

## **28/3/24: NET ZERO MARKET REFORM and its effect on Community Benefit Funding**

### ***Are RES aware of the scale of the financial impact that “net zero market reform” will have on the viability of the Blair Hill project ?***

In the foreword to the November 2023 fourth phase report of the Net Zero Market Reform, NZMR, review carried out by the Electricity System Operator, the ESO, the Head of Market Development at the ESO, Cian McLeavey-Reville, says;

“The reality is that the current package of market design and policy is no longer fit for purpose, and if left unchanged will result in significant unnecessary costs and will risk GB missing its carbon targets. Evidence of this has continued to mount over 2022 and 2023; for example on 1st July 2023 we incurred a cost of £20.3 million when we had to bid 88 GWh of wind down. These are but a sign of what is yet to come – we believe these trends will only accelerate as the system continues to decarbonise, unless markets and policy undergo fundamental reform”

The report goes on to identify the various issues that have arisen as a result of shortcomings in the design of the current national electricity supply balancing mechanism system, the BM, shortcomings that are crying out to be dealt with urgently. The ESO sees the four key issues involved as:

1. Constraint costs are rising at a dramatic rate
2. Balancing the network is becoming more challenging and requires increasing levels of inefficient redispatch
3. National pricing can sometimes send perverse incentives to flexible assets, that worsen constraints
4. Current market design does not unlock the full potential of flexibility from supply and demand.

Further on in the report the BM, in its current form, is criticised for distorting the market by having created a situation where “bidding is based on lost subsidies” and that there is, “a perverse incentive for generators to locate where congestion exists”

The conclusions from the Stage Four Report of the NZMR are:

“The ESO consider cost-reflective, granular temporal and locational signals are ultimately needed in the wholesale market to provide real-time transparency of system needs across supply and demand and to maximise flexible resources’ arbitrage revenues. As discussed in our Phase 3 report, we consider these signals would be most effectively deployed via shorter settlement periods and locational energy pricing.

Considerable investment will be needed in flexible resources to meet the changing system needs in all timescales driven by growth in weather-dependent renewables. Locationally and temporally accurate market signals are needed to incentivise flexible assets to locate and dispatch where they can minimise whole system costs”

In the earlier Phase 3 Report the conclusions reached were:

“Our analysis shows that the status quo will not deliver net zero cost effectively, as current market design creates inefficient behaviours, particularly in dispatch, resulting in dramatic and rising costs for consumers.”

“The most efficient solution to this is real-time dynamic locational signals, and our assessment of the three locational market design options finds that neither national nor zonal pricing can deliver these effectively.”

“Our analysis shows that a nodal pricing market with central dispatch has the potential to deliver significant consumer benefits through facilitating efficient dispatch of generation, demand and flexible assets; and optimising siting decisions across the whole electricity system.”

“It creates the opportunity for consumers and industry to access low-cost, low-carbon electricity when and where it is abundant.”

“We think it is credible to implement nodal pricing and central dispatch within 5 years. There are some key questions that need to be answered, such as what are the additional market reforms required to complement nodal pricing, and to what extent should consumers be exposed to locational price signals.”

From these conclusions it can be safely assumed that:

The ESO is intent that new legislation will soon be introduced and that nodal pricing will replace national pricing sometime around 2030.

Clearly, if RES end up gaining planning permission for the Blair Hill project and then go on to build it, they will not be able to benefit from the current single nationally priced system of constraint payments that have allowed similarly, poorly located wind farms to prosper up until now. The “perverse incentive to locate where congestion exists” will have gone by the time Blair Hill is ready to be commissioned. The wind farm will have to operate under a new nodally priced market system where electricity generators are rewarded for being located where energy is needed and paid for providing energy at the time it is required as opposed to being paid compensation for not producing energy when it is not needed.

