

## Grid Code Gas Insulated Switchgear (GIS) Working Group

Meeting Name	Grid Code Gas Insulated Switchgear (GIS) Working Group
Meeting No.	6
Date of Meeting	29 <sup>th</sup> June 2009
Time	10:00am – 3:30pm
Venue	Conference Room 6, National Grid Offices, Warwick

This note outlines the key points from the sixth meeting of the Grid Code (GIS) Working Group.

### Members Present:

David Smith	DS	Chairman
Richard Dunn	RD	Technical Secretary
Tom Ireland	TI	National Grid
John Norbury	JN	RWE Trading
Claire Maxim	CM	E.On UK Ltd
John Morris	JM	British Energy
Lionel MacKay	LM	EdF Energy Networks
Alan Creighton	AC	CE Electric UK
Daniel Cassidy	DC	Scottish Power
Jeff Norfolk	JNo	RWE Trading
Bridget Morgan	BM	Ofgem

### Apologies:

Chris Holdsworth	CH	CE Electric UK
Keith Hodson	KH	Central Networks
Paul Dyer	PD	EdF Energy Networks
Fraser Ainslie	FA	Scottish Power

## 1. Introductions and Apologies

110. Apologies for absence were received from Chris Holdsworth, Paul Dyer, Keith Hodson and Fraser Ainslie. Lionel MacKay was attending on behalf of Paul Dyer and Alan Creighton was attending on behalf of Chris Holdsworth.

## 2. Draft Notes and Actions of the Meeting held on 13<sup>th</sup> May 2009

111. The draft notes of the fifth meeting held on 13<sup>th</sup> May 2009 were agreed. RD would publish the final version on the website.

**Action: National Grid (RD)**

### 112. Review of Actions from the 13<sup>th</sup> May 2009 meeting

Actions were the subject of agenda items apart from the following:

- Item 72 – AC confirmed that in his view DNOs would need to be clear about their obligations (e.g. in the context of P2/6) should the current boundaries between National Grid and Users change as a result of implementation of a solution for GIS and this should be noted in the Working Group report – action outstanding.

**Action: National Grid (TI)**

- item 73 – Members noted that worked examples could only be provided if Users were prepared to share costs with National Grid which could then be anonymised and shared with the Group – action complete.

- Item 97 – JN queried whether the basis of "contracted" meant signature of a BCA or contracted in the procurement sense for the switchgear equipment mattered at all since from the User's point

of view this was "contracted " with National Grid. AC pointed out that DNOs might have a different interpretation of the term "contracted!" and DS noted that this was one of the areas where the DNO issues had not been considered in the same depth as for the generators hitherto. JN enquired about the application of the Working Group report to OFTOs. BM confirmed that the offshore transmission "Go-Active" occurred on 24<sup>th</sup> June 2009 when changes to the Grid Code, other industry codes and the transmission licence were implemented by the Secretary of State. JN noted that most offshore wind farms would be connected to the shore via GIS substations. BM advised that the Working Group would also need to consider offshore as the offshore transmission arrangements now form part of the Grid Code baseline. CM noted that any solution for GIS might also need to take into account any modifications arising from BSC Issue Group 37 which was considering revised BM Unit arrangements and related metering issues for Offshore wind farms (post meeting note: Centrica had now raised BSC Modification Proposals P237 and P238 following the report of the Issue 37 Group. The BSC Panel would consider Initial Written Assessments (IWAs) for P237 and P238 at its next meeting on 9<sup>th</sup> July).

