International Energy Agency

Global Gas Security Review 2019

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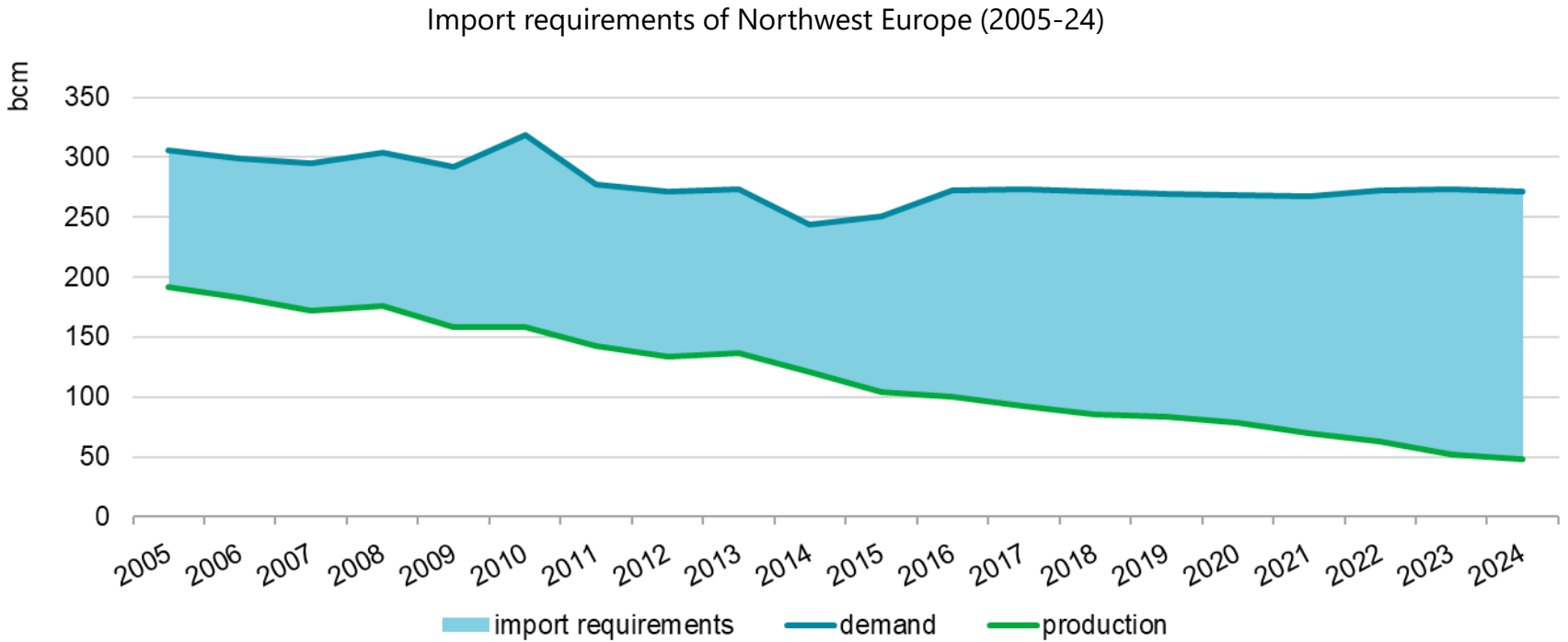
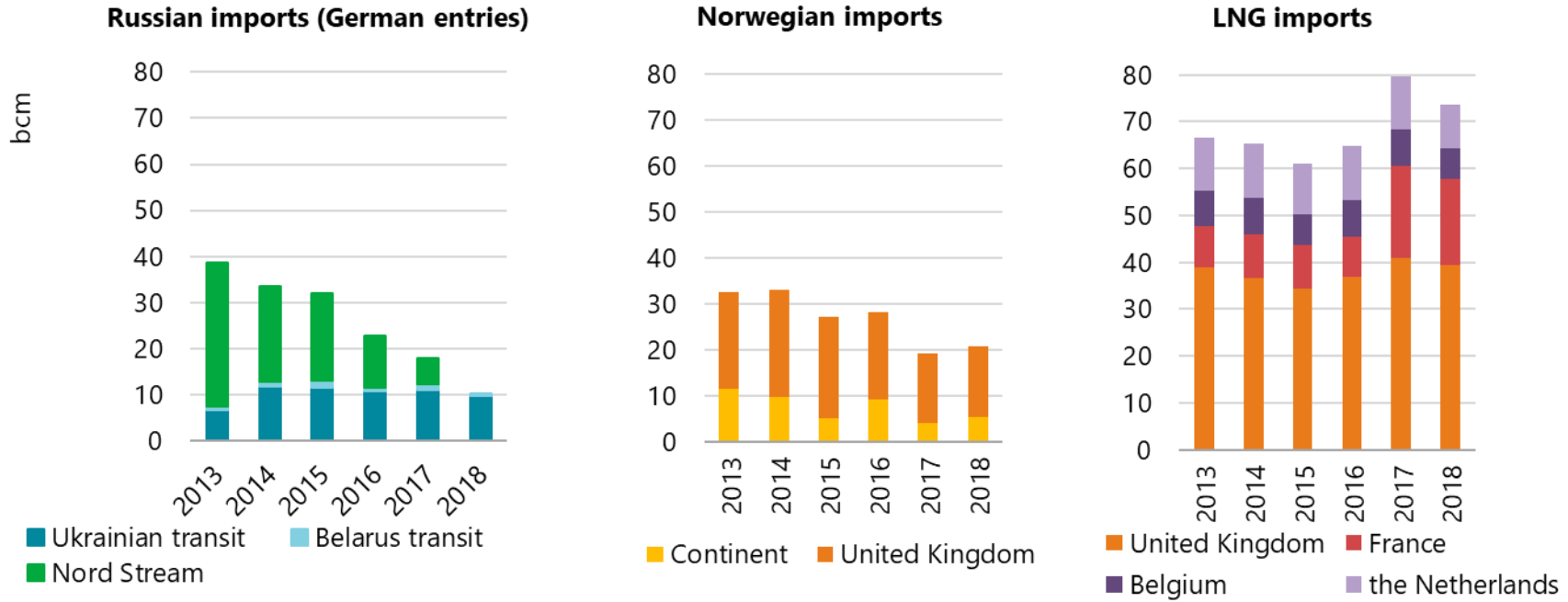
Northwest Europe supply gap increases…



