

OFGEM – CONSULTATION DOCUMENT – RESPONSE

Increasing Coordination in the development of offshore energy networks

Thank you for the opportunity for people with an interest in offshore transmission to respond to your consultation document. I have personally been involved with trying to protect the onshore environment, in my home county of Norfolk, from being overrun by onshore radial connections to the NETS from offshore windfarms. I was successful at Judicial Review (JR) in overturning the Development Consent Order (DCO) for the Norfolk Vanguard Windfarm project which was illegally proposed by Vattenfall UK Ltd.. Such is my concern at the lack of responsibility for the environment from the Government, lack of coordination and planning from Ofgem, the intransigence of the ESO (ultimately National Grid plc), and, the flaunting of the planning regulations by successive windfarm developers that I am compelled to respond to Ofgem's Consultation Document.

Introduction

Before commenting on the Consultation Document in detail, and having researched Ofgem's involvement, or lack of, in the planning process leading up to the successful JR against Norfolk Vanguard, I contend that Ofgem, as a regulatory organisation, has been remiss in its statutory responsibilities to regulate the electricity supply industry and protect consumers' best interests. The lack of any substantial involvement in the CION process prosecuted by National Grid (plc) as the ESO, and lack of challenge to decisions made by the ESO with regards to their continued approval for environmentally damaging radial transmission systems, whilst presiding over National Grid plc's manipulation of the output of successive reviews, such as the IOTP (East) 2015, are testament to Ofgem's failings.

As a regulatory authority, Ofgem is, and always has been, required to contribute to sustainable development, whilst promoting efficiency and economy, in order that it protects the public's (UK consumer's) interests. The continuance of approvals for multiple radial transmission systems, especially from offshore to onshore, is inefficient, environmentally damaging, and, not sustainable. Also, the deployment of a shared transmission system, which is precisely what the NETS is albeit onshore, has been demonstrated by various historic reviews, and importantly the current OTNR, to save the consumer billions of pounds. Yet, Ofgem has not reacted, until now, when the situation has become unsustainable. Indeed, the failure of Ofgem to insist on an OTN by 2025 will result in a 50% increase in costs for reinforcement of the NETS and the development of further onshore infrastructure.

If Ofgem are not responsible for the commercial and regulatory landscape of the UK's electricity supply, then who is? Without a complete overhaul of the regulatory system for the UK's electricity supply industry then, I fear, the outcome of this consultation will be more of the same ... all talk and no action. Ofgem's historic lack of action has left the UK consumer and the environment of our countryside completely at the mercy of overseas developers who, as proven by the JR against Norfolk Vanguard, will utilise permissive planning legislation to secure lucrative Government contracts, and without regard for the environment they profess to protect.

If the planet is at the tipping point for adverse climate change, how could it possibly be beneficial to even contemplate the planning and deployment of further multiple radial connections for offshore wind? Individual developments will require the manufacture and deployment of thousands of kilometres of individual cables, thousands of tons of concrete for individual substations and the destruction of thousands of hectares of countryside; this alone will guarantee an immediate carbon impact which may well tip the climate into a downward spiral. Therefore, it would be far more beneficial for the environment and

climate change to limit the impact of carbon release with the deployment of shared offshore transmission. Therefore, I contend, it is Ofgem's lack of control of the ESO which is the root of all the problems with coordinating the Offshore Transmission Network (OTN) and the Consultation is merely tinkering with the mechanics of ensuring that the developers get paid.

Overview

Reference A:

<https://www.thecrownestate.co.uk/en-gb/media-and-insights/news/2014-round-3-progresses-to-the-next-phase/> dated 08 July 2014.

Reference B:

<https://www.nationalgrideso.com/document/125331/download> dated August 2015.

The statement that: "... offshore wind was a nascent sector and industry expectations were just 10GW by 2030" is disingenuous. As at Reference A, even in 2014 there was an expectation from the Crown Estate of 30GW from offshore wind by 2030 with 18GW of this from the Crown Estate Round 3 Auction projects alone.

