



Transformer Neutral Earthing Arrangements

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EirGrid GCRP

Lisa McMullan



History of Modification

- Presented to the EirGrid GCRP 14th September
- DSO concern re: DSO transformers connected to TSO system neutral earth arrangements
- DSO / TSO engagement and revised text

Background

- Align neutral earthing arrangements across 110kV & 220kV transformers
- Neutral earths are required for the management of single phase to ground s/c levels @ connection point
- Connection agreements set out specific requirements
 - This clarifies how CA & GC interact

Modification Text – 110kV Requirements

- 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.*

Modification Text – 220kV Requirements

- 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**.

THOUGHTS???