Decreasing domestic production will increase the region's import dependence.

….whilst its spare pipeline import capacity has declined…

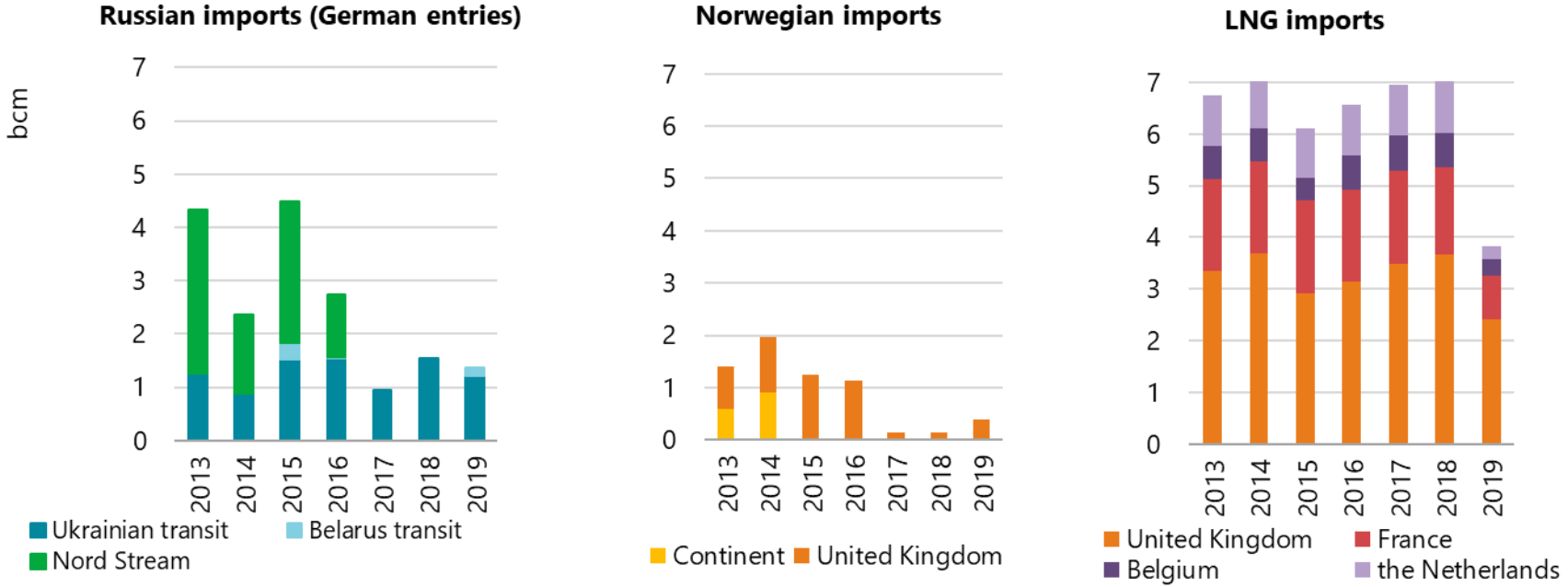
Annual spare import capacity to Northwest Europe by origin of imports (2013-18)



Spare import pipeline capacity to Northwest Europe halved in the last 5 years, whilst spare capacity in LNG regasification terminals slightly increased.

