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30th March 2010

Dear Martin

Electricity Interconnector Policy

National Grid welcomes this opportunity to respond to Ofgem's consultation on Electricity Interconnector Policy. Given the need to develop the European internal electricity market to enhance security of supply, facilitate the transition to a low carbon energy sector and efficiently integrate variable renewables, we agree that a focus on this part of the electricity transport infrastructure is timely and important.

Although this consultation focuses on the interconnection regime, it is clear that a regime is required which facilitates a more strategic approach to the development of all offshore transmission infrastructure. In particular, it will be in UK consumers' long-term interest to identify an approach which captures the potential synergies between electricity interconnectors and renewable connections. At present the UK regulatory frameworks for these two types of infrastructure are incompatible and discourage the development of such synergies.

National Grid sees this consultation as a constructive and helpful step in ensuring that more interconnection capacity is developed and summarise our response as follows:

- Greater interconnectivity is likely to play an essential role in facilitating competition in Europe's internal market, integrating variable renewables and enhancing security of supply.

- However, interconnector development involves significant cost and complex performance/design trade offs which mean that they need to be developed by a party who is accurately anticipating future market conditions.

- National Grid supports an approach where developers are incentivised to undertake this anticipation while striking an appropriate balance of risk between the developer and consumers.

- But differences in regulation between GB, the regime at the 'other end' and EU regulatory practice is currently a substantial barrier to progressing these projects.

- We therefore welcome Ofgem's consideration towards developing an approach which, by offering common ground between the measures required by regulators, could enable barriers to be reduced and projects to progress.

Q1.1 Have we accurately captured the benefits of and demand for new interconnection? Are the projects under consideration all viable? Would they be sufficient? Are there other projects being developed?

The consultation characterises the benefits of interconnection as permitting high priced electricity on one side of an interconnector to be substituted with cheaper electricity on the other. While this may be the main energy market benefit that can be ascribed to interconnectors, there are other benefits as follows:

1. Interconnectors can facilitate competition and hence help consumers discover and gain access to efficient energy prices, especially where there may be dominance in certain market areas.

2. Interconnectors can contribute to security and quality of supply in ways that are additional to simply making energy available from one market area to another. Like other parts of the network infrastructure they can contribute to supply resilience. They also offer infrastructure which permits the sharing of key system balancing facilities (only some of which may be valued in current ancillary service market arrangements for example their benefits in a renewables rich generation world may not be fully understood at present).

In terms of the need for interconnection capacity, questions about viability and sufficiency must be answered not only in the context of current market conditions but over the life of these assets. Whereas National Grid's work has identified an appetite in the current market for some additional capacity, potential developments towards increased use of electricity in meeting energy needs and the increased production from remote renewable sources suggests that the demand for capacity may well increase in the future. The key question for consumers (and interconnector developers) is whether there is a cost-benefit for a particular capacity development sequence. This question can be answered in two basic ways:

1. By constructing a regime in which the cost-benefit is market-tested such that developers take the risk that the benefits (represented in revenue streams) might not cover the costs. This approach will protect consumers from poor investment decisions or poor link performance but may result in a systematic under delivery of capacity and wider benefits (due to a combination of insufficient valuation of the benefits, the effects of market power that may lie with the owner of an established link and regulatory risk).

2. By establishing a coordinated approach that considers whether investment costs are justified given the wider benefits including achieving policy goals related to security, facilitating low carbon energy sources and enhancing affordability by facilitating

competition. To protect consumers from poor cost-benefit decisions or poor implementation and operation of the interconnector assets, appropriate regulation of the link owner will be required.

We consider that a mixture of these two approaches can be established such that the benefits of rigorous cost-benefits and performance incentives can be achieved while ensuring wider policy goals are facilitated. We provide further views on this below.

Q 1.2 Are there other key aspects of the legal or regulatory framework that we should consider, or should some features be given different emphasis?

We agree with the descriptions of the key elements of the legal and regulatory frameworks. However, one aspect not highlighted (although we appreciate it is an area that Ofgem has been active in addressing) is the regulatory risk associated with investments in market remunerated interconnectors. The fact that an interconnector falls into three regulatory jurisdictions (a national regime at each end and also under European Commission supervision) means differences in regulatory approach by the authorities can represent a barrier to development. As there is a significant difference in the regulatory approach currently adopted in GB (by default, market funded) compared to that taken by the Commission and most other European regulators (by default regulated as a TSO activity), this issue is very relevant.

