Life after REMA:

Reflections on the UK's Review of Electricity Market Arrangements

By Dermot Nolan

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What now?

Possibly I should have asked that question 8 weeks ago on the day after the Review of Electricity Markets (REMA) decision was announced. But summer intervened and other concerns arose. However, with Autumn now here, it might be opportune to consider where the energy sector "is" now and, perhaps more interestingly, where it might "go" in the near future. While this note casts some doubt over the options facing policymakers currently, it is intended to be at least somewhat constructive. I consider some of the options now facing the government and regulator in terms of dealing with the same problems it previously identified - including building more network, changing transmission charging arrangements, enhancing system flexibility - and ask whether they can work, and will they, in fact, reopen the same conflicts as REMA. I also muse on Ofgem's consultation on new ways of charging for energy and how that might interact with the problems faced by vulnerable consumers.

As those of you who have been following REMA know, over the last 18 months, the UK government has been consulting on changing the structure of the electricity generation market. It originally promulgated several options, but they quickly boiled down to the decision as to whether to divide the national market into a set of distinct geographical areas. An initial possibility considered was a full locational marginal pricing (LMP) or nodal model[1], breaking the country into hundreds of separate nodes in a manner similar to, say, the PJM market in the US. However, this was discarded, and the options were then reduced to a zonal market, which would have split the country into around 7-12 zones, or what was called a "reformed national" market, which would have retained the main lineaments of the current system. The UK would have been one of the first large European countries to have moved away from a national market. Italy does have regional zones, in addition to some of the Scandinavian countries[2]. It could have been a first step towards emulating the nodal framework now commonly seen in US generation markets. Anyone wishing to see the series of government documents on this issue can read them here.[3]

1 The EPRG had a range of views on nodal pricing. See https://www.jbs.cam.ac.uk/wp-content/uploads/2024/01/eprg-SLIDES-NEWBERYSpring-Sem-LMP-22-final.pdf and https://www.jbs.cam.ac.uk/wp-content/uploads/2023/12/eprg-wp2318.pdf

2 Italy has 7 zones; Norway has 5; Sweden has 4. See https://www.jbs.cam.ac.uk/wp-content/uploads/2025/06/eprg-wp2515.pdf

3 https://www.gov.uk/government/collections/review-of-electricity-market-arrangements-rema

This was in the middle of a major drive to fully decarbonise the electricity system to meet the Clean Power 2030 target of 95% of electricity being carbon-free[4]. To achieve this, the UK will need to build both huge amounts of renewable generation (with the primary emphasis being on offshore wind), but also a massive quantity of new and reinforced transmission network to transport the wind to the main centres of usage. The spectre of the generation being built, but there being insufficient network to transport it, leading to an explosion in constraint costs, has haunted the government and was the main potential driver of the change. However, after much agonising, in July this year, the government said no to zonal and opted for reformed national.

Conflict

The debate over REMA was the most divisive and bitter debate I have seen in nearly 12 years in the UK energy sector. Conversations with those more experienced than me confirm this is also a fair characterisation of an equivalent quantum of time prior to my arrival. The majority of energy companies opposed a change to zonal, but a significant fraction supported it, arguing that consumers - who were relatively muted in what was a technical debate - would benefit significantly from it.[5]

I don't propose to rehearse the merits of the decision (I should note that I was personally supportive of a change to zonal). Ultimately, the Secretary of State rejected a change predominantly on the grounds that it could imperil the vast amount of investment needed to achieve Clean Power 2030 and/or raise the cost of such investment as to wipe out any benefits of the change. There is some sense that the issue of zonal, or indeed nodal, pricing will return - possibly after 2030 - but it seems safe to assume for now there will be no move to a zonal market.

One rather querulous comment on my part is that it took a long time for the decision to be made. Given the debate has been raging for at least 18 months, allied to the continued stress on the need for speed and delivery, would it not have been possible to analyse the issue sufficiently by the end of 2024 or at least early this year? This might be unfair, as it is surely a positive that the government conducted a thorough analysis of the issue. But some of that irritation on my part might be dispelled if they published the full impact assessment/CBA that they certainly must have done.