The 'Ten Point Plan' for 40GW by 2030 is a target not a requirement and this target is neither required by law nor legislated for. Therefore, if 40GW were not to be achieved by 2030, there would be no penalty other than, maybe, a red- faced Government! Whereas, the Paris Agreement is a legally binding international treaty, adopted on 12th December 2015 and entered into force on 4th November 2016. Further, offshore wind is a major contributor to the UK's Nationally Determined Contributions (NDCs) to the Paris Agreement. Since the signing of the Paris Agreement, Ofgem has had ample time and opportunity to react to the imperatives to bring the offshore wind legislative framework up to date to enable asset sharing. There is something amiss when the UK can organise shared assets and interlinks with other sovereign countries but for Ofgem to find it difficult to legislate for shared assets between developments completely within the UK's boundaries and control. Further, there is little doubt that the appropriate balance between environment, social and economic costs **could** and **should** have been applied to inflight projects as early as 2015 in order that the consumer savings, such as identified at Reference B, were secured at the earliest opportunity.

The target of 40GW by 2030 could still be achieved by the intervention of Ofgem to regulate the ESO or for the ESO to become part of Ofgem as a non-profit organisation. Currently, the ESO continues to grant connections for radial transmission systems, to an already overloaded NETS, with a preference to carry out network reinforcements at a cost of £6 billions rather than an integrated offshore solution saving £6 billions for the consumer; the detrimental cost to the consumer being £12 billions total. As the main issue from the Consultation appears to be AI, in order to attract expertise and development, then the Government needs to intervene. There needs to be recognition of what the various Cost Base Analysis (CBAs) carried out in multiple previous reviews are telling them with an urgent investment in an OTN on the consumer's behalf.

The CION process is not fit for purpose. In simple terms, the process is that: the ESO is obliged to offer a connection to a developer (the applicant), but the ESO maintains that it is up to the applicant to ask for what it wants. The applicant usually wants the nearest connection point on the NETS from its development, as the crow flies, in order to reduce the cost of the transmission system. However, the ESO is in the position to dictate the amount of capacity on offer at any connection point, the date when that capacity can be taken up and the costs for the applicant's connection (substation enhancement) which the applicant will have to absorb, such that **only one option** comes forward out of the CION process. By way of example, in the Hornsea Project 3 application, there was professed to be no capacity at the nearer Killingholme or Creyke Beck substations in Lincolnshire by the ESO and the project was granted a

connection at Norwich Main in Norfolk, which is significantly further south and 60kms inland from the Norfolk coast. However, it transpires from the ESO more recently, there is now capacity for both the Hornsea Project 4 and the Eastern Link to connect in Lincolnshire. Ofgem appears to have no overview of the ESO through the CION process with the ESO making decisions which are not in the consumer's best interests and certainly not with any environmental consideration. Furthermore, post CION the ESO steps away from the project planning leaving the developer to grapple with the infrastructure planning process, even though the final NETS substation for any development, and alterations to, are for a NETS asset.

The ESO has clear conflicts of interests in developing an OTN, as opposed to continuing with the current CION approved radial connection process. Historically, the ESO has placed every conceivable barrier to avoid integration; including the unsubstantiated assumption that there would only be 10GW available from offshore wind by 2030 (Reference B)! Of note, the 10GW threshold was crossed in October 2018 when Hornsea Project 3 entered planning shortly followed by Norfolk Vanguard in December 2018 but still without intervention from Ofgem. All the while, the ESO and its monopoly company National Grid plc, continue to profit from developers carrying out onshore substation enhancements so that their projects connect radially to the now overloaded NETS. There is nothing in the Overview or Consultation to support the continuance of the current scenario in any guise. Therefore, Ofgem needs to consider the role of the ESO as a priority including replacing the organisation with an independent body.

When considering offshore wind's impact on the onshore environment and overall cost to the consumer – including cost for system reinforcements and loss of savings for integration - it is no longer acceptable for the design of the connection to be determined relatively early in the process. Further, as can be demonstrated within current planning legislation, changes to ongoing projects including those far along in the development process, would not necessarily be at risk of a project's success; for example, the 'Windfarm' could be granted a DCO separate to the 'Transmission System' as per the Triton Knoll project. It is inconsistent for developers to be allowed to employ, and fully utilise, the 'Rochdale Envelope' in their design and planning of the windfarm, thereby reducing the substantial risk to success by enabling changes to design and technology along the process, whilst the connection to the NETS is set in stone before any public consultation. Currently, the transmission system connection can be granted up to a decade before any electricity is generated as indicated in 'Overview Figure 1', but, the developer does not even need to decide on what transmission method (HVAC versus HVDC) until after any DCO consent; the system is wholly hedged for the developers. By example, Hornsea Project 3 made a planning application for both HVDC and HVAC despite there being different onshore impacts for each system. Also, the plan for Norfolk Vanguard was to build the transmission system in the first two years after DCO, including establishing the cable ducts for Norfolk Boreas despite Norfolk Boreas being subject to a separate planning application? Ofgem needs to be involved in the planning decisions for offshore windfarms from the outset in addition to regulation of the ESO's decisions such that the consumer's interests are protected from overzealous development.

