CORNWALL INSIGHT

CREATING CLARITY

The Impact of Brexit on Electricity Trading in the UK

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Ben Hall

HELPING YOU MAKE SENSE OF THE ENERGY AND WATER SECTORS

Introducing Cornwall Insight

- What we do
  - Policy, regulatory and commercial analysis and support
  - Revenue/ cost modelling and forecasts
    - Power, embedded benefits, Rocs, Capacity Market and balancing services
  - Forums – Green Generators Group and Flexibility Forum
  - Bespoke consulting and training
- And who work with
  - Our customer base: over 350 companies in the energy and water markets in GB and Ireland
  - Generators/ developers, investor ... ers and inte ... s

No-deal scenario

No deal Brexit, possible implications

Cross-border trading rules

- Cross-border flows of power will no longer be governed by EU codes
  - No longer part of market coupling
  - Impacts at day-ahead stage and within-day plans
  - BEIS/ Ofgem are developing new access rules with interconnectors – market participants will need to use these new arrangements
  - Explicit auction arrangements?
- UK market participants will need to register under REMIT with ACER for cross border trades, including to SEM
- Majority of existing REMIT regime will continue on UK operators
  - The transparency obligations (no insider trading/ outage notification) but trade capture reporting would cease, but further review by Ofgem
- BEIS "taking all possible measures" to maintain SEM in Ireland/ Northern Ireland, but noted risk that it may not be able to continue
  - Looking at alternative arrangements for if this is not possible under no deal

No deal Brexit, possible implications

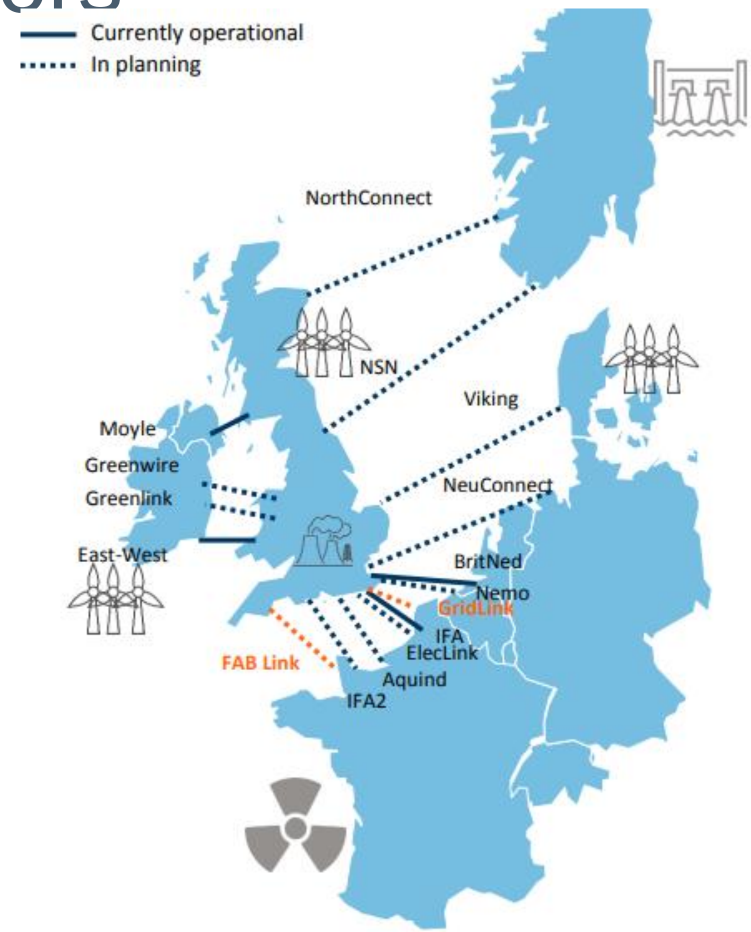
Emissions policy & certificates

- EU ETS would no longer apply in the UK
  - Business emissions from 1 January 2019 would no longer be covered by EU ETS (no need to surrender allowances)
  - Deadline to surrender allowances extended to 26 March 2019
- Power stations will need to continue to comply with regulations for monitoring, reporting and verifying GHGs
- UK Carbon Emissions Tax will be introduced on 1 April 2019
  - It will be set at £16/t, which is slightly lower than the current EU ETS price (€22/t)
  - This will replace the EU ETS, but the £18/t top-up tax (CPS) will remain
  - UK will not issue or auction any 2019 EU ETS allowances
  - Govt also considering domestic equivalent ETS (limited detail so far)
- REGOs might not be tradeable overseas and Ofgem may no longer be mandated to accept GoOs from suppliers as demonstration of the volume of renewable energy purchased in a given year
  - REGOs from GB will not be accepted in Europe
  - Still some uncertainty over European GoOs in GB: BEIS said they would continue to accept them in September 2018; exemption from FiT/CfD costs is not clear

