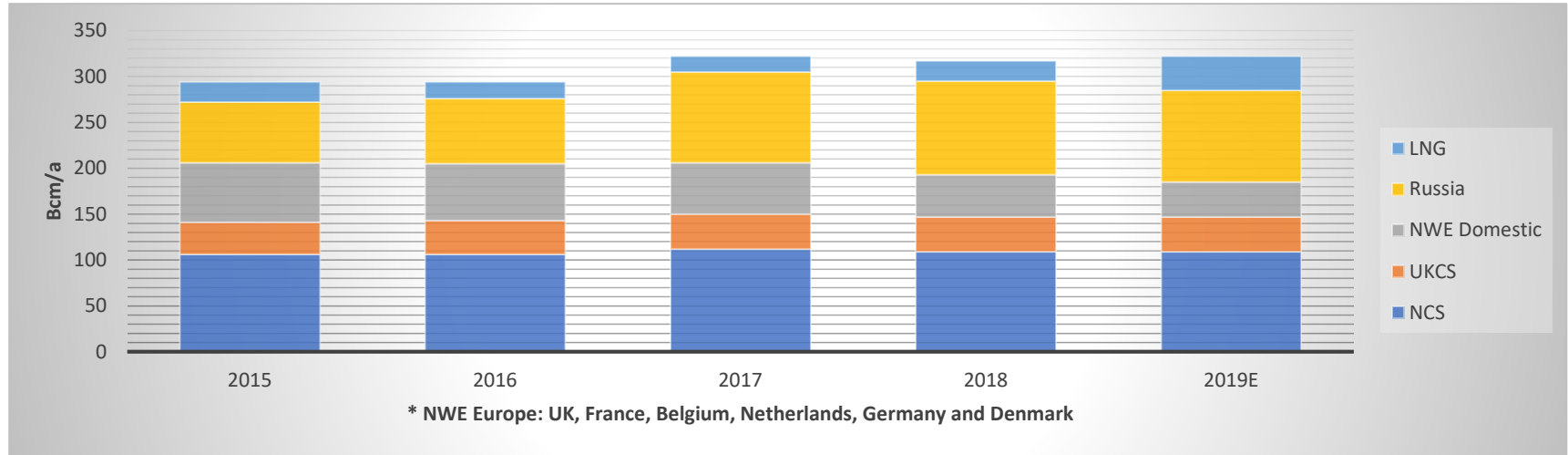


LNG vs Pipeline Gas Competition

Flame 2019

Guy Smith, XX.05.2019

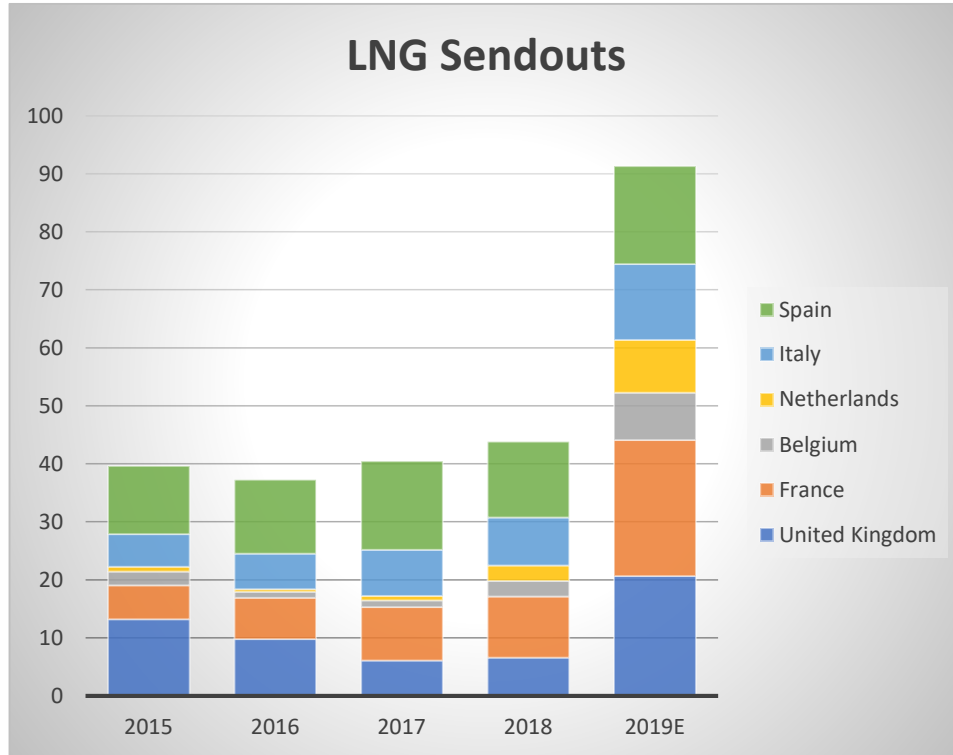
NWE European Gas Supply by Source



Supply

- With the decline in NWE indigenous production NWE increase the need for imports to fill the gap
- As NCS and UKCS production remains flat we have seen Russian and LNG imports covering for the decrease in Domestic production
- New LNG liquefaction capacity and Nord Stream 2 project coming online

