

## Distribution Code Consultation Response Proforma

### DCRP/21/02/PC: Distribution Code EREC G100 Issue 2: Technical Requirements for Customers' Export and Import Limitation Schemes

---

Stakeholders are invited to respond to this consultation, expressing their views or providing any further evidence on any of the matters contained within the consultation document. Stakeholders are invited to supply the rationale for their responses to the set questions.

Please send your responses and comments by **17:00, 3<sup>rd</sup> December 2021** to [dcode@energynetworks.org](mailto:dcode@energynetworks.org) and please title your email 'Consultation Response DCRP/21/02/PC – EREC G100 Issue 2'. Please note that any responses received after the deadline may not receive due consideration by the Working Group.

Any queries on the content of the consultation pro-forma should be addressed to DCode Administrator on 020 7706 5105, or to [dcode@energynetworks.org](mailto:dcode@energynetworks.org)

<b>Respondent</b>	<i>Dr Chris Horne</i>
<b>Company Name</b>	<i>myenergi Ltd</i>
<b>No. of DCode Stakeholders Represented</b>	<i>One</i>
<b>Stakeholders represented</b>	<i>myenergi Ltd</i>
<b>Role of Respondent</b>	<i>Manufacturer</i>

## Distribution Code Consultation Response Proforma

<b>We intend to publish the consultation responses on the DCode website. Do you agree to this response being published on the DCode website? [Y/N]</b>	Yes
--	-----

	Question	Response
Q1	Do you agree with the general intent of the proposed modification? If not, please explain your views.	<i>Yes – we welcome the development of G100 to provide a consistent approach to both generation and load limitation, and in particular the intention to make it straightforward for manufacturers, equipment suppliers and installers to install equipment such as EV chargers, batteries and heat pumps in domestic properties.</i>
Q2	Do you agree that the revised EREC G100 should be included in the Distribution Code (as a new requirement by reference in DPC6), be listed in Annex 1 and included under Distribution Code governance in the future?	<i>We are not qualified to respond to this question without further exploring the consequences of including the revised EREC G100 in the Distribution Code Annex 1.</i>
Q3	Do you agree that the proposed modifications satisfy the applicable Distribution Code objectives? If not, please explain your concerns.	Yes
Q4	Do you support the formal description of the states of operation and the migration between them?	Yes
Q5	Do you agree with the fail safe approach, and with the excessive state 2 operation criteria? If not, would you propose different criteria?	Yes

# Distribution Code Consultation Response Proforma

	Question	Response
Q6	Do you agree with the proposed approach to resetting the limitation scheme and recovering from state 3? In particular do you agree that it is appropriate to distinguish the capability to reset the CLS between domestic and commercial/industrial installations? An alternative would be to make a distinction between fully type tested CLSs and those which are not fully type tested; the WG would be interested in views on this.	Yes
Q7	Do you agree with the revised design limits? Do you support the thresholds now proposed?	<p><i>Partially.</i></p> <p><i>For domestic installations it may be impractical to measure the voltage at the Connection Point, particularly where the CLS is built into the EVSE. Voltage measurement within the EVSE is reasonable but will be subject to the voltage drop on the cable to the EVSE, which may be several volts. These restrictions need to be recognised in the drafting. Potential options (for Domestic Installations) include:</i></p> <ul style="list-style-type: none"> <li><i>- Removing the voltage based thresholds for domestic installations (recognising that these are already covered by G98/G99 for generation sites)</i></li> <li><i>- Removing the overvoltage threshold for Import Only CLS.</i></li> </ul> <p><i>Allowing the voltage at the Connection Point to be inferred by the EVSE based on the current flowing to the EV. (The actual method used by the EVSE to calculate the voltage drop in the supply cable should not be explicitly stated in the Engineering Recommendation, but it may be reasonable to include demonstration of the feature in the Manufacturer's Type Test requirements)</i></p>
Q8	Do you support the approach to communication media? Do you agree with the suggested approach to cyber security?	Yes
Q9	Do you have any comments on the requirement to monitor the integrity of the secondary circuit of the current transformers used?	<p><i>Yes. The current transformer is a critical part of the CLS and the CLS must move to mode 3 if there are any problems with the CT, including</i></p> <ul style="list-style-type: none"> <li><i>- disconnection of the CT (particularly important in domestic installations where the CT will normally be clipped around the meter tail. It is common for the CT to be removed by the meter fitter when meters are replaced or upgraded to smart meters)</i></li> </ul>

