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### Electrical Transient Analyzer Program

#### Load Flow Analysis

Loading Category (1): Design  
Generation Category (1): Design  
Load Diversity Factor: None

	<u>Swing</u>	<u>V-Control</u>	<u>Load</u>	<u>Total</u>
Number of Buses:	2	0	471	473

	<u>XEMR2</u>	<u>XEMR3</u>	<u>Reactor</u>	<u>Line/Cable</u>	<u>Impedance</u>	<u>Tie PD</u>	<u>Total</u>
Number of Branches:	162	0	0	293	0	17	472

Method of Solution:	Adaptive Newton-Raphson Method
Maximum No. of Iteration:	99
Precision of Solution:	0.0001000
System Frequency:	50.00 Hz
Unit System:	Metric
Project Filename:	project
Output Filename:	C:\Users\Top Net\Desktop\مشروع التخرج\انتهائي وشغال\انتهائي وشغال\etap\project\Untitled.Ifr

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**Adjustments**

<u>Tolerance</u>	<u>Apply Adjustments</u>	<u>Individual /Global</u>	<u>Percent</u>
Transformer Impedance:	Yes	Individual	
Reactor Impedance:	Yes	Individual	
Overload Heater Resistance:	No		
Transmission Line Length:	No		
Cable Length:	No		

  

<u>Temperature Correction</u>	<u>Apply Adjustments</u>	<u>Individual /Global</u>	<u>Degree C</u>
Transmission Line Resistance:	Yes	Individual	
Cable Resistance:	Yes	Individual	

Bus Input Data

Bus			Initial Voltage		Load							
					Constant kVA		Constant Z		Constant I		Generic	
ID	kV	Sub-sys	% Mag.	Ang.	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
Bus2	33.000	1	100.0	0.0								
Bus3	33.000	1	100.0	0.0								
Bus4	33.000	1	100.0	0.0								
Bus5	33.000	1	100.0	0.0								
Bus6	33.000	1	100.0	0.0								
Bus7	33.000	1	100.0	0.0								
Bus8	33.000	1	100.0	0.0								
Bus9	33.000	1	100.0	0.0								
Bus10	33.000	1	100.0	0.0								
Bus11	33.000	1	100.0	0.0								
Bus12	33.000	1	100.0	0.0								
Bus13	33.000	1	100.0	0.0								
Bus14	33.000	1	100.0	0.0								
Bus15	33.000	1	100.0	0.0								
Bus16	33.000	1	100.0	0.0								
Bus17	33.000	1	100.0	0.0								
Bus18	33.000	1	100.0	0.0								
Bus19	33.000	1	100.0	0.0								
Bus20	33.000	1	100.0	0.0								
Bus21	33.000	1	100.0	0.0								
Bus22	33.000	1	100.0	0.0								
Bus23	33.000	1	100.0	0.0								
Bus24	33.000	1	100.0	0.0								
Bus25	33.000	1	100.0	0.0								
Bus26	33.000	1	100.0	0.0								
Bus27	33.000	1	100.0	0.0								
Bus28	33.000	1	100.0	0.0								
Bus29	33.000	1	100.0	0.0								
Bus30	33.000	1	100.0	0.0								
Bus31	33.000	1	100.0	0.0								
Bus32	33.000	1	100.0	0.0								
Bus33	33.000	1	100.0	0.0								
Bus34	33.000	1	100.0	0.0								

					Load							
Bus			Initial Voltage		Constant kVA		Constant Z		Constant I		Generic	
ID	kV	Sub-sys	% Mag.	Ang.	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
Bus35	33.000	1	100.0	0.0								
Bus36	33.000	1	100.0	0.0								
Bus37	33.000	1	100.0	0.0								
Bus38	33.000	1	100.0	0.0								
Bus39	33.000	1	100.0	0.0								
Bus40	33.000	1	100.0	0.0								
Bus41	33.000	1	100.0	0.0								
Bus42	33.000	1	100.0	0.0								
Bus43	33.000	1	100.0	0.0								
Bus44	33.000	1	100.0	0.0								
Bus45	33.000	1	100.0	0.0								
Bus46	33.000	1	100.0	0.0								
Bus47	33.000	1	100.0	0.0								
Bus48	33.000	1	100.0	0.0								
Bus49	33.000	1	100.0	0.0								
Bus50	33.000	1	100.0	0.0								
Bus51	33.000	1	100.0	0.0								
Bus52	33.000	1	100.0	0.0								
Bus53	33.000	1	100.0	0.0								
Bus54	33.000	1	100.0	0.0								
Bus55	33.000	1	100.0	0.0								
Bus56	33.000	1	100.0	0.0								
Bus57	33.000	1	100.0	0.0								
Bus58	33.000	1	100.0	0.0								
Bus59	33.000	1	100.0	0.0								
Bus60	33.000	1	100.0	0.0								
Bus61	33.000	1	100.0	0.0								
Bus62	33.000	1	100.0	0.0								
Bus63	33.000	1	100.0	0.0								
Bus64	33.000	1	100.0	0.0								
Bus65	33.000	1	100.0	0.0								
Bus66	33.000	1	100.0	0.0								
Bus67	33.000	1	100.0	0.0								
Bus68	33.000	1	100.0	0.0								
Bus69	33.000	1	100.0	0.0								

					Load							
Bus			Initial Voltage		Constant kVA		Constant Z		Constant I		Generic	
ID	kV	Sub-sys	% Mag.	Ang.	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
Bus70	33.000	1	100.0	0.0								
Bus71	33.000	1	100.0	0.0								
Bus72	33.000	1	100.0	0.0								
Bus73	33.000	1	100.0	0.0								
Bus74	33.000	1	100.0	0.0								
Bus75	33.000	1	100.0	0.0								
Bus76	33.000	1	100.0	0.0								
Bus77	33.000	1	100.0	0.0								
Bus78	33.000	1	100.0	0.0								
Bus79	33.000	1	100.0	0.0								
Bus80	33.000	1	100.0	0.0								
Bus81	33.000	1	100.0	0.0								
Bus82	33.000	1	100.0	0.0								
Bus83	33.000	1	100.0	0.0								
Bus84	33.000	1	100.0	0.0								
Bus87	33.000	1	100.0	0.0								
Bus88	33.000	1	100.0	0.0								
Bus89	33.000	1	100.0	0.0								
Bus90	33.000	1	100.0	0.0								
Bus91	33.000	1	100.0	0.0								
Bus92	33.000	1	100.0	0.0								
Bus93	33.000	1	100.0	0.0								
Bus94	33.000	1	100.0	0.0								
Bus95	33.000	1	100.0	0.0								
Bus96	33.000	1	100.0	0.0								
Bus97	33.000	1	100.0	0.0								
Bus98	33.000	1	100.0	0.0								
Bus99	33.000	1	100.0	0.0								
Bus100	33.000	1	100.0	0.0								
Bus101	33.000	1	100.0	0.0								
Bus102	33.000	1	100.0	0.0								
Bus103	33.000	1	100.0	0.0								
Bus104	33.000	1	100.0	0.0								
Bus105	33.000	1	100.0	0.0								
Bus106	33.000	1	100.0	0.0								

					Load							
Bus			Initial Voltage		Constant kVA		Constant Z		Constant I		Generic	
ID	kV	Sub-sys	% Mag.	Ang.	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
Bus109	33.000	1	100.0	0.0								
Bus110	33.000	1	100.0	0.0								
Bus111	33.000	1	100.0	0.0								
Bus112	33.000	1	100.0	0.0								
Bus113	33.000	1	100.0	0.0								
Bus114	33.000	1	100.0	0.0								
Bus115	33.000	1	100.0	0.0								
Bus116	33.000	1	100.0	0.0								
Bus118	33.000	1	100.0	0.0								
Bus119	33.000	1	100.0	0.0								
Bus120	33.000	1	100.0	0.0								
Bus122	33.000	1	100.0	0.0								
Bus123	33.000	1	100.0	0.0								
Bus124	33.000	1	100.0	0.0								
Bus125	33.000	1	100.0	0.0								
Bus126	33.000	1	100.0	0.0								
Bus127	33.000	1	100.0	0.0								
Bus135	33.000	1	100.0	0.0								
Bus137	33.000	1	100.0	0.0								
Bus138	33.000	1	100.0	0.0								
Bus139	33.000	1	100.0	0.0								
Bus140	33.000	1	100.0	0.0								
Bus141	33.000	1	100.0	0.0								
Bus142	33.000	1	100.0	0.0								
Bus143	33.000	1	100.0	0.0								
Bus144	33.000	1	100.0	0.0								
Bus145	33.000	1	100.0	0.0								
Bus146	33.000	1	100.0	0.0								
Bus147	33.000	1	100.0	0.0								
Bus148	33.000	1	100.0	0.0								
Bus149	33.000	1	100.0	0.0								
Bus150	33.000	1	100.0	0.0								
Bus151	33.000	1	100.0	0.0								
Bus152	33.000	1	100.0	0.0								
Bus153	33.000	1	100.0	0.0								

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					Load							
Bus			Initial Voltage		Constant kVA		Constant Z		Constant I		Generic	
ID	kV	Sub-sys	% Mag.	Ang.	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
Bus154	33.000	1	100.0	0.0								
Bus155	33.000	1	100.0	0.0								
Bus156	33.000	1	100.0	0.0								
Bus157	33.000	1	100.0	0.0								
Bus158	33.000	1	100.0	0.0								
Bus159	33.000	1	100.0	0.0								
Bus160	33.000	1	100.0	0.0								
Bus161	33.000	1	100.0	0.0								
Bus162	33.000	1	100.0	0.0								
Bus163	33.000	1	100.0	0.0								
Bus164	33.000	1	100.0	0.0								
Bus165	33.000	1	100.0	0.0								
Bus167	33.000	1	100.0	0.0								
Bus168	33.000	1	100.0	0.0								
Bus169	33.000	1	100.0	0.0								
Bus170	33.000	1	100.0	0.0								
Bus171	33.000	1	100.0	0.0								
Bus173	33.000	1	100.0	0.0								
Bus174	33.000	1	100.0	0.0								
Bus175	33.000	1	100.0	0.0								
Bus176	33.000	1	100.0	0.0								
Bus177	33.000	1	100.0	0.0								
Bus178	33.000	1	100.0	0.0								
Bus179	33.000	1	100.0	0.0								
Bus180	33.000	1	100.0	0.0								
Bus181	33.000	1	100.0	0.0								
Bus182	33.000	1	100.0	0.0								
Bus183	33.000	1	100.0	0.0								
Bus184	33.000	1	100.0	0.0								
Bus185	33.000	1	100.0	0.0								
Bus186	33.000	1	100.0	0.0								
Bus187	33.000	1	100.0	0.0								
Bus188	33.000	1	100.0	0.0								
Bus189	33.000	1	100.0	0.0								
Bus190	33.000	1	100.0	0.0								

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Bus			Initial Voltage		Constant kVA		Constant Z		Constant I		Generic	
ID	kV	Sub-sys	% Mag.	Ang.	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
Bus191	33.000	1	100.0	0.0								
Bus192	33.000	1	100.0	0.0								
Bus193	33.000	1	100.0	0.0								
Bus194	33.000	1	100.0	0.0								
Bus195	33.000	1	100.0	0.0								
Bus196	33.000	1	100.0	0.0								
Bus197	33.000	1	100.0	0.0								
Bus198	33.000	1	100.0	0.0								
Bus199	33.000	1	100.0	0.0								
Bus201	33.000	1	100.0	0.0								
Bus202	33.000	1	100.0	0.0								
Bus203	33.000	1	100.0	0.0								
Bus229	0.400	1	100.0	0.0	0.183	0.037						
Bus230	0.400	1	100.0	0.0	0.031	0.021						
Bus231	0.400	1	100.0	0.0	0.128	0.042						
Bus233	0.400	1	100.0	0.0	0.024	0.009						
Bus234	0.400	1	100.0	0.0	0.084	0.021						
Bus235	0.400	1	100.0	0.0	0.086	0.025						
Bus237	0.400	1	100.0	0.0	0.021	0.003						
Bus238	0.400	1	100.0	0.0	0.123	0.040						
Bus239	0.400	1	100.0	0.0	0.172	0.056						
Bus240	0.400	1	100.0	0.0	0.019	0.006						
Bus246	0.400	1	100.0	0.0	0.107	0.035						
Bus247	0.400	1	100.0	0.0	0.182	0.046						
Bus248	0.400	1	100.0	0.0	0.089	0.022						
Bus249	0.400	1	100.0	0.0	0.123	0.041						
Bus250	0.400	1	100.0	0.0	0.129	0.047						
Bus251	0.400	1	100.0	0.0	0.124	0.031						
Bus252	0.400	1	100.0	0.0	0.009	0.002						
Bus253	0.400	1	100.0	0.0	0.030	0.000						
Bus254	0.400	1	100.0	0.0	0.026	0.008						
Bus255	0.400	1	100.0	0.0	0.030	0.020						
Bus256	0.400	1	100.0	0.0	0.138	0.067						
Bus257	0.400	1	100.0	0.0								
Bus258	0.400	1	100.0	0.0	0.058	0.023						



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Bus			Initial Voltage		Load							
					Constant kVA		Constant Z		Constant I		Generic	
ID	kV	Sub-sys	% Mag.	Ang.	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
Bus259	0.400	1	100.0	0.0	0.138	0.035						
Bus260	0.400	1	100.0	0.0	0.017	0.007						
Bus261	0.400	1	100.0	0.0	0.007	0.002						
Bus262	0.400	1	100.0	0.0	0.132	0.056						
Bus263	0.400	1	100.0	0.0	0.022	0.007						
Bus264	0.400	1	100.0	0.0	0.009	0.004						
Bus268	0.400	1	100.0	0.0	0.011	0.008						
Bus269	0.400	1	100.0	0.0	0.001	0.115	0.000	0.001				
Bus270	0.400	1	100.0	0.0	0.098	0.028						
Bus271	0.400	1	100.0	0.0	0.126	0.050						
Bus272	0.400	1	100.0	0.0	0.068	0.010						
Bus273	0.400	1	100.0	0.0	0.035	0.018						
Bus274	0.400	1	100.0	0.0	0.084	0.021						
Bus275	0.400	1	100.0	0.0	0.043	0.012						
Bus276	0.400	1	100.0	0.0	0.205	0.132						
Bus277	0.400	1	100.0	0.0	0.084	0.041						
Bus278	0.400	1	100.0	0.0	0.079	0.031						
Bus279	0.400	1	100.0	0.0	0.023	0.018						
Bus280	0.400	1	100.0	0.0	0.055	0.022						
Bus281	0.400	1	100.0	0.0	0.091	0.023						
Bus282	0.400	1	100.0	0.0	0.075	0.011						
Bus283	0.400	1	100.0	0.0	0.084	0.017						
Bus284	0.400	1	100.0	0.0	0.056	0.011						
Bus285	0.400	1	100.0	0.0	0.021	0.059						
Bus286	0.400	1	100.0	0.0	0.021	0.059						
Bus287	0.400	1	100.0	0.0	0.008	0.002						
Bus288	0.400	1	100.0	0.0	0.040	0.010						
Bus289	0.400	1	100.0	0.0	0.019	0.007						
Bus290	0.400	1	100.0	0.0	0.013	0.003						
Bus291	0.400	1	100.0	0.0	0.035	0.015						
Bus292	0.400	1	100.0	0.0	0.036	0.000						
Bus293	0.400	1	100.0	0.0	0.092	0.023						
Bus294	0.400	1	100.0	0.0	0.094	0.024						
Bus295	0.400	1	100.0	0.0	0.067	0.031						
Bus296	0.400	1	100.0	0.0	0.014	0.011						

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Bus			Initial Voltage		Load							
					Constant kVA		Constant Z		Constant I		Generic	
ID	kV	Sub-sys	% Mag.	Ang.	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
Bus297	0.400	1	100.0	0.0	0.034	0.008						
Bus298	0.400	1	100.0	0.0	0.024	0.006						
Bus299	0.400	1	100.0	0.0	0.068	0.027						
Bus300	0.400	1	100.0	0.0	0.078	0.028						
Bus301	0.400	1	100.0	0.0	0.064	0.023						
Bus302	0.400	1	100.0	0.0	0.074	0.000						
Bus303	0.400	1	100.0	0.0	0.069	0.030						
Bus304	0.400	1	100.0	0.0	0.015	0.012						
Bus305	0.400	1	100.0	0.0	0.043	0.018						
Bus306	0.400	1	100.0	0.0	0.055	0.011						
Bus307	0.400	1	100.0	0.0	0.030	0.004						
Bus308	0.400	1	100.0	0.0								
Bus309	0.400	1	100.0	0.0	0.020	0.009						
Bus310	0.400	1	100.0	0.0	0.059	0.037						
Bus311	0.400	1	100.0	0.0								
Bus312	0.400	1	100.0	0.0	0.002	0.000						
Bus313	0.400	1	100.0	0.0	0.069	0.014						
Bus314	0.400	1	100.0	0.0	0.045	0.009						
Bus315	0.400	1	100.0	0.0	0.044	0.006						
Bus316	0.400	1	100.0	0.0								
Bus317	0.400	1	100.0	0.0	0.075	0.025						
Bus319	0.400	1	100.0	0.0	0.058	0.021						
Bus320	0.400	1	100.0	0.0	0.019	0.015						
Bus321	0.400	1	100.0	0.0	0.078	0.023						
Bus322	0.400	1	100.0	0.0	0.025	0.006						
Bus323	0.400	1	100.0	0.0	0.073	0.024						
Bus324	0.400	1	100.0	0.0	0.011	0.004						
Bus325	0.400	1	100.0	0.0	0.058	0.028						
Bus327	0.400	1	100.0	0.0	0.075	0.011						
Bus328	0.400	1	100.0	0.0	0.058	0.028						
Bus329	0.400	1	100.0	0.0	0.048	0.024						
Bus330	0.400	1	100.0	0.0	0.048	0.020						
Bus331	0.400	1	100.0	0.0	0.043	0.018						
Bus332	0.400	1	100.0	0.0	0.128	0.062						
Bus333	0.400	1	100.0	0.0	0.032	0.010						

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Bus			Initial Voltage		Load							
					Constant kVA		Constant Z		Constant I		Generic	
ID	kV	Sub-sys	% Mag.	Ang.	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
Bus334	0.400	1	100.0	0.0	0.066	0.032						
Bus335	0.400	1	100.0	0.0	0.004	0.001						
Bus336	0.400	1	100.0	0.0	0.034	0.011						
Bus337	0.400	1	100.0	0.0	0.034	0.008						
Bus338	0.400	1	100.0	0.0	0.048	0.014						
Bus339	0.400	1	100.0	0.0	0.094	0.031						
Bus340	0.400	1	100.0	0.0	0.055	0.011						
Bus341	0.400	1	100.0	0.0	0.074	0.022						
Bus342	0.400	1	100.0	0.0	0.047	0.015						
Bus343	0.400	1	100.0	0.0	0.076	0.019						
Bus344	0.400	1	100.0	0.0	0.139	0.046						
Bus345	0.400	1	100.0	0.0	0.069	0.020						
Bus346	0.400	1	100.0	0.0	0.038	0.011						
Bus347	0.400	1	100.0	0.0	0.144	0.052						
Bus348	0.400	1	100.0	0.0	0.016	0.005						
Bus349	0.400	1	100.0	0.0	0.008	0.003						
Bus350	0.400	1	100.0	0.0	0.008	0.002						
Bus351	0.400	1	100.0	0.0	0.079	0.031						
Bus352	0.400	1	100.0	0.0	0.011	0.006						
Bus353	33.000	1	100.0	0.0								
Bus354	33.000	1	100.0	0.0								
Bus355	33.000	1	100.0	0.0								
Bus356	33.000	1	100.0	0.0								
Bus357	0.400	1	100.0	0.0	0.063	0.030						
Bus358	33.000	1	100.0	0.0								
Bus359	33.000	1	100.0	0.0								
Bus360	0.400	1	100.0	0.0	0.003	0.002						
Bus361	33.000	1	100.0	0.0								
Bus362	33.000	1	100.0	0.0								
Bus363	33.000	1	100.0	0.0								
Bus364	0.400	1	100.0	0.0	0.099	0.064						
Bus365	33.000	1	100.0	0.0								
Bus366	33.000	1	100.0	0.0								
Bus367	33.000	1	100.0	0.0								
Bus368	33.000	1	100.0	0.0								

