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Reference: **881**

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Type:

**Technical Brochures**

Title:

**Electromagnetic transient simulation models for large-scale system impact studies in power systems having a high penetration of inverter-connected generation**

This Technical Brochure discusses detailed and systematic whole-system power system modelling based on electromagnetic transient (EMT) simulation. This is primarily intended for large power systems with a high penetration of inverter-based resources (IBR) where the conventional phasor-domain simulation tools may fall short as demonstrated by several practical examples. The level of details to be included in an IBR EMT model to make it suitable for wide-area system impact studies is then discussed. Approaches for systematic development and testing of the whole-system EMT models is also discussed. Lastly, the TB presents several practical case studies on how these wide-area EMT models have been used across the world and the insight provided by them which could not have been otherwise provided by conventional phasor-domain models.

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More Informations :

**File Size:**13,8 MB **Pages NB:**188 **Study Committee :** C4 **WG (TF):**WG C4.56 **Year:**2022

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