

**GIS Issues –updated outputs from the meeting 10<sup>th</sup> June 2008**

Construction	Usage and maintenance	Enduring Ownership
<p>Single Unit Construction likely to be more cost effective – separate build of relevant assets can be undertaken but leads to interface issues which can be managed but may be impractical and add to overall costs</p>	<p>Responsibility for Operation of GIS tends to follow the ownership</p> <p>(Is this sensible and should this practice continue? To be considered further when we discuss options at the next meeting)</p>	<p>RWE proposal made to the GCRP envisages enduring ownership by National Grid. Is enduring ownership best with a single entity?</p>
<p>For new builds a single contract award for equipment and build appears to provide the most cost efficient solution overall.</p> <p>Extending existing substations creates new issues regarding adapters to connect different manufacturer equipment types or obsolete designs. Such as type testing, non-standard nature for parts and maintenance and cost.</p>	<p>Control and safety: Existing examples of the User owning the busbar in GIS and AIS and is not responsible for operation. Not necessary for National Grid to carry out the physical task of switching the assets under its control (e.g. NG instruct Scottish TOs to do switching on their systems) Many examples of DNOs operating National Grid assets and vice versa.</p> <p>May require new operational agreements</p>	<p>Liability and compensation issues to be discussed further. Parallels can be drawn with the offshore model</p> <p>In case of de-energisation caused by a fault in the gas zone should any CAP048 (compensation for interruption)?</p> <p>To be considered further when we discuss options at the next meeting</p>
<p>The backstop with AIS for each party to build user assets is more difficult with GIS due to limited competition once equipment manufacturer has been determined.</p>	<p>Instructive maintenance is very low. However there will be a requirement to undertake mechanical maintenance</p> <p>De gasing a zone occurs when a substation is extended or post fault repair</p>	<p>Consider the principle that failed switchgear within the gas zone should be replaced (promptly) by the owner (even if not the operator).</p>
<p>AIS are preferred to GIS however GIS will be used when lifetime conditions preclude AIS.</p>	<p>Switching to synchronise/desynchronise a generator was a much more dynamic activity than switching DNO circuits leading to higher maintenance costs – should the two categories be considered separately?</p> <p>New design has a separate syn. CB down stream and therefore no/limited generator assets are within the GIS substation</p> <p>The impact of the CB will depend upon its functionality / purpose</p>	<p>Are there unintended consequences for the SQSS since there is no clear definition of where the transmission system ends? In the CUSC this is “where agreed”.</p>
<p>May result in higher User charges with GIS but overall benefits on safety and maintenance may not be currently reflected in the charges I.e. land costs (a potentially significant issue in the south east?).</p> <p>(Charging implications to be considered further at subsequent meetings and an expert from National Grid could be invited to attend but technically out of scope for the working group.)</p>	<p>Any change of ownership arrangements to reflect GIS should not impact upon operational arrangements</p>	<p>Are enduring ownership considerations different at DNO and Generator sites?</p>

<p>What are the issues associated with commissioning?</p> <p>On occasions generators have undertaken commissioning and building prior to when they would have liked due to the cost impacts of not constructing at the same time of the majority substation owner.</p> <p>To be discussed further, if required.</p>	<p>If the majority of GIS maintenance costs fall on the generator then should the generator operate the GIS?</p> <p>What are the overall maintenance costs for GIS? Are they different depending on who owns and operates? The only difference in cost is economies of scale as transmission and distribution companies will have more GIS assets to maintain</p>	<p>DNOs did not believe that they had heard convincing evidence for them to change from their existing arrangements (under which a single party, often the DNO, owns the busbars section on the transmission side on an enduring basis).</p>
<p>What are the issues associated with decommissioning?</p> <p>Paul Coventry provided examples during his presentation</p> <p>To be discussed further, if required.</p>	<p>Reductions in the voltage at which generators will be synchronised is likely to be more common in future – implications for GIS?</p>	<p>Appropriate charging arrangements would need to be put in place that were non-discriminatory on an enduring basis.</p>
		<p>Impacts on the Licence(s) needs to be considered to accommodate any changes the ownership of “transmission” assets by another licensee?</p>