

**DECC Improving Grid Access**  
**Technical consultation on the model for improving grid access**

**National Grid response**

**1 Executive Summary**

- 1.1 We support the implementation of connect & manage, but remain concerned about the level of constraint costs that could arise if this model is implemented on an enduring basis. In particular, we are concerned that the analysis undertaken by Redpoint has not taken account of the impact of local constraints which could be significant with the proposed definition of “enabling works”. We also welcome the commitment to review the arrangements if the constraint costs are considerably higher than expected.
- 1.2 We welcome the increased user commitment from post-commissioning power stations but note that the new level of a minimum of one year and five days is still significantly lower than the average construction time for transmission assets. This means that asset stranding caused by the unexpected closure of existing power stations is likely to remain a significant risk.
- 1.3 We are concerned about the proposed definition of “enabling works” because of the potential for increased constraints and the lack of clarity over the appropriate level of works. The definition includes a requirement to comply with the pre-fault generation connection criteria from the security standard, but compliance with these criteria could still lead to extensive costs if operationally National Grid were to continue to work to the post-fault criteria. This could lead to circumstances in which new generation is advanced, but then has to be extensively constrained due to the limited extent of “enabling works” specified.
- 1.4 To address these concerns, we have recommended changes to the definition of “maximum enabling works” and “main system circuits” together with the introduction of additional criteria.
- 1.5 We are also concerned about the proposed self-derogation process, and in particular the requirement for the System Operator to potentially veto self-derogation reports prepared by other Transmission Owners. We recommend the changes to the definition of “enabling works” referred to above to make this a less subjective process, but our preference would be for the Authority, rather than a private licensee, to exercise the veto function.
- 1.6 This Authority led option is more consistent with the regulatory scheme under the Electricity Act and is more compatible with National Grid’s need to comply with its wider duties. To address any perceived issue of regulatory delay in derogations the process could include a time period within which the Authority must either exercise the veto or else the derogation would be deemed granted. This approach is consistent with the approach taken by the Authority in relation to income adjusting events under licensees’ existing price controls.
- 1.7 We also note the view that the key features of the government's intervention constitute a public service obligation in the general economic interest. We have a concern as to whether in fact the proposals do fall within the notion of a public service obligation in Article 3(2) of Directive EC2003/45/EC (restated in Directive 2009/72/EC) given the nature and scope of the proposed changes

and the lack of reasoning in the consultation document. We are also concerned that this issue has been raised in the consultation at a late stage in the process.

## **2 Introduction**

- 2.1 We welcome the opportunity to respond to the DECC Improving Grid Access technical consultation.
- 2.2 National Grid Electricity Transmission plc (NGET), owns and operates the electricity transmission system in England & Wales, and is the national electricity transmission system operator (NETSO) for the whole National Electricity Transmission system. In our role as NETSO, we have a licence obligation to offer terms for connection to, and use of, the national electricity transmission system and, as such, the reform of transmission access will have a direct impact on the contractual arrangements between National Grid and users of the national electricity transmission system.
- 2.3 National Grid has duties under the Electricity Act to develop and maintain an efficient, co-ordinated and economical transmission system and to facilitate competition in generation and supply.
- 2.4 Whilst these duties are designed to provide the most economic solution for end consumers, we recognise that these must be framed in the manner that the Secretary of State considers is best designed to further the principal objective of protecting the interests of existing and future electricity consumers.
- 2.5 In addition to the duties above, the transmission licence also prohibits National Grid from discriminating against any User or class of Users.
- 2.6 National Grid remains committed to the journey towards a low carbon future and is fully supportive of the Government's policy aims. In our role as NETSO and Transmission Owner (TO) in England & Wales, we play a crucial role in facilitating the Government's aspirations for climate change and security of supply. The timely provision of additional transmission capacity and the better utilisation of existing capacity are essential elements of meeting these policy aims and we therefore continue to be proactive in our approach to the development of enhanced transmission investment incentives, a fundamental review of the security and quality of supply standards and the revision of transmission access arrangements.
- 2.7 Through the implementation of Interim Connect and Manage (ICM), National Grid has offered to advance connection dates for some 2.8GW of renewable generation in Scotland. In England & Wales, we have already offered earlier dates to approximately 9.5GW of projects under ICM.
- 2.8 Ultimately, as exemplified through the work undertaken under the auspices of the Electricity Networks Strategy Group (ENSG), additional transmission capacity forms an important part of an economic and efficient overall solution in conjunction with enduring access reform. National Grid, along with the other TOs participating in the ENSG, remains proactively engaged with the development of an enhanced transmission investment incentive mechanism to help ensure that this additional capacity is delivered.
- 2.9 We believe that the delivery of sufficient transmission capacity in a timely manner is the best way to ensure that costs are minimised in the long term

and renewable generation is able to connect to the system and contribute to the supply of demand, thus furthering the Government's aims.