….in particular during peak demand periods

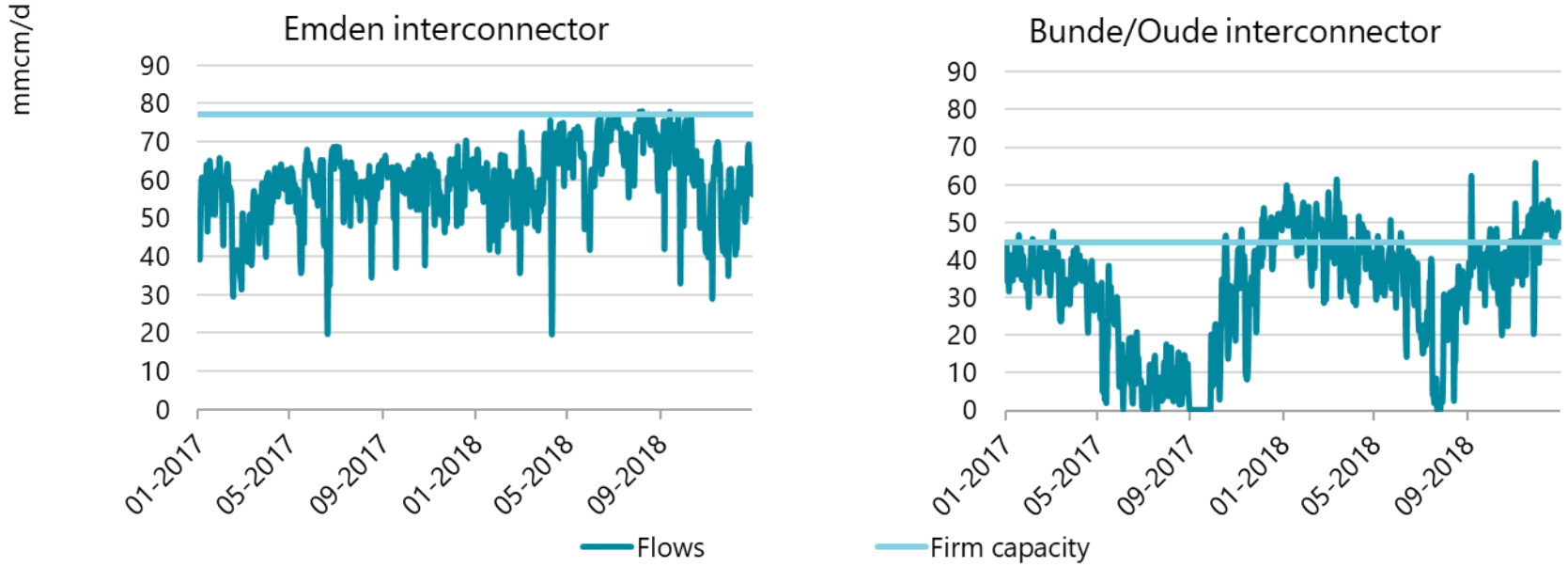
January spare import capacity to Northwest Europe by origin of imports (2013-18)



Spare capacity in pipelines directly servicing northwest Europe has practically fallen to 0 during January in the last two heating season.

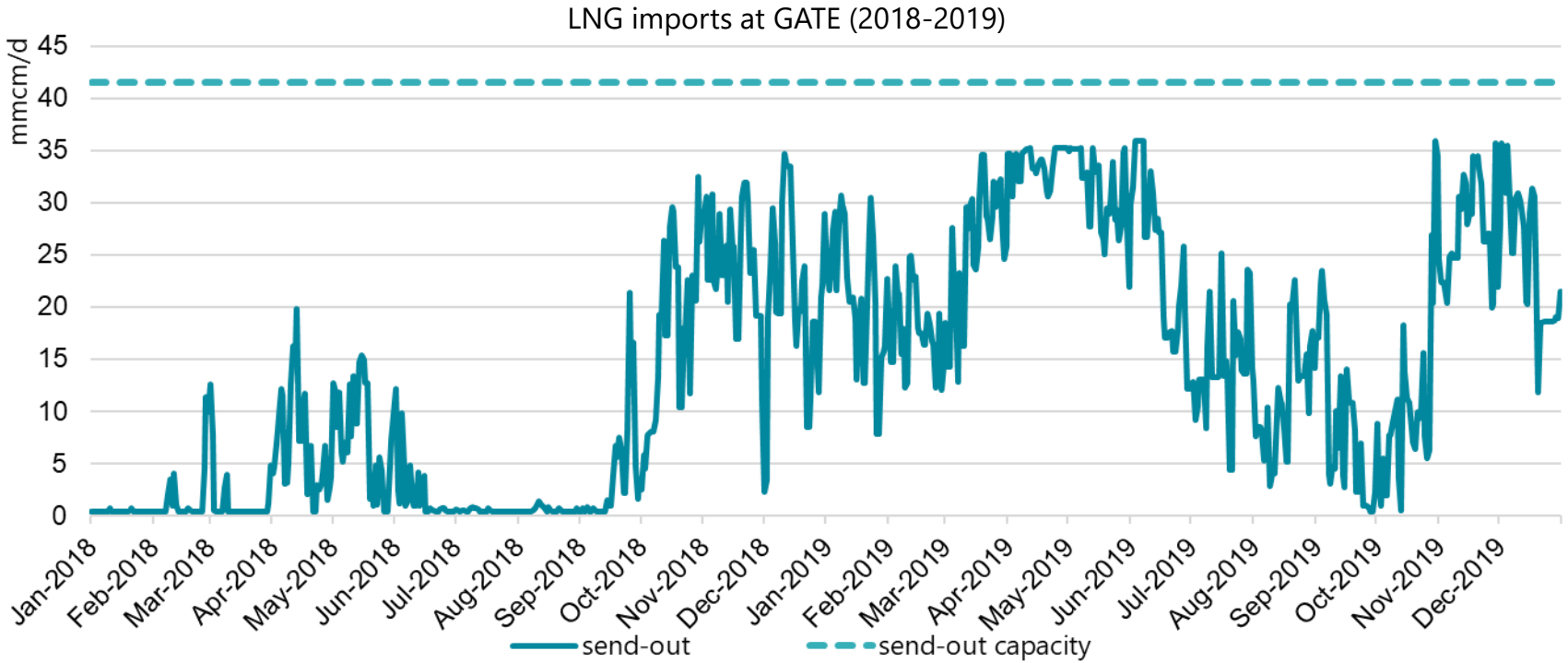
Some interconnectors are becoming saturated

