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All interested parties

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Date: 26 July 2012

Dear Colleagues

Open letter: Offshore Transmission - update on Coordination policy developments

In March, we published a consultation on potential measures to support efficient network Coordination[1] (the March Consultation), which invited views from stakeholders on our initial proposals to help ensure coordinated networks may be delivered through the competitive offshore transmission regime. Responses to the consultation were positive and there was broad agreement with much of our analysis, with some areas identified for further work. The purpose of this document is to update stakeholders on our progress in relation to:

A. offshore transmission Coordination policy development
B. other offshore transmission policy developments
C. wider policy and regulatory developments

Responses to this letter and continued stakeholder engagement will inform the development of our policy proposals, the detail of which will be published in a full consultation document later in the year.

A. Progress on offshore Coordination policy development since the March Consultation

In March 2012 Ofgem and DECC also published a joint conclusions report[2] (the Joint Report) setting out potential barriers to the coordination of offshore electricity transmission assets, the removal of which could reduce the cost of connecting offshore generation by up to £3.5 billion by 2030. Alongside the Joint Report, Ofgem published the March Consultation which set out initial proposals to help ensure the delivery of coordinated networks through the competitive offshore transmission regime.

The March Consultation invited views on how to overcome two of the key barriers identified by the Joint Report; in particular, it considered 1) improvements to the network planning process and 2) a proposed approach to investment in offshore transmission infrastructure required to enable Coordination. This letter provides an update on our work in these areas and invites views on some of the issues raised in response to the consultation.

A summary of consultation responses is included in Annex 2. Full responses can be found on our website.[3]

[1] Coordination and other key terms are defined in Annex 3.
[2] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=9&refer=Networks/offtrans/pdc/cdr/2012
[3] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=12&refer=Networks/offtrans/pdc/cdr/2012

1. Improvements to the network planning process

The March Consultation considered whether improvements to the system planning process would better facilitate Coordination. In particular, it sought views on if and how changes should be made to system planning documents and how investment in coordinated infrastructure should be identified.

Planning documents

The March Consultation considered whether current planning documents were fit for purpose or needed reform. We identified ways in which the Offshore Development Information Statement (ODIS)[4], prepared by the National Electricity Transmission System Operator (NETSO), could change to help developers[5] make more informed investment decisions. These included the proposal that network planning documents should allow for a more holistic view of long term network planning across onshore and offshore needs, as well as improving the coverage of cross-border developments.

The NETSO has recently consulted on proposed changes to existing network planning documents[6] and proposed to amalgamate the ODIS and the Seven Year Statement (SYS) in order to provide a more joined-up picture across onshore and offshore networks. Ofgem will continue to engage with the NETSO and monitor the NETSO's policy development of an amalgamated document, to ensure that the needs of consumers and EU transmission system planning obligations are addressed.

Identification of investment needed to support efficient Coordination

The March Consultation outlined some key areas for consideration to enable effective system planning, with particular regard to the connection offer process. Consultation responses highlighted that this process may not be capable of capturing all necessary investment to support Coordination, particularly where such investment is not linked to a particular project or offer. We recognise this and will conduct further work on whether or not the NETSO or TOs could propose and take forward pre-construction works that would have wider network benefits (see investment category three, below, for further detail).

Our March Consultation outlined the current role of the NETSO and asked whether the NETSO needs further powers to support the development of an efficient network.

Feedback generally agreed that the NETSO should take a greater role in system planning, with recognition that the NETSO has already been identifying where Coordination would be beneficial when making connection offers. In progressing our work on coordinated system planning in the offshore context we will work closely with colleagues across Ofgem to ensure compatibility with system planning across the National Electricity System (NETS) (see text on our ITPR project below for further detail).

Respondents raised two potential issues where **we would welcome any further views** on the extent to which these could pose constraints:

- The availability of information around connection offers - due to confidentiality around connection requests from other parties in the area, some respondents have noted potential limitations in the information available to help developers plan and coordinate works and assess connection offers that include elements that go beyond developers' own needs.

[4] http://www.nationalgrid.com/uk/Electricity/OffshoreTransmission/ODIS/
[5] Throughout this document, "developers" refers to "developers of offshore generation assets". Such parties may or may not hold a generation licence.
[6] http://www.nationalgrid.com/NR/rdonlyres/9FAEE652-E034-451E-852A-874C0A8B0F6A/52997/ETYSConsultationdocument.pdf

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- The 90 day period for making or accepting connection offers - a number of respondents suggested that this may not be long enough for some more complex offers. At present the connection offer process includes some flexibility in that National Grid can request an extension to this 90 period if they feel that the time allowed is not adequate.

2. Anticipatory investment (AI) and investment driven by wider network benefits

Our March Consultation sought to set out two categories of AI and asked stakeholders whether or not they agreed that these captured the types of investment in offshore transmission infrastructure which might be needed to support Coordination.

Consultation responses and policy development since the March Consultation have suggested the need to further evolve how we treat investment driven by wider network benefits. As a result, it may be appropriate to consider investment driven by wider network benefits under two separate categories. Further explanation, including some illustrative examples for each of the potential categories listed below can be found in Annex 1. It is expected that there are potential benefits to consumers from each of these categories of investment, as identified in the TNEI and Redpoint reports published last year.[7]

For each of these categories, the required investment does not solely relate to the construction of oversized or additional offshore transmission assets. There is also potential need for some additional activity at the pre-construction[8] stage to keep design options open and allow more time to establish what assets are required to contribute to the most efficient development of the network.