The differences currently arise because the only revenue stream available from the GB end to fund interconnectors is one derived from capacity sales which, in accordance with the Regulation, must not exceed that needed for the permitted purposes. Clarity on the regulatory definition of a permissible financing cost (i.e. a reasonable and acceptable return given market fluctuations) is therefore crucial. Clarity concerning the position of all three regulatory authorities can be obtained from the terms of an exemption, but the conditions under which exemptions are granted include:

- The requirement for the interconnector owner to be legally separate from the system operators of the interconnected systems.
- The requirement for the interconnector not to have received any funding from transmission or distribution charges in the systems linked by the interconnector.

These two conditions do not impose additional requirements at the GB end because legal separation from the system operator is required by the Electricity Act and there is no mechanism for a legally separate interconnector to obtain revenues from distribution or transmission charges. However, at the other end, these conditions mean that system operators (who are generally expected by their regulators or governments to lead on interconnector development) cannot obtain exemptions and thereby participate in interconnector projects jointly developed with the GB end.

As mentioned in the consultation, the granting of exemptions to enable market funded interconnectors is not the default approach to regulating interconnectors under the Regulation. There is therefore a regulatory hurdle which all interconnectors funded on GB market revenues need to overcome in order to depart from the default approach established to facilitate a single market. Given our experiences when seeking to progress interconnectors, this is not an inconsequential issue. Indeed in our experience the Commission's appetite to grant the required exemptions for electricity interconnectors

is not that great, especially since the general regulatory approach seems increasingly to militate against them.

The difference between GB and the Regulation's default regulatory approach is particularly important because it is our experience that, in order to achieve a successful interconnector development in practice, it is important to act in partnership with a competent and experienced developer and integrator of interconnectors at the remote end. This will often mean forming a partnership with the remote system operator. National Grid has noted that such operators simply cannot, do not wish to, or see no need to adjust their national arrangements in order to take forward a development under the exempt approach. (The full extent of these views National Grid will leave to those other system operators to express).

Q1.3 How can the Regional Initiative best contribute to development or implementation of policy? Do you agree with the priorities and approach outlined?

The Third package introduces a range of new requirements and mechanisms relating to interconnectors. This includes requirements for greater cooperation between TSOs, for capacity allocation procedures to be approved by National Regulatory Authorities (NRAs) and greater coordination on how cross-border capacity is allocated and managed. The post Florence projects under AHAG will develop Framework Guidelines from which, Network Codes on congestion management and capacity allocation will be identified and developed relating to the European Target Model. These binding codes will determine the basis for how cross-border capacity will be dealt with within and between regions

We therefore strongly support the consideration of GB arrangements within an extended regional initiative that includes all the countries to which GB may soon be physically connected (i.e. CWE and the Nordic region). Given the potential capacity between GB and the continent if even a subset of the interconnector projects identified by Ofgem progress, it would not be appropriate to consider the GB market as a radial spur to the European market given that the GB hub may be at least as well connected as countries in the other regional initiatives.

The consultation also seeks views on the interaction of interconnectors, OFTOs and offshore grids. There are important synergies between offshore wind connections and interconnectors that result from the manner in which the two sets of users could share capacity by counter flowing on shared assets. These synergies will favour the development of a meshed offshore network. The risks for consumers implicit with Ofgem E-Serve acting as a single buyer for offshore network would be significantly greater if the single buyer approach is further extended to interconnectors and the even more complex issues inherent with networks meeting both wind connection and interconnector requirements.

Q2.1 Are the target models appropriate for GB? What are the issues that need to be considered? Are there alternative approaches that would be better? Will the target models effectively accommodate intermittency?

The target model is in effect a range of interconnector capacity products across different timeframes from one year plus to intraday and, as such, is a mix of explicit and implicit capacity products. National Grid understands that this mixed approach is the preference of the majority of stakeholders (as expressed both in Florence and at the FUI Regional Initiative meeting in Paris in November 2009).

The AHAG process now has three projects underway to deliver the target model: Capacity calculation (looking at how a common method might be developed across the EU), Intraday Capacity Allocation and Day Ahead Capacity Allocation/Governance. This work is now operating alongside projects of a similar vein in CWE, and beyond CWE into an emerging NW Europe regional market grouping which is being taken forward within ENTSO-E. This latter work is specifically looking at how 'price coupling' could be achieved across a NW region in 2011.

As a consequence of the BritNed exemption (which requires a mix of explicit and implicitly auctioned products) price coupling between GB and the near continent needs to be achieved. The Third Package requirement for coordination and cooperation between all cross-border capacity has implications for the existing link to France (IFA) and the plans between National Grid and Elia, RTE and Statnett to develop further interconnectors to Belgium, France and Norway over the next ten years.

Given the above, we conclude that the future of efficient interconnector utilisation is best served by regional solutions and we see the Target Model as a good basis on which to move forward given the broad stakeholder support it has received.

