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Workgroup Consultation Response Proforma

GC0168: Submission of Electro Magnetic Transient (EMT) Models

Industry parties are invited to respond to this consultation expressing their views and supplying the rationale for those views, particularly in respect of any specific questions detailed below.

Please send your responses to grid.code@nationalenergyso.com **5pm on 21 February 2025**. Please note that any responses received after the deadline or sent to a different email address may not receive due consideration.

If you have any queries on the content of this consultation, please contact grid.code@nationalenergyso.com

Respondent details	Please enter your details	
Respondent name:	John Harrower	
Company name:	SSE Generation	
Email address:	john.harrower@sse.com	
Phone number:	01387 341738	
Which best describes your organisation?	<input type="checkbox"/> Consumer body <input type="checkbox"/> Demand <input type="checkbox"/> Distribution Network Operator <input checked="" type="checkbox"/> Generator <input type="checkbox"/> Industry body <input type="checkbox"/> Interconnector	<input type="checkbox"/> Storage <input type="checkbox"/> Supplier <input type="checkbox"/> System Operator <input type="checkbox"/> Transmission Owner <input type="checkbox"/> Virtual Lead Party <input type="checkbox"/> Other

I wish my response to be:

(Please mark the relevant box)

☒ **Non-Confidential** (this will be shared with industry and the Panel for further consideration)

☐ **Confidential** (this will be disclosed to the Authority in full but, unless specified, will not be shared with the Workgroup, Panel or the industry for further consideration)

For reference the Applicable Grid Code Objectives are:

- To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity
- Facilitating effective competition in the generation and supply of electricity (and without limiting the foregoing, to facilitate the national electricity transmission system being made

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available to persons authorised to supply or generate electricity on terms which neither prevent nor restrict competition in the supply or generation of electricity);

- c) *Subject to sub-paragraphs (i) and (ii), to promote the security and efficiency of the electricity generation, transmission and distribution systems in the national electricity transmission system operator area taken as a whole;*
- d) *To efficiently discharge the obligations imposed upon the licensee by this license* and to comply with the Electricity Regulation and any relevant legally binding decisions of the European Commission and/or the Agency; and*
- e) *To promote efficiency in the implementation and administration of the Grid Code arrangements*

* See Electricity System Operator Licence

Please express your views in the right-hand side of the table below, including your rationale.

Standard Workgroup Consultation questions				
1	Do you believe that the Original Proposal and/or any potential alternatives better facilitate the Applicable Objectives?	<p>Mark the Objectives which you believe the Original Solution better facilitates:</p> <table border="1"> <tr> <td>Original</td> <td><input checked="" type="checkbox"/>A <input type="checkbox"/>B <input checked="" type="checkbox"/>C <input type="checkbox"/>D <input type="checkbox"/>E</td> </tr> </table> <p>We believe that this modification better facilitates objective A and to a lesser extent, objective C. We believe that it is neutral with respect to objectives B, D and E.</p>	Original	<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input checked="" type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E
Original	<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input checked="" type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E			
2	Do you support the proposed implementation approach?	<p><input checked="" type="checkbox"/>Yes with the below caveats</p> <p><input type="checkbox"/>No</p> <p>We would only support the implementation approach if the following is taken into account:</p> <ul style="list-style-type: none"> - the guidance, proposed to sit within the suite of electrical standards, must take into account the difficulties of obtaining EMT models of legacy plant - the cost recovery mechanism (which is considered essential) must be both clear and sufficient to ensure that legitimate costs are recoverable. 		
3	Do you have any other comments?	Click or tap here to enter text.		
4	Do you wish to raise a Workgroup	<input type="checkbox"/> Yes (the request form can be found in the Workgroup Consultation Section)		

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	Consultation Alternative Request for the Workgroup to consider?	<input checked="" type="checkbox"/> No
		N/A
5	Do you agree the Workgroup's assessment that GC0168 does not impact the European Electricity Balancing Regulations (EBR) Article 18 terms and conditions held within the Grid Code?	<input type="checkbox"/> Yes <input type="checkbox"/> No
		No comment
6	Do you have any comments on the Impact of GC0168 on the EBR Objectives?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Click or tap here to enter text.