Bus			Initial Voltage		Load							
					Constant kVA		Constant Z		Constant I		Generic	
ID	kV	Sub-sys	% Mag.	Ang.	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
Bus369	33.000	1	100.0	0.0								
Bus370	33.000	1	100.0	0.0								
Bus371	33.000	1	100.0	0.0								
Bus372	0.400	1	100.0	0.0	0.268	0.159						
Bus373	33.000	1	100.0	0.0								
Bus374	33.000	1	100.0	0.0								
Bus375	0.400	1	100.0	0.0	0.104	0.056						
Bus376	33.000	1	100.0	0.0								
Bus377	0.400	1	100.0	0.0	0.030	0.018						
Bus378	0.400	1	100.0	0.0	0.198	0.107						
Bus379	0.400	1	100.0	0.0	0.067	0.022						
Bus383	0.400	1	100.0	0.0								
Bus384	0.400	1	100.0	0.0								
Bus388	0.400	1	100.0	0.0								
Bus389	0.400	1	100.0	0.0								
Bus390	0.400	1	100.0	0.0								
Bus391	0.400	1	100.0	0.0								
Bus392	0.400	1	100.0	0.0								
Bus393	0.400	1	100.0	0.0								
Bus394	0.400	1	100.0	0.0								
Bus395	0.400	1	100.0	0.0								
Bus396	33.000	1	100.0	0.0								
Bus408	0.400	1	100.0	0.0								
Bus409	0.400	1	100.0	0.0								
Bus410	0.400	1	100.0	0.0								
Bus411	0.400	1	100.0	0.0								
Bus413	0.400	1	100.0	0.0								
Bus414	0.400	1	100.0	0.0								
Bus415	0.400	1	100.0	0.0								
Bus416	0.400	1	100.0	0.0								
Bus417	0.400	1	100.0	0.0								
Bus423	0.400	1	100.0	0.0								
Bus424	0.400	1	100.0	0.0								
Bus425	0.400	1	100.0	0.0								
Bus426	0.400	1	100.0	0.0								

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					Load							
Bus			Initial Voltage		Constant kVA		Constant Z		Constant I		Generic	
ID	kV	Sub-sys	% Mag.	Ang.	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
Bus427	0.400	1	100.0	0.0								
Bus428	0.400	1	100.0	0.0								
Bus429	0.400	1	100.0	0.0								
Bus430	0.400	1	100.0	0.0								
Bus431	0.400	1	100.0	0.0								
Bus432	0.400	1	100.0	0.0								
Bus433	0.400	1	100.0	0.0								
Bus434	33.000	1	100.0	0.0								
Bus435	0.400	1	100.0	0.0	0.070	0.030						
Bus436	33.000	1	100.0	0.0								
Bus437	0.400	1	100.0	0.0	0.071	0.042						
Bus438	33.000	1	100.0	0.0								
Bus439	33.000	1	100.0	0.0								
Bus440	0.400	1	100.0	0.0	0.096	0.059						
Bus441	0.400	1	100.0	0.0	0.021	0.006						
Bus442	33.000	1	100.0	0.0								
Bus443	0.400	1	100.0	0.0	0.067	0.022						
Bus444	33.000	1	100.0	0.0								
Bus446	33.000	1	100.0	0.0								
Bus448	33.000	1	100.0	0.0								
Bus449	0.400	1	100.0	0.0	0.116	0.075						
Bus450	33.000	1	100.0	0.0								
Bus451	33.000	1	100.0	0.0								
Bus452	0.400	1	100.0	0.0	0.035	0.020						
Bus453	33.000	1	100.0	0.0								
Bus454	33.000	1	100.0	0.0								
Bus455	33.000	1	100.0	0.0								
Bus456	0.400	1	100.0	0.0	0.079	0.034						
Bus457	33.000	1	100.0	0.0								
Bus458	0.400	1	100.0	0.0	0.079	0.034						
Bus459	0.400	1	100.0	0.0	0.058	0.019						
Bus460	33.000	1	100.0	0.0								
Bus461	33.000	1	100.0	0.0								
Bus462	33.000	1	100.0	0.0								
Bus463	0.400	1	100.0	0.0	0.036	0.013						

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Bus			Initial Voltage		Load							
					Constant kVA		Constant Z		Constant I		Generic	
ID	kV	Sub-sys	% Mag.	Ang.	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
Bus464	33.000	1	100.0	0.0								
Bus465	0.400	1	100.0	0.0	0.099	0.029						
Bus466	33.000	1	100.0	0.0								
Bus467	0.400	1	100.0	0.0	0.030	0.011						
Bus468	33.000	1	100.0	0.0								
Bus469	0.400	1	100.0	0.0	0.039	0.010						
Bus470	33.000	1	100.0	0.0								
Bus471	0.400	1	100.0	0.0	0.155	0.061						
Bus472	33.000	1	100.0	0.0								
Bus473	0.400	1	100.0	0.0	0.090	0.026						
Bus474	33.000	1	100.0	0.0								
Bus475	0.400	1	100.0	0.0	0.036	0.009						
Bus476	33.000	1	100.0	0.0								
Bus477	33.000	1	100.0	0.0								
Bus478	33.000	1	100.0	0.0								
Bus479	33.000	1	100.0	0.0								
Bus480	0.400	1	100.0	0.0	0.072	0.028						
Bus481	33.000	1	100.0	0.0								
Bus482	0.400	1	100.0	0.0	0.076	0.019						
Bus485	33.000	1	100.0	0.0								
Bus486	33.000	1	100.0	0.0								
Bus487	0.400	1	100.0	0.0	0.099	0.048						
Bus488	33.000	1	100.0	0.0								
Bus489	0.400	1	100.0	0.0	0.021	0.008						
Bus490	33.000	1	100.0	0.0								
Bus491	0.400	1	100.0	0.0	0.068	0.029						
Bus492	33.000	1	100.0	0.0								
Bus493	33.000	1	100.0	0.0								
Bus494	0.400	1	100.0	0.0	0.011	0.007						
Bus495	33.000	1	100.0	0.0								
Bus496	33.000	1	100.0	0.0								
Bus497	33.000	1	100.0	0.0								
Bus498	0.400	1	100.0	0.0	0.061	0.038						
Bus499	0.400	1	100.0	0.0	0.008	0.003						
Bus500	33.000	1	100.0	0.0								

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Bus			Initial Voltage		Load							
					Constant kVA		Constant Z		Constant I		Generic	
ID	kV	Sub-sys	% Mag.	Ang.	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
Bus501	33.000	1	100.0	0.0								
Bus502	0.400	1	100.0	0.0	0.242	0.061						
Bus503	33.000	1	100.0	0.0								
Bus504	33.000	1	100.0	0.0								
Bus505	33.000	1	100.0	0.0								
Bus506	0.400	1	100.0	0.0	0.134	0.027						
Bus507	0.400	1	100.0	0.0	0.018	0.003						
Bus508	33.000	1	100.0	0.0								
Bus509	0.400	1	100.0	0.0	0.088	0.018						
Bus510	33.000	1	100.0	0.0								
Bus511	0.400	1	100.0	0.0	0.008	0.006						
Bus512	33.000	1	100.0	0.0								
Bus513	0.400	1	100.0	0.0	0.074	0.015						
Bus514	33.000	1	100.0	0.0								
Bus515	0.400	1	100.0	0.0	0.082	0.055						
Bus516	33.000	1	100.0	0.0								
Bus517	0.400	1	100.0	0.0	0.053	0.015						
Bus518	33.000	1	100.0	0.0								
Bus519	0.400	1	100.0	0.0	0.331	0.047						
Bus520	33.000	1	100.0	0.0								
Bus521	0.400	1	100.0	0.0	0.012	0.003						
Bus524	0.400	1	100.0	0.0								
Bus525	0.400	1	100.0	0.0								
Bus526	0.400	1	100.0	0.0								
Bus527	0.400	1	100.0	0.0								
Bus528	0.400	1	100.0	0.0								
Bus529	0.400	1	100.0	0.0								
Bus530	0.400	1	100.0	0.0								
Bus531	0.400	1	100.0	0.0								
Bus533	0.400	1	100.0	0.0								
Bus536	0.400	1	100.0	0.0								
Bus537	0.400	1	100.0	0.0								
Bus538	0.400	1	100.0	0.0								
Bus539	0.400	1	100.0	0.0								
Bus540	0.400	1	100.0	0.0								

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Bus					Load									
					Initial Voltage		Constant kVA		Constant Z		Constant I		Generic	
							MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
ID	kV	Sub-sys	% Mag.	Ang.										
Bus541	0.400	1	100.0	0.0										
Bus542	0.400	1	100.0	0.0										
Bus543	0.400	1	100.0	0.0										
Bus544	0.400	1	100.0	0.0										
Bus545	0.400	1	100.0	0.0										
Bus546	0.400	1	100.0	0.0										
Bus547	0.400	1	100.0	0.0										
Bus548	0.400	1	100.0	0.0										
Bus549	0.400	1	100.0	0.0										
Bus550	0.400	1	100.0	0.0										
Bus551	0.400	1	100.0	0.0										
Bus552	0.400	1	100.0	0.0										
Bus553	0.400	1	100.0	0.0										
Bus554	0.400	1	100.0	0.0										
Bus556	0.400	1	100.0	0.0										
Bus558	0.400	1	100.0	0.0										
Bus560	0.400	1	100.0	0.0										
Bus562	0.400	1	100.0	0.0										
Bus564	0.400	1	100.0	0.0										
Line43~	33.000		100.0	0.0										
Total Number of Buses: 473					10.048	3.822	0.000	0.001	0.000	0.000	0.000	0.000	0.000	

Generation Bus				Voltage		Generation			Mvar Limits	
ID	kV	Type	Sub-sys	% Mag.	Angle	MW	Mvar	% PF	Max	Min
Bus2	33.000	Swing	1	100.0	0.0					
Bus83	33.000	Swing	1	100.0	0.0					
Bus383	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus388	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus389	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus390	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus391	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus392	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus393	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus394	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus408	0.400	Mvar/PF Control	1	100.0	0.0	0.049	-0.016	-95.0		



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Generation Bus				Voltage		Generation			Mvar Limits	
ID	kV	Type	Sub-sys	% Mag.	Angle	MW	Mvar	% PF	Max	Min
Bus410	0.400	Mvar/PF Control	1	100.0	0.0	0.049	-0.016	-95.0		
Bus413	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus414	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus415	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus416	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus417	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus423	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus424	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus425	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus426	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus427	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus524	0.400	Mvar/PF Control	1	100.0	0.0	0.049	-0.016	-95.0		
Bus525	0.400	Mvar/PF Control	1	100.0	0.0	0.049	-0.016	-95.0		
Bus526	0.400	Mvar/PF Control	1	100.0	0.0	0.049	-0.016	-95.0		
Bus527	0.400	Mvar/PF Control	1	100.0	0.0	0.049	-0.016	-95.0		
Bus528	0.400	Mvar/PF Control	1	100.0	0.0	0.049	-0.016	-95.0		
Bus529	0.400	Mvar/PF Control	1	100.0	0.0	0.049	-0.016	-95.0		
Bus530	0.400	Mvar/PF Control	1	100.0	0.0	0.049	-0.016	-95.0		
Bus531	0.400	Mvar/PF Control	1	100.0	0.0	0.049	-0.016	-95.0		
Bus533	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus536	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus537	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus538	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus539	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus540	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus541	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus542	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus543	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus544	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus546	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus547	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus548	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus549	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus550	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus551	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus552	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus553	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		

Generation Bus				Voltage		Generation			Mvar Limits	
ID	kV	Type	Sub-sys	% Mag.	Angle	MW	Mvar	% PF	Max	Min
Bus554	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus558	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus560	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
Bus562	0.400	Mvar/PF Control	1	100.0	0.0	0.049	-0.016	-95.0		
Bus564	0.400	Mvar/PF Control	1	100.0	0.0	0.055	-0.018	-95.0		
						2.740	-0.901			

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**Line/Cable Input Data**

Ohms or Siemens/1000 m per Conductor (Cable) or per Phase (Line)									
Line/Cable		Length							
ID	Library	Size	Adj. (m)	% Tol.	#/Phase	T (°C)	R	X	Y
Cable1	33MCUS1	70	295.0	0.0	1	75	0.327145	0.151000	0.0000581
Cable2	33MCUS3	70	486.0	0.0	1	75	0.327145	0.134000	0.0000599
Cable3	33MCUS3	70	259.0	0.0	1	75	0.327145	0.134000	0.0000599
Cable4	33MCUS3	70	398.0	0.0	1	75	0.327145	0.134000	0.0000599
Cable5	33MCUS3	70	180.0	0.0	1	75	0.327145	0.134000	0.0000599
Cable7	33MCUS3	70	352.0	0.0	1	75	0.327145	0.134000	0.0000599
Cable8	33MCUS3	70	140.0	0.0	1	75	0.327145	0.134000	0.0000599
Cable44	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable45	33MCUS3	70	259.0	0.0	1	75	0.327145	0.134000	0.0000599
Cable48	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable49	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable50	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable51	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable52	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable53	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable54	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable66	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable67	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable69	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable70	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable71	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable72	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable73	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable79	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable80	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable81	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable82	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable83	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable86	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable87	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable88	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable89	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable90	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable91	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	

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Line/Cable									
ID	Library	Size	Length		#/Phase	T (°C)	R	X	Y
			Adj. (m)	% Tol.					
Cable92	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable93	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable95	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable98	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable99	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable100	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable101	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable102	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable103	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable104	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable105	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable106	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable107	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable108	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable109	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable110	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable111	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable112	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable113	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable114	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable115	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable118	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable120	33MCUS3	70	259.0	0.0	1	75	0.327145	0.134000	0.0000599
Cable121	33MCUS3	70	259.0	0.0	1	75	0.327145	0.134000	0.0000599
Cable122	33MCUS3	70	259.0	0.0	1	75	0.327145	0.134000	0.0000599
Cable123	33MCUS3	70	259.0	0.0	1	75	0.327145	0.134000	0.0000599
Cable124	33MCUS3	70	259.0	0.0	1	75	0.327145	0.134000	0.0000599
Cable126	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable128	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Cable130	0.4OALN3	35	50.0	0.0	1	75	1.057658	0.156000	
Line2		49.5	28.0	0.0	1	50	0.860816	0.424539	0.0000028
Line3		49.5	74.0	0.0	1	75	0.860816	0.424539	0.0000028
Line4		49.5	1609.3	0.0	1	75	0.860816	0.424539	0.0000028
Line5		307	920.0	0.0	1	75	0.136971	0.351228	0.0000033
Line6		49.5	1404.0	0.0	1	75	0.860816	0.424539	0.0000028
Line7		49.5	116.0	0.0	1	75	0.860816	0.424539	0.0000028

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**Ohms or Siemens/1000 m per Conductor (Cable) or per Phase (Line)**

Line/Cable		Library	Size	Length		#/Phase	T (°C)	R	X	Y
				Adj. (m)	% Tol.					
Line8			49.5	200.0	0.0	1	75	0.860816	0.424539	0.0000028
Line9			49.5	551.0	0.0	1	75	0.860816	0.424539	0.0000028
Line10			49.5	660.0	0.0	1	75	0.860816	0.424539	0.0000028
Line11			49.5	369.0	0.0	1	75	0.860816	0.424539	0.0000028
Line12			49.5	227.0	0.0	1	75	0.860816	0.424539	0.0000028
Line13			49.5	110.0	0.0	1	75	0.860816	0.424539	0.0000028
Line14			49.5	348.0	0.0	1	75	0.860816	0.424539	0.0000028
Line15			49.5	146.0	0.0	1	75	0.860816	0.424539	0.0000028
Line16			49.5	185.0	0.0	1	75	0.860816	0.424539	0.0000028
Line17			49.5	133.0	0.0	1	75	0.860816	0.424539	0.0000028
Line18			49.5	58.0	0.0	1	75	0.860816	0.424539	0.0000028
Line19			49.5	212.0	0.0	1	75	0.860816	0.424539	0.0000028
Line20			49.5	445.0	0.0	1	75	0.860816	0.424539	0.0000028
Line21			49.5	128.0	0.0	1	75	0.860816	0.424539	0.0000028
Line22			49.5	149.0	0.0	1	75	0.860816	0.424539	0.0000028
Line23			49.5	493.0	0.0	1	75	0.860816	0.424539	0.0000028
Line24			49.5	121.0	0.0	1	75	0.860816	0.424539	0.0000028
Line25			49.5	930.0	0.0	1	75	0.860816	0.424539	0.0000028
Line26			49.5	808.0	0.0	1	75	0.860816	0.424539	0.0000028
Line27			49.5	1050.0	0.0	1	75	0.860816	0.424539	0.0000028
Line28			49.5	656.0	0.0	1	75	0.860816	0.424539	0.0000028
Line29			49.5	197.0	0.0	1	75	0.860816	0.424539	0.0000028
Line30			49.5	118.0	0.0	1	75	0.860816	0.424539	0.0000028
Line31			49.5	73.0	0.0	1	75	0.860816	0.424539	0.0000028
Line32			49.5	250.0	0.0	1	75	0.860816	0.424539	0.0000028
Line33			49.5	1156.0	0.0	1	75	0.860816	0.424539	0.0000028
Line34			49.5	846.0	0.0	1	75	0.860816	0.424539	0.0000028
Line35			49.5	1070.0	0.0	1	75	0.860816	0.424539	0.0000028
Line36			49.5	469.0	0.0	1	75	0.860816	0.424539	0.0000028
Line37			49.5	1580.0	0.0	1	75	0.860816	0.424539	0.0000028
Line38			49.5	230.0	0.0	1	75	0.860816	0.424539	0.0000028
Line39			49.5	154.0	0.0	1	75	0.860816	0.424539	0.0000028
Line40			49.5	140.0	0.0	1	75	0.860816	0.424539	0.0000028
Line41			49.5	533.0	0.0	1	75	0.860816	0.424539	0.0000028
Line42			49.5	172.0	0.0	1	75	0.860816	0.424539	0.0000028
Line44			49.5	156.0	0.0	1	75	0.860816	0.424539	0.0000028

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Line/Cable		Library	Size	Length		#/Phase	T (°C)	R	X	Y
				Adj. (m)	% Tol.					
Line45			431	687.0	0.0	1	75	0.091981	0.341820	0.0000034
Line46			49.5	1085.0	0.0	1	75	0.860816	0.424539	0.0000028
Line47			49.5	362.0	0.0	1	75	0.860816	0.424539	0.0000028
Line48			49.5	140.0	0.0	1	75	0.860816	0.424539	0.0000028
Line49			49.5	147.0	0.0	1	75	0.860816	0.424539	0.0000028
Line50			49.5	103.0	0.0	1	75	0.860816	0.424539	0.0000028
Line51			49.5	78.0	0.0	1	75	0.860816	0.424539	0.0000028
Line52			49.5	153.0	0.0	1	75	0.860816	0.424539	0.0000028
Line53			49.5	444.0	0.0	1	75	0.860816	0.424539	0.0000028
Line54			49.5	1989.0	0.0	1	75	0.860816	0.424539	0.0000028
Line55			49.5	730.0	0.0	1	75	0.860816	0.424539	0.0000028
Line56			49.5	357.0	0.0	1	75	0.860816	0.424539	0.0000028
Line57			49.5	612.0	0.0	1	75	0.860816	0.424539	0.0000028
Line58			49.5	1333.0	0.0	1	75	0.860816	0.424539	0.0000028
Line59			49.5	29.0	0.0	1	75	0.860816	0.424539	0.0000028
Line60			49.5	3183.0	0.0	1	75	0.860816	0.424539	0.0000028
Line61			49.5	485.0	0.0	1	75	0.860816	0.424539	0.0000028
Line62			49.5	316.0	0.0	1	75	0.860816	0.424539	0.0000028
Line63			49.5	119.0	0.0	1	75	0.860816	0.424539	0.0000028
Line64			49.5	1775.0	0.0	1	75	0.860816	0.424539	0.0000028
Line65			49.5	195.0	0.0	1	75	0.860816	0.424539	0.0000028
Line66			49.5	368.0	0.0	1	75	0.860816	0.424539	0.0000028
Line67			49.5	1937.0	0.0	1	75	0.860816	0.424539	0.0000028
Line68			49.5	386.0	0.0	1	75	0.860816	0.424539	0.0000028
Line69			49.5	495.0	0.0	1	75	0.860816	0.424539	0.0000028
Line70			49.5	336.0	0.0	1	75	0.860816	0.424539	0.0000028
Line71			49.5	231.0	0.0	1	75	0.860816	0.424539	0.0000028
Line72			49.5	116.0	0.0	1	75	0.860816	0.424539	0.0000028
Line73			49.5	1400.0	0.0	1	75	0.860816	0.424539	0.0000028
Line74			49.5	440.0	0.0	1	75	0.860816	0.424539	0.0000028
Line75			49.5	1137.0	0.0	1	75	0.860816	0.424539	0.0000028
Line76			49.5	783.0	0.0	1	75	0.860816	0.424539	0.0000028
Line77			49.5	661.0	0.0	1	75	0.860816	0.424539	0.0000028
Line78			49.5	1696.0	0.0	1	75	0.860816	0.424539	0.0000028
Line79			49.5	1153.0	0.0	1	75	0.860816	0.424539	0.0000028
Line81			49.5	246.0	0.0	1	75	0.860816	0.424539	0.0000028

