedia.com

# Fundamental factors in power and gas price formation

Or: do we need a time machine?

ETCSEE

Matthew Monteverde

19 June 2019

London  
Houston  
Singapore  
Moscow  
Dubai  
New York  
Portland  
Calgary  
Santiago  
Bogota  
Rio de Janeiro  
Beijing  
Shanghai  
Tokyo  
Sydney  
Astana  
Kiev  
Cape Town  
Riga  
San Francisco  
Washington

Market Reporting

Consulting

Events

illuminating the markets

A nighttime photograph of the London skyline, featuring the Shard and other skyscrapers reflected in the water. A glowing blue line, representing a gas price trend, starts from the bottom left and curves upwards towards the right.

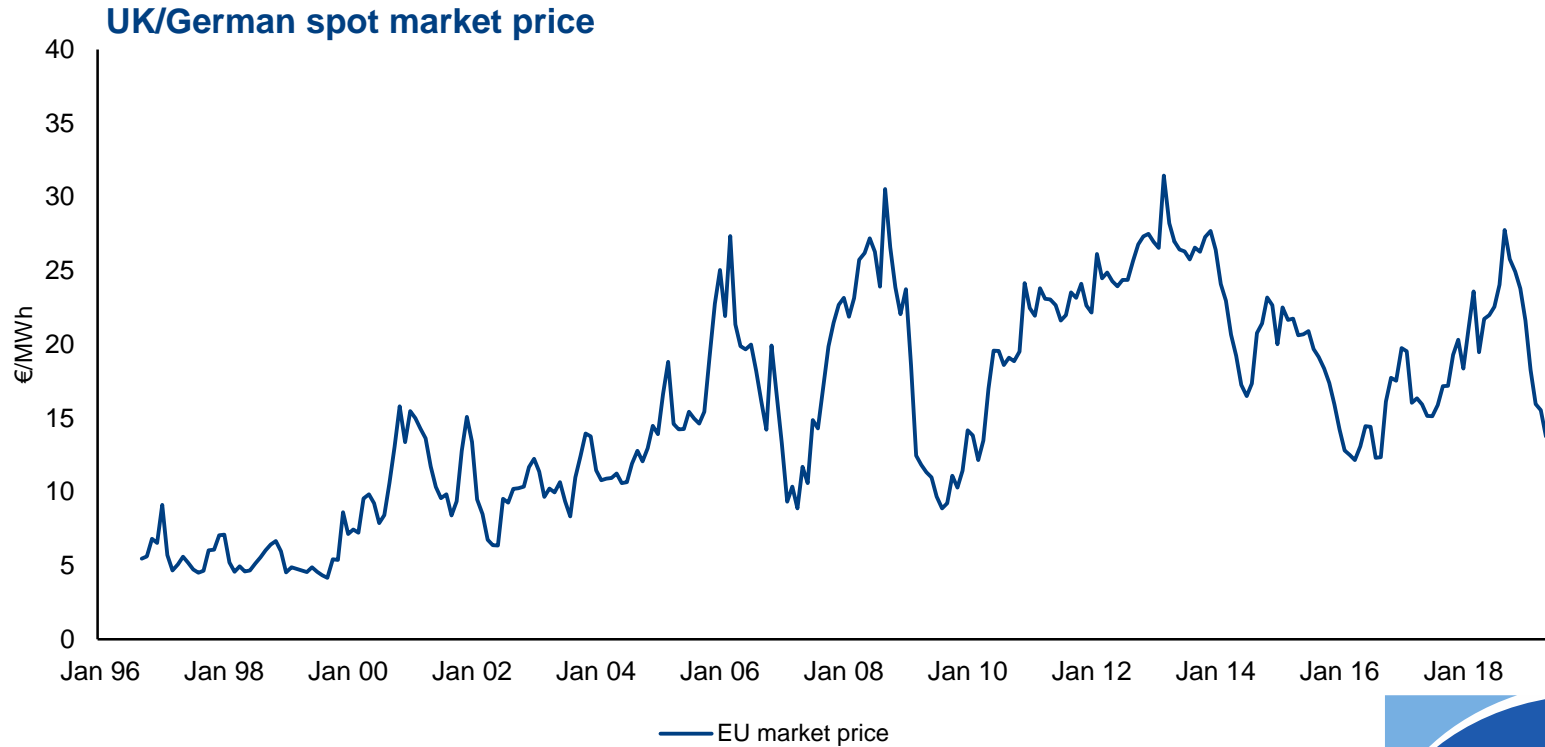
# The long view of European gas prices

Three eras?

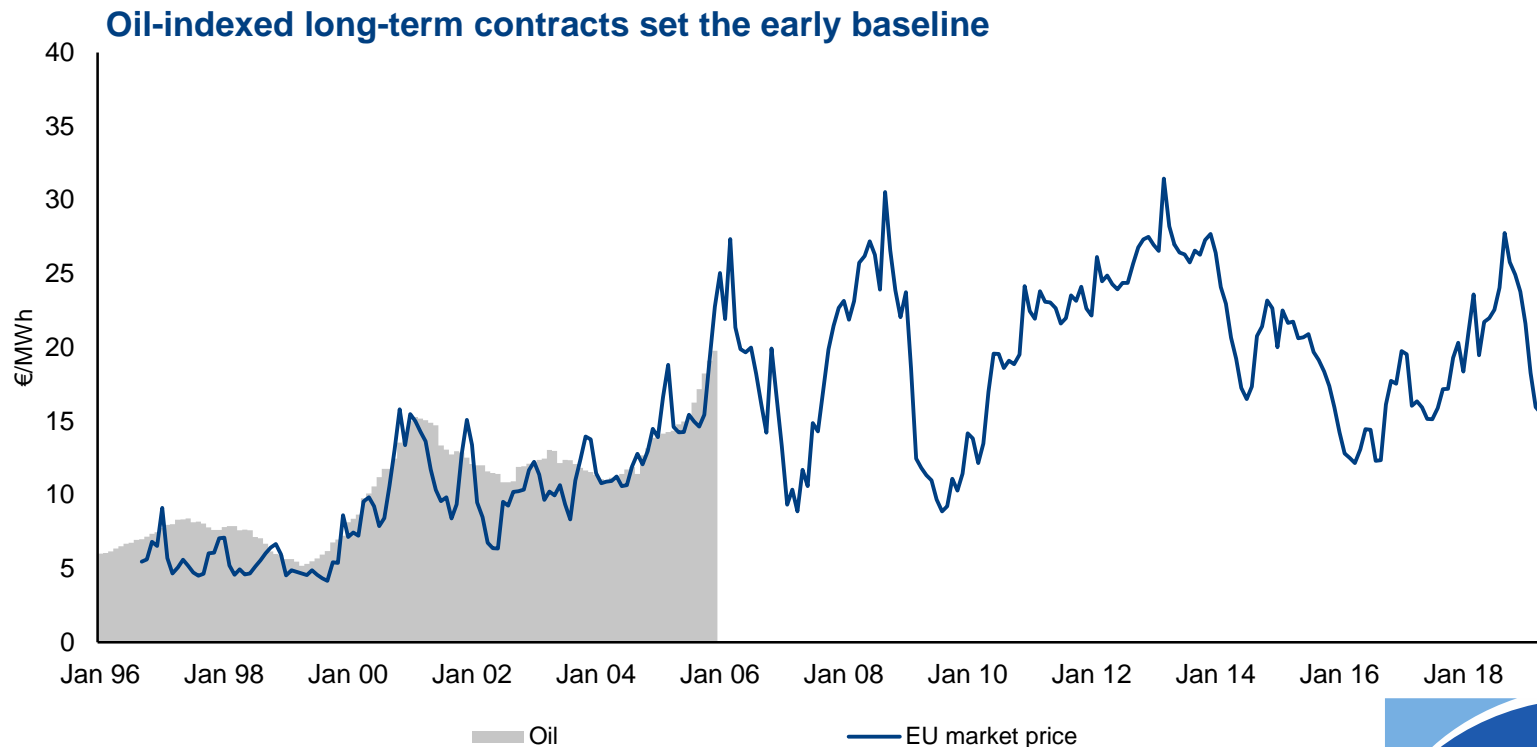
| illuminating the markets

Market Reporting  
Consulting  
Events

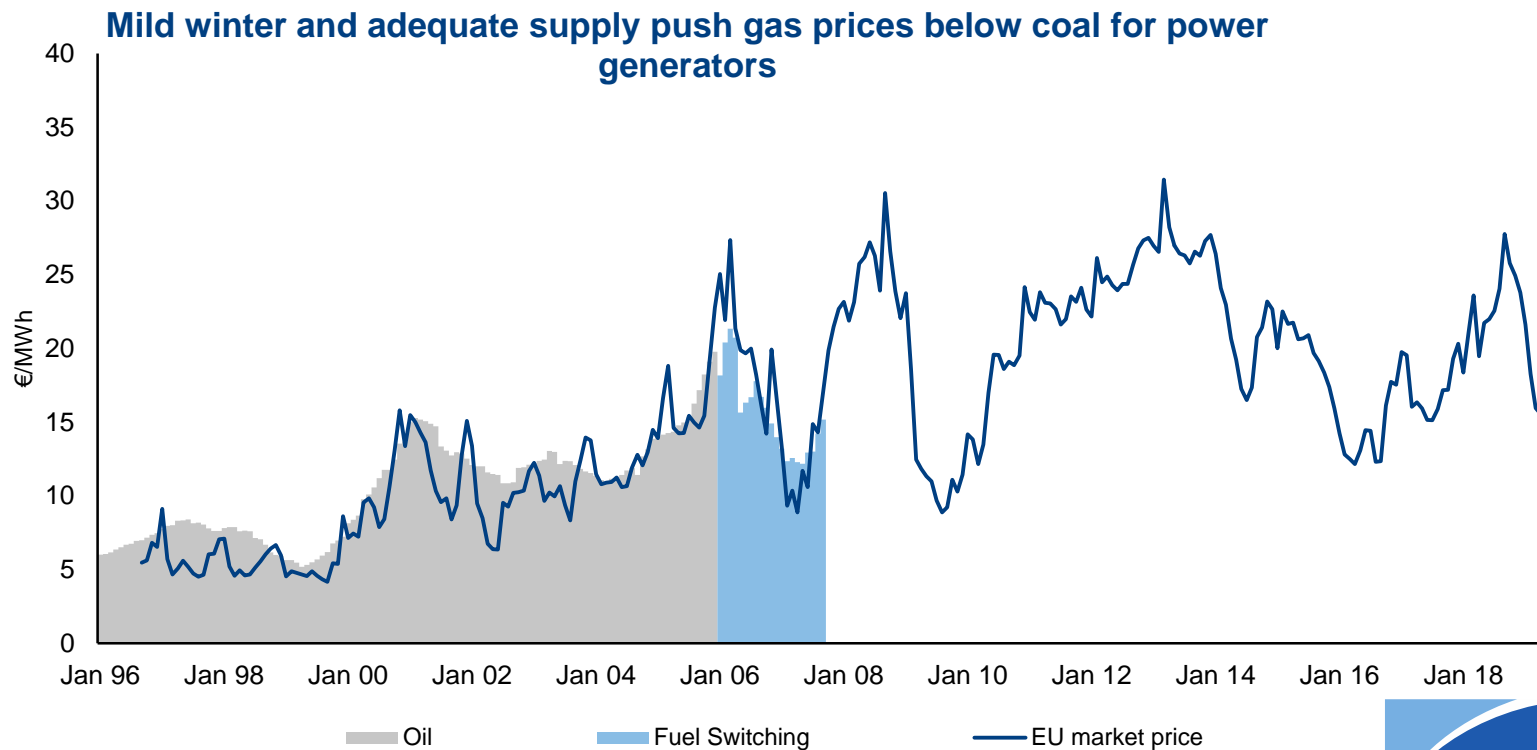
# European gas market prices



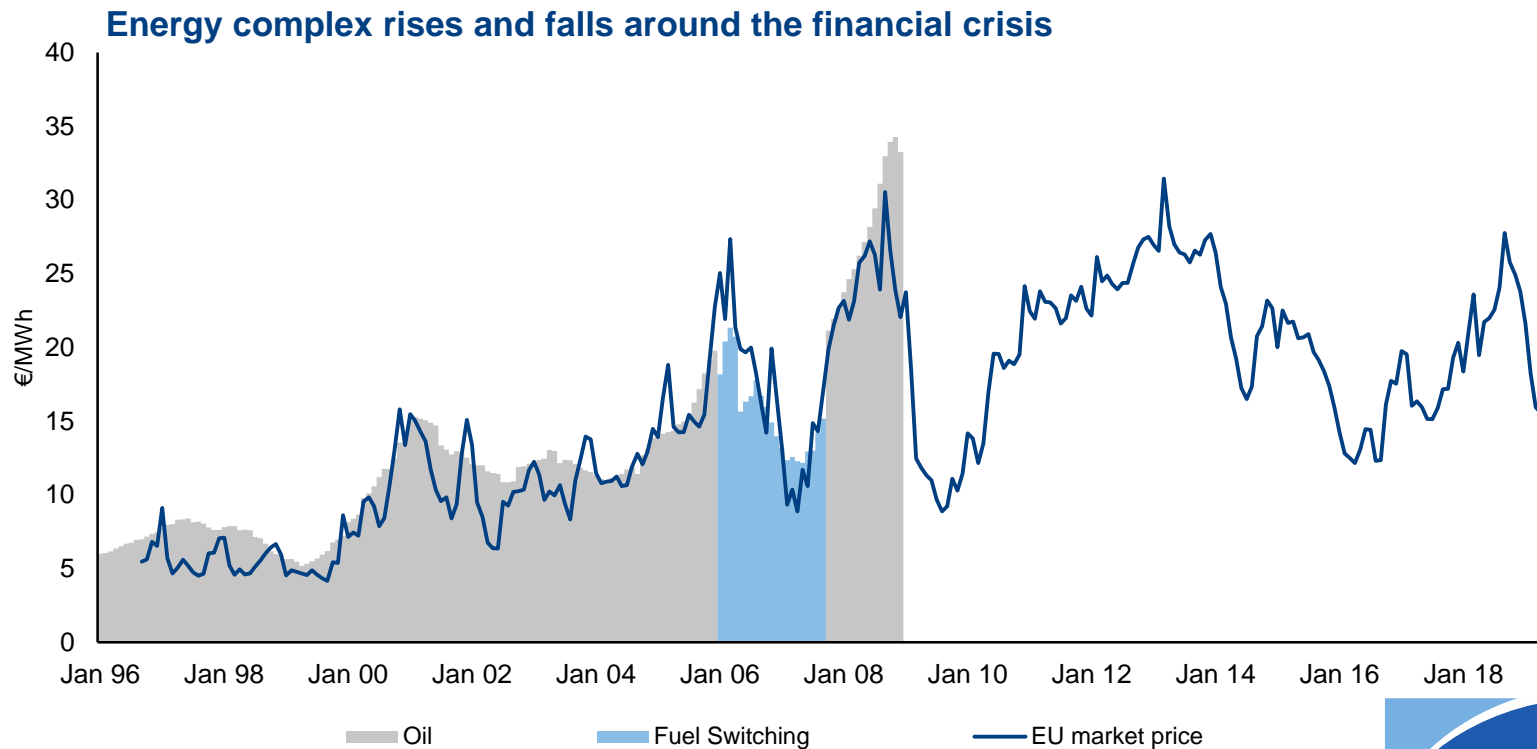
# In the beginning: oil-indexation and seasonality