Record LNG Arriving in NWE Europe

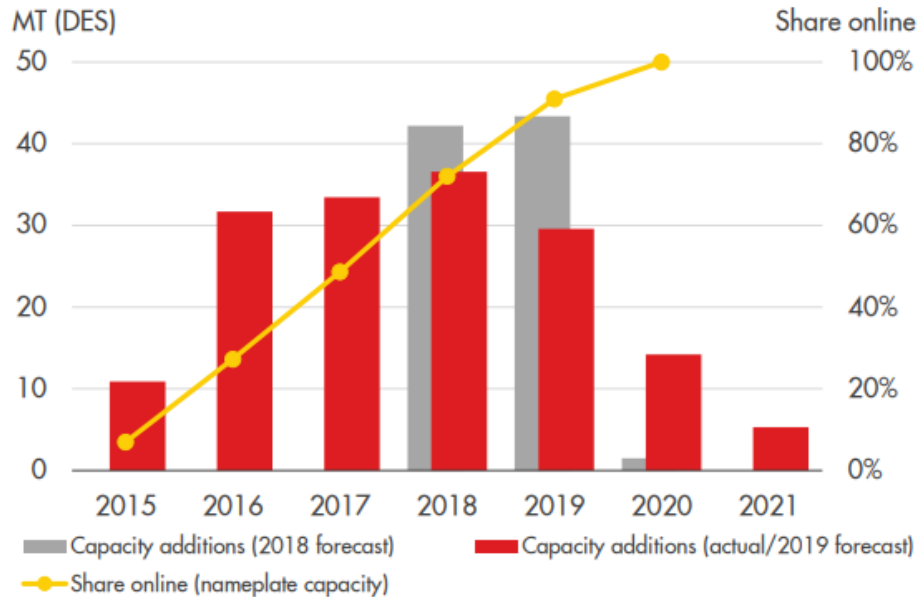


LNG Send-outs in Europe

- European markets probed that they can absorb LNG flows in an oversupplied LNG market
- Asian demand could limit European LNG imports and therefore Send-outs.
- JKM prices could continue to chase TTF down and lower Gas price anchors

LNG Liquefaction capacity additions will decrease after 2019

LNG liquefaction capacity additions



Source: Shell LNG Outlook 2019

New LNG Supply

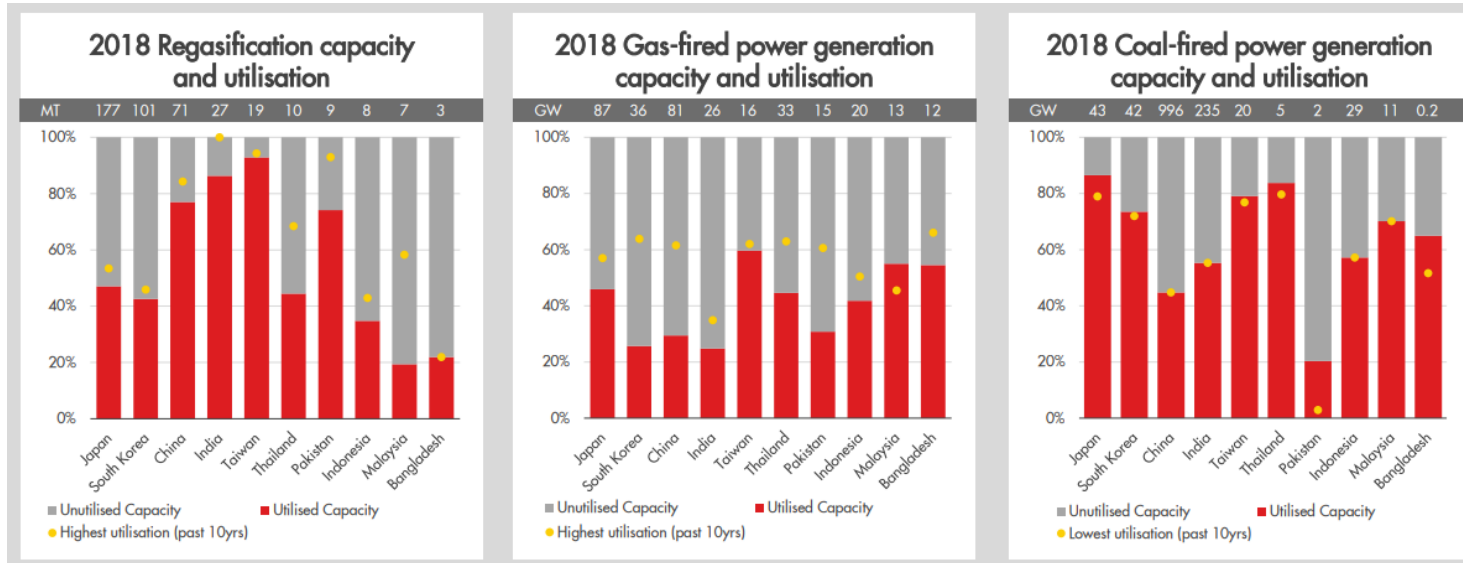
- New LNG supply is expected to be absorbed by Asia and Europe
- China and India can potentially double import infrastructure in 5 years
- Netbacks from the US could turn negative and put economic dispatches at risk