Interconnector flows from Germany to the Netherlands (2017–18)



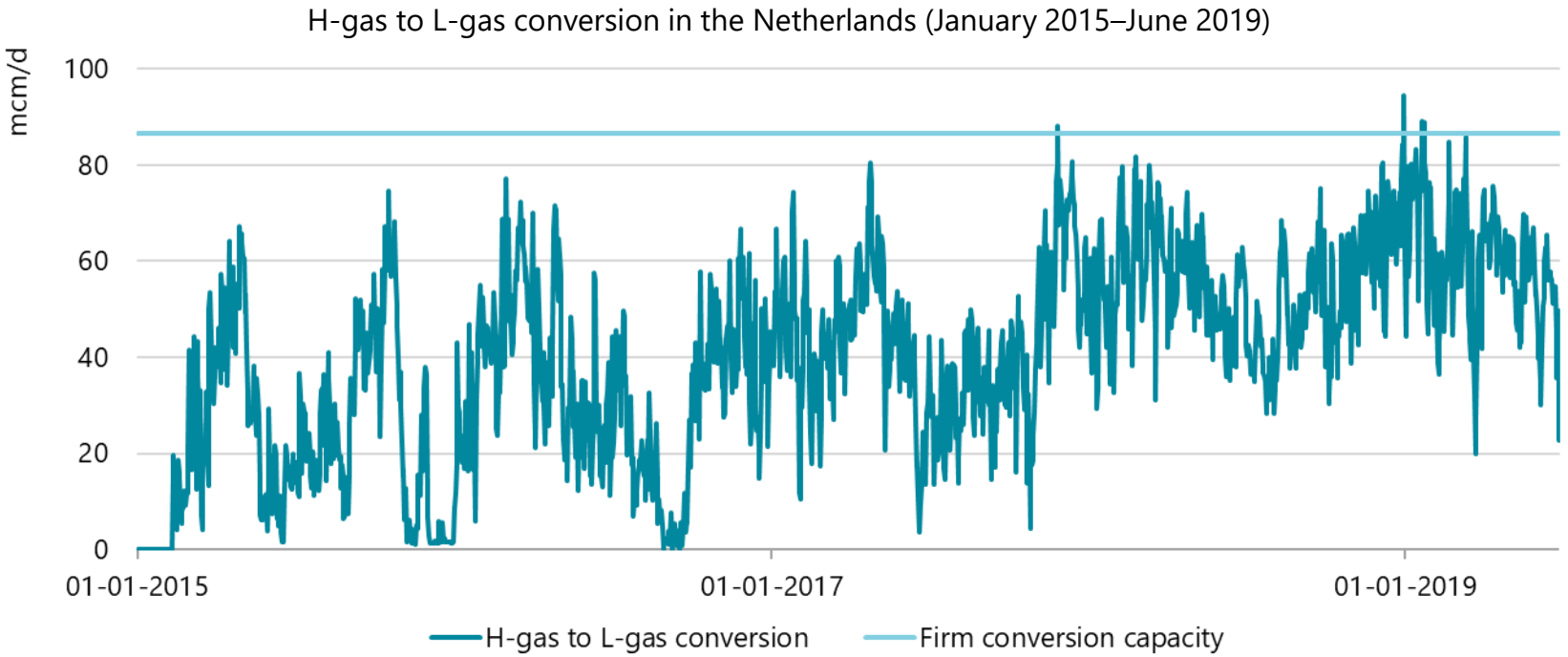
The utilisation of interconnections feeding into the Dutch natural gas grid from Germany is saturated during periods of high demand, hence limiting the availability of spare capacity.

