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LOAD FLOW REPORT

Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
* Bus2	33.000	100.000	0.0	8.420	4.125	0	0	Bus3	8.420	4.125	164.0	89.8	
Bus3	33.000	99.977	0.0	0	0	0	0	Bus2	-8.418	-4.124	164.0	89.8	
								Bus4	0.031	0.016	0.6	88.8	
								Bus7	8.387	4.108	163.4	89.8	
Bus4	33.000	99.977	0.0	0	0	0	0	Bus3	-0.031	-0.016	0.6	88.5	
								Bus5	0.031	0.016	0.6	88.5	
Bus5	33.000	99.977	0.0	0	0	0	0	Bus6	0.031	0.016	0.6	88.5	
								Bus4	-0.031	-0.016	0.6	88.5	
Bus6	33.000	99.971	0.0	0	0	0	0	Bus5	-0.031	-0.021	0.7	82.6	
								Bus230	0.031	0.021	0.7	82.6	
Bus7	33.000	99.219	0.0	0	0	0	0	Bus3	-8.323	-4.079	163.4	89.8	
								Bus8	8.195	4.036	161.1	89.7	
								Bus231	0.128	0.043	2.4	94.8	
Bus8	33.000	98.080	0.0	0	0	0	0	Bus7	-8.101	-3.994	161.1	89.7	
								Bus9	8.077	3.986	160.7	89.7	
								Bus233	0.024	0.008	0.4	94.7	
Bus9	33.000	97.986	0.0	0	0	0	0	Bus8	-8.069	-3.982	160.7	89.7	
								Bus10	8.069	3.982	160.7	89.7	
Bus10	33.000	97.986	0.0	0	0	0	0	Bus11	8.069	3.982	160.7	89.7	
								Bus9	-8.069	-3.982	160.7	89.7	
Bus11	33.000	97.824	0.0	0	0	0	0	Bus10	-8.056	-3.976	160.7	89.7	
								Bus12	8.056	3.976	160.7	89.7	
Bus12	33.000	96.089	-1.9	0	0	0	0	Bus13	8.039	3.639	160.7	91.1	
								Bus11	-8.039	-3.639	160.7	91.1	
Bus13	33.000	95.644	-1.9	0	0	0	0	Bus12	-8.002	-3.623	160.7	91.1	
								Bus14	7.918	3.603	159.1	91.0	
								Bus234	0.084	0.020	1.6	97.2	
Bus14	33.000	95.115	-1.9	0	0	0	0	Bus13	-7.875	-3.583	159.1	91.0	
								Bus15	7.789	3.560	157.5	91.0	
								Bus235	0.086	0.023	1.6	96.5	
Bus15	33.000	94.822	-1.9	0	0	0	0	Bus14	-7.766	-3.549	157.5	91.0	
								Bus16	7.766	3.549	157.5	91.0	
Bus16	33.000	94.642	-1.9	0	0	0	0	Bus15	-7.751	-3.543	157.5	91.0	
								Bus17	7.732	3.537	157.2	90.9	
								Bus240	0.019	0.006	0.4	95.3	
Bus17	33.000	94.555	-1.9	0	0	0	0	Bus16	-7.725	-3.534	157.2	90.9	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus18	33.000	94.370	-2.0	0	0	0	0	Bus18	5.513	1.696	106.7	95.6	
								Bus158	2.213	1.838	53.2	76.9	
								Bus17	-5.502	-1.692	106.7	95.6	
								Bus19	5.396	1.659	104.7	95.6	
								Bus246	0.106	0.033	2.1	95.5	
Bus19	33.000	94.294	-2.0	0	0	0	0	Bus18	-5.392	-1.657	104.7	95.6	
								Bus20	0.268	0.060	5.1	97.6	
								Bus26	5.124	1.597	99.6	95.5	
Bus20	33.000	94.290	-2.0	0	0	0	0	Bus19	-0.268	-0.061	5.1	97.5	
								Bus21	0.180	0.044	3.4	97.2	
								Bus22	0.088	0.017	1.7	98.2	
Bus21	33.000	94.287	-2.0	0	0	0	0	Bus20	-0.180	-0.044	3.4	97.1	
								Bus247	0.180	0.044	3.4	97.1	
Bus22	33.000	94.289	-2.0	0	0	0	0	Bus20	-0.088	-0.017	1.7	98.1	
								Bus23	0.088	0.017	1.7	98.1	
Bus23	33.000	94.289	-2.0	0	0	0	0	Bus24	0.088	0.017	1.7	98.1	
								Bus22	-0.088	-0.017	1.7	98.1	
Bus24	33.000	94.288	-2.0	0	0	0	0	Bus23	-0.088	-0.018	1.7	98.0	
								Bus25	0.088	0.018	1.7	98.0	
Bus25	33.000	94.284	-2.0	0	0	0	0	Bus24	-0.088	-0.019	1.7	97.7	
								Bus248	0.088	0.019	1.7	97.7	
Bus26	33.000	94.231	-2.0	0	0	0	0	Bus19	-5.120	-1.595	99.6	95.5	
								Bus27	5.120	1.595	99.6	95.5	
Bus27	33.000	94.231	-2.0	0	0	0	0	Bus28	5.120	1.595	99.6	95.5	
								Bus26	-5.120	-1.595	99.6	95.5	
Bus28	33.000	94.157	-2.0	0	0	0	0	Bus29	0.128	0.028	2.4	97.7	
								Bus27	-5.116	-1.594	99.6	95.5	
								Bus30	4.867	1.526	94.8	95.4	
Bus29	33.000	94.156	-2.0	0	0	0	0	Bus249	0.122	0.040	2.4	94.9	
								Bus28	-0.128	-0.045	2.5	94.4	
								Bus250	0.128	0.045	2.5	94.4	
Bus30	33.000	93.924	-2.0	0	0	0	0	Bus28	-4.855	-1.521	94.8	95.4	
								Bus31	0.038	-0.003	0.7	-99.7	
								Bus35	4.694	1.497	91.8	95.3	
Bus31	33.000	93.924	-2.0	0	0	0	0	Bus251	0.123	0.028	2.3	97.6	
								Bus30	-0.038	0.003	0.7	-99.8	
								Bus32	0.038	-0.003	0.7	-99.8	
Bus32	33.000	93.924	-2.0	0	0	0	0	Bus33	0.038	-0.003	0.7	-99.8	
								Bus31	-0.038	0.003	0.7	-99.8	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus33	33.000	93.921	-2.0	0	0	0	0	Bus32	-0.038	0.000	0.7	100.0	
								Bus34	0.029	-0.002	0.5	-99.8	
								Bus252	0.009	0.002	0.2	97.6	
Bus34	33.000	93.919	-2.0	0	0	0	0	Bus33	-0.029	0.000	0.5	100.0	
Bus35	33.000	93.444	-2.0	0	0	0	0	Bus253	0.029	0.000	0.5	100.0	
								Bus30	-4.671	-1.488	91.8	95.3	
								Bus36	0.025	0.005	0.5	98.0	
Bus36	33.000	93.443	-2.0	0	0	0	0	Bus37	4.646	1.483	91.3	95.3	
								Bus35	-0.025	-0.007	0.5	96.5	
								Bus254	0.025	0.007	0.5	96.5	
Bus37	33.000	93.355	-2.1	0	0	0	0	Bus35	-4.642	-1.481	91.3	95.3	
								Bus38	4.613	1.462	90.7	95.3	
								Bus255	0.029	0.020	0.7	83.1	
Bus38	33.000	93.301	-2.1	0	0	0	0	Bus39	0.137	0.036	2.7	96.7	
								Bus37	-4.610	-1.461	90.7	95.3	
								Bus41	4.473	1.425	88.0	95.3	
Bus39	33.000	93.299	-2.1	0	0	0	0	Bus38	-0.137	-0.064	2.8	90.7	
								Bus40	0.136	0.063	2.8	90.6	
								Bus257	0.001	0.000	0.0	98.1	
Bus40	33.000	93.298	-2.1	0	0	0	0	Bus39	-0.136	-0.063	2.8	90.6	
								Bus256	0.136	0.063	2.8	90.6	
								Bus38	-4.468	-1.423	88.0	95.3	
Bus41	33.000	93.192	-2.1	0	0	0	0	Bus42	4.412	1.401	86.9	95.3	
								Bus258	0.057	0.022	1.1	93.3	
								Bus41	-4.389	-1.393	86.9	95.3	
Bus42	33.000	92.692	-2.1	0	0	0	0	Bus43	0.023	0.004	0.4	98.7	
								Bus45	4.230	1.356	83.8	95.2	
								Bus259	0.136	0.033	2.6	97.2	
Bus43	33.000	92.690	-2.1	0	0	0	0	Bus42	-0.023	-0.006	0.5	96.8	
								Bus44	0.007	-0.001	0.1	-99.3	
								Bus260	0.017	0.007	0.3	92.4	
Bus44	33.000	92.689	-2.1	0	0	0	0	Bus43	-0.007	-0.002	0.1	96.1	
								Bus261	0.007	0.002	0.1	96.1	
								Bus42	-4.221	-1.353	83.8	95.2	
Bus45	33.000	92.496	-2.1	0	0	0	0	Bus46	4.092	1.300	81.2	95.3	
								Bus262	0.130	0.053	2.7	92.5	
								Bus45	-4.065	-1.291	81.2	95.3	
Bus46	33.000	91.856	-2.2	0	0	0	0	Bus47	4.043	1.284	80.8	95.3	
								Bus263	0.021	0.007	0.4	95.2	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus47	33.000	91.764	-2.2	0	0	0	0	Bus46	-4.039	-1.283	80.8	95.3	
								Bus48	4.039	1.283	80.8	95.3	
Bus48	33.000	91.702	-2.2	0	0	0	0	Bus47	-4.037	-1.282	80.8	95.3	
								Bus49	4.037	1.282	80.8	95.3	
Bus49	33.000	91.702	-2.2	0	0	0	0	Bus50	4.037	1.282	80.8	95.3	
								Bus48	-4.037	-1.282	80.8	95.3	
Bus50	33.000	91.646	-2.2	0	0	0	0	Bus49	-4.034	-1.281	80.8	95.3	
								Bus51	0.000	-0.003	0.1	0.0	
								Bus55	4.034	1.284	80.8	95.3	
Bus51	33.000	91.646	-2.2	0	0	0	0	Bus50	0.000	0.002	0.0	0.0	