## Distribution Code Consultation Response Proforma

	Question	Response
		<p>- <i>disconnection or damage to the secondary wiring from the CT to the CLS control unit</i></p> <p><i>As drafted, we believe that the integrity of the CT and secondary wiring are covered by 4.5.1</i></p>
Q10	Do you support the approach proposed for multiple limitation devices installed in a single premise?	Yes
Q11	Do you have any comments on the proposals for domestic installations?	<p><i>No additional comments other than stated already:</i></p> <p><i>Q16 – Threshold for recording a Mode 2 excursion to be increased to 15 seconds</i></p> <p><i>Q7 – Drafting needs to be changed to reflect that it is not practical to measure the voltage at the Connection Point in a Domestic Installation</i></p>
Q12	Do you have any comments on the proposed type testing regime?	No
Q13	Is there the right balance of principle and detail in Section 5 on testing? Do you have any detailed comments on how testing should be prescribed?	<i>On first reading the balance appears correct, however this view may change once practical type testing is carried out.</i>
Q14	Do you agree that the addition Figure 0-1 in the Introduction of EREC G100 aids understanding of the relationship between EREC G100 and flexibility services that the customer might be providing? If not, can you suggest any improvements?	Yes
Q15	Do you agree with requirement in EREC G100 to only provide a schematic diagram, with any operational diagram for generation remaining to be as specified in EREC G99 (or G98, 59 or 83)?	Yes
Q16	Do you agree that the 5s period before an excursion into state 2 is registered is appropriate? If not, please state what you think might be an appropriate approach.	<p>No.</p> <p><i>We are very pleased that the points we made in the first consultation regarding short transient excursions in Domestic Installation have been recognised, however the 5 second threshold is too short if the CLS is controlling the load supplied to an EV via the EV Supply Equipment (EVSE).</i></p> <p><i>For an AC EVSE, the power/current flow is controlled by the power electronics in the onboard charger in the EV.</i></p>

## Distribution Code Consultation Response Proforma

	Question	Response
		<p><i>According to IEC 61851-1 (Table A.6; Sequence 6) the EV has up to 5 seconds to respond to a change in the PWM control signal from the EVSE – so it is reasonable to expect that some EV's will only start to respond within the 5 second window currently allowed in the drafting of EREC G100. This was demonstrated in the tests conducted with a Jaguar I-Pace (paper attached) where the EV onboard charger brought the current back within State 1 limits within 10 seconds.</i></p> <p><b><i>Where the CLS is built into, or designed to work with an EVSE, then the threshold for recording the State 2 excursion should be increased to 15 seconds in order to avoid unnecessary Mode 3 operations.</i></b></p> <p><i>Of course the CLS should always react immediately if the MEL/MIL is exceeded – these thresholds are only applicable to the tests for excessive Mode 2 operation</i></p>
Q17	Do you agree that is appropriate to allow remote resetting of state 3?	Yes
Q18	Do you agree that fully type tested CLSs should be tested at three current settings, viz maximum, minimum and one intermediate point? If not please suggest.	Yes.
Q19	If you have any detailed comments on the proposed drafting, please provide those comments in the proforma provided, or by marking up the consultation draft of G100.	<i>No additional comments</i>

# Distribution Code Consultation Response Proforma

Please provide comments relating to the specific technical content of the proposed modifications<sup>1</sup>

Page / line No	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS OF THE SECRETARIAT on each comment submitted
						See comments above.

---

<sup>1</sup> Add more rows if required

# Distribution Code Consultation Response Proforma

---