

Grid Code Modification Proposal Form

Email to gridcode@eirgrid.com



Title of Modification Proposal:

Clarification to Grid-connected Transformer Neutral Earthing Requirements

MPID (EirGrid Use Only): MPID 272

Date: 16th January 2018

Company Name: EirGrid

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Grid Code Version: 6.0

**Grid Code Section(s)
Impacted by Modification
Proposal:** Connection Conditions
CC.7.2.5.3.1 & CC.7.2.5.3.2

Modification Proposal Justification:

This modification is required to align EirGrid TSO requirements for Grid-Connected Transformer Neutral Earthing across 110 kV and 220 kV applications. Individual applicants will be advised via their Connection Offer as to their specific requirements which will serve to remove any ambiguity that may exist. This is required for the management of single phase to ground short circuit levels at connection points and at surrounding network nodes. *For the avoidance of doubt this modification proposal only applies to generator and demand customer's transformers. This proposal does not apply to Transformer located at the TSO-DSO boundary.*

Red-line Version of Impacted Grid Code Section(s) - show proposed changes to text:

Deleted text in ~~strike-through-red font~~ and new text highlighted in *blue font*

CC.7.2.5.3.1 *Demand customers and Generators are advised that provision should be made for the earthing of the neutral of each of their Transformers connected to the 110 kV System by bringing out the neutral and ensuring that the insulation is such that these Transformers can be operated unearthed.*

The TSO will consider on a case by case basis the required treatment of the 110kV neutral connection of these Transformers. A 110 kV Neutral Earth Switch may be required to be installed in specific instances and Demand Customers or Generators, as applicable, will be advised of this at the time of the Connection Offer. The TSO will be responsible for the status of the 110 kV Neutral Earth Switch on these Transformers. For the avoidance of doubt, this clause does not apply to Transformers located at the TSO-DSO, boundary where such issues are agreed between the TSO and DSO.

CC.7.2.5.3.2 *Demand customers and Generators are advised that provision should be made for the earthing of the neutral of each of their Transformers connected to the 220 kV System by bringing out the neutral- and ensuring that the insulation is such that these Transformers can be operated unearthed. The TSO will consider on a case by case basis if the Transformer is required to be operated with the 220kV neutral unearthed.-the required treatment of the 220kV neutral connection of these Transformers. A 220 kV Neutral Earth Switch may be required to be installed in specific instances.-Applicants and*

*Demand Customers or Generators, as applicable, will be advised of this at the time of the **Connection Offer**. The **TSO** will be responsible for the status of the 220 kV Neutral Earth Switch on these **Transformers**. For the avoidance of doubt, this clause does not apply to **Transformers** located at the **TSO-DSO** boundary, where such issues are agreed between the **TSO** and **DSO**.*

Green-line Version of Impacted Grid Code Section(s) - show proposed final text:

*CC.7.2.5.3.1 **Demand customers** and **Generators** are advised that provision should be made for the earthing of the neutral of each of their **Transformers** connected to the 110 kV **System** by bringing out the neutral and ensuring that the insulation is such that these **Transformers** can be operated unearthed.*

*The **TSO** will consider on a case by case basis the required treatment of the 110kV neutral connection of these **Transformers**. A 110 kV Neutral Earth Switch may be required to be installed in specific instances and **Demand Customers** or **Generators**, as applicable, will be advised of this at the time of the **Connection Offer**. The **TSO** will be responsible for the status of the 110 kV Neutral Earth Switch on these **Transformers**. For the avoidance of doubt, this clause does not apply to **Transformers** located at the **TSO-DSO** boundary, where such issues are agreed between the **TSO** and **DSO**.*

*CC.7.2.5.3.2 **Demand customers** and **Generators** are advised that provision should be made for the earthing of the neutral of each of their **Transformers** connected to the 220 kV **System** by bringing out the neutral- and ensuring that the insulation is such that these **Transformers** can be operated unearthed. The **TSO** will consider on a case by case basis the required treatment of the 220kV neutral connection of these **Transformers**. A 220 kV Neutral Earth Switch may be required to be installed in specific instances-and **Demand Customers** or **Generators**, as applicable, will be advised of this at the time of the **Connection Offer**. The **TSO** will be responsible for the status of the 220 kV Neutral Earth Switch on these **Transformers**. For the avoidance of doubt, this clause does not apply to **Transformers** located at the **TSO-DSO** boundary, where such issues are agreed between the **TSO** and **DSO**.*