								Bus52	0.000	-0.002	0.0	0.0	
Bus52	33.000	91.646	-2.2	0	0	0	0	Bus53	0.000	-0.002	0.0	0.0	
								Bus51	0.000	0.002	0.0	0.0	
Bus53	33.000	91.646	-2.2	0	0	0	0	Bus52	0.000	0.001	0.0	0.0	
								Bus54	0.000	-0.001	0.0	0.0	
Bus54	33.000	91.646	-2.2	0	0	0	0	Line43~	0.000	-0.001	0.0	0.0	
								Bus53	0.000	0.001	0.0	0.0	
Bus55	33.000	91.583	-2.2	0	0	0	0	Bus50	-4.032	-1.283	80.8	95.3	
								Bus56	4.032	1.283	80.8	95.3	
Bus56	33.000	91.306	-2.2	0	0	0	0	Bus55	-4.020	-1.279	80.8	95.3	
								Bus57	4.010	1.272	80.6	95.3	
								Bus268	0.011	0.008	0.3	80.8	
Bus57	33.000	90.871	-2.3	0	0	0	0	Bus56	-3.991	-1.265	80.6	95.3	
								Bus58	3.879	1.255	78.5	95.1	
								Bus269	0.112	0.010	2.2	99.6	
Bus58	33.000	90.729	-2.3	0	0	0	0	Bus57	-3.873	-1.253	78.5	95.1	
								Bus59	1.494	0.456	30.1	95.6	
								Bus96	2.380	0.797	48.4	94.8	
Bus59	33.000	90.708	-2.3	0	0	0	0	Bus60	0.095	0.014	1.9	99.0	
								Bus58	-1.493	-0.456	30.1	95.6	
								Bus61	1.398	0.443	28.3	95.3	
Bus60	33.000	90.707	-2.3	0	0	0	0	Bus59	-0.095	-0.028	1.9	96.1	
								Bus270	0.095	0.028	1.9	96.1	
Bus61	33.000	90.687	-2.3	0	0	0	0	Bus59	-1.398	-0.443	28.3	95.3	
								Bus62	1.276	0.394	25.8	95.5	
								Bus271	0.122	0.049	2.5	92.9	
Bus62	33.000	90.674	-2.3	0	0	0	0	Bus61	-1.276	-0.394	25.8	95.5	
								Bus63	0.138	0.016	2.7	99.3	
								Bus67	1.137	0.378	23.1	94.9	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus63	33.000	90.673	-2.3	0	0	0	0	Bus64	0.062	-0.010	1.2	-98.8	
								Bus62	-0.138	-0.016	2.7	99.3	
								Bus300	0.076	0.026	1.6	94.8	
Bus64	33.000	90.672	-2.3	0	0	0	0	Bus63	-0.062	-0.012	1.2	98.2	
Bus65	33.000	90.671	-2.3	0	0	0	0	Bus65	0.062	0.012	1.2	98.2	
								Bus66	0.062	0.012	1.2	98.1	
								Bus64	-0.062	-0.012	1.2	98.1	
Bus66	33.000	90.671	-2.3	0	0	0	0	Bus65	-0.062	-0.022	1.3	94.3	
Bus67	33.000	90.623	-2.3	0	0	0	0	Bus301	0.062	0.022	1.3	94.3	
								Bus62	-1.137	-0.379	23.1	94.9	
								Bus68	1.071	0.370	21.9	94.5	
Bus68	33.000	90.405	-2.3	0	0	0	0	Bus272	0.066	0.009	1.3	99.1	
								Bus67	-1.068	-0.374	21.9	94.4	
								Bus69	1.035	0.357	21.2	94.5	
Bus69	33.000	90.328	-2.3	0	0	0	0	Bus273	0.034	0.016	0.7	89.9	
								Bus68	-1.034	-0.359	21.2	94.5	
								Bus70	0.953	0.338	19.6	94.3	
Bus70	33.000	90.293	-2.3	0	0	0	0	Bus274	0.081	0.021	1.6	96.8	
								Bus69	-0.952	-0.338	19.6	94.2	
								Bus71	0.241	0.137	5.4	87.0	
Bus71	33.000	90.276	-2.3	0	0	0	0	Bus73	0.712	0.202	14.3	96.2	
								Bus70	-0.240	-0.138	5.4	86.7	
								Bus72	0.199	0.127	4.6	84.3	
Bus72	33.000	90.246	-2.3	0	0	0	0	Bus275	0.042	0.011	0.8	96.5	
								Bus71	-0.199	-0.130	4.6	83.7	
								Bus276	0.199	0.130	4.6	83.7	
Bus73	33.000	90.291	-2.3	0	0	0	0	Bus70	-0.712	-0.202	14.3	96.2	
								Bus74	0.646	0.176	13.0	96.5	
								Bus299	0.066	0.025	1.4	93.2	
Bus74	33.000	90.086	-2.4	0	0	0	0	Bus73	-0.645	-0.184	13.0	96.2	
								Bus75	0.078	0.029	1.6	93.6	
								Bus76	0.485	0.116	9.7	97.3	
Bus75	33.000	90.082	-2.4	0	0	0	0	Bus277	0.082	0.038	1.8	90.6	
								Bus74	-0.078	-0.030	1.6	93.1	
								Bus278	0.078	0.030	1.6	93.1	
Bus76	33.000	90.071	-2.4	0	0	0	0	Bus74	-0.485	-0.117	9.7	97.2	
								Bus77	0.022	0.017	0.5	79.1	
								Bus78	0.463	0.100	9.2	97.8	
Bus77	33.000	90.071	-2.4	0	0	0	0	Bus76	-0.022	-0.017	0.5	78.6	

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Bus78	33.000	89.991	-2.4	0	0	0	0	Bus279	0.022	0.017	0.5	78.6	
								Bus76	-0.462	-0.104	9.2	97.6	
								Bus79	0.008	0.001	0.2	98.2	
Bus79	33.000	89.991	-2.4	0	0	0	0	Bus80	0.455	0.102	9.1	97.6	
								Bus78	-0.008	-0.002	0.2	96.9	
								Bus287	0.008	0.002	0.2	96.9	
Bus80	33.000	89.975	-2.4	0	0	0	0	Bus78	-0.454	-0.103	9.1	97.5	
								Bus81	0.070	0.016	1.4	97.5	
								Bus87	0.385	0.087	7.7	97.5	
Bus81	33.000	89.961	-2.4	0	0	0	0	Bus80	-0.069	-0.021	1.4	95.8	
								Bus82	0.013	0.010	0.3	81.2	
								Bus83	0.056	0.011	1.1	98.1	
Bus82	33.000	89.961	-2.4	0	0	0	0	Bus81	-0.013	-0.011	0.3	78.5	
								Bus296	0.013	0.011	0.3	78.5	
Bus83	33.000	89.959	-2.4	0	0	0	0	Bus81	-0.056	-0.012	1.1	97.7	
								Bus84	0.023	0.005	0.5	97.7	
								Bus297	0.033	0.007	0.7	97.7	
Bus84	33.000	89.958	-2.4	0	0	0	0	Bus83	-0.023	-0.006	0.5	96.9	
								Bus298	0.023	0.006	0.5	96.9	
Bus87	33.000	89.966	-2.4	0	0	0	0	Bus80	-0.385	-0.088	7.7	97.5	
								Bus88	0.057	0.013	1.1	97.5	
								Bus90	0.328	0.075	6.5	97.5	
Bus88	33.000	89.965	-2.4	0	0	0	0	Bus87	-0.057	-0.013	1.1	97.4	
								Bus89	0.018	0.003	0.4	98.3	
								Bus288	0.039	0.010	0.8	96.9	
Bus89	33.000	89.963	-2.4	0	0	0	0	Bus88	-0.018	-0.007	0.4	93.6	
								Bus289	0.018	0.007	0.4	93.6	
Bus90	33.000	89.952	-2.4	0	0	0	0	Bus87	-0.328	-0.076	6.5	97.4	
								Bus91	0.013	0.000	0.2	100.0	
								Bus92	0.226	0.053	4.5	97.4	
Bus91	33.000	89.951	-2.4	0	0	0	0	Bus293	0.089	0.023	1.8	96.8	
								Bus90	-0.013	-0.003	0.2	97.4	
								Bus290	0.013	0.003	0.2	97.4	
Bus92	33.000	89.935	-2.4	0	0	0	0	Bus90	-0.226	-0.055	4.5	97.2	
								Bus93	0.192	0.041	3.8	97.8	
								Bus291	0.034	0.014	0.7	92.5	
Bus93	33.000	89.922	-2.4	0	0	0	0	Bus92	-0.192	-0.042	3.8	97.7	
								Bus94	0.157	0.042	3.2	96.7	
								Bus292	0.035	0.000	0.7	100.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus94	33.000	89.896	-2.4	0	0	0	0	Bus93	-0.157	-0.046	3.2	96.0	
								Bus95	0.066	0.026	1.4	93.1	
								Bus294	0.092	0.020	1.8	97.7	
Bus95	33.000	89.888	-2.4	0	0	0	0	Bus94	-0.066	-0.029	1.4	91.7	
								Bus295	0.066	0.029	1.4	91.7	
Bus96	33.000	90.669	-2.3	0	0	0	0	Bus58	-2.378	-0.797	48.4	94.8	
								Bus97	2.378	0.797	48.4	94.8	
Bus97	33.000	90.669	-2.3	0	0	0	0	Bus98	2.378	0.797	48.4	94.8	
								Bus96	-2.378	-0.797	48.4	94.8	
Bus98	33.000	90.646	-2.3	0	0	0	0	Bus97	-2.378	-0.797	48.4	94.8	
								Bus99	0.258	0.100	5.3	93.3	
								Bus112	2.119	0.697	43.1	95.0	
Bus99	33.000	90.643	-2.3	0	0	0	0	Bus98	-0.258	-0.100	5.3	93.2	
								Bus100	0.191	0.073	3.9	93.4	
								Bus303	0.068	0.027	1.4	92.7	
Bus100	33.000	90.635	-2.3	0	0	0	0	Bus99	-0.191	-0.074	3.9	93.2	
								Bus101	0.176	0.062	3.6	94.3	
								Bus304	0.014	0.012	0.4	78.0	
Bus101	33.000	90.589	-2.3	0	0	0	0	Bus100	-0.176	-0.068	3.7	93.2	
								Bus102	0.176	0.068	3.7	93.2	
Bus102	33.000	90.589	-2.3	0	0	0	0	Bus103	0.176	0.068	3.7	93.2	
								Bus101	-0.176	-0.068	3.7	93.2	