In the Consultation, it is not clear which developers have been approached to take part in the Early Opportunities workstream. I contend that these must include those projects with either a DCO consent or DCO application as this is the "earliest opportunity" to bring any coordination forward. Also, it cannot be left for the developer to opt-in, rather that the SoS BEIS, through Ofgem, should exercise his/her power by consenting the 'Windfarm' separate to the 'Transmission System' and then incentivise developers to Opt-in to the OTN Pathfinder project. This should include the Crown Estates' Round 3 projects, as they will be the easiest and more readily available projects to influence. There is a clear argument that projects which are not part of an integrated OTN, producing cheaper electricity for the consumer, could be left out on a limb by virtue of their radial transmission system, whilst receiving nothing but constraint payments. The counter argument from developers being that, if all projects are connected radially then there is a more level playing field for competition; the losers in the radial connection scenario will always be the onshore environment, the people of East Anglia and ultimately the consumer. Furthermore, allowing the

developers to manage the construction of their own route to market is very much the 'tail wagging the dog' and I would dispute the perceived success as being the best for the consumer.

I contend that BEIS and Ofgem did not take appropriate action upon the IOTP (East) 2015 review, by allowing the National Grid plc to assume 10GW or less from offshore wind by 2030. If appropriate action had been taken in 2015, the "benefits of acting now" would have been no different in 2015 and consumers could have already been benefitting from cheaper renewable energy enabled by greater integration. By 2018 the 10GW threshold was breached but still no action was taken to integrate offshore wind. It is appropriate that this scandalous failing by Ofgem and BEIS is not ignored or the ESO will continue to manipulate the policy makers (BEIS) and enforcers (Ofgem) into its own agenda.

Metering the output of a windfarm is not rocket science! Furthermore, paying the generator for the amount of electricity either consumed, or not consumed as the case may be, is not difficult and certainly not dependent on the transmission system employed to transport the energy to the consumer. Therefore, the developers, in consultation with both BEIS and Ofgem, are deliberately making the payment process unnecessarily over complicated; arguably, this is an attempt to protect their lucrative CfD auctions and constraint payments; the solution could be to get rid of them and start again! In my opinion, the Consultation needs to ask some direct questions, such as:

Are constraint payments and subsidies necessary for the windfarm developers to make their investments look profitable?

Is continually researching AI pathways clouding the issue of what financial incentives are available to ensure developers cooperate, co-ordinate or take part in Pathfinder?

There could soon be an occasion, as radial transmission systems become longer and costs for building those transmission systems rise, where CfD auction rates will be insufficient to allow the auction projects to proceed; this may be the case for Hornsea Project 3 if the Round 4 auction rate is low. Therefore, instead of the windfarms tendering for a connection point and building a transmission system to suit, why not have transmission system developers (not necessarily the same windfarm developers) tender to build an integrated OTN and guarantee a connection for generators at a fixed cost for capacity for 25 years? The technical solution, despite the dissuasion from BEIS OTNR and the ESO, is to have an integrated Offshore Ring Main (ORM) which will accept 'Plug and Pay' windfarm developments. The onshore NETS is such a 'Plug and Pay' network, therefore, there is no technical reason whatsoever for an ORM/OTN not to be developed, in short order. The windfarms currently in-flight will not be operational post 2050 as they only have a 25 year life. Therefore, redundancy for 'Plug and Pay' developments will be required in the future.

Early Opportunities

The overall purpose of renewable energy is to slow down the impact of climate change. Therefore, any impact from development that negatively impacts climate change should be addressed by legislation. Importantly, delaying the connection of a windfarm by two or three years, in order to reduce the impact of its transmission systems on the climate, **must** be taken into consideration. For instance, 5 windfarms in the East Anglian Zone sharing an integrated system **must** be better for the climate than 5 individual long range radial transmission systems, or has climate change taken a back seat?