Q2.2 What should be our approach to firmness of interconnector capacity? Should this vary between new and existing interconnectors, or between regulated and exempt? What are the categories of costs and benefits from changing approach? Where should they fall and can they be quantified?

As the consultation correctly points out, implicit methods raise a number of issues that are different to explicit. These include the applicability of transmission network charges (to access the main integrated transmission systems at either end of the interconnector) and firmness of capacity.

There is a link between firmness and the introduction of implicit arrangements, as implicit products require physical firmness[1]. However, the debate on firmness is a general one across all timeframes – implicit or explicit.

The options on how to treat firmness in future are fairly set out in the Ofgem document. The key question to consider is who is best placed to manage the risk of offering firmness? It is generally in consumers' interests if costs are directed to the party best able to manage them. If exposed to such costs, link owners will have reinforced incentives to maintain and quickly restore availability (strong incentives already exist given the revenue loss associated with unavailability). However, in the event of an unavoidable prolonged link outage, there is an opportunity and significant benefit if traders revise

[1] In explicit capacity sales, link users and owners can agree how to share the costs of a link failure. In implicit auctions, however, power exchange users will not know whether they are using interconnectors because they cannot control whether they are matched with a counter-party in the same national market area or in a remote area. As power exchange users will generally possess firm rights to deliver trades with local counterparties, they will expect/need interconnectors to be equally firm. This implies imbalance costs resulting from link failures cannot be shared between interconnector owners and implicit interconnector users on a bilateral basis.

their positions and so minimise the overall costs of redispatch while meeting any longer-term contractual obligations.

If we take as an example a public policy decision which determined interconnector users should be compensated at full market spread, this effectively passes the management of the risk to the interconnector owner or (as it is a public policy decision) to the end consumer via the TSO. As the consultation points out, the costs of offering full firmness could be in the order of tens of millions of pounds per annum. One might argue that the interconnector owner could insure against this risk and include the costs of such insurance in its prices for offering capacity. However, even if such insurance could be obtained at a reasonable cost, the recovery of such a fee is likely to be regarded as a reserve price, a practice which is not permitted by the EU Congestion Management Guidelines, unless the interconnector benefits from an exemption under the EU legislation.

We conclude that, if any alteration is made to the current GB arrangements on firmness, the firmness exposure should either be capped (e.g. at 110% of the price initially paid) or the exposure should be a pass through cost to TSO revenues and the end consumer (given that the position is determined by a public policy decision).

Given that implicit auctions are envisaged for day ahead and within day trading only, the inability for link owners and link users to jointly manage costs from a prolonged link outage is perhaps acceptable given the potential small impact on consumers. However, the potential for significant differences in link owner exposure between implicit and explicit arrangements and between those that arise for independent owners compared to system operator managed links highlights the potential for distortions and barriers to market-based link development. To minimise such differences, it is for consideration whether the imbalance exposures on implicit capacity sales for independent link owners should be moderated so that they are no higher than the congestion exposure of the system operator on other network links.

The move towards an implicit product for GB (driven by both the BritNed exemption and the AHAG work) also raises the issue of levying transmission charges on interconnector flows. This issue is however, not exclusive to implicit products, and is rather a more general point of principle against the backdrop of the Regulation and the Mandatory ITC scheme which the EC plans to introduce in 2010.

In relation to the issues around levying transmission charges to interconnector flows, this question has been reviewed on several occasions to date. The conclusion of those reviews has been that levying these charges is compliant with NGET's legal and regulatory obligations as they stand, whether these relate to GB or the EU. That said NGET keeps its charging methodology under continuous review and NGET has proposed to Ofgem that it should carry out a specific review of TRIAD (and transmission charging to interconnectors in general) in the course of 2010. Such a review would encompass the possible consequential implications for GB charging arrangements as a consequence of changes to current EU legislation and the adoption of a mandatory ITC scheme.

Q2.3 Should we seek regional solutions rather than individual project solutions for access rules, such as through a broader North West European solution for market coupling? What are the priority areas for greater regional co-ordination?

See also response to Q 1.3 For the reasons set out above, we consider the target model is best delivered through a regional rather than project based solution and AHAG and NWE activities are already underway to achieve day ahead market coupling.

National Grid therefore strongly supports regional solutions, and recognises that those solutions will be delivered most efficiently in an appropriate (larger) forum. We believe this is also the case in respect of the BritNed exemption, where we feel it would make more sense to have an enduring regional solution for implicit mechanisms even if this is implemented several months after BritNed 'go-live'. A short term solution followed by another charge later in 2011 is surely not an efficient solution for all parties.

Q3.1 Does this chapter capture the key issues in regulation of new interconnectors? Should we assume that all new interconnectors will seek exemptions?