A focus on GATE: a changing utilization rate



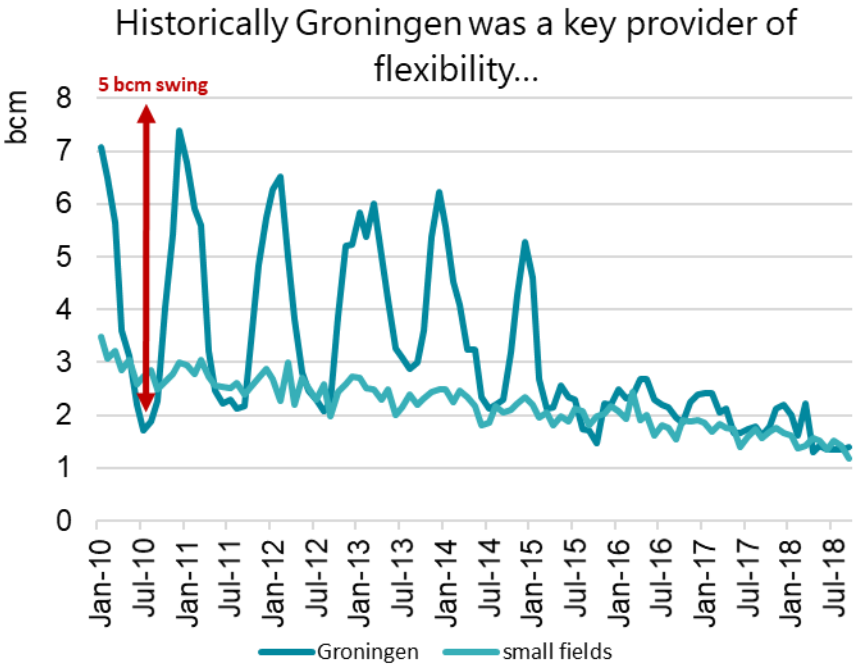
The great LNG influx into northwest Europe drove up the utilization rates of LNG regas terminals, including GATE, which has been running close to its maximum send-out capacity.

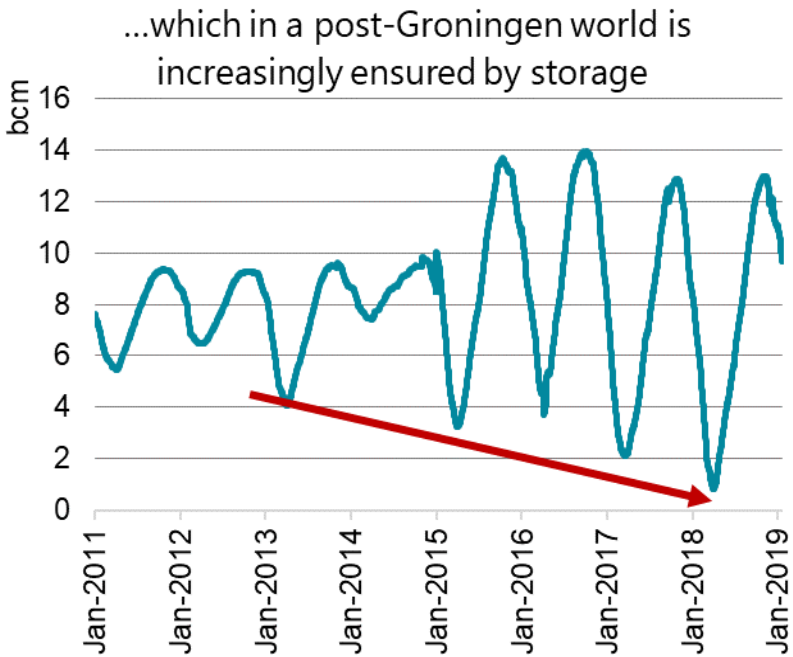
Conversion facilities in the Netherlands are heavily used



Conversion facilities now account for 60% of L-cal gas production in the Netherlands, reaching an average utilisation rate of 88% in 2018.

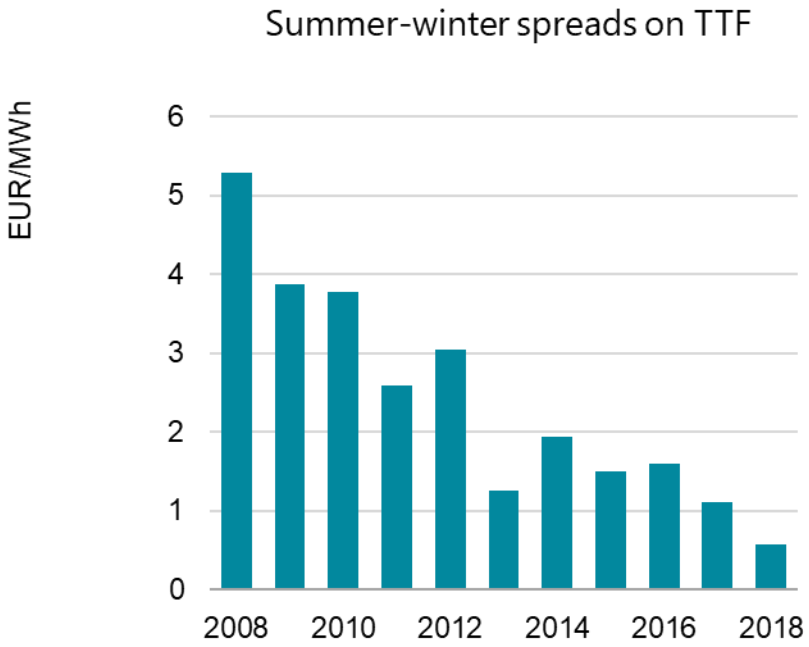
The role of storage in seasonal balancing is growing