- 2.10 To date National Grid has taken a leading role in the Transmission Access Review (TAR) process by proposing and progressing relevant amendment proposals through industry governance, undertaking detailed analysis of the proposed models, responding to consultations and presenting at public seminars. More recently we have been working closely with DECC, and have contributed to the advisory group established to discuss the details of the reform proposals.

### **3 National Grid views**

- 3.1 This section presents our views in response to the suite of consultation documents.

#### **Constraint costs**

- 3.2 We support the implementation of connect & manage, but remain concerned about the level of constraint costs that could arise if this model is implemented on an enduring basis for the simple reason that increased levels of generation will be connected prior to the completion of the wider reinforcements required to accommodate them in an economic and efficient manner.
- 3.3 The annex to the impact assessment notes the differences between the results of Redpoint's constraint cost analysis for 2010/11 (£100m) and National Grid's forecast for 2010/11 (£322m<sup>1</sup>) and describes the principle reasons for the difference as merit order and local constraints. DECC also state their view that "there are other tools to mitigate constraints arising as a result of these factors, and therefore their bearing on the impact of the grid access models assessed should be limited."
- 3.4 On merit order, it is clear that Redpoint's analysis leads to very different levels of running from Scottish thermal plant than we have observed in operating the system. We can only conclude that either there are issues with the data that Redpoint have used to construct the merit order, or that the observed merit order has been affected by other issues.
- 3.5 On local constraints, DECC note that these have not been included in Redpoint's analysis.
- 3.6 Whilst historically under the "Invest then Connect" access regime, main system boundaries have been responsible for the majority of network constraints; this is by no means certain in the future. As such, we would like to highlight the impact that the definition of "enabling works" is likely to have on the level of local constraints going forward.
- 3.7 "Enabling works" are those works that under the proposed model must be completed prior to access being made available to a generator getting transmission access rights. The scope of these works has been specifically limited to provide generation developers with a clearer view of the extent of the works that will be required prior to their connection. It is therefore inevitable that this limited scope will lead to local constraints that have not been modelled by Redpoint.
- 3.8 Local constraints therefore have the potential to significantly increase constraint costs above the level calculated by Redpoint, and furthermore with the current proposals it is not clear to us what the "other tools to mitigate constraints arising as a result of" local constraints referred to in the consultation are. We have proposed some changes to the definition of Enabling Works below [paragraph 3.18 onwards].

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<sup>1</sup>The latest figure agreed as part of incentive scheme is £239.5m

- 3.9 In our role as NETSO, we will also continue to investigate all options to minimise operational costs and develop the associated code changes (for example, CAP170: Category 5 System to Generator Operational Intertripping Schemes).
- 3.10 Paragraph 1.19 on page 14 states that National Grid's forecast of constraints for 2010/11 of £322m is based on the same simplified model of the national electricity transmission system that was used for the partial impact assessment published as part of the "Improving Grid Access" consultation in August 2009. This statement is incorrect. Unlike the analysis undertaken for the partial impact assessment or the analysis completed by Redpoint, National Grid's year-ahead model includes a far more detailed representation of the transmission network. It also includes transmission outage and notified generation outage information. This allows issues such as local constraints to be identified.
- 3.11 The consultation references the possible need for further amendments [Page 33, Para 3.42] if the costs are "considerably higher than expected" for an "intolerable period". Whilst we welcome this acknowledgment of this risk of increased costs, it would be helpful if DECC were to be more specific about the meaning of these terms. It is also worth noting that it will be difficult to manage the pressure for further reform in this area in light of the proposed changes by Ofgem to the governance arrangements which will allow third parties to propose charging methodology changes, especially as the proposed licence wording on the socialisation of constraint costs could be viewed as open to interpretation.