Investment Category 1 - Offshore generator focused AI[9] *- investment to support more efficient connections for later phases of offshore generation.*

We expect such AI to support the later connection of specific phases of offshore generation, and would involve either a single or multiple developers. In developing our proposals for the treatment of this type of investment, we are undertaking further work to consider:

- The potential for guidance on our approach in undertaking our assessment of costs[10] for an asset that includes this type of AI to be used instead of the option of providing an upfront Ofgem assessment discussed in paragraphs 3.29 to 3.35 of the March Consultation. The purpose of such guidance would be to provide greater clarity for developers on how such AI will be treated under the offshore tender process.

- The allocation of costs and risks of such AI between generators and consumers given by current charging arrangements, and whether this is appropriate and in the interest of consumers. We note that at present the lack of a framework for user commitment between developers means that alternative arrangements may be required to allocate risks if different parties are involved under a Generator build option, and that there may be challenges to relying solely on commercial arrangements between parties.

- Given these arrangements, how different options for treating this type of AI in our assessment of costs could impact on consumers' exposure to stranding risk.

[7] http://www.ofgem.gov.uk/Networks/offtrans/pdc/pwg/OTCP/reports/Pages/reports.aspx
[8] As defined in the recent Enduring Consultation: http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=45&refer=Networks/offtrans/pdc/cdr/2012
[9] Investment in this case would be 'anticipatory' because it is focussed on early investment to allow for future coordination of assets beyond the immediate need.
[10] As part of the tender process we undertake an assessment of costs to inform the asset transfer value when it passes from the developer to the OFTO, either ahead of or following construction depending on whether the generator chooses OFTO or Generator build.

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Investment Category 2 – Wider network benefits investment undertaken by a developer – *investment in transmission assets which is driven by wider network benefits and which is identified in the connection offer of a specific developer. These works go beyond the investment needed by a single developer and aim to substitute for network reinforcement, with the developer undertaking pre-construction and (under a Generator build option) construction works for wider benefit assets, or opting for OFTO-build at this stage.*

In developing our proposals for this type of investment, we are undertaking further work to consider:

- The form and process for providing any upfront Ofgem assessment of whether it is economic and efficient for the scope of the assets to provide wider network benefits, looking to draw relevant learning from the onshore Strategic Wider Works (SWW) approach.

- Whether there are appropriate incentives for developers to undertake the construction of all forms of assets that are driven by wider network benefits, as discussed in paragraph 3.59 of the March Consultation.

- Whether there is scope for options that do not require an upfront Ofgem assessment while still providing sufficient protection for consumers.

We also recognise the importance of the TNUoS and user commitment arrangements for this type of asset and welcome work being undertaken by National Grid Electricity Transmission (NGET) to ensure that these regimes are effective for coordinated offshore arrangements (discussed further in the Update on wider policy and regulatory development section below). In addition, we note the importance of the Security and Quality of Supply Standards (SQSS) in providing the correct design framework for assets driven by wider network benefits. Further consideration may be needed as to whether the current standards and existing modification processes will provide an adequate framework for coordinated offshore designs.

Investment Category 3 - Wider network benefits investment not taken forward by a developer *- investment in transmission assets which is driven by wider network benefits but which is not related to a specific connection offer, or where a developer(s) does not have the appetite to undertake the pre-construction or construction works.*

We proposed in the March Consultation a potential new route for existing TOs (including OFTOs) to propose where offshore wider works may be needed. The model envisaged that TOs would be able to submit proposals in order to obtain funding for the pre-construction activities required to develop such assets. These outputs would then feed into an Ofgem tender exercise to identify an OFTO to construct and own the assets.

A number of respondents to the March Consultation showed support for this model, with developers suggesting that they would be unlikely to have the necessary appetite to undertake pre-construction or build some assets driven by wider network benefits where it would not form a key part of connecting their offshore generation project. A number of stakeholders also provided views on this possible model in their responses to the latest consultation of the development of the enduring offshore tender regime, which closed last week. OFTOs noted the importance of ensuring that there could still be a fair and competitive OFTO-build tender where TOs would be undertaking pre-construction works for an asset.

Since the March Consultation, NGET has submitted to us a request for funding through the onshore price control mechanism, RIIO, to undertake some pre-construction activities to

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develop potential assets with wider network benefits off the East Coast of England[11]. We are considering this proposal alongside our assessment of NGET's RIIO-T1 business case, as well as alongside our development of the framework for this type of investment under the offshore regime.

In light of consultation responses and these recent developments, we are undertaking further work across a number of areas in relation to which **we would welcome the views** of stakeholders:

- Whether the NETSO could have a role in identifying and undertaking the pre-construction works, instead of or in addition to TOs having such a role.
- The process for proposals for this type of work to be put forward by third parties, including any need for consultation/publication to ensure interested parties are adequately engaged in the process.
- What outputs might be required from a third party's pre-construction activities on this type of asset, such as necessary surveys, wayleaves, consents and a tender specification.
- What further obligations might be necessary to ensure a fair and competitive tender, such as:
    - Any requirement for business separation between the third party and a related organisation intending to participate in a competitive tender process.
    - The need for certain assets to be transferred across from the third party to the successful bidder.

Stakeholders' views on these issues will inform our publication later this year.