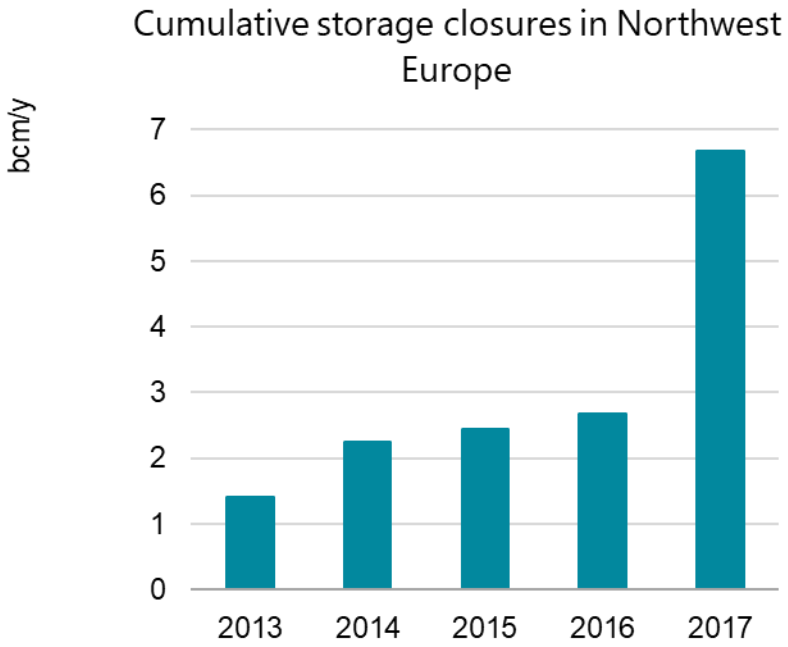




Utilization of gas storage to provide the seasonal swing has been growing in northwest Europe amidst declining flexible domestic production.

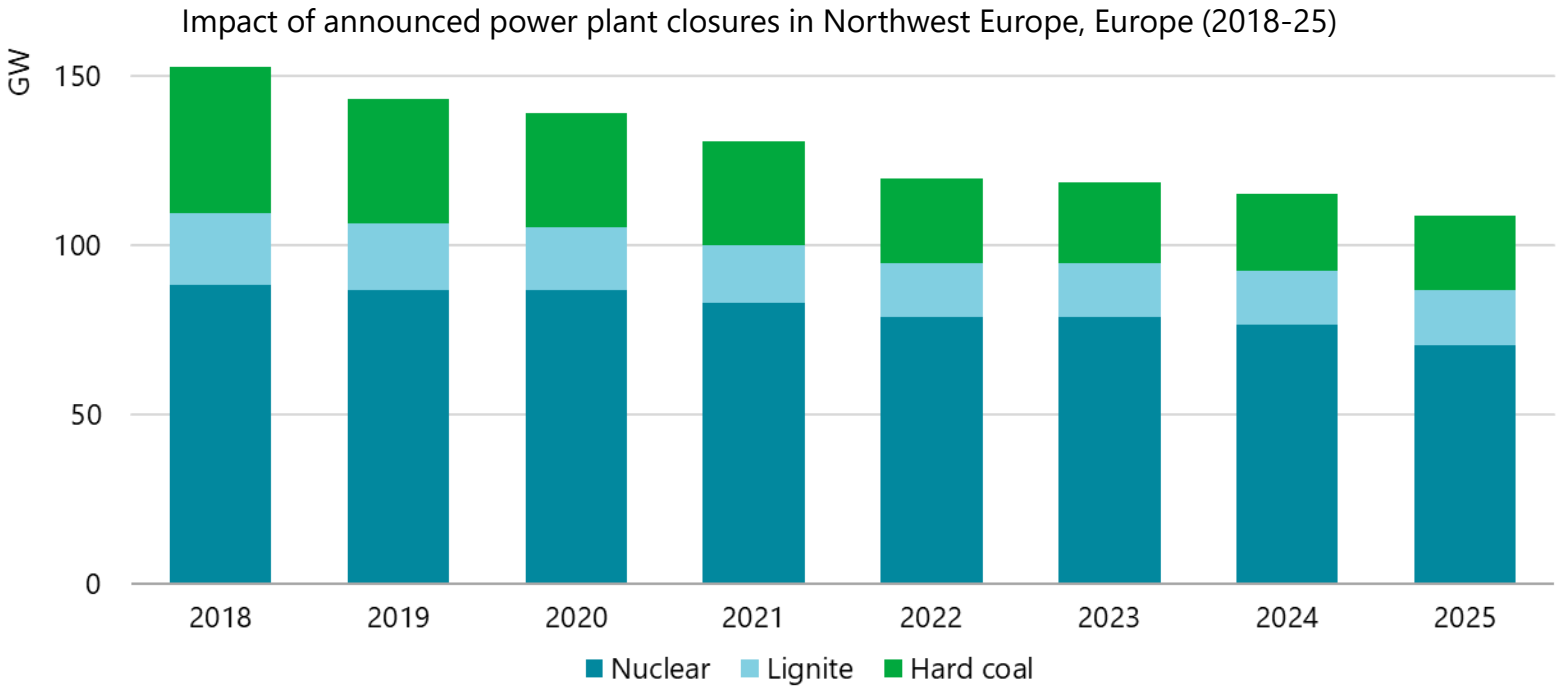
Challenging storage economics leads to storage closures…





Seasonal spreads on the TTF have more than halved since 2012, leading to the closure of almost 7 bcm of storage capacity since 2013.