The Early Opportunities workstream does not go far enough and is, once again, developer centric. Slowing the rate of development, in order to accommodate an integrated solution – fewer radial connections being better for the environment, the economy and the consumer – will not necessarily place the 40GW by 2030 target in any jeopardy if co-ordination of the in-flight projects is incentivised. The developers of in-flight projects know their 'bottom-line' income, that is: the minimum CfD rate they could accept and what they would gain by sale of the transmission system through OFTO. Therefore, a 'bottom-line' agreement between the UK Government and developer could be made but with an incentive to coordinate with an integrated system; after all, the developer will be saving the cost of their transmission system. The

Belgian’s designed and had in operation their Modular Offshore Grid (MOG) within three years and there is no reason why similar systems could not be rapidly deployed and linked together along the near North Sea.

The design from the IOTP (East) 2015 network is below at Figure 1.

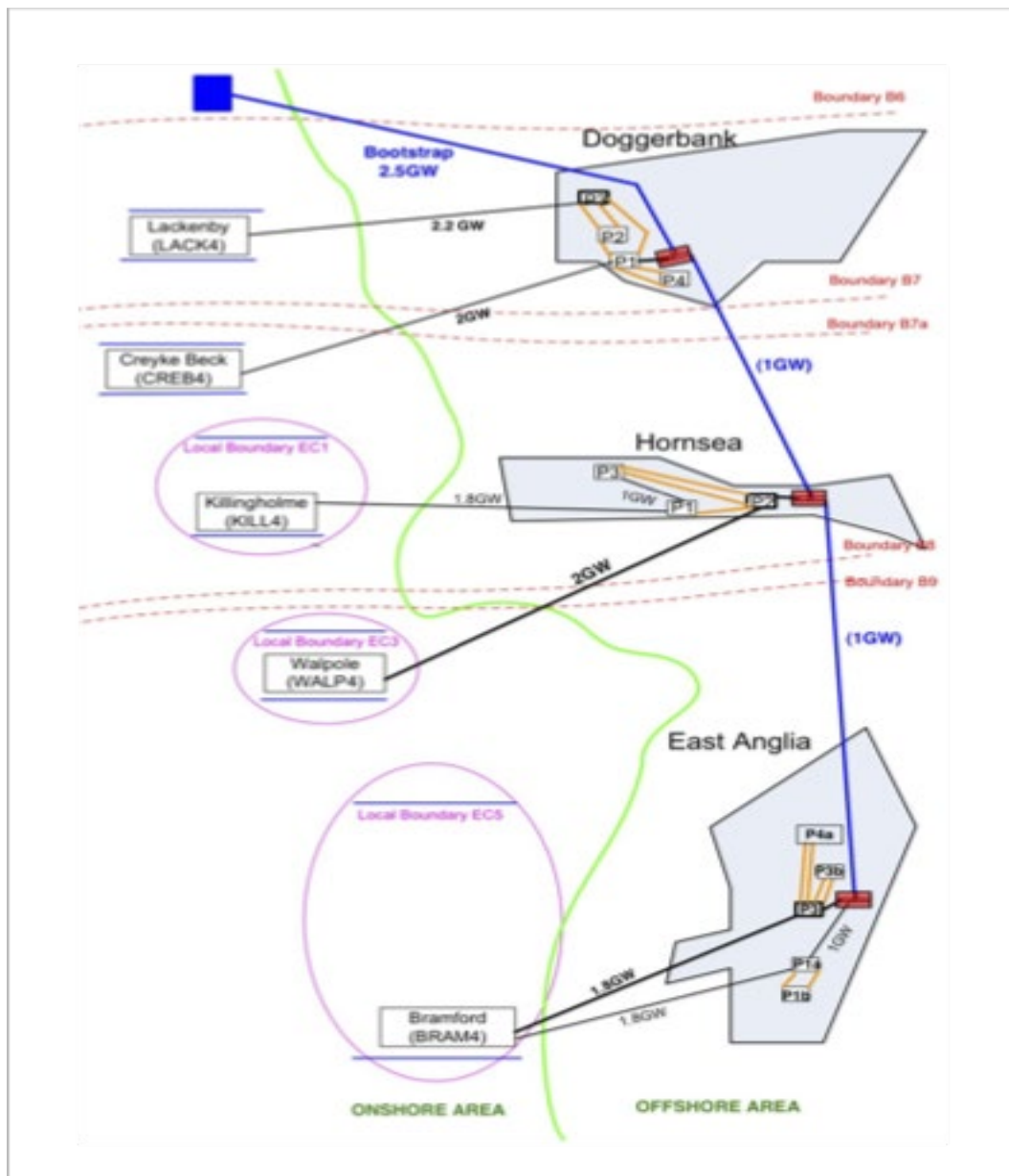


Figure 1: IOTP (East) Network Design

The ‘Concepts’ promulgated in the Consultation are not new. The integrated offshore transmission system, including technical, regulation, constraints AI and financial risk assessments have been under repeated scrutiny for over a decade. The work for the integrated network of the East Coast has already been carried out in the IOTP (East) Network Design at Figure 1.