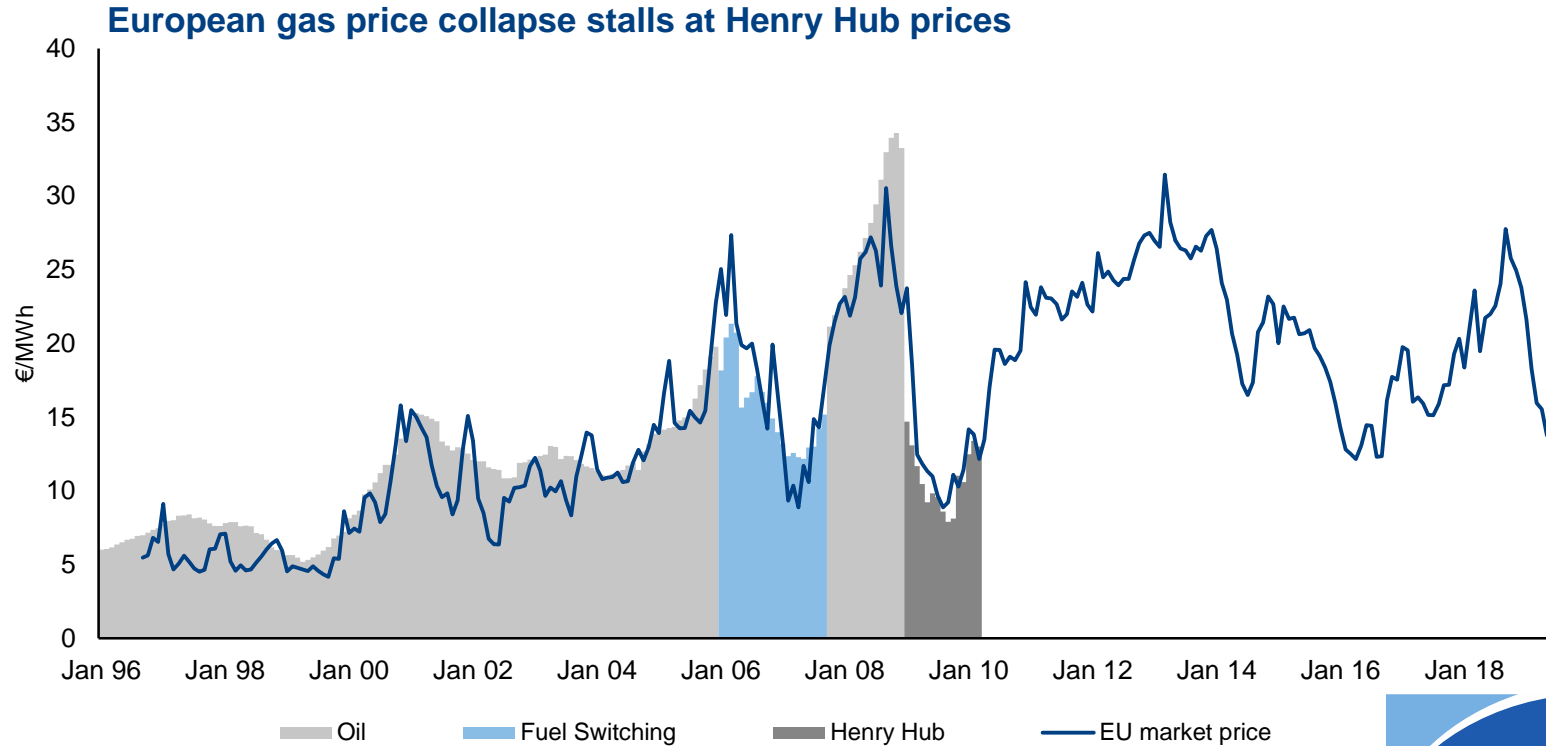
# 2007: gas and coal in competition



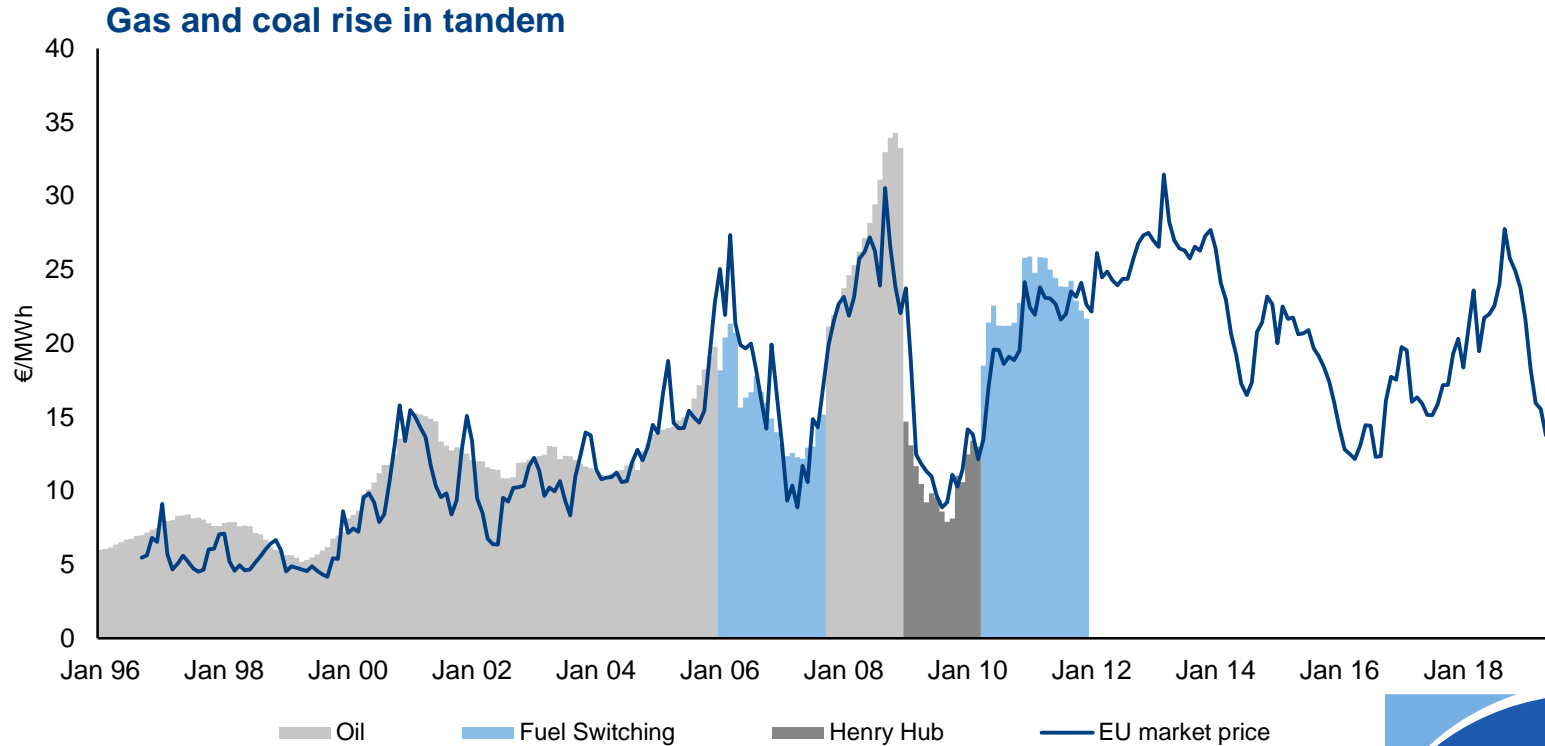
# 2008: everything up, then everything crashes



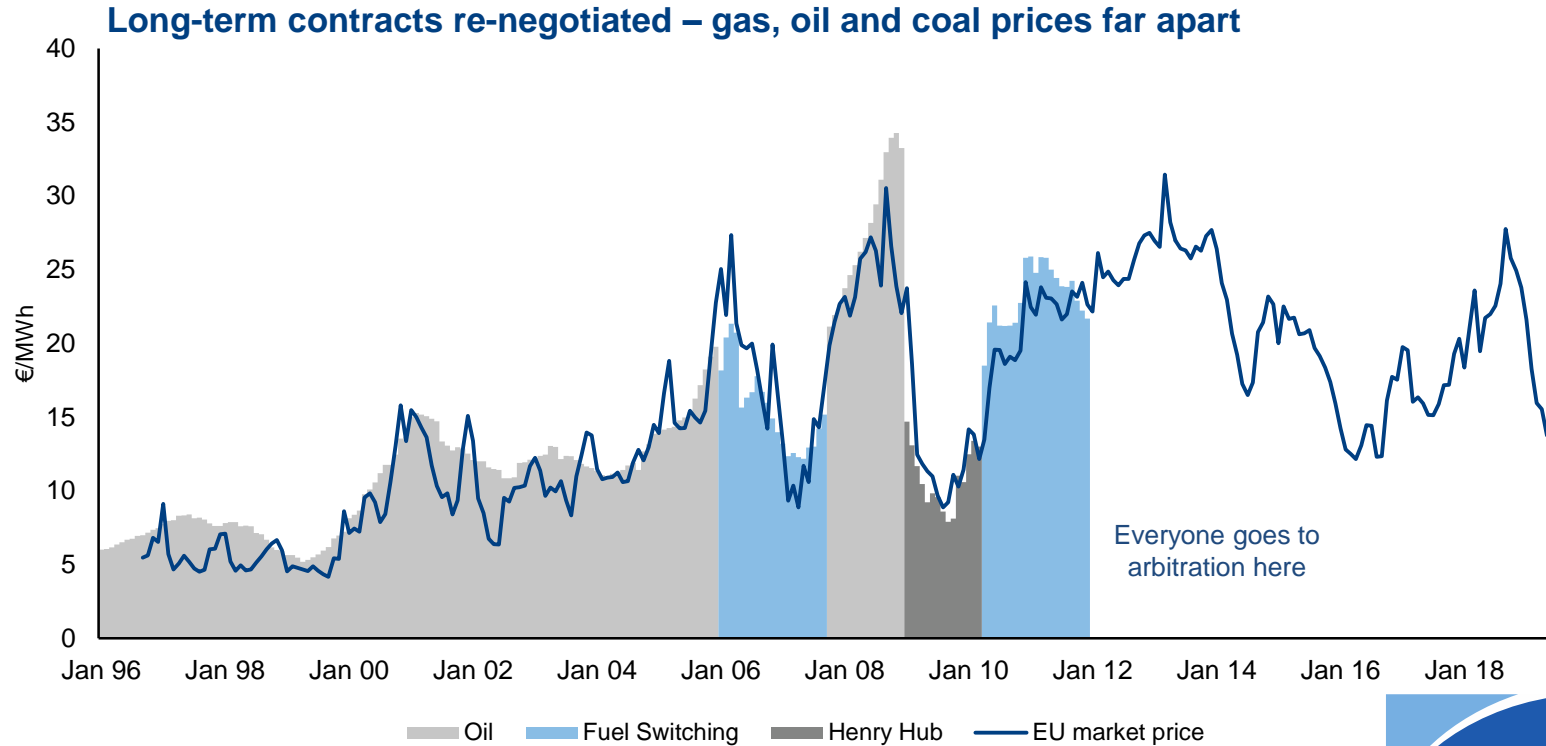
# Remember when the US imported LNG?



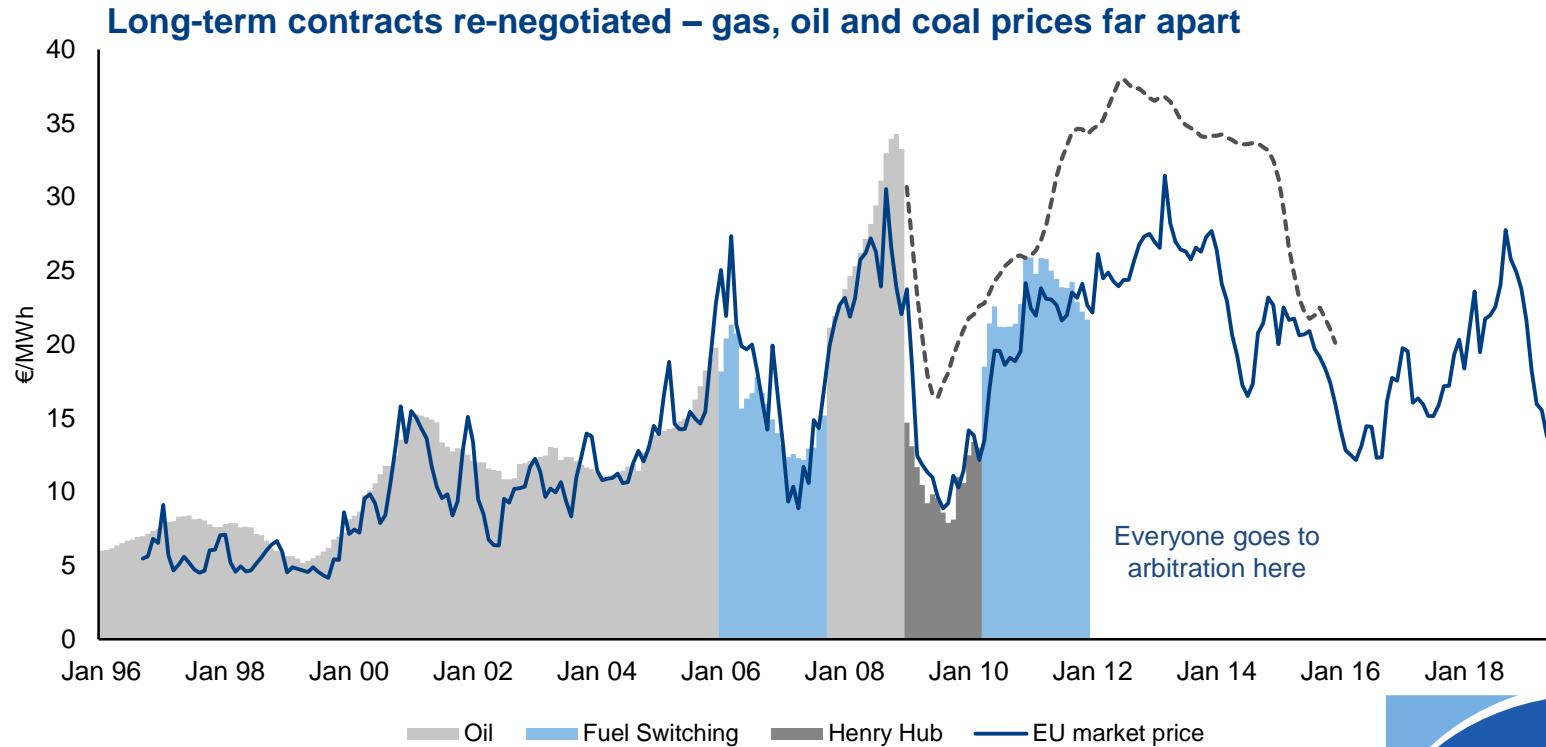
# More fuel price competition during the recovery



