RenewableUK REMA position: developing an enduring and investable set of market arrangements

We welcome the opportunity to feed into the second REMA package and set out the key criteria for reforming electricity markets in a way that enables us to decarbonise the power system in a cost-effective manner and maintain security of supply.

Industry has welcomed the removal of the most radical options in the second REMA package, most notably markets split by characteristic and nodal pricing.

Executive summary

As a successor to 2013's Electricity Market Reform package, the REMA package should set out enduring options that will lay the foundation for our future energy system. The **reforms should not disrupt investment flows through radical options, but rather act as the bedrock of investor confidence and market attractiveness**.

In order to do so, options like zonal pricing need to be ruled out, as the government has modelled that that any theoretical benefits it could offer will be wiped out by **increases in cost of capital of 0.3-0.9 percentage points across all technologies.**[1] There is near-consensus across developers, supply chain companies, financial institutions and asset managers that a large and high-risk market reform like zonal pricing could lead to increases in excess of this range. Higher risk premia associated with this reform will significantly reduce the pool of investors with an appetite to commit capital to the UK market.

The package should also avoid a "tunnel vision" approach by solving one particular challenge in a way that is detrimental to whole-system outcomes –

[1] System benefits from efficient locational signals (publishing.service.gov.uk)

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for example, by introducing zonal pricing to deal with grid constraints, especially across the B6 boundary.

We recognise that building the system in the first place and attracting the necessary investment (e.g. in transmission, generation, and supply chain capabilities) needs to come before system optimisation. Given this, reliable **investment signals need to be prioritised in the next decade when the lion's share of the system needs to be built, with operational signals increasing in relative importance as we approach 2050** and most of the system has already been built.

Evolving current market arrangements and correcting ineffective investment signals can deliver the market framework we need for a decarbonised energy system. This will also be less costly, less risky from an investor perspective and will be less likely to see delays to implementation, as much of the work is already ongoing. Therefore, the main options that REMA should prioritise are:

1. **An enhanced national market**, with a reformed CfD, and a more robust constraints market. Reforming TNUoS to achieve greater predictability and less volatility will also be a key signal for generation and strategic demand that is not captured in the design of Strategic Spatial Energy Plan (SSEP). An enhanced national market should also provide shorter settlement periods in the Balancing Mechanism (BM), as well as options to increase competition and transparency in the BM. Evolution of market arrangements should also optimise interconnector flows, including by productively collaborating with system operators in neighbouring countries and by returning to implicit interconnector trading.

2. **A robust constraints market**, with forward and local constraints markets that have adequate liquidity and more accurate forecasting from the system operator. Reducing constraints will also be delivered by building adequate grid capacity, progressing the recommendations of the Transmission Acceleration Action Plan, and delivery of Centralised Strategic Network Plan. Targeted constraint markets on certain

boundaries such as the B6 boundary, could temporarily alleviate some constraint management costs while the necessary transmission capacity is built.

3. **Evolution of the current CfD framework.** Some of the CfD models which aim to decouple CfD payment from output could, if designed correctly, play a role in mitigating the distortions related to the CfD. Given the lack of detail in the proposed CfD design options, we would strongly encourage another round of consultation to minimise unintended consequences and deliver maximum system benefit from an evolved CfD.

4. **Guaranteeing a route to market for long duration flexibility**, through the implementation of a cap and floor system for long duration electricity storage (LDES) and dispatchable power agreement for hydrogen to power. Some of these mechanisms are outside the scope of REMA, but their implementation should not be delayed until the REMA package is finalised. Timely technology neutral design and allocation of LDES cap and floor would serve to unlock opportunities across a wide range of LDES technologies. We urge DESNZ to open the application window for Stream 1 established LDES technologies in Q1 2025 and Stream 2 novel LDES technologies later on in 2025.

5. **Creating different revenue streams for key technologies**, for example by enabling greater participation of flexible low carbon technologies in the Optimised Capacity Market.

6. **Legacy Arrangements.** Market reforms that significantly impact the revenues of generators should be accompanied by full grandfathering arrangements to preserve investor confidence. This should apply to all generation supported by existing schemes and generation procured in

allocation rounds that do not have full certainty on the final REMA package.

Principles for selecting reform options

The need to meet the four challenges outlined in the consultation, design a market system fit for the future whilst maintaining investor confidence will require careful balancing of policy options, investment and operational signals. In addition to outlining our response to the questions and challenges posed by the consultation, RenewableUK would like to put forward a set of principles and overarching recommendations that should be considered when selecting the final set of options. Based on **conversations with developers, supply chain companies and financial institutions**, we believe that these recommendations will:

- **Enable government to address some of the main challenges arising from the current set of market arrangements in a timely way**. This includes issues such as price cannibalisation and excessive constraints on the network, which can be addressed through measures that build on current arrangements and ongoing work from government, industry and regulators (e.g. deemed CfD, cap and floor for LDES, greater participation of low carbon technologies in an Optimised Capacity Market).

