

TechNote Generators

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Generator Model 3 Issues

April 15, 2001

The DSS stumbles when there is more than one Generator with Model=3 connected to the same bus. It works, but is more problematic when the solution is difficult to converge. I found that consolidating all generators into one will fix the problem and it will converge quickly to a better answer. This is the generator model that emulates the P-V bus model of conventional power flows. It needs to know the dQ/dV at a bus, which it can determine. However, there is no algorithm to divide that among N generators. Therefore, it takes a little longer to converge if there are several generators trying to regulate the same bus. And sometimes, it misses entirely. You can run into this problem when converting PSS/E data, which can have several generators regulating the same bus.

May 23, 2001

There seems to be a problem with the Generator model for attempting a model=3 for a 1-phase generator model. Doesn't converge well so there may be a problem with the dQ/dV calc for 1-phase. Works OK for 3-phase as long as only one generator controlling a bus.

--Rdugan 20:54, 1 October 2010 (UTC)

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