

## Grid Code Administrator Consultation Response Proforma

### GC0143: 'Last resort disconnection of Embedded Generation'

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

Please send your responses by **17:00** on **5 May 2020** to [grid.code@nationalgrideso.com](mailto:grid.code@nationalgrideso.com). Please note that any responses received after the deadline or sent to a different email address may not be included within the Final Modification Report to the Authority.

Any queries on the content of the consultation should be addressed to Christine Brown at [christine.brown1@nationalgrideso.com](mailto:christine.brown1@nationalgrideso.com)

These responses will be included within the Draft Grid Code Modification Report to the Grid Code Panel and within the Final Grid Code Modification Report to the Authority.

<b>Respondent:</b>	<i>Eddie Wilkinson</i> <i>CEO – Energy Power Resources Limited</i> <i>07736 909 104</i> <i>Eddie.wilkinson@eprl.co.uk</i>
<b>Company Name:</b>	<i>Energy Power Resources Limited</i>
<b>Please express your views regarding the Code Administrator Consultation, including rationale.</b> <b>(Please include any issues, suggestions or queries)</b>	<i>For reference, the Applicable Grid Code objectives are:</i>  (a) To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity;  (b) Facilitating effective competition in the generation and supply of electricity (and without limiting the foregoing, to facilitate the national electricity transmission system being made 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;

	<p>(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</p> <p>(e) To promote efficiency in the implementation and administration of the Grid Code arrangements.</p>
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### Code Administrator Consultation questions

Q	Question	Response
1	<b>Do you believe GC0143 better facilitates the Grid Code Objectives? Please include your reasoning.</b>	No comment.
2	<b>Do you support the proposed implementation approach?</b>	<p>No we do not support this implementation approach. This appears to be a “one size fits all” approach, treating all embedded generation identically without proper consideration of the specific assets at risk of being disconnected or the broader risks and impacts.</p> <p>Energy Power Resources Limited (“EPRL”) owns and operates five biomass power stations.</p> <p>These are thermal plant and as such generally are not able to safely shut down in the timescales required. The shut-down and start-up process also creates risk of potential damage to plant. Further, these power stations are fuelled with the residues from the food chain (1 million tonnes per annum – mainly chicken but also meat production) and need to operate as a disposal route on a continuous 24/7 basis. Any disruption to the generation process has the potential to create backlogs in, and issues for, the food supply chain.</p> <p>Accordingly, we believe a more refined approach is required. An approach which includes proper consideration of (i) environmental factors; (ii) risks to food supply chain; and (iii) risk to plant and equipment. Further, the implementation approach needs to be clearly set out and fully understood by each DNO.</p>

3	<p><b>Do you have any other comments in relation to GC0143?</b></p>	<p>An unplanned disconnection of a site from the distribution network will cause a site blackout, which may take several hours to restore. Any blackout will cause an unplanned shutdown of the boilers and is likely to result in a period of increased emissions of CO, TOC, and dioxins and furans while waste burns on the grate without sufficient air for complete combustion. Further, there is increased risk to staff during their normal duties as well as potential risk from equipment failure during what is essentially an unplanned event. Disconnection of biomass plants will result in those plants entering a heightened level of instability, with multiple safety devices and systems being called into operation.</p> <p>Operating at full load followed by immediate disconnection heightens the risk of potential failure of the plant due to the thermal shock which could result in the plants requiring significant maintenance intervention and unplanned shutdowns for a significant period of time with potential for permanent damage to be caused to critical plant such as turbine and associated gearboxes.</p> <p>There will also be an increased risk of having the power stations offline for an extended period (due to the impacts of the thermal shock) and/or to operate at reduced load. In turn this would have a knock-on effect on the food supply chain and could create a public health exposure and environmental impact through increased stockpiling of biomass fuels such as poultry litter.</p> <p>Further, as the plants operate in a similar fashion to conventional plant generation plant, our power stations provide the opportunity for the DNOs to regulate system voltage in local networks in a similar fashion to that of the larger transmission connected generators, thereby providing greater stability to the grid.</p> <p>Finally, it is implied that an embedded generator that is switched off through this mechanism will not be compensated, unlike larger plants that receive curtailment payments. If this is correct, this is a significant commercial issue and should be addressed.</p>
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Q	Question	Response