SIEMENS

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Dear Mr Atkins,

Response to consultation on a proposed framework to enable coordination of offshore transmission

Preamble

This response to the above consultation is on behalf of Siemens.

Siemens is the market leading design and build contractor for offshore grid connections and builds onshore transmission substations as an Alliance partner of National Grid. Siemens is also the leading supplier of offshore wind turbines and a co-investor in three UK offshore wind projects. We therefore have a detailed understanding of what is necessary to deliver an integrated, efficient on and offshore transmission network.

We thank Ofgem for carrying out a consultation on the regulatory framework required to support anticipatory investment. We are pleased to support the consultation and believe that it is an important step in providing a cost effective model for delivering the transmission network Britain

needs for the large scale deployment of offshore wind. We believe that a coordinated approach to network development and a framework that supports timely cost-effective investment in the sector are especially critical if offshore wind is to meet the cost reduction targets described in DECC's Renewables Roadmap. They are also essential in supporting the development of a sustainable, cost effective supply chain.

We previously contributed to Ofgem's ITPR consulation (146/12). In our response we highlighted:

1. The importance of a coordinated approach to offshore transmission in developing a robust, cost effective supply chain;
2. The value of considering wider system configuration in achieving an optimised design. It will improve maintainability and drive research and development. A whole system approach includes consideration of standardisation for the next generation of HVDC assets;
3. That the regulatory regime should recognise risk is not uniform across the industry and in doing so provide an appropriate mechanism to reflect varying levels of risk encountered by different investments;
4. The importance of alignment with the European transmission network given that in future greater interconnection with the mainland is likely.

General Comments

Customers benefit from prudent Anticipatory Investment (AI) and should take their share of risk

We are convinced that it is in the interests of electricity customers that they take AI risk on some parts of the network. The outcome for this consultation needs to be a framework which supports prudent AI and, where necessary, that customers take on some risk in order to benefit from a more efficient overall network.

There is precedent for customers taking AI risk onshore. The incumbent TO makes a cost benefit case to Ofgem for approval of the investment. Offshore no such arrangement exists and to date any anticipatory investment has been entirely at the risk of, and fully secured by, generation developers.

The challenge is to be able to take account of likely - but not certain - future generation in designing the network, then to build that network in stages that are efficient. This is more efficient than only building those elements that can be fully secured by generators at a point in time and hence ending up with a less integrated network.

The scale of investment in even a single offshore transmission link means that separate generation projects require separate financing. It is not realistic for investors in one phase of an offshore zone to

take on the full risk and raise the additional capital required to make provision for a future phase that has not yet reached FID, even where the project sponsor is the same. The burden and risk of AI falls on the first project, yet the future benefit is seen by another. Only electricity customers will see the overall risk and benefit, so there must be a mechanism by which customers can take on some risk to enable AI to happen.

Regulatory neutrality will work against AI

The larger sums required for the enduring phase and Round 3 transmission assets pose a financing challenge. Our customers' balance sheets are under pressure: available capital is limited and a constraining factor, and a neutral treatment of all investment types by Ofgem will work against AI.

A mechanism should exist that rewards developers or generators to support AI where it can be demonstrated that it leads to an overall benefit to the consumer. It is unrealistic to expect generators to take any additional risk or capital commitment in the absence a direct economic benefit in doing so.

The user commitment should be phased, but it should encourage full commitment as early as possible.

We agree there is a clear need for the future user of the AI to underwrite the risk taken on by the first developer as soon as they are able to do so. There should be a phased user commitment that reflects the maturity of the AI proposal and the practical ability for a future developer to provide an assurance of their future intention to connect to an asset. Where it is unreasonable for a developer to provide a full user commitment the balance of commitment should be provided by the consumer.

The user commitment must be enforceable. Ofgem or the NETSO will need to play a role.

The AI portion will need to be underwritten in a way that is both credit-worthy and enforceable. It will also need to be paid for as the asset is constructed. It is unlikely that such an underwriting agreement would be formed directly between financiers or developers in the current financial market: Ofgem should consider introducing a specific mechanism that supports the user commitment, perhaps through the NETSO.