It is disappointing that the Consultation has chosen to revisit and conceptualise work that already exists. The above network is a “Quasi Bootstrap System” with embedded “Shared Offshore Transmission Systems” in the parlance of the consultation. However, if you include the onshore NETS connections between the onshore substations you have ... an Offshore Ring Main (ORM)! The main technical point is that: each and every windfarm has a collector substation which can connect to any other substation, be it inland or offshore, making it ludicrous to conceptualise the system any further. All that is needed is the impetus to either make the developers adopt the design or pay them to do so but it should not be up to the developer to decide; they do not decide how to connect to the onshore NETS so why is this different

offshore? The above system would preclude many of the very costly onshore system reinforcements the ESO would require in order to enhance the North to South flow of electricity towards the South East and London. Further, a “boot-strap” to the Isle of Grain could also encompass the next generation of interconnections such as UK to Germany or UK to Belgium. Therefore, it is the reticence of the ESO and the developers that Ofgem needs to overcome and, as a consumer, it is frustrating for the many members of the public impacted by the unnecessary industrialisation of the countryside to have to review further concepts, in order to attract development. I contend that presenting three transmission system developers with the design for say, the East Anglian Zone, and asking them to tender to build it would produce a comparable competitive cost; Ofgem needs to simplify the process.

Alternatively, any AI for the above Network could come from the sharing of revenue from both the “bootstrap” and offshore to onshore transmission system immediately adjacent to the generators’ zone, with windfarms in each generation zone receiving a percentage per capability payment: 6GW total from East Anglian Zone with 1.8GW capable from Norfolk Vanguard equals 30% of transmission payments would go to Norfolk Vanguard. Also, the windfarms in the Hornsea Zone are all being developed by Ørsted so there should never have to be any issues with integrating these windfarms together by the same developer; the issue with this zone’s integration has always been the ESO and the CION process. Further, there is no logical reason why the “Bootstraps” cannot be developed and sold using the same methodology as the current OFTO process. Alternatively, private investment by share ownership of a specific project or bootstrap, as progressed by the Victorians, should also be considered. Indeed, a developer solely developing the “bootstrap” transmission system, with a view to selling to an investment operator, could easily attract the AI the Consultation appears to be constrained by.

Whilst the Consultation wants “developers to be ambitious” it does not say how? Also, the Consultation does not expand on what “incentives in the wider commercial and regulatory frameworks” actually are? Therefore, it is difficult to make comparisons.

AI versus High AI

The questions are again hedged towards the developers when it is Ofgem’s responsibility to obtain the best for the consumer. Clearly, if asked, any developer would want all of the AI risk to be on the consumer as this would minimise their risk and make their project a dead cert! Therefore, I will answer as a consumer:

Question 2: No. However, if consumer risk cannot be avoided then it should be the minimum. Windfarm developments are speculative by nature therefore, it should not be for the consumer to speculate on development costs.

Question 3: If a system is “conceptual” then the developer should invest in proving that concept before any risk to the consumer. The IOTP (East) 2015 study proved that the concept of an integrated transmission offshore would benefit the consumer but not one single developer nor National Grid were compelled to invest in the design ... and ... here we are ... still talking about it! The onshore environment is constrained, the offshore environment less so. Therefore, logically, AI should be aimed at promoting and developing integrated offshore transmission systems.

Question 4: Any developer undertaking a Crown Estate Leasing Auction, and a DCO Planning Application is showing a reasonable demonstration of intent! However, if they act unlawfully, then Ofgem should have powers to preclude them from application. Also, developers can sell on their leasing rights without disclosing any intent. The failure of GFAI and WNBI are indicative that developers have a firm understanding of the potential for their individual development to be profitable with the radial transmission system as a stand-alone asset.