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Line/Cable	Library	Size	Length		#/Phase	T (°C)	R	X	Y
ID			Adj. (m)	% Tol.					
Line83		49.5	98.0	0.0	1	75	0.860816	0.424539	0.0000028
Line84		49.5	105.0	0.0	1	75	0.860816	0.424539	0.0000028
Line85		49.5	422.0	0.0	1	75	0.860816	0.424539	0.0000028
Line86		49.5	2497.0	0.0	1	75	0.860816	0.424539	0.0000028
Line87		49.5	102.0	0.0	1	75	0.860816	0.424539	0.0000028
Line88		49.5	638.0	0.0	1	75	0.860816	0.424539	0.0000028
Line89		49.5	349.0	0.0	1	75	0.860816	0.424539	0.0000028
Line90		49.5	780.0	0.0	1	75	0.860816	0.424539	0.0000028
Line91		49.5	210.0	0.0	1	75	0.860816	0.424539	0.0000028
Line92		49.5	617.0	0.0	1	75	0.860816	0.424539	0.0000028
Line93		49.5	1452.0	0.0	1	75	0.860816	0.424539	0.0000028
Line94		49.5	105.0	0.0	1	75	0.860816	0.424539	0.0000028
Line95		49.5	2420.0	0.0	1	75	0.860816	0.424539	0.0000028
Line96		49.5	112.0	0.0	1	75	0.860816	0.424539	0.0000028
Line97		49.5	312.0	0.0	1	75	0.860816	0.424539	0.0000028
Line98		49.5	334.0	0.0	1	75	0.860816	0.424539	0.0000028
Line99		49.5	142.0	0.0	1	75	0.860816	0.424539	0.0000028
Line100		49.5	101.0	0.0	1	75	0.860816	0.424539	0.0000028
Line101		49.5	61.0	0.0	1	75	0.860816	0.424539	0.0000028
Line102		49.5	99.0	0.0	1	75	0.860816	0.424539	0.0000028
Line103		49.5	1654.0	0.0	1	75	0.860816	0.424539	0.0000028
Line104		49.5	620.0	0.0	1	75	0.860816	0.424539	0.0000028
Line105		49.5	826.0	0.0	1	75	0.860816	0.424539	0.0000028
Line106		49.5	1896.0	0.0	1	75	0.860816	0.424539	0.0000028
Line108		49.5	415.0	0.0	1	75	0.860816	0.424539	0.0000028
Line109		49.5	948.0	0.0	1	75	0.860816	0.424539	0.0000028
Line110		49.5	925.0	0.0	1	75	0.860816	0.424539	0.0000028
Line111		49.5	1359.0	0.0	1	75	0.860816	0.424539	0.0000028
Line112		49.5	314.0	0.0	1	75	0.860816	0.424539	0.0000028
Line113		49.5	1905.0	0.0	1	75	0.860816	0.424539	0.0000028
Line114		49.5	197.0	0.0	1	75	0.860816	0.424539	0.0000028
Line115		49.5	95.0	0.0	1	75	0.860816	0.424539	0.0000028
Line116		49.5	262.0	0.0	1	75	0.860816	0.424539	0.0000028
Line117		49.5	105.0	0.0	1	75	0.860816	0.424539	0.0000028
Line118		49.5	425.0	0.0	1	75	0.860816	0.424539	0.0000028
Line120		49.5	249.0	0.0	1	75	0.860816	0.424539	0.0000028

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Line/Cable		Library	Size	Length		#/Phase	T (°C)	R	X	Y
				Adj. (m)	% Tol.					
Line121			49.5	216.0	0.0	1	75	0.860816	0.424539	0.0000028
Line122			49.5	116.0	0.0	1	75	0.860816	0.424539	0.0000028
Line123			49.5	453.0	0.0	1	75	0.860816	0.424539	0.0000028
Line124			49.5	432.0	0.0	1	75	0.860816	0.424539	0.0000028
Line125			49.5	1137.0	0.0	1	75	0.860816	0.424539	0.0000028
Line126			49.5	261.0	0.0	1	75	0.860816	0.424539	0.0000028
Line127			49.5	75.0	0.0	1	75	0.860816	0.424539	0.0000028
Line129			120	44.0	0.0	1	75	0.360923	0.396062	0.0000030
Line130			49.5	224.0	0.0	1	75	0.860816	0.424539	0.0000028
Line131			49.5	75.0	0.0	1	75	0.860816	0.424539	0.0000028
Line132			49.5	189.0	0.0	1	75	0.860816	0.424539	0.0000028
Line133			49.5	68.0	0.0	1	75	0.860816	0.424539	0.0000028
Line134			49.5	463.0	0.0	1	75	0.860816	0.424539	0.0000028
Line136			49.5	237.0	0.0	1	75	0.860816	0.424539	0.0000028
Line137			49.5	113.0	0.0	1	75	0.860816	0.424539	0.0000028
Line138			49.5	170.0	0.0	1	75	0.860816	0.424539	0.0000028
Line139			49.5	250.0	0.0	1	75	0.860816	0.424539	0.0000028
Line141			49.5	1202.0	0.0	1	75	0.860816	0.424539	0.0000028
Line142			49.5	937.0	0.0	1	75	0.860816	0.424539	0.0000028
Line143			49.5	406.0	0.0	1	75	0.860816	0.424539	0.0000028
Line144			49.5	313.0	0.0	1	75	0.860816	0.424539	0.0000028
Line145			49.5	205.0	0.0	1	75	0.860816	0.424539	0.0000028
Line146			49.5	619.0	0.0	1	75	0.860816	0.424539	0.0000028
Line147			49.5	442.0	0.0	1	75	0.860816	0.424539	0.0000028
Line148			49.5	1391.0	0.0	1	75	0.860816	0.424539	0.0000028
Line149			49.5	949.0	0.0	1	75	0.860816	0.424539	0.0000028
Line150			49.5	119.0	0.0	1	75	0.860816	0.424539	0.0000028
Line152			49.5	351.0	0.0	1	75	0.860816	0.424539	0.0000028
Line153			49.5	200.0	0.0	1	75	0.860816	0.424539	0.0000028
Line154			49.5	206.0	0.0	1	75	0.860816	0.424539	0.0000028
Line155			49.5	650.0	0.0	1	75	0.860816	0.424539	0.0000028
Line156			49.5	468.0	0.0	1	75	0.860816	0.424539	0.0000028
Line157			49.5	94.0	0.0	1	75	0.860816	0.424539	0.0000028
Line158			49.5	431.0	0.0	1	75	0.860816	0.424539	0.0000028
Line159			49.5	539.0	0.0	1	75	0.860816	0.424539	0.0000028
Line160			49.5	500.0	0.0	1	75	0.860816	0.424539	0.0000028



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Line/Cable	Length								
ID	Library	Size	Adj. (m)	% Tol.	#/Phase	T (°C)	R	X	Y
Line161		49.5	88.0	0.0	1	75	0.860816	0.424539	0.0000028
Line162		49.5	244.0	0.0	1	75	0.860816	0.424539	0.0000028
Line163		49.5	135.0	0.0	1	75	0.860816	0.424539	0.0000028
Line164		49.5	43.0	0.0	1	75	0.860816	0.424539	0.0000028
Line165		49.5	829.0	0.0	1	75	0.860816	0.424539	0.0000028
Line167		49.5	1370.0	0.0	1	75	0.860816	0.424539	0.0000028
Line168		49.5	598.0	0.0	1	75	0.860816	0.424539	0.0000028
Line169		49.5	2427.0	0.0	1	75	0.860816	0.424539	0.0000028
Line171		49.5	280.0	0.0	1	75	0.860816	0.424539	0.0000028
Line172		49.5	99.0	0.0	1	75	0.860816	0.424539	0.0000028
Line173		49.5	844.0	0.0	1	75	0.860816	0.424539	0.0000028
Line175		49.5	609.0	0.0	1	75	0.860816	0.424539	0.0000028
Line176		49.5	820.0	0.0	1	75	0.860816	0.424539	0.0000028
Line177		49.5	200.0	0.0	1	75	0.860816	0.424539	0.0000028
Line178		49.5	200.0	0.0	1	75	0.860816	0.424539	0.0000028
Line179		49.5	200.0	0.0	1	75	0.860816	0.424539	0.0000028
Line180		49.5	305.0	0.0	1	75	0.860816	0.424539	0.0000028
Line181		49.5	200.0	0.0	1	75	0.860816	0.424539	0.0000028
Line182		49.5	375.0	0.0	1	75	0.860816	0.424539	0.0000028
Line183		49.5	344.0	0.0	1	75	0.860816	0.424539	0.0000028
Line184		49.5	158.0	0.0	1	75	0.860816	0.424539	0.0000028
Line185		49.5	489.0	0.0	1	75	0.860816	0.424539	0.0000028
Line186		49.5	200.0	0.0	1	75	0.860816	0.424539	0.0000028
Line187		49.5	232.0	0.0	1	75	0.860816	0.424539	0.0000028
Line188		49.5	1100.0	0.0	1	75	0.860816	0.424539	0.0000028
Line189		49.5	100.0	0.0	1	75	0.860816	0.424539	0.0000028
Line190		49.5	800.0	0.0	1	75	0.860816	0.424539	0.0000028
Line191		49.5	1200.0	0.0	1	75	0.860816	0.424539	0.0000028
Line192		49.5	200.0	0.0	1	75	0.860816	0.424539	0.0000028
Line195		49.5	315.0	0.0	1	75	0.860816	0.424539	0.0000028
Line196		49.5	125.0	0.0	1	75	0.860816	0.424539	0.0000028
Line197		49.5	676.0	0.0	1	75	0.860816	0.424539	0.0000028
Line198		49.5	183.0	0.0	1	75	0.860816	0.424539	0.0000028
Line199		49.5	1220.0	0.0	1	75	0.860816	0.424539	0.0000028
Line200		49.5	260.0	0.0	1	75	0.860816	0.424539	0.0000028
Line201		49.5	419.0	0.0	1	75	0.860816	0.424539	0.0000028

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Ohms or Siemens/1000 m per Conductor (Cable) or per Phase (Line)

Line/Cable	Length								
ID	Library	Size	Adj. (m)	% Tol.	#/Phase	T (°C)	R	X	Y
Line202		49.5	349.0	0.0	1	75	0.860816	0.424539	0.0000028
Line203		49.5	128.0	0.0	1	75	0.860816	0.424539	0.0000028
Line204		49.5	355.0	0.0	1	75	0.860816	0.424539	0.0000028
Line205		49.5	470.0	0.0	1	75	0.860816	0.424539	0.0000028
Line206		49.5	409.0	0.0	1	75	0.860816	0.424539	0.0000028
Line207		49.5	234.0	0.0	1	75	0.860816	0.424539	0.0000028
Line208		49.5	760.0	0.0	1	75	0.860816	0.424539	0.0000028
Line209		49.5	680.0	0.0	1	75	0.860816	0.424539	0.0000028
Line210		49.5	84.0	0.0	1	75	0.860816	0.424539	0.0000028
Line212		49.5	509.0	0.0	1	75	0.860816	0.424539	0.0000028
Line213		49.5	438.0	0.0	1	75	0.860816	0.424539	0.0000028
Line214		49.5	667.0	0.0	1	75	0.860816	0.424539	0.0000028
Line215		49.5	750.0	0.0	1	75	0.860816	0.424539	0.0000028
Line216		49.5	829.0	0.0	1	75	0.860816	0.424539	0.0000028
Line217		49.5	1021.0	0.0	1	75	0.860816	0.424539	0.0000028
Line218		49.5	56.0	0.0	1	75	0.860816	0.424539	0.0000028
Line219		49.5	1081.0	0.0	1	75	0.860816	0.424539	0.0000028
Line220		49.5	94.0	0.0	1	75	0.860816	0.424539	0.0000028
Line221		49.5	394.0	0.0	1	75	0.860816	0.424539	0.0000028
Line222		49.5	133.0	0.0	1	75	0.860816	0.424539	0.0000028
Line223		49.5	238.0	0.0	1	75	0.860816	0.424539	0.0000028
Line224		49.5	503.0	0.0	1	75	0.860816	0.424539	0.0000028
Line225		49.5	453.0	0.0	1	75	0.860816	0.424539	0.0000028
Line226		49.5	1325.0	0.0	1	75	0.860816	0.424539	0.0000028
Line227		49.5	109.0	0.0	1	75	0.860816	0.424539	0.0000028
Line228		49.5	428.0	0.0	1	75	0.860816	0.424539	0.0000028
Line229		49.5	238.0	0.0	1	75	0.860816	0.424539	0.0000028
Line230		49.5	912.0	0.0	1	75	0.860816	0.424539	0.0000028
Line231		49.5	153.0	0.0	1	75	0.860816	0.424539	0.0000028
Line232		49.5	88.0	0.0	1	75	0.860816	0.424539	0.0000028
Line233		49.5	242.0	0.0	1	75	0.860816	0.424539	0.0000028
Line234		49.5	120.0	0.0	1	75	0.860816	0.424539	0.0000028
Line235		49.5	80.0	0.0	1	75	0.860816	0.424539	0.0000028
Line236		49.5	239.0	0.0	1	75	0.860816	0.424539	0.0000028
Line237		49.5	347.0	0.0	1	75	0.860816	0.424539	0.0000028
Line238		49.5	180.0	0.0	1	75	0.860816	0.424539	0.0000028

Ohms or Siemens/1000 m per Conductor (Cable) or per Phase (Line)									
Line/Cable									
ID	Library	Size	Length		#/Phase	T (°C)	R	X	Y
			Adj. (m)	% Tol.					
Line239		49.5	184.0	0.0	1	75	0.860816	0.424539	0.0000028
Line240		49.5	50.0	0.0	1	75	0.860816	0.424539	0.0000028
Line241		49.5	60.0	0.0	1	75	0.860816	0.424539	0.0000028
Line242		49.5	206.0	0.0	1	75	0.860816	0.424539	0.0000028
Line243		49.5	167.0	0.0	1	75	0.860816	0.424539	0.0000028
Line244		49.5	200.0	0.0	1	75	0.860816	0.424539	0.0000028
Line43		49.5	554.0	0.0	1	75	0.860816	0.424539	0.0000028

Line / Cable resistances are listed at the specified temperatures.

2-Winding Transformer Input Data

Transformer		Rating					Z Variation			% Tap Setting		Adjusted	Phase Shift	
ID	Phase	MVA	Prim. kV	Sec. kV	% Z1	X1/R1	+ 5%	- 5%	% Tol.	Prim.	Sec.	% Z	Type	Angle
3en zaya	3-Phase	0.100	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
abo hameed	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
abo khadeer	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
abo omar	3-Phase	0.050	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
abo shehab	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
abo shehadeh	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
abo tareq	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
abu omar	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
administration college	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
agricultural project	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
al bassateen	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
al hafria	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
al kafeer main	3-Phase	0.100	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
al-3een	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
al-aqapeh	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
al-ashqar stone cutter	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
al-battman	3-Phase	0.100	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
al-daqnya	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
al-hawooz 1	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
al-helal	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
al-hesba	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
al-kharaz	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
al-masa3eed	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
al-mtalleh	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
al-shareef	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
al-thoghrah	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
alBATTAH	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
ALJALHOOM	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
ALMISHMAS	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
alrass	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
alrfaid	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
amnawaqa2	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
anabosa	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
aqapeh main	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000

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Transformer		Rating					Z Variation			% Tap Setting		Adjusted	Phase Shift	
ID	Phase	MVA	Prim. kV	Sec. kV	% Z1	X1/R1	+ 5%	- 5%	% Tol.	Prim.	Sec.	% Z	Type	Angle
arciticular college	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
ATOOF	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
AUU intersection ZA	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
beer al- basha	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
burhan	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
dawajen	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
dewan	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
dream land	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
dream land 1	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
dream land 2	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
east jarpa	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
east of raba	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
eastern al-maghura	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
eastren al-jalquoua	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
eastren aqapa	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
eastren beer basha	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
eastren maslya	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
eastren zababde	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
eastren zawya	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
esfalt	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
essawi	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
farah	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
faysel well	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
first of the town	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
gas station	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
grand plaza DL	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
hafreya	3-Phase	0.100	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
HAKIM	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
hawooz aqapa	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
huseen al araj	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
jarpa main	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
karag	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
kasaret abo asaad	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
kazeya	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
kazeyt samara	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
keshda main	3-Phase	0.050	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000

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Transformer		Rating					Z Variation			% Tap Setting		Adjusted	Phase Shift	
ID	Phase	MVA	Prim. kV	Sec. kV	% Z1	X1/R1	+ 5%	- 5%	% Tol.	Prim.	Sec.	% Z	Type	Angle
khalet al qaser 1	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
khalet al qaser 2	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
khalt el looz	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
khrrpet aisha	3-Phase	0.100	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
mahajeer 1	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
mahta	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
main om toot	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
malhameh	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
mamdooh	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
manasheer meselya	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
manasheer ZA	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
marah karas	3-Phase	0.100	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
masalya	3-Phase	0.100	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
masria	3-Phase	0.100	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
masriya	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
mass stone	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
mass stones	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
MAWAFAQ FAKHRY	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
mawfak al-fakhry	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
middle jalqumya	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
middle of raba	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
middle zababdeh	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
midecin	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
midical harps	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
mo2ayad fridges	3-Phase	0.360	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
mohafada	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
mohammad al basher	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
national security	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
old station	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
pickle factory	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
plastic factory	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
police	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
princec palce	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
rahwa	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
rahwa.	3-Phase	0.100	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
RAS AL-MATTALEH	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000

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Transformer		Rating					Z Variation			% Tap Setting		Adjusted	Phase Shift	
ID	Phase	MVA	Prim. kV	Sec. kV	% Z1	X1/R1	+ 5%	- 5%	% Tol.	Prim.	Sec.	% Z	Type	Angle
refat	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
refat 2	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
registration bulding	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
royal	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
safeena	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
safya north	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
salhab	3-Phase	0.100	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
sameeh abo khezaran	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
sameeh.	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
sameer motlaq	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
school	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
school.	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
sefferya zababdeh	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
shcool maraqa	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
shcool zababdeh	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
shereen	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
span	3-Phase	0.100	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
sport stidium 1	3-Phase	1.000	33.000	0.400	5.00	3.50	0	0	0	0	0	5.0000	Dyn	0.000
sport stidium 2	3-Phase	1.000	33.000	0.400	5.00	3.50	0	0	0	0	0	5.0000	Dyn	0.000
stadium	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
stone cutter	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T1	3-Phase	0.630	0.400	33.000	4.00	1.50	0	0	0	0	0	4.0000	YNd	0.000
T2	3-Phase	0.630	0.400	33.000	4.00	1.50	0	0	0	0	0	4.0000	YNd	0.000
T3	3-Phase	0.630	0.400	33.000	4.00	1.50	0	0	0	0	0	4.0000	YNd	0.000
T4	3-Phase	25.000	33.000	33.000	10.00	20.00	0	0	0	0	0	10.0000	Dyn	0.000
T6	3-Phase	0.400	0.400	33.000	4.00	1.50	0	0	0	0	0	4.0000	YNd	0.000
T7	3-Phase	0.630	0.400	33.000	4.00	1.50	0	0	0	0	0	4.0000	YNd	0.000
T8	3-Phase	0.630	0.400	33.000	4.00	1.50	0	0	0	0	0	4.0000	YNd	0.000
T63	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
tayseer main	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
thiab	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
tlfeet	3-Phase	0.100	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
tneen main	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
toop factory	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
tubas hospital 2	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
tubas weel	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000

