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all gas and electricity customers

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Date: 20 December 2011

Dear colleague,

Preliminary conclusions on the regulatory regime for project NEMO and future subsea electricity interconnector investment

This summer, the GB energy regulator, Ofgem and the Belgian regulator, CREG issued a joint consultation on the principles and design of a new regulatory framework for electricity interconnector investment. The consultation focused on project NEMO, the proposed interconnector between Great Britain and Belgium, as a pilot project. It was published on the 28 June 2011 and closed on the 2 September 2011 and 17 responses were received. On 2 December 2011, Ofgem and CREG published a joint summary of responses to the consultation¹.

The purpose of this letter is to set out our preliminary conclusions on the high level principles and basic cap and floor design for NEMO as well as on development of an enduring regulated regime for electricity interconnector investment in GB. The preliminary conclusions on the principles and basic design for NEMO have been jointly agreed with CREG.

High level principles

1. The regulatory framework will take into account the commercial viability of a project as well as considering the wider benefits efficient levels of interconnection can offer to consumers for example: security of supply, integration of renewable energy sources, competition and market integration across Europe (*This replaces the following principle included in the consultation: Developers should be exposed to the market's valuation of interconnector capacity*)
2. Consumers should be protected from the cost implications of excessive returns or market power that might accrue to interconnector owners,
3. Developers should be able to earn returns that are commensurate with the levels of risk they are exposed to under the regulatory framework,
4. Regulatory treatment of developers should be coordinated between National Regulatory Authorities (NRAs) at either end of the shared asset and
5. (For GB and new interconnector developments) Regulatory treatment should allow third party developers and should be impartial and unbiased between Transmission System Operators (TSOs) and non-TSO developers, existing and future developers

¹ This paper summarises responses under four main areas: 1) high level principles 2) the cap and floor approach 3) design of the cap and floor and 4) process for evaluation of new interconnector investment projects in GB <http://www.ofgem.gov.uk/Europe/Documents1/Summary%20of%20responses%20to%20Consultation.pdf>

These high level principles are intended to encourage consistent evaluation of proposals for new interconnection. Respondents broadly agreed with the principles set out in our June consultation, highlighting the need for developers to retain some exposure to the market value as this will lead to positive incentives to make capacity available. They recognised the need for protecting consumers from the implications of excessive returns and supported the idea that developers should be able to earn returns commensurate to the risk levels they are exposed. They also agreed with our intention to develop a coordinated approach between NRAs for the regulation of cross border assets. This does not necessarily mean that the regulatory framework needs to be identical on both sides of the border but, where it differs it should drive the same behaviour from both parties.

Most importantly, several respondents highlighted the need to recognise in the principles, the wider benefits that interconnection offers to consumers in terms of security of supply, integration of renewables, market integration, competition etc. They noted that assessing future projects only on the basis of market valuation (ie congestion revenues derived from auctioning interconnector capacity) may not be sufficient.

Indeed, for GB, moving from a merchant approach² where the developer bears all the costs of the project to a regulated regime where consumers could potentially be exposed to some of the costs, gives Ofgem an additional responsibility to ensure wider consumer benefits are taken into account when assessing different interconnector proposals. Our aim is to ensure that the price consumers pay is proportionate to the wider benefits they receive from the project. Our amended first principle aims to reflect this important point.

Cap and Floor design for NEMO

The proposed cap and floor approach will be a regulated regime for new interconnector investment. In the consultation we set out a detailed description of how we envisage the mechanism working³ as well as some potential risks associated with the regime and proposed solutions. We also asked for views on the basic design parameters of the regime⁴.

The majority of respondents confirmed their support for a cap and floor regime. They highlighted that one of the interesting features of this approach is that by suitable selection of parameters it is possible to replicate every other approach to interconnector regulation. From the respondents that answered the questions related to the design parameters, they felt they were comprehensive but had diverse views on the appropriate choice of design.

We have analysed stakeholders' views and come up with a basic cap and floor design, illustrated in Table 1 below, which we believe meets the drivers and principles of the regime. A detailed explanation of the choice of each parameter as well as of the open issues (marked in red) is included in Annex 1. There are still some open design questions which we need to explore further before taking a final decision in 2012.

² Ofgem remains open to applications for merchant project developers for exemptions where these meet the relevant legal requirements.

