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Hitting Reset: Reforming Britain's Fuel Mix Reporting to Build Consumer Trust

Position paper

Executive Summary

The Problem

Great Britain has been successful in shifting to clean energy sources to-date and has made substantial progress in reducing the carbon intensity of its grid through dedicated climate and energy related policy initiatives as well as electricity market-based measures. However, to deliver a 'clean Great Britain power system' by 2030 could remain an ambition if consumers are not 'placed at the heart of the energy market'[1]. This is because consumers must be able to make environmentally responsible choices about their electricity supply. They must also see how their deliberate choice for renewable and low-carbon electricity drives Great Britain's electricity sector decarbonisation and investment.

With this regard the data and information on the origin of every MWh of electricity regardless of the fuel source must be available to them. This evidence should be complete, transparent, accurate, reliable and time sensitive. However, the mechanism of the fuel mix disclosure and the associated annual matching that have been in place for almost 20 years have not evolved with the energy system to drive an active consumer choice about the electricity supply. The reasons are as follows:

- There is neither mandatory requirement from producers to certify the origin of every unit of energy produced, nor is there a responsibility imposed on suppliers to confirm the origin and the environmental characteristics of every unit of electricity supplied. The voluntary nature of accounting for and claiming the origin of either renewable or non-renewable electricity, weakens the objectivity and effectiveness of such data and does not fulfil its full potential.
- The verification of non-renewable electricity origin with generator declarations (GENDECs) lacks clear recognition and robust tracking and could lead to double counting, particularly when the electricity is imported from outside of Great Britain.
- When consumers do not make an active choice to be renewable, they default to unverified electricity (the residual mix) rather to a fully democratised energy mix when

[1] See: See https://assets.publishing.service.gov.uk/media/642468ff2fa8480013ec0f39/powering-up-britain-joint-overview.pdf

they must face all the other options of low carbon or fossil-fuelled electricity. Notwithstanding that, the residual mix calculation has its flaws, namely:

  - For the residual mix calculation, the data on verified electricity is aggregated from the six major suppliers only. This is not representative of the market as the major suppliers' combined share declined to just 65% in the total market share in 2023. This is important because their data is used to calculate the residual mix shares for the disclosure table (DTT) that is then used by all British suppliers to determine their own residual mix (that is then shown to their consumers).
  - The statistical approach to allocating the fuel sources in the residual mix is not explicitly defined. In addition, reliance on national statistics undermines decarbonisation efforts of individual suppliers in Britain consequently making it challenging for consumers to differentiate between suppliers based on the environmental characteristics of their supply. There are further concerns about double counting and inaccuracies associated with the use of European residual mix.
  - The annual loss factor calculation does not adequately account for seasonal variations in electricity supply and is not responsive enough to capture rapid changes or improvements in the network. These could lead to inaccuracies in the fuel mix and subsequently residual mix calculations. In the context of future real-time matching a more frequent loss factor adjustment might be required to accurately reflect the dynamic nature of energy flows and losses.

- About 15% of the Great Britain's electricity supply comes via interconnectors. This is expected to grow to 33% by 2030, with most power originating from Europe. The progress towards decarbonised power systems is varied across the continent. Therefore, it is critical British consumers understand and can reliably claim the environmental value of every MWh that comes from Europe. Namely:
  - Since April 2023 there has been no mechanism to verify and claim the origin of imported renewable electricity from Europe.
  - GENDECs could be used as evidence for non-renewable generation, but they are not explicitly recognised as reliable tracking instruments in Europe. Notably, the GENDECs issue is not mandatory. These could lead to double counting and undermine the credibility of the claims supported by them.
- The annual post alia matching of electricity attributes is not aligned with the future decarbonisation ambitions and discourages investment.
  - The renewable electricity produced in Great Britain during a specific window in a disclosure year could be matched to consumption during any time in that

disclosure year. This means that matching does not reflect the actual seasonal fluctuations in renewable supply and demand throughout the year. This practice already reduces the credibility of renewable guarantees of origin (REGOs) with corporate consumers that use it for renewable electricity accounting purposes.

- The purpose of certificates of origin is to verify the origin. Under right pricing conditions Great Britain has been successful in creating signals for new renewable investment. Yet, there is a strong argument to shift to a more granular matching. This is because annual matching does not align with the seasonal and day-night volatility in renewable energy output. Nor does it provide accurate signals about the periods of under-supply and potential shortages of renewable electricity during certain times of the year. Hence, by default it does not optimally stimulate investment into renewable generation and/or flexibility measures.
- The requirement for suppliers to demonstrate renewable, additional and time-matched electricity is already included in the guidance from the UK Green Buildings Council (UKGBC) on Renewable Energy Procurement for decarbonising buildings.

Our Proposal

Given the above we propose to introduce amendments to the current fuel mix disclosure practices:

- We propose shifting from voluntary to mandatory issuance of the guarantees of origin for all produced electricity regardless of the energy source and origination as well as full disclosure for energy suppliers. Namely:
  - This means a shift to full production disclosure where every electricity producer must receive a certificate for every MWh of power they put into the grid, regardless of the generating technology used.
  - At the same time an electricity label shall be created based on proof of origin for every MWh of electricity supplied to the end consumer. This means shifting to full consumption disclosure.
  - Accounting for the above, we advocate imposing the responsibility for the full consumption disclosure on licensed suppliers.
- We call for a review of generator declarations and advocate replacing them with the Certificates of Origin to back the origin of non-renewable generation. The latter will align practices in Great Britain with those in Europe and the rest of the world.

- We call for a closer temporal alignment between the physical electricity flows and all energy certificates of origin. We propose to shift from annual to quarterly matching first, followed by monthly, and then daily matching. We believe this will help effectively align electricity procurement with tangible outcomes for reducing indirect emissions associated with purchased electricity under scope 2 as it would encourage investment into grid development, balancing solutions, and ultimately further decarbonisation.

We strongly believe these changes are critical and we need to set the right trajectory already in 2024 so that every step afterwards leads towards a more transparent and reliable disclosure—essentially increasing the trust that consumers place in the electricity decarbonisation process in Great Britain.

We therefore propose the following timeline for these changes:

- Shift to the full production and full consumption disclosures from 2025/26.
- Shift to quarterly matching (2026/27) and monthly matching (2027/28)
- Shift to daily matching (2029/30), noting the requirement for technical changes to be made in the register