The consultation captures the key regulatory issues and helpfully explains the concerns of European regulators about the potential for a purely merchant approach to interconnector development to under provide the efficient quantity of capacity. The result of this would be to disadvantage consumers and frustrate the achievement of energy policy goals including improved competition in Europe's energy markets. These concerns by regulators, despite the care with which remedies have been designed, reinforces the worries of developers that investments may be subject to further regulatory interventions and regime developments. Given this situation, and the barriers that exist to European partners acquiring exemptions that would enable them to participate in GB market funded projects, we support Ofgem's further consideration of the regulation of interconnectors.

National Grid would consider it imprudent to invest in a market funded interconnector (the only approach available under the GB regime) without an exemption. This is because the use of revenue and third party access obligations in the Regulation are very much subject to interpretation, and this interpretation may well be subject to change if new policy approaches within the developing European market place are adopted. We also consider it increasingly difficult if not impossible to obtain an exemption as noted at the start of this paper.

As described in our response to Q1.2 above, the need for an exemption imposes a requirement on any partner in an interconnector development to have the same business separation between the development interest and the system operator activity as that which National Grid is required to achieve under GB licensing arrangements. While some independent developers may consider this to be a desirable objective, an approach which effectively requires all parties to follow the GB approach despite concerns that such an approach may not achieve the desired public policy objectives would appear questionable.

As to whether the GB licensing regime should be altered (as posed in para 3.15 of the consultation), we suggest there is merit in exploring whether interconnector developments can be facilitated by adjustments to the regulatory approach before seeking a review of legislation. If such adjustments cannot be facilitated then we do think it would be appropriate to review the legislation to ensure GB consumers can obtain the benefits of greater interconnectivity.

Q3.2 Of the options set out, which are preferable and why? What are the key considerations in taking forward any of the options?

As was evident at Ofgem's workshop, there are strongly polarised views (although not necessarily equal in weight) concerning the merits of a merchant approach (Options 1 or 2 in the consultation document) or an approach based on an appropriately regulated TSO (Option 4). As we describe above, our experience is that it is highly problematic to progress an interconnector with a mix of these approaches. In order to deliver the benefits that interconnectors can bring to consumers, we suggest Option 3 offers the prospect of retaining most of the advantages of the other approaches but also offers the prospects of reducing certain barriers to progress (for example, concerning the need for exemptions).

Option 3 offers a regulatory framework which:

- Permits interconnectors to be developed in full compliance with (a more fully specified) default regulatory regime without the need for exemptions (although retaining the scope for the granting of additional exemptions to non-TSO developers if this is necessary). In essence, broadly symmetrical cap/collar arrangements could provide developers with similar comfort against regulatory risk as is currently sought by applying for an exemption and avoid the asymmetric biases that risk under development of link capacity.
- Retains market testing of the investment decisions thereby protecting consumers by ensuring developers are exposed to the quality of their choices concerning how much capacity, the appropriate connection points and link timing.
- Retains good incentives on link operators to maintain capacity, availability and reliability.
- Permits partnerships to be established between parties that have knowledge and experience of the linked systems (even if such parties are TSOs at the non-GB end).
- Retains scope for independent developers to bring forward projects (with or without exemption) thereby maintaining contestability in interconnector development.

Of course, Option 3 will only retain the policy benefits of the more purist options if there is a viable range of caps/collars so that either sufficient market testing is introduced into a regulated approach and sufficient regulatory symmetry and certainty is introduced into an otherwise merchant approach. For our part, we would consider developing interconnectors under a defined regulated approach of the form represented in Option 3 (i.e. without exemption) with a collar on losses sufficiently low such that it would have negligible likelihood of augmenting congestion revenues provided that the collar did give substantive comfort in the event of a significant shift in regulatory policy concerning the funding of parallel links.

Q3.3 Is it feasible to have a mixture of different approaches for different interconnectors – such as some exempt and others regulated? If not why and how should this be resolved?

A change to the current GB arrangements (of the type envisaged by option three) should be offered to all new interconnector developments, but we do not consider it necessary or desirable to require it to be imposed retrospectively on established projects. We see no reason why a mix of approaches cannot co-exist.

However, a public policy decision (e.g. adoption of a common approach to firmness and further changes to the Regulation) might lead to costs that would not be appropriate to leave wholly with link owners. In such a circumstance, there may need to be a reconsideration of all existing interconnector

regulatory arrangements and the introduction of adjustments consistent with Option 3 (albeit with suitable customised parameters).

In conclusion, it is National Grid's view that it is vital to change the GB arrangements as indicated in Ofgem's consultation and in this response; otherwise GB consumers will be denied the benefits of further interconnector developments with willing partners in Norway or Continental Europe.

Yours sincerely

[By e-mail]

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