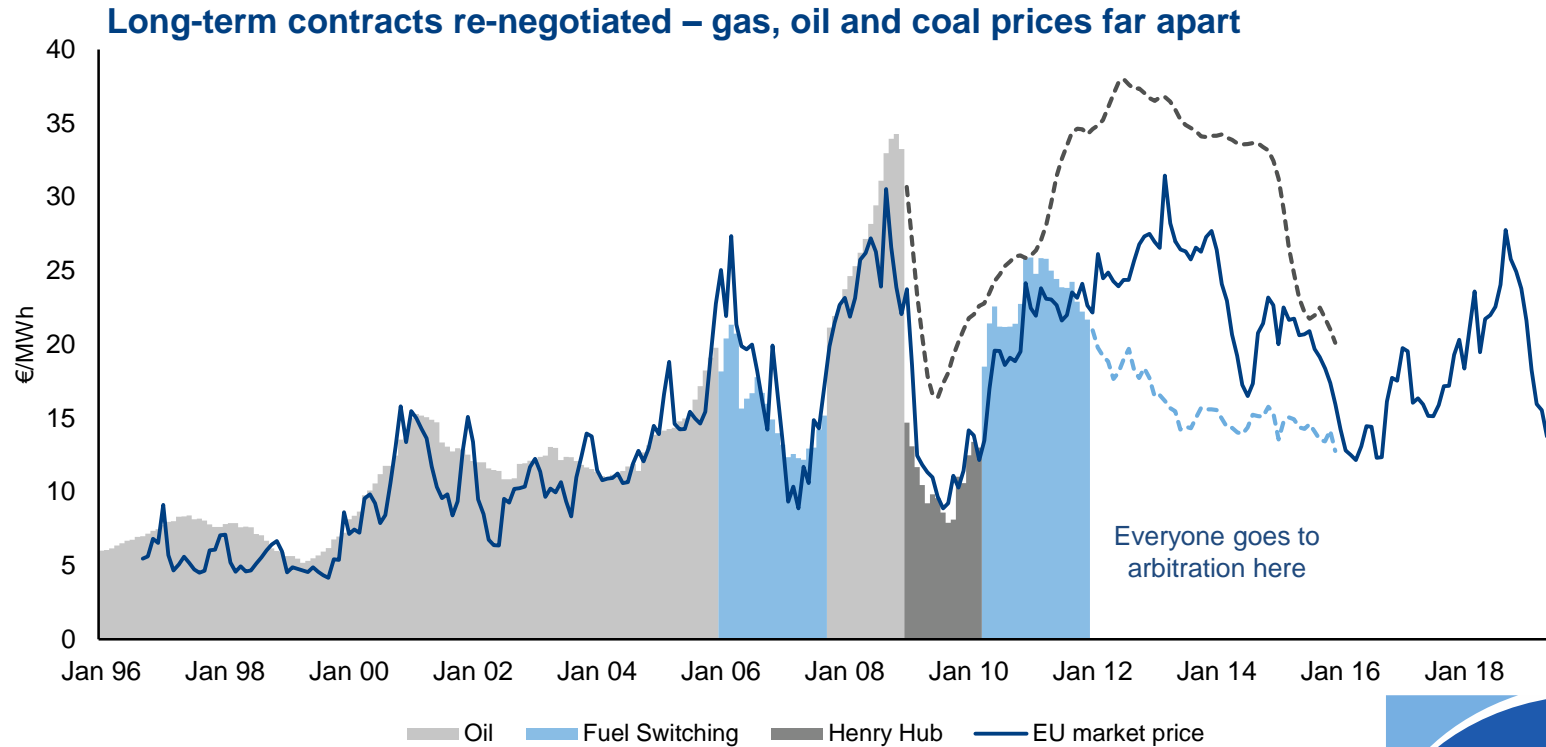
# Pricing mechanisms under pressure



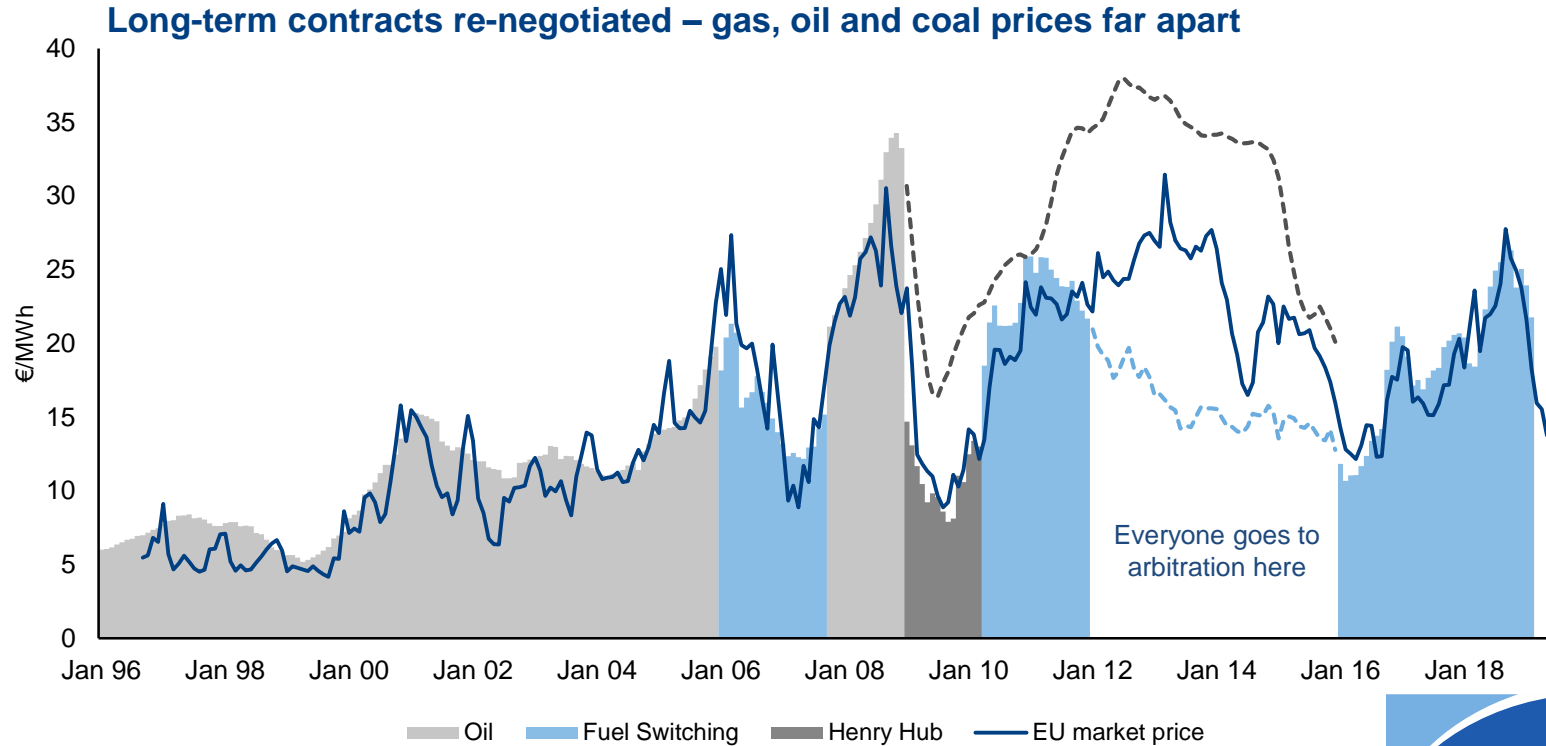
# Pricing mechanisms under pressure



# Pricing mechanisms under pressure



# More competition between fuels





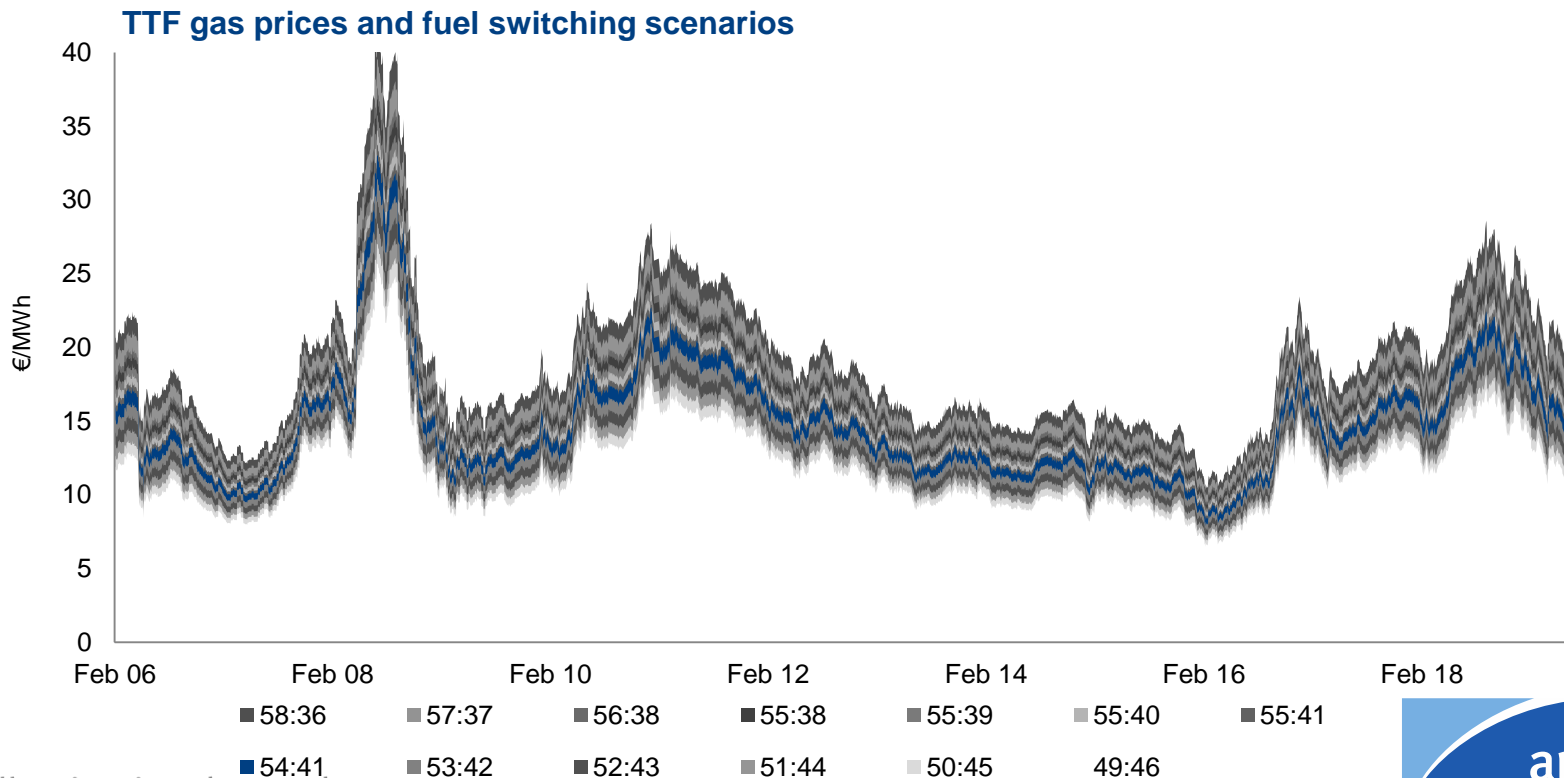
# Fuel switching

Have we run out and what does it mean if we have?

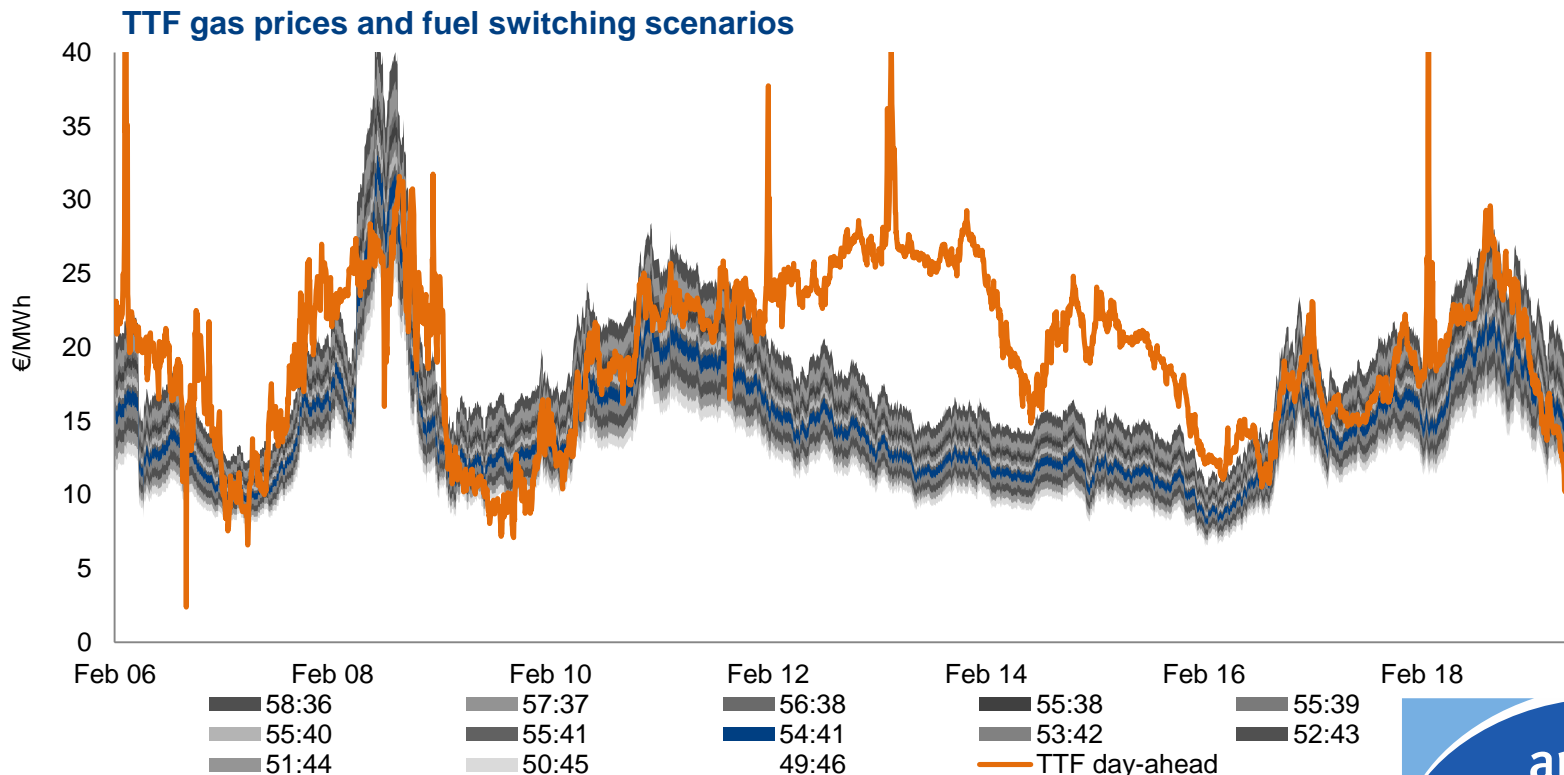
illuminating the markets

Market Reporting  
Consulting  
Events

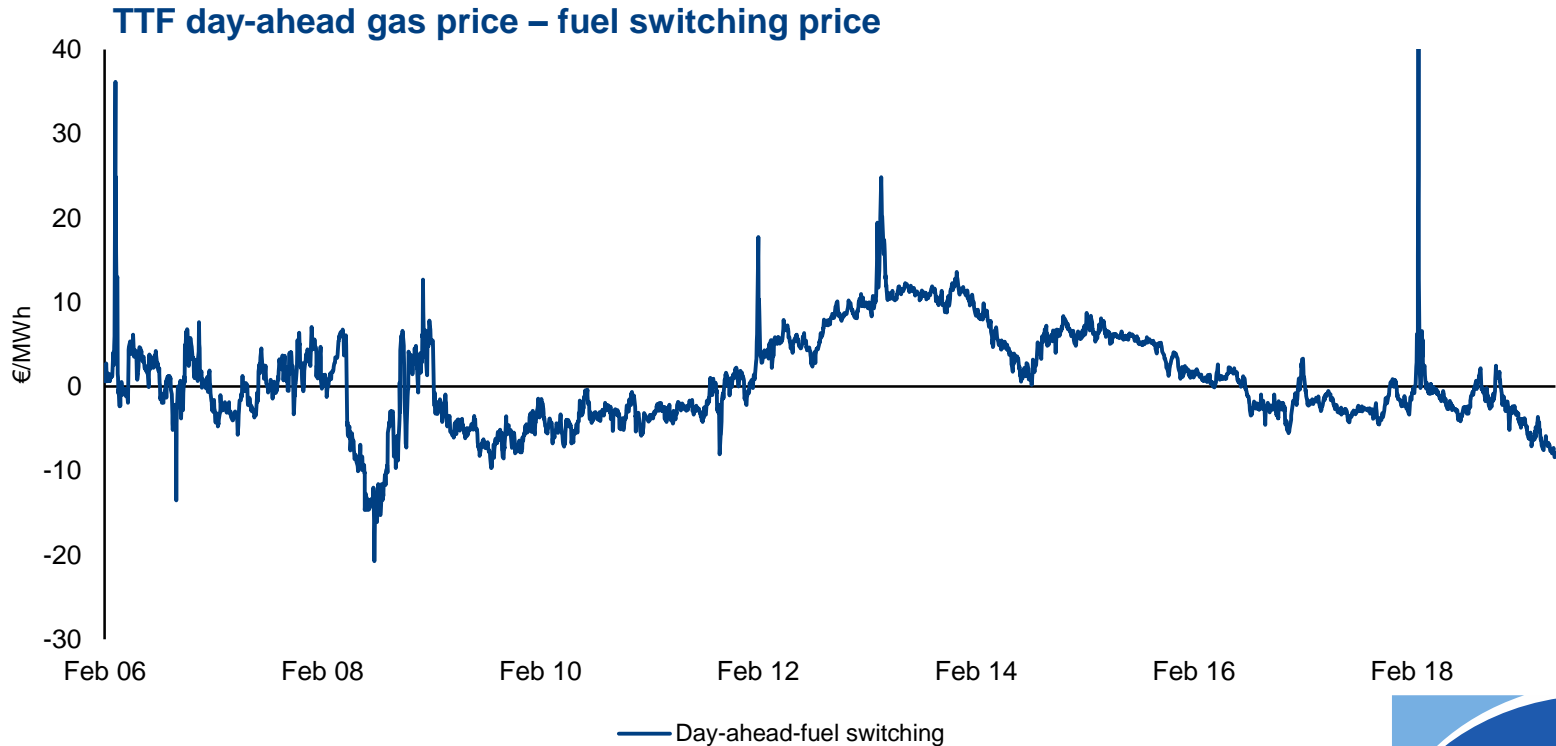
# Fuel switching scenarios



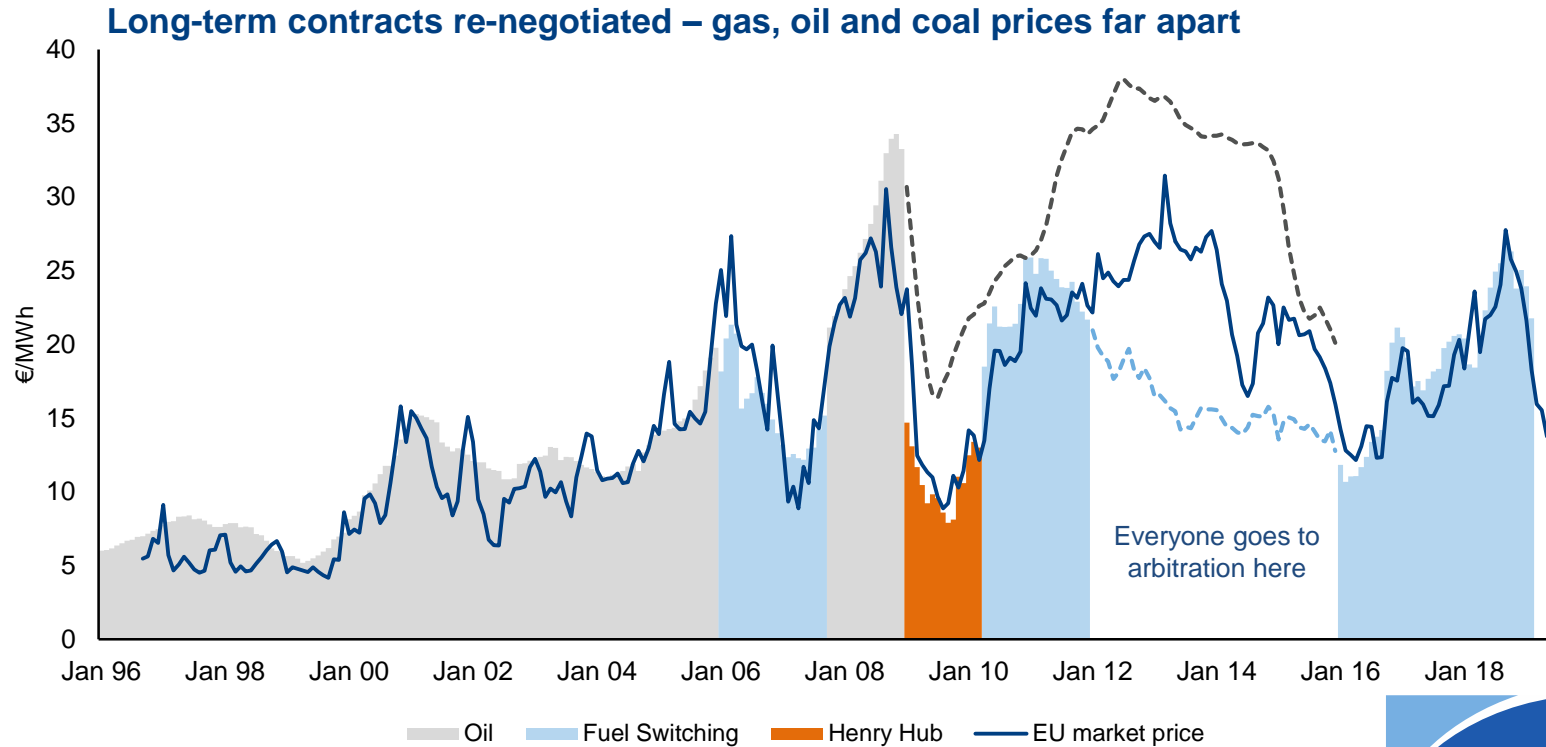
# Gas prices fall through fuel-switching support




# Spot gas prices near 10-year low against coal/CO<sub>2</sub>



# Remember 2009?






So, is it 2009 all over again?

illuminating the markets

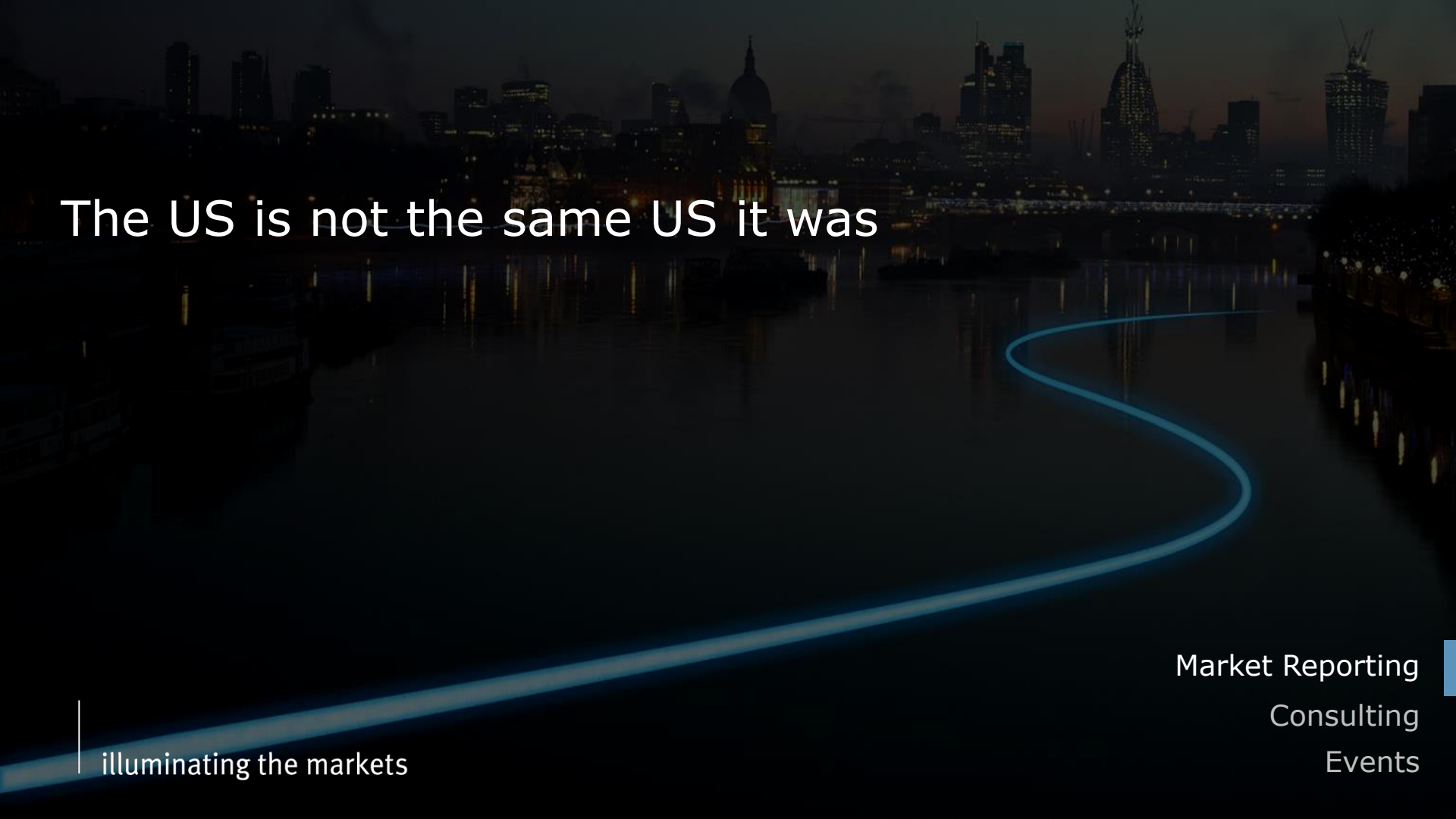
Market Reporting  
Consulting  
Events

A nighttime photograph of the London skyline across the River Thames. The city lights are reflected in the water. A bright blue, glowing line starts from the bottom left, curves along the riverbank, and disappears into the distance. The word "No" is written in white in the upper left.