#### **User commitment**

- 3.12 The current option for existing power stations to reduce their Transmission Entry Capacity with a minimum of 5 days notice is problematic for TOs that are developing the transmission network to accommodate new and existing power stations. We therefore welcome the increase in user commitment from existing generators from a minimum of 5 days to a minimum of 1 year and 5 days.
- 3.13 We note that this commitment period is still considerably lower than the average time to construct transmission reinforcements and therefore there is still a significant risk of abortive costs due to Transmission Entry Capacity reductions at existing power stations, although this may currently be mitigated by the demand for new generation connections in some parts of the transmission system.
- 3.14 Our understanding is that the level of the additional user commitment is collared at £0/kW (i.e. users in negative charging zones do not receive additional payments as a result of this change). We note that the proposals are unlikely to provide any increased notice in negative or marginally positive Transmission Network Use of System generation tariff zones.
- 3.15 Given that DECC has indicated that industry and Ofgem should keep under review whether further changes to user commitment would be appropriate, we believe that further developments in this area will be required to address the issues described above.

- 3.16 In providing an increased User Commitment, we believe it is DECC's intention that Users are able to avoid future charge changes, where they are either planning to disconnect from the transmission system or decrease their Transmission Entry Capacity. The description in the consultation document [Paragraph 3.22 on page 29] supports this view. However the proposed changes to CUSC Section 6 [Page 77] are different in that the requirement to give at least 1 year and 5 days notice does not expressly allow for giving a lesser period. If the notice period is therefore fixed to a minimum of 1 year and 5 days, then the usual TNUoS charge (as opposed to a charge equal to the previous years TNUoS) will be payable.
- 3.17 The increased User Commitment could be implemented whilst allowing Users to avoid future charge changes. This is best achieved by leaving the notice period unchanged at a minimum of 5 days notice, but introducing a charge which becomes payable if the notice period is less than 1 year and 5 days.

### **Enabling Works**

- 3.18 We have the following concerns with the proposed definition of "enabling works":
- The definition could lead to significant constraint costs that, as described above, have not been included as part of Redpoint's assessment;
  - The maximum "enabling works" are defined as those required between the entry point and a "MITS Substation", but there are no criteria specified to determine the extent of these works;
  - The proposed definition of a "MITS substation" leads to some perverse outcomes;
  - There is no guidance as to how TOs should optimise between the minimum and maximum level of "enabling works".
- 3.19 The minimum level of "enabling works" is described by the application of criteria set out in the CUSC. These include a requirement to comply with the pre-fault generation connection criteria from the security standard. Compliance with these criteria could still lead to extensive costs if operationally National Grid were to continue to work to the post-fault criteria. The Redpoint analysis used to support the DECC decision excludes any local constraint costs i.e. does not include the cost of planning to pre-fault and operating to post-fault criteria.
- 3.20 The maximum level of "enabling works" is described as those reinforcement works required between the connection site and the "MITS substation", but there are no criteria specified. It would be preferable if the maximum level of works were determined by the application of the generation connection criteria contained in the security standards between the connection site and the "MITS substation" in full.
- 3.21 Since the publication of the consultation document, DECC has published transmission system diagrams on which the "MITS substations" have been highlighted. These diagrams highlight that the proposed definition of "MITS Substations" leads to some perverse outcomes, mainly due to the classification of 132kV as transmission in Scotland.
- 3.22 There are a number of 132kV substations in Scotland which are classified as "MITS substations" since they have more than four "main system circuits"

connected. However, many of these circuits are radial and therefore do not offer a connection to the remainder of the main interconnected transmission system and as such are not helpful in terms of accommodating power from new generation connections. For example, Shin 132kV substation is classified as a “MITS substation” because it has five “Main System Circuits” connected, but one of those circuits is a radial feeder to Cassley and Lairg and therefore does not provide any export capability.

