ICheme Advancing CHEMICAL ENGINEERING WORLDWIDE



Future Energy Leaders

Deal or No Deal: BREXIT and UK Energy Policy

Sarah Clark & James Sweeney













26th November 2019

Introductions

- Sarah Clark, CEng Oil and Gas Industry
- James Sweeney, AMIChemE renewables/solar photovoltaic engineer for residential market





Agenda

- Future Energy Leaders (FEL)
- The Article
- Impacts of Deal on UK Energy Policy
- Impacts of No Deal on UK Energy Policy





Future Energy Leaders

- Chair Sarah; Vice Chair James; 2nd Vice Chair – Kyriacos
- 20 Volunteers (TBC)
- Works with Energy Centre (EC) Board
- Focus:
 - Educational Outreach
 - Public Engagement
 - Content Creation
- Academia / Industry Split: 60 / 40



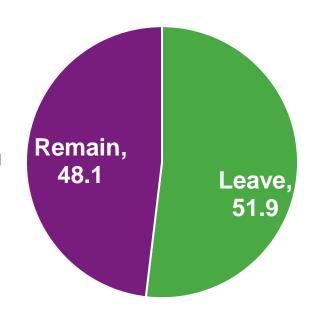




BREXIT

- 23 June '16 BREXIT Referendum
- 29 March '17 Article 50 triggered;
 2 year countdown started
- 20 March '19 PM wrote to EU Council for extension
- 21 March '19 EU Council grants extension to 12 April '19
- 10 April '19 2nd extension granted to 31 October '19
- 28 October '19 "flextension" granted to 31 January '20
- 29 October '19 12 December general election approved in House of Commons







Article

- January 2019
- Deadline 29th March 2019
- Expectations!

Deal or No Deal – Brexit and UK Energy Policy

Article by Sarah Clark and James Sweeney



"At this late stage there is still no certainty concerning the handling of the myriad interconnections and partnerships formed with the EU over the past decades."





- No arrangements for UK and EU trading or energy markets – guaranteed <u>current</u> agreements until end of transition period (currently December 2020)
- "cooperate to support the delivery of cost efficient, clean and secure supplies of electricity and gas".





A "framework to facilitate technical cooperation between electricity and gas networks operators and organisations" is needed, as is a mechanism for "efficient trade over [electricity and gas] interconnections".

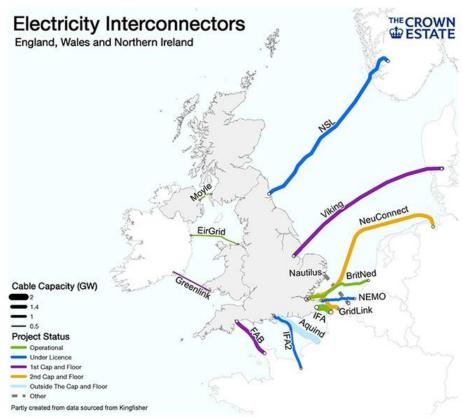


Image source: The Crown Estate. 2018. *Electricity Interconnectors*. https://www.thecrownestate.co.uk/en-gb/media-and-insights/stories/2018-electricity-interconnectors/





- Internal Energy Market (IEM) collective gas and electricity markets of EU member states.
- Physically well connected
- Benefits:
 - Security of energy supply and reduce generation costs
 - Joint optimisation of dispatch
- No trading of gas and electricity excluded from IEM



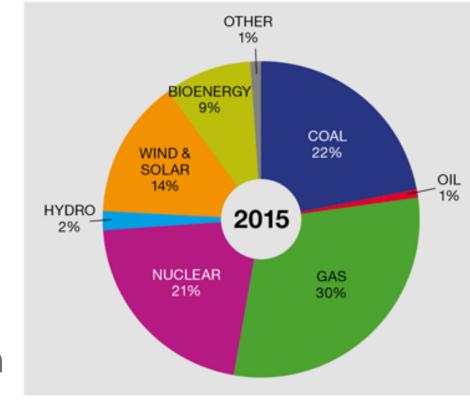


- IEM
 - Agency for the Cooperation of Energy Regulators (ACER)
 - European Networks of Transmission System Operators for electricity and gas (ENTSO-E and ENTSO-G)
- Post BREXIT with deal abide by EU network codes for ENTSO-E and ENTSO-G only