Going back to the issue of "what now", the departmental statement[6] did acknowledge that the status quo was basically not an option, that some of the core concerns underlying the drive to clean power 2030 remained: insufficient network build could be available to connect properly the vast increase in renewable generation, with the consequent explosion in

[4] https://www.gov.uk/government/publications/clean-power-2030-action-plan

[5] Those interested in reading some of the material presented by both sides could start with: Pro-zonal https://octopus.energy/blog/locational-zonal-pricing-explained/ Anti-zonal https://www.frontier-economics.com/uk/en/news-and-insights/news/news-article-i21634-understanding-the-effects-of-zonal-electricity-pricing-on-gb-consumers-and-flexibility/

[6] See https://www.gov.uk/government/publications/review-of-electricity-market-arrangements-rema-summer-update-2025/review-of-electricity-market-arrangements-rema-summer-update-2025-accessible-webpage

constraint costs to be paid by consumers. Within a short time, there was follow-up from both DESNZ and Ofgem stating that there would be a focused work program on transmission charging reform as well a major commitment to improving flexibility within the system[7].

The documents that accompanied these commitments were perhaps shorter in detail than might have been hoped, but it would be churlish of me to overly criticise them for that. The key question would be whether they can be developed in sufficient time to ameliorate the underlying problems. But a related concern is whether these work streams will reopen the debates and controversies that accompanied the whole REMA process.

TNUoS: a magic bullet?

The sentence in the DESNZ document referring to the "mismatch in siting"[8] between generation and networks still remains to be tackled. Generators in Scotland and Northern England opposed the move to REMA, but will they also oppose different methods of solving the same problem? The main vehicle for dealing with this is likely to be the reform of transmission (Transmission Network Use of System or TNUoS) charging announced by Ofgem. I spoke earlier of the divisiveness of REMA - my own experience from regulating in both the UK and Ireland suggests that the only issue that has the potential to approach the level of contentiousness of REMA is, in fact, transmission charging. This is unsurprising - transmission charging is about how to split a "fixed pie" between many consumers of said pie, so the possibility of squabbling always seems high, and legal challenges tend to follow regulatory decisions in these matters as night follows day.

Can this be avoided here? I am not sure that it can. If Ofgem wants to reduce the expected consumer cost of constraints, it might want to opt for a system that raises transmission charges in the north and reduces them in the south. A zonal framework, in principle, covers both generator locational decisions and operational decisions, while TNUoS charging focuses mainly on the locational effects. It is certainly possible that reform of TNUoS might give somewhat different results than the pro-zonal REMA modelling did, but my guess is that the broad direction of travel will be similar. If so, presumably Scottish wind generators will feel nearly as aggrieved by this as they did by the zonal proposals.

More generally, any changes that lead to significant winners and losers amongst different classes of generators are likely to prove divisive and provoke opposition. There may be other options which involve more limited changes - and I freely confess to not knowing how Ofgem will approach this - but any review of transmission charging will need to be built around a CBA. Ofgem has been given duties on net zero and economic growth, but its clear primary duty remains the protection of the interests of consumers, so one would imagine that any decision will need to reflect this.

[7] See https://www.ofgem.gov.uk/sites/default/files/2025-07/open-letter-reforming-network-charging-signals.pdf, and https://www.gov.uk/government/publications/clean-flexibility-roadmap/clean-flexibility-roadmap

[8] See footnote 5, Ch 1.

Ofgem had put in place a temporary cap-and-floor on TNUoS charging - generally welcomed by Northern generators - but consulted on removing it after the REMA decision[9]. I find it hard to imagine how a cap-and-floor solution could be compatible with its statutory duties in the long run. But perhaps creative arguments will be deployed and I will be proven wrong?

If there is significant disagreement about the direction of TNUoS charging, then it will be hard to make changes quickly. The current codes framework was deliberately set-up (possibly rightly?) to make major policy changes difficult to achieve. That was the case even 30 years ago with far fewer companies in the sector, but change is even trickier to complete now given the myriad of companies that have entered since then. Quite how the NESO and Ofgem will steer a clear course through these potentially troubled waters is going to be interesting.

The current version of the codes system is due for significant changes in the relatively near future, though any changes will presumably not apply to the proposed review. One possibility would be for DESNZ itself to try to speed up and "insulate" any transmission charging review. However, that would (a) raise questions about regulatory independence and (b) almost certainly require primary legislation (which might beg the question of why they did not legislate for REMA if they end up - and they may not - going in the same direction).

Build, baby, build…

Amidst all this, one thing that almost all relevant parties agree on - possibly apart from unhappy landowners in the shires - is that transmission lines should be built as quickly as possible. The problems in doing so, and the price transmission companies will try to charge for their services, are issues that Ofgem and the companies will have to resolve. But what seems clear is that constraint costs will balloon post-2030 if they are not built in time. I am not *au fait* with the specific numbers, but there is talk of constraints costs of nearly £4bn attached to two lines that National Grid needs to complete in the east of England. That is an awful lot of money attached to two specific projects.