- **Ensure that the transition to new market arrangements minimises increases in the cost of capital**, which would make the transition more expensive, limit our ability to continue attracting private investment into the UK and wipe out the whole-system cost savings that could be delivered through the implementation of certain options. In addition, radical reforms also create the need to grandfather current arrangements for operational projects if the UK is to maintain its reputation for policy and regulatory stability, generating additional costs for government.

The building blocks of a successful reform package:

1. **Appropriate sequencing of the different types of signals should be reflected in the final reforms package, with investment signals being paramount over the next decade,** but operational signals becoming more important once the lion's share of the capacity has been built.

   The next six years and the next decade to 2035 are critical for attracting private investment at pace to meet our targets and ensure that private finance does the heavy lifting in terms of building the future energy system. The UK still needs to build 35GW to meet our 2030 offshore wind target. At least **134GW of wind and solar** will need to be built to 2035, as well as up to **55GW of storage and demand-side response** and between **30-50GW of long duration flexibility,** to enable power sector decarbonisation. With high levels of international competition for mobile capital, it is essential that REMA reforms give precedence to sending the right investment signals over operational signals – **the effectiveness of operational signals will be limited if the UK does not manage to attract the investment required to build capacity in the first place**.

   According to the AFRY study supported by RenewableUK[2], annual power system costs could increase by 30% over the next decade, with the increased costs of generation investment driving most of the increase. To avoid unnecessarily adding to cost for consumers (who ultimately pay for the entire system), it is critical that improved market arrangements over the next decade do not come at the expense of significantly increased investment risk.

   Reforms that **evolve the current frameworks** (e.g. deemed generation CfDs or a predictable TNUoS), that **guarantee a route to market for long duration flexibility** (e.g. cap and floor for LDES and dispatchable power agreement for hydrogen to power) or that **create different revenue streams for key technologies** (e.g. by enabling greater participation of

[2] National and Zonal electricity market designs for Great Britain | AFRY

flexible low carbon technologies in the Optimised Capacity Market) should be prioritised, given that they will send adequate investment signals and continue driving private investment into the UK.

On the other hand, a reform like zonal pricing could send negative investment signals and jeopardise the transition to a renewables-based system. Studies commissioned by Government estimate that an increase of 0.3 to 0.9 percentage points in the cost of capital would wipe out the net system benefits of a move to a zonal pricing.[3] This could increase consumer bills and does not factor in additional costs related to the grandfathering of existing contractual arrangements.

2. The final REMA package **should also not disaggregate elements of the future energy system and optimising the outcomes in one part but not the others – all reforms should be looked at holistically**. For example, reforms like zonal pricing that could in theory optimise locational decisions and reduce constraints need to be tested in a whole-system scenario to ensure they do not create significant unintended consequences in other parts of the system – as above, the implications for cost of capital increases across all technologies from a move to zonal pricing outweigh the purported value of system optimisation.

   It is also worth noting that **measures which increase the cost of capital and risk premia for certain types of technologies will not only mean higher project costs, but also that the pool of investors will be smaller, as investors with a lower risk appetite will turn to other forms of investment**. For example, pension funds could at present invest in infrastructure such as offshore wind, given the relatively stable policy and regulatory environment, the clarity and familiarity of the routes to market. However, under a zonal pricing system, where revenues for windfarms would be harder to predict, investors with a lower risk

[3] System benefits from efficient locational signals (publishing.service.gov.uk)

appetite such as pensions funds might prefer investing in different asset classes instead, shrinking the pool of available capital.

3. To create an enduring set of market arrangements, **the final reform package should not be designed to compensate for (expected) failure in other parts of the system**. One of the justifications for moving to zonal pricing relates to expectations that the grid expansion we need to see will not materialise sufficiently quickly. Given that the REMA package is meant to lay the foundations for our future energy system, and that the arrangements should be enduring (as they were in the EMR package), we think that trying to solve issues related to grid build out through a market reform package is not appropriate. Doing so could send the wrong signals to investors and TOs that are ramping up for greater levels of grid investment, and it could also skew the final reform package towards a solution that creates a much higher risk profile for renewables infrastructure (see above).