Bus103	33.000	90.587	-2.3	0	0	0	0	Bus102	-0.176	-0.069	3.7	93.2	
								Bus104	0.176	0.072	3.7	92.5	
								Bus111	0.000	-0.004	0.1	0.0	
Bus104	33.000	90.576	-2.3	0	0	0	0	Bus103	-0.176	-0.074	3.7	92.2	
								Bus105	0.134	0.056	2.8	92.3	
								Bus305	0.042	0.018	0.9	91.8	
Bus105	33.000	90.571	-2.3	0	0	0	0	Bus104	-0.134	-0.057	2.8	92.1	
								Bus106	0.093	0.039	1.9	92.1	
								Bus331	0.042	0.018	0.9	92.1	
Bus106	33.000	90.563	-2.3	0	0	0	0	Bus105	-0.093	-0.041	2.0	91.4	
								Bus109	0.093	0.041	2.0	91.4	
Bus109	33.000	90.561	-2.3	0	0	0	0	Bus106	-0.093	-0.042	2.0	91.3	
								Bus110	0.046	0.018	1.0	93.2	
								Bus329	0.046	0.024	1.0	89.2	
Bus110	33.000	90.558	-2.3	0	0	0	0	Bus109	-0.046	-0.020	1.0	92.1	
								Bus330	0.046	0.020	1.0	92.1	
Bus111	33.000	90.587	-2.3	0	0	0	0	Bus103	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus112	33.000	90.623	-2.3	0	0	0	0	Bus316	0.000	0.000	0.0	0.0	
								Bus98	-2.119	-0.697	43.1	95.0	
								Bus113	2.119	0.697	43.1	95.0	
Bus113	33.000	90.623	-2.3	0	0	0	0	Bus114	2.119	0.697	43.1	95.0	
								Bus112	-2.119	-0.697	43.1	95.0	
Bus114	33.000	90.103	-2.4	0	0	0	0	Bus113	-2.107	-0.697	43.1	94.9	
								Bus115	0.928	0.430	19.9	90.7	
								Bus116	1.179	0.267	23.5	97.5	
Bus115	33.000	90.092	-2.4	0	0	0	0	Bus114	-0.928	-0.430	19.9	90.7	
								Bus302	0.928	0.430	19.9	90.7	
Bus116	33.000	90.067	-2.4	0	0	0	0	Bus114	-1.179	-0.268	23.5	97.5	
								Bus123	0.668	0.170	13.4	96.9	
								Bus142	0.511	0.098	10.1	98.2	
Bus118	33.000	90.041	-2.4	0	0	0	0	Bus123	-0.294	-0.079	5.9	96.6	
								Bus119	0.184	0.062	3.8	94.8	
								Bus315	0.042	0.006	0.8	99.0	
								Bus313	0.068	0.011	1.3	98.7	
Bus119	33.000	90.039	-2.4	0	0	0	0	Bus118	-0.184	-0.062	3.8	94.8	
								Bus120	0.128	0.036	2.6	96.3	
								Bus325	0.056	0.026	1.2	90.6	
Bus120	33.000	90.038	-2.4	0	0	0	0	Bus119	-0.128	-0.036	2.6	96.3	
								Bus122	0.128	0.036	2.6	96.3	
Bus122	33.000	90.037	-2.4	0	0	0	0	Bus120	-0.128	-0.036	2.6	96.2	
								Bus327	0.072	0.010	1.4	99.0	
								Bus328	0.056	0.026	1.2	90.6	
Bus123	33.000	90.045	-2.4	0	0	0	0	Bus116	-0.668	-0.171	13.4	96.9	
								Bus118	0.294	0.078	5.9	96.6	
								Bus124	0.374	0.093	7.5	97.1	
Bus124	33.000	89.984	-2.4	0	0	0	0	Bus123	-0.374	-0.097	7.5	96.8	
								Bus125	0.372	0.097	7.5	96.8	
								Bus312	0.002	0.000	0.0	100.0	
Bus125	33.000	89.961	-2.4	0	0	0	0	Bus124	-0.372	-0.098	7.5	96.7	
								Bus126	0.328	0.091	6.6	96.4	
								Bus314	0.043	0.007	0.9	98.7	
Bus126	33.000	89.934	-2.4	0	0	0	0	Bus125	-0.328	-0.093	6.6	96.2	
								Bus127	0.056	0.014	1.1	97.0	
								Bus137	0.199	0.056	4.0	96.2	
								Bus317	0.073	0.023	1.5	95.5	
Bus127	33.000	89.924	-2.4	0	0	0	0	Bus126	-0.056	-0.019	1.1	94.9	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap	
Bus135	33.000	89.921	-2.4	0	0	0	0	Bus135	0.056	0.019	1.1	94.9		
								Bus127	-0.056	-0.020	1.2	94.4		
								Bus319	0.056	0.020	1.2	94.4		
Bus137	33.000	89.915	-2.4	0	0	0	0	Bus126	-0.199	-0.058	4.0	95.9		
								Bus138	0.181	0.044	3.6	97.2		
								Bus320	0.018	0.015	0.5	78.3		
Bus138	33.000	89.899	-2.4	0	0	0	0	Bus137	-0.181	-0.046	3.6	96.9		
								Bus139	0.157	0.040	3.1	96.9		
								Bus322	0.024	0.006	0.5	97.0		
Bus139	33.000	89.878	-2.4	0	0	0	0	Bus138	-0.157	-0.043	3.2	96.4		
								Bus140	0.081	0.021	1.6	96.7		
								Bus321	0.075	0.022	1.5	96.0		
Bus140	33.000	89.875	-2.4	0	0	0	0	Bus139	-0.081	-0.022	1.6	96.5		
								Bus141	0.011	-0.001	0.2	-99.7		
								Bus323	0.071	0.023	1.4	95.1		
Bus141	33.000	89.873	-2.4	0	0	0	0	Bus140	-0.011	-0.004	0.2	93.9		
								Bus324	0.011	0.004	0.2	93.9		
Bus142	33.000	90.058	-2.4	0	0	0	0	Bus116	-0.510	-0.098	10.1	98.2		
								Bus143	0.053	0.020	1.1	93.4		
								Bus144	0.457	0.078	9.0	98.6		
Bus143	33.000	90.057	-2.4	0	0	0	0	Bus142	-0.053	-0.020	1.1	93.3		
								Bus280	0.053	0.020	1.1	93.3		
Bus144	33.000	90.046	-2.4	0	0	0	0	Bus142	-0.457	-0.078	9.0	98.6		
								Bus145	0.370	0.057	7.3	98.8		
								Bus281	0.088	0.022	1.8	97.1		
Bus145	33.000	90.043	-2.4	0	0	0	0	Bus144	-0.370	-0.057	7.3	98.8		
								Bus146	0.262	0.017	5.1	99.8		
								Bus152	0.108	0.040	2.2	93.7		
Bus146	33.000	90.033	-2.4	0	0	0	0	Bus147	0.135	-0.001	2.6	100.0		
								Bus145	-0.262	-0.018	5.1	99.8		
								Bus149	0.054	0.008	1.1	98.8		
Bus147	33.000	90.031	-2.4	0	0	0	0	Bus282	0.073	0.010	1.4	99.0		
								Bus146	-0.135	-0.018	2.6	99.2		
								Bus148	0.082	0.006	1.6	99.7		
Bus148	33.000	90.030	-2.4	0	0	0	0	Bus306	0.053	0.011	1.1	97.9		
								Bus147	-0.082	-0.014	1.6	98.6		
								Bus283	0.082	0.014	1.6	98.6		
Bus149	33.000	90.031	-2.4	0	0	0	0	Bus146	-0.054	-0.009	1.1	98.6		
								Bus150	0.054	0.009	1.1	98.5		

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Line122~	0.000	0.000	0.0	0.0	
Bus150	33.000	90.030	-2.4	0	0	0	0	Bus149	-0.054	-0.010	1.1	98.4	
								Bus284	0.054	0.010	1.1	98.4	
Bus152	33.000	90.037	-2.4	0	0	0	0	Bus145	-0.108	-0.041	2.2	93.4	
								Bus153	0.029	0.002	0.6	99.8	
								Bus154	0.079	0.039	1.7	89.6	
Bus153	33.000	90.036	-2.4	0	0	0	0	Bus152	-0.029	-0.003	0.6	99.4	
								Bus307	0.029	0.003	0.6	99.4	
Bus154	33.000	90.028	-2.4	0	0	0	0	Bus152	-0.079	-0.042	1.7	88.3	
								Bus155	0.078	0.042	1.7	88.3	
								Bus308	0.001	0.000	0.0	92.8	
Bus155	33.000	90.025	-2.4	0	0	0	0	Bus154	-0.078	-0.042	1.7	88.0	
								Bus156	0.059	0.034	1.3	86.9	
								Bus309	0.019	0.009	0.4	91.2	
Bus156	33.000	90.025	-2.4	0	0	0	0	Bus155	-0.059	-0.034	1.3	86.7	
								Bus157	0.001	-0.001	0.0	-63.9	
								Bus310	0.058	0.035	1.3	85.6	
Bus157	33.000	90.025	-2.4	0	0	0	0	Bus156	-0.001	0.000	0.0	92.8	
								Bus311	0.001	0.000	0.0	92.8	
Bus158	33.000	94.544	-1.9	0	0	0	0	Bus17	-2.213	-1.838	53.2	76.9	
								Bus159	0.122	0.039	2.4	95.3	
								Bus160	2.090	1.799	51.0	75.8	
Bus159	33.000	94.541	-1.9	0	0	0	0	Bus158	-0.122	-0.039	2.4	95.2	
								Bus238	0.122	0.039	2.4	95.2	
Bus160	33.000	94.525	-1.9	0	0	0	0	Bus158	-2.090	-1.799	51.0	75.8	
								Bus161	2.069	1.797	50.7	75.5	
								Bus237	0.021	0.002	0.4	99.5	
Bus161	33.000	94.478	-1.9	0	0	0	0	Bus160	-2.068	-1.797	50.7	75.5	
								Bus162	1.898	1.742	47.7	73.7	
								Bus239	0.170	0.055	3.3	95.2	
Bus162	33.000	94.462	-1.9	0	0	0	0	Bus161	-1.897	-1.742	47.7	73.7	
								Bus163	1.897	1.742	47.7	73.7	