³ Chapter 4:

<http://www.ofgem.gov.uk/Europe/Documents1/Cap%20and%20floor%20regime%20for%20regulation%20of%20new%20subsea%20interconnector%20investment5.pdf>

⁴ Chapter 5:

<http://www.ofgem.gov.uk/Europe/Documents1/Cap%20and%20floor%20regime%20for%20regulation%20of%20new%20subsea%20interconnector%20investment5.pdf>

Table 1

| Length of the regime | What is the C&F levied on? | Performance Assessment | Incentives |
|----------------------|----------------------------|--|--|
| Project Lifetime | Revenues | <ul style="list-style-type: none"> •C&F set ex-ante, one-off; re-opens in exceptional circumstances •Discrete periods •Annual reporting | <ul style="list-style-type: none"> •Capex incentive, during construction phase •Operational incentives |

Note: red=parameter still open, black=parameter finalised

High level cap and floor process for NEMO:

Figure 1

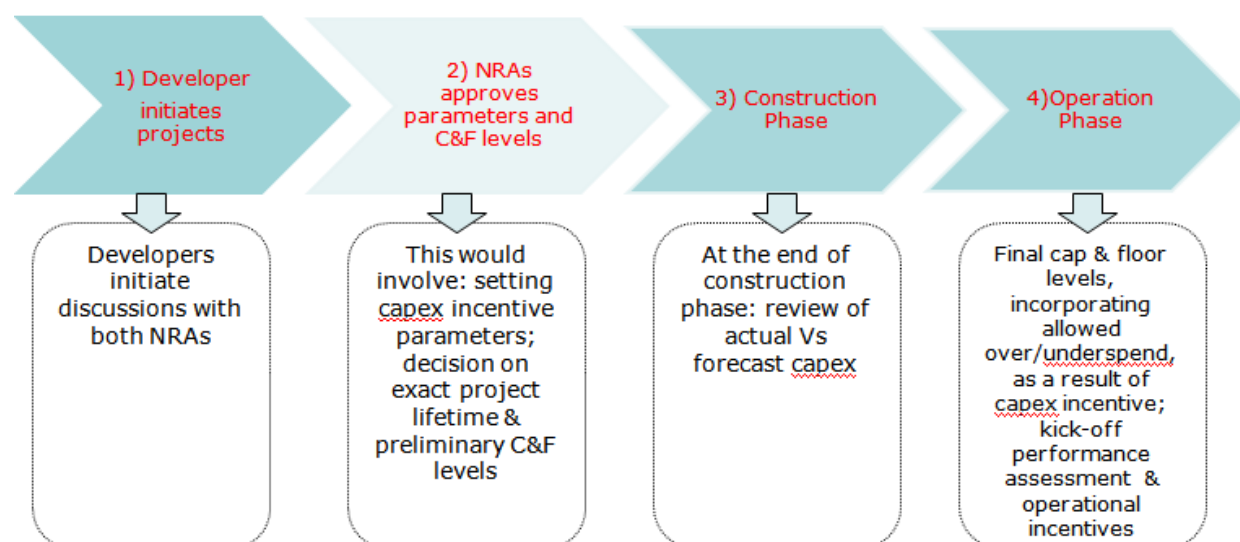


Figure 1 illustrates a high level process proposed for the implementation of the cap and floor for project NEMO which has been jointly agreed with CREG and is based on the cap and floor design described above and in more detail in Annex 1. It aims to illustrate the different phases of the project and the stages at which decision on the cap and floor levels are taken and when they will apply, highlighting also when the incentives impact the process.

Developing an enduring GB regime for regulation of future interconnector investment

In GB, there is commercial potential for more interconnection from GB shores which could bring additional benefits for GB consumers such as increased competition and lower average prices. It can help reduce the costs associated with the integration of wind generation, assist with the completion of the EU internal energy market and contribute to GB security of supply. Since our public commitment to explore further the regulated cap and floor regime, several projects for interconnectors between GB and the neighbouring markets have been proposed.

Our June consultation had a GB-specific chapter seeking views on whether the cap and floor regime should evolve into an enduring regulated regime to facilitate the realisation of these projects. The majority of respondents supported the development of an enduring regulated regime in GB. It was felt to be a good model with the potential to minimise regulatory barriers and to share costs and benefits appropriately. A number of respondents highlighted that the success of an enduring regime would rely on the parameters being set appropriately. Others noted that in the longer term a cap and floor regime may need to evolve towards a more regulated approach. Reasons for this included increasing levels of interconnection between GB and other markets which may result in price convergence, ambitions for a North Seas grid, and the recognition that future applicability may depend on the extent to which NRAs can reach a common view on regulatory frameworks. It was also noted that regulatory evaluation of projects should be undertaken at an early stage, defining any necessary conditions on cost before significant capital investment takes place in order to build regulatory certainty into the process for evaluating interconnector projects. Maintaining a consistent approach across interconnectors developed at different times was also considered important.