B. Update on offshore transmission

Our work on offshore transmission Coordination policy forms part of broader package of work being taken forward by ourselves as well as other work being progressed by Government and the industry. This work is necessary to ensure that the policy, regulatory and industry frameworks for electricity transmission continue to be effective in efficiently delivering the substantial investments required in transmission, supporting significant growth in low carbon generation over the coming decades while protecting the interests of consumers. In particular, the growth in offshore wind generation potential, emergence of new transmission technologies and greater possible scope for network integration with other European countries means that there is a need to consider whether or not the regulatory framework needs to evolve across a number of areas. Key work areas to achieve this are set out below.

In considering changes that are required to address these challenges, we recognise the strong need to maintain investor confidence in the transmission regimes and provide a robust framework for investment. We will therefore aim to develop and implement any changes in a way that does not undermine investor confidence, and look to build on success to date of the offshore regime in attracting investors.

Progress is also being made in relation to other potential barriers set out in March in the joint DECC-Ofgem report. DECC intend to publish a summary of progress across all six areas around the end of August (six months after publication of the report).

[11] http://www.nationalgrid.com/NR/rdonlyres/66DE9A8F-9D8D-4629-8D9B-39A19A55772A/49798/NGETdetailedplansecure1.pdf

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The framework for running tender exercises under the enduring regime

Over the course of the past year we have undertaken substantial consultation on the framework for running tender exercises under the enduring offshore regime. In particular, we have set out further details on how the OFTO build option will work, put forward enhancements to the Generator build option, and considered how tender exercises would be run for phased or staged projects. We are planning to publish draft tender regulations reflecting these proposals in early autumn 2012.

The Offshore regime is expected to deliver around £2.4 billion of investment in offshore transmission assets through our transitional tender exercises alone. We have already granted licences for offshore transmission assets worth over £350 million, including our fifth licence grant which took place earlier this month. A recent report by the National Audit Office (NAO)[12], which includes an evaluation of the design of the licensing regime and the outcomes of the first competitive licence grants, recognised that DECC and the Ofgem "*have been innovative in creating a new competitive market for the ownership and maintenance of offshore transmission assets"* and that the Offshore regime *"has already delivered some benefits and has the potential to deliver more*". We will continue to seek to ensure that these benefits are captured going forwards, building upon lessons learnt during the development of the regime and taking into account NAO recommendations.

One area of particular relevance to offshore Coordination is our approach to the assessment of developers' costs when determining the value of assets to be transferred to an OFTO as part of a tender exercise. In our interactions with the stakeholder community, we have already set out the principles that we have applied to assessment of costs to date in reports on our website[13], but recognise that these may need to be supplemented to reflect the additional issues associated with the types of investment needed to allow for efficient network Coordination. We intend to publish guidance on the cost assessment principles and approach later this year.

We have also been working closely with DECC on developing a solution which balances the preference for developers to be able to commission their transmission assets, under the Generator build option, with the need for ensuring that developers transfer the transmission assets to the OFTO in a timely manner. DECC is proposing to address this through a change to the Electricity Act 1989, and have included a clause in the draft Energy Bill that has been published for pre-legislative scrutiny.

On 10 July a joint Ofgem/ DECC stakeholder briefing event sought industry input on the draft clause. The response at this event was positive with stakeholders welcoming the greater certainty that the clause will provide for how Generator build commissioning will work under the enduring regime. DECC received useful feedback that will be considered in undertaking further work towards the Energy Bill being laid in Parliament later this year.

C. Update on wider policy and regulatory developments

The Integrated Transmission Planning and Regulation (ITPR) Project

We published an open letter in March launching the ITPR project[14]. This project will aim to build on the Coordination work by taking a holistic view across onshore, offshore and cross-border developments. In particular, it will consider whether the system planning arrangements and interactions between the current onshore, offshore and interconnector regulatory regimes are appropriate in order to effectively deliver an integrated transmission network. Where issues identified are specific to offshore we will be looking to address them

[12] http://www.nao.org.uk/publications/1213/offshore_electricity.aspx
[13] http://www.ofgem.gov.uk/Networks/offtrans/rott/Pages/rott.aspx
[14] http://www.ofgem.gov.uk/Europe/Documents1/ITPR%20Open%20Letter%20-%20Final%20version%20-%2023%20March%202012.pdf

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as part of our work on Coordination, while ensuring that they remain compatible with the wider system approach. Where we identify broader or longer-term issues that apply across the entire transmission system we will examine those through the ITPR project to ensure an integrated solution is developed to meet the needs of the wider transmission system.

Onshore transmission investment

We have developed a new regulatory framework, known as the RIIO model (revenue = incentives + innovation + outputs) to help promote smarter onshore gas and electricity networks for a low carbon future while delivering value for money for consumers. We have now published the headlines from our Initial Proposals for transmission companies over the first price control period (RIIO-T1) and will be publishing further details shortly[15].

Our RIIO-T1 proposals for NGET recognise that there may be a need to provide funding for NGET to undertake pre-construction activities driven by wider network benefits. We will consider this alongside our development of the framework for investment in offshore assets that provide wider network benefits, and also in relation to our assessment of NGET's specific proposal for funding to undertake some pre-construction activities for potential works off the East Coast. We will work to ensure consistency between our RIIO-T1 funding proposals and ongoing offshore coordination policy development.