No deal Brexit, possible implications
Trading & interconnectors

- UK could lose access to the internal energy market, and tariff-free trading of gas and electricity
    - This could increase commodity prices and reduce gains from trade
    - This already happens to some extent through network wheeling charges

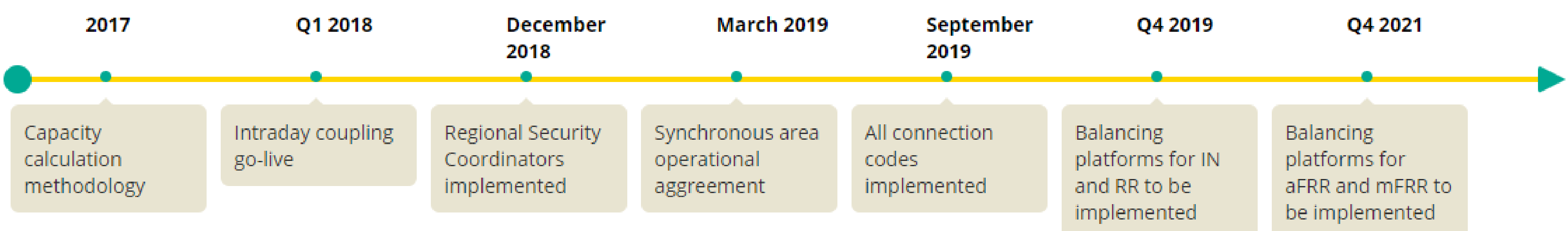
- Less incentive for interconnectors to be built without tariff-free trading?
    - 4GW operational and growing fast
    - Interactions with Cap & Floor regime – strong economic cases
    - The volume of storage within the UK may have to increase more rapidly, in order to cater for increasing capacity of renewables



No deal Brexit, possible implications Network codes

- Future EU network codes may not apply to the UK
  - Although existing codes are unlikely to change, UK codes may not be subject to updates and the two sets of codes may diverge over time
  - On day 1 the UK will be fully compliant with network codes
  - But UK may decide to deviate thereafter
  - UK appears to be pressing on with setting up for Project TERRE for European reserve power – it is possible to be part of TERRE if Europe allows it

Current schedule for EU network harmonisation (ENTSOE)



No deal Brexit, possible implications

Investment

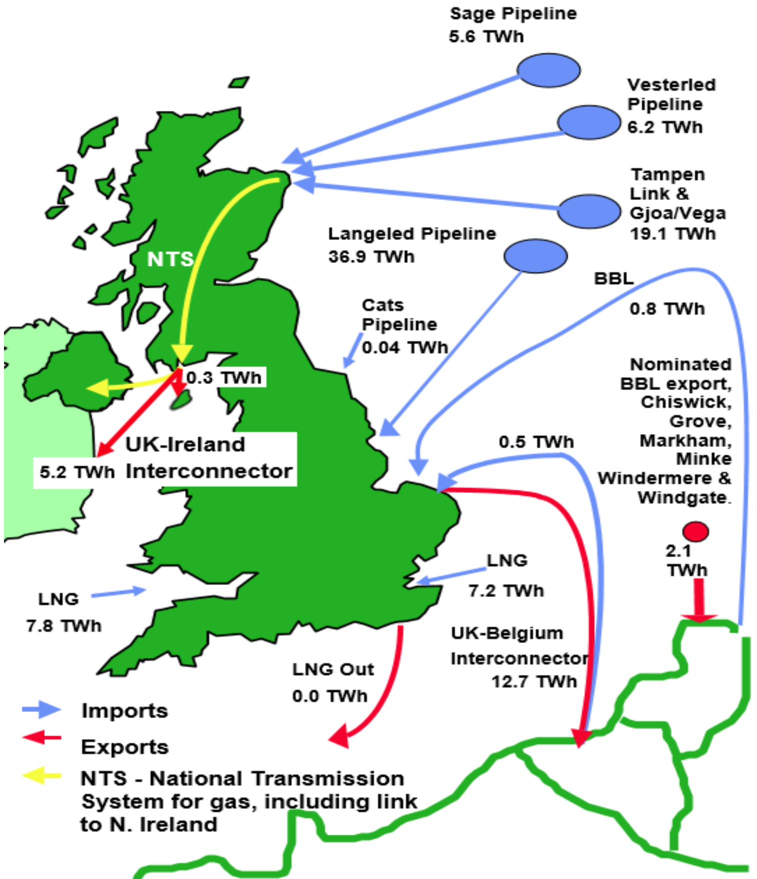
- The WACC for investments into the UK could increase, raising the cost of borrowing for new projects, which will flow through to increase development costs
  - Higher cost of new generation across fossil fuel and renewables assets
- Current uncertainty is leading to delays in making final investment decisions (FiDs)
- Regardless of deal or no deal, once the UK clarifies the nature and timing of its exit from the EU, developers will be better able to reach FiDs on projects
  - Possibly leading to some projects being rejected, though certainty remains for some through next CfD allocation rounds
  - Many of the most significant developers of renewables in the UK are from Europe
- There may be some positive upside for investors in wholesale prices (see next slides), thereby increasing forecast revenues for generators and improving investor appetite