No

illuminating the markets

Market Reporting  
Consulting  
Events

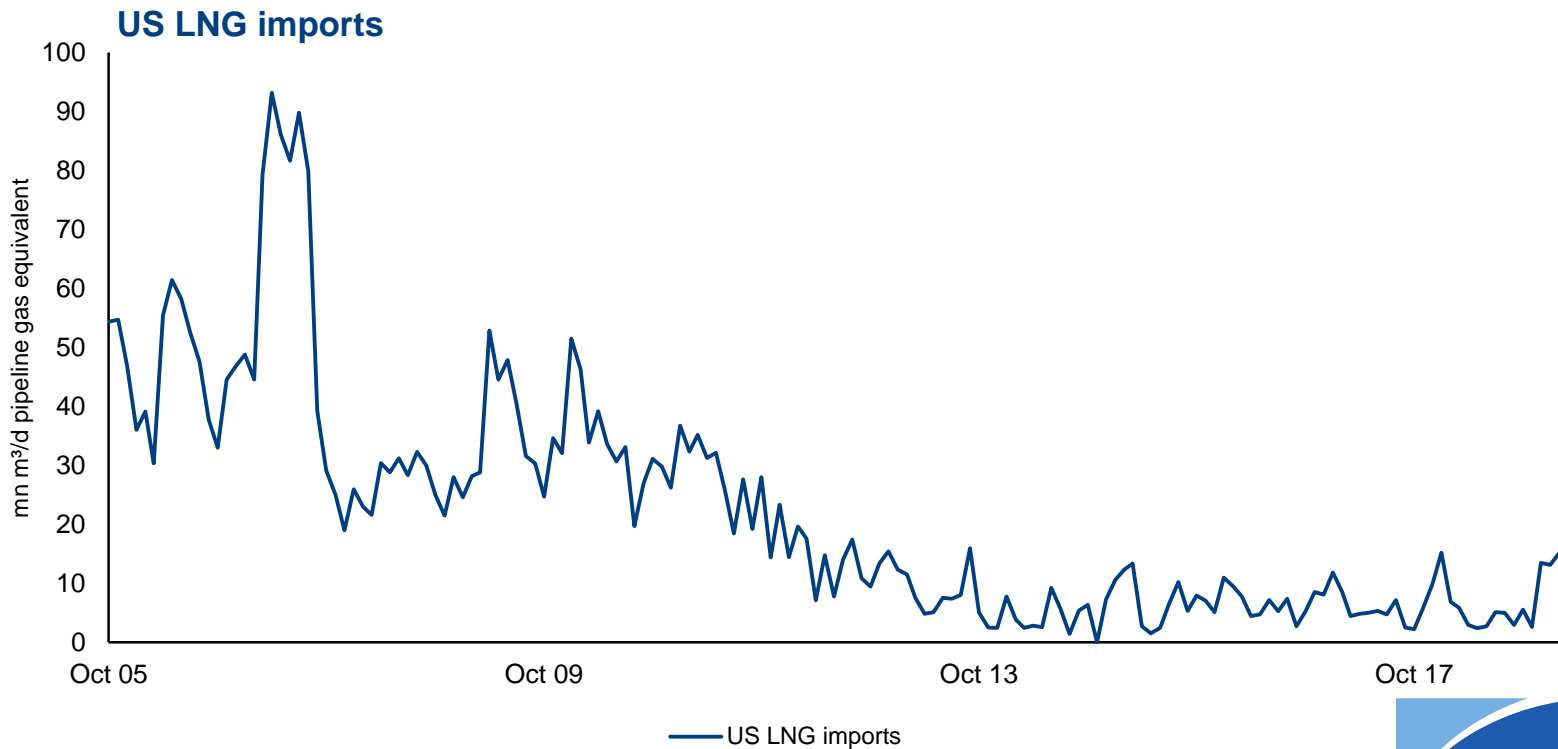


The US is not the same US it was

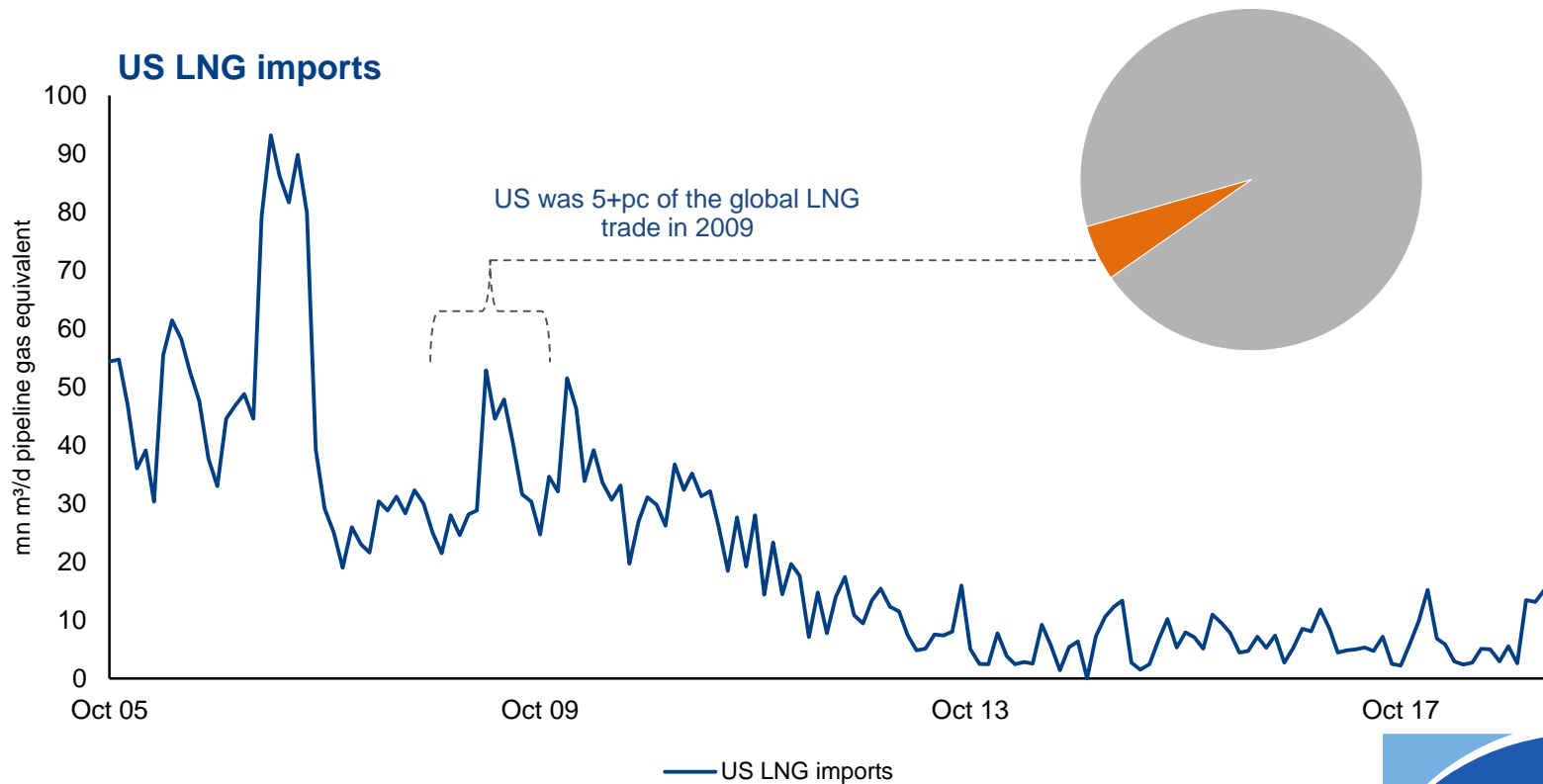
illuminating the markets

Market Reporting  
Consulting  
Events

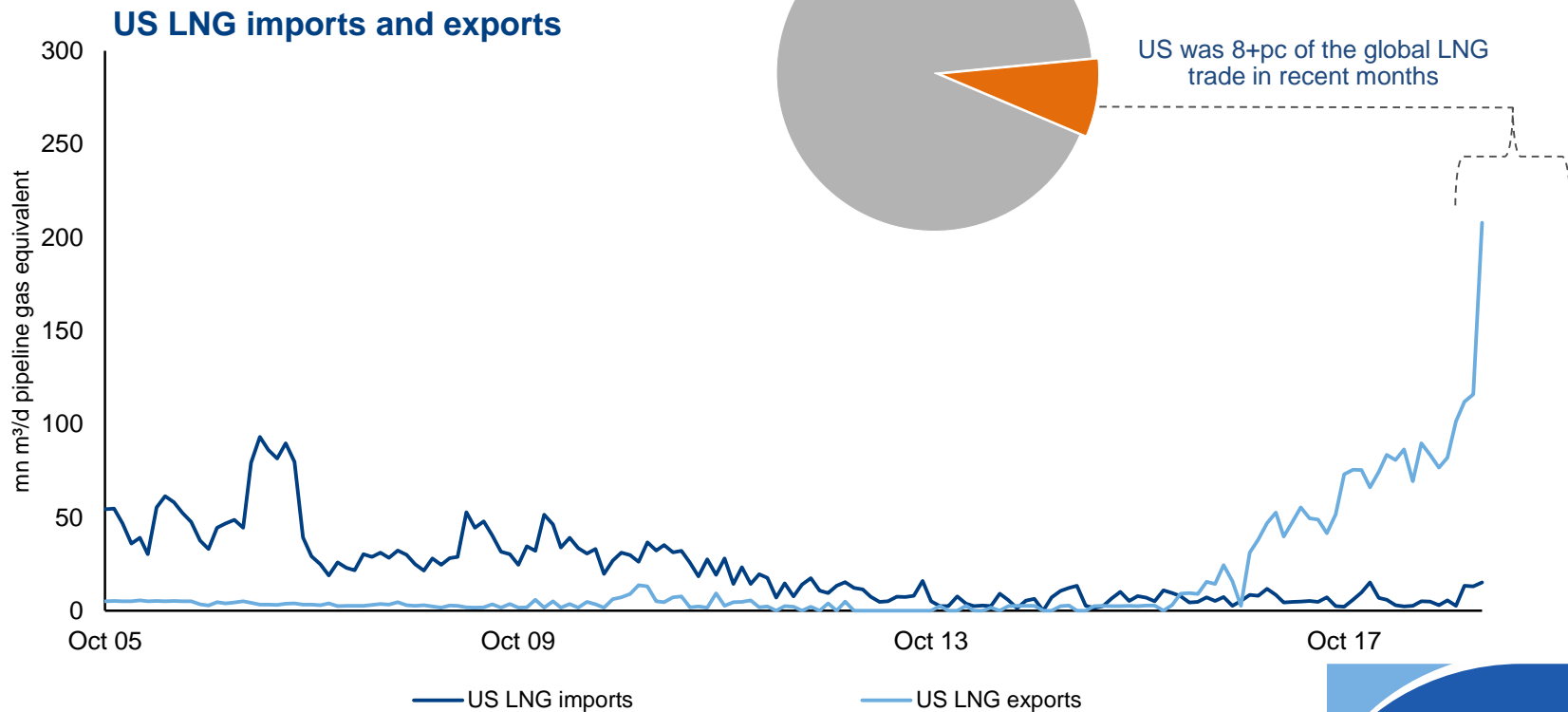
# The US was still a sizeable LNG importer in 2009



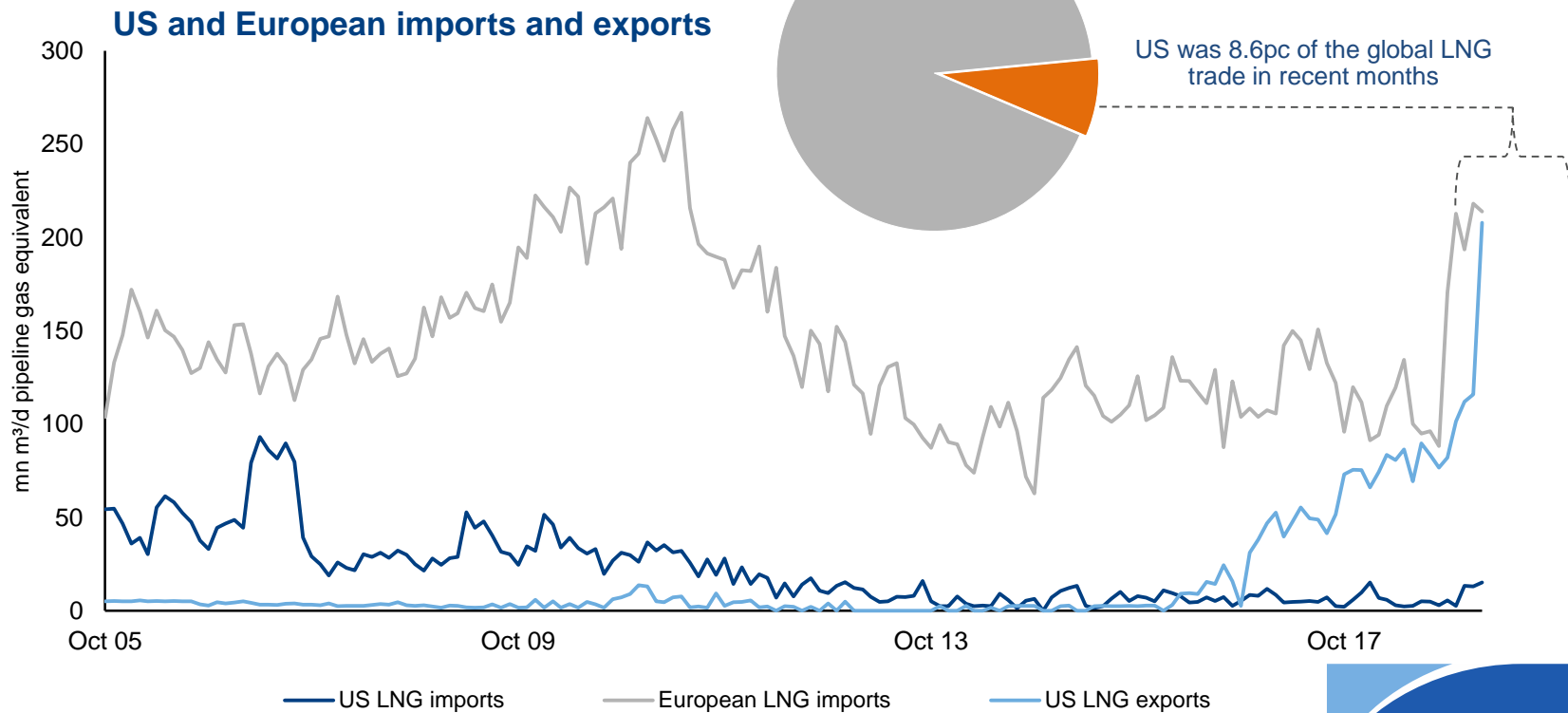
# The US as LNG importer



# The US as LNG exporter



# Will the US respond?



A nighttime photograph of a city skyline, likely New York City, with the Chrysler Building and other skyscrapers visible. A bright blue line graph is overlaid on the image, starting from the bottom left and curving upwards towards the right. The text "Price formation in the US Gulf" is written in white, bold, sans-serif font across the middle of the image.

# Price formation in the US Gulf

Is the US a price taker?