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Transformer		Rating					Z Variation			% Tap Setting		Adjusted	Phase Shift	
ID	Phase	MVA	Prim. kV	Sec. kV	% Z1	X1/R1	+ 5%	- 5%	% Tol.	Prim.	Sec.	% Z	Type	Angle
tubas well	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
tupas hospital 1	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
wadi al efsha	3-Phase	0.050	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
wadi d3oqa	3-Phase	0.100	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
wastren al-maghayer	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
water pumb	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
weastern	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
weel	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
weels	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
well	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
west 1 AUU	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
west 2 AUU	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
westren jalqnosa	3-Phase	0.160	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
westren maslya	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
westren zababdeh	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
westren zayah 2	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
westwern aqapa	3-Phase	0.400	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
yaseed east	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
yaseed west	3-Phase	0.250	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
zakarneh 1	3-Phase	0.630	33.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000



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### Branch Connections

CKT/Branch		Connected Bus ID		% Impedance, Pos. Seq., 100 MVA Base			
ID	Type	From Bus	To Bus	R	X	Z	Y
3en zaya	2W XFMR	Bus83	Bus297	2218.80	3328.20	4000.00	
abo hameed	2W XFMR	Bus448	Bus449	352.19	528.29	634.92	
abo khadeer	2W XFMR	Bus472	Bus473	887.52	1331.28	1600.00	
abo omar	2W XFMR	Bus88	Bus288	4437.60	6656.40	8000.00	
abo shehab	2W XFMR	Bus164	Bus229	352.19	528.29	634.92	
abo shehadeh	2W XFMR	Bus468	Bus469	887.52	1331.28	1600.00	
abo tareq	2W XFMR	Bus474	Bus475	352.19	528.29	634.92	
abu omar	2W XFMR	Bus161	Bus239	554.70	832.05	1000.00	
administration college	2W XFMR	Bus143	Bus280	554.70	832.05	1000.00	
agricultural project	2W XFMR	Bus436	Bus437	352.19	528.29	634.92	
al bassateen	2W XFMR	Bus470	Bus471	352.19	528.29	634.92	
al hafria	2W XFMR	Bus490	Bus491	887.52	1331.28	1600.00	
al kafeer main	2W XFMR	Bus55	Bus264	2218.80	3328.20	4000.00	
al-3een	2W XFMR	Bus512	Bus513	352.19	528.29	634.92	
al-aqapeh	2W XFMR	Bus37	Bus255	554.70	832.05	1000.00	
al-ashqar stone cutter	2W XFMR	Bus442	Bus443	352.19	528.29	634.92	
al-battman	2W XFMR	Bus187	Bus342	2218.80	3328.20	4000.00	
al-daqnya	2W XFMR	Bus30	Bus251	887.52	1331.28	1600.00	
al-hawwoz 1	2W XFMR	Bus29	Bus250	554.70	832.05	1000.00	
al-helal	2W XFMR	Bus28	Bus249	887.52	1331.28	1600.00	
al-hesba	2W XFMR	Bus462	Bus463	887.52	1331.28	1600.00	
al-kharaz	2W XFMR	Bus451	Bus452	1386.75	2080.13	2500.00	
al-masa3eed	2W XFMR	Bus159	Bus238	887.52	1331.28	1600.00	
al-mtalleh	2W XFMR	Bus141	Bus324	1386.75	2080.13	2500.00	
al-shareef	2W XFMR	Bus508	Bus509	352.19	528.29	634.92	
al-thoghrah	2W XFMR	Bus13	Bus234	1386.75	2080.13	2500.00	
alBATTAH	2W XFMR	Bus191	Bus345	1386.75	2080.13	2500.00	
ALJALHOOM	2W XFMR	Bus198	Bus349	1386.75	2080.13	2500.00	
ALMISHMAS	2W XFMR	Bus192	Bus347	887.52	1331.28	1600.00	
alrass	2W XFMR	Bus193	Bus346	887.52	1331.28	1600.00	
alrfaid	2W XFMR	Bus189	Bus344	887.52	1331.28	1600.00	
amnawaqa2	2W XFMR	Bus171	Bus333	1386.75	2080.13	2500.00	
anabosa	2W XFMR	Bus160	Bus237	887.52	1331.28	1600.00	
aqapeh main	2W XFMR	Bus6	Bus230	1386.75	2080.13	2500.00	
arciticular college	2W XFMR	Bus67	Bus272	554.70	832.05	1000.00	
ATOOF	2W XFMR	Bus199	Bus350	1386.75	2080.13	2500.00	
AUU intersiction ZA	2W XFMR	Bus99	Bus303	352.19	528.29	634.92	

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CKT/Branch		Connected Bus ID		% Impedance, Pos. Seq., 100 MVA Base			
ID	Type	From Bus	To Bus	R	X	Z	Y
beer al- basha	2W XFMR	Bus94	Bus294	554.70	832.05	1000.00	
burhan	2W XFMR	Bus186	Bus341	887.52	1331.28	1600.00	
dawajen	2W XFMR	Bus43	Bus260	887.52	1331.28	1600.00	
dewan	2W XFMR	Bus363	Bus364	554.70	832.05	1000.00	
dream land	2W XFMR	Bus150	Bus284	554.70	832.05	1000.00	
dream land 1	2W XFMR	Bus118	Bus315	352.19	528.29	634.92	
dream land 2	2W XFMR	Bus118	Bus313	554.70	832.05	1000.00	
east jarpa	2W XFMR	Bus75	Bus278	1386.75	2080.13	2500.00	
east of raba	2W XFMR	Bus110	Bus330	887.52	1331.28	1600.00	
eastern al-maghura	2W XFMR	Bus140	Bus323	887.52	1331.28	1600.00	
eastren al-jalquoua	2W XFMR	Bus137	Bus320	1386.75	2080.13	2500.00	
eastren aqapa	2W XFMR	Bus42	Bus259	554.70	832.05	1000.00	
eastren beer basha	2W XFMR	Bus95	Bus295	887.52	1331.28	1600.00	
eastren maslya	2W XFMR	Bus69	Bus274	554.70	832.05	1000.00	
eastren zababde	2W XFMR	Bus57	Bus269	352.19	528.29	634.92	
eastren zawya	2W XFMR	Bus82	Bus296	1386.75	2080.13	2500.00	
esfalt	2W XFMR	Bus154	Bus308	352.19	528.29	634.92	
essawi	2W XFMR	Bus488	Bus489	887.52	1331.28	1600.00	
farah	2W XFMR	Bus481	Bus482	554.70	832.05	1000.00	
faysel well	2W XFMR	Bus374	Bus375	352.19	528.29	634.92	
first of the town	2W XFMR	Bus183	Bus339	887.52	1331.28	1600.00	
gas station	2W XFMR	Bus41	Bus258	887.52	1331.28	1600.00	
grand plaza DL	2W XFMR	Bus147	Bus306	887.52	1331.28	1600.00	
hafreya	2W XFMR	Bus93	Bus292	2218.80	3328.20	4000.00	
HAKIM	2W XFMR	Bus203	Bus352	352.19	528.29	634.92	
hawooz aqapa	2W XFMR	Bus46	Bus263	887.52	1331.28	1600.00	
huseen al araj	2W XFMR	Bus376	Bus377	887.52	1331.28	1600.00	
jarpa main	2W XFMR	Bus74	Bus277	554.70	832.05	1000.00	
karag	2W XFMR	Bus18	Bus246	887.52	1331.28	1600.00	
kasaret abo asaad	2W XFMR	Bus496	Bus498	554.70	832.05	1000.00	
kazeya	2W XFMR	Bus464	Bus465	554.70	832.05	1000.00	
kazeyt samara	2W XFMR	Bus438	Bus441	554.70	832.05	1000.00	
keshda main	2W XFMR	Bus359	Bus360	4437.60	6656.40	8000.00	
khalet al qaser 1	2W XFMR	Bus370	Bus378	554.70	832.05	1000.00	
khalet al qaser 2	2W XFMR	Bus370	Bus379	352.19	528.29	634.92	
khalt el looz	2W XFMR	Bus175	Bus335	1386.75	2080.13	2500.00	
khrrpet aisha	2W XFMR	Bus124	Bus312	2218.80	3328.20	4000.00	
mahajeer 1	2W XFMR	Bus56	Bus268	887.52	1331.28	1600.00	
mahta	2W XFMR	Bus21	Bus247	554.70	832.05	1000.00	

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CKT/Branch		Connected Bus ID		% Impedance, Pos. Seq., 100 MVA Base			
ID	Type	From Bus	To Bus	R	X	Z	Y
main om toot	2W XFMR	Bus135	Bus319	554.70	832.05	1000.00	
malhameh	2W XFMR	Bus510	Bus511	352.19	528.29	634.92	
mamdooh	2W XFMR	Bus479	Bus480	554.70	832.05	1000.00	
manasheer meselya	2W XFMR	Bus68	Bus273	352.19	528.29	634.92	
manasheer ZA	2W XFMR	Bus100	Bus304	887.52	1331.28	1600.00	
marah karas	2W XFMR	Bus138	Bus322	2218.80	3328.20	4000.00	
masalya	2W XFMR	Bus71	Bus275	2218.80	3328.20	4000.00	
masria	2W XFMR	Bus92	Bus291	2218.80	3328.20	4000.00	
masriya	2W XFMR	Bus25	Bus248	352.19	528.29	634.92	
mass stone	2W XFMR	Bus155	Bus309	352.19	528.29	634.92	
mass stones	2W XFMR	Bus156	Bus310	352.19	528.29	634.92	
MAWAFAQ FAKHRY	2W XFMR	Bus202	Bus351	352.19	528.29	634.92	
mawfak al-fakhry	2W XFMR	Bus434	Bus435	352.19	528.29	634.92	
middle jalqumya	2W XFMR	Bus126	Bus317	554.70	832.05	1000.00	
middle of raba	2W XFMR	Bus109	Bus329	887.52	1331.28	1600.00	
middle zababdeh	2W XFMR	Bus61	Bus271	554.70	832.05	1000.00	
midecin	2W XFMR	Bus119	Bus325	352.19	528.29	634.92	
midical harps	2W XFMR	Bus8	Bus233	1386.75	2080.13	2500.00	
mo2ayad fridges	2W XFMR	Bus178	Bus334	616.33	924.50	1111.11	
mohafada	2W XFMR	Bus180	Bus337	887.52	1331.28	1600.00	
mohammad al basher	2W XFMR	Bus371	Bus372	352.19	528.29	634.92	
national security	2W XFMR	Bus188	Bus343	1386.75	2080.13	2500.00	
old station	2W XFMR	Bus518	Bus519	554.70	832.05	1000.00	
pickle factory	2W XFMR	Bus356	Bus357	554.70	832.05	1000.00	
plastic factory	2W XFMR	Bus77	Bus279	887.52	1331.28	1600.00	
police	2W XFMR	Bus184	Bus340	887.52	1331.28	1600.00	
princee palce	2W XFMR	Bus146	Bus282	887.52	1331.28	1600.00	
rahwa	2W XFMR	Bus105	Bus331	554.70	832.05	1000.00	
rahwa.	2W XFMR	Bus104	Bus305	2218.80	3328.20	4000.00	
RAS AL-MATTALEH	2W XFMR	Bus196	Bus348	1386.75	2080.13	2500.00	
refat	2W XFMR	Bus455	Bus456	554.70	832.05	1000.00	
refat 2	2W XFMR	Bus455	Bus458	554.70	832.05	1000.00	
registration bulding	2W XFMR	Bus144	Bus281	352.19	528.29	634.92	
royal	2W XFMR	Bus148	Bus283	352.19	528.29	634.92	
safeena	2W XFMR	Bus457	Bus459	554.70	832.05	1000.00	
safya north	2W XFMR	Bus36	Bus254	887.52	1331.28	1600.00	
salhab	2W XFMR	Bus44	Bus261	2218.80	3328.20	4000.00	
sameeh abo khezaran	2W XFMR	Bus520	Bus521	554.70	832.05	1000.00	
sameeh.	2W XFMR	Bus16	Bus240	887.52	1331.28	1600.00	

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CKT/Branch		Connected Bus ID		% Impedance, Pos. Seq., 100 MVA Base			
ID	Type	From Bus	To Bus	R	X	Z	Y
sameer motlaq	2W XFMR	Bus486	Bus487	554.70	832.05	1000.00	
school	2W XFMR	Bus466	Bus467	554.70	832.05	1000.00	
school.	2W XFMR	Bus504	Bus506	887.52	1331.28	1600.00	
sefferya zababdeh	2W XFMR	Bus66	Bus301	887.52	1331.28	1600.00	
shcool maraqa	2W XFMR	Bus90	Bus293	554.70	832.05	1000.00	
shcool zababdeh	2W XFMR	Bus60	Bus270	887.52	1331.28	1600.00	
shereen	2W XFMR	Bus177	Bus336	1386.75	2080.13	2500.00	
span	2W XFMR	Bus33	Bus252	2218.80	3328.20	4000.00	
sport stidum 1	2W XFMR	Bus151	Bus286	137.36	480.76	500.00	
sport stidum 2	2W XFMR	Bus151	Bus285	137.36	480.76	500.00	
stadium	2W XFMR	Bus516	Bus517	887.52	1331.28	1600.00	
stone cutter	2W XFMR	Bus34	Bus253	887.52	1331.28	1600.00	
T1	2W XFMR	Bus395	Bus396	352.19	528.29	634.92	
T2	2W XFMR	Bus429	Bus396	352.19	528.29	634.92	
T3	2W XFMR	Bus430	Bus396	352.19	528.29	634.92	
T4	2W XFMR	Bus11	Bus12	2.00	39.95	40.00	
T6	2W XFMR	Bus431	Bus396	554.70	832.05	1000.00	
T7	2W XFMR	Bus432	Bus396	352.19	528.29	634.92	
T8	2W XFMR	Bus433	Bus396	352.19	528.29	634.92	
T63	2W XFMR	Bus111	Bus316	352.19	528.29	634.92	
tayseer main	2W XFMR	Bus7	Bus231	887.52	1331.28	1600.00	
thiab	2W XFMR	Bus439	Bus440	352.19	528.29	634.92	
tlfeet	2W XFMR	Bus115	Bus302	2218.80	3328.20	4000.00	
tneen main	2W XFMR	Bus153	Bus307	1386.75	2080.13	2500.00	
toop factory	2W XFMR	Bus14	Bus235	554.70	832.05	1000.00	
tubas hospital 2	2W XFMR	Bus40	Bus256	352.19	528.29	634.92	
tubas weel	2W XFMR	Bus168	Bus332	887.52	1331.28	1600.00	
tubas well	2W XFMR	Bus505	Bus507	554.70	832.05	1000.00	
tupas hospital 1	2W XFMR	Bus39	Bus257	352.19	528.29	634.92	
wadi al efsha	2W XFMR	Bus79	Bus287	4437.60	6656.40	8000.00	
wadi d3oqa	2W XFMR	Bus89	Bus289	2218.80	3328.20	4000.00	
wastren al-maghayer	2W XFMR	Bus139	Bus321	887.52	1331.28	1600.00	
water pumb	2W XFMR	Bus91	Bus290	554.70	832.05	1000.00	
weastern	2W XFMR	Bus501	Bus502	887.52	1331.28	1600.00	
weel	2W XFMR	Bus181	Bus338	352.19	528.29	634.92	
weels	2W XFMR	Bus72	Bus276	352.19	528.29	634.92	
well	2W XFMR	Bus514	Bus515	554.70	832.05	1000.00	
west 1 AUU	2W XFMR	Bus122	Bus327	554.70	832.05	1000.00	
west 2 AUU	2W XFMR	Bus122	Bus328	352.19	528.29	634.92	

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ID	Type	From Bus	To Bus	R	X	Z	Y
westren jalqnosa	2W XFMR	Bus125	Bus314	1386.75	2080.13	2500.00	
westren maslya	2W XFMR	Bus73	Bus299	554.70	832.05	1000.00	
westren zababdeh	2W XFMR	Bus63	Bus300	554.70	832.05	1000.00	
westren zayah 2	2W XFMR	Bus84	Bus298	887.52	1331.28	1600.00	
westwern aqapa	2W XFMR	Bus45	Bus262	554.70	832.05	1000.00	
yaseed east	2W XFMR	Bus493	Bus494	887.52	1331.28	1600.00	
yaseed west	2W XFMR	Bus497	Bus499	887.52	1331.28	1600.00	
zakarneh 1	2W XFMR	Bus157	Bus311	352.19	528.29	634.92	
Cable1	Cable	Bus28	Bus29	0.89	0.41	0.98	0.0186649
Cable2	Cable	Bus38	Bus39	1.46	0.60	1.58	0.0317023
Cable3	Cable	Bus59	Bus60	0.78	0.32	0.84	0.0168948
Cable4	Cable	Bus63	Bus64	1.20	0.49	1.29	0.0259620
Cable5	Cable	Bus65	Bus66	0.54	0.22	0.58	0.0117416
Cable7	Cable	Bus146	Bus147	1.06	0.43	1.14	0.0229614
Cable8	Cable	Bus147	Bus148	0.42	0.17	0.45	0.0091324
Cable44	Cable	Bus384	Bus383	3305.18	487.50	3340.94	
Cable45	Cable	Bus395	Bus384	5295.66	2169.13	5722.68	0.0000025
Cable48	Cable	Bus384	Bus388	3305.18	487.50	3340.94	
Cable49	Cable	Bus384	Bus389	3305.18	487.50	3340.94	
Cable50	Cable	Bus384	Bus390	3305.18	487.50	3340.94	
Cable51	Cable	Bus384	Bus391	3305.18	487.50	3340.94	
Cable52	Cable	Bus384	Bus392	3305.18	487.50	3340.94	
Cable53	Cable	Bus384	Bus393	3305.18	487.50	3340.94	
Cable54	Cable	Bus384	Bus394	3305.18	487.50	3340.94	
Cable66	Cable	Bus409	Bus408	3305.18	487.50	3340.94	
Cable67	Cable	Bus411	Bus410	3305.18	487.50	3340.94	
Cable69	Cable	Bus411	Bus413	3305.18	487.50	3340.94	
Cable70	Cable	Bus411	Bus414	3305.18	487.50	3340.94	
Cable71	Cable	Bus411	Bus415	3305.18	487.50	3340.94	
Cable72	Cable	Bus411	Bus416	3305.18	487.50	3340.94	
Cable73	Cable	Bus411	Bus417	3305.18	487.50	3340.94	
Cable79	Cable	Bus428	Bus423	3305.18	487.50	3340.94	
Cable80	Cable	Bus428	Bus424	3305.18	487.50	3340.94	
Cable81	Cable	Bus428	Bus425	3305.18	487.50	3340.94	
Cable82	Cable	Bus428	Bus426	3305.18	487.50	3340.94	
Cable83	Cable	Bus428	Bus427	3305.18	487.50	3340.94	
Cable86	Cable	Bus409	Bus524	3305.18	487.50	3340.94	
Cable87	Cable	Bus409	Bus525	3305.18	487.50	3340.94	
Cable88	Cable	Bus409	Bus526	3305.18	487.50	3340.94	