We share stakeholders’ views and we are committed to developing an enduring regulated regime which will help to maintain momentum with the other interconnector projects in the pipeline on a non-discriminatory basis between all projects.

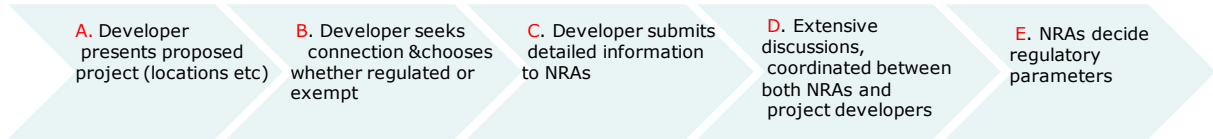
Stepping into a regulated regime for interconnector investment means that consumers may share some of the costs of the investment. This creates an additional responsibility to Ofgem to look into more detail the benefits that accrue to consumers from increased interconnection and the extent to which different projects deliver these benefits. We are discussing with NGET as the system operator how to ensure a coordinated development of cross border infrastructure and of overall coordination of offshore, onshore and interconnection development.

We recognise that further work is needed to ensure that the GB interconnection regime is coherent with the GB offshore and onshore regimes and any differences are justified. Compatibility of the three regimes will be important for the realisation of projects where all these assets may converge in the future, such as the North Seas Countries Offshore Grid Initiative. We will continue to work on this in 2012.

Proposed high level process for evaluating new proposals

Figure 2 illustrates a high level process for evaluation of new proposals which will be developed further in 2012, together with the above considerations. It describes the necessary steps from project initiation to the approval of cap and floor parameters (or equivalent) by NRAs. An indicative list of requirements required by NRAs under step C will be similar but not limited to the requirements for an exemption application from parts of the European legislation⁵. We envisage that information required under this step will be amended to reflect the needs of the other NRA. Ofgem and the other NRA may also request additional information if what is provided is not sufficient or further clarity is needed on some aspects of the proposal.

Figure 2



It is our intention to develop a coordinated approach for the regulation of the cross border asset. Therefore we aim to work closely with the NRA at the other end of the proposed interconnector under all the proposed steps. During this process it may become apparent

⁵ Article 17 of Electricity Regulation No 714/2009

that the application of two different regimes is the only feasible option for the realisation of the project. In this case, we will ensure that both approaches drive the same behaviour for the parties involved and we will discuss with the other NRA if adjustments to the regimes (e.g. on incentives) may be needed to achieve this.

In 2012, we aim to develop further our enduring regulated regime and proposed process for evaluation of proposals which could be applied to other interconnector proposals (beyond NEMO). As explained in our consultation, in the longer term as the extent of interconnection between GB and other markets increases, prices may converge and it may be appropriate to evolve towards a fully regulated approach and the cap and floor may converge on regulated returns in the future. We envisage that the fully regulated regime will be in line with our onshore and offshore regimes and therefore will still be based on incentive based regulation. Our envisaged incentive based cap and floor regime is a significant step in that direction. Prospective developers should assume that the GB regulatory regime will continue to support construction of economically-justified interconnector capacity.

Next Steps

We aim to take a decision on the open issues regarding the cap and floor design and parameters for NEMO in 2012. In parallel we will develop further our thinking on the enduring regulated regime and proposed process for evaluation of new proposals. We will update stakeholders on progress by mid-2012. We welcome stakeholders' views on our preliminary conclusions regarding NEMO and our progress so far in developing a GB regulated investment regime.

If you have any comments or questions on the contents of this letter, please feel free to contact Emmanouela Angelidaki (Emmanouela.Angelidaki@ofgem.gov.uk).

Yours faithfully,
Martin Crouch
Partner-European Wholesale team

Annex 1: Basic Cap and Floor design

Length of the regime: Project Lifetime

Why? In the consultation we set out two main options for the duration of the regime: a) lifetime of financing and b) lifetime of the interconnector asset. There was little support for the lifetime of financing as it was seen as too uncertain and dependent on the choice of the financing options and the behaviour of financial markets. There was some support for the technical lifetime of the asset which was seen as the best way to ensure compliance with European legislation. There was considerable support for the project lifetime approach, understood as the lifetime prior to refurbishment, which is also our preference for the duration of the cap and floor regime.

The main reasons for choosing the project lifetime approach include: easier to make cost assessments based on a shorter project lifetime rather than technical lifetime (which is 40 years or more); avoids making assumptions about conditions that are too uncertain and long term to incorporate in the business plan; the flexibility for the exact lifetime combined with certainty that the parameters will be fixed for this period allows for cost optimisation of cost of capital particularly for parties interested in investing via project finance route.

