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Sent by email to:

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Swindon, 11/09/2025

Frequency Risk and Control Report 2025 Consultation

Dear Calum Watkins,

About RWE

RWE is the leading power generator in the UK, with a diverse operational portfolio of onshore wind, offshore wind, hydro, biomass and gas. We produce enough energy to power the equivalent of around 12 million UK homes¹. We are investing today, with 2.2GW of new renewable projects currently in construction. This includes our 1.4GW Sofia offshore wind farm, four new onshore wind farms totalling ~230MW, 10 new solar farms totalling ~500MW and four co-located battery storage sites totalling 105MW.

We have ambitious plans to expand our UK footprint even further, with over 15GW of renewables at various stages of development. This includes nine new offshore wind farms totalling nearly 10GW², and a GW scale pipeline of onshore wind and solar projects. Complementing our renewables pipeline, we have over 3.6GW of battery storage under development, and we are in the early stages of developing four gas carbon capture and storage (CCS) projects across the UK, totalling up to 4.6GW.

In addition, as a key component in the energy transition, RWE is developing ~500MWe green hydrogen opportunities across the UK.

¹ Homes powered calculation based on RWE Generation 2023 (from Annual Report - full installed capacity) and assuming average annual consumption = 3,240kWh (Latest DESNZ Stats). Calculations here: <I:\RWE-GENERATION\G-E\GEC\GEC\UK\Book of knowledge\RWE MWh data\RWE UK MWh 2023 from Annual Report - March 2024.xlsx>

² NB: Based on full installed capacity – total 9.8 GW. Pro-rata (based on equity share) is 7.0 GW. Internal source: <\\ENERGY.LOCAL\DATA\RWE-GENERATION\G-E\GEC\GEC\UK\Book of knowledge\Infographic\2024 Infographic\Asset stats\Consolidated data for 2024 UK infographic.xlsx>



We directly employ over 3,100 people across the UK and our planned investment will continue to create green jobs, developing green skills up and down the country.

We are committed to working in partnership with the government to deliver its 2030 clean power mission, and to deliver clean, secure and affordable energy for the UK.

Responses to Consultation Questions

Question 1) What is your view on NESO's FRCR 2025 policy to reduce the minimum system inertia requirement?

Please explain your reasoning, with relevant evidence to support your views.

RWE understands the ambition and proposed case for change. As RWE has not undertaken detailed system analysis, and, given the complexity of the associated modelling, we would not opine on the specific level of inertia (ultimately 102 GVA.s) as proposed by NESO in the FRCR 2025 policy.

However, we do observe, and indeed are concerned by, a distinct lack of any detailed information available on the proposed implementation approach in FRCR 2025 section 7.2, or any requirement for testing and validation of the modelled security and quality of supply implications, *ahead* of formal adoption of the policy, as part of the Ofgem decision proposal.

Implementation plan

In FRCR 2025 NESO states “There will be a minimum interval of five weeks between the two stages to allow adequate time for observation of the changes.” We are unsure where 5 weeks comes from. This appears to be a rather arbitrary duration.

We observe that the following FRCR 2023, there was an almost 4 month period between implementation of Phase 1 and Phase 2. We also note that this policy proposal is a more significant step, in terms of percentage reduction in minimum inertia (140 GVA.s to 120 GVA.s being a 16% reduction, and 120 GVA.s to 102 GVA.s being a 17.6% reduction).

RWE is mindful of the current global narrative around security of supply in electricity systems with high proportions of low inertia generation. We observe that the FRCR 2025 policy is expected to result in an increase in the probability of occurrence of frequency excursion events, relative to FRCR 2024.

With that context, we would therefore propose that prior to any approval of the policy *in principle* (with full approval for enduring operation at the proposed levels only being confirmed following conclusion of satisfactory testing and reporting), there should at minimum be an explicit requirement to specify:

1. an agreed minimum number of settlement periods operating at (or very close to) the proposed 110 GVA.s, to provide a suitably representative, and statistically

significant, data set for analysis (rather than the arbitrary “5 weeks” in Phase 1 – which indeed might include no such relevant occurrences, depending on seasonal system characteristics)

2. a minimum criteria for what is considered stable operation of the National Electricity Transmission System (NETS) in Phase 1, before moving to Phase 2, and time allocated to report back to industry/Ofgem on the same, before moving to Phase 2.
3. an agreed minimum number of settlement periods operating at or very close to the proposed 102 GVA.s, with a minimum criteria for what is considered stable operation of the NETS in Phase 2, before the policy is formally adopted.
4. a clear “rollback plan”, in the event that the implementation does not meet the criteria defined in 2. and 3.

Question 2) Do you have any further comments?

Procurement of DC Low

An excursion beyond 49.2 Hz is described in the executive summary as an expected “1-in-23 year” occurrence in 2025/6, increasing from the 2024 “1-in-29 year” benchmark for the same. It is unclear why NESO believe this is an acceptable increase, or rather an acceptable reduction in system stability.

RWE also notes that while academically or theoretically this may be the expected probability of occurrence, there have in fact been multiple events in recent years which have reached or passed the 49.2 Hz threshold. These are summarised in the table below³:

| Date | Cause | Frequency Drop |
|------------------|--|---------------------------|
| 27 May 2008 | Generator trips (Longannet & Sizewell B) | Below 49.2 Hz; to 48.8 Hz |
| 9 August 2019 | Lightning strike → cascading generator trips | Below 49.2 Hz; to 48.8 Hz |
| 22 December 2023 | IFA interconnector fault | Dropped to 49.2 Hz |

This would lead us to believe that the theoretical expected probability of excursions beyond 49.2 Hz may not be an accurate representation of operational reality.

Therefore, based on the information provided in FRCR 2025 and recent operational reality, RWE would challenge NESOs assertion that 200 MW of DC-Low is the most balanced recommendation, as opposed to 300 MW of additional DC-Low. Procurement of an additional 300 MW of DC Low is shown in the report to, for a proportionally small

³ From NESO’s System Performance Reports portal data, it is understood that the December 2023 IFA interconnector fault reached 49.27 Hz <https://www.neso.energy/industry-information/industry-data-and-reports/system-performance-reports>



amount of investment, maintain a calculated stability level almost equivalent to the 2024 benchmark (an additional £1.6m cost compared against the expected £67m savings, to achieve an event occurrence probability of “1-in-28 years” - Table 6 compared to current “1-in-29 years”).

As such RWE would suggest that the most balanced recommendation would rather be:

5. that **a minimum of 300 MW of DC Low is procured**, to maintain system stability at a level equivalent to FRCR 2024.

Otherwise, there should be appropriate narrative as to why it is considered acceptable to expect a significant increase in the probability of occurrence of frequency excursions below 49.2 Hz (a ca. 20% increase), for what appears to be a proportionally small cost saving.

Drafting point

And lastly, it would be helpful for general comprehension if in future FRCR reports if:

6. rather than simply referring to 2025/6 and 2026/7, that specific months or quarters might be explicitly referenced, given that at this point of decision we are already close to the beginning of 2026.

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