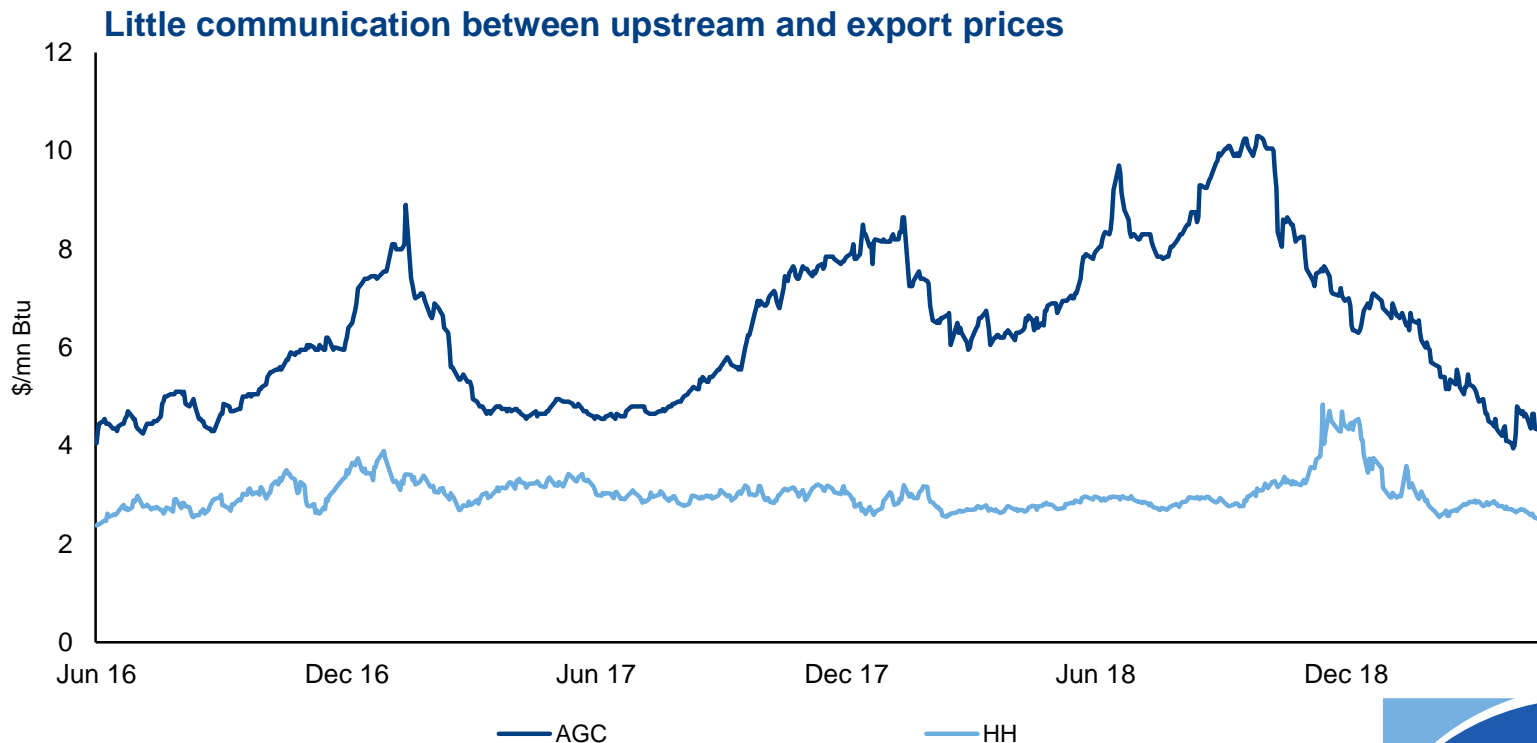
illuminating the markets

Market Reporting

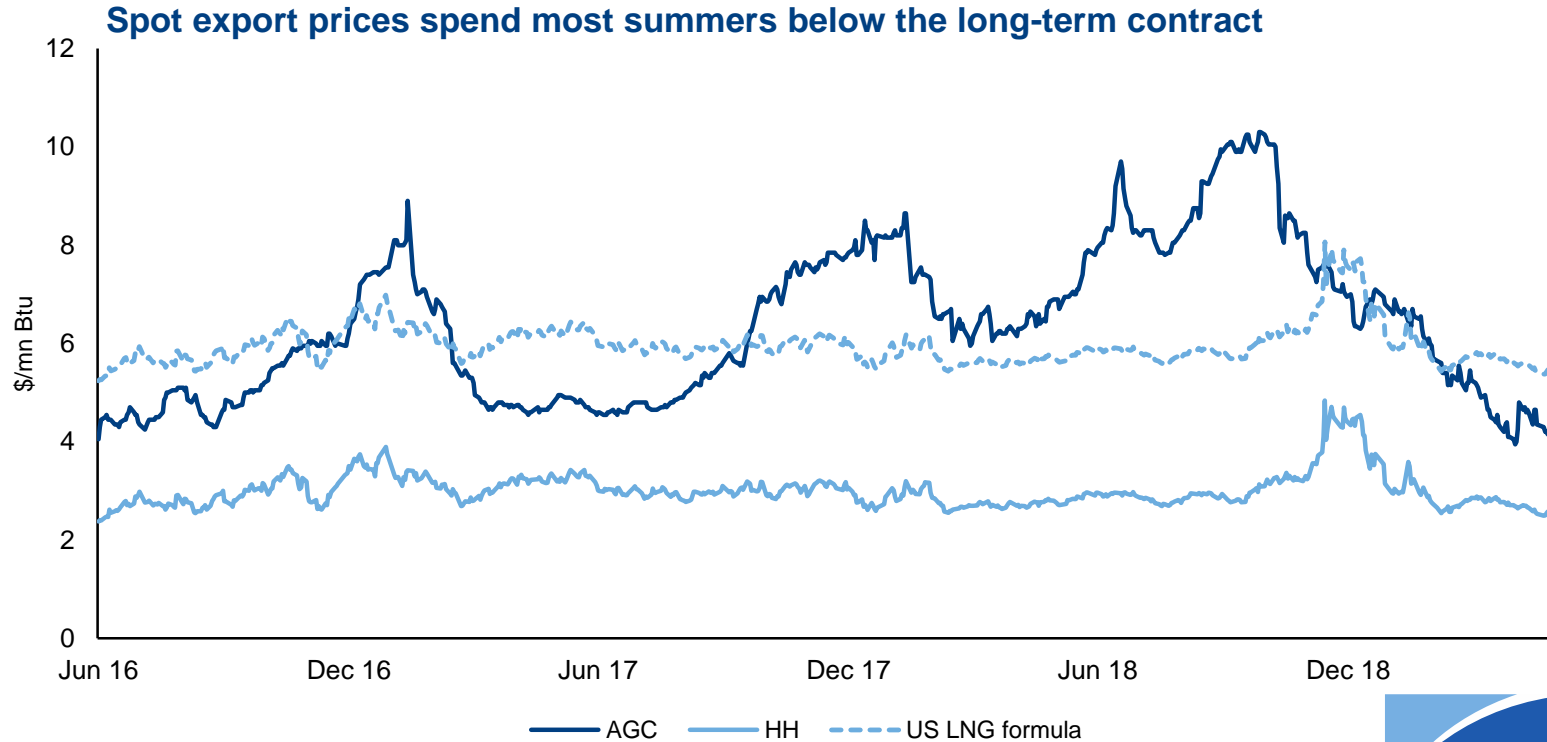
Consulting

Events

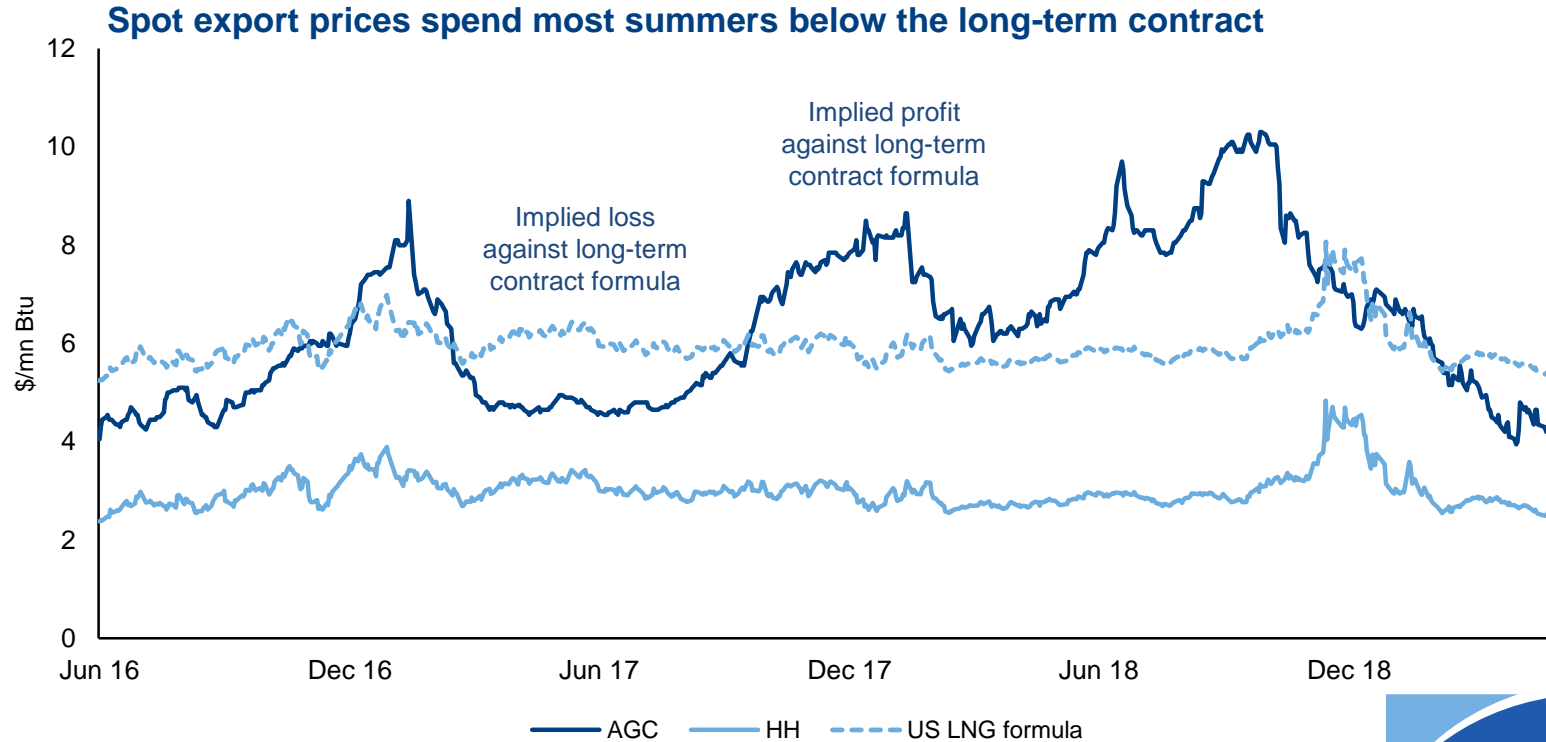
# US Gulf export prices show little Henry Hub link



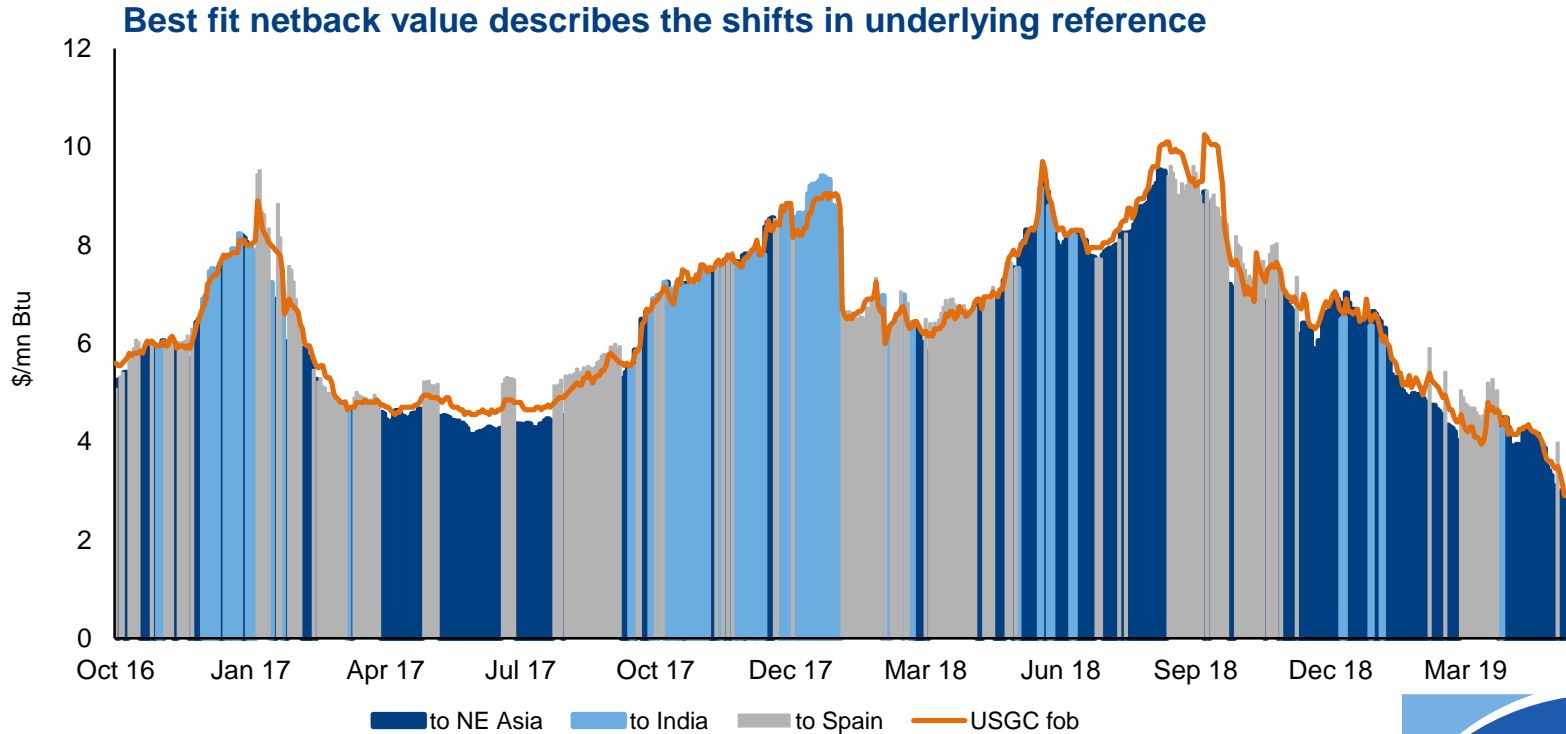
# and little direct connection to long-term LNG prices



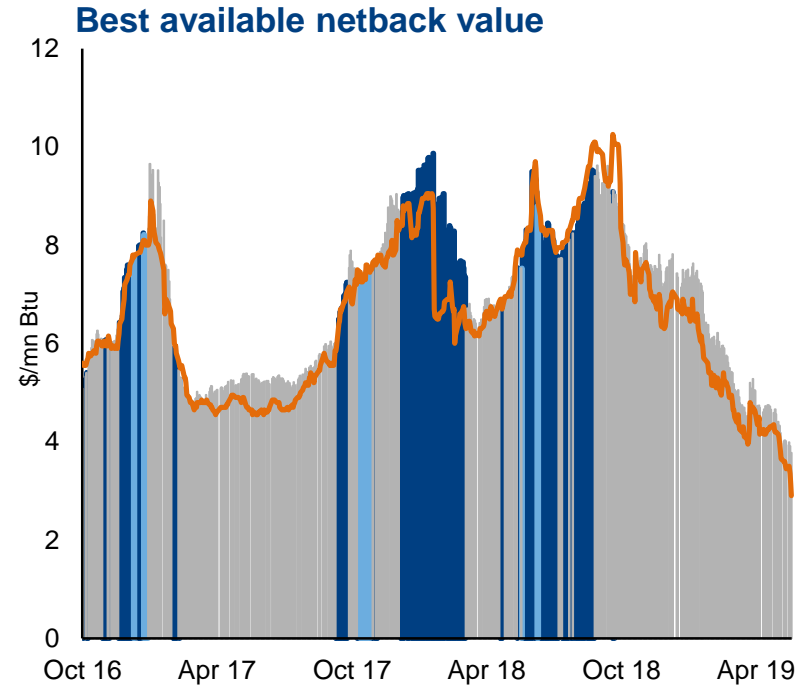
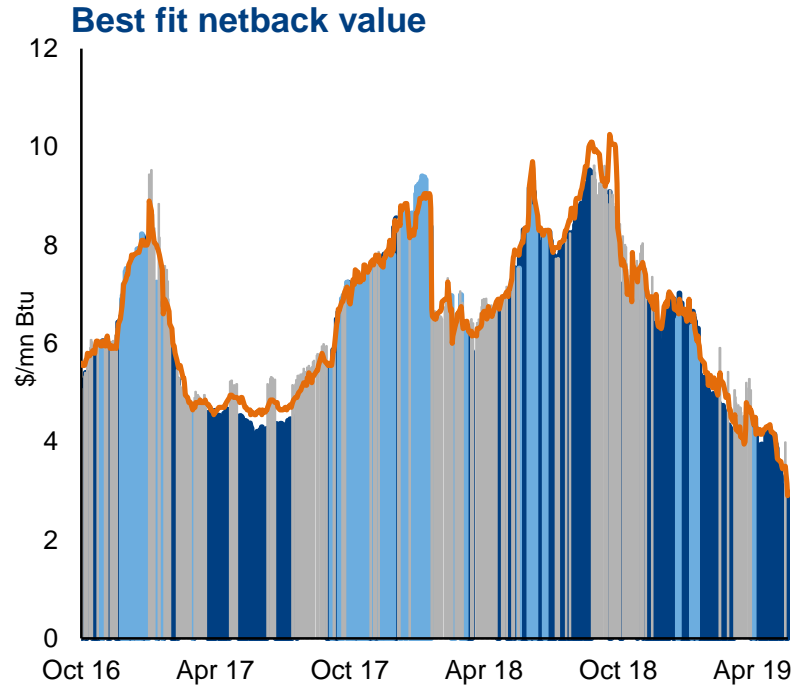
# and little direct connection to long-term LNG prices



# Regional destination markets set the export price



# Regional destination markets set the export price



■ to NE Asia ■ to India ■ to Spain — USGC fob

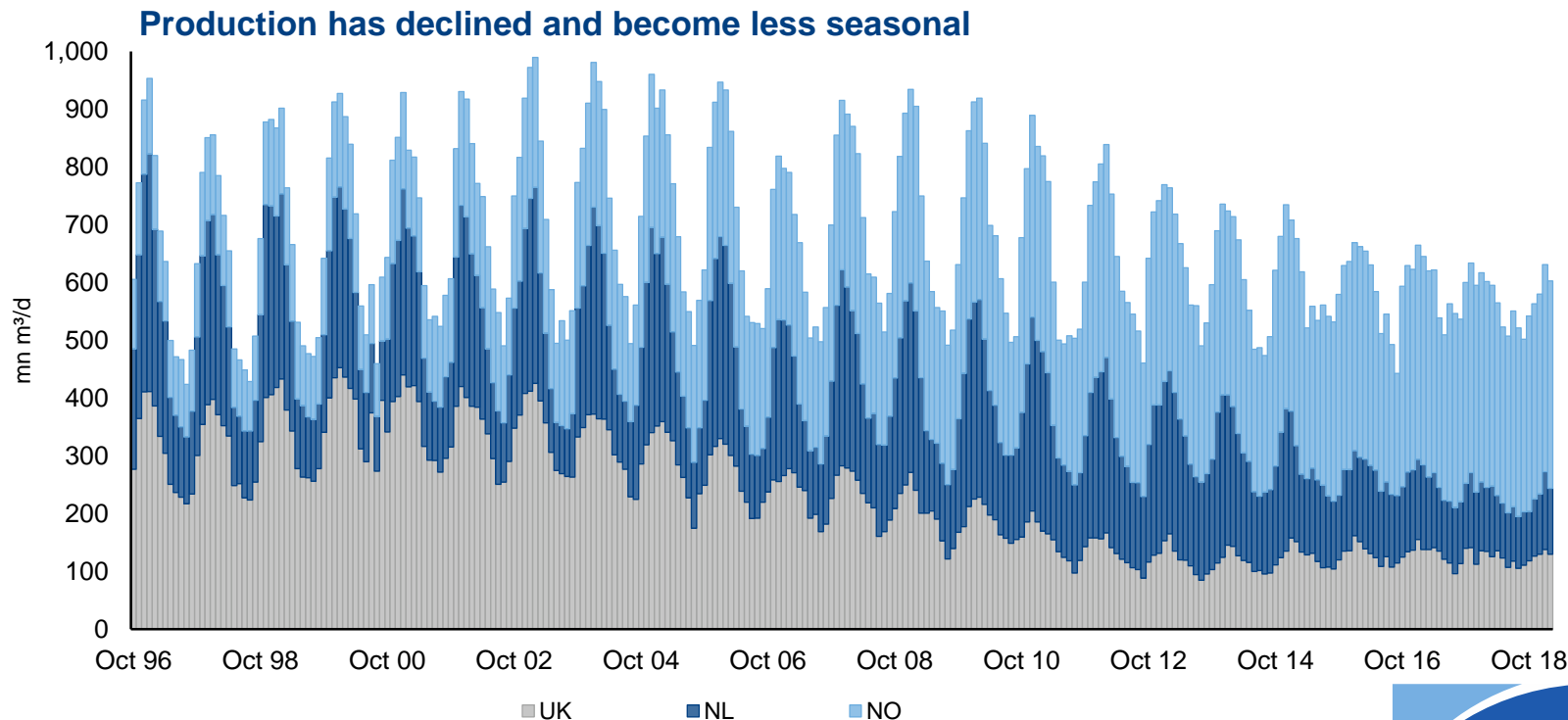
A nighttime photograph of the London skyline, featuring the Shard and other skyscrapers reflected in the water. A glowing blue line, resembling a light trail or a stylized river, curves through the lower half of the image.