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ID	Type	From Bus	To Bus	R	X	Z	Y
Cable89	Cable	Bus409	Bus527	3305.18	487.50	3340.94	
Cable90	Cable	Bus409	Bus528	3305.18	487.50	3340.94	
Cable91	Cable	Bus409	Bus529	3305.18	487.50	3340.94	
Cable92	Cable	Bus409	Bus530	3305.18	487.50	3340.94	
Cable93	Cable	Bus409	Bus531	3305.18	487.50	3340.94	
Cable95	Cable	Bus545	Bus533	3305.18	487.50	3340.94	
Cable98	Cable	Bus545	Bus536	3305.18	487.50	3340.94	
Cable99	Cable	Bus545	Bus537	3305.18	487.50	3340.94	
Cable100	Cable	Bus545	Bus538	3305.18	487.50	3340.94	
Cable101	Cable	Bus545	Bus539	3305.18	487.50	3340.94	
Cable102	Cable	Bus545	Bus540	3305.18	487.50	3340.94	
Cable103	Cable	Bus545	Bus541	3305.18	487.50	3340.94	
Cable104	Cable	Bus545	Bus542	3305.18	487.50	3340.94	
Cable105	Cable	Bus545	Bus543	3305.18	487.50	3340.94	
Cable106	Cable	Bus545	Bus544	3305.18	487.50	3340.94	
Cable107	Cable	Bus556	Bus546	3305.18	487.50	3340.94	
Cable108	Cable	Bus556	Bus547	3305.18	487.50	3340.94	
Cable109	Cable	Bus556	Bus548	3305.18	487.50	3340.94	
Cable110	Cable	Bus556	Bus549	3305.18	487.50	3340.94	
Cable111	Cable	Bus556	Bus550	3305.18	487.50	3340.94	
Cable112	Cable	Bus556	Bus551	3305.18	487.50	3340.94	
Cable113	Cable	Bus556	Bus552	3305.18	487.50	3340.94	
Cable114	Cable	Bus556	Bus553	3305.18	487.50	3340.94	
Cable115	Cable	Bus556	Bus554	3305.18	487.50	3340.94	
Cable118	Cable	Bus411	Bus558	3305.18	487.50	3340.94	
Cable120	Cable	Bus409	Bus429	5295.66	2169.13	5722.68	0.0000025
Cable121	Cable	Bus411	Bus430	5295.66	2169.13	5722.68	0.0000025
Cable122	Cable	Bus428	Bus431	5295.66	2169.13	5722.68	0.0000025
Cable123	Cable	Bus545	Bus432	5295.66	2169.13	5722.68	0.0000025
Cable124	Cable	Bus556	Bus433	5295.66	2169.13	5722.68	0.0000025
Cable126	Cable	Bus384	Bus560	3305.18	487.50	3340.94	
Cable128	Cable	Bus409	Bus562	3305.18	487.50	3340.94	
Cable130	Cable	Bus411	Bus564	3305.18	487.50	3340.94	
Line2	Line	Bus2	Bus3	0.22	0.11	0.25	0.0000847
Line3	Line	Bus3	Bus4	0.58	0.29	0.65	0.0002237
Line4	Line	Bus5	Bus6	12.72	6.27	14.18	0.0048656
Line5	Line	Bus3	Bus7	1.16	2.97	3.18	0.0032674
Line6	Line	Bus7	Bus8	11.10	5.47	12.37	0.0042448
Line7	Line	Bus8	Bus9	0.92	0.45	1.02	0.0003507

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ID	Type	From Bus	To Bus	R	X	Z	Y
Line8	Line	Bus10	Bus11	1.58	0.78	1.76	0.0006047
Line9	Line	Bus12	Bus13	4.36	2.15	4.86	0.0016659
Line10	Line	Bus13	Bus14	5.22	2.57	5.82	0.0019954
Line11	Line	Bus14	Bus15	2.92	1.44	3.25	0.0011156
Line12	Line	Bus15	Bus16	1.79	0.88	2.00	0.0006863
Line13	Line	Bus16	Bus17	0.87	0.43	0.97	0.0003326
Line14	Line	Bus17	Bus18	2.75	1.36	3.07	0.0010521
Line15	Line	Bus18	Bus19	1.15	0.57	1.29	0.0004414
Line16	Line	Bus19	Bus20	1.46	0.72	1.63	0.0005593
Line17	Line	Bus20	Bus21	1.05	0.52	1.17	0.0004021
Line18	Line	Bus20	Bus22	0.46	0.23	0.51	0.0001754
Line19	Line	Bus23	Bus24	1.68	0.83	1.87	0.0006410
Line20	Line	Bus24	Bus25	3.52	1.73	3.92	0.0013454
Line21	Line	Bus19	Bus26	1.01	0.50	1.13	0.0003870
Line22	Line	Bus27	Bus28	1.18	0.58	1.31	0.0004505
Line23	Line	Bus28	Bus30	3.90	1.92	4.35	0.0014905
Line24	Line	Bus30	Bus31	0.96	0.47	1.07	0.0003658
Line25	Line	Bus32	Bus33	7.35	3.63	8.20	0.0028117
Line26	Line	Bus33	Bus34	6.39	3.15	7.12	0.0024429
Line27	Line	Bus30	Bus35	8.30	4.09	9.25	0.0031745
Line28	Line	Bus35	Bus36	5.19	2.56	5.78	0.0019833
Line29	Line	Bus35	Bus37	1.56	0.77	1.74	0.0005956
Line30	Line	Bus37	Bus38	0.93	0.46	1.04	0.0003568
Line31	Line	Bus39	Bus40	0.58	0.28	0.64	0.0002207
Line32	Line	Bus38	Bus41	1.98	0.97	2.20	0.0007558
Line33	Line	Bus41	Bus42	9.14	4.51	10.19	0.0034950
Line34	Line	Bus42	Bus43	6.69	3.30	7.46	0.0025578
Line35	Line	Bus43	Bus44	8.46	4.17	9.43	0.0032350
Line36	Line	Bus42	Bus45	3.71	1.83	4.13	0.0014180
Line37	Line	Bus45	Bus46	12.49	6.16	13.93	0.0047769
Line38	Line	Bus46	Bus47	1.82	0.90	2.03	0.0006954
Line39	Line	Bus47	Bus48	1.22	0.60	1.36	0.0004656
Line40	Line	Bus49	Bus50	1.11	0.55	1.23	0.0004233
Line41	Line	Bus50	Bus51	4.21	2.08	4.70	0.0016115
Line42	Line	Bus52	Bus53	1.36	0.67	1.52	0.0005200
Line44	Line	Bus50	Bus55	1.23	0.61	1.37	0.0004716
Line45	Line	Bus55	Bus56	0.58	2.16	2.23	0.0025201
Line46	Line	Bus56	Bus57	8.58	4.23	9.56	0.0032804
Line47	Line	Bus57	Bus58	2.86	1.41	3.19	0.0010945

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ID	Type	From Bus	To Bus	R	X	Z	Y
Line48	Line	Bus58	Bus59	1.11	0.55	1.23	0.0004233
Line49	Line	Bus59	Bus61	1.16	0.57	1.30	0.0004444
Line50	Line	Bus61	Bus62	0.81	0.40	0.91	0.0003114
Line51	Line	Bus62	Bus63	0.62	0.30	0.69	0.0002358
Line52	Line	Bus64	Bus65	1.21	0.60	1.35	0.0004626
Line53	Line	Bus62	Bus67	3.51	1.73	3.91	0.0013424
Line54	Line	Bus67	Bus68	15.72	7.75	17.53	0.0060135
Line55	Line	Bus68	Bus69	5.77	2.85	6.43	0.0022071
Line56	Line	Bus69	Bus70	2.82	1.39	3.15	0.0010793
Line57	Line	Bus70	Bus71	4.84	2.39	5.39	0.0018503
Line58	Line	Bus71	Bus72	10.54	5.20	11.75	0.0040301
Line59	Line	Bus70	Bus73	0.23	0.11	0.26	0.0000877
Line60	Line	Bus73	Bus74	25.16	12.41	28.05	0.0096234
Line61	Line	Bus74	Bus75	3.83	1.89	4.27	0.0014663
Line62	Line	Bus74	Bus76	2.50	1.23	2.79	0.0009554
Line63	Line	Bus76	Bus77	0.94	0.46	1.05	0.0003598
Line64	Line	Bus76	Bus78	14.03	6.92	15.64	0.0053665
Line65	Line	Bus78	Bus79	1.54	0.76	1.72	0.0005896
Line66	Line	Bus78	Bus80	2.91	1.43	3.24	0.0011126
Line67	Line	Bus80	Bus81	15.31	7.55	17.07	0.0058563
Line68	Line	Bus81	Bus82	3.05	1.50	3.40	0.0011670
Line69	Line	Bus81	Bus83	3.91	1.93	4.36	0.0014966
Line70	Line	Bus83	Bus84	2.66	1.31	2.96	0.0010159
Line71	Line	Bus80	Bus87	1.83	0.90	2.04	0.0006984
Line72	Line	Bus87	Bus88	0.92	0.45	1.02	0.0003507
Line73	Line	Bus88	Bus89	11.07	5.46	12.34	0.0042327
Line74	Line	Bus87	Bus90	3.48	1.72	3.88	0.0013303
Line75	Line	Bus90	Bus91	8.99	4.43	10.02	0.0034376
Line76	Line	Bus90	Bus92	6.19	3.05	6.90	0.0023673
Line77	Line	Bus92	Bus93	5.22	2.58	5.83	0.0019984
Line78	Line	Bus93	Bus94	13.41	6.61	14.95	0.0051276
Line79	Line	Bus94	Bus95	9.11	4.49	10.16	0.0034859
Line81	Line	Bus58	Bus96	1.94	0.96	2.17	0.0007437
Line83	Line	Bus97	Bus98	0.77	0.38	0.86	0.0002963
Line84	Line	Bus98	Bus99	0.83	0.41	0.93	0.0003175
Line85	Line	Bus99	Bus100	3.34	1.65	3.72	0.0012759
Line86	Line	Bus100	Bus101	19.74	9.73	22.01	0.0075494
Line87	Line	Bus102	Bus103	0.81	0.40	0.90	0.0003084
Line88	Line	Bus103	Bus104	5.04	2.49	5.62	0.0019289



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ID	Type	From Bus	To Bus	R	X	Z	Y
Line89	Line	Bus104	Bus105	2.76	1.36	3.08	0.0010552
Line90	Line	Bus105	Bus106	6.17	3.04	6.87	0.0023582
Line91	Line	Bus106	Bus109	1.66	0.82	1.85	0.0006349
Line92	Line	Bus109	Bus110	4.88	2.41	5.44	0.0018654
Line93	Line	Bus103	Bus111	11.48	5.66	12.80	0.0043899
Line94	Line	Bus98	Bus112	0.83	0.41	0.93	0.0003175
Line95	Line	Bus113	Bus114	19.13	9.43	21.33	0.0073166
Line96	Line	Bus114	Bus115	0.89	0.44	0.99	0.0003386
Line97	Line	Bus114	Bus116	2.47	1.22	2.75	0.0009433
Line98	Line	Bus116	Bus123	2.64	1.30	2.94	0.0010098
Line99	Line	Bus123	Bus118	1.12	0.55	1.25	0.0004293
Line100	Line	Bus118	Bus119	0.80	0.39	0.89	0.0003054
Line101	Line	Bus119	Bus120	0.48	0.24	0.54	0.0001844
Line102	Line	Bus120	Bus122	0.78	0.39	0.87	0.0002993
Line103	Line	Bus123	Bus124	13.07	6.45	14.58	0.0050007
Line104	Line	Bus124	Bus125	4.90	2.42	5.46	0.0018745
Line105	Line	Bus125	Bus126	6.53	3.22	7.28	0.0024973
Line106	Line	Bus126	Bus127	14.99	7.39	16.71	0.0057323
Line108	Line	Bus127	Bus135	3.28	1.62	3.66	0.0012547
Line109	Line	Bus126	Bus137	7.49	3.70	8.36	0.0028662
Line110	Line	Bus137	Bus138	7.31	3.61	8.15	0.0027966
Line111	Line	Bus138	Bus139	10.74	5.30	11.98	0.0041088
Line112	Line	Bus139	Bus140	2.48	1.22	2.77	0.0009493
Line113	Line	Bus140	Bus141	15.06	7.43	16.79	0.0057595
Line114	Line	Bus116	Bus142	1.56	0.77	1.74	0.0005956
Line115	Line	Bus142	Bus143	0.75	0.37	0.84	0.0002872
Line116	Line	Bus142	Bus144	2.07	1.02	2.31	0.0007921
Line117	Line	Bus144	Bus145	0.83	0.41	0.93	0.0003175
Line118	Line	Bus145	Bus146	3.36	1.66	3.75	0.0012849
Line120	Line	Bus146	Bus149	1.97	0.97	2.19	0.0007528
Line121	Line	Bus149	Bus150	1.71	0.84	1.90	0.0006530
Line122	Line	Bus149	Bus151	0.92	0.45	1.02	0.0003507
Line123	Line	Bus145	Bus152	3.58	1.77	3.99	0.0013696
Line124	Line	Bus152	Bus153	3.41	1.68	3.81	0.0013061
Line125	Line	Bus152	Bus154	8.99	4.43	10.02	0.0034376
Line126	Line	Bus154	Bus155	2.06	1.02	2.30	0.0007891
Line127	Line	Bus155	Bus156	0.59	0.29	0.66	0.0002268
Line129	Line	Bus17	Bus158	0.15	0.16	0.22	0.0001437
Line130	Line	Bus158	Bus159	1.77	0.87	1.97	0.0006772

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Line131	Line	Bus158	Bus160	0.59	0.29	0.66	0.0002268
Line132	Line	Bus160	Bus161	1.49	0.74	1.67	0.0005714
Line133	Line	Bus161	Bus162	0.54	0.27	0.60	0.0002056
Line134	Line	Bus163	Bus164	3.66	1.80	4.08	0.0013998
Line136	Line	Bus165	Bus167	1.87	0.92	2.09	0.0007165
Line137	Line	Bus167	Bus168	0.89	0.44	1.00	0.0003416
Line138	Line	Bus167	Bus169	1.34	0.66	1.50	0.0005140
Line139	Line	Bus170	Bus171	1.98	0.97	2.20	0.0007558
Line141	Line	Bus173	Bus174	9.50	4.69	10.59	0.0036341
Line142	Line	Bus174	Bus175	7.41	3.65	8.26	0.0028329
Line143	Line	Bus175	Bus176	3.21	1.58	3.58	0.0012275
Line144	Line	Bus176	Bus177	2.47	1.22	2.76	0.0009463
Line145	Line	Bus173	Bus178	1.62	0.80	1.81	0.0006198
Line146	Line	Bus178	Bus179	4.89	2.41	5.46	0.0018715
Line147	Line	Bus179	Bus180	3.49	1.72	3.90	0.0013363
Line148	Line	Bus179	Bus181	11.00	5.42	12.26	0.0042055
Line149	Line	Bus181	Bus182	7.50	3.70	8.36	0.0028692
Line150	Line	Bus182	Bus183	0.94	0.46	1.05	0.0003598
Line152	Line	Bus184	Bus185	2.77	1.37	3.09	0.0010612
Line153	Line	Bus185	Bus186	1.58	0.78	1.76	0.0006047
Line154	Line	Bus185	Bus187	1.63	0.80	1.82	0.0006228
Line155	Line	Bus185	Bus188	5.14	2.53	5.73	0.0019652
Line156	Line	Bus188	Bus189	3.70	1.82	4.12	0.0014149
Line157	Line	Bus189	Bus190	0.74	0.37	0.83	0.0002842
Line158	Line	Bus190	Bus191	3.41	1.68	3.80	0.0013031
Line159	Line	Bus191	Bus192	4.26	2.10	4.75	0.0016296
Line160	Line	Bus190	Bus193	3.95	1.95	4.41	0.0015117
Line161	Line	Bus164	Bus165	0.70	0.34	0.78	0.0002661
Line162	Line	Bus171	Bus173	1.93	0.95	2.15	0.0007377
Line163	Line	Bus182	Bus184	1.07	0.53	1.19	0.0004082
Line164	Line	Bus188	Bus194	0.34	0.17	0.38	0.0001300
Line165	Line	Bus195	Bus196	6.55	3.23	7.31	0.0025064
Line167	Line	Bus196	Bus197	10.83	5.34	12.07	0.0041420
Line168	Line	Bus197	Bus198	4.73	2.33	5.27	0.0018080
Line169	Line	Bus198	Bus199	19.18	9.46	21.39	0.0073377
Line171	Line	Bus197	Bus201	2.21	1.09	2.47	0.0008465
Line172	Line	Bus201	Bus202	0.78	0.39	0.87	0.0002993
Line173	Line	Bus201	Bus203	6.67	3.29	7.44	0.0025517
Line175	Line	Bus171	Bus353	4.81	2.37	5.37	0.0018412

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ID	Type	From Bus	To Bus	R	X	Z	Y
Line176	Line	Bus354	Bus355	6.48	3.20	7.23	0.0024792
Line177	Line	Bus355	Bus356	1.58	0.78	1.76	0.0006047
Line178	Line	Bus355	Bus358	1.58	0.78	1.76	0.0006047
Line179	Line	Bus358	Bus359	1.58	0.78	1.76	0.0006047
Line180	Line	Bus358	Bus361	2.41	1.19	2.69	0.0009221
Line181	Line	Bus361	Bus362	1.58	0.78	1.76	0.0006047
Line182	Line	Bus361	Bus363	2.96	1.46	3.31	0.0011338
Line183	Line	Bus363	Bus365	2.72	1.34	3.03	0.0010400
Line184	Line	Bus365	Bus366	1.25	0.62	1.39	0.0004777
Line185	Line	Bus366	Bus367	3.87	1.91	4.31	0.0014784
Line186	Line	Bus368	Bus369	1.58	0.78	1.76	0.0006047
Line187	Line	Bus369	Bus370	1.83	0.90	2.04	0.0007014
Line188	Line	Bus370	Bus371	8.70	4.29	9.70	0.0033257
Line189	Line	Bus370	Bus373	0.79	0.39	0.88	0.0003023
Line190	Line	Bus373	Bus374	6.32	3.12	7.05	0.0024187
Line191	Line	Bus374	Bus376	9.49	4.68	10.58	0.0036280
Line192	Line	Bus362	Bus396	1.58	0.78	1.76	0.0006047
Line195	Line	Bus369	Bus434	2.49	1.23	2.78	0.0009524
Line196	Line	Bus366	Bus436	0.99	0.49	1.10	0.0003779
Line197	Line	Bus436	Bus438	5.34	2.64	5.96	0.0020438
Line198	Line	Bus438	Bus439	1.45	0.71	1.61	0.0005533
Line199	Line	Bus438	Bus442	9.64	4.76	10.75	0.0036885
Line200	Line	Bus365	Bus444	2.06	1.01	2.29	0.0007861
Line201	Line	Bus444	Bus446	3.31	1.63	3.69	0.0012668
Line202	Line	Bus446	Bus448	2.76	1.36	3.08	0.0010552
Line203	Line	Bus444	Bus450	1.01	0.50	1.13	0.0003870
Line204	Line	Bus450	Bus451	2.81	1.38	3.13	0.0010733
Line205	Line	Bus450	Bus453	3.72	1.83	4.14	0.0014210
Line206	Line	Bus453	Bus454	3.23	1.59	3.60	0.0012366
Line207	Line	Bus454	Bus455	1.85	0.91	2.06	0.0007075
Line208	Line	Bus455	Bus457	6.01	2.96	6.70	0.0022978
Line209	Line	Bus454	Bus460	5.38	2.65	5.99	0.0020559
Line210	Line	Bus460	Bus461	0.66	0.33	0.74	0.0002540
Line212	Line	Bus462	Bus464	4.02	1.98	4.49	0.0015389
Line213	Line	Bus464	Bus466	3.46	1.71	3.86	0.0013242
Line214	Line	Bus466	Bus468	5.27	2.60	5.88	0.0020166
Line215	Line	Bus461	Bus470	5.93	2.92	6.61	0.0022675
Line216	Line	Bus470	Bus472	6.55	3.23	7.31	0.0025064
Line217	Line	Bus472	Bus474	8.07	3.98	9.00	0.0030869