As part of the RIIO-T1 framework, we are developing proposals for increasing third party involvement in onshore transmission developments. We are currently considering further details on our approach to introducing third party access to the onshore transmission regime. These will look to learn from the success of the approach to competition in offshore transmission.

Charging and user commitment

Ofgem has completed a Significant Code Review (SCR) of transmission charging arrangements under Project TransmiT. Its aim was to ensure that appropriate arrangements are in place to facilitate the timely move to a low carbon energy sector whilst continuing to provide safe, secure, high quality network services at value for money to existing and future consumers. This resulted in the Authority issuing a direction to NGET to develop improvements to the charging arrangements to better reflect the changing electricity generation mix and the impact different users have on transmission investment decisions. Alongside this, industry will also need to progress changes to reflect impending issues such as the development of potential island connections and High Voltage Direct Current (HVDC) technology.

At a more detailed level, there is a need for review of the charging arrangements for offshore transmission given that the scope for integrated offshore networks was not envisaged when the current arrangements were developed. NGET published a high-level note in January setting out some principles for future developments[16], and has now commenced a workgroup to develop GB transmission charging arrangements (TNUoS) for integrated onshore-offshore transmission networks. The first session of this group was held in June. Whilst the group has been convened at the request of NGET, and has no formal recognition under the Connection and Use of System Code (CUSC), it is aiming to develop robust options for a potential future modification proposal. We welcome this initiative and will continue to work with NGET on this issue.

There have also recently been industry-led changes to the user commitment arrangements through CUSC Modification Proposal 192. When a transmission owner is undertaking investments to accommodate the need of generators, the new arrangements will apply to both onshore and offshore generation in order to financially secure the works being undertaken on their behalf. The arrangements also look to apply the separation between

[15] http://www.ofgem.gov.uk/Networks/Trans/PriceControls/RIIO-T1/ConRes/Documents1/NG_IP_Letter.pdf
[16] www.nationalgrid.com/uk/Electricity/OffshoreTransmission/OffshoreApproach

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wider and local works - already applied onshore - to offshore. This may ultimately support the development of more coordinated offshore networks.

Ofgem approved the CUSC proposal in March 2012. The new arrangements will be in place from April 2013 and NGET is now in the process of implementing them and developing guidance for how the arrangements will apply in the offshore context. Further CUSC modifications may be proposed as integrated offshore-onshore networks develop.

Next steps

We intend to take forward the development of our policy proposals over the summer and we are keen to engage further with stakeholders throughout this process. As part of this, we are open to bilateral meetings and would encourage interested parties to contact us through the email address below.

Please provide us with your views on the issues highlighted above by 20 September 2012 by emailing your responses to Offshore.Coordination@ofgem.gov.uk. If you have any further comments or queries on Coordination, again please contact us at the above address in the first instance or call Jon Parker on 0207 901 7408.

For further information on Offshore Transmission please visit our webpage[17], if you have further queries or want to join our stakeholder community, please email: offshore@ofgem.gov.uk

Martin Crouch
Director, Offshore Transmission

[17] http://www.ofgem.gov.uk/NETWORKS/OFFTRANS/Pages/Offshoretransmission.aspx

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Annex 1 – Outline of potential framework for investment needed to support Coordination

Types of investment

As set out in the main body of this open letter, the responses to the March Consultation and subsequent policy analysis suggest the need to further examine how we view investment driven by wider network benefits. Broadly speaking, such investment may be categorised under the following three categories:

Investment Category 1 - Offshore generator focused AI - investment to support more efficient connections for later phases of offshore generation. Possible examples of this type of AI are set out of page 19 of our March Consultation. This generator focused AI may involve either a single or multiple developers.

Investment Category 2 - Wider benefits investment undertaken by a developer - investment in transmission assets which is driven by wider network benefits and which is identified in the connection offer of a specific developer. These works go beyond those needs of a single developer and aim to substitute for onshore network reinforcement, with the developer undertaking pre-construction and (under a Generator-build option) construction works or opting for OFTO-build at this stage.

Investment Category 3 - Wider benefits investment not taken forward by a developer - investment in transmission assets which are driven by wider network benefits but which is not related to a specific connection offer, or where a developer(s) does not have the appetite to undertake either the pre-construction or construction works.

Illustrative examples

The diagrams below are for illustrative purposes only and they do not prejudge any future development of policy proposals on phasing under the Enduring regime.