# Europe is not the same Europe it was

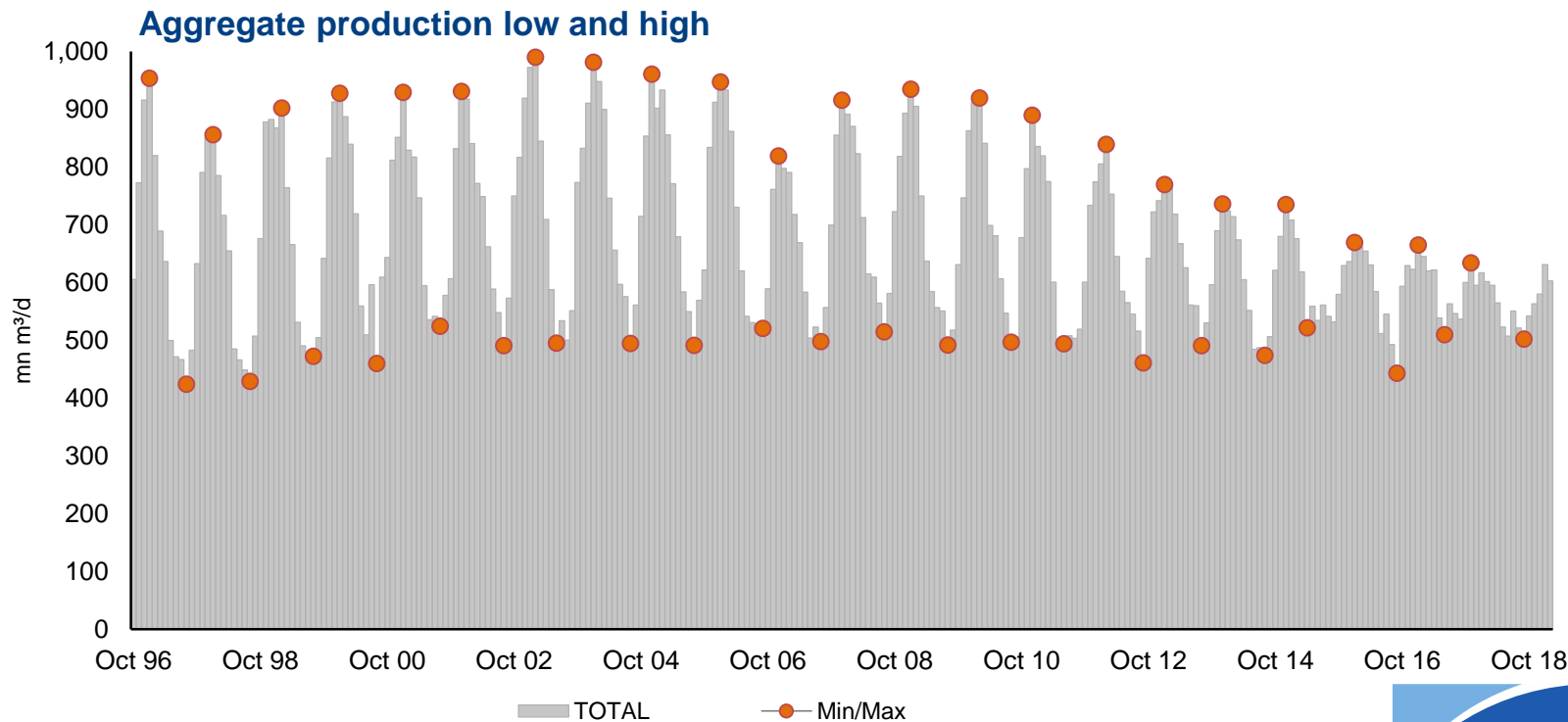
illuminating the markets

Market Reporting  
Consulting  
Events

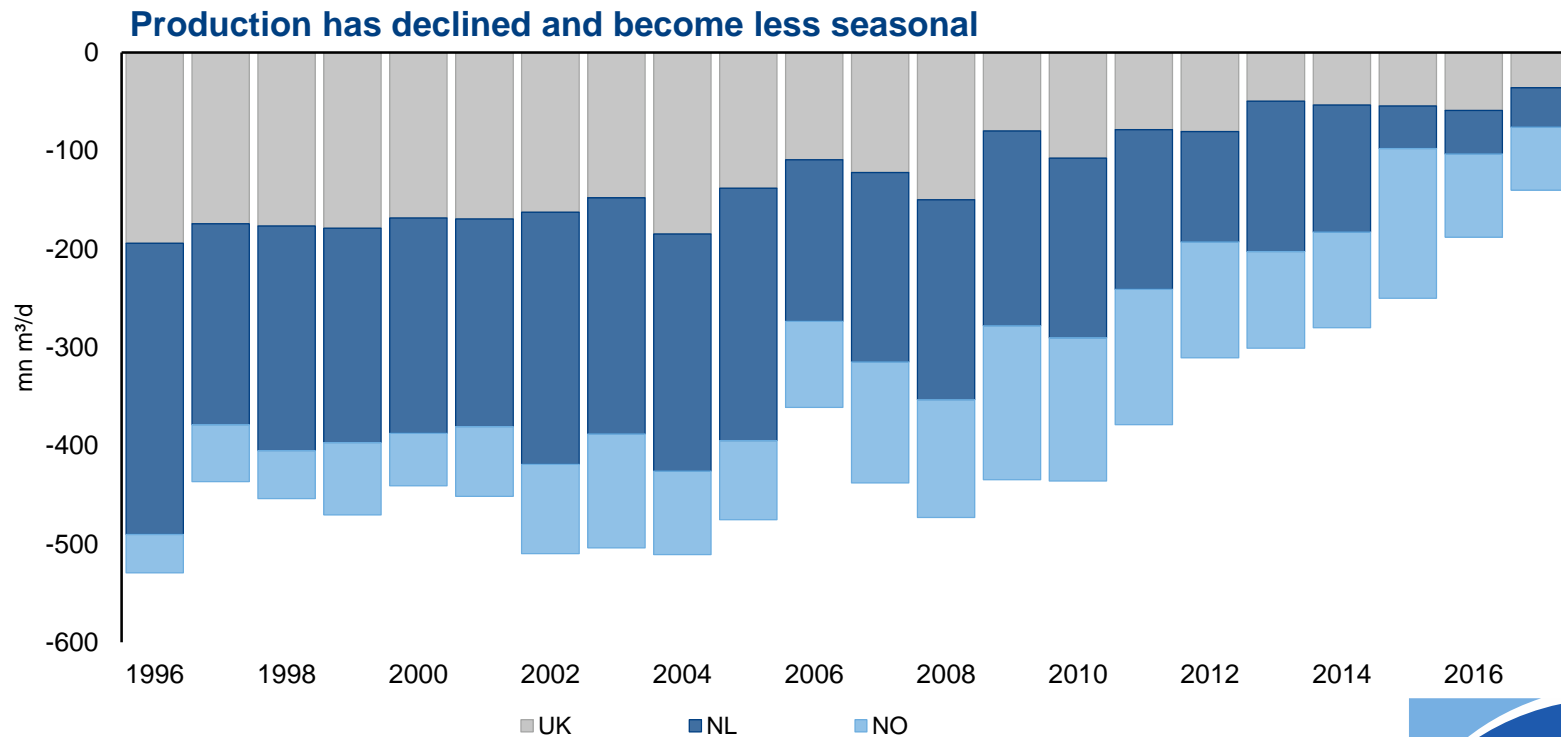
# UK, Dutch and Norwegian production



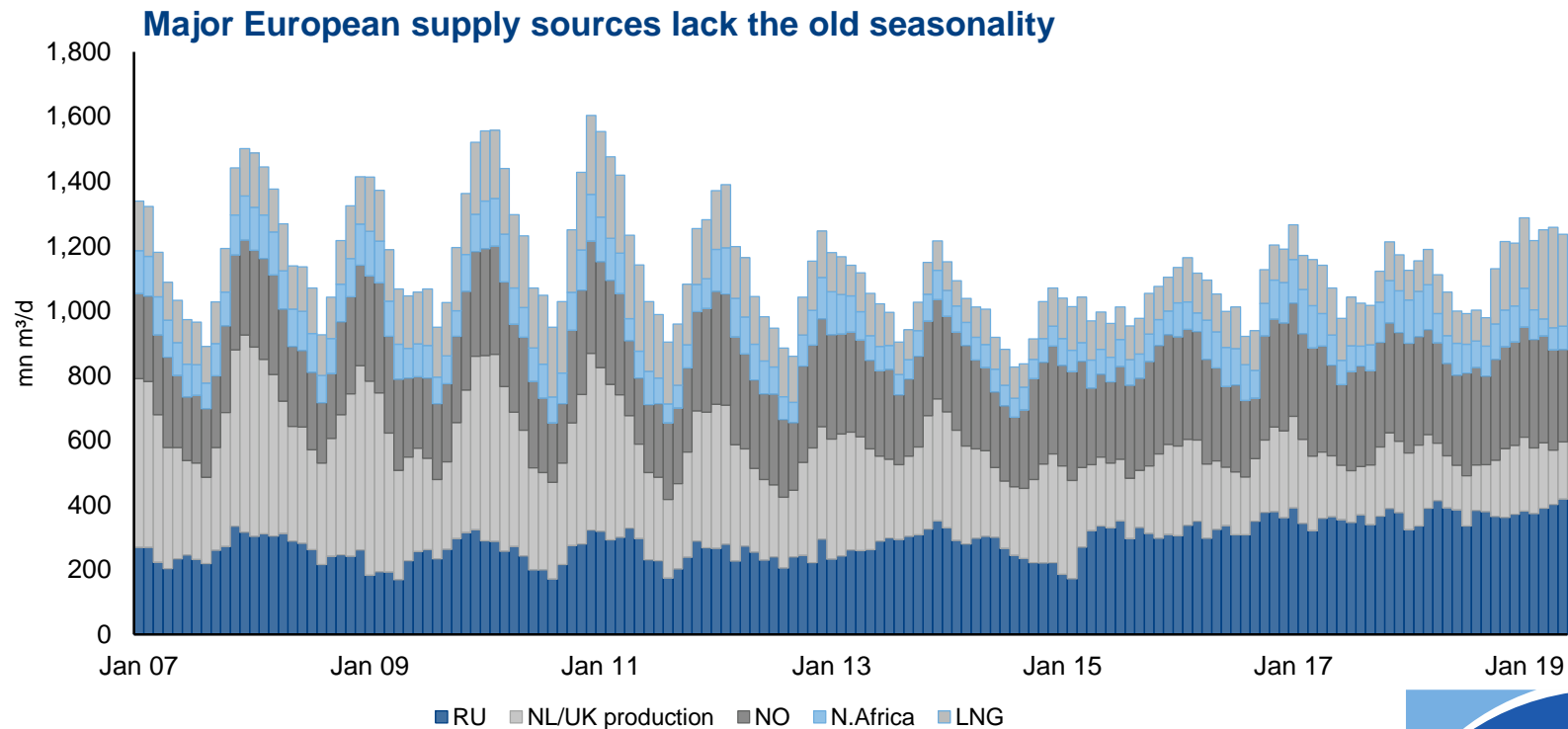
# Gas year production swing has declined



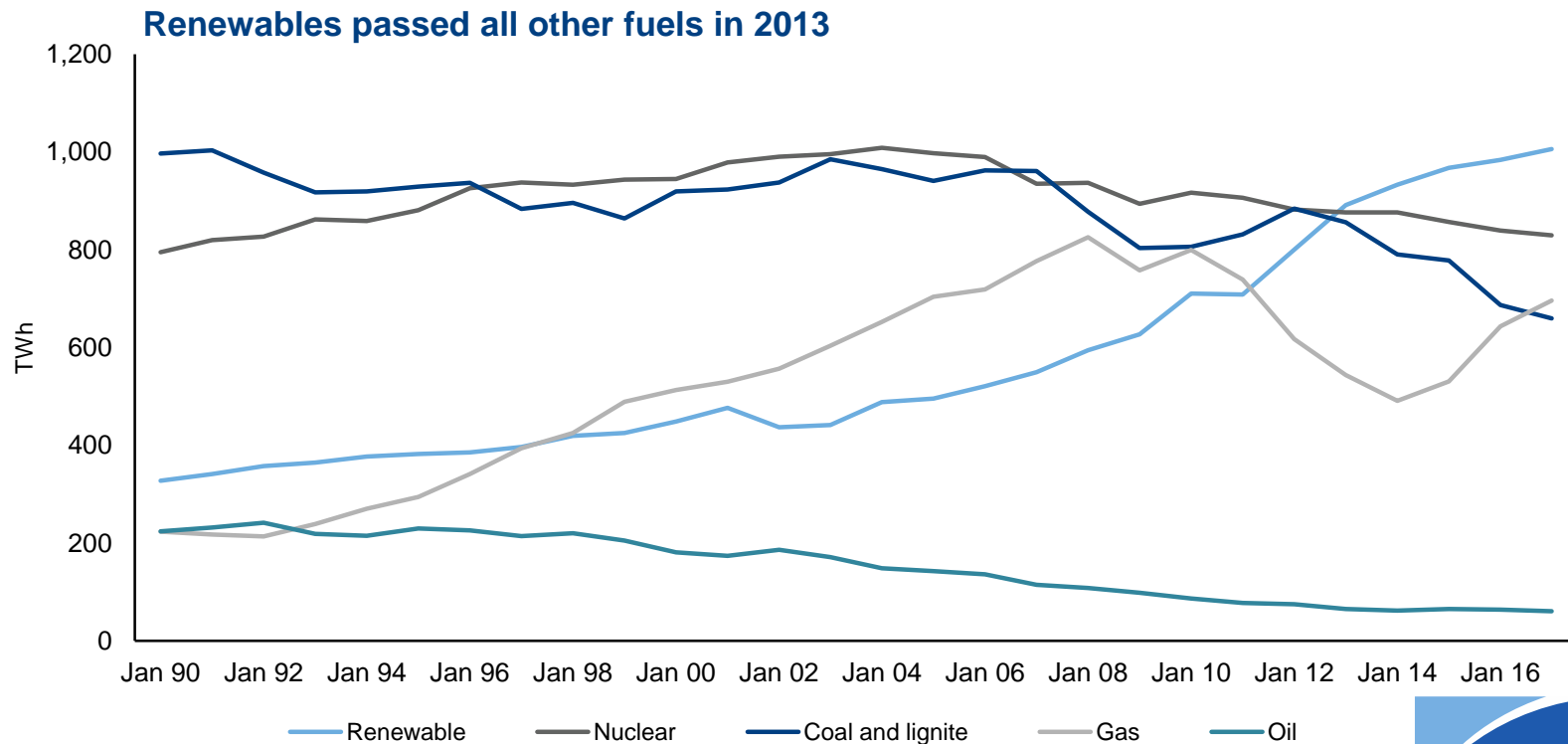
# Apparent flexibility falls sharply



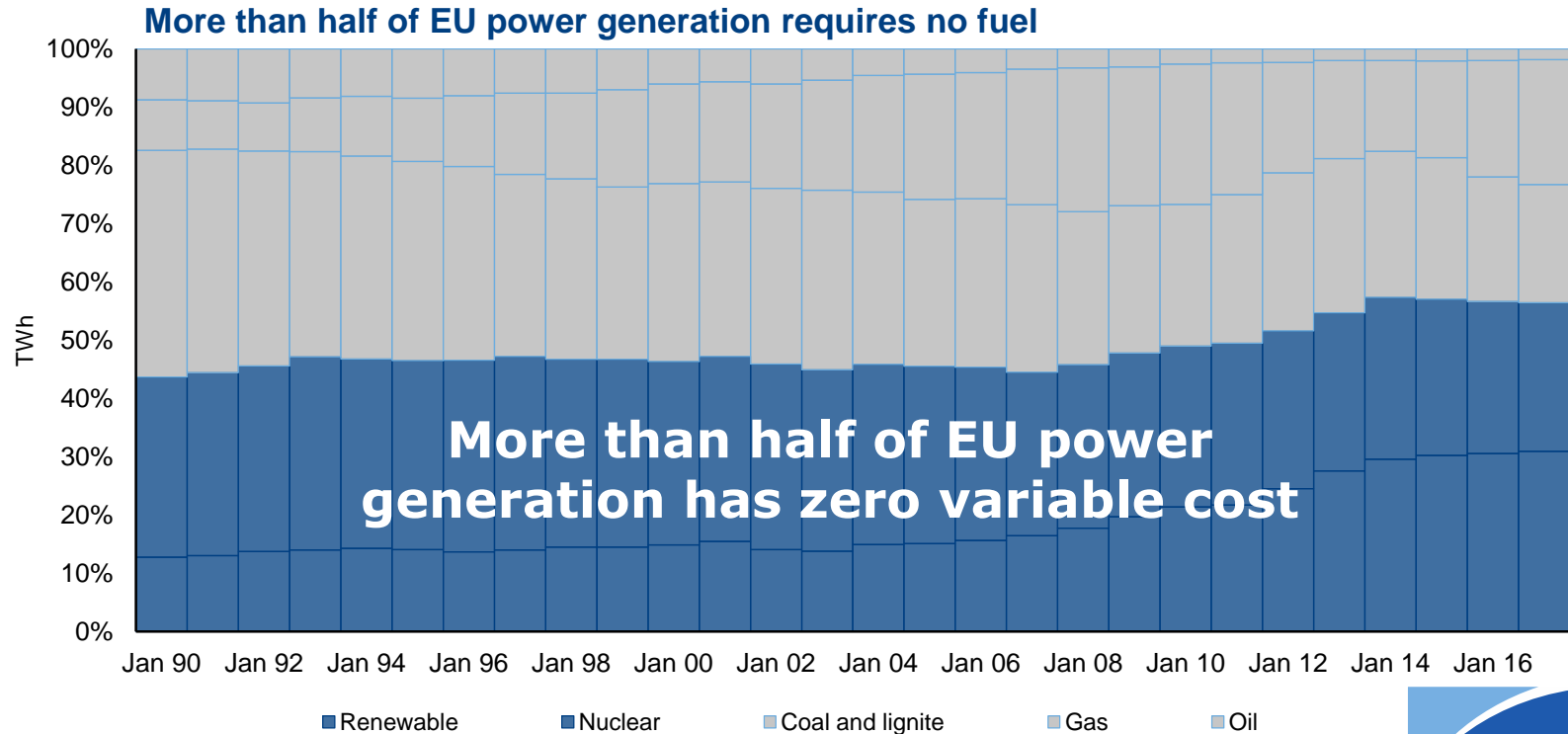
# Overall European supply has flattened too



