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Essential Services Commission  
Electricity Distribution Code review  
Topic: Star connected Voltage transformers with the neutral point earthed are effectively excluded from 22KV REFCL networks.

Dear Sir/Madam,

it is common practice to connect the high side of voltage transformers in star and earth the neutral point. When REFCL operates one voltage transformer has close to zero volts across and two have close to phase/phase voltage.

Resonate earthed systems are not uncommon, REFCL is little more than a fancy version with electronics tuning the circuit so the fault current is close to zero.

Because resonate earthing systems are not uncommon there are voltage transformer standards that require units to survive phase to phase voltage for the maximum times allowed under various European regulations. Austria allows 8 hours so the fault can be found without loss of supply.

Victoria has placed no limit on the time a system is allowed to operate with a phase to earth fault, effectively ignoring over 100 years of European experience and the standards developed. The Victorian supply standard creates a situation where a standard solution cannot be guaranteed to survive on a REFCL network. Aside from the technical issues it really has a very unprofessional look about it.

Is the Essential Services Commission trying to create an environment that allows different parties to build what is a complex system with some confidence? Because of this oversight the current supply standard does not serve this purpose.

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