Russian pipeline Gas: Nord Stream 2



- Nord Stream 2 will come online but uncertainty remains around its exact start date
- The pipeline still required approval from Denmark with no firm data
- Delays to Nord Stream 2 beyond end-2019 could force Gazprom to reach a new transit agreement with Naftogaz
- Additionally to Nord Stream 2 there are a range of projects intended to bring gas from the Caspian Sea under the Southern Corridor pipeline system

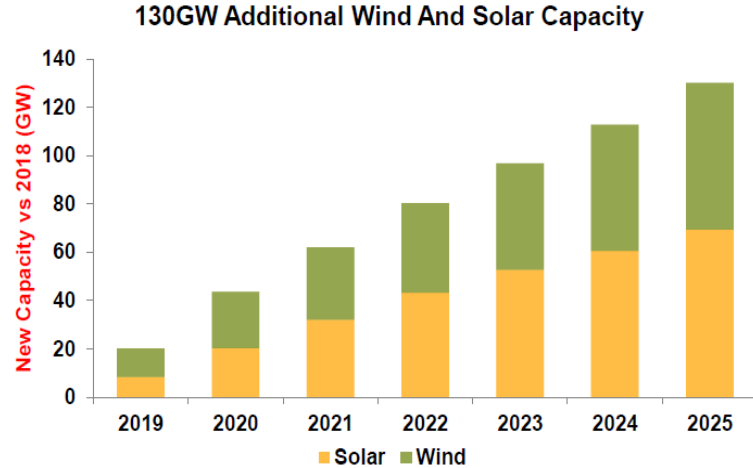
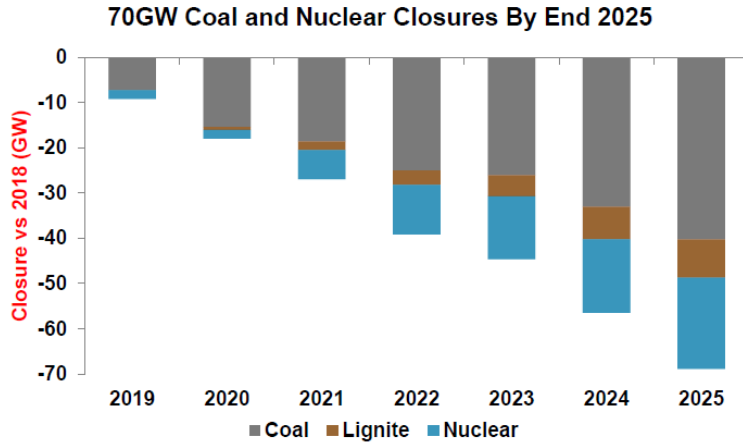
Asian Demand impacting LNG Imports to Europe



Source: Shell LNG Outlook 2019

- More than doubling European LNG imports since last summer is a function of global LNG supply outpacing demand growth
- Under a high demand growth scenario in Asia the surplus of LNG in 2020 flowing to Europe would be limited

European Demand to absorb Imports increase



Charts include: UK, DE, NL, FR, BE, IT, ES, AT, CH, PT

Source: S&P Global Platts

- Gas to Power demand in Europe will undergo significant changes over the next few years
- Coal and Nuclear closures will support Gas to Power demand in Europe
- On the other side more competitive renewables could cap Gas to Power demand increase

Summary - Russia imports vs. LNG

Key Takeaways

- Based on recent Gazprom strategy it suggests that Russia will continue to fight to keep their market share in Europe
- If we continue to see current high levels of LNG imports to Europe, Gazprom could change their strategy from market share to revenue in the short-term until new liquefaction is on line focusing on exporting to new markets, i.e. China until the LNG market balanced
- The current wave of LNG imports to Europe could be a short lived trend if new LNG supply does not increase after early 2020.
- Asian demand will be key to absorb extra LNG supply growth and potentially end the market share competition between LNG and Russian pipeline gas in Europe.

Q&A