# Renewables are the largest source of EU supply



# More electricity has no variable cost



# So what does all of this mean for prices?

Two different approaches

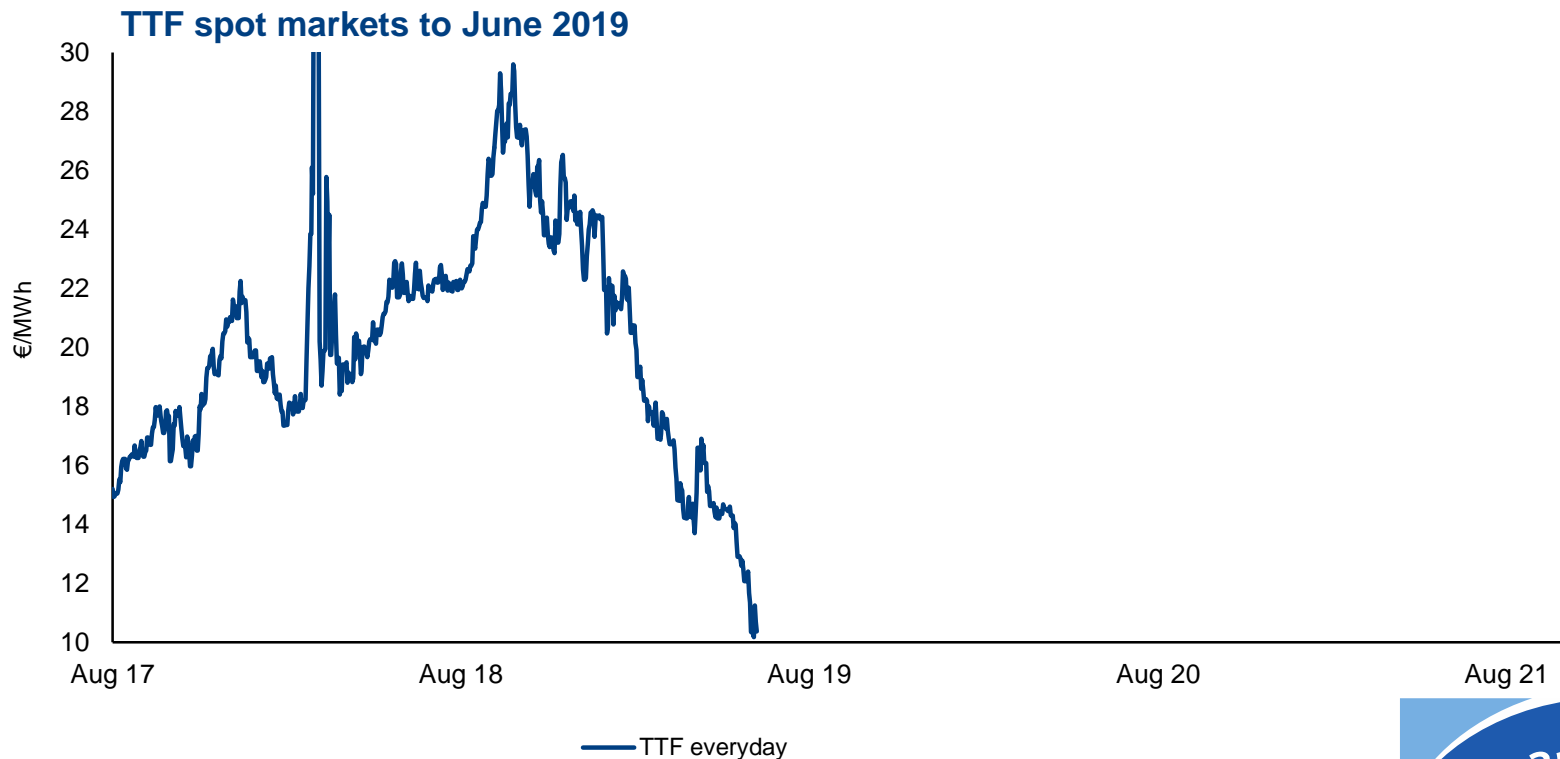
illuminating the markets

Market Reporting

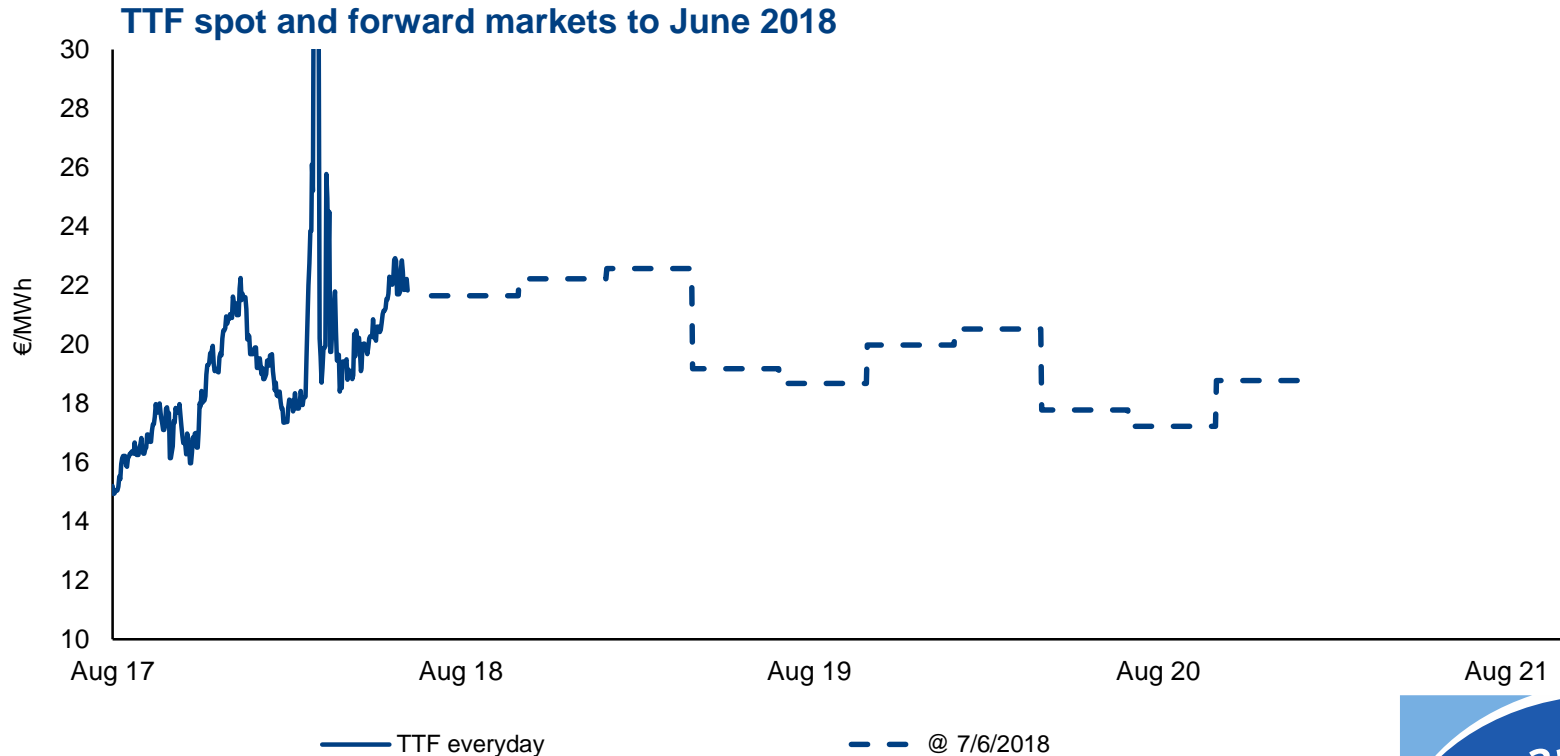
Consulting

Events

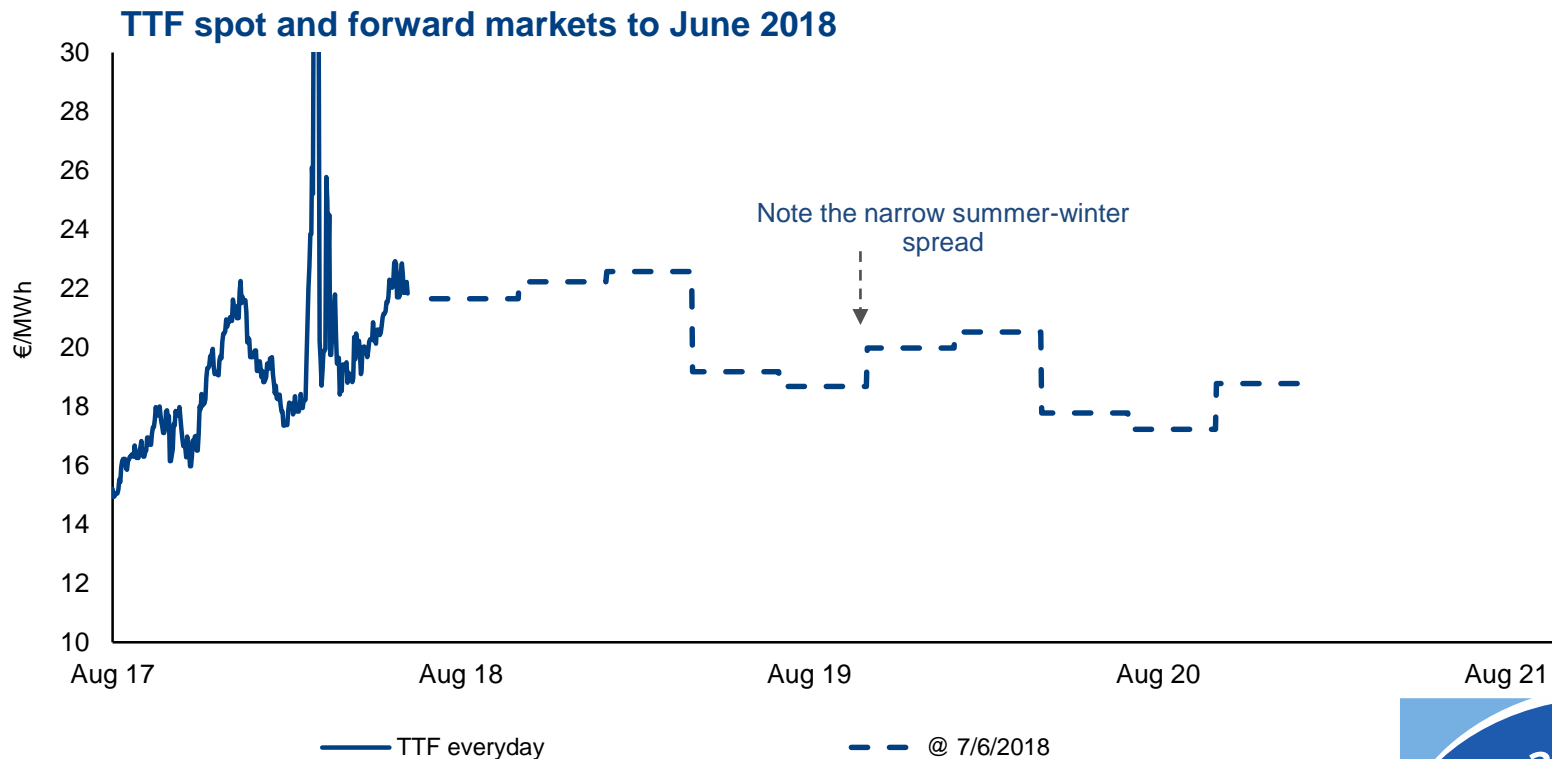
# TTF spot prices reach €10/MWh



# How did forward markets respond?



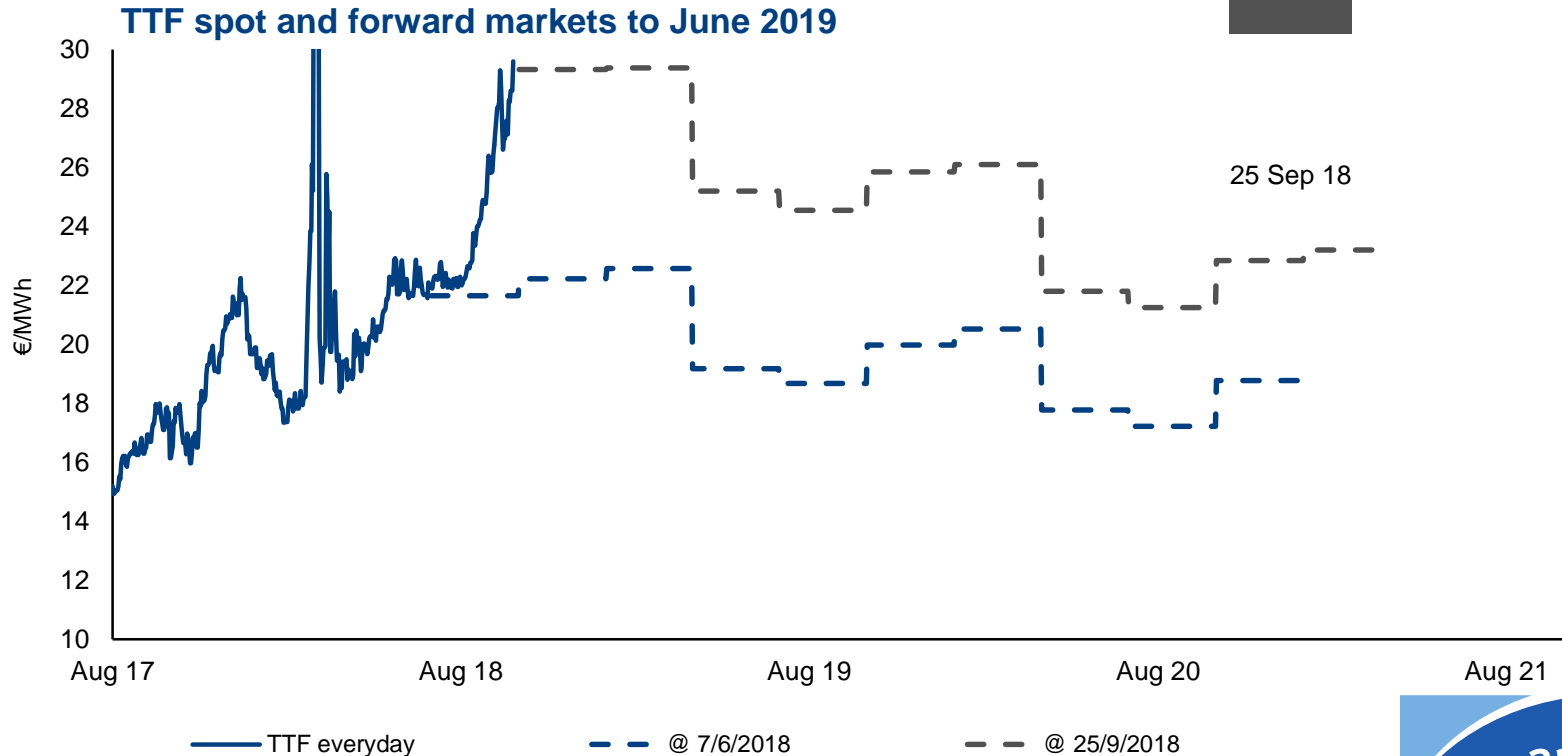
# How did forward markets respond?