   It is also worth noting that the introduction of zonal pricing as a way of addressing constraints will not work as a silver bullet solution – the focus should remain on acceleration of transmission buildout.

4. The **attractiveness of different reform options should also reflect the expected timelines for implementation**. The transition to the new arrangements should be delivered quickly and with manageable levels of risk to enable a net zero electricity system by 2035. Options that look promising in theory but in practice could not be implemented in a timely way should be downgraded. In principle, any reforms that do not build on current arrangements and require a significant departure from the status quo will take much longer to implement and thereby have a more limited impact. In addition, **the need to grandfather existing arrangements will further limit the impact of certain reform options**. For example, a move to zonal pricing could either create significant regulatory risk and damage confidence in the UK market by not grandfathering arrangements for existing projects, or it could have a

very limited impact as the installed generation will not be bound by zonal pricing. Similarly, legacy assets losing firm access rights would represent a significant change that could severely damage investor confidence.

5. **Greater reassurance will need to be provided on how the REMA work interfaces with other reforms** being developed at the moment, most notably the Strategic Spatial Energy Plan (SSEP). Industry recognises that some of the elements of REMA have interdependencies with other reforms progressed through different teams in DESNZ, Ofgem or National Grid ESO. However, it is currently unclear how inputs from different working groups and policy teams are coordinated at a strategic level**. Investors and asset managers have also pointed out that the perception of REMA being looked at in isolation from other reforms is impacting perceptions of the attractiveness of the UK market.** A prime example here is the upcoming SSEP, which is due to be commissioned this month. The development of such a centralised plan would bring into question the effectiveness of a locational signal sent through a zonal market, as location choices will be dictated by the SSEP. We recommend that REMA options which contradict existing reforms and work packages are discounted.

Key elements of a future system

Using appropriate reforms to deliver an enhanced national market will be essential for the success of REMA. This will correct the inefficiencies of the current system in a way that builds on ongoing work from government, regulators, and industry. It will also not increase the bill for the energy transition through sudden cost of capital increases.

1. **An enhanced national market,** with a reformed CfD, and a more robust constraints market. Reforming TNUoS to achieve greater predictability and less volatility will also be a key signal for generation and strategic

demand that is not captured in the design of Strategic Spatial Energy Plan (SSEP). An enhanced national market should also provide shorter settlement periods in the Balancing Mechanism (BM), as well as options to increase competition and transparency in the BM. Evolution of market arrangements should also optimise interconnector flows, including by productively collaborating with system operators in neighbouring countries and by returning to implicit interconnector trading.

2. A **balanced approach to constraint management**, with the REMA package not seeking to overcompensate for failure in other parts of the system when addressing constraints.

   We recognise that some of the reforms in REMA are intended to alleviate constraints in the network – e.g. by optimising locational decisions through zonal pricing. However, we believe the consultation should aim to achieve broader alignment between the range of reforms and constraints markets, to maintain some optionality on how constraints are mitigated (e.g. by incentivising investment in low carbon flexibility, continuing the work on transmission acceleration and enabling better forecasting from the system operator) instead of relying on a silver bullet option which may not deliver good outcomes for constraints management. As above, the adoption of measures such as CfD reform could also help manage constraints, as it will disincentivise generation at times of system overload.

3. **A reformed CfD that addresses operational inefficiencies and price cannibalisation.** Industry recognises the need to decouple CfD payments from output to manage operational inefficiencies and reduce curtailment costs and sees a well-designed deemed or capacity CfD as promising potential options to achieve this. Well design CfD reform could deliver whole-system benefits, as generators are incentivised to behave more flexibly and to participate more in other markets such as the balancing and ancillary services, knowing that CfD

payments would not be impacted by this. This should involve measures which facilitate co-location for all assets, including offshore wind.

The methodology for these options will need to be developed in close consultation with industry, but we believe that the complexity of the scheme and any uncertainty it introduces would be offset by the fact that reform builds on existing arrangements and the CfD regime which is familiar to investors.

4. The **value of flexibility is clearly reflected in market arrangements**, **with clear routes to market for a suite of flexibility solutions.**

   Reforms should shape a market that clearly rewards the value of flexible solutions and provides clear routes to market for technologies such as long-duration electricity storage (LDES) and incentivises co-location of complementary technologies such as renewables with flexibility. Capacity Market reforms should encourage greater participation from flexible, low carbon technologies first (batteries, hydrogen to power, interconnectors, storage, demand-side response), with unabated gas only used as a last resort. Deploying flexible technologies is vital to optimising renewables and reducing curtailment across the system.

   As above, CfD reform options like a well-designed deemed generation CfD would also be beneficial for overall system flexibility.