Regarding the project lifetime⁶, we envisage that it will be up to the developer to identify the project duration. The developer would need to provide a justification for the choice and Ofgem will have a role in approving the exact lifetime together with taking a decision on the exact design of incentives during construction and operation phase and the cap and floor range (Step 2 in figure 1).

Regarding the regime that will be applied once the initial period has expired we envisage that a new regulated regime will be put in place since European legislation applies throughout the technical lifetime of the asset. The exact parameters of the regime will be decided at a later stage when better information about project performance will be known, but early enough in order to provide the necessary regulatory certainty to interconnector owners for refurbishment investments.

What is the Cap and Floor Levied on? Revenues

Why? The consultation included the following options regarding the output used to set the cap and floor levels: a) Revenues b) Profits c) Internal Rate of Return (IRR).⁷ There was considerable support for the revenues approach, with few respondents favouring the IRR approach and almost no support for the profit approach.

With regard to the IRR and profit approaches, it was recognised that they were complex and potentially subject to distortion based on the developer's accounting approach. They were also considered as the most challenging and least transparent to cost monitoring.

The main reasons for choosing the revenues approach include: greater transparency and simpler to implement than IRR or profits where manipulation of costs can be an issue; it is capable of mitigating the risks of inconsistent cost allocation and provides the incentives for the developer to control operating costs, allowing interconnector operators (ICOs) to be financially responsible for risks within their control.

⁶ For example, the GB offshore regime had proposed a 20 year lifetime. However, in the latest consultation on tender exercises under the enduring regime(<http://www.ofgem.gov.uk/Networks/offtrans/pdc/cdr/Cons2011/Documents1/Enduring%20con%20doc.pdf>) we recognise that there may be benefit to consumers from reviewing the appropriateness of a 20 year period, for example to enable new sources of finance to be brought forward.

⁷ Please see Chapter 5 of the consultation for more detailed information: <http://www.ofgem.gov.uk/Europe/Documents1/Summary%20of%20responses%20to%20Consultation.pdf>

Open issue: Within a revenues approach, it may be appropriate to offset some uncontrollable costs against the revenues before comparing to the cap and floor (a “net revenues” approach). An example could be compensation for capacity not available if there are other availability incentives. A decision on this issue will be taken in 2012, following an in depth analysis from both regulators.

Performance assessment: cap and floor set ex-ante, one-off with re-openers in exceptional circumstances; performances assessed periodically, including annual reporting:

Why? In the consultation, we set out several options around the timeframe for evaluating project performance and when to make or take payments to or from the interconnector owners. In line with the preference of the majority of stakeholders, we envisage that the cap and floor will be set ex-ante and on a one-off basis for the duration of the regime. This approach removes the uncertainty of re-setting the cap and floor periodically, increases investor certainty and minimises the negative impact of risk on cost of capital. Following the example of the GB offshore regime, we will introduce re-openers which will be applied only in exceptional circumstances⁸. We envisage that performance will be assessed on a discrete rather than cumulative basis, as this is simpler and more transparent. Again, in line with the view of most stakeholders, we believe that it is appropriate to assess performance more frequently than a one-off assessment at the end of the regime. We also think it is important that annual reporting is introduced which would allow for a closer overview of performance and ensures accounts are produced efficiently every year.

Open issue: The exact duration of assessment periods is still undecided. This could range from yearly, to, say, 4 or 8 year assessments. Periodic assessments of 4-8 years were seen by some respondents as helping to keep the balance between the needs of consumers and developers. They felt that the length of the period should be not too long in order to reduce risks and uncertainty both for developers and consumers and it should be not too short in order to have some stability in triggering caps and floors that will have an effect on national transmission tariffs. Others felt that yearly assessments would be the most appropriate. They were seen as reducing the risks for investors and lenders, partly through ensuring that large surpluses and deficits have less time to develop, are consistent with Ofgem’s RIIO approach (includes yearly assessments) and helps align with accounts which should be produced consistently each year.

Incentives

As explained in our consultation paper, we consider it is important that interconnector projects are realised efficiently and operated efficiently. We have taken into account stakeholders’ views, the GB onshore and offshore regimes and experience from other interconnection investments. We feel it is important to make a distinction between incentives that apply during the construction phase and aim to incentivise efficient capital expenditures (capex) and incentives applied during the operation phase and aim to ensure high cable availability and consistent cost allocation. We have come up to a view on the former incentives but we are still developing the latter.