No deal Brexit, possible implications

Wholesale gas prices

- UK is a net gas importer and has built significant infrastructure and trade links to source gas
- UK is reliant on gas from a range of sources including Norway, Belgium, Netherlands and LNG deliveries
- Depreciation against international currencies could increase gas import prices
- Electricity prices are heavily correlated to gas prices in the UK so any changes will flow through to electricity too
- The UK could be excluded from EU “solidarity principles”, which will:
  - Increased requirement for UK gas storage, knock-on effects could increase gas prices
  - Increase the prevalence of gas shortfalls which will increase gas and electricity prices during periods of peak consumption

UK Imports & Exports of Gas Q2 2018

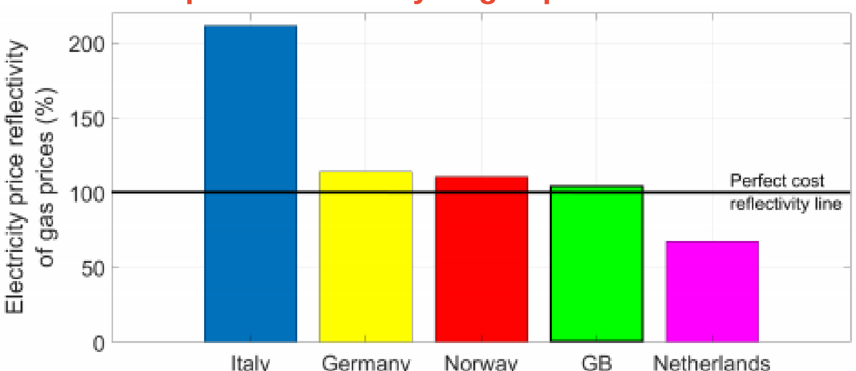


Source: BEIS

No deal Brexit, possible implications
Wholesale electricity prices

- Any tariffs imposed on imported electricity (which may imported during peak periods) could increase prices during peak periods
- Tariffs and a worsened exchange rate could increase the cost of importing equipment for building new generation, which would increase prices in long-term
- Lack of market coupling could lead to increased divergence of UK prices with continental Europe
  - Less efficient power flows across Europe/ UK
- The annual energy bill for the average UK household rose by £75 following the June 2016 Brexit vote and is expected to rise by a further £61 in the event of a hard Brexit (according to UCL)
- Political risk against environmental agenda

Power price reflectivity of gas prices



Source: UCL

Negotiated deal scenario

Negotiated deal Brexit, possible implications

- In the event of the UK negotiating a deal on Brexit, depending on the deal:
  - EU legislation pertaining to cross-border power flows and trading may continue to apply to the UK
  - The SEM will probably be maintained across Ireland and Northern Ireland
  - The UK may remain in the EU ETS, meaning the £16/t carbon price will not be applied and the overall carbon price will, on average, remain near unchanged
  - The UK may remain in the internal energy market and interconnector build-out will continue
  - It is also possible that the UK retain partial access to the single energy market in a similar manner to Switzerland
  - EU network codes may continue to apply to the UK, leading to ongoing harmonisation of the two markets

Negotiated deal Brexit, possible implications

- In the event of the UK negotiating a deal on Brexit, depending on the deal:
  - Should the UK negotiate favourable trading terms, the pound may not significantly depreciate and the cost of importing gas and equipment for the manufacture of energy-generators may remain stable
  - The economy could improve, relative to the status quo, leading to currency appreciation and decreased cost of gas imports
  - Investor confidence could improve if the UK secures favourable terms with the EU and several projects with deferred FiDs may proceed
  - The UK will probably continue to be included in “solidarity principles”, thereby easing potential gas supply shortfalls