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ID	Type	From Bus	To Bus	R	X	Z	Y
Line218	Line	Bus474	Bus476	0.44	0.22	0.49	0.0001693
Line219	Line	Bus477	Bus478	8.54	4.21	9.53	0.0032683
Line220	Line	Bus478	Bus479	0.74	0.37	0.83	0.0002842
Line221	Line	Bus478	Bus481	3.11	1.54	3.47	0.0011912
Line222	Line	Bus478	Bus485	1.05	0.52	1.17	0.0004021
Line223	Line	Bus485	Bus486	1.88	0.93	2.10	0.0007196
Line224	Line	Bus485	Bus488	3.98	1.96	4.43	0.0015208
Line225	Line	Bus460	Bus490	3.58	1.77	3.99	0.0013696
Line226	Line	Bus460	Bus492	10.47	5.17	11.68	0.0040060
Line227	Line	Bus492	Bus493	0.86	0.42	0.96	0.0003295
Line228	Line	Bus492	Bus495	3.38	1.67	3.77	0.0012940
Line229	Line	Bus495	Bus497	1.88	0.93	2.10	0.0007196
Line230	Line	Bus495	Bus496	7.21	3.56	8.04	0.0027573
Line231	Line	Bus453	Bus500	1.21	0.60	1.35	0.0004626
Line232	Line	Bus500	Bus501	0.70	0.34	0.78	0.0002661
Line233	Line	Bus500	Bus503	1.91	0.94	2.13	0.0007317
Line234	Line	Bus503	Bus505	0.95	0.47	1.06	0.0003628
Line235	Line	Bus503	Bus504	0.63	0.31	0.71	0.0002419
Line236	Line	Bus500	Bus508	1.89	0.93	2.11	0.0007226
Line237	Line	Bus508	Bus510	2.74	1.35	3.06	0.0010491
Line238	Line	Bus510	Bus512	1.42	0.70	1.59	0.0005442
Line239	Line	Bus510	Bus514	1.45	0.72	1.62	0.0005563
Line240	Line	Bus514	Bus516	0.40	0.19	0.44	0.0001512
Line241	Line	Bus516	Bus518	0.47	0.23	0.53	0.0001814
Line242	Line	Bus510	Bus520	1.63	0.80	1.82	0.0006228
Line243	Line	Bus461	Bus462	1.32	0.65	1.47	0.0005049
Line244	Line	Bus156	Bus157	1.58	0.78	1.76	0.0006047
Line43	Line	Bus54	Line43~	4.38	2.16	4.88	0.0016749
CB1	Tie Breakr	Bus4	Bus5				
CB2	Tie Breakr	Bus9	Bus10				
CB4	Tie Breakr	Bus22	Bus23				
CB5	Tie Breakr	Bus26	Bus27				
CB6	Tie Breakr	Bus31	Bus32				
CB7	Tie Breakr	Bus48	Bus49				
CB8	Tie Breakr	Bus51	Bus52				
CB9	Tie Breakr	Bus53	Bus54				
CB10	Tie Breakr	Bus96	Bus97				
CB11	Tie Breakr	Bus101	Bus102				
CB12	Tie Breakr	Bus112	Bus113				

CKT/Branch		Connected Bus ID		% Impedance, Pos. Seq., 100 MVA Base			
ID	Type	From Bus	To Bus	R	X	Z	Y
CB13	Tie Breakr	Bus162	Bus163				
CB14	Tie Breakr	Bus169	Bus170				
CB15	Tie Breakr	Bus194	Bus195				
CB17	Tie Breakr	Bus353	Bus354				
CB18	Tie Breakr	Bus367	Bus368				
CB58	Tie Breakr	Bus476	Bus477				

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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	4.394	4.013	0	0	Bus3	4.394	4.013	104.1	73.8	
Bus3	33.000	99.986	0.0	0	0	0	0	Bus2	-4.394	-4.013	104.1	73.8	
								Bus4	0.031	0.017	0.6	88.0	
								Bus7	4.363	3.997	103.5	73.7	
Bus4	33.000	99.986	0.0	0	0	0	0	Bus3	-0.031	-0.017	0.6	87.8	
								Bus5	0.031	0.017	0.6	87.8	
Bus5	33.000	99.986	0.0	0	0	0	0	Bus6	0.031	0.017	0.6	87.8	
								Bus4	-0.031	-0.017	0.6	87.8	
Bus6	33.000	99.981	0.0	0	0	0	0	Bus5	-0.031	-0.022	0.7	81.8	
								Bus230	0.031	0.022	0.7	81.8	
Bus7	33.000	99.817	0.0	0	0	0	0	Bus3	-4.359	-3.989	103.6	73.8	
								Bus8	4.229	3.945	101.4	73.1	
								Bus231	0.129	0.044	2.4	94.6	
Bus8	33.000	99.130	0.1	0	0	0	0	Bus7	-4.192	-3.931	101.4	72.9	
								Bus9	4.168	3.922	101.0	72.8	
								Bus233	0.024	0.009	0.4	93.9	
Bus9	33.000	99.074	0.1	0	0	0	0	Bus8	-4.165	-3.921	101.0	72.8	
								Bus10	4.165	3.921	101.0	72.8	
Bus10	33.000	99.074	0.1	0	0	0	0	Bus11	4.165	3.921	101.0	72.8	
								Bus9	-4.165	-3.921	101.0	72.8	
Bus11	33.000	98.977	0.1	0	0	0	0	Bus10	-4.160	-3.919	101.0	72.8	
								Bus12	4.160	3.919	101.0	72.8	
Bus12	33.000	97.324	-0.8	0	0	0	0	Bus13	4.153	3.786	101.0	73.9	
								Bus11	-4.153	-3.786	101.0	73.9	
Bus13	33.000	97.055	-0.8	0	0	0	0	Bus12	-4.139	-3.780	101.0	73.8	
								Bus14	4.053	3.757	99.6	73.3	
								Bus234	0.086	0.023	1.6	96.6	
Bus14	33.000	96.737	-0.7	0	0	0	0	Bus13	-4.036	-3.751	99.6	73.3	
								Bus15	3.949	3.725	98.2	72.7	
								Bus235	0.087	0.026	1.6	95.8	
Bus15	33.000	96.563	-0.7	0	0	0	0	Bus14	-3.940	-3.721	98.2	72.7	
								Bus16	3.940	3.721	98.2	72.7	
Bus16	33.000	96.455	-0.7	0	0	0	0	Bus15	-3.934	-3.719	98.2	72.7	
								Bus17	3.915	3.713	97.9	72.6	
								Bus240	0.019	0.006	0.4	94.9	
Bus17	33.000	96.404	-0.7	0	0	0	0	Bus16	-3.913	-3.712	97.9	72.5	

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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	96.375	-0.7	0	0	0	0	Bus18	0.717	0.587	16.8	77.4	
								Bus158	3.196	3.125	81.1	71.5	
								Bus17	-0.717	-0.587	16.8	77.3	
								Bus19	0.608	0.550	14.9	74.2	
Bus19	33.000	96.364	-0.7	0	0	0	0	Bus246	0.108	0.037	2.1	94.6	
								Bus18	-0.608	-0.551	14.9	74.1	
								Bus20	0.274	0.069	5.1	97.0	
								Bus26	0.334	0.482	10.6	57.0	
Bus20	33.000	96.360	-0.7	0	0	0	0	Bus19	-0.274	-0.069	5.1	96.9	
								Bus21	0.184	0.049	3.5	96.7	
								Bus22	0.090	0.021	1.7	97.4	
								Bus20	-0.184	-0.049	3.5	96.7	
Bus21	33.000	96.357	-0.7	0	0	0	0	Bus247	0.184	0.049	3.5	96.7	
								Bus20	-0.090	-0.021	1.7	97.4	
								Bus23	0.090	0.021	1.7	97.4	
								Bus24	0.090	0.021	1.7	97.4	
Bus22	33.000	96.359	-0.7	0	0	0	0	Bus22	-0.090	-0.021	1.7	97.4	
								Bus23	0.090	0.021	1.7	97.4	
								Bus24	0.090	0.021	1.7	97.4	
								Bus22	-0.090	-0.021	1.7	97.4	
Bus23	33.000	96.359	-0.7	0	0	0	0	Bus23	-0.090	-0.022	1.7	97.2	
								Bus25	0.090	0.022	1.7	97.2	
								Bus24	-0.090	-0.023	1.7	96.9	
								Bus248	0.090	0.023	1.7	96.9	
Bus24	33.000	96.357	-0.7	0	0	0	0	Bus19	-0.334	-0.482	10.7	57.0	
								Bus27	0.334	0.482	10.7	57.0	
								Bus28	0.334	0.482	10.7	57.0	
								Bus26	-0.334	-0.482	10.7	57.0	
Bus25	33.000	96.354	-0.7	0	0	0	0	Bus29	0.130	0.031	2.4	97.2	
								Bus27	-0.334	-0.483	10.7	56.9	
								Bus30	0.079	0.408	7.6	19.0	
								Bus249	0.125	0.043	2.4	94.6	
Bus26	33.000	96.358	-0.7	0	0	0	0	Bus28	-0.130	-0.049	2.5	93.7	
								Bus250	0.130	0.049	2.5	93.7	
								Bus28	-0.079	-0.410	7.6	18.9	
								Bus31	0.039	-0.003	0.7	-99.7	
Bus27	33.000	96.358	-0.7	0	0	0	0	Bus35	-0.086	0.379	7.1	-22.0	
								Bus251	0.125	0.033	2.4	96.6	
								Bus30	-0.039	0.002	0.7	-99.8	
								Bus32	0.039	-0.002	0.7	-99.8	
Bus28	33.000	96.351	-0.7	0	0	0	0	Bus33	0.039	-0.002	0.7	-99.8	
								Bus31	-0.039	0.002	0.7	-99.8	
Bus29	33.000	96.350	-0.7	0	0	0	0						
Bus30	33.000	96.340	-0.7	0	0	0	0						
Bus31	33.000	96.340	-0.7	0	0	0	0						
Bus32	33.000	96.340	-0.7	0	0	0	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
Bus33	33.000	96.337	-0.7	0	0	0	0	Bus32	-0.039	0.000	0.7	100.0	
								Bus34	0.030	-0.002	0.5	-99.7	
								Bus252	0.009	0.002	0.2	96.9	
Bus34	33.000	96.335	-0.7	0	0	0	0	Bus33	-0.030	0.000	0.5	100.0	
								Bus253	0.030	0.000	0.5	100.0	
Bus35	33.000	96.331	-0.6	0	0	0	0	Bus30	0.086	-0.382	7.1	-21.9	
								Bus36	0.026	0.006	0.5	97.6	
								Bus37	-0.112	0.376	7.1	-28.5	
Bus36	33.000	96.330	-0.6	0	0	0	0	Bus35	-0.026	-0.008	0.5	95.9	
								Bus254	0.026	0.008	0.5	95.9	
Bus37	33.000	96.330	-0.6	0	0	0	0	Bus35	0.112	-0.377	7.1	-28.4	
								Bus38	-0.142	0.356	7.0	-36.9	
								Bus255	0.030	0.020	0.7	82.9	
Bus38	33.000	96.330	-0.6	0	0	0	0	Bus39	0.140	0.039	2.6	96.4	
								Bus37	0.142	-0.357	7.0	-36.9	
								Bus41	-0.281	0.318	7.7	-66.3	
Bus39	33.000	96.327	-0.6	0	0	0	0	Bus38	-0.140	-0.068	2.8	89.9	
								Bus40	0.139	0.068	2.8	89.8	
								Bus257	0.001	0.000	0.0	98.0	
Bus40	33.000	96.326	-0.6	0	0	0	0	Bus39	-0.139	-0.068	2.8	89.8	
								Bus256	0.139	0.068	2.8	89.8	
Bus41	33.000	96.332	-0.6	0	0	0	0	Bus38	0.281	-0.319	7.7	-66.2	
								Bus42	-0.339	0.295	8.2	-75.4	
								Bus258	0.058	0.023	1.1	92.8	
Bus42	33.000	96.351	-0.6	0	0	0	0	Bus41	0.340	-0.298	8.2	-75.1	
								Bus43	0.024	0.004	0.4	98.7	
								Bus45	-0.503	0.258	10.3	-89.0	
								Bus259	0.140	0.037	2.6	96.7	
Bus43	33.000	96.349	-0.6	0	0	0	0	Bus42	-0.024	-0.006	0.4	96.7	
								Bus44	0.007	-0.001	0.1	-99.1	
								Bus260	0.017	0.007	0.3	91.9	
Bus44	33.000	96.348	-0.6	0	0	0	0	Bus43	-0.007	-0.002	0.1	95.9	
								Bus261	0.007	0.002	0.1	95.9	
Bus45	33.000	96.365	-0.6	0	0	0	0	Bus42	0.503	-0.259	10.3	-88.9	
								Bus46	-0.636	0.201	12.1	-95.3	
								Bus262	0.133	0.058	2.6	91.7	
Bus46	33.000	96.434	-0.5	0	0	0	0	Bus45	0.637	-0.205	12.1	-95.2	
								Bus47	-0.659	0.198	12.5	-95.8	
								Bus263	0.022	0.007	0.4	94.9	



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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
Bus47	33.000	96.445	-0.5	0	0	0	0	Bus46	0.659	-0.199	12.5	-95.7	
								Bus48	-0.659	0.199	12.5	-95.7	
Bus48	33.000	96.452	-0.5	0	0	0	0	Bus47	0.659	-0.199	12.5	-95.7	
								Bus49	-0.659	0.199	12.5	-95.7	
Bus49	33.000	96.452	-0.5	0	0	0	0	Bus50	-0.659	0.199	12.5	-95.7	
								Bus48	0.659	-0.199	12.5	-95.7	
Bus50	33.000	96.459	-0.5	0	0	0	0	Bus49	0.659	-0.199	12.5	-95.7	
								Bus51	0.000	-0.004	0.1	0.0	
								Bus55	-0.659	0.203	12.5	-95.6	
Bus51	33.000	96.459	-0.5	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	96.459	-0.5	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	96.459	-0.5	0	0	0	0	Bus52	0.000	0.002	0.0	0.0	
								Bus54	0.000	-0.002	0.0	0.0	
Bus54	33.000	96.459	-0.5	0	0	0	0	Line43~	0.000	-0.002	0.0	0.0	
								Bus53	0.000	0.002	0.0	0.0	
Bus55	33.000	96.466	-0.5	0	0	0	0	Bus50	0.659	-0.203	12.5	-95.6	
								Bus56	-0.668	0.199	12.6	-95.8	
								Bus264	0.009	0.004	0.2	90.9	
Bus56	33.000	96.465	-0.5	0	0	0	0	Bus55	0.668	-0.202	12.7	-95.7	
								Bus57	-0.679	0.193	12.8	-96.2	
								Bus268	0.011	0.008	0.2	80.0	
Bus57	33.000	96.517	-0.5	0	0	0	0	Bus56	0.680	-0.196	12.8	-96.1	
								Bus58	-0.681	0.079	12.4	-99.3	
								Bus269	0.002	0.117	2.1	1.4	
Bus58	33.000	96.536	-0.5	0	0	0	0	Bus57	0.681	-0.080	12.4	-99.3	
								Bus59	-2.295	-0.434	42.3	98.3	
								Bus96	1.613	0.514	30.7	95.3	
Bus59	33.000	96.565	-0.5	0	0	0	0	Bus60	0.099	0.014	1.8	99.0	
								Bus58	2.295	0.434	42.3	98.3	
								Bus61	-2.394	-0.449	44.1	98.3	
Bus60	33.000	96.564	-0.5	0	0	0	0	Bus59	-0.099	-0.030	1.9	95.7	
								Bus270	0.099	0.030	1.9	95.7	
Bus61	33.000	96.596	-0.5	0	0	0	0	Bus59	2.395	0.448	44.1	98.3	
								Bus62	-2.521	-0.500	46.6	98.1	
								Bus271	0.127	0.051	2.5	92.7	
Bus62	33.000	96.620	-0.5	0	0	0	0	Bus61	2.522	0.500	46.6	98.1	
								Bus63	0.143	0.017	2.6	99.3	

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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
Bus63	33.000	96.619	-0.5	0	0	0	0	Bus67	-2.665	-0.517	49.2	98.2	
								Bus64	0.064	-0.012	1.2	-98.3	
								Bus62	-0.143	-0.017	2.6	99.3	
								Bus300	0.079	0.029	1.5	93.8	
Bus64	33.000	96.618	-0.5	0	0	0	0	Bus63	-0.064	-0.012	1.2	98.2	
Bus65	33.000	96.617	-0.5	0	0	0	0	Bus65	0.064	0.012	1.2	98.2	
								Bus66	0.064	0.013	1.2	98.1	
Bus66	33.000	96.617	-0.5	0	0	0	0	Bus64	-0.064	-0.013	1.2	98.1	
Bus67	33.000	96.726	-0.5	0	0	0	0	Bus65	-0.064	-0.024	1.2	93.8	
								Bus301	0.064	0.024	1.2	93.8	
								Bus62	2.667	0.517	49.1	98.2	
								Bus68	-2.736	-0.527	50.4	98.2	
Bus68	33.000	97.212	-0.4	0	0	0	0	Bus272	0.068	0.010	1.2	98.9	
Bus69	33.000	97.394	-0.3	0	0	0	0	Bus67	2.749	0.528	50.4	98.2	
								Bus69	-2.783	-0.546	51.0	98.1	
								Bus273	0.035	0.018	0.7	88.9	
								Bus68	2.788	0.546	51.0	98.1	
Bus70	33.000	97.485	-0.3	0	0	0	0	Bus70	-2.873	-0.568	52.6	98.1	
Bus71	33.000	97.469	-0.3	0	0	0	0	Bus274	0.084	0.022	1.6	96.8	
								Bus69	2.875	0.568	52.6	98.1	
								Bus71	0.250	0.143	5.2	86.8	
								Bus73	-3.126	-0.711	57.5	97.5	
Bus72	33.000	97.440	-0.3	0	0	0	0	Bus70	-0.250	-0.145	5.2	86.5	
								Bus72	0.207	0.132	4.4	84.4	
								Bus275	0.043	0.013	0.8	95.7	
								Bus71	-0.207	-0.136	4.4	83.6	
Bus73	33.000	97.493	-0.3	0	0	0	0	Bus276	0.207	0.136	4.4	83.6	
Bus74	33.000	98.411	-0.2	0	0	0	0	Bus70	3.126	0.711	57.5	97.5	
								Bus74	-3.194	-0.738	58.8	97.4	
								Bus299	0.068	0.027	1.3	92.8	
								Bus73	3.222	0.743	58.8	97.4	
Bus75	33.000	98.407	-0.2	0	0	0	0	Bus75	0.081	0.032	1.5	93.1	
								Bus76	-3.387	-0.816	61.9	97.2	
								Bus277	0.085	0.042	1.7	89.8	
								Bus74	-0.081	-0.033	1.5	92.5	
Bus76	33.000	98.507	-0.2	0	0	0	0	Bus278	0.081	0.033	1.5	92.5	
								Bus74	3.391	0.817	61.9	97.2	
								Bus77	0.023	0.018	0.5	78.5	
								Bus78	-3.413	-0.835	62.4	97.1	