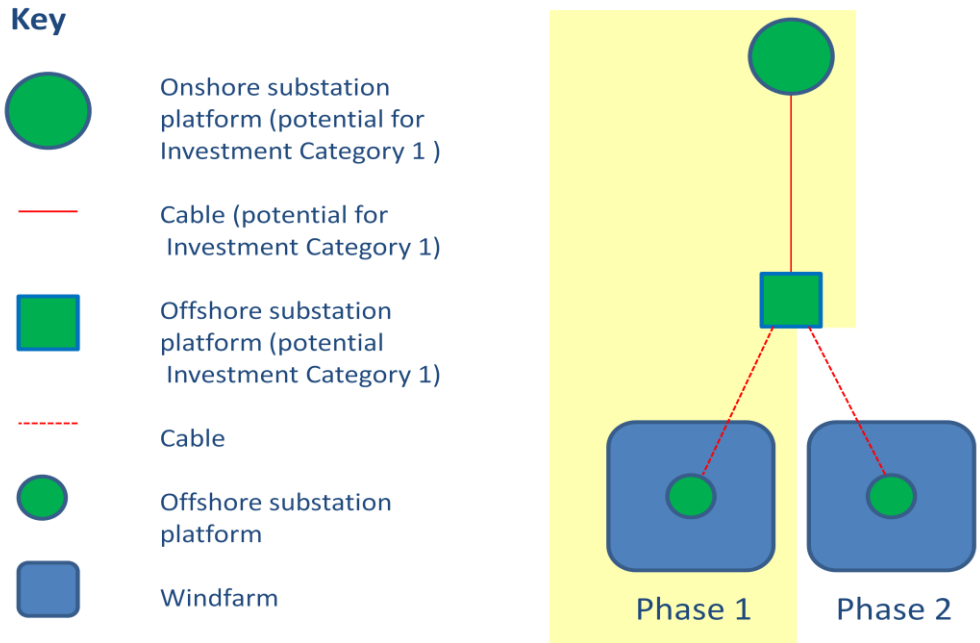

Diagram 1 - *Example of generator focused AI.*

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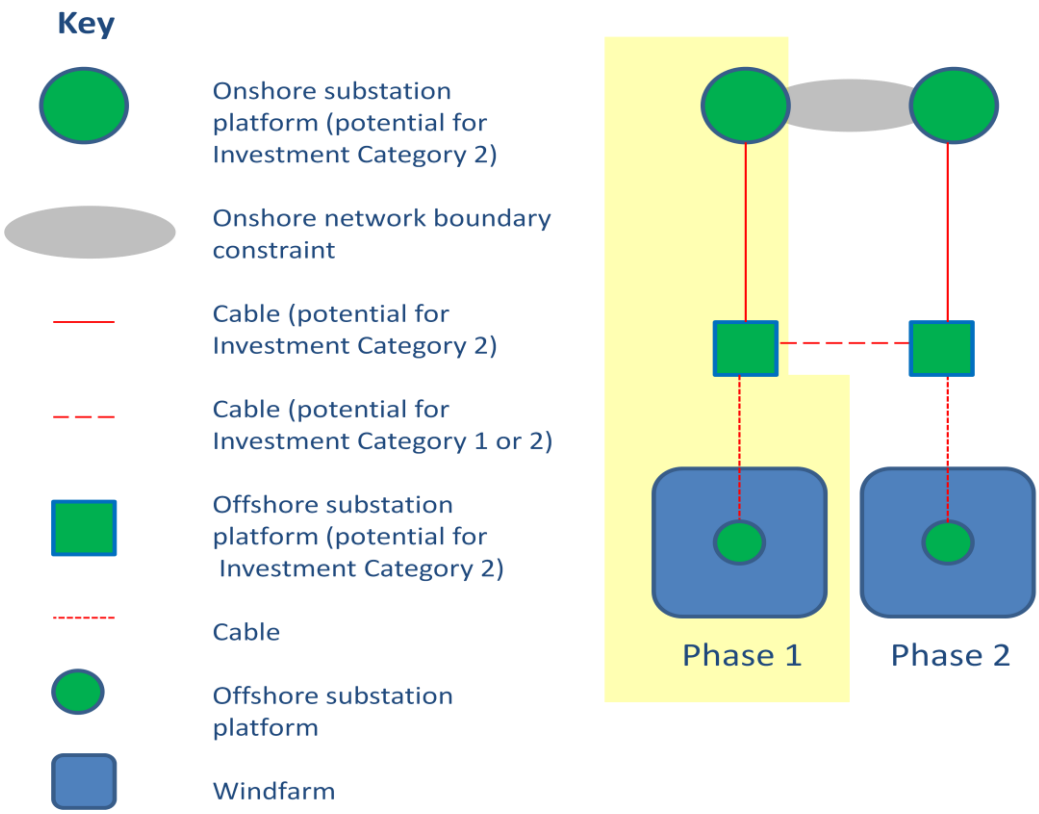

Diagram 2 – Example of wider network benefits investment

Potential roles of different parties

Our March Consultation document set out different options for who might undertake pre-construction and construction works for different types of investment, where it is beyond the needs of a single phase of offshore generation. The table below summarises these proposals and applies them to the three types of investment identified above.

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Type of investment	**Pre-construction works** *(may include undertaking impact assessments and stakeholder consultations, engineering surveys, high level engineering design and obtaining consents)*	**Construction works**
Offshore generator focused AI	Developer might undertake some additional pre-construction activities to develop options to allow for the efficient connection of later phases of offshore generation.	Undertaken by developer under Generator build option or OFTO under OFTO build option. Possible examples may include building substations or cables that are oversized relative to the immediate needs of a single generation phase to allow for the connection of later phases of offshore generation.
Wider benefits investment undertaken by a developer	Developer might undertake some additional pre-construction activities to develop options for the potential construction of assets that would have wider network benefits.	Undertaken by developer under Generator build option or OFTO under OFTO build option. Possible examples may include oversizing substations or platforms to allow future connection of cables to interconnect offshore platforms, with the aim of providing a route for power to flow through offshore links to different points on the onshore network.
Wider benefits investment not taken forward by a developer	Existing onshore TO(s) or OFTO, or party selected through Ofgem tender, may need to undertake some additional pre-construction activities to develop options for the potential construction of assets that would have wider network benefits. We will be considering further whether such pre-construction activities might be more aligned with the role of the NETSO or a TO.	Undertaken by OFTO, following an OFTO-build tender. Possible examples may include building interconnections between offshore platforms to provide a route for power to flow through offshore links to different points on the onshore network.