Bus163	33.000	94.462	-1.9	0	0	0	0	Bus164	1.897	1.742	47.7	73.7	
								Bus162	-1.897	-1.742	47.7	73.7	
Bus164	33.000	94.356	-1.9	0	0	0	0	Bus163	-1.895	-1.742	47.7	73.6	
								Bus165	1.714	1.707	44.9	70.9	
								Bus229	0.181	0.035	3.4	98.2	
Bus165	33.000	94.337	-1.9	0	0	0	0	Bus167	1.713	1.707	44.9	70.8	
								Bus164	-1.713	-1.707	44.9	70.8	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus167	33.000	94.286	-1.9	0	0	0	0	Bus165	-1.712	-1.707	44.9	70.8	
								Bus168	0.127	0.062	2.6	89.9	
								Bus169	1.585	1.645	42.4	69.4	
Bus168	33.000	94.285	-1.9	0	0	0	0	Bus167	-0.127	-0.062	2.6	89.8	
								Bus332	0.127	0.062	2.6	89.8	
Bus169	33.000	94.252	-1.9	0	0	0	0	Bus167	-1.584	-1.645	42.4	69.4	
								Bus170	1.584	1.645	42.4	69.4	
Bus170	33.000	94.252	-1.9	0	0	0	0	Bus171	1.584	1.645	42.4	69.4	
								Bus169	-1.584	-1.645	42.4	69.4	
Bus171	33.000	94.202	-1.9	0	0	0	0	Bus170	-1.583	-1.645	42.4	69.3	
								Bus173	1.035	0.285	19.9	96.4	
								Bus353	0.517	1.350	26.8	35.8	
								Bus333	0.031	0.010	0.6	95.3	
Bus173	33.000	94.178	-1.9	0	0	0	0	Bus174	0.037	0.003	0.7	99.6	
								Bus178	0.997	0.282	19.3	96.2	
								Bus171	-1.034	-0.286	19.9	96.4	
Bus174	33.000	94.174	-1.9	0	0	0	0	Bus173	-0.037	-0.007	0.7	98.5	
								Bus175	0.037	0.007	0.7	98.5	
Bus175	33.000	94.170	-1.9	0	0	0	0	Bus174	-0.037	-0.009	0.7	97.2	
								Bus176	0.033	0.008	0.6	97.2	
								Bus335	0.004	0.001	0.1	97.0	
Bus176	33.000	94.169	-1.9	0	0	0	0	Bus175	-0.033	-0.009	0.6	96.4	
								Bus177	0.033	0.009	0.6	96.4	
Bus177	33.000	94.168	-1.9	0	0	0	0	Bus176	-0.033	-0.010	0.6	95.8	
								Bus336	0.033	0.010	0.6	95.8	
Bus178	33.000	94.158	-1.9	0	0	0	0	Bus173	-0.997	-0.283	19.3	96.2	
								Bus179	0.931	0.252	17.9	96.5	
								Bus334	0.066	0.031	1.3	90.6	
Bus179	33.000	94.103	-1.9	0	0	0	0	Bus178	-0.931	-0.254	17.9	96.5	
								Bus180	0.033	0.006	0.6	98.5	
								Bus181	0.897	0.248	17.3	96.4	
Bus180	33.000	94.102	-1.9	0	0	0	0	Bus179	-0.033	-0.007	0.6	97.9	
								Bus337	0.033	0.007	0.6	97.9	
Bus181	33.000	93.984	-1.9	0	0	0	0	Bus179	-0.896	-0.251	17.3	96.3	
								Bus182	0.849	0.238	16.4	96.3	
								Bus338	0.047	0.013	0.9	96.5	
Bus182	33.000	93.907	-1.9	0	0	0	0	Bus181	-0.849	-0.240	16.4	96.2	
								Bus183	0.093	0.029	1.8	95.4	
								Bus184	0.756	0.211	14.6	96.3	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus183	33.000	93.906	-1.9	0	0	0	0	Bus182	-0.093	-0.030	1.8	95.3	
								Bus339	0.093	0.030	1.8	95.3	
Bus184	33.000	93.897	-1.9	0	0	0	0	Bus185	0.702	0.200	13.6	96.2	
								Bus182	-0.755	-0.211	14.6	96.3	
Bus185	33.000	93.873	-1.9	0	0	0	0	Bus340	0.054	0.011	1.0	97.9	
								Bus184	-0.701	-0.201	13.6	96.1	
								Bus186	0.074	0.019	1.4	96.9	
								Bus187	0.046	0.014	0.9	95.7	
Bus186	33.000	93.872	-1.9	0	0	0	0	Bus188	0.582	0.168	11.3	96.1	
								Bus185	-0.074	-0.019	1.4	96.7	
								Bus341	0.074	0.019	1.4	96.7	
Bus187	33.000	93.872	-1.9	0	0	0	0	Bus185	-0.046	-0.014	0.9	95.4	
								Bus342	0.046	0.014	0.9	95.4	
Bus188	33.000	93.837	-1.9	0	0	0	0	Bus185	-0.581	-0.170	11.3	96.0	
								Bus189	0.387	0.122	7.6	95.4	
								Bus194	0.120	0.028	2.3	97.4	
								Bus343	0.075	0.020	1.4	96.6	
Bus189	33.000	93.819	-1.9	0	0	0	0	Bus188	-0.386	-0.123	7.6	95.3	
								Bus190	0.249	0.078	4.9	95.4	
								Bus344	0.138	0.045	2.7	95.1	
Bus190	33.000	93.817	-1.9	0	0	0	0	Bus189	-0.249	-0.079	4.9	95.4	
								Bus191	0.212	0.069	4.1	95.1	
								Bus193	0.037	0.010	0.7	96.8	
Bus191	33.000	93.808	-1.9	0	0	0	0	Bus190	-0.211	-0.070	4.2	94.9	
								Bus192	0.143	0.051	2.8	94.1	
								Bus345	0.069	0.019	1.3	96.5	
Bus192	33.000	93.800	-1.9	0	0	0	0	Bus191	-0.143	-0.053	2.8	93.8	
								Bus347	0.143	0.053	2.8	93.8	
Bus193	33.000	93.815	-1.9	0	0	0	0	Bus190	-0.037	-0.011	0.7	95.9	
								Bus346	0.037	0.011	0.7	95.9	
Bus194	33.000	93.836	-1.9	0	0	0	0	Bus188	-0.120	-0.028	2.3	97.4	
								Bus195	0.120	0.028	2.3	97.4	
Bus195	33.000	93.836	-1.9	0	0	0	0	Bus196	0.120	0.028	2.3	97.4	
								Bus194	-0.120	-0.028	2.3	97.4	
Bus196	33.000	93.827	-1.9	0	0	0	0	Bus195	-0.120	-0.030	2.3	96.9	
								Bus197	0.105	0.025	2.0	97.2	
								Bus348	0.016	0.005	0.3	95.4	
Bus197	33.000	93.813	-1.9	0	0	0	0	Bus196	-0.105	-0.029	2.0	96.3	
								Bus198	0.016	-0.003	0.3	-98.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus198	33.000	93.813	-1.9	0	0	0	0	Bus201	0.089	0.032	1.8	94.0	
								Bus197	-0.016	0.002	0.3	-99.5	
								Bus199	0.008	-0.004	0.2	-86.7	
Bus199	33.000	93.811	-1.9	0	0	0	0	Bus349	0.008	0.003	0.2	93.6	
								Bus198	-0.008	-0.002	0.2	97.0	
								Bus350	0.008	0.002	0.2	97.0	
Bus201	33.000	93.811	-1.9	0	0	0	0	Bus197	-0.089	-0.033	1.8	93.8	
								Bus202	0.078	0.029	1.6	93.6	
								Bus203	0.011	0.004	0.2	94.8	
Bus202	33.000	93.810	-1.9	0	0	0	0	Bus201	-0.078	-0.030	1.6	93.5	
								Bus351	0.078	0.030	1.6	93.5	
Bus203	33.000	93.810	-1.9	0	0	0	0	Bus201	-0.011	-0.006	0.2	87.8	
								Bus352	0.011	0.006	0.2	87.8	
Bus229	0.400	93.488	-2.4	0	0	0.179	0.033	Bus164	-0.179	-0.033	281.6	98.3	
Bus230	0.400	99.099	-0.2	0	0	0.031	0.021	Bus6	-0.031	-0.021	54.3	82.8	
Bus231	0.400	97.502	-0.8	0	0	0.127	0.041	Bus7	-0.127	-0.041	197.0	95.2	
Bus233	0.400	97.572	-0.2	0	0	0.024	0.008	Bus8	-0.024	-0.008	37.1	94.9	
Bus234	0.400	93.995	-2.9	0	0	0.083	0.019	Bus13	-0.083	-0.019	130.6	97.6	
Bus235	0.400	94.415	-2.3	0	0	0.085	0.023	Bus14	-0.085	-0.023	134.6	96.7	
Bus237	0.400	94.304	-2.1	0	0	0.021	0.002	Bus160	-0.021	-0.002	31.6	99.5	
Bus238	0.400	92.848	-2.8	0	0	0.121	0.037	Bus159	-0.121	-0.037	196.1	95.6	
Bus239	0.400	93.005	-2.7	0	0	0.168	0.052	Bus161	-0.168	-0.052	273.2	95.6	
Bus240	0.400	94.384	-2.1	0	0	0.019	0.006	Bus16	-0.019	-0.006	29.8	95.4	
Bus246	0.400	92.913	-2.7	0	0	0.105	0.031	Bus18	-0.105	-0.031	170.2	95.9	
Bus247	0.400	92.849	-2.8	0	0	0.178	0.041	Bus21	-0.178	-0.041	283.8	97.5	
Bus248	0.400	93.849	-2.2	0	0	0.088	0.019	Bus25	-0.088	-0.019	138.1	97.8	
Bus249	0.400	92.446	-2.8	0	0	0.120	0.038	Bus28	-0.120	-0.038	197.1	95.4	
Bus250	0.400	93.014	-2.5	0	0	0.126	0.043	Bus29	-0.126	-0.043	207.2	94.7	
Bus251	0.400	92.383	-2.9	0	0	0.121	0.025	Bus30	-0.121	-0.025	193.6	97.9	
Bus252	0.400	93.643	-2.2	0	0	0.009	0.002	Bus33	-0.009	-0.002	13.9	97.6	
Bus253	0.400	93.641	-2.3	0	0	0.029	0.000	Bus34	-0.029	0.000	45.1	100.0	