I am aware that it is all too easy to criticise past decisions - having made some dubious ones myself - but I feel that the original departmental decision of connect-and-manage back in 2010[10] was deeply flawed. Again, perhaps I am being unfair - it could be argued that it provided a degree of certainty that has facilitated the major strides in renewable generation that have happened in the last 15 years. But it could lead to some very unpleasant arithmetic in the future - numbers that might further inflame the appetites of those working against decarbonisation. If (and I stress "if") constraint costs will rise by £4bn if wind generators are built and the accompanying network is not, then would the proverbial man on the Clapham omnibus not say something akin to "well, then you should delay the wind farms until the network is ready"? I am aware the relevant generators would feel they have entitlements,

[9] https://www.ofgem.gov.uk/sites/default/files/2025-07/CMP444-MTDCon-Final.pdf

[10] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/42979/251-govt-response-grid-access.pdf

and I have no idea how such changes would be accomplished in practice but surely there would be some scope for some form of arrangement to be made?

Flexibility

The other main plank of the DESNZ programme was a renewed focus on flexibility. As noted at the start of this piece, I should acknowledge an interest here as I advise the ADE but would hope I can credibly say that this focus is very much welcome. There have been a number of initiatives announced on flexibility in the past that have not really succeeded - and I should know as I was associated with some of them - yet there has still been considerable progress made. But nowhere near enough.

As mentioned, the strategy document published had rather a paucity of detail. I am not going to try to set out all the specific changes that might be made, nor am I fully sure about the scope for flexibility measures to effectively reduce constraint costs. But it is still hard to move away from the conclusion that the government's relentless focus on building physical infrastructure may have distracted it from the benefits of stimulating consumer responsiveness, and that Ministers and senior officials should now approach this issue with some of the same voracious energy brought to recent developments on connection reform.

Liberal guilt?

My own experience suggests that anything that could be construed as placing requirements and restrictions on consumers raises politicians' antennae. The prolonged (and still eking out a continuing existence) campaign by some media against smart meters is evidence of this. I am clearly not suggesting this problem is not important or difficult but might point out that much of this media is unfriendly to decarbonisation in any case. But there must be some hope that improvements in technology and the common usage of apps, etc, may mean more fertile grounds for enhancing flexibility now exist.

Despite this, there will remain (possibly legitimate) concerns that promoting flexible response will benefit predominantly well-off consumers and leave more vulnerable users facing an increasing rump of residual costs. I do understand this - similar concerns somewhat paralysed my actions in my last 12-18 months at Ofgem. I refused to fund a project to build a network of charging points at motorway service stations across the UK, feeling that this would be a significant subsidy from poorer to well-off consumers (I should note my then board agreed with me, with one non-executive director saying they had not joined the regulator to subsidise the well-off). But, in retrospect, I think such inactivity (though arguably not on that particular scheme) was probably a mistake.

Some have argued that it is condescending to poorer energy consumers to assume they will not invest in new energy technology. That might be true but the current empirical evidence - such as it is - suggests that it is richer people who will use heat pumps, EVs, batteries, etc, and who will reap the benefits of using such devices. A regulator might feel agonised by that but is probably duty-bound to still progress such innovation and, as far as possible, point out

to government and the population at large, that any negative distributional effects need to be deal with by government policy.

These issues relate to the recent consultation issued by Ofgem on different ways of charging for energy[11]. This is at an early stage but is clearly an important topic - ultimately energy companies will hopefully find creative ways of charging for their services, but the regulator needs to be sure that services are supplied competitively and respect consumers' rights.

Ofgem has also signalled its interest in finding ways to ensure that vulnerable customers are protected. This could be seen as representing an attempt to resolve the issue discussed above and a desire to resolve any tension between innovation and fairness. In some ways, I find this an intensely laudable thing for Ofgem to take on. But I would remain concerned that for a regulator to attempt to make major decisions relating to distribution between energy customers is going beyond its statutory remit unless it has a clear direction from the government. My own - hardly unique - view is that society must find a way to ensure that decarbonised energy can be accessed by all regardless of income. But - for what it is worth - both my experience and my economics training suggests that for the regulator to use the same tool to try and resolve both innovation and fairness is likely to be fraught with peril.

These are difficult matters to resolve, and I am conscious that I have given few useful thoughts on solving them. But I hope others will be more successful than me in doing so. Mind you, after that there is still decarbonising heat to deal with….

[11] https://www.ofgem.gov.uk/press-release/ofgem-announces-major-review-how-costs-are-allocated-across-energy-system