Capex incentive

For large-scale infrastructure projects, such as subsea interconnectors, capex accounts for a large majority of the overall project costs. Where revenues are regulated, it is necessary to ensure that capex costs are efficient. Setting the cap and floor levels ex-ante means there is information asymmetry between regulators and developers during the decision making process of the cap and floor range in step 2 (figure 1). A capex incentive designed to encourage accurate forecasting of efficient spending will help to address this issue by

⁸ e.g. changes in the European legislation related to the operation of interconnection

reducing developers' opportunity for 'gaming'. By encouraging this, it will also help address the incentive for the developer to overestimate capex in order to affect the cap and floor levels. At the same time, it will also help to share the benefits of efficient underspend or the burden of efficient overspend between the developer and consumers.

We aim to introduce a capex incentive⁹ which Ofgem already operates under its electricity and gas distribution price controls and will be retaining this approach for RIIO price controls. We envisage that a mechanism similar to the Information Quality Incentive (IQI) will be applied.

We would envisage that during the second stage of the process (Figure 1), where NRAs set parameter and cap and floor levels, the capex incentive will be calculated. Developers would submit their estimated capex forecasts to NRAs which will then be compared to the NRAs' estimate of efficient capex. Developers would submit their capex forecast to NRA, which will then be compared to the NRAs's estimate of efficient capex. The capex incentive mechanism uses these two inputs to calculate three outputs:

- The capex amount that will feed into the levels of the cap and floor
- An 'additional allowance' (which could be either positive or negative) that adjusts the level of the cap based on the extent to which the developers' estimate differs from the NRAs¹⁰
- A parameter to address the extent to which efficient over/underspend are reflected in the levels of the cap and floor

The first two of the above outputs of the mechanism are fed into the calculation to determine the preliminary cap and floor levels. The third is used to determine the final cap and floor levels after the construction period when the actual capex spend is known

The parameters that drive the mechanism are not yet fixed and can be calibrated so as to strengthen or loosen the impact of the incentive. The exact parameters and implementation of the capex incentive for NEMO will be finalised in 2012 together with other open issues related to the cap and floor design.

Operational incentives: Open issue

Under a cap and floor regime, the main risks to ensuring interconnector projects are operated efficiently arise when the cap and floor is, or is close to being, activated. At these points, the interconnector developer faces a perverse incentive to deliberately reduce interconnector availability and/or allocate costs inconsistently within the current period.

Possible solutions to addressing the above perverse incentives fall into two broad categories. They either seek to reduce the likelihood and/or magnitude of the perverse incentive, or remove the above perverse incentive altogether. Having a wide cap and floor, and/or introducing a sharing factor within the cap and floor are examples of the former. Introducing an availability/asset utilisation incentive and/or having sharing factor above the cap and below the floor are examples of the latter.

Around half of the respondents that commented felt additional incentives should be introduced to encourage desirable outcomes, with particular support for an availability incentive. A variety of reasons were given including: a means of preventing the cap being a revenue target, ensuring high availability at the cap – deemed a significant risk, and promoting efficient link location. Respondents had mixed views on sharing factors, with those in favour split between the sharing factor being within or above and below respectively the cap and floor levels.

⁹ Our design is based on a mechanism used by Ofgem in onshore price controls, where it is known as the Information Quality Incentive (IQI)

¹⁰ This reduces the possibility of developers with relatively high capex forecasts making very high returns from underspend, while rewarding developers with relatively low capex forecasts if they deliver what they say.

Through using revenues as our output measure for the cap and floor, discussed previously, the perverse incentive to allocate costs inconsistently has been reduced. We are undertaking further work on the most appropriate course of action to ensure that interconnector developers have the incentive to maintain high availability in all situations. This will be coupled with considerations of designation of controllable vs. non-controllable costs.

Other open issues

Cap and Floor range: Among those who commented on the cap and floor range in the consultation, the majority felt there should be a wide distance between the cap and floor. Reasons given for this included the wish to allow market conditions to largely determine return, the wish to maximise potential for third party financing, and the desire to maintain incentives for efficiency and innovation. Only a minority felt it should be narrow, as this would remove the economic incentive to undersize the assets and it would allow the project to be financed at a low cost of capital. We expect to take a decision on the cap and floor range for NEMO, once the cap and floor design mechanism is finalised. If the regime is applied to any future links we would expect to use similar principles and design but discuss the cap and floor range on a case by case basis, to ensure that the specifics of each project are taken into account.

Financial distress and bankruptcy: We also need to consider the arrangements for dealing with financial distress in the regime, in particular when above the floor.