Bus254	0.400	93.104	-2.2	0	0	0.025	0.007	Bus36	-0.025	-0.007	40.6	96.6	
Bus255	0.400	93.006	-2.1	0	0	0.029	0.019	Bus37	-0.029	-0.019	54.4	83.2	
Bus256	0.400	92.427	-2.4	0	0	0.135	0.062	Bus40	-0.135	-0.062	232.0	90.8	
Bus257	0.400	93.294	-2.1	0	0	0	0	Bus39	-0.001	0.000	1.5	98.1	
Bus258	0.400	92.341	-2.4	0	0	0.056	0.021	Bus41	-0.056	-0.021	94.1	93.5	
Bus259	0.400	91.590	-2.8	0	0	0.135	0.031	Bus42	-0.135	-0.031	217.5	97.5	
Bus260	0.400	92.433	-2.2	0	0	0.017	0.007	Bus43	-0.017	-0.007	27.9	92.5	
Bus261	0.400	92.456	-2.2	0	0	0.007	0.002	Bus44	-0.007	-0.002	11.0	96.2	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus262	0.400	91.243	-2.7	0	0	0.129	0.051	Bus45	-0.129	-0.051	218.9	92.9	
Bus263	0.400	91.551	-2.3	0	0	0.021	0.007	Bus46	-0.021	-0.007	35.2	95.3	
Bus268	0.400	91.090	-2.3	0	0	0.011	0.008	Bus56	-0.011	-0.008	20.8	80.9	
Bus269	0.400	90.377	-2.7	0	0	0.112	0.010	Bus57	-0.112	-0.010	179.1	99.6	
Bus270	0.400	89.380	-3.0	0	0	0.094	0.026	Bus60	-0.094	-0.026	157.6	96.4	
Bus271	0.400	89.496	-2.8	0	0	0.121	0.047	Bus61	-0.121	-0.047	209.4	93.2	
Bus272	0.400	90.138	-2.7	0	0	0.065	0.009	Bus67	-0.065	-0.009	105.7	99.1	
Bus273	0.400	90.178	-2.4	0	0	0.034	0.016	Bus68	-0.034	-0.016	60.0	90.0	
Bus274	0.400	89.639	-2.7	0	0	0.081	0.020	Bus69	-0.081	-0.020	133.9	97.0	
Bus275	0.400	88.844	-3.2	0	0	0.041	0.011	Bus71	-0.041	-0.011	69.1	96.9	
Bus276	0.400	88.712	-2.8	0	0	0.196	0.126	Bus72	-0.196	-0.126	379.8	84.1	
Bus277	0.400	89.229	-2.7	0	0	0.082	0.037	Bus74	-0.082	-0.037	145.1	90.9	
Bus278	0.400	88.194	-3.2	0	0	0.076	0.029	Bus75	-0.076	-0.029	133.6	93.6	
Bus279	0.400	89.595	-2.5	0	0	0.022	0.017	Bus77	-0.022	-0.017	45.2	78.8	
Bus280	0.400	89.542	-2.6	0	0	0.053	0.020	Bus143	-0.053	-0.020	91.1	93.4	
Bus281	0.400	89.577	-2.6	0	0	0.087	0.021	Bus144	-0.087	-0.021	144.9	97.2	
Bus282	0.400	89.168	-3.0	0	0	0.072	0.010	Bus146	-0.072	-0.010	117.5	99.1	
Bus283	0.400	89.629	-2.6	0	0	0.082	0.013	Bus148	-0.082	-0.013	133.3	98.7	
Bus284	0.400	89.607	-2.7	0	0	0.054	0.010	Bus150	-0.054	-0.010	88.0	98.4	
Bus287	0.400	89.466	-2.7	0	0	0.008	0.002	Bus79	-0.008	-0.002	12.8	97.0	
Bus288	0.400	87.342	-4.0	0	0	0.038	0.009	Bus88	-0.038	-0.009	64.5	97.6	
Bus289	0.400	89.258	-2.7	0	0	0.018	0.007	Bus89	-0.018	-0.007	31.4	93.8	
Bus290	0.400	89.847	-2.4	0	0	0.012	0.003	Bus91	-0.012	-0.003	20.6	97.4	
Bus291	0.400	88.588	-3.0	0	0	0.033	0.013	Bus92	-0.033	-0.013	58.8	92.8	
Bus292	0.400	89.053	-3.2	0	0	0.035	0.000	Bus93	-0.035	0.000	55.9	100.0	
Bus293	0.400	89.195	-2.8	0	0	0.088	0.022	Bus90	-0.088	-0.022	147.2	97.0	
Bus294	0.400	89.147	-2.9	0	0	0.091	0.019	Bus94	-0.091	-0.019	150.7	97.9	
Bus295	0.400	88.818	-2.8	0	0	0.065	0.028	Bus95	-0.065	-0.028	115.1	92.0	
Bus296	0.400	89.507	-2.5	0	0	0.013	0.011	Bus82	-0.013	-0.011	27.6	78.6	
Bus297	0.400	88.888	-3.1	0	0	0.033	0.007	Bus83	-0.033	-0.007	54.0	97.9	
Bus298	0.400	89.644	-2.6	0	0	0.023	0.006	Bus84	-0.023	-0.006	38.3	97.0	
Bus299	0.400	89.654	-2.6	0	0	0.065	0.025	Bus73	-0.065	-0.025	112.6	93.4	
Bus300	0.400	89.972	-2.7	0	0	0.076	0.025	Bus63	-0.076	-0.025	128.3	95.0	
Bus301	0.400	89.746	-2.8	0	0	0.062	0.021	Bus66	-0.062	-0.021	104.6	94.6	
Bus302	0.400	56.557	-27.1	0	0	0.642	0.001	Bus115	-0.642	-0.001	1638.1	100.0	
Bus303	0.400	90.222	-2.5	0	0	0.067	0.027	Bus99	-0.067	-0.027	116.1	92.8	
Bus304	0.400	90.322	-2.4	0	0	0.014	0.012	Bus100	-0.014	-0.012	29.6	78.1	
Bus305	0.400	88.895	-3.0	0	0	0.041	0.017	Bus104	-0.041	-0.017	72.5	92.2	
Bus306	0.400	89.347	-2.8	0	0	0.053	0.011	Bus147	-0.053	-0.011	87.0	98.1	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus307	0.400	89.521	-2.8	0	0	0.029	0.003	Bus153	-0.029	-0.003	46.7	99.5	
Bus308	0.400	90.022	-2.4	0	0	0	0	Bus154	-0.001	0.000	1.7	92.8	
Bus309	0.400	89.899	-2.4	0	0	0.019	0.009	Bus155	-0.019	-0.009	33.9	91.2	
Bus310	0.400	89.594	-2.5	0	0	0.058	0.035	Bus156	-0.058	-0.035	108.3	85.7	
Bus311	0.400	90.019	-2.4	0	0	0	0	Bus157	-0.001	0.000	1.7	92.8	
Bus312	0.400	89.939	-2.4	0	0	0.002	0.000	Bus124	-0.002	0.000	2.9	100.0	
Bus313	0.400	89.525	-2.7	0	0	0.067	0.011	Bus118	-0.067	-0.011	109.7	98.8	
Bus314	0.400	89.129	-3.0	0	0	0.043	0.007	Bus125	-0.043	-0.007	70.7	98.8	
Bus315	0.400	89.841	-2.5	0	0	0.042	0.006	Bus118	-0.042	-0.006	68.6	99.1	
Bus316	0.400	90.587	-2.3	0	0	0	0	Bus111	0.000	0.000	0.0	0.0	
Bus317	0.400	89.274	-2.7	0	0	0.073	0.022	Bus126	-0.073	-0.022	123.2	95.7	
Bus319	0.400	89.396	-2.6	0	0	0.056	0.019	Bus135	-0.056	-0.019	95.1	94.5	
Bus320	0.400	89.297	-2.5	0	0	0.018	0.014	Bus137	-0.018	-0.014	37.5	78.5	
Bus321	0.400	88.811	-3.0	0	0	0.075	0.021	Bus139	-0.075	-0.021	126.1	96.2	
Bus322	0.400	89.084	-2.9	0	0	0.024	0.006	Bus138	-0.024	-0.006	39.9	97.2	
Bus323	0.400	88.843	-2.9	0	0	0.070	0.022	Bus140	-0.070	-0.022	119.1	95.4	
Bus324	0.400	89.620	-2.5	0	0	0.011	0.004	Bus141	-0.011	-0.004	18.1	94.0	
Bus325	0.400	89.667	-2.5	0	0	0.056	0.026	Bus119	-0.056	-0.026	98.9	90.7	
Bus327	0.400	89.499	-2.8	0	0	0.072	0.010	Bus122	-0.072	-0.010	117.2	99.1	
Bus328	0.400	89.665	-2.5	0	0	0.056	0.026	Bus122	-0.056	-0.026	98.9	90.7	
Bus329	0.400	89.761	-2.6	0	0	0.046	0.023	Bus109	-0.046	-0.023	82.9	89.4	
Bus330	0.400	89.816	-2.6	0	0	0.046	0.019	Bus110	-0.046	-0.019	80.3	92.3	
Bus331	0.400	90.156	-2.5	0	0	0.041	0.017	Bus105	-0.041	-0.017	71.8	92.2	
Bus332	0.400	92.218	-2.6	0	0	0.125	0.059	Bus168	-0.125	-0.059	216.7	90.4	
Bus333	0.400	93.521	-2.2	0	0	0.031	0.010	Bus171	-0.031	-0.010	50.4	95.4	
Bus334	0.400	93.427	-2.2	0	0	0.065	0.030	Bus178	-0.065	-0.030	111.2	90.8	
Bus335	0.400	94.091	-1.9	0	0	0.004	0.001	Bus175	-0.004	-0.001	6.2	97.0	
Bus336	0.400	93.458	-2.2	0	0	0.033	0.010	Bus177	-0.033	-0.010	53.3	95.9	
Bus337	0.400	93.690	-2.1	0	0	0.033	0.007	Bus180	-0.033	-0.007	52.2	97.9	
Bus338	0.400	93.736	-2.0	0	0	0.047	0.013	Bus181	-0.047	-0.013	74.7	96.5	
Bus339	0.400	92.610	-2.6	0	0	0.092	0.028	Bus183	-0.092	-0.028	150.4	95.6	
Bus340	0.400	93.232	-2.3	0	0	0.054	0.011	Bus184	-0.054	-0.011	84.6	98.1	
Bus341	0.400	92.906	-2.4	0	0	0.073	0.018	Bus186	-0.073	-0.018	116.9	96.9	
Bus342	0.400	92.277	-2.7	0	0	0.046	0.014	Bus187	-0.046	-0.014	74.4	95.8	
Bus343	0.400	92.303	-2.8	0	0	0.074	0.018	Bus188	-0.074	-0.018	118.9	97.0	
Bus344	0.400	91.893	-2.9	0	0	0.136	0.042	Bus189	-0.136	-0.042	222.9	95.6	
Bus345	0.400	92.386	-2.7	0	0	0.068	0.017	Bus191	-0.068	-0.017	109.6	96.8	
Bus346	0.400	93.309	-2.2	0	0	0.037	0.011	Bus193	-0.037	-0.011	59.6	96.1	