Question 5: As previously described, the Round 3 in-flight projects **are** the earliest opportunity for integration of the offshore windfarms into an integrated system. Therefore, the environment and process should be as permissive as possible for these developers to integrate their windfarms. However, there is no reason to conceptualise the system as it has been discussed and planned many times.

There is an urgent requirement for key projects to be identified capable of integrating and joining the OTN Pathfinder and they are easily definable in 'Zones'. Therefore, any incentives to integrate should come from Government and those incentives should be weighted against potential, otherwise there will be no progress towards integration from this Consultation; the developers will never opt-in without an incentive.

Cost Assessment - OFTO

Reference C

<https://www.nationalgrid.com/about-us/what-we-do/us-principal-operations>

The OFTO process is blinkered as it is only really applicable to a wholly owned and developed individual transmission system. Attempting to shape an OFTO process to fit a system with multiple ownership and development will not work. Investment through company share ownership would seem appropriate and could even include Government investment. For example, Vattenfall Limited is wholly owned by the Swedish Government but it operates and is recognised as a commercial company providing offshore wind expertise. Therefore, a simple change of legislation to allow a mix of government and private ownership of offshore transmission companies, still overseen by Ofgem as the regulator, is all that is needed.

I do not believe that any developer would progress building a transmission system without an understanding of how much return that system will yield once disposed of through OFTO. Clearly, the developer would carry out its own CBA, albeit within the OFTO Guidance, before commencing any development. The transmission system will have a finite value on the open market, irrespective of OFTO, which could, in a truly open market, be less value than the OFTO Cost Assessment, thereby reducing costs for the consumer. Having to continually provide assurances to developers is not necessary.

Why does a developer/generator have to plan and develop the associated transmission system before offloading it through OFTO? Why is it perceived that the only way of developing large scale infrastructure is by having a single source developer? To reiterate, the developers see the OFTO process as being a lucrative element of their income and are taking an unreasonable stance to preserve this. There are companies who could specifically design and build a transmission system and could attract the AI for that element of a development, leaving the generator to build the windfarm. For instance, National Grid plc have part of their business in the USA doing exactly this sort of transmission investment and development, as at Reference C. However, being the ESO does cause a very real conflict of interest for National Grid plc's shareholders, reinforcing the argument that the ESO should be an independent body.

The interconnector AI model is becoming an established model as per the Germany - Denmark interconnector. The point being that sharing a transmission system is not insurmountable and it is arguable that, instead of building multiple point-to-point radial transmission systems, interconnectors and bootstraps are less environmentally damaging and more economically viable; however, the Consultation does not need to prove this as a concept.

The OFTO process needs an urgent overhaul and does not appear to be suited to integrated transmission systems. Attempting to amend the current legislation and organisation for OFTO would be long winded and counter-productive whereas a new set of rules under new (urgent) legislation for Multiple User Offshore Transmission Operators (MUOFTO) could be established more expediently.

Holistic Design

As above, the Holistic Network Design (HND) for the East Coast was already completed in IOTP (East) 2015. However, the developers still resist integrating their projects within the current framework; the Consultation has not adequately established why? The TO's NOA 21 is inadequate as it does not recognise the compelling need for a HND and co-ordination of in-flight projects. I reiterate, in order to ensure integration and a HND the Government needs to separate the DCO consents for the 'Windfarm' from the 'Transmission System'. Further, those in-flight projects with DCO consents should be incentivised to integrate with other projects within the development 'Zones' as indicated above in Figure 1.

It is clear to me, from the intransigence of National Grid and the ESO to address the issues they are culpable for, that offshore infrastructure needs urgent independent planning and organisation in order to enable any HND. The UK's Electricity Supply industry, under the overall governance of Ofgem but control of National Grid plc, has muddled forward with plans for renewable energy with outdated licences and inappropriate mechanisms, OFTO being just one of many. The lack of clarity for the future and inaction after multiple reviews and reports has brought the UK to this critical juncture which is both, unsustainable for the NETS, and, costly for the consumer. Therefore, it is time for radical intervention and change.

The HND would obviously provide for consumer savings, much improved efficiency and with a huge reduction in the environmental impact of transmission systems. However, the impetus from the initial rounds of sea-bed leasing has been lost with developers being asked if they would now like to opt-in, so long as their investment are virtually guaranteed; this is completely the wrong emphasis! The developers specifically impacting Norfolk are all from Scandinavia (Equinor – Norway, Ørsted – Denmark, Vattenfall – Sweden) and all have significant investment from their respective governments. These companies are grasping the opportunity to make huge profits for their shareholders yet we, in the UK, believe we still need to incentivise them to do so and provide another study on how we should go about it. Meanwhile, the TO (National Grid plc) does not appear to even recognise the urgent need for a HND, which must include both onshore and offshore assets. Therefore, immediate and radical action is required if the '10 Point Plan' is to achieve anything.