- 3.23 In order to avoid situations in which the application of the criteria leads to the specification of an inadequate level of “enabling works” and consequently an inappropriately high level of constraint costs, the definition of “Main System Circuit” should be modified to remove radial circuits.
- 3.24 We are also concerned about the lack of guidance as to how a TO should determine the appropriate level of “enabling works” between the minimum and maximum levels specified.
- 3.25 The link between “enabling works” and the self-derogation process makes this lack of guidance more problematic since it may lead to different interpretations between the TO and the reviewer of the self-derogation report prepared by the TO. The self-derogation process is discussed further below.
- 3.26 There should be a requirement for the appropriate level of “enabling works” to be determined by considering both the consequential generation connection date and level of transmission system constraints. In the majority of cases, this should lead to an obvious conclusion about the appropriate level of “enabling works”.
- 3.27 For more difficult examples, it may be that a limit to the acceptable level of transmission system constraints is required. This could be specified as a percentage of energy generated by the connecting generator and could be included as a criterion to be applied by the TO, or by any reviewer of the self-derogation report prepared by the TO.
- 3.28 In summary, we think that the proposed definition of “enabling works” should be modified by:
- Clarifying that the maximum “enabling works” will be determined with the application of the security standards generation connection criteria in full between the connection point and the “MITS Substation”;
  - Changing the definition of “Main System Circuits” such that radial circuits, that do not provide any export capability, are not included;
  - Introducing a requirement to determine the appropriate level of “enabling works” between the minimum and maximum definitions which strikes the right balance between generation connection date and transmission system constraints.
- 3.29 The proposed CUSC drafting for “enabling works” also places an obligation on National Grid to publish an annual report showing:
- The number of connect & manage offers made (with reference to the “maximum enabling works” definition); and
  - The time taken to complete “enabling works”.
- Given that the specification and construction of “enabling works” is a TO activity, it would be helpful if the SO-TO Code drafting was updated to include



a requirement for the TOs to report the information relevant to their areas in a timely fashion such that it can be included in this report.

### **Self-derogation**

- 3.30 We do not consider that National Grid (in its capacity as SO), as a licensee is in an appropriate position to exercise veto powers over issues arising under the licence of another transmission licensee, although we recognise that National Grid should input into the process.
- 3.31 We consider that the exercise of veto powers, given that it will have a direct impact on the licence obligations of another licensee, should properly be seen as a core regulatory function that should remain the responsibility of Ofgem and the Authority. Any other process could be seen as “privatising” this aspect of the regulatory oversight of the Scottish transmission licensees and we do not consider that this is appropriate in the context of the regulatory regime established under the Electricity Act.
- 3.32 We consider that the issues surrounding the timing of the granting of derogations and the perceived delays and uncertainties that this brings for generators can adequately be dealt with by:
- ensuring that the criteria against which “enabling works” are determined and therefore derogations are granted be made clearer as set out above. This improved clarity would minimise the likelihood of the Authority excising the veto; and
  - inserting a clear timetable for the exercise of the veto by the Authority into condition C17. This approach would be consistent with the approach taken by the Authority in relation to income adjusting events under licensee’s price controls. It could also be combined with a shorter period for the TO and SO to provide information to the Authority to minimise the period of uncertainty for the developers.
- 3.33 This approach would accord with the respective constitutional positions of licensees and the Authority without creating any undue delay or additional uncertainty for potential connectees.

### **Public Service Obligation**

- 3.34 We note the view in paragraph 3.37 of the consultation that the key features of the government’s intervention constitute a public service obligation in the general economic interest. We have a concern whether the proposals do in fact fall within the notion of a public service obligation in Article 3(2) of Directive EC2003/45/EC (restated in Directive 2009/72/EC) given:
1. the nature and scope of the changes to the regime proposed; and
  2. the absence of adequate reasoning as to precisely why they do constitute a public service obligation
- We are also concerned that this issue has been raised in the consultation at a late stage in the process.

### **Transition**

- 3.35 We note that the proposed text includes a requirement to automatically make an offer to vary to all those users with an interim connect & manage agreement within six months of the connect & manage implementation date.
- 3.36 We are comfortable with the proposed timescales provided there is commitment from the other TOs to make the necessary changes to the relevant Transmission Owner Construction Agreements (TOCAs) and leave sufficient time for National Grid to process the changes to user's agreements.
- 3.37 As part of the process of on-going liaison with the other TOs, we have initiated discussions in order to establish a more detailed program for this work.

### **Other comments**

- 3.38 The consultation notes [Paragraph 3.10 on Page 26] the review of pre-connection securities currently being carried out by National Grid and recommends that this is progressed through the normal industry governance process at the earliest opportunity.
- 3.39 National Grid intends to publish a consultation on proposed changes to the arrangements for pre-connection securities during April, 2010. The changes seek to address issues with the application of the arrangements for sharing liabilities between users and the intention is to progress these changes as soon as possible such that they are implemented prior to the next six monthly securities round in summer 2010.
- 3.40 National Grid is also aware that further changes to the pre-connection securities arrangements may be required to make them more compatible with the enduring connect & manage access arrangements. If a requirement for further change is identified then National Grid will bring forward proposals for industry consultation as soon as possible.