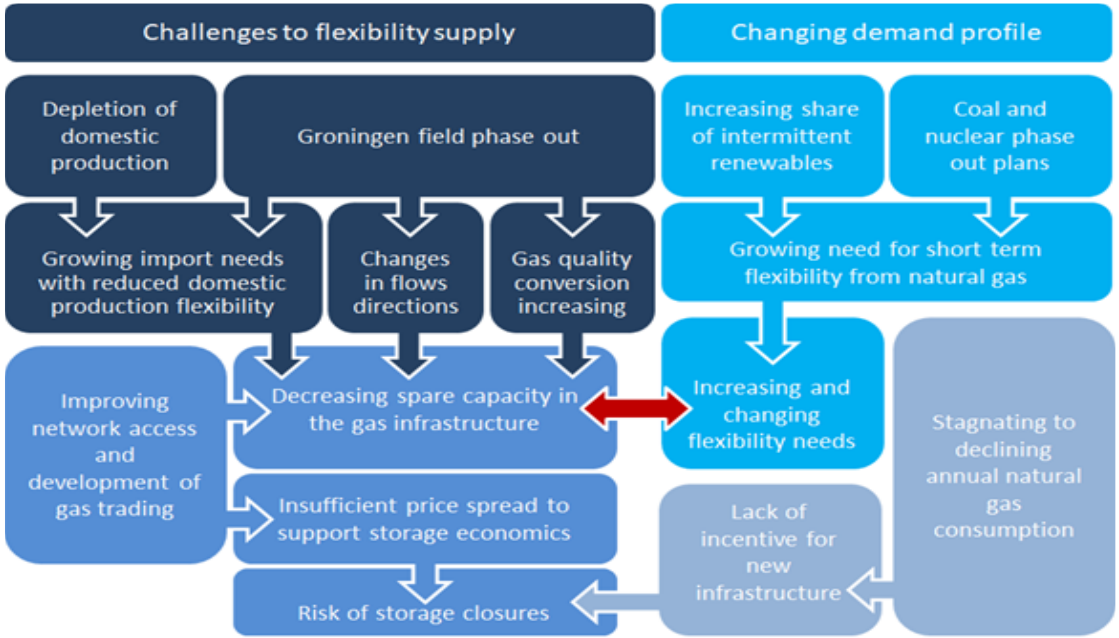
…in a transforming energy system…



The growing share of intermittent renewables, coupled with declining coal-fired and nuclear power generation, is set to increase the volatility of gas-fired power generation.

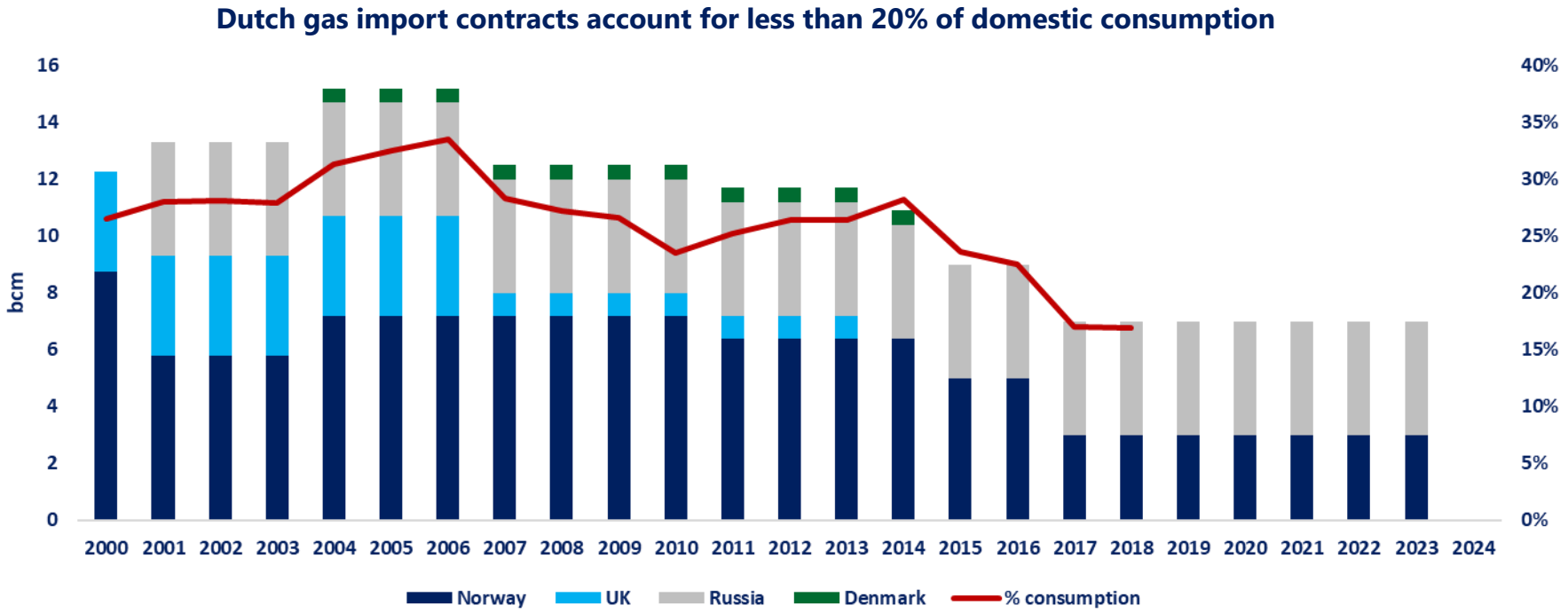
…with growing complexities and flexibility requirements