The Consultation's recognition that environmental and community impacts should be considered on equal terms with optimum engineering solutions and economic impacts for any HND are relevant, and welcome, but leaving those elements within the bailiwick of the ESO will conflict with those of National Grid plc. I reiterate, an independent organisation capable of producing the HND for the whole system, including onshore generation, offshore generation and interconnection, and, with future proofing, is urgently required. The future organisation should be empowered to work with developers and, if necessary, incentivise them to adopt the HND. Codes and licensing would be able to adapt to the regime of a HND once laid out; this would be much more preferable to the piecemeal take up of generating capacity the UK has suffered from both NGETS and the now legally separated ESO. There would also be mileage in having one licensing regime; a generator is a generator and it is irrelevant where that generator is so why over complicate the licence.

Network Design Offshore

Reference D

https://www.ofgem.gov.uk/sites/default/files/docs/2020/02/owic_evidence.pdf dated November 2019

As above (Figure 1), the work for network design offshore of East Anglia has been completed, argued about, and now accepted by the OTNR and OCP. Therefore, the only obstacle is bringing the design into development. Also, importantly, without adopting the offshore network design, Norfolk will be devastated by multiple successive cable corridors for decades to come. The environment should not be held victim to timing irrespective of the arbitrary 2030 Government target.

Whilst the Consultation recognises the over development issue it does little to bring forward a solution. Radial connections from offshore to onshore are environmentally damaging and the continuance of the ESO to grant such connections is counter intuitive to the whole approach of the Consultation. Indeed, the Network Constraints Costs, as indicated at Figure 2 below, would preclude any further connections to the NETS in Norfolk.

Figure 2 shows the variation of network constraint costs for the connection of a 1.5GW offshore wind farm at different locations. Grid connections at Norwich Main (Zone F), and Friston in Suffolk, are more constrained than connections at either Walpole (Zone E) or Isle of Grain (Zone G). These constraint costs are paid by the final consumer. Therefore, as the consumer's champion, Ofgem needs to be involved with the decisions being made.