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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
Bus77	33.000	98.507	-0.2	0	0	0	0	Bus76	-0.023	-0.018	0.5	77.9	
								Bus279	0.023	0.018	0.5	77.9	
Bus78	33.000	99.052	-0.1	0	0	0	0	Bus76	3.431	0.839	62.4	97.1	
								Bus79	0.008	0.001	0.1	98.4	
								Bus80	-3.439	-0.840	62.5	97.1	
Bus79	33.000	99.052	-0.1	0	0	0	0	Bus78	-0.008	-0.002	0.1	96.9	
								Bus287	0.008	0.002	0.1	96.9	
Bus80	33.000	99.165	-0.1	0	0	0	0	Bus78	3.443	0.841	62.5	97.1	
								Bus81	-3.842	-0.936	69.8	97.2	
								Bus87	0.399	0.095	7.2	97.3	
Bus81	33.000	99.830	0.0	0	0	0	0	Bus80	3.866	0.942	69.7	97.2	
								Bus82	0.014	0.010	0.3	81.1	
								Bus83	-3.880	-0.952	70.0	97.1	
Bus82	33.000	99.829	0.0	0	0	0	0	Bus81	-0.014	-0.011	0.3	77.9	
								Bus296	0.014	0.011	0.3	77.9	
* Bus83	33.000	100.000	0.0	3.945	0.967	0	0	Bus81	3.887	0.953	70.0	97.1	
Bus84	33.000	99.999	0.0	0	0	0	0	Bus84	0.024	0.005	0.4	97.8	
								Bus297	0.034	0.009	0.6	96.8	
								Bus83	-0.024	-0.006	0.4	96.9	
Bus87	33.000	99.157	-0.1	0	0	0	0	Bus298	0.024	0.006	0.4	96.9	
								Bus80	-0.399	-0.095	7.2	97.3	
								Bus88	0.059	0.014	1.1	97.3	
Bus88	33.000	99.156	-0.1	0	0	0	0	Bus90	0.339	0.081	6.2	97.3	
								Bus87	-0.059	-0.015	1.1	97.1	
								Bus89	0.019	0.003	0.3	98.4	
Bus89	33.000	99.154	-0.1	0	0	0	0	Bus288	0.041	0.011	0.7	96.4	
								Bus88	-0.019	-0.008	0.4	92.8	
								Bus289	0.019	0.008	0.4	92.8	
Bus90	33.000	99.144	-0.1	0	0	0	0	Bus87	-0.339	-0.083	6.2	97.2	
								Bus91	0.013	0.000	0.2	100.0	
								Bus92	0.234	0.059	4.3	97.0	
Bus91	33.000	99.142	-0.1	0	0	0	0	Bus293	0.093	0.024	1.7	96.8	
								Bus90	-0.013	-0.003	0.2	97.0	
								Bus290	0.013	0.003	0.2	97.0	
Bus92	33.000	99.127	-0.1	0	0	0	0	Bus90	-0.234	-0.061	4.3	96.7	
								Bus93	0.199	0.046	3.6	97.4	
								Bus291	0.035	0.015	0.7	91.7	
Bus93	33.000	99.115	-0.1	0	0	0	0	Bus92	-0.199	-0.048	3.6	97.2	
								Bus94	0.163	0.047	3.0	96.0	

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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
Bus94	33.000	99.090	-0.1	0	0	0	0	Bus292	0.036	0.000	0.6	100.0	
								Bus93	-0.162	-0.052	3.0	95.2	
								Bus95	0.068	0.028	1.3	92.4	
								Bus294	0.095	0.024	1.7	96.8	
Bus95	33.000	99.083	-0.1	0	0	0	0	Bus94	-0.068	-0.031	1.3	90.7	
Bus96	33.000	96.499	-0.5	0	0	0	0	Bus295	0.068	0.031	1.3	90.7	
								Bus58	-1.613	-0.515	30.7	95.3	
								Bus97	1.613	0.515	30.7	95.3	
Bus97	33.000	96.499	-0.5	0	0	0	0	Bus98	1.613	0.515	30.7	95.3	
Bus98	33.000	96.484	-0.5	0	0	0	0	Bus96	-1.613	-0.515	30.7	95.3	
								Bus97	-1.612	-0.515	30.7	95.3	
								Bus99	0.267	0.105	5.2	93.1	
								Bus112	1.345	0.410	25.5	95.7	
Bus99	33.000	96.481	-0.5	0	0	0	0	Bus98	-0.267	-0.105	5.2	93.0	
Bus100	33.000	96.473	-0.5	0	0	0	0	Bus100	0.198	0.075	3.8	93.4	
								Bus303	0.070	0.030	1.4	91.9	
								Bus99	-0.198	-0.077	3.8	93.2	
								Bus101	0.183	0.065	3.5	94.3	
Bus101	33.000	96.428	-0.5	0	0	0	0	Bus304	0.015	0.012	0.3	77.9	
								Bus100	-0.183	-0.072	3.6	93.1	
								Bus102	0.183	0.072	3.6	93.1	
								Bus103	0.183	0.072	3.6	93.1	
Bus102	33.000	96.428	-0.5	0	0	0	0	Bus101	-0.183	-0.072	3.6	93.1	
Bus103	33.000	96.427	-0.5	0	0	0	0	Bus102	-0.183	-0.072	3.6	93.1	
								Bus104	0.183	0.076	3.6	92.3	
								Bus111	0.000	-0.004	0.1	0.0	
								Bus103	-0.183	-0.078	3.6	92.0	
Bus104	33.000	96.415	-0.5	0	0	0	0	Bus105	0.139	0.059	2.7	92.2	
								Bus305	0.043	0.019	0.9	91.6	
								Bus104	-0.139	-0.060	2.7	91.9	
								Bus106	0.096	0.041	1.9	91.9	
Bus105	33.000	96.410	-0.5	0	0	0	0	Bus331	0.043	0.018	0.8	91.9	
								Bus105	-0.096	-0.043	1.9	91.2	
								Bus109	0.096	0.043	1.9	91.2	
								Bus106	-0.096	-0.044	1.9	91.0	
Bus106	33.000	96.403	-0.5	0	0	0	0	Bus110	0.048	0.019	0.9	93.0	
								Bus329	0.048	0.025	1.0	88.8	
								Bus109	-0.048	-0.021	1.0	91.8	
								Bus330	0.048	0.021	1.0	91.8	

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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
Bus111	33.000	96.427	-0.5	0	0	0	0	Bus103	0.000	0.000	0.0	0.0	
								Bus316	0.000	0.000	0.0	0.0	
Bus112	33.000	96.470	-0.5	0	0	0	0	Bus98	-1.345	-0.410	25.5	95.7	
								Bus113	1.345	0.410	25.5	95.7	
Bus113	33.000	96.470	-0.5	0	0	0	0	Bus114	1.345	0.410	25.5	95.7	
								Bus112	-1.345	-0.410	25.5	95.7	
Bus114	33.000	96.163	-0.5	0	0	0	0	Bus113	-1.341	-0.415	25.5	95.5	
								Bus115	0.076	0.002	1.4	100.0	
								Bus116	1.265	0.413	24.2	95.1	
Bus115	33.000	96.162	-0.5	0	0	0	0	Bus114	-0.076	-0.002	1.4	100.0	
								Bus302	0.076	0.002	1.4	100.0	
Bus116	33.000	96.125	-0.5	0	0	0	0	Bus114	-1.265	-0.414	24.2	95.0	
								Bus123	0.692	0.187	13.1	96.5	
								Bus142	0.572	0.227	11.2	93.0	
Bus118	33.000	96.100	-0.5	0	0	0	0	Bus123	-0.305	-0.088	5.8	96.1	
								Bus119	0.191	0.067	3.7	94.4	
								Bus315	0.044	0.006	0.8	99.0	
								Bus313	0.070	0.015	1.3	97.9	
Bus119	33.000	96.098	-0.5	0	0	0	0	Bus118	-0.191	-0.067	3.7	94.3	
								Bus120	0.133	0.039	2.5	96.0	
								Bus325	0.058	0.028	1.2	89.9	
Bus120	33.000	96.097	-0.5	0	0	0	0	Bus119	-0.133	-0.039	2.5	96.0	
								Bus122	0.133	0.039	2.5	96.0	
Bus122	33.000	96.096	-0.5	0	0	0	0	Bus120	-0.133	-0.039	2.5	95.9	
								Bus327	0.075	0.011	1.4	98.9	
								Bus328	0.058	0.028	1.2	89.9	
Bus123	33.000	96.104	-0.5	0	0	0	0	Bus116	-0.692	-0.188	13.1	96.5	
								Bus118	0.305	0.087	5.8	96.1	
								Bus124	0.388	0.101	7.3	96.8	
Bus124	33.000	96.044	-0.5	0	0	0	0	Bus123	-0.388	-0.105	7.3	96.5	
								Bus125	0.386	0.105	7.3	96.5	
								Bus312	0.002	0.000	0.0	100.0	
Bus125	33.000	96.022	-0.5	0	0	0	0	Bus124	-0.386	-0.107	7.3	96.4	
								Bus126	0.341	0.097	6.5	96.1	
								Bus314	0.045	0.010	0.8	97.8	
Bus126	33.000	95.995	-0.5	0	0	0	0	Bus125	-0.341	-0.100	6.5	96.0	
								Bus127	0.058	0.015	1.1	96.9	
								Bus137	0.207	0.059	3.9	96.1	
								Bus317	0.076	0.025	1.5	94.8	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus127	33.000	95.985	-0.5	0	0	0	0	Bus126	-0.058	-0.020	1.1	94.5	
								Bus135	0.058	0.020	1.1	94.5	
Bus135	33.000	95.983	-0.5	0	0	0	0	Bus127	-0.058	-0.021	1.1	93.9	
								Bus319	0.058	0.021	1.1	93.9	
Bus137	33.000	95.977	-0.5	0	0	0	0	Bus126	-0.207	-0.062	3.9	95.8	
								Bus138	0.188	0.047	3.5	97.0	
								Bus320	0.019	0.015	0.4	77.9	
Bus138	33.000	95.961	-0.5	0	0	0	0	Bus137	-0.188	-0.049	3.5	96.7	
								Bus139	0.163	0.043	3.1	96.7	
								Bus322	0.025	0.006	0.5	96.8	
Bus139	33.000	95.940	-0.5	0	0	0	0	Bus138	-0.163	-0.047	3.1	96.1	
								Bus140	0.084	0.023	1.6	96.5	
								Bus321	0.078	0.024	1.5	95.7	
Bus140	33.000	95.938	-0.5	0	0	0	0	Bus139	-0.084	-0.024	1.6	96.2	
								Bus141	0.011	-0.001	0.2	-99.6	
								Bus323	0.073	0.025	1.4	94.7	
Bus141	33.000	95.936	-0.5	0	0	0	0	Bus140	-0.011	-0.004	0.2	92.9	
								Bus324	0.011	0.004	0.2	92.9	
Bus142	33.000	96.114	-0.5	0	0	0	0	Bus116	-0.572	-0.227	11.2	92.9	
								Bus143	0.055	0.022	1.1	93.0	
								Bus144	0.517	0.205	10.1	92.9	
Bus143	33.000	96.114	-0.5	0	0	0	0	Bus142	-0.055	-0.022	1.1	92.9	
								Bus280	0.055	0.022	1.1	92.9	
Bus144	33.000	96.101	-0.5	0	0	0	0	Bus142	-0.517	-0.206	10.1	92.9	
								Bus145	0.426	0.183	8.4	91.9	
								Bus281	0.091	0.023	1.7	96.9	
Bus145	33.000	96.097	-0.5	0	0	0	0	Bus144	-0.426	-0.183	8.4	91.9	
								Bus146	0.314	0.139	6.3	91.5	
								Bus152	0.112	0.044	2.2	92.9	
Bus146	33.000	96.083	-0.5	0	0	0	0	Bus147	0.140	0.000	2.5	100.0	
								Bus145	-0.314	-0.140	6.3	91.4	
								Bus149	0.099	0.129	3.0	60.9	
								Bus282	0.075	0.012	1.4	98.9	
Bus147	33.000	96.082	-0.5	0	0	0	0	Bus146	-0.140	-0.021	2.6	98.9	
								Bus148	0.085	0.009	1.6	99.4	
								Bus306	0.055	0.012	1.0	97.9	
Bus148	33.000	96.081	-0.5	0	0	0	0	Bus147	-0.085	-0.018	1.6	97.9	
								Bus283	0.085	0.018	1.6	97.9	
Bus149	33.000	96.080	-0.5	0	0	0	0	Bus146	-0.099	-0.130	3.0	60.7	

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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
Bus150	33.000	96.079	-0.5	0	0	0	0	Bus150	0.056	0.011	1.0	98.1	
								Bus151	0.043	0.119	2.3	34.1	
								Bus149	-0.056	-0.012	1.0	97.9	
Bus151	33.000	96.079	-0.5	0	0	0	0	Bus284	0.056	0.012	1.0	97.9	
								Bus149	-0.043	-0.119	2.3	34.0	
								Bus286	0.021	0.059	1.2	34.0	
Bus152	33.000	96.092	-0.5	0	0	0	0	Bus285	0.021	0.059	1.2	34.0	
								Bus145	-0.112	-0.046	2.2	92.5	
								Bus153	0.030	0.003	0.5	99.4	
Bus153	33.000	96.090	-0.5	0	0	0	0	Bus154	0.082	0.042	1.7	88.7	
								Bus152	-0.030	-0.004	0.6	98.9	
								Bus307	0.030	0.004	0.6	98.9	
Bus154	33.000	96.082	-0.5	0	0	0	0	Bus152	-0.082	-0.046	1.7	87.3	
								Bus155	0.081	0.045	1.7	87.2	
								Bus308	0.001	0.000	0.0	92.0	
Bus155	33.000	96.080	-0.5	0	0	0	0	Bus154	-0.081	-0.046	1.7	86.9	
								Bus156	0.061	0.037	1.3	85.5	
								Bus309	0.020	0.009	0.4	91.0	
Bus156	33.000	96.079	-0.5	0	0	0	0	Bus155	-0.061	-0.037	1.3	85.4	
								Bus157	0.001	0.000	0.0	-99.1	
								Bus310	0.060	0.037	1.3	84.9	
Bus157	33.000	96.079	-0.5	0	0	0	0	Bus156	-0.001	0.000	0.0	92.0	
								Bus311	0.001	0.000	0.0	92.0	
								Bus17	-3.196	-3.125	81.1	71.5	
Bus158	33.000	96.394	-0.7	0	0	0	0	Bus159	0.125	0.042	2.4	94.7	
								Bus160	3.071	3.083	79.0	70.6	
								Bus158	-0.125	-0.043	2.4	94.6	
Bus159	33.000	96.391	-0.7	0	0	0	0	Bus238	0.125	0.043	2.4	94.6	
								Bus158	-3.069	-3.082	79.0	70.6	
								Bus161	3.049	3.079	78.7	70.4	
Bus160	33.000	96.365	-0.7	0	0	0	0	Bus237	0.021	0.003	0.4	99.0	
								Bus160	-3.046	-3.078	78.7	70.3	
								Bus162	2.872	3.019	75.7	68.9	
Bus161	33.000	96.295	-0.7	0	0	0	0	Bus239	0.174	0.060	3.3	94.6	
								Bus161	-2.871	-3.018	75.7	68.9	
								Bus163	2.871	3.018	75.7	68.9	
Bus162	33.000	96.270	-0.7	0	0	0	0	Bus164	2.871	3.018	75.7	68.9	
								Bus162	-2.871	-3.018	75.7	68.9	
								Bus163	-2.864	-3.016	75.7	68.9	