- Euratom
 - Ruled out continued membership
 - Nuclear energy 21% of UK energy supply in 2015



- Replicate Euratom no solution for continued supply
- Nuclear Cooperation Agreements signed to reduce risk of disruption



 Price of gas and electricity for consumer to increase – IEM



- Frictionless trade in jeopardy
- Can continue to participate but compliance with European Network Codes and regulatory bodies





- Electricity more affected than gas industry
 - Gas physically well connected
 - Little difference in wholesale gas prices across market
 - UK largest LNG import infrastructure in Europe
 - Most gas imports from Norway little dependence on EU
- Whether there is a hard, soft or no deal Brexit, the overall impact on gas trade and prices will be minimal.





- Electricity more affected than gas industry
 - Expensive
 - Difficult to store
 - Decarbonisation of the energy sector -increase use of variable renewable energy sources
- The Single Electricity Market (SEM) that exists between Northern Ireland and the Republic of Ireland is one of the most integrated electricity networks in the EU





- World Trade Organisation terms and conditions
- Customer to EU market buying and selling gas and electricity according to demand
- Higher electricity prices
 - "sub-optimal dispatch"
 - Lower market liquidity
 - Less competitive pressure
 - Raw materials





Conclusion

- Deal "business-as-usual"
- No deal significant inefficiency
 - Suddenly plunged in to darkness?
- Across party goals are the same reduce waste, be self sufficient
- Energy is a basic societal need
- Price hikes will effect all parts of the economy





Questions?

 https://www.thechemicalengineer.com/features/d eal-or-no-deal-brexit-and-uk-energy-policy/





New Withdrawal Agreement & SEM

- New Withdrawal Agreement will take UK (including NI) out of EU customs union.
- Regarding trade of goods & electricity¹:
 - All-island regulatory zone eliminates regulatory checks for trade between NI and Ireland
 - Consent NI Executive vote every 4 years on these arrangements²

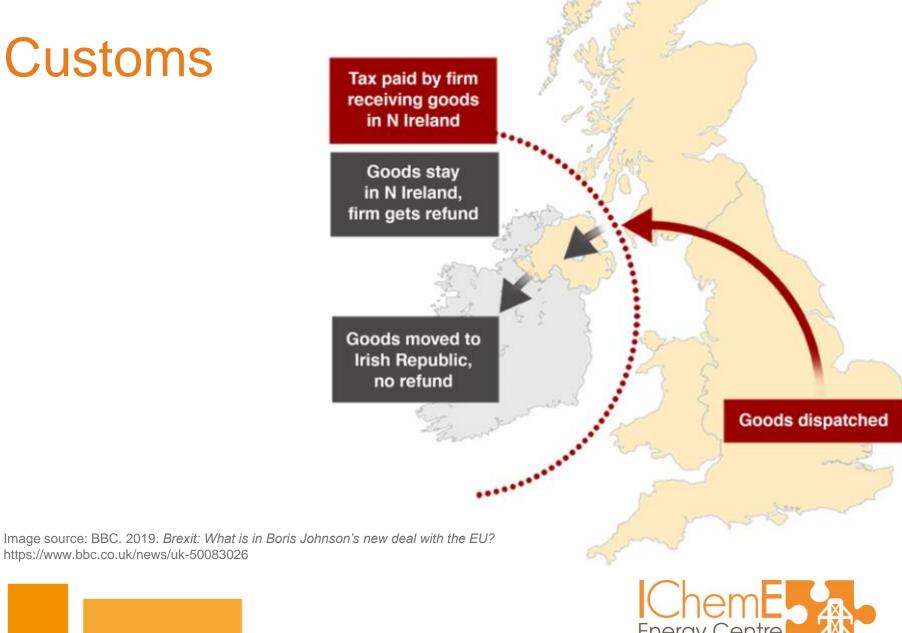
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- 2. BBC. 2019. Brexit: What is in Boris Johnson's new deal with the EU? https://www.bbc.co.uk/news/uk-50083026







Customs







https://www.bbc.co.uk/news/uk-50083026