Bus347	0.400	91.712	-2.9	0	0	0.140	0.049	Bus192	-0.140	-0.049	234.2	94.3	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus348	0.400	93.487	-2.1	0	0	0.016	0.005	Bus196	-0.016	-0.005	25.2	95.4	
Bus349	0.400	93.632	-2.0	0	0	0.008	0.003	Bus198	-0.008	-0.003	12.8	93.6	
Bus350	0.400	93.652	-2.0	0	0	0.008	0.002	Bus199	-0.008	-0.002	12.4	97.0	
Bus351	0.400	93.350	-2.1	0	0	0.078	0.029	Bus202	-0.078	-0.029	128.7	93.6	
Bus352	0.400	93.737	-1.9	0	0	0.011	0.006	Bus203	-0.011	-0.006	18.8	87.8	
Bus353	33.000	94.141	-1.8	0	0	0	0	Bus171	-0.516	-1.351	26.9	35.7	
								Bus354	0.516	1.351	26.9	35.7	
Bus354	33.000	94.141	-1.8	0	0	0	0	Bus355	0.516	1.351	26.9	35.7	
								Bus353	-0.516	-1.351	26.9	35.7	
Bus355	33.000	94.060	-1.8	0	0	0	0	Bus354	-0.514	-1.353	26.9	35.6	
								Bus356	0.062	0.029	1.3	90.4	
								Bus358	0.453	1.323	26.0	32.4	
Bus356	33.000	94.059	-1.8	0	0	0	0	Bus355	-0.062	-0.030	1.3	90.1	
								Bus357	0.062	0.030	1.3	90.1	
Bus357	0.400	93.433	-2.0	0	0	0.061	0.029	Bus356	-0.061	-0.029	105.1	90.3	
Bus358	33.000	94.041	-1.8	0	0	0	0	Bus355	-0.452	-1.324	26.0	32.3	
								Bus359	0.003	0.001	0.1	95.3	
								Bus361	0.450	1.323	26.0	32.2	
Bus359	33.000	94.041	-1.8	0	0	0	0	Bus358	-0.003	-0.001	0.1	89.4	
								Bus360	0.003	0.001	0.1	89.4	
Bus360	0.400	93.799	-1.9	0	0	0.003	0.001	Bus359	-0.003	-0.001	5.0	89.4	
Bus361	33.000	94.013	-1.8	0	0	0	0	Bus358	-0.449	-1.323	26.0	32.1	
								Bus362	-2.175	0.258	40.8	-99.3	
								Bus363	2.624	1.065	52.7	92.7	
Bus362	33.000	94.047	-1.8	0	0	0	0	Bus361	2.176	-0.258	40.8	-99.3	
								Bus396	-2.176	0.258	40.8	-99.3	
Bus363	33.000	93.914	-1.8	0	0	0	0	Bus361	-2.622	-1.065	52.7	92.6	
								Bus365	2.524	1.003	50.6	92.9	
								Bus364	0.098	0.062	2.2	84.7	
Bus364	0.400	92.791	-2.1	0	0	0.097	0.060	Bus363	-0.097	-0.060	177.9	85.0	
Bus365	33.000	93.826	-1.8	0	0	0	0	Bus363	-2.521	-1.003	50.6	92.9	
								Bus366	0.978	0.492	20.4	89.3	
								Bus444	1.543	0.511	30.3	94.9	
Bus366	33.000	93.810	-1.8	0	0	0	0	Bus365	-0.978	-0.492	20.4	89.3	
								Bus367	0.728	0.373	15.3	89.0	
								Bus436	0.250	0.119	5.2	90.3	
Bus367	33.000	93.772	-1.8	0	0	0	0	Bus366	-0.727	-0.374	15.3	88.9	
								Bus368	0.727	0.374	15.3	88.9	
Bus368	33.000	93.772	-1.8	0	0	0	0	Bus369	0.727	0.374	15.3	88.9	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus369	33.000	93.757	-1.8	0	0	0	0	Bus367	-0.727	-0.374	15.3	88.9	
								Bus368	-0.727	-0.375	15.3	88.9	
								Bus370	0.659	0.347	13.9	88.5	
								Bus434	0.068	0.028	1.4	92.7	
Bus370	33.000	93.741	-1.8	0	0	0	0	Bus369	-0.659	-0.348	13.9	88.4	
								Bus371	0.265	0.153	5.7	86.6	
								Bus373	0.132	0.066	2.8	89.3	
								Bus378	0.196	0.107	4.2	87.7	
								Bus379	0.065	0.021	1.3	95.3	
								Bus370	-0.265	-0.156	5.7	86.2	
Bus371	33.000	93.709	-1.8	0	0	0	0	Bus372	0.265	0.156	5.7	86.2	
								Bus371	-0.262	-0.150	474.0	86.7	
Bus372	0.400	91.838	-2.3	0	0	0.262	0.150	Bus371	-0.262	-0.150	474.0	86.7	
Bus373	33.000	93.739	-1.8	0	0	0	0	Bus370	-0.132	-0.067	2.8	89.3	
								Bus374	0.132	0.067	2.8	89.3	
Bus374	33.000	93.728	-1.8	0	0	0	0	Bus373	-0.132	-0.069	2.8	88.7	
								Bus376	0.029	0.015	0.6	89.6	
								Bus375	0.103	0.054	2.2	88.4	
								Bus374	-0.102	-0.054	178.9	88.6	
Bus375	0.400	93.037	-2.0	0	0	0.102	0.054	Bus374	-0.102	-0.054	178.9	88.6	
Bus376	33.000	93.724	-1.8	0	0	0	0	Bus374	-0.029	-0.018	0.6	85.6	
								Bus377	0.029	0.018	0.6	85.6	
Bus377	0.400	93.196	-1.9	0	0	0.029	0.018	Bus376	-0.029	-0.018	52.8	85.7	
Bus378	0.400	91.636	-2.5	0	0	0.193	0.103	Bus370	-0.193	-0.103	343.8	88.3	
Bus379	0.400	93.378	-2.0	0	0	0.065	0.020	Bus370	-0.065	-0.020	105.8	95.4	
Bus383	0.400	118.470	5.3	0.055	0.000	0	0	Bus384	0.055	0.000	66.9	100.0	
Bus384	0.400	116.938	5.2	0	0	0	0	Bus383	-0.054	0.000	66.9	100.0	
								Bus395	0.488	-0.001	602.1	100.0	
								Bus387	-0.054	0.000	66.9	100.0	
								Bus388	-0.054	0.000	66.9	100.0	
								Bus389	-0.054	0.000	66.9	100.0	
								Bus390	-0.054	0.000	66.9	100.0	
								Bus391	-0.054	0.000	66.9	100.0	
								Bus392	-0.054	0.000	66.9	100.0	
								Bus393	-0.054	0.000	66.9	100.0	
								Bus394	-0.054	0.000	66.9	100.0	
Bus387	0.400	118.470	5.3	0.055	0.000	0	0	Bus384	0.055	0.000	66.9	100.0	
Bus388	0.400	118.470	5.3	0.055	0.000	0	0	Bus384	0.055	0.000	66.9	100.0	
Bus389	0.400	118.470	5.3	0.055	0.000	0	0	Bus384	0.055	0.000	66.9	100.0	
Bus390	0.400	118.470	5.3	0.055	0.000	0	0	Bus384	0.055	0.000	66.9	100.0	
Bus391	0.400	118.470	5.3	0.055	0.000	0	0	Bus384	0.055	0.000	66.9	100.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus392	0.400	118.470	5.3	0.055	0.000	0	0	Bus384	0.055	0.000	66.9	100.0	
Bus393	0.400	118.470	5.3	0.055	0.000	0	0	Bus384	0.055	0.000	66.9	100.0	
Bus394	0.400	118.470	5.3	0.055	0.000	0	0	Bus384	0.055	0.000	66.9	100.0	
Bus395	0.400	95.301	-0.3	0	0	0	0	Bus384	-0.396	0.039	602.1	-99.5	
								Bus396	0.396	-0.039	602.1	-99.5	
Bus396	33.000	94.082	-1.7	0	0	0	0	Bus362	2.177	-0.258	40.8	-99.3	
								Bus395	-0.390	0.048	7.3	-99.3	
								Bus429	-0.390	0.048	7.3	-99.3	
								Bus430	-0.349	0.038	6.5	-99.4	
								Bus431	-0.234	0.019	4.4	-99.7	
								Bus432	-0.425	0.057	8.0	-99.1	
								Bus433	-0.390	0.048	7.3	-99.3	
Bus408	0.400	118.344	5.3	0.049	0.000	0	0	Bus409	0.049	0.000	60.3	100.0	
Bus409	0.400	116.964	5.2	0	0	0	0	Bus408	-0.049	0.000	60.3	100.0	
								Bus523	-0.049	0.000	60.3	100.0	
								Bus524	-0.049	0.000	60.3	100.0	
								Bus525	-0.049	0.000	60.3	100.0	
								Bus526	-0.049	0.000	60.3	100.0	
								Bus527	-0.049	0.000	60.3	100.0	
								Bus528	-0.049	0.000	60.3	100.0	
								Bus529	-0.049	0.000	60.3	100.0	
								Bus530	-0.049	0.000	60.3	100.0	
								Bus531	-0.049	0.000	60.3	100.0	
								Bus429	0.488	-0.001	602.7	100.0	
Bus410	0.400	116.016	4.5	0.049	0.000	0	0	Bus411	0.049	0.000	61.5	100.0	
Bus411	0.400	114.608	4.4	0	0	0	0	Bus410	-0.049	0.000	61.5	100.0	
								Bus412	-0.054	0.000	68.2	100.0	
								Bus413	-0.054	0.000	68.2	100.0	
								Bus414	-0.054	0.000	68.2	100.0	
								Bus415	-0.054	0.000	68.2	100.0	
								Bus416	-0.054	0.000	68.2	100.0	
								Bus417	-0.054	0.000	68.2	100.0	
								Bus558	-0.054	0.000	68.2	100.0	
								Bus430	0.428	-0.001	539.0	100.0	
Bus412	0.400	116.170	4.5	0.055	0.000	0	0	Bus411	0.055	0.000	68.2	100.0	