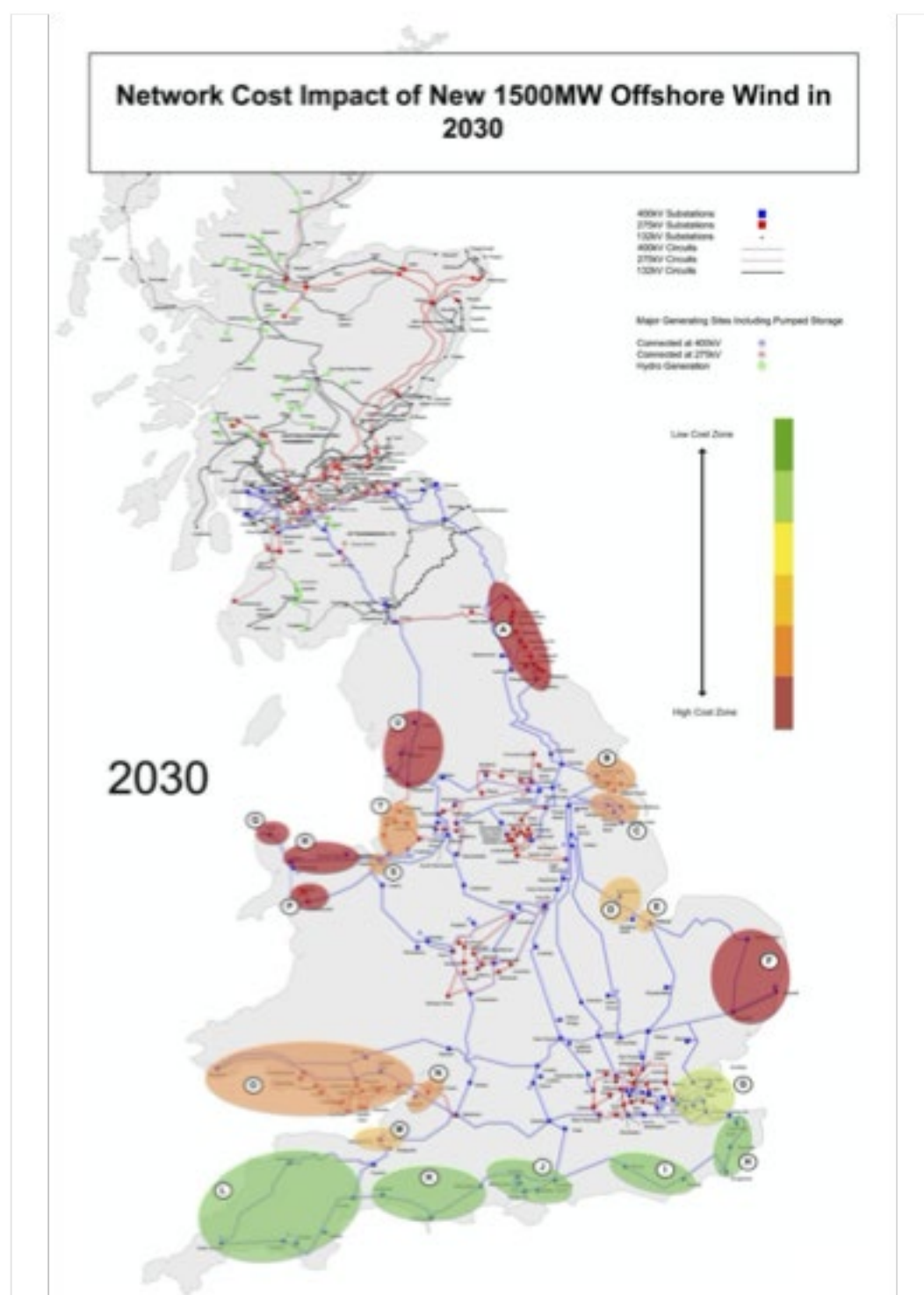


Figure 2 – Network Constraints Costs

At Reference D, OWIC also identified that constraints on the NETS in East Anglia preclude further radial connections, including those that, for some inexplicable reason, the ESO have recently approved. Commensurately, I do not accept the 40GW by 2030 as being a reasonable argument for the ESO to continue to approve connections in East Anglia, especially knowing these would constrain the NETS with costs to the consumer. If Ofgem has real intent to move towards an integrated HND, including an integrated offshore network, then the practices of the industry under the lead of National Grid plc, in causing its own problems and increasing costs for the consumer, whilst damaging the environment, must cease forthwith.

At Reference D, Page 7, OWIC identifies the following:

“Given the currently visible issues and that NGESO’s study concerned a single Round 4 project only, it is difficult to understand how the current onshore grid can accommodate the high volumes of offshore wind that are expected over coming decades or how combined on and offshore solutions can be identified, developed and evaluated.”

OWIC’s understanding is clear; the current onshore grid **cannot** accommodate the high volumes of offshore wind that are expected ... but, once again, another study and no action

Conclusion

Whilst Ofgem’s consultation on ‘Increasing Coordination in the development of offshore energy networks’ is welcomed, the report is underwhelming in scope and impact. The issues facing Norfolk and East Anglia have been known about, reviewed in various studies and discussed at every level of governance for over a decade. The Consultation conceptualises connections in an effort to appease the payment of AI to developers who, by their very refusal to engage with projects such as the OTNR Pathfinder, are part of the problem for the lack of an integrated offshore solution.

The root of all the planning, design and development issues, for an offshore network and HND, are caused by an over reliance on the ESO which, although legally separate to National Grid plc, has a commercial bias in the decisions the organisation is making. Therefore, a wholly independent decision making, funded and incentivised organisation is urgently required to carry forward both the HND and future planning of the UK’s electricity supply network.

Both Ofgem and BEIS have had ample time and foresight of the need to co-ordinate and establish an efficient offshore transmission network, regrettably delaying any intervention until the current situation where the NETS is constrained, and, future generator connections are unsustainable. There has been no accountability for the lack of action by responsible organisations and successive consultations, such as this one, are not progressing the required changes to legislation with any expediency ... as a consumer, I find the Consultation to be just more of the same and lacking in substance.

The OFTO and CfD processes are not fit for purpose for a multi-use integrated transmission network and a whole new system for attracting investment by limited company shareholding and government investment, is necessary.

Urgent and decisive action is now required by Ofgem and BEIS.

Ray Pearce
Norfolk