Table 1: Summary of the potential roles of different parties, as set out in our March Consultation

Annex 2 - Summary of responses to our Consultation on potential measures to support efficient network coordination, March 2012

Introduction

Our March Consultation on potential measures to support efficient network coordination closed on 26 April 2012. We gave respondents the opportunity to comment on our initial proposals to ensure coordinated networks may be delivered through the competitive offshore transmission regime. Potential measures included improvements to the network planning process and a proposed approach to funding anticipatory investment in offshore transmission infrastructure.

This annex provides an overview of the key themes arising from the 25 submissions received in response to the March Consultation. This summary does not attempt to give a detailed account of all opinions raised in response to each consultation question. Those interested in individual responses, or who wish to read further details on responses to questions which may not be summarised within this annex, should refer to the original stakeholder submissions. Copies of all non-confidential responses are available on the Ofgem website[18].

Summaries of responses in respect to each of the themes of the March Consultation document are set out below.

Planning an efficient, economic and coordinated network

The role of the GB National Electricity Transmission System Operator

Several responses indicated that, in certain circumstances, there is scope for the current connection offer process to enable the design of an efficient and coordinated network. However, in general responses suggested that the connection offer process, as a reactive process, may not always support coordinated design solutions.

Responses recognised that the NETSO already holds an important role in developing an efficient network. However, there was a mixed response as to whether the NETSO already has appropriate obligations to undertake this role. Some responses indicated that a clarification of the current role of NETSO in system planning and Coordination would assist in commenting as to whether further powers are required

NGET suggested that the extension of its role as NETSO could be in the best interest of consumers. However, several responses indicated that any enhancement of the NETSO role would need to be assessed against any potential conflicts of interest.

Network planning documents

Responses generally agreed with the proposed objectives and regulatory design principles for a reformed network planning document. Responses supported the principle of wider stakeholder consultation and some responses suggested that the document:

- Make a clear delineation between analysis based on contracted capacity and that based on network scenarios;
- Take into account interconnector development; and
- Should not be a blueprint for a future network.

[18]http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=12&refer=Networks/offtrans/pdc/cdr/2012

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Anticipatory investment

Types of AI

In general, responses stated that our initial proposal for a definition of AI seemed appropriate. However, responses suggested this definition should retain an element of flexibility and that our definition of pre-construction works could include a greater scope of activities.

Design principles for an approach to AI

Responses broadly agreed with our potential high-level objectives and regulatory design principles to inform an approach to AI. One response believed our objectives did not go far enough in terms of socialising any potential additional costs and/or liabilities associated with AI.

Taking into account all responses, it appears that all of our proposed objectives are considered to be important. Two responses believed that the objective to retain the benefits of competition should not be pursued at the expense of other objectives (including those which competition is intended to deliver).

Responses also suggested various further principles and objectives, these include:

- Facilitate the production and consumption of renewable energy to meet Government energy policy targets;
- Provide a flexible regulatory framework which caters for changes in circumstances over time; and
- Minimise negative environmental impacts

Identification of AI

Responses suggested that the bilateral connection offer process may be an appropriate platform for identifying AI in certain instances. However, responses broadly indicated that the current connection offer process may not be appropriate as a platform for identifying AI which is not associated with contracted demand.

A number of respondents showed an appetite for AI to be identified through a more strategic process outside of the connection offer process.

Several respondents indicated that changes to industry codes and licences would be required to further enable the connection offer process to identify AI. In particular, many respondents highlighted that in some instances the current timescales for issuing and accepting offers may be too short.

Some responses suggested that the potential risks associated with one developer being dependent on another developer are a key barrier to cooperation in connection offers.

One response stated that the absence of incentives or obligations for developers or OFTOs to consider wider network users, or coordinate wider than for a specific project/ zone under the current offshore framework may also be a barrier to cooperation in connection offers.

The March Consultation set out that developers, the NETSO, and existing onshore TOs and OFTOs (as appropriate) have an important role in identifying opportunities for AI. The majority of respondents agreed with this statement.

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Some responses suggested further parties could play a role in identifying AI, these included: parties involved with the development of interconnectors; European agencies and bodies; and potentially wider stakeholders through forums such as the ENSG.

Design life of assets that have wider network benefits

Consultation responses broadly suggested that early clarity as to the intended lifetime of transmission assets with wider network benefits was important to ensure that such assets are designed, constructed and operated for an appropriate period of time.

We received mixed responses as to whether a longer revenue stream for assets that have wider network benefits could create better value for consumers. Some respondents saw potential benefits, whilst recognising that the scale of benefits may differ between scenarios and that there may be complexities associated with designing, operating and maintaining interdependent transmission assets which are subject to varying TRS lengths. In contrast, several responses believed that a potential for increased risks and uncertainties could offset any benefits attributable to a longer TRS.

Responses showed an interest in further information on possible options for operating transmission assets beyond the 20 year TRS.

Funding of AI

Responses highlighted that further development of Transmission Network Use of System (TNUoS) charging and user commitment arrangements for integrated offshore transmission networks is a key factor in supporting Coordination. There was broad agreement that TNUoS charging and user commitment arrangements for AI in offshore transmission infrastructure will play an important role in facilitating the development of a coordinated offshore transmission network.