## **4      Commentary on Licence Drafting Text**

### **NEW CONDITION B[ ] CONNECT AND MANAGE IMPLEMENTATION**

- 4.1      It is not clear what function this condition is intended to perform. When BETTA was introduced, there was a transitional period during which the licensee needed to be bound by certain provisions even though the BETTA reforms had not been fully implemented – this is what the provision (Condition B13 (BETTA Implementation) from which this new condition is derived was designed to do.
- 4.2      However, there will be no such transitional period in the implementation of the TAR reforms: either the modifications will have been directed by the Secretary of State, in which case they will bind the licensee, or not, in which case they will not bind, nor would this condition be in the licence. As such, paragraphs 1 and 2 of the condition do not add anything meaningful to the licensee's obligations.
- 4.3      Furthermore, paragraph 3 merely repeats the obligations of the licensee to provide the Authority with information that it is already subject to pursuant to Condition B4 (Provision of information to the Authority). Finally, paragraph 4 gives the (erroneous) impression that the access modifications are time limited as it implies that the licensee shall not be required to give effect to the reforms (pursuant to paragraph 1) after the end of the transition period. Finally, it is not clear what the term “fully effective” is intended to mean in paragraph 4: if the modifications are made, they bind the licensee.
- 4.4      As such, this condition should be deleted as unnecessary and potentially confusing.

### **NEW CONDITION C[x]: REQUIRMENTS OF A CONNECT AND MANAGE CONNECTION**

- 4.5      The obligation on the licensee in paragraph 6(c) (in the numbering of the document published) not to charge until the connection date requires a change to the definition of “Connection Date” so that it is clear that charges can be applied irrespective of whether the applicant's project is ready to generate to avoid risk of sunk costs through lack of progress by generator. Insertion of the words “to be” in this definition should effect this change. However, it is not clear why this obligation is needed at all as the Construction Agreement and Bilateral Connection Agreement make it clear from when charges will be due.
- 4.6      We consider that paragraph 7 (in the numbering of the document published) should be deleted: given that the applicant's reasonable expectations can only be derived from its Bilateral Connection Agreement with the licensee (and time is of the essence in that Agreement) there appears to be no justification for imposing a licence obligation here.
- 4.7      We consider that paragraph 8 (in the numbering of the document published) would be clearer if it made it clear:
- (i)      that the sharing of costs related to those costs arising as a result of connect and manage applications; and
  - (ii)     which use of system charge was relevant.

- 4.8 We have suggested changes to the drafting in the attached mark-up to reflect these comments.
- 4.9 We consider that paragraph 9 (in the numbering of the document published) should be amended in sub-paragraphs (a) and (b) because the mischief to be addressed is one of disadvantaging the people not the connections in question. We have suggested changes to the drafting in the attached mark-up to reflect this comment.
- 4.10 In addition, please refer to the comments marked-up in the text of the proposed condition.

**NEW CONDITION D[x]: REQUIREMENTS OF A CONNECT AND MANAGE CONNECTION for Scottish licensees**

- 4.11 We have suggested changes to the drafting in the attached mark-up to reflect these comments: please refer to the comments marked-up in the text of the proposed condition.

**Condition B12 (System Operator - Transmission Owner Code)**

- 4.12 It is not clear why the new code objective proposed to be inserted at paragraph 2(f) of this condition is not to be repeated in the CUSC Relevant Objectives in paragraph 1 of Condition C10 (CUSC).

**Condition C5 (Use of System Charging Methodology)**

- 4.13 It is not clear what the words “where appropriate” in paragraph 5(d) of this condition add other than creating the risk of serious confusion as to how firm the obligation is. We suggest that these words are deleted in order to avoid the risk that endless charging methodology modifications will be brought forward by industry parties if the code governance reforms are implemented, arguing that compliance with this obligation is not “appropriate”. The drafting of this paragraph can also be tightened in relation to the reference to condition C[x] (Connect and Manage Implementation) to reflect the style of other licence conditions and re-ordered for clarity of style.

- 4.14 We have suggested changes to the drafting in the attached mark-up to reflect these comments.

**Conditions C17 and D3 (Transmission system security standard and quality of service)**

- 4.15 As indicated above, National Grid does not consider that it is appropriate for one licensee to have a veto right which affects the licence obligations of another licensee: such a right can only properly be the responsibility of the Authority under the scheme of regulation created by the Electricity Act 1989. National Grid would be happy to assist with the additional drafting required to develop the drafting of this condition to effect this, if requested.