

IEEE 33 BUS TEST SYSTEM DATA

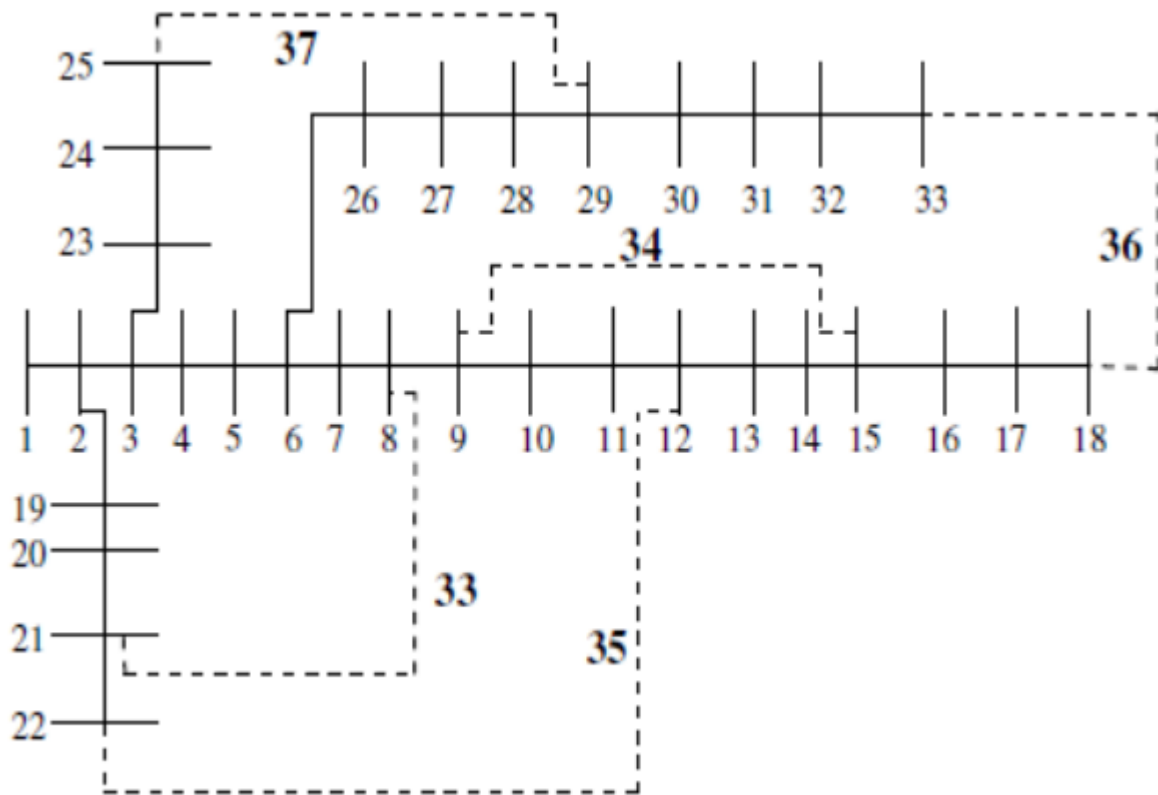


Fig. 2 33 Bus system before reconfiguration

Table 1. Data for 33-bus test system [4]

Branch	Sending end	Receiving end	Resistance in ohms	Reactance in ohms	Active power load in kW	Reactive power load in kVAr
1	1	2	0.0922	0.0470	100.00	60.00
2	2	3	0.4930	0.2511	90.00	40.00
3	3	4	0.3660	0.1864	120.00	80.00
4	4	5	0.3811	0.1941	60.00	30.00
5	5	6	0.8190	0.7070	60.00	20.00
6	6	7	0.1872	0.6188	200.00	100.00
7	7	8	1.7114	1.2351	200.00	100.00
8	8	9	1.0300	0.7400	60.00	20.00
9	9	10	1.0440	0.7400	60.00	20.00
10	10	11	0.1966	0.0650	45.00	30.00
11	11	12	0.3744	0.1238	60.00	35.00
12	12	13	1.4680	1.1550	60.00	35.00
13	13	14	0.5416	0.7129	120.00	80.00
14	14	15	0.5910	0.5260	60.00	10.00
15	15	16	0.7463	0.5450	60.00	20.00
16	16	17	1.2890	1.7210	60.00	20.00
17	17	18	0.7320	0.5740	90.00	40.00
18	2	19	0.1640	0.1565	90.00	40.00
19	19	20	1.5042	1.3554	90.00	40.00
20	20	21	0.4095	0.4784	90.00	40.00
21	21	22	0.7089	0.9373	90.00	40.00
22	3	23	0.4512	0.3083	90.00	50.00
23	23	24	0.8980	0.7091	420.00	200.00
24	24	25	0.8960	0.7011	420.00	200.00
25	6	26	0.2030	0.1034	60.00	25.00
26	26	27	0.2842	0.1447	60.00	25.00
27	27	28	1.0590	0.9337	60.00	20.00
28	28	29	0.8042	0.7006	120.00	70.00
29	29	30	0.5075	0.2585	200.00	600.00
30	30	31	0.9744	0.9630	150.00	70.00
31	31	32	0.3105	0.3619	210.00	100.00
32	32	33	0.3410	0.5302	60.00	40.00
Tie Line Data						
33	21	8	0.0000	2.0000		
34	9	15	0.0000	2.0000		
35	12	22	0.0000	2.0000		
36	18	33	0.0000	0.5000		
37	25	29	0.0000	0.5000		