Bus413	0.400	116.170	4.5	0.055	0.000	0	0	Bus411	0.055	0.000	68.2	100.0	
Bus414	0.400	116.170	4.5	0.055	0.000	0	0	Bus411	0.055	0.000	68.2	100.0	
Bus415	0.400	116.170	4.5	0.055	0.000	0	0	Bus411	0.055	0.000	68.2	100.0	
Bus416	0.400	116.170	4.5	0.055	0.000	0	0	Bus411	0.055	0.000	68.2	100.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus417	0.400	116.170	4.5	0.055	0.000	0	0	Bus411	0.055	0.000	68.2	100.0	
Bus423	0.400	110.013	3.0	0.055	0.000	0	0	Bus428	0.055	0.000	72.0	100.0	
Bus424	0.400	110.013	3.0	0.055	0.000	0	0	Bus428	0.055	0.000	72.0	100.0	
Bus425	0.400	110.013	3.0	0.055	0.000	0	0	Bus428	0.055	0.000	72.0	100.0	
Bus426	0.400	110.013	3.0	0.055	0.000	0	0	Bus428	0.055	0.000	72.0	100.0	
Bus427	0.400	110.013	3.0	0.055	0.000	0	0	Bus428	0.055	0.000	72.0	100.0	
Bus428	0.400	108.363	2.8	0	0	0	0	Bus423	-0.054	0.000	72.0	100.0	
								Bus424	-0.054	0.000	72.0	100.0	
								Bus425	-0.054	0.000	72.0	100.0	
								Bus426	-0.054	0.000	72.0	100.0	
								Bus427	-0.054	0.000	72.0	100.0	
								Bus431	0.270	-0.001	360.2	100.0	
Bus429	0.400	95.302	-0.3	0	0	0	0	Bus409	-0.396	0.039	602.7	-99.5	
								Bus396	0.396	-0.039	602.7	-99.5	
Bus430	0.400	95.196	-0.5	0	0	0	0	Bus411	-0.354	0.031	539.0	-99.6	
								Bus396	0.354	-0.031	539.0	-99.6	
Bus431	0.400	95.316	-0.4	0	0	0	0	Bus428	-0.237	0.014	360.2	-99.8	
								Bus396	0.237	-0.014	360.2	-99.8	
Bus432	0.400	95.388	-0.2	0	0	0	0	Bus545	-0.432	0.046	657.7	-99.4	
								Bus396	0.432	-0.046	657.7	-99.4	
Bus433	0.400	95.301	-0.3	0	0	0	0	Bus556	-0.396	0.039	602.1	-99.5	
								Bus396	0.396	-0.039	602.1	-99.5	
Bus434	33.000	93.755	-1.8	0	0	0	0	Bus369	-0.068	-0.029	1.4	92.3	
								Bus435	0.068	0.029	1.4	92.3	
Bus435	0.400	93.337	-1.9	0	0	0.068	0.028	Bus434	-0.068	-0.028	114.2	92.4	
Bus436	33.000	93.807	-1.8	0	0	0	0	Bus366	-0.250	-0.120	5.2	90.2	
								Bus438	0.180	0.079	3.7	91.5	
								Bus437	0.070	0.040	1.5	86.8	
Bus437	0.400	93.316	-1.9	0	0	0.070	0.040	Bus436	-0.070	-0.040	124.8	86.9	
Bus438	33.000	93.794	-1.8	0	0	0	0	Bus436	-0.180	-0.081	3.7	91.2	
								Bus439	0.094	0.058	2.1	85.2	
								Bus442	0.065	0.018	1.3	96.6	
								Bus441	0.021	0.006	0.4	96.1	
Bus439	33.000	93.792	-1.8	0	0	0	0	Bus438	-0.094	-0.058	2.1	85.0	
								Bus440	0.094	0.058	2.1	85.0	
Bus440	0.400	93.113	-2.0	0	0	0.093	0.057	Bus439	-0.093	-0.057	170.0	85.2	
Bus441	0.400	93.621	-1.9	0	0	0.020	0.006	Bus438	-0.020	-0.006	32.8	96.2	
Bus442	33.000	93.787	-1.8	0	0	0	0	Bus438	-0.065	-0.021	1.3	95.3	
								Bus443	0.065	0.021	1.3	95.3	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus443	0.400	93.424	-2.0	0	0	0.065	0.020	Bus442	-0.065	-0.020	105.7	95.4	
Bus444	33.000	93.787	-1.8	0	0	0	0	Bus365	-1.542	-0.511	30.3	94.9	
								Bus446	0.114	0.071	2.5	84.8	
								Bus450	1.429	0.440	27.9	95.6	
Bus446	33.000	93.782	-1.8	0	0	0	0	Bus444	-0.114	-0.072	2.5	84.4	
								Bus448	0.114	0.072	2.5	84.4	
Bus448	33.000	93.777	-1.8	0	0	0	0	Bus446	-0.114	-0.073	2.5	84.1	
								Bus449	0.114	0.073	2.5	84.1	
Bus449	0.400	92.940	-2.0	0	0	0.113	0.072	Bus448	-0.113	-0.072	207.9	84.3	
Bus450	33.000	93.769	-1.8	0	0	0	0	Bus444	-1.429	-0.441	27.9	95.6	
								Bus451	0.034	0.018	0.7	88.6	
								Bus453	1.394	0.423	27.2	95.7	
Bus451	33.000	93.768	-1.8	0	0	0	0	Bus450	-0.034	-0.019	0.7	87.6	
								Bus452	0.034	0.019	0.7	87.6	
Bus452	0.400	92.844	-2.1	0	0	0.034	0.018	Bus451	-0.034	-0.018	60.2	87.9	
Bus453	33.000	93.706	-1.8	0	0	0	0	Bus450	-1.393	-0.424	27.2	95.7	
								Bus454	0.825	0.298	16.4	94.0	
								Bus500	0.569	0.125	10.9	97.7	
Bus454	33.000	93.672	-1.8	0	0	0	0	Bus453	-0.824	-0.299	16.4	94.0	
								Bus455	0.213	0.079	4.2	93.8	
								Bus460	0.611	0.220	12.1	94.1	
Bus455	33.000	93.667	-1.8	0	0	0	0	Bus454	-0.213	-0.079	4.3	93.7	
								Bus457	0.057	0.016	1.1	96.3	
								Bus456	0.078	0.032	1.6	92.6	
								Bus458	0.078	0.032	1.6	92.6	
Bus456	0.400	92.923	-2.1	0	0	0.078	0.031	Bus455	-0.078	-0.031	130.2	92.8	
Bus457	33.000	93.663	-1.8	0	0	0	0	Bus455	-0.057	-0.018	1.1	95.4	
								Bus459	0.057	0.018	1.1	95.4	
Bus458	0.400	92.923	-2.1	0	0	0.078	0.031	Bus455	-0.078	-0.031	130.2	92.8	
Bus459	0.400	93.169	-2.0	0	0	0.056	0.018	Bus457	-0.056	-0.018	91.6	95.5	
Bus460	33.000	93.631	-1.8	0	0	0	0	Bus454	-0.611	-0.222	12.1	94.0	
								Bus461	0.466	0.157	9.2	94.8	
								Bus490	0.067	0.027	1.3	92.8	
								Bus492	0.078	0.038	1.6	89.8	
Bus461	33.000	93.627	-1.8	0	0	0	0	Bus460	-0.466	-0.157	9.2	94.8	
								Bus470	0.466	0.158	9.2	94.7	
								Line211~	0.000	0.000	0.0	0.0	
Bus470	33.000	93.592	-1.8	0	0	0	0	Bus461	-0.466	-0.159	9.2	94.6	
								Bus472	0.313	0.102	6.2	95.1	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus471	0.400	92.693	-2.2	0	0	0.152	0.056	Bus471	0.153	0.058	3.1	93.5	
								Bus470	-0.152	-0.056	251.9	93.7	
Bus472	33.000	93.567	-1.8	0	0	0	0	Bus470	-0.313	-0.104	6.2	94.9	
								Bus474	0.224	0.080	4.4	94.2	
Bus473	0.400	92.391	-2.4	0	0	0.088	0.022	Bus473	0.089	0.024	1.7	96.7	
								Bus472	-0.088	-0.022	142.3	97.0	
Bus474	33.000	93.544	-1.8	0	0	0	0	Bus472	-0.224	-0.083	4.5	93.8	
								Bus476	0.189	0.074	3.8	93.1	
Bus475	0.400	93.362	-1.9	0	0	0.035	0.009	Bus475	0.035	0.009	0.7	97.0	
								Bus474	-0.035	-0.009	55.9	97.0	
Bus476	33.000	93.543	-1.8	0	0	0	0	Bus474	-0.189	-0.074	3.8	93.1	
								Bus477	0.189	0.074	3.8	93.1	
Bus477	33.000	93.543	-1.8	0	0	0	0	Bus478	0.189	0.074	3.8	93.1	
								Bus476	-0.189	-0.074	3.8	93.1	
Bus478	33.000	93.523	-1.8	0	0	0	0	Bus477	-0.189	-0.077	3.8	92.6	
								Bus479	0.070	0.027	1.4	93.6	
Bus479	33.000	93.522	-1.8	0	0	0	0	Bus481	0.000	-0.001	0.0	0.0	
								Bus485	0.118	0.051	2.4	91.7	
Bus480	0.400	92.867	-2.1	0	0	0.070	0.026	Bus478	-0.070	-0.027	1.4	93.5	
								Bus480	0.070	0.027	1.4	93.5	
Bus481	33.000	93.523	-1.8	0	0	0	0	Bus479	-0.070	-0.026	116.2	93.6	
								Bus478	0.000	0.000	0.0	0.0	
Bus485	33.000	93.521	-1.8	0	0	0	0	Bus478	-0.118	-0.052	2.4	91.6	
								Bus486	0.098	0.045	2.0	90.8	
Bus486	33.000	93.518	-1.8	0	0	0	0	Bus488	0.020	0.007	0.4	95.3	
								Bus485	-0.098	-0.046	2.0	90.6	
Bus487	0.400	92.533	-2.2	0	0	0.097	0.045	Bus487	0.098	0.046	2.0	90.6	
								Bus486	-0.097	-0.045	166.8	90.8	
Bus488	33.000	93.520	-1.8	0	0	0	0	Bus485	-0.020	-0.008	0.4	93.4	
								Bus489	0.020	0.008	0.4	93.4	