### 3. Charging Issues Associated with GIS

113. TI indicated that further debate on charging issues was necessary before the issue could be taken forward. TI explained that the current charging methodology was based on ensuring that Users received cost-reflective signals via the methodology and it would be important to keep this principle in mind in considering any changes to accommodate GIS. Connection Asset charges were asset based with additional allowances for depreciation and maintenance.
114. JN reiterated the view of RWE that they were simply trying to understand the costs of GIS installation when undertaken by the unlicensed side of National Grid business. There was a need for more transparency for Users of these costs so that an overall judgement could be made by the User of value for money in terms of contestability. It was currently very difficult for Users to form such a view given the effective fait accompli that they were provided with by National Grid where new projects included GIS switchgear in new or reconfigured substations. JN did not underestimate the difficulties of separating out these costs with GIS but believed this could be done to a far greater extent than hitherto. He believed this approach was consistent with developing cost reflective signals. JM agreed that there was a need for indicative generic prices on GIS and expressed surprise that National Grid could not provide these.
115. DC explained that there were no Alliance arrangements amongst the TOs in Scotland. There was a competitive tender each time for a new project involving GIS which provided more transparency. However, he confirmed that it was still difficult to drill down into the manufacturer's costs as they tended to bundle a lot of the equipment together into one quote and would not break that down further. LM also noted that there were also different specifications from Users to cope with such as different size and extent of bays and different civil works.
116. DS pointed out that there were two elements to this debate:
- transparency of the cost of the GIS installation as a whole
  - transparency of the cost of that portion of the GIS installation charged to the Generator

It seemed logical that the second element could be capable of greater transparency than the first element. There was probably a need to consider whether a generic methodology could be developed in respect of GIS which could help to underpin the transparency sought by Users. CM noted that it would also be important to develop an approach that applied equally well to Generators and DNOs. A methodology would give comfort to Users that cost reflectivity was being applied. TI noted that generic costs could still result in a mismatch with actual costs in practice. JN added that the industry understood that costs could diverge from the generic norm for very good reasons. BM asked how costs were identified when the work was undertaken on an unlicensed basis. DS indicated that these would be provided by the Supplier which still raised the same issues relating to contestability and lack of transparency. JM asked whether the option of equipping the Generator bays could be included in the

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original GIS tender. However, with such an approach it was noted that cost savings to National Grid in such a tender scenario may not mean savings for the Generator and vice versa. National Grid agreed to explore this option and report back at the next meeting.

**Action: National Grid (TI)**

117. The Group debated the fact that GIS tended to be more expensive than AIS. One Working Group member stated that GIS bays cost twice as much as AIS but it was noted that the GIS quote tended to be for a greenfield site and included all civils as well. There were also longer term savings on maintenance costs with GIS so that a direct comparison was somewhat misleading. DS noted that the development of a cost reflective methodology for GIS would need to be pursued in the TCMF and that would need to be referred to in the Working Group's report to the GCRP.

### 4. Construction and Maintenance of Generator Circuits

118. TI explained that National Grid were keen to discuss further the potential risks arising from its ownership of the generator connection circuits which was an integral part of the RWE proposal for changes in ownership arrangements at new GIS sites. Given the RWE scenario, it would be sensible to consider coordinating generator outages with those for the Transmission licensee's equipment and this process could be quantified as part of the OC2 process in the Grid Code. National Grid's reaction to faults on the GIS assets that make up part of the generator circuits would need to be considered between the two parties since it was unlikely that National Grid could respond immediately given the need to prioritise work on the transmission system. It was highlighted that in such instances, the generator would not receive compensation during its loss of access to the transmission system for faults on such GIS assets, and it must be accepted that higher priority work, such as that related to safety from the system, could delay the fault restoration work. One option would be to have an SLA between the parties with a premium payable for urgent correction of faults on the Generator circuits.

119. JN believed that there was little need for change to the existing arrangements should the RWE proposed solution be adopted except that the work undertaken for the Generator by National Grid would become licensed work. TI noted that the problem of which resources to allocate to any fault on what used to be the Generator circuits as opposed to transmission asset work was a problem for National Grid. JN believed that National Grid should provide the same level of service for GIS as currently was provided for AIS. The decision to opt for GIS was one taken by National Grid and therefore he could not see why the same regime should not apply in both cases. CM agreed and believed that the resourcing for dealing with faults by National Grid should not be any different than under the current arrangements. DC disagreed and explained that a maintenance regime under an unlicensed agreement and one under a licensed agreement would be very different. A licensed maintenance regime would not be as extensive as that under an unlicensed regime as the remuneration was subject to price control restrictions and assumes, in general, redundancy facilitating access to assets. It would still of course be subject to the licence requirements for developing and maintaining an efficient, coordinated and economical system of electricity transmission. JN noted that there was already a site specific maintenance charge included in National Grid's TNUoS and connection charges. TI agreed to clarify the site specific nature of the Use of System Charges.