Several responses suggested that the high-level TNUoS charging and user commitment principles set out in the March Consultation were consistent with cost reflective charging principles and were reasonable. However, one response stated that there needs to be an awareness of the limits to what a developer is able to fund or underwrite.

Some responses suggested that consumers receive some level of direct benefits from both AI which has wider network benefits and AI focused on the connection of offshore generation, and that this should be reflected through an appropriate distribution of risk.

Several responses - directly or indirectly - referred to three areas of transmission charging which require further work, as set out in NGET's January publication on Charging for integrated onshore-offshore transmission[19]:

- Revenue recovery (including appropriate asset life for integrated transmission assets);
- Transmission technology (including the addition of DC circuits); and
- SQSS compliance (including varying levels of system redundancy)

Further, responses showed particular interest in how local and wider use assets, and charging zones, may be defined for integrated offshore assets.

[19] http://www.nationalgrid.com/uk/Electricity/OffshoreTransmission/OffshoreApproach/

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Potential Ofgem assessment stages

Responses broadly welcomed the principle of earlier clarity on how including AI within the scope of pre-construction and construction works might be treated when Ofgem determines the transfer value of tender assets.

Our March Consultation proposed that Ofgem may potentially run two assessment stages, ahead of pre-construction and construction activities. Responses broadly agreed that a two-stage gateway assessment is appropriate. Several responses stated that in reality pre-construction and construction activities may overlap and that any assessment process should take this into account.
One response thought that it would be more efficient for Ofgem to publish clear and transparent criteria against which Ofgem would determine AI costs during cost assessment, rather than a potential assessment process.

Our question on whether gateways should be optional for developers - where developers are undertaking subsequent works - was not broadly answered and those responses received were mixed.

Our March Consultation proposed three high-level criteria for use by Ofgem when considering whether AI would be economic and efficient in a potential assessment process. Respondents broadly agreed with these criteria, as well as suggesting several further criteria. In particular, several responses indicated that it may be appropriate for assessment criteria:

- To be consistent with criteria applied to onshore transmission assets; and
- To take into account wider Government energy policy objectives.

In general, responses highlighted that possible Ofgem gateways for pre-construction and construction works should be as early and as flexible as possible.

We received mixed responses as to whether the first gateway should take place before or after the connection offer process. One respondent showed concern should a scenario occur where an AI design is approved at the connection offer stage, but then blocked at the pre-construction gateway.

Several respondents suggested that it would be appropriate for the second gateway to take place during the consenting process, stating that this assessment may need to be earlier in some instances in order to take into account HVDC technology procurement exercises. Several responses suggested that these gateways could be developer triggered.

Many responses showed an appetite for possible Ofgem gateways to be supplemented by regular dialogue between Ofgem and developers, with the aim of minimising any potential risk of delays to the tender process.

Our March Consultation set out four areas where Ofgem might provide guidance on how an AI process would work. There was general support for the transparency of process that guidance facilitates, and recognition that guidance should evolve as experience of the assessment process is gained.

Responses also suggested various additional areas that guidance could cover. These include:

- Conditions for entry into the assessment process;
- Key environmental factors which inform the AI needs case;
- How Ofgem would view connection agreements that do not involve AI;

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- Details of any potential cost benefit model or economic and efficient test used by Ofgem;

- How findings at an interim assessment stage will be treated at the final assessment, including what factors may lead to a change in decision between assessment stages;

- Examples or scenarios of AI, which could be derived from up to date case studies; and

- General principles of cost assessment.

Our March Consultation sought views as to whether there should be any additional requirements for parties to share information with Ofgem, with the aim of streamlining any Ofgem assessment of AI. Respondents suggested additional requirements may be appropriate where AI involves multiple developers.

Several responses noted that it is in the best interests of parties to share information with Ofgem when appropriate. There was recognition that the type and level of information which could be useful is likely to vary from project to project and that there are likely to be issues around commercial confidentiality when developing the AI needs case, which will need to be managed.

Who undertakes AI driven by wider network benefits?

Regarding assets where AI would be driven by wider network benefits, respondents expressed a greater interest in options 2 and 3, as set out in our March Consultation.

> Option 2: Fund existing onshore transmission operator (TO) or OFTO (or TOs if, for example, the asset crosses different TOs' geographical boundaries) in the area to undertake the pre-construction works.
>
> Option 3: Continue to give developers the choice of undertaking pre-construction, but with the local TO taking on the activity should the developer prefer not to take on the responsibility.

Responses to whether the Generator build option remains attractive for wider network benefit assets, and whether additional incentives are required to achieve this, were mixed.

In general, developers were of the view that options should remain open, with projects considered on a case by case basis, dependent on various factors including: the interaction between wider assets and the generators' routes to market; the size of the assets; and the management of liabilities. Most developers responded that wider network benefit assets should not only be open to OFTO build.

Several responses suggested that if a developer's generation assets are highly dependent on the wider network benefit assets, then there may be sufficient incentives for developers to undertake these works (to ensure timely connection of their generation).

Where a developer's generation assets are not highly dependent on the wider network benefit transmission assets, most respondents were of the view that there were few incentives for developers to undertake these works. A number of respondents suggested possible incentives, including:

- Developers be indemnified for the costs of undertaking these works;

- Developers receive a guarantee of payment associated with the activities in undertaking these works; and

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- Developers should be rewarded for taking on the extra risks associated with carrying out these works.