Northwest Europe's changing gas flexibility landscape



Whilst the supply of gas flexibility is decreasing, the flexibility call on the Northwest European gas system might increase through the medium-term when considering the broader energy complex.

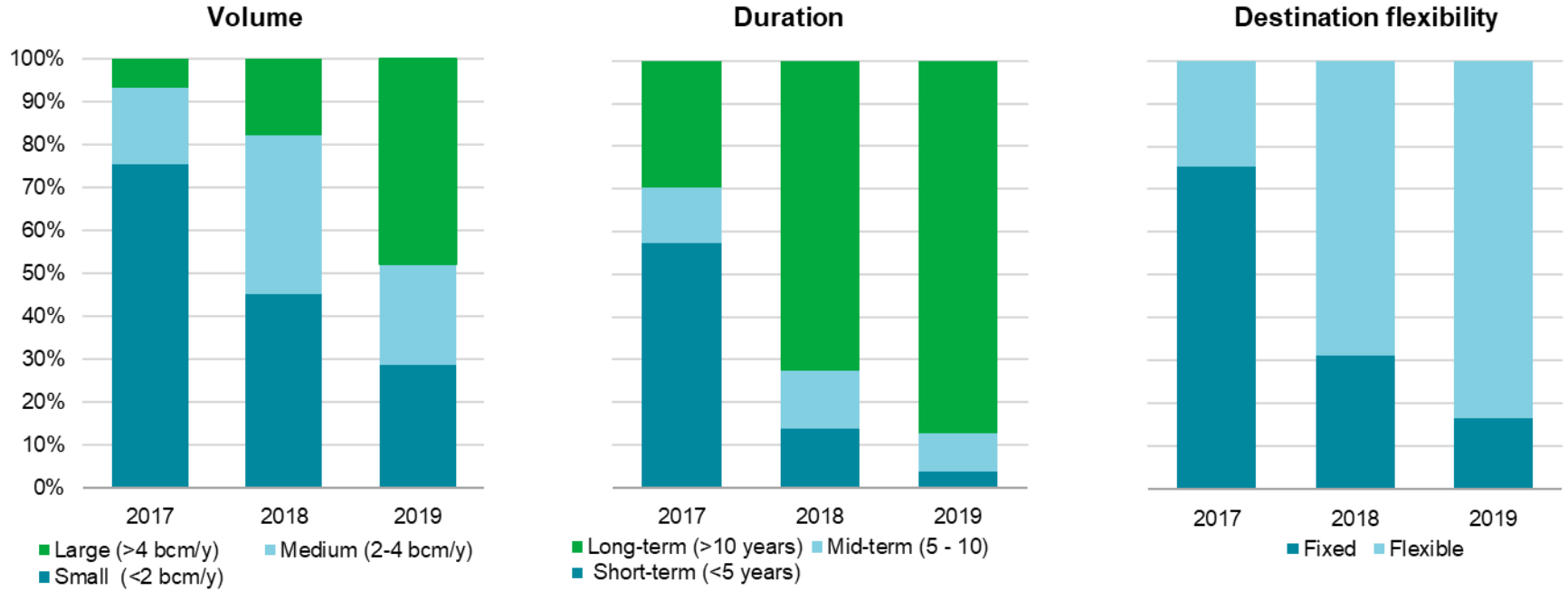
What role for long-term import contracts?



Whilst domestic production will continue to fall, long-term import contracts are set to expire by 2024.

…in an increasingly flexible global gas market?

LNG contracts by volume, duration and destination flexibility (2017-19)



LNG contracting and trading is becoming increasingly flexible, whilst global portfolio players are looking for liquid hubs to hedge their long-term positions on the forward curve.

Conclusions

- Northwest Europe's supply gap is widening: natural gas production in north-western Europe is set to fall by a further 45%, driving up the region's import requirements by an additional 40 bcm/y by 2024.

- Spare import capacity via Norwegian and Russian pipelines directly servicing north-western Europe fell to close to zero during the past two heating seasons.

- Interconnectors from Germany to the Netherlands are becoming saturated as a result of the evolving supply outlook in the Netherlands, whilst the utilisation rate of conversion facilities reached an average 88% in 2018.

- Rising gas demand volatility will require enhanced system flexibility in the downstream gas infrastructure.