Modeling and Analysis of a Grid-Connected Hybrid Power System with Wind and Solar PV Integration

LOAD FLOW REPORT

Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	% PF	% Tap
* Bus1	34.500	146.070	0.0	-3.105	-1.860	0	0	Bus2	-3.105	-1.860	41.5	85.8	
Bus2	4.160	146.635	0.3	0	0	0.000	2.150	Bus1	3.106	1.884	343.9	85.5	
								Bus7	-2.198	0.247	209.3	-99.4	
								Bus12	-0.891	0.016	84.3	-100.0	
								Bus14	-0.018	0.003	1.8	-98.3	
* Bus3	0.600	147.838	2.4	0.230	0.001	0	0	Bus4	-1.994	0.170	1302.3	-99.6	
								Bus7	2.223	-0.169	1451.2	-99.7	
* Bus4	0.600	148.789	3.0	0.225	0.003	0	0	Bus5	-1.783	0.154	1157.4	-99.6	
								Bus3	2.008	-0.151	1302.3	-99.7	
* Bus5	0.600	149.631	3.5	0.600	0.240	0	0	Bus6	-1.194	0.379	805.9	-95.3	
								Bus4	1.794	-0.139	1157.4	-99.7	
Bus6	0.600	150.000	3.9	1.200	-0.372	0	0	Bus5	1.200	-0.372	805.9	-95.5	
Bus7	0.600	146.782	1.7	0	0	0	0	Bus3	-2.205	0.192	1451.2	-99.6	
								Bus2	2.205	-0.192	1451.2	-99.6	
Bus8	0.600	149.096	1.5	0.225	0.000	0	0	Bus9	0.225	0.000	145.2	100.0	
Bus9	0.600	148.615	1.4	0.225	0.000	0	0	Bus8	-0.224	0.000	145.2	100.0	
								Bus10	0.449	0.000	290.9	100.0	
Bus10	0.600	147.651	1.3	0.225	0.000	0	0	Bus9	-0.446	0.001	290.9	100.0	
								Bus11	0.671	-0.001	437.5	100.0	
Bus11	0.600	147.294	1.1	0.225	0.000	0	0	Bus10	-0.670	0.003	437.5	100.0	
								Bus12	0.895	-0.003	584.5	100.0	
Bus12	0.600	146.820	0.9	0	0	0	0	Bus11	-0.892	0.007	584.5	100.0	
								Bus2	0.892	-0.007	584.5	100.0	
Bus14	0.220	146.634	0.3	0.018	-0.003	0	0	Bus2	0.018	-0.003	33.2	-98.3	

* Indicates a voltage regulated bus (voltage controlled or swing type machine connected to it)

# Indicates a bus with a load mismatch of more than 0.1 MVA