The node that will determine the price of electricity generated at Blair Hill will be in south west Scotland, home to the most congested part of the UK transmission network on windy days. As a consequence, regardless of the exact location of the node, once the nodal pricing system is introduced, the price that the market will be prepared to offer Blair Hill for wind generated electricity; or offer them to constrain generation, will be much less than it would be if the current single national pricing system were to remain in place.

If RES don't ditch the Blair Hill project they will be “locating where congestion exists”, having made a “suboptimal siting decision” through failing to realise the financial implications that the imminent reform of UK energy markets will have for weather dependent generators on the wrong side of the transmission bottlenecks in South West Scotland.

## **9/4/24 REPLY**

### **Net Zero Market Reform**

*“Are RES aware of the scale of the financial impact that Net Zero Market Reform will have on the viability of Blair Hill Project?”*

RES welcomes the Net Zero Market Reform to support the delivery of the UK Government's aim of fully decarbonising electricity generation by 2035. It is important to note that the Electricity System Operator (soon to be the National Energy System Operator, the body who was responsible for publishing comment on Nodal Marginal Pricing noted in the submission) is not responsible for deciding Government policy. The ESO themselves state in the Net Zero Market Reform: Phase 4 Assessment and Conclusions report<sup>1</sup>: “the ESO will continue to support the Government and Ofgem on the design and implementation of reform options as they are narrowed down in REMA, specifically advising on their impact on GB electricity system operation.” Furthermore, the assumption in the submission to RES that Nodal Marginal Pricing is set to be introduced is incorrect. Since the Net Zero Market Reform: Phase 4 Assessment and Conclusions report was published in November 2023, a second consultation under the Review of Electricity Market Arrangements (REMA) has been published by the Government in which it rules out moving to Nodal Marginal Pricing<sup>2</sup>. Several other options are being considered by the Government that will address operational issues while still ensuring deliverability of the Government 2035 decarbonisation target; Nodal Marginal Pricing is not one of them. Significant new investment in transmission infrastructure in order to integrate low cost renewables is required in all scenarios, and the Government understands this. RES fully understands the impact of Net Zero Market Reform on renewable generation and supports this change to market design for a net zero future.

## **3/5/24 QUESTION**

It is important that the local community have confidence that the Blair Hill project is a financially sound undertaking. It could easily become insolvent and be abandoned before it is completed because of future changes to how the electricity market works. It is very likely that, by the time the project is ready to begin generating electricity, the current system, where wind farms get generously paid not to generate electricity when it can't be used, will have ceased. There is a real danger that even if construction activity at the Blair Hill wind Farm site has started, a future unexpected regulatory change in the electricity market could wreck its viability. Financing for the project could dry up and the local community would end up looking at a half finished windfarm without any community benefit funding to compensate them

RES are correct to state that since the Net Zero Market Reform: Phase 4 Assessment and Conclusions report was published in November 2023, a second consultation under the Review of Electricity Market Arrangements (REMA) has been published by the Government in which it rules out moving to Nodal Marginal Pricing. This second consultation was launched on 24th March. I was not aware of it, by then I was busy composing my question on the mistaken assumption that the conclusion of both phases 3 and 4; that introducing nodal pricing was the best way to send the locational price signals needed to improve market efficiency, would be acted on. I was wrong, however the content of the latest consultation, mentioned above, shows that OFGEM is still intent on sending locational price signals to discourage generators from locating in areas where the grid network is constrained. Areas such as southern Scotland.

There have been continual rounds of consultations on reform; REMA, RIO-3, ESO, CFDs, the Balancing Mechanism and many more. My conclusion from trying to make sense of all of it is that sooner or later we will be forced to accept that using market forces to manage our electricity supply can't ever work. This realisation will force the government to take drastic action. Poorly located variable generators who rely on constraint payments will lose most of their income and probably go bust.

The community deserve to be told how RES intend to deal with this sort of scenario.

**Are RES prepared to deposit the entire Community Benefit Fund as soon as they get planning permission for the project ?**

**If not, then what guarantees can RES give the community that they will actually receive the community benefit funds being promised ?**

**These questions need answered at the public exhibitions**