Bus489	0.400	93.214	-1.9	0	0	0.020	0.008	Bus488	-0.020	-0.008	33.9	93.4	
								Bus490	-0.067	-0.028	1.3	92.2	
Bus491	0.400	92.601	-2.2	0	0	0.066	0.027	Bus460	-0.067	-0.028	1.3	92.2	
								Bus491	0.067	0.028	1.3	92.2	
Bus492	33.000	93.620	-1.8	0	0	0	0	Bus490	-0.066	-0.027	111.4	92.5	
								Bus460	-0.078	-0.042	1.7	88.2	
Bus493	33.000	93.620	-1.8	0	0	0	0	Bus493	0.011	0.007	0.2	85.3	
								Bus495	0.067	0.035	1.4	88.6	
Bus493	33.000	93.620	-1.8	0	0	0	0	Bus492	-0.011	-0.007	0.2	84.3	
								Bus494	0.011	0.007	0.2	84.3	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus494	0.400	93.421	-1.8	0	0	0.011	0.007	Bus493	-0.011	-0.007	19.6	84.4	
Bus495	33.000	93.617	-1.8	0	0	0	0	Bus492	-0.067	-0.036	1.4	88.0	
								Bus497	0.008	0.002	0.2	95.9	
								Bus496	0.060	0.034	1.3	86.9	
Bus496	33.000	93.611	-1.8	0	0	0	0	Bus495	-0.060	-0.036	1.3	85.3	
								Bus498	0.060	0.036	1.3	85.3	
Bus497	33.000	93.617	-1.8	0	0	0	0	Bus495	-0.008	-0.003	0.2	93.6	
								Bus499	0.008	0.003	0.2	93.6	
Bus498	0.400	92.934	-2.0	0	0	0.059	0.036	Bus496	-0.059	-0.036	107.8	85.5	
Bus499	0.400	93.501	-1.8	0	0	0.008	0.003	Bus497	-0.008	-0.003	12.9	93.6	
Bus500	33.000	93.698	-1.8	0	0	0	0	Bus453	-0.569	-0.126	10.9	97.6	
								Bus501	0.241	0.063	4.6	96.7	
								Bus503	0.150	0.025	2.8	98.7	
								Bus508	0.178	0.038	3.4	97.8	
Bus501	33.000	93.696	-1.8	0	0	0	0	Bus500	-0.241	-0.063	4.6	96.7	
								Bus502	0.241	0.063	4.6	96.7	
Bus502	0.400	90.561	-3.6	0	0	0.234	0.054	Bus501	-0.234	-0.054	383.2	97.4	
Bus503	33.000	93.694	-1.8	0	0	0	0	Bus500	-0.150	-0.026	2.8	98.6	
								Bus505	0.018	0.001	0.3	99.9	
								Bus504	0.133	0.025	2.5	98.3	
Bus504	33.000	93.693	-1.8	0	0	0	0	Bus503	-0.133	-0.025	2.5	98.3	
								Bus506	0.133	0.025	2.5	98.3	
Bus505	33.000	93.694	-1.8	0	0	0	0	Bus503	-0.018	-0.001	0.3	99.8	
								Bus507	0.018	0.001	0.3	99.8	
Bus506	0.400	92.094	-2.8	0	0	0.131	0.022	Bus504	-0.131	-0.022	208.1	98.6	
Bus507	0.400	93.581	-1.9	0	0	0.018	0.001	Bus505	-0.018	-0.001	27.1	99.8	
Bus508	33.000	93.694	-1.8	0	0	0	0	Bus500	-0.178	-0.038	3.4	97.8	
								Bus510	0.092	0.021	1.8	97.4	
								Bus509	0.086	0.017	1.6	98.1	
Bus509	0.400	93.275	-2.0	0	0	0.086	0.017	Bus508	-0.086	-0.017	135.1	98.2	
Bus510	33.000	93.691	-1.8	0	0	0	0	Bus508	-0.092	-0.022	1.8	97.2	
								Bus512	0.072	0.014	1.4	98.1	
								Bus520	0.012	0.002	0.2	98.0	
								Line239~	0.000	0.000	0.0	0.0	
								Bus511	0.008	0.006	0.2	80.0	
Bus511	0.400	93.628	-1.8	0	0	0.008	0.006	Bus510	-0.008	-0.006	15.0	80.0	
Bus512	33.000	93.689	-1.8	0	0	0	0	Bus510	-0.072	-0.015	1.4	97.9	
								Bus513	0.072	0.015	1.4	97.9	
Bus513	0.400	93.334	-2.0	0	0	0.072	0.015	Bus512	-0.072	-0.015	113.8	98.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus520	33.000	93.690	-1.8	0	0	0	0	Bus510	-0.012	-0.003	0.2	97.0	
								Bus521	0.012	0.003	0.2	97.0	
Bus521	0.400	93.595	-1.8	0	0	0.012	0.003	Bus520	-0.012	-0.003	18.6	97.0	
Bus523	0.400	118.344	5.3	0.049	0.000	0	0	Bus409	0.049	0.000	60.3	100.0	
Bus524	0.400	118.344	5.3	0.049	0.000	0	0	Bus409	0.049	0.000	60.3	100.0	
Bus525	0.400	118.344	5.3	0.049	0.000	0	0	Bus409	0.049	0.000	60.3	100.0	
Bus526	0.400	118.344	5.3	0.049	0.000	0	0	Bus409	0.049	0.000	60.3	100.0	
Bus527	0.400	118.344	5.3	0.049	0.000	0	0	Bus409	0.049	0.000	60.3	100.0	
Bus528	0.400	118.344	5.3	0.049	0.000	0	0	Bus409	0.049	0.000	60.3	100.0	
Bus529	0.400	118.344	5.3	0.049	0.000	0	0	Bus409	0.049	0.000	60.3	100.0	
Bus530	0.400	118.344	5.3	0.049	0.000	0	0	Bus409	0.049	0.000	60.3	100.0	
Bus531	0.400	118.344	5.3	0.049	0.000	0	0	Bus409	0.049	0.000	60.3	100.0	
Bus533	0.400	120.489	5.9	0.055	0.000	0	0	Bus545	0.055	0.000	65.8	100.0	
Bus536	0.400	120.489	5.9	0.055	0.000	0	0	Bus545	0.055	0.000	65.8	100.0	
Bus537	0.400	120.489	5.9	0.055	0.000	0	0	Bus545	0.055	0.000	65.8	100.0	
Bus538	0.400	120.489	5.9	0.055	0.000	0	0	Bus545	0.055	0.000	65.8	100.0	
Bus539	0.400	120.489	5.9	0.055	0.000	0	0	Bus545	0.055	0.000	65.8	100.0	
Bus540	0.400	120.489	5.9	0.055	0.000	0	0	Bus545	0.055	0.000	65.8	100.0	
Bus541	0.400	120.489	5.9	0.055	0.000	0	0	Bus545	0.055	0.000	65.8	100.0	
Bus542	0.400	120.489	5.9	0.055	0.000	0	0	Bus545	0.055	0.000	65.8	100.0	
Bus543	0.400	120.489	5.9	0.055	0.000	0	0	Bus545	0.055	0.000	65.8	100.0	
Bus544	0.400	120.489	5.9	0.055	0.000	0	0	Bus545	0.055	0.000	65.8	100.0	
Bus545	0.400	118.983	5.8	0	0	0	0	Bus533	-0.054	0.000	65.8	100.0	
								Bus536	-0.054	0.000	65.8	100.0	
								Bus537	-0.054	0.000	65.8	100.0	
								Bus538	-0.054	0.000	65.8	100.0	
								Bus539	-0.054	0.000	65.8	100.0	
								Bus540	-0.054	0.000	65.8	100.0	
								Bus541	-0.054	0.000	65.8	100.0	
								Bus542	-0.054	0.000	65.8	100.0	
								Bus543	-0.054	0.000	65.8	100.0	
								Bus544	-0.054	0.000	65.8	100.0	
								Bus432	0.542	-0.001	657.7	100.0	
Bus546	0.400	118.470	5.3	0.055	0.000	0	0	Bus556	0.055	0.000	66.9	100.0	
Bus547	0.400	118.470	5.3	0.055	0.000	0	0	Bus556	0.055	0.000	66.9	100.0	
Bus548	0.400	118.470	5.3	0.055	0.000	0	0	Bus556	0.055	0.000	66.9	100.0	
Bus549	0.400	118.470	5.3	0.055	0.000	0	0	Bus556	0.055	0.000	66.9	100.0	
Bus550	0.400	118.470	5.3	0.055	0.000	0	0	Bus556	0.055	0.000	66.9	100.0	
Bus551	0.400	118.470	5.3	0.055	0.000	0	0	Bus556	0.055	0.000	66.9	100.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus552	0.400	118.470	5.3	0.055	0.000	0	0	Bus556	0.055	0.000	66.9	100.0	
Bus553	0.400	118.470	5.3	0.055	0.000	0	0	Bus556	0.055	0.000	66.9	100.0	
Bus554	0.400	118.470	5.3	0.055	0.000	0	0	Bus556	0.055	0.000	66.9	100.0	
Bus556	0.400	116.938	5.2	0	0	0	0	Bus546	-0.054	0.000	66.9	100.0	
								Bus547	-0.054	0.000	66.9	100.0	
								Bus548	-0.054	0.000	66.9	100.0	
								Bus549	-0.054	0.000	66.9	100.0	
								Bus550	-0.054	0.000	66.9	100.0	
								Bus551	-0.054	0.000	66.9	100.0	
								Bus552	-0.054	0.000	66.9	100.0	
								Bus553	-0.054	0.000	66.9	100.0	
								Bus554	-0.054	0.000	66.9	100.0	
								Bus433	0.488	-0.001	602.1	100.0	
Bus558	0.400	116.170	4.5	0.055	0.000	0	0	Bus411	0.055	0.000	68.2	100.0	
Line43~	33.000	91.646	-2.2	0	0	0	0	Bus54	0.000	0.000	0.0	0.0	
Line122~	33.000	90.031	-2.4	0	0	0	0	Bus149	0.000	0.000	0.0	0.0	
Line211~	33.000	93.627	-1.8	0	0	0	0	Bus461	0.000	0.000	0.0	0.0	
Line239~	33.000	93.691	-1.8	0	0	0	0	Bus510	0.000	0.000	0.0	0.0	

* 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