

# IEEE PES Task Force on Benchmark Systems for Stability Controls

## Simplified 14-Generator Model of the South East Australian Power System:

(Including implementations in Mudpack for small-signal analysis and PSS/E for transient-stability analysis)

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The loadflow and dynamics model data for the simplified 14 generator model of the South East Australian system is provided in the archive file AU14GenModelData\_Ver04.zip. The contents of the archive are summarized in the following table.

**Table 1** Contents of “AU14GenModelData\_Ver04.zip”

File	Description
LF_Case0<n>_R4_S.raw	PSS/E [1] loadflow data files in PSS/E version 29 raw data format <sup>a</sup> for cases <n> = 1,2,...6.
LF_Case0<n>_R4_Report.txt	Loadflow solution report for cases <n> = 1,2,...6. The loadflow solution is obtained with PSS/E based on the above loadflow raw data input files.
MP_DYN_Case0<n>.dat	Mudpack [2] dynamics data files for cases <n> = 1,2,...6.
PSSE_DYN_Case0<n>.dat	PSS/E [1] dynamics data files for cases <n> = 1,2,...6.
SequenceData.seq	Network sequence impedance data in PSS/E [1] compatible format.
PSSE_SimulationParameters.txt	Values of key PSS/E simulation parameters.

- a. The specification of the Siemens-PTI PSS/E version 29 loadflow raw data format is available by application from Siemens-PTI at the following web-site <http://w3.usa.siemens.com/smartgrid/us/en/transmission-grid/products/grid-analysis-tools/transmission-system-planning/Pages/PSSERawData-Format.aspx>

[1] *PSS/E Version 32, Program Operation Manual*: Siemens, June 2009.  
Siemens-PTI PSS/E web address:

<http://w3.usa.siemens.com/smartgrid/us/en/transmission-grid/products/grid-analysis-tools/transmission-system-planning/Pages/transmission-system-planning.aspx>

- [2] Vowles, D.J. and Gibbard, M.J., “Mudpack - a software package for the analysis of the small-signal dynamic performance and control of large electric power systems”, School of Electrical & Electronic Engineering, The University of Adelaide, South Australia.