OFTOs and several other respondents stated that the main focus for assets with significant wider network benefits should be on OFTO build, given that developers may not be best placed, or have appropriate incentives to undertake them. Additionally there was some discussion as to whether an early OFTO build option may be appropriate for this type of works. However, respondents also raised concerns around these models, including:

- Consideration should be given to the business structure of the OFTO. Where the OFTO has been formed as a separate legal entity for the sole intention of holding the OFTO licence then it may not be able to meet the financial obligations that would be associated with issues that delay delivery;

- Current experience in pre-construction or construction works within the OFTO community is limited; and

  Existing OFTOs have previously indicated an unwillingness to carry out such work under the enduring OFTO regime. This informed Ofgem's decision to focus on the Generator build and late OFTO build options, as opposed to the early OFTO build option.

Several respondents were of the opinion that TOs were best placed to undertake these works, given their wider network view and ability to manage the risk associated with AI.

A number of respondents commented that consenting activities should not form part of the pre-construction works and should remain with the party who will construct or own the asset.

***Distinction between offshore generator focused and wider network benefit* assets**

Regarding the distinction between offshore generator focused and wider network benefit assets, approximately half the respondents considered this was an appropriate distinction to make.

Methods put forward by respondents to distinguish between such asset types included: distinction to be identified by an appropriate design authority; distinction to be made through the SQSS, as is the case for local and wider works under the onshore Connect and Manage regime; or distinction to be driven by who has deemed the Coordination measure to be the best solution. In relation to the use of SQSS, one respondent discussed the need for a review of the SQSS, in order to determine appropriate security standards for offshore coordinated networks.

The other respondents argued that such a distinction was unhelpful. Amongst these responses, there was a general theme that the two types of assets will overlap in many cases, with a particular reference to a dynamic element that AI with wider network benefits might become generator focused AI with the connection of further generation or vice versa.

Several respondents stated that the distinction between offshore generator focused and wider network benefit assets was one of the most important questions raised in the March Consultation.

Treatment of shared assets secured in pre-construction AI

We received a mixed response as to what role commercial contractual arrangements could have in ensuring that pre-construction assets are passed to the relevant party in order that the first developer can recover their costs. Opinion as to the need for and appropriateness of commercial contracts varied depending on:

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- Whether assets were being developed under a Generator or OFTO build option;

- The number of potential parties involved; and

- The extent to which boundaries and interface points are clearly defined, pre-construction works separable, and how the assets are to be grouped for tender exercise(s)

One response suggested that the transfer of risks and liabilities, alongside the transfer of assets, warrants further consideration.

Our question on the impacts of requiring an OFTO to hold assets for developers was largely answered by offshore developers only. The responses we received showed an appetite for AI assets to be transferred to OFTOs.

Responses conveyed uncertainty as to whether these assets would be 'held' by OFTOs or whether the OFTO would receive a revenue stream for the AI. This query formed part of a broader theme in responses: that transferring AI to OFTOs would require amendments and clarification to TNUoS and user commitment arrangements.

Access rights for shared infrastructure

Our question on whether commercial arrangements and industry codes and licences provide sufficient access rights for shared assets received a relatively low response rate. However, responses did highlight that offshore generators should have the same level of access to shared assets as onshore generators.

One response stated that if a generator is building shared transmission assets to which others require access, then that generator should have no influence over the access rights of third party generators.

Responses also suggested further potential issues which may be associated with shared assets, including:

- Impacts on availability levels associated with outages needed to connect additional generation where assets form part of a coordinated design; and

- A need for incentives/penalties on the first developer to keep to its construction programme and not cause delays for later connections, and to deliver fit-for purpose transmission assets.

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Annex 3 – Brief glossary of key terms

Anticipatory investment (AI) – in our March Consultation we proposed that the most appropriate definition for AI in the context of offshore transmission could be "capital expenditure that supports anticipated future network requirements, rather than the immediate needs of a single offshore generation phase".

The March Consultation also set out that the types of investment that might incorporate AI can be broadly split into two categories:

- Investment focused on coordinating the connection of offshore generation
- Investment that is significantly driven by the wider network

Coordination – the development of onshore and offshore transmission networks in a strategic and coordinated manner. This means offshore and onshore development will need to be considered together when looking at network development needs, in order to deliver the most economic and efficient overarching design[20].

Site/zone[21] – the transmission assets within a site or zone licensed by the Crown Estate.

Phase - a grouping of transmission assets to be built out over a period of time, where the grouping is defined by certainty on build out (for example in relation to a Final Investment Decision (FID) and/or key contractual commitments). A phase may include stages.

Stage - transmission assets built out incrementally in a discrete group within a phase.

[20] See http://www.ofgem.gov.uk/Networks/offtrans/pdc/cdr/2012/Documents1/Coordination%20Consultation%2020120301.pdf for further details.

[21] We refer to both sites and zones because enduring tender exercises are likely to be required for transmission assets within both sites (in relation to Crown Estate Round 2 sites, Round 2.5 and Scottish territorial waters), and zones (in relation to Crown Estate Round 3). For further information on sites/zones, phases and stages see http://www.ofgem.gov.uk/Networks/offtrans/pdc/cdr/2012/Documents1/Enduring%20con%20doc%20May%2012.pdf

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