AI will probably increase the costs of financing assets

There is need for OFGEM to revisit its benchmark allowance for finance cost, as introducing AI is likely to increase project risks (especially through the introduction of additional interface risks) for any developer or financier. Further, under the present regime the developer faces a potential shortfall between completion and asset transfer. Given the wider benefit of AI, and the increased complexity of the sale process, we feel that the developer should not be penalised where a transfer delay can be shown to be out of its control.

We welcome the principle of Ofgem review gateways.

We would encourage Ofgem to consider extending the concept of early involvement into non-AI related projects. This would help reduce the OFTO asset transfer valuation risk for developers.

Regulatory controls are required to support shared assets

Further regulatory controls are required to support the delivery of multi-user assets. In particular, commissioning outages may constrain an incumbent generator off the network when a later generator connects to the asset. Also, network maintenance may lead to the network operator being forced to choose between available generators to satisfy a reduced network capacity. A framework needs to be in place that supports this scenario.

HVDC interconnection using multiple manufacturers is unlikely using today's technology.

The process of interconnecting transmission technology can be highly complex, especially in the case of HVDC. At the moment there are fundamental differences between products offered by different HVDC suppliers, meaning that technology is not compatible and interconnection is not practical. It will not benefit the industry to attempt to retrofit standardisation to existing products, and we foresee significant practical challenges in designing an integrated offshore network using today's HVDC technology.

However, future HVDC interconnection may be possible. There is a role for the NETSO.

We support the idea of future interconnection across manufacturers. However, there is likely to be limited willingness for manufacturers to share information with competitors, making overall network modelling difficult. We foresee a role for the NETSO in either coordinating black-box information from multiple suppliers or in developing standards which support interconnection.

GFAI

The existing valuation process presents a barrier to taking on increased scope

The model retains the post-build valuation process that exists in the 'generator build' model. This represents a significant risk to our customers. We would like the GFAI process to include early assessment of design decisions made during optioneering and through the connection application process. We feel it is unlikely that the generator will commit to additional scope without a degree of certainty as to whether the inclusion of that additional scope will be considered efficient.

We support the increased role of the NETSO

Under the proposed regime the role of the NETSO or onshore TO is significantly enhanced in determining the opportunity for anticipatory investment. We support the enhanced role: we feel it will add value. This is particularly pronounced in the case of WNBI, but it also applies to GFAI. The model implies that the NETSO will assume ownership for a proportion of the design risk.

Developer-led WNBI

Ofgem's early involvement in the process

We welcome Ofgem's structured approach to WNBI, and in particular are pleased to see greater Ofgem involvement during the initial design and development of the offshore asset. However, it would be useful if Ofgem could clarify the full extent of the term 'preliminary works' in the context of the new model. Furthermore, it would be useful to have a greater understanding of the nature of the gateways, and the level of effort required in order to pass through them. Where the needs case changes either between or after gateways, we would anticipate that the party responsible for the change would bear its costs.

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Retrofit costs drive the rationale for low regret WNBI

We expect that low regret WNBI that developers might take forward without gateway assessments could include spare GIS bays, export cable J-tubes, space for additional primary equipment, or additional control and protection systems, in particular where these would be installed onshore. This is due to the excessive costs of retrofit works offshore.

Non-developer-led WNBI

NETSO responsibility should increase.

We feel that the NETSO is the natural owner of the design process as it passes through the Ofgem gateways. The NETSO should therefore assume some of the design risk taken on by any subsequent designers, the asset manufacturer, and the OFTO.

We assume that Ofgem does not want to take on wider client responsibilities under this scenario. The NETSO should take responsibility for design assurance and technical compliance during the OFTO build stage. Further, we expect that the NETSO would be responsible for typical client duties, such as contracting and commercial arrangements, for this form of network investment.

Later design changes should be reimbursed by Ofgem.

It is likely that the OFTO will not be involved in the optioneering or preliminary works, and as such it will need reassurance that design changes, or issues with the final usability of the design solution, are attributed to the party that was responsible for the initial design solution and are reimbursed by Ofgem.

No user commitment is obtained under this scenario: as a result, it is not clear where the stranded asset risk lies. We understand that Ofgem would commit to paying a revenue stream to the OFTO without a generator connection to the network.

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We thank Ofgem for the opportunity to comment on the proposals and look forward to playing a role in future.

Yours sincerely,

Ben Bowler

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