# How did forward markets respond?

Curve value relative to June 2018

+25.6%

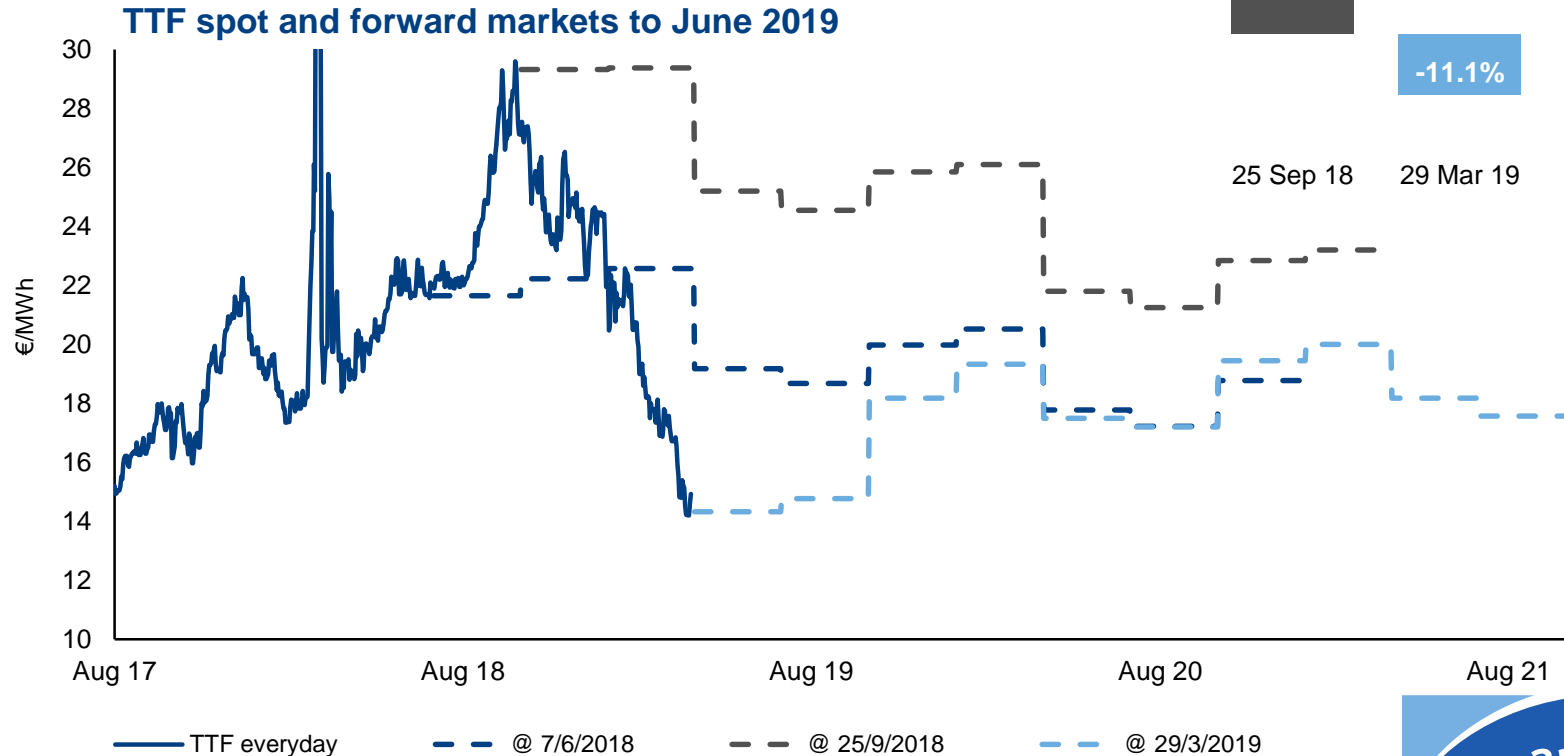


# How did forward markets respond?

Curve value relative to June 2018

+25.6%

-11.1%

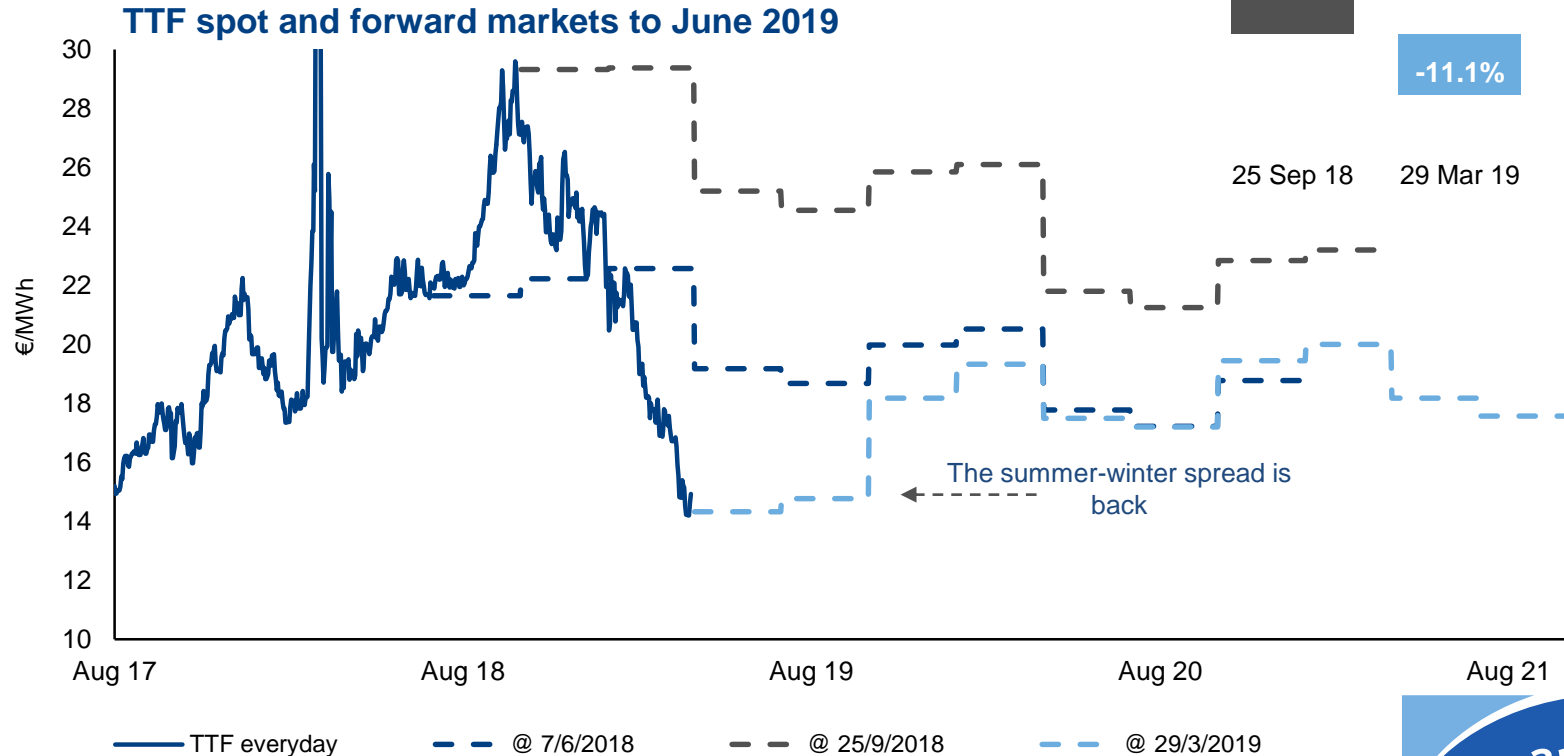


# How did forward markets respond?

Curve value relative to June 2018

+25.6%

-11.1%



# How did forward markets respond?

Curve value relative to June 2018

+25.6%

-11.1%

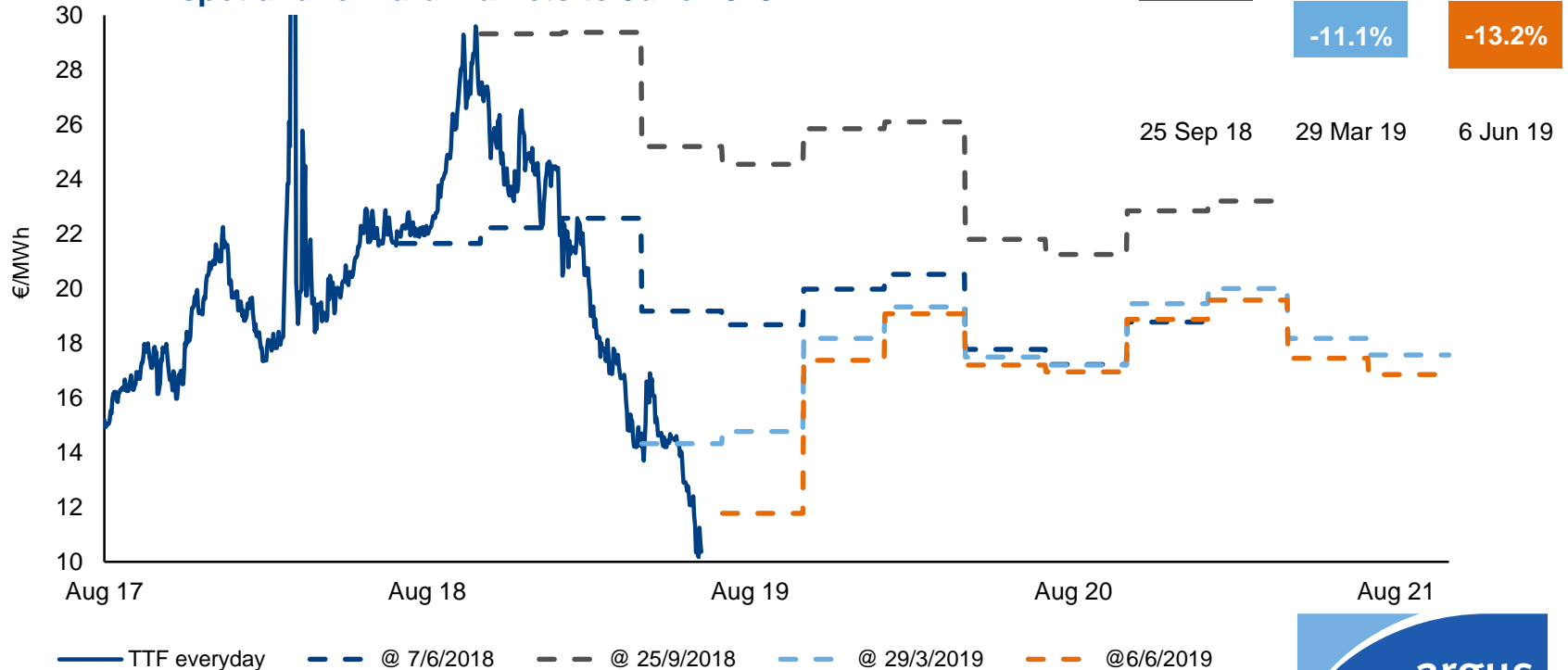
-13.2%

25 Sep 18

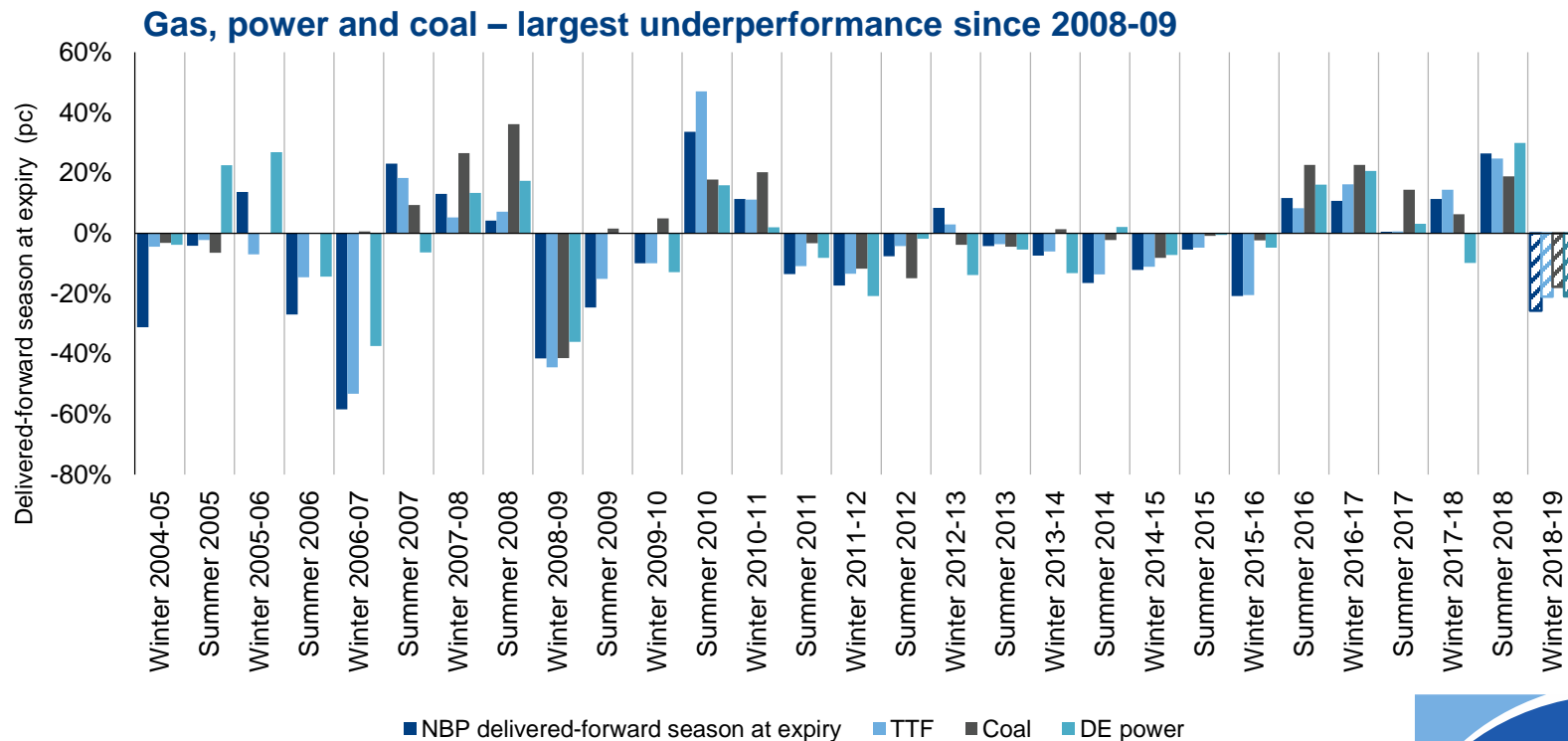
29 Mar 19

6 Jun 19

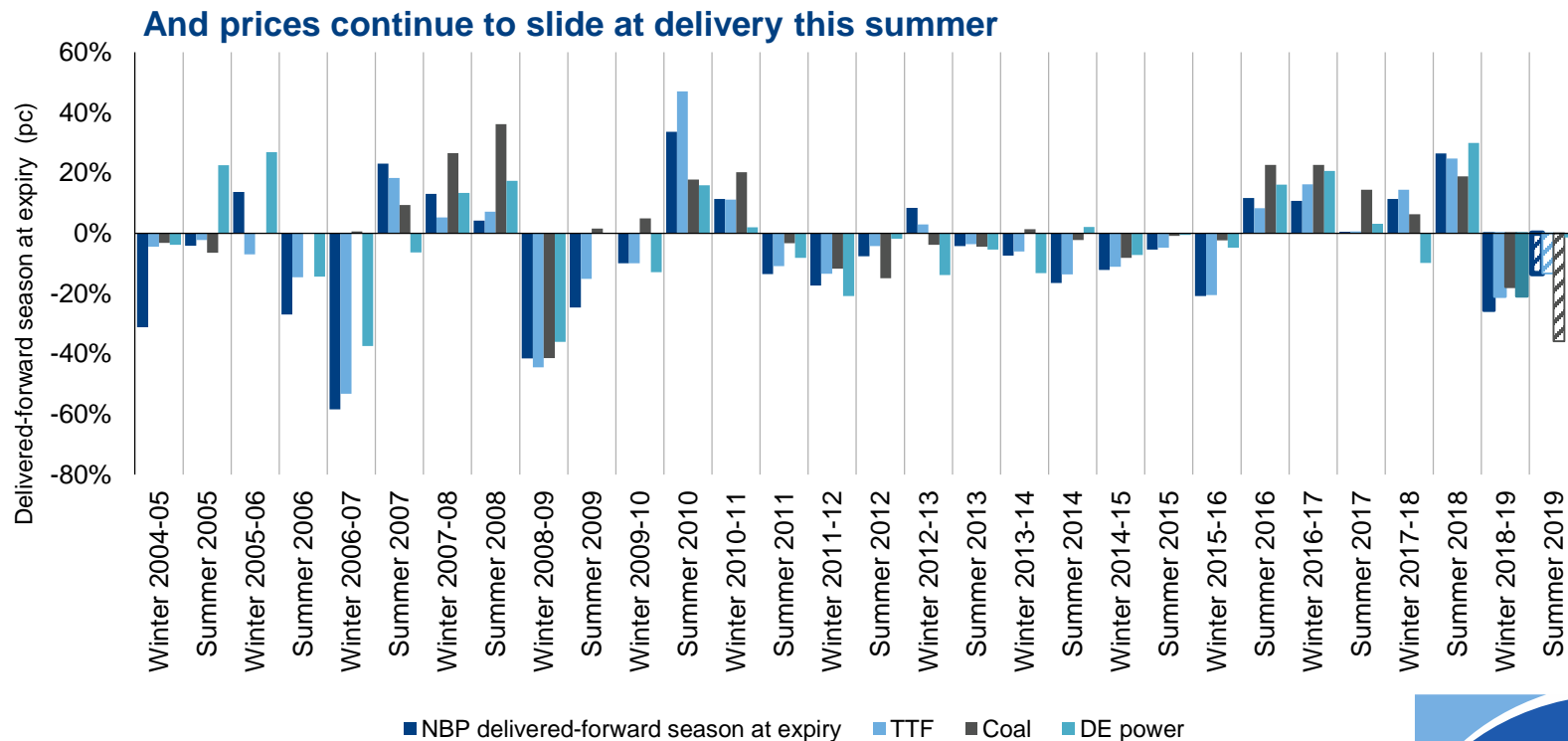
TTF spot and forward markets to June 2019



# Seasonal prices at delivery v at expiry



# Can we value future market inflexibility?



# Matthew Monteverde



## Vice President – Commodities Markets



matthew.monteverde@argusmedia.com

+44 20 7780 4225

skype: matthew\_monteverde

### Stay Connected

 @ArgusMedia  
 +Argusmediaplus

 Argus-media  
 argusmediavideo

### Copyright notice

Copyright © 2019 Argus Media group. All rights reserved. All intellectual property rights in this presentation and the information herein are the exclusive property of Argus and and/or its licensors and may only be used under licence from Argus. Without limiting the foregoing, by reading this presentation you agree that you will not copy or reproduce any part of its contents (including, but not limited to, single prices or any other individual items of data) in any form or for any purpose whatsoever without the prior written consent of Argus.

### Trademark notice

ARGUS, the ARGUS logo, ARGUS MEDIA, ARGUS DIRECT, ARGUS OPEN MARKETS, AOM, FMB, DEWITT, JIM JORDAN & ASSOCIATES, JJ&A, FUNDALYTICS, METAL-PAGES, METALPRICES.COM, Argus publication titles and Argus index names are trademarks of Argus Media group.

### Disclaimer

All data and other information presented (the "Data") are provided on an "as is" basis. Argus makes no warranties, express or implied, as to the accuracy, adequacy, timeliness, or completeness of the Data or fitness for any particular purpose. Argus shall not be liable for any loss or damage arising from any party's reliance on the Data and disclaims any and all liability related to or arising out of use of the Data to the full extent permissible by law.

The Argus logo is located in the bottom right corner of the slide. It consists of a blue rectangular box with a white curved line on the left side, and the word "argus" in white lowercase letters to the right of the line.