Specific Workgroup Consultation questions

7	Do you believe it is reasonable to require those Users identified in the draft legal text in PC.A.9.2.2 to provide an EMT model when requested by the NESO noting the importance of accurate modelling on power system design, operation and post event analysis?	<input checked="" type="checkbox"/> Yes with the below reservations <input type="checkbox"/> No
		It is reasonable to define an approach to obtain models (including from legacy plant) which may be required to accurately assess the current electricity network. However, any requirement (the guidance of which is proposed to be detailed within the suite of electrical standards) must take into account the inherent difficulties in retrospectively obtaining models from plant, some of which is several decades old (our oldest power station has been connected to the transmission system for over 95 years).

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		<p>Difficulties which may be encountered include limited data available on plant from which to build a model, Original Equipment Manufacturers (OEMs) no longer in existence, Intellectual Property sharing difficulties, OEM/modelling consultant's resource (which relates to the timescale requirements) and prohibitive costs (which relates to the cost recovery mechanism, yet to be detailed).</p> <p>Any requirement must offer a pragmatic approach in the event that practical difficulties associated with legacy plant are encountered by the User and should consider acceptable alternatives (e.g. accuracy requirements, generic models). It should be noted that in a large number of cases, the plant under consideration will have years, if not many decades of acceptable operational performance.</p>
8	Do you believe the timelines proposed for the submission of an EMT model as drafted in PC.A.9.2.2.1 are appropriate?	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No with the below caveat</p> <p>While, in principle, we don't have an issue with "target" submission timescales, it should be acknowledged (and reflected in the legal text) that there may be practical impediments outside of the control of the User that prevent either a timely submission or, in some cases, any submission.</p> <p>This could include data gathering timescales, external resource constraints and confidentiality discussions. As an example, we have experience of model exchange difficulties relating to intellectual property taking several months to resolve. Users must not be penalised for any reasonable delays experienced.</p>
9	Do you believe that it is appropriate to set out the remuneration and cost recovery provision of the models in the CUSC?	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p>The CUSC would appear to be the correct location. As stated above, it is imperative that the process to recover costs is both transparent and allows for sufficient costs to be recovered. This should take into account both the provision of the model and any testing and validation work required.</p>

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		The cost recovery mechanism established, via CMP398, within the CUSC would be a good model to follow in the case of GC0168.
10	Do you believe it is appropriate to define the detail of the model submission in an Electrical Standard rather than in a specific part of the Grid Code, or as a separate guidance note. If you do not believe this to be the case, please state why you would support an alternative approach?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No We believe that this strikes the correct balance between administrative burden (if codified) and governance.
11	As part of the electrical standard, it is expected that an EMT model would be submitted in PSCAD Version 5. Do you have any views on this approach and if so, please state what they are?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Click or tap here to enter text.
12	Do you believe that the timeline proposed for the Workgroup meetings and target date of September 2025 are reasonable?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Click or tap here to enter text.
13	Does this proposal deal adequately with LEEMPs?	<input type="checkbox"/> Yes <input type="checkbox"/> No No comment
14	Please could you share your rationale for a cost-recovery mechanism to be put in place supported by evidence, where available. If no cost	<input type="checkbox"/> Yes <input type="checkbox"/> No It is imperative that a transparent and suitable cost recovery mechanism is put in place to ensure legitimate costs are

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	recovery mechanism were available, what do you believe the implications would be?	recoverable. As this proposed modification is retrospective, existing plant would not have forecast this cost, which could be significant. If no cost recovery mechanism were available, the quality of models obtained could be lower, defeating the main purpose of this modification.
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