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120. DS noted that National Grid's maintenance plan becomes more critical and intrinsically coordinated the closer one moves to real time. If the Generator could not, in the event, coordinate an outage with the planned National Grid outage, finding an alternative placement becomes more and more costly and less feasible. JN believed it should be possible to agree outages subject to appropriate wording in the BCA. National Grid commented that whilst the OC2 process would be the preferred method by which outages are agreed and placed with the generator, it needs the ultimate right to take access to its transmission assets even if total agreement cannot be reached with the generator, in order to avoid a deadlock situation.
121. BM noted that an offshore generator and OFTO would need to agree site access arrangements for the offshore platform as either party may own the offshore platform.

122. AC requested that the Group keep sight of the National Grid/DNO interface in any solution. Although in comparison the equipment at the National Grid/DNO interface would require far less maintenance than at the National Grid/Generator interface, the nature of any circuit breaker fault, for example, at the National Grid/DNO interface would be very low probability but very high impact. LM agreed and confirmed that DNOs would not like to own significant numbers of GIS bays in future which otherwise would have been National Grid owned assets.

### 5. Draft Legal Text

123. TI confirmed that he would review the Legal drafting in the area of Ownership and maintenance with a view to reducing the drafting significantly in the light of the discussion under item 4 and also under item 6.

**Action: National Grid (TI)**

### 6. Working Group Report to the Grid Code Panel

124. The Group considered the comments provided to date (principally by AC and JN on the draft report circulated under cover of TI's e-mail dated 18<sup>th</sup> June.

125. Main points made during discussion on the comments were:

- The Background and Current Position section of the report (2.0) should be expanded to describe the Licensed/Unlicensed situation with regards to GIS and that the service levels would be different under the two regimes. The section should also briefly describe the access, safety and maintenance issues surrounding GIS. In terms of maintenance it would be important to manage the industry's expectations of the maintenance regime under GIS and the report could begin this process
- The Summary of Working Group discussions section of the report (3.0) referred to AIS as the "preferred solution" but several Working Group Members cast doubt on this assertion. It was agreed that National Grid would insert the actual figures for AIS and GIS employed in projects for the last 12 months in this section
- References in section 3 should be to "all relevant transmission licensees" and there should be a description of the situation in Scotland.
- There needed to be more description in Section 3 of why the Group had rejected the original options 2-5 and a clearer description of where responsibilities rested in the case of option 6. Indeed the Group suggested that it was worth revisiting all options 1-6 again in the light of where the Group had now arrived at either to reinforce the arguments as to why an option had been rejected or reconsider if an option was now more viable. The options should also be reconsidered in the context of whether they were acceptable to both Generators and DNOs
- Section 3 should explain the licence requirements on National Grid and the DNOs to ensure that equipment was procured and maintained to acceptable standards.
- Site Responsibility Schedules should be examined to establish what secondary systems (e.g. protection) were included at GIS sites so that this could be described in the report and any differences that there might be in Scotland should be highlighted
- The report should refer to the need for any changes to the charging methodologies and the need for such changes to be considered by the TCMF. The need for an RIA should also be flagged up in the report
- In section 7.0 – Impact on Core Industry Documents – this would need to summarise the changes to the Grid Code, CUSC and the STC that were envisaged for the preferred solution(s).
- The report would need to be clear on whether it was intended to apply to other lower voltage metal clad switchgear or not
- The report needed to be clearer that the preferred solution(s) applied to GIS sites involving both the Generators and the DNOs

**Action: National Grid (TI)**

### 7. Next Steps

126. It was agreed that National Grid would endeavour to revise the draft Working Group report to take into account the comments made on the draft Working Group report and the outcome of the discussion on charging and maintenance issues.

**Action: National Grid (TI)**

### 8. Date of Next Meeting/Any Other Business

127. Thursday 13<sup>th</sup> August 2009 at NGH. There was no other business.