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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
Bus165	33.000	96.074	-0.6	0	0	0	0	Bus165	2.679	2.977	72.9	66.9	
								Bus229	0.185	0.039	3.4	97.8	
								Bus167	2.678	2.977	72.9	66.9	
Bus167	33.000	95.994	-0.6	0	0	0	0	Bus164	-2.678	-2.977	72.9	66.9	
								Bus165	-2.675	-2.976	72.9	66.8	
								Bus168	0.130	0.065	2.7	89.5	
Bus168	33.000	95.992	-0.6	0	0	0	0	Bus169	2.544	2.911	70.5	65.8	
								Bus167	-0.130	-0.065	2.7	89.4	
								Bus332	0.130	0.065	2.7	89.4	
Bus169	33.000	95.938	-0.6	0	0	0	0	Bus167	-2.542	-2.910	70.5	65.8	
								Bus170	2.542	2.910	70.5	65.8	
								Bus171	2.542	2.910	70.5	65.8	
Bus170	33.000	95.938	-0.6	0	0	0	0	Bus169	-2.542	-2.910	70.5	65.8	
								Bus170	-2.539	-2.909	70.5	65.7	
								Bus173	1.058	0.312	20.1	95.9	
Bus171	33.000	95.856	-0.6	0	0	0	0	Bus353	1.448	2.586	54.1	48.9	
								Bus333	0.032	0.011	0.6	94.8	
								Bus174	0.038	0.004	0.7	99.3	
Bus173	33.000	95.832	-0.6	0	0	0	0	Bus178	1.020	0.309	19.5	95.7	
								Bus171	-1.058	-0.313	20.1	95.9	
								Bus173	-0.038	-0.008	0.7	98.0	
Bus174	33.000	95.828	-0.6	0	0	0	0	Bus175	0.038	0.008	0.7	98.0	
								Bus174	-0.038	-0.010	0.7	96.5	
								Bus176	0.034	0.009	0.6	96.4	
Bus175	33.000	95.824	-0.6	0	0	0	0	Bus335	0.004	0.001	0.1	97.0	
								Bus175	-0.034	-0.010	0.6	95.5	
								Bus177	0.034	0.010	0.6	95.5	
Bus176	33.000	95.823	-0.6	0	0	0	0	Bus176	-0.034	-0.011	0.7	94.8	
								Bus336	0.034	0.011	0.7	94.8	
								Bus173	-1.020	-0.309	19.5	95.7	
Bus177	33.000	95.822	-0.6	0	0	0	0	Bus179	0.953	0.276	18.1	96.0	
								Bus334	0.067	0.033	1.4	89.8	
								Bus178	-0.953	-0.278	18.1	96.0	
Bus178	33.000	95.812	-0.6	0	0	0	0	Bus180	0.034	0.007	0.6	97.7	
								Bus181	0.919	0.270	17.5	95.9	
								Bus179	-0.034	-0.009	0.6	96.9	
Bus179	33.000	95.756	-0.6	0	0	0	0	Bus337	0.034	0.009	0.6	96.9	
								Bus179	-0.918	-0.274	17.5	95.8	
								Bus182	0.870	0.260	16.6	95.8	
Bus180	33.000	95.755	-0.6	0	0	0	0						
Bus181	33.000	95.635	-0.6	0	0	0	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
Bus182	33.000	95.557	-0.6	0	0	0	0	Bus338	0.048	0.014	0.9	95.9	
								Bus181	-0.869	-0.262	16.6	95.7	
								Bus183	0.095	0.032	1.8	94.8	
Bus183	33.000	95.556	-0.6	0	0	0	0	Bus184	0.774	0.230	14.8	95.9	
								Bus182	-0.095	-0.032	1.8	94.7	
								Bus339	0.095	0.032	1.8	94.7	
Bus184	33.000	95.547	-0.6	0	0	0	0	Bus185	0.719	0.218	13.8	95.7	
								Bus182	-0.774	-0.230	14.8	95.9	
								Bus340	0.055	0.012	1.0	97.9	
Bus185	33.000	95.523	-0.6	0	0	0	0	Bus184	-0.719	-0.219	13.8	95.6	
								Bus186	0.075	0.022	1.4	95.9	
								Bus187	0.047	0.016	0.9	94.9	
Bus186	33.000	95.521	-0.6	0	0	0	0	Bus188	0.596	0.182	11.4	95.7	
								Bus185	-0.075	-0.023	1.4	95.7	
								Bus341	0.075	0.023	1.4	95.7	
Bus187	33.000	95.522	-0.6	0	0	0	0	Bus185	-0.047	-0.016	0.9	94.6	
								Bus342	0.047	0.016	0.9	94.6	
								Bus185	-0.596	-0.183	11.4	95.6	
Bus188	33.000	95.486	-0.6	0	0	0	0	Bus189	0.397	0.132	7.7	94.9	
								Bus194	0.123	0.031	2.3	97.0	
								Bus343	0.077	0.020	1.5	96.6	
Bus189	33.000	95.468	-0.6	0	0	0	0	Bus188	-0.397	-0.134	7.7	94.8	
								Bus190	0.255	0.085	4.9	94.9	
								Bus344	0.141	0.049	2.7	94.5	
Bus190	33.000	95.466	-0.6	0	0	0	0	Bus189	-0.255	-0.085	4.9	94.9	
								Bus191	0.217	0.075	4.2	94.5	
								Bus193	0.038	0.010	0.7	96.8	
Bus191	33.000	95.457	-0.6	0	0	0	0	Bus190	-0.217	-0.076	4.2	94.4	
								Bus192	0.147	0.055	2.9	93.7	
								Bus345	0.070	0.021	1.3	95.6	
Bus192	33.000	95.449	-0.6	0	0	0	0	Bus191	-0.147	-0.056	2.9	93.4	
								Bus347	0.147	0.056	2.9	93.4	
								Bus190	-0.038	-0.011	0.7	95.9	
Bus193	33.000	95.464	-0.6	0	0	0	0	Bus346	0.038	0.011	0.7	95.9	
								Bus188	-0.123	-0.031	2.3	97.0	
								Bus195	0.123	0.031	2.3	97.0	
Bus194	33.000	95.485	-0.6	0	0	0	0	Bus196	0.123	0.031	2.3	97.0	
								Bus194	-0.123	-0.031	2.3	97.0	
								Bus195	-0.123	-0.033	2.3	96.6	
Bus196	33.000	95.476	-0.6	0	0	0	0	Bus195	-0.123	-0.033	2.3	96.6	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus197	33.000	95.462	-0.6	0	0	0	0	Bus197	0.107	0.028	2.0	96.8	
								Bus348	0.016	0.005	0.3	94.9	
								Bus196	-0.107	-0.031	2.0	95.9	
								Bus198	0.016	-0.003	0.3	-98.1	
Bus198	33.000	95.461	-0.6	0	0	0	0	Bus201	0.091	0.035	1.8	93.4	
								Bus197	-0.016	0.002	0.3	-99.6	
								Bus199	0.008	-0.005	0.2	-86.4	
								Bus349	0.008	0.003	0.2	93.0	
Bus199	33.000	95.460	-0.6	0	0	0	0	Bus198	-0.008	-0.002	0.2	97.0	
								Bus350	0.008	0.002	0.2	97.0	
Bus201	33.000	95.460	-0.6	0	0	0	0	Bus197	-0.091	-0.035	1.8	93.1	
								Bus202	0.080	0.032	1.6	93.0	
								Bus203	0.011	0.004	0.2	94.3	
Bus202	33.000	95.459	-0.6	0	0	0	0	Bus201	-0.080	-0.032	1.6	92.9	
								Bus351	0.080	0.032	1.6	92.9	
								Bus201	-0.011	-0.006	0.2	87.0	
Bus203	33.000	95.459	-0.6	0	0	0	0	Bus352	0.011	0.006	0.2	87.0	
								Bus164	-0.183	-0.037	283.6	98.0	
Bus229	0.400	95.216	-1.1	0	0	0.183	0.037	Bus6	-0.031	-0.021	54.5	82.0	
Bus230	0.400	99.100	-0.2	0	0	0.031	0.021	Bus7	-0.128	-0.042	197.8	95.0	
Bus231	0.400	98.083	-0.8	0	0	0.128	0.042	Bus8	-0.024	-0.009	37.0	94.0	
Bus233	0.400	98.613	-0.1	0	0	0.024	0.009	Bus13	-0.084	-0.021	131.8	97.0	
Bus234	0.400	95.352	-1.7	0	0	0.084	0.021	Bus14	-0.086	-0.025	135.3	96.0	
Bus235	0.400	96.018	-1.1	0	0	0.086	0.025	Bus160	-0.021	-0.003	31.7	99.0	
Bus237	0.400	96.131	-0.8	0	0	0.021	0.003	Bus159	-0.123	-0.040	197.8	95.0	
Bus238	0.400	94.657	-1.5	0	0	0.123	0.040	Bus161	-0.172	-0.056	275.5	95.0	
Bus239	0.400	94.785	-1.4	0	0	0.172	0.056	Bus16	-0.019	-0.006	29.9	95.0	
Bus240	0.400	96.194	-0.8	0	0	0.019	0.006	Bus18	-0.107	-0.035	171.4	95.0	
Bus246	0.400	94.873	-1.4	0	0	0.107	0.035	Bus21	-0.182	-0.046	285.6	97.0	
Bus247	0.400	94.883	-1.5	0	0	0.182	0.046	Bus25	-0.089	-0.022	138.4	97.0	
Bus248	0.400	95.902	-0.9	0	0	0.089	0.022	Bus28	-0.123	-0.041	198.3	95.0	
Bus249	0.400	94.612	-1.5	0	0	0.123	0.041	Bus29	-0.129	-0.047	208.1	94.0	
Bus250	0.400	95.185	-1.2	0	0	0.129	0.047	Bus30	-0.124	-0.031	194.5	97.0	
Bus251	0.400	94.733	-1.5	0	0	0.124	0.031	Bus33	-0.009	-0.002	13.9	97.0	
Bus252	0.400	96.052	-0.8	0	0	0.009	0.002	Bus34	-0.030	0.000	45.1	100.0	
Bus253	0.400	96.057	-0.9	0	0	0.030	0.000	Bus36	-0.026	-0.008	40.5	96.0	
Bus254	0.400	95.986	-0.8	0	0	0.026	0.008	Bus37	-0.030	-0.020	54.2	83.0	
Bus255	0.400	95.983	-0.7	0	0	0.030	0.020	Bus40	-0.138	-0.067	231.4	90.0	
Bus256	0.400	95.447	-0.9	0	0	0.138	0.067	Bus39	-0.001	0.000	1.5	98.0	
Bus257	0.400	96.322	-0.6	0	0	0	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
Bus258	0.400	95.476	-1.0	0	0	0.058	0.023	Bus41	-0.058	-0.023	93.8	93.0	
Bus259	0.400	95.236	-1.2	0	0	0.138	0.035	Bus42	-0.138	-0.035	216.2	97.0	
Bus260	0.400	96.093	-0.7	0	0	0.017	0.007	Bus43	-0.017	-0.007	27.6	92.0	
Bus261	0.400	96.116	-0.7	0	0	0.007	0.002	Bus44	-0.007	-0.002	10.9	96.0	
Bus262	0.400	95.102	-1.1	0	0	0.132	0.056	Bus45	-0.132	-0.056	217.3	92.0	
Bus263	0.400	96.132	-0.7	0	0	0.022	0.007	Bus46	-0.022	-0.007	34.7	95.0	
Bus264	0.400	96.117	-0.7	0	0	0.009	0.004	Bus55	-0.009	-0.004	14.8	91.0	
Bus268	0.400	96.252	-0.6	0	0	0.011	0.008	Bus56	-0.011	-0.008	20.4	80.0	
Bus269	0.400	95.871	-0.2	0	0	0.001	0.116	Bus57	-0.001	-0.116	175.1	1.0	
Bus270	0.400	95.251	-1.1	0	0	0.098	0.028	Bus60	-0.098	-0.028	154.0	96.0	
Bus271	0.400	95.429	-1.0	0	0	0.126	0.050	Bus61	-0.126	-0.050	204.5	93.0	
Bus272	0.400	96.249	-0.8	0	0	0.068	0.010	Bus67	-0.068	-0.010	102.9	99.0	
Bus273	0.400	96.990	-0.4	0	0	0.035	0.018	Bus68	-0.035	-0.018	57.9	89.0	
Bus274	0.400	96.729	-0.7	0	0	0.084	0.021	Bus69	-0.084	-0.021	129.2	97.0	
Bus275	0.400	96.047	-1.0	0	0	0.043	0.012	Bus71	-0.043	-0.012	66.7	96.0	
Bus276	0.400	95.957	-0.7	0	0	0.205	0.132	Bus72	-0.205	-0.132	366.8	84.0	
Bus277	0.400	97.584	-0.5	0	0	0.084	0.041	Bus74	-0.084	-0.041	138.3	90.0	
Bus278	0.400	96.582	-0.9	0	0	0.079	0.031	Bus75	-0.079	-0.031	127.7	93.0	
Bus279	0.400	98.053	-0.3	0	0	0.023	0.018	Bus77	-0.023	-0.018	43.0	78.0	
Bus280	0.400	95.607	-0.7	0	0	0.055	0.022	Bus143	-0.055	-0.022	88.9	93.0	
Bus281	0.400	95.640	-0.8	0	0	0.091	0.023	Bus144	-0.091	-0.023	141.3	97.0	
Bus282	0.400	95.231	-1.1	0	0	0.075	0.011	Bus146	-0.075	-0.011	114.7	99.0	
Bus283	0.400	95.675	-0.8	0	0	0.084	0.017	Bus148	-0.084	-0.017	130.0	98.0	
Bus284	0.400	95.656	-0.8	0	0	0.056	0.011	Bus150	-0.056	-0.011	85.8	98.0	
Bus285	0.400	95.751	-0.5	0	0	0.021	0.059	Bus151	-0.021	-0.059	94.9	34.0	
Bus286	0.400	95.751	-0.5	0	0	0.021	0.059	Bus151	-0.021	-0.059	94.9	34.0	
Bus287	0.400	98.555	-0.4	0	0	0.008	0.002	Bus79	-0.008	-0.002	12.1	97.0	
Bus288	0.400	96.617	-1.4	0	0	0.040	0.010	Bus88	-0.040	-0.010	61.3	97.0	
Bus289	0.400	98.477	-0.4	0	0	0.019	0.007	Bus89	-0.019	-0.007	29.7	93.0	
Bus290	0.400	99.043	-0.2	0	0	0.013	0.003	Bus91	-0.013	-0.003	19.4	97.0	
Bus291	0.400	97.834	-0.6	0	0	0.035	0.015	Bus92	-0.035	-0.015	55.6	92.0	
Bus292	0.400	98.295	-0.8	0	0	0.036	0.000	Bus93	-0.036	0.000	52.9	100.0	
Bus293	0.400	98.428	-0.5	0	0	0.092	0.023	Bus90	-0.092	-0.023	139.1	97.0	
Bus294	0.400	98.357	-0.5	0	0	0.094	0.024	Bus94	-0.094	-0.024	142.5	97.0	
Bus295	0.400	98.056	-0.5	0	0	0.067	0.031	Bus95	-0.067	-0.031	108.8	91.0	
Bus296	0.400	99.402	-0.1	0	0	0.014	0.011	Bus82	-0.014	-0.011	25.9	78.0	
Bus297	0.400	98.957	-0.5	0	0	0.034	0.008	Bus83	-0.034	-0.008	50.6	97.0	
Bus298	0.400	99.705	-0.2	0	0	0.024	0.006	Bus84	-0.024	-0.006	35.8	97.0	
Bus299	0.400	96.875	-0.6	0	0	0.068	0.027	Bus73	-0.068	-0.027	108.5	93.0	

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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
Bus300	0.400	95.919	-0.8	0	0	0.078	0.028	Bus63	-0.078	-0.028	125.2	94.0	
Bus301	0.400	95.703	-0.9	0	0	0.064	0.023	Bus66	-0.064	-0.023	102.1	94.0	
Bus302	0.400	94.380	-2.1	0	0	0.074	0.000	Bus115	-0.074	0.000	113.6	100.0	
Bus303	0.400	96.064	-0.7	0	0	0.069	0.030	Bus99	-0.069	-0.030	113.3	92.0	
Bus304	0.400	96.168	-0.5	0	0	0.015	0.012	Bus100	-0.015	-0.012	28.8	78.0	
Bus305	0.400	94.763	-1.1	0	0	0.043	0.018	Bus104	-0.043	-0.018	71.0	92.0	
Bus306	0.400	95.412	-0.9	0	0	0.055	0.011	Bus147	-0.055	-0.011	84.9	98.0	
Bus307	0.400	95.563	-0.9	0	0	0.030	0.004	Bus153	-0.030	-0.004	45.5	99.0	
Bus308	0.400	96.076	-0.5	0	0	0	0	Bus154	-0.001	0.000	1.6	92.0	
Bus309	0.400	95.956	-0.6	0	0	0.020	0.009	Bus155	-0.020	-0.009	33.0	91.0	
Bus310	0.400	95.656	-0.6	0	0	0.059	0.037	Bus156	-0.059	-0.037	105.6	85.0	
Bus311	0.400	96.073	-0.5	0	0	0	0	Bus157	-0.001	0.000	1.6	92.0	
Bus312	0.400	96.000	-0.6	0	0	0.002	0.000	Bus124	-0.002	0.000	2.9	100.0	
Bus313	0.400	95.573	-0.8	0	0	0.069	0.014	Bus118	-0.069	-0.014	107.0	98.0	
Bus314	0.400	95.170	-1.0	0	0	0.045	0.009	Bus125	-0.045	-0.009	69.1	98.0	
Bus315	0.400	95.904	-0.7	0	0	0.044	0.006	Bus118	-0.044	-0.006	66.8	99.0	
Bus316	0.400	96.427	-0.5	0	0	0	0	Bus111	0.000	0.000	0.0	0.0	
Bus317	0.400	95.339	-0.8	0	0	0.075	0.025	Bus126	-0.075	-0.025	120.2	95.0	
Bus319	0.400	95.464	-0.8	0	0	0.058	0.021	Bus135	-0.058	-0.021	92.8	94.0	
Bus320	0.400	95.372	-0.7	0	0	0.019	0.015	Bus137	-0.019	-0.015	36.6	78.0	
Bus321	0.400	94.890	-1.1	0	0	0.078	0.023	Bus139	-0.078	-0.023	123.3	96.0	
Bus322	0.400	95.158	-1.0	0	0	0.025	0.006	Bus138	-0.025	-0.006	39.0	97.0	
Bus323	0.400	94.919	-1.0	0	0	0.073	0.024	Bus140	-0.073	-0.024	116.4	95.0	
Bus324	0.400	95.684	-0.6	0	0	0.011	0.004	Bus141	-0.011	-0.004	17.7	93.0	
Bus325	0.400	95.732	-0.7	0	0	0.058	0.028	Bus119	-0.058	-0.028	96.5	90.0	
Bus327	0.400	95.566	-0.9	0	0	0.075	0.011	Bus122	-0.075	-0.011	114.3	99.0	
Bus328	0.400	95.730	-0.7	0	0	0.058	0.028	Bus122	-0.058	-0.028	96.5	90.0	
Bus329	0.400	95.616	-0.8	0	0	0.048	0.024	Bus109	-0.048	-0.024	81.0	89.0	
Bus330	0.400	95.669	-0.8	0	0	0.048	0.020	Bus110	-0.048	-0.020	78.5	92.0	
Bus331	0.400	96.004	-0.7	0	0	0.043	0.018	Bus105	-0.043	-0.018	70.1	92.0	
Bus332	0.400	93.888	-1.3	0	0	0.128	0.062	Bus168	-0.128	-0.062	219.4	90.0	
Bus333	0.400	95.161	-0.9	0	0	0.032	0.010	Bus171	-0.032	-0.010	50.9	95.0	
Bus334	0.400	95.067	-0.8	0	0	0.066	0.032	Bus178	-0.066	-0.032	112.1	90.0	
Bus335	0.400	95.745	-0.6	0	0	0.004	0.001	Bus175	-0.004	-0.001	6.2	97.0	
Bus336	0.400	95.087	-0.9	0	0	0.034	0.011	Bus177	-0.034	-0.011	53.8	95.0	
Bus337	0.400	95.323	-0.8	0	0	0.034	0.008	Bus180	-0.034	-0.008	52.6	97.0	
Bus338	0.400	95.381	-0.7	0	0	0.048	0.014	Bus181	-0.048	-0.014	75.3	96.0	
Bus339	0.400	94.223	-1.2	0	0	0.094	0.031	Bus183	-0.094	-0.031	152.2	95.0	
Bus340	0.400	94.874	-1.0	0	0	0.055	0.011	Bus184	-0.055	-0.011	85.3	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
Bus341	0.400	94.515	-1.1	0	0	0.074	0.022	Bus186	-0.074	-0.022	118.2	96.0	
Bus342	0.400	93.869	-1.4	0	0	0.047	0.015	Bus187	-0.047	-0.015	75.4	95.0	
Bus343	0.400	93.932	-1.4	0	0	0.076	0.019	Bus188	-0.076	-0.019	120.4	97.0	
Bus344	0.400	93.483	-1.5	0	0	0.139	0.046	Bus189	-0.139	-0.046	226.1	95.0	
Bus345	0.400	93.977	-1.3	0	0	0.069	0.020	Bus191	-0.069	-0.020	111.0	96.0	
Bus346	0.400	94.953	-0.9	0	0	0.038	0.011	Bus193	-0.038	-0.011	60.1	96.0	
Bus347	0.400	93.314	-1.5	0	0	0.144	0.052	Bus192	-0.144	-0.052	237.8	94.0	
Bus348	0.400	95.129	-0.8	0	0	0.016	0.005	Bus196	-0.016	-0.005	25.4	95.0	
Bus349	0.400	95.277	-0.7	0	0	0.008	0.003	Bus198	-0.008	-0.003	12.9	93.0	
Bus350	0.400	95.300	-0.7	0	0	0.008	0.002	Bus199	-0.008	-0.002	12.5	97.0	
Bus351	0.400	94.989	-0.8	0	0	0.079	0.031	Bus202	-0.079	-0.031	129.8	93.0	
Bus352	0.400	95.384	-0.6	0	0	0.011	0.006	Bus203	-0.011	-0.006	19.0	87.0	
Bus353	33.000	95.719	-0.5	0	0	0	0	Bus171	-1.444	-2.586	54.1	48.7	
								Bus354	1.444	2.586	54.1	48.7	
Bus354	33.000	95.719	-0.5	0	0	0	0	Bus355	1.444	2.586	54.1	48.7	
								Bus353	-1.444	-2.586	54.1	48.7	
Bus355	33.000	95.535	-0.4	0	0	0	0	Bus354	-1.437	-2.585	54.2	48.6	
								Bus356	0.063	0.030	1.3	90.1	
								Bus358	1.374	2.554	53.1	47.4	
Bus356	33.000	95.534	-0.4	0	0	0	0	Bus355	-0.063	-0.031	1.3	89.8	
								Bus357	0.063	0.031	1.3	89.8	
Bus357	0.400	94.899	-0.6	0	0	0.063	0.030	Bus356	-0.063	-0.030	106.1	90.0	
Bus358	33.000	95.492	-0.4	0	0	0	0	Bus355	-1.373	-2.554	53.1	47.3	
								Bus359	0.003	0.001	0.1	95.0	
								Bus361	1.370	2.553	53.1	47.3	
Bus359	33.000	95.491	-0.4	0	0	0	0	Bus358	-0.003	-0.002	0.1	88.9	
								Bus360	0.003	0.002	0.1	88.9	
Bus360	0.400	95.245	-0.5	0	0	0.003	0.002	Bus359	-0.003	-0.002	5.1	89.0	
Bus361	33.000	95.425	-0.4	0	0	0	0	Bus358	-1.368	-2.553	53.1	47.2	
								Bus362	-2.080	1.203	44.0	-86.6	
								Bus363	3.447	1.350	67.9	93.1	
Bus362	33.000	95.450	-0.4	0	0	0	0	Bus361	2.081	-1.203	44.0	-86.6	
								Bus396	-2.081	1.203	44.0	-86.6	
Bus363	33.000	95.297	-0.4	0	0	0	0	Bus361	-3.443	-1.349	67.9	93.1	
								Bus365	3.343	1.284	65.7	93.4	
								Bus364	0.100	0.065	2.2	83.7	
Bus364	0.400	94.150	-0.7	0	0	0.099	0.064	Bus363	-0.099	-0.064	180.4	84.0	
Bus365	33.000	95.184	-0.4	0	0	0	0	Bus363	-3.339	-1.283	65.8	93.3	
								Bus366	1.001	0.518	20.7	88.8	

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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	
Bus366	33.000	95.167	-0.4	0	0	0	0	Bus444	2.338	0.765	45.2	95.0		
								Bus365	-1.001	-0.518	20.7	88.8		
								Bus367	0.746	0.393	15.5	88.5		
								Bus436	0.256	0.125	5.2	89.8		
Bus367	33.000	95.129	-0.4	0	0	0	0	Bus366	-0.745	-0.394	15.5	88.4		
								Bus368	0.745	0.394	15.5	88.4		
Bus368	33.000	95.129	-0.4	0	0	0	0	Bus369	0.745	0.394	15.5	88.4		
Bus369	33.000	95.114	-0.4	0	0	0	0	Bus367	-0.745	-0.394	15.5	88.4		
								Bus368	-0.745	-0.395	15.5	88.4		
								Bus370	0.675	0.365	14.1	87.9		
								Bus434	0.070	0.029	1.4	92.3		
Bus370	33.000	95.097	-0.4	0	0	0	0	Bus369	-0.675	-0.366	14.1	87.9		
								Bus371	0.272	0.162	5.8	85.9		
								Bus373	0.135	0.070	2.8	88.7		
								Bus378	0.202	0.112	4.2	87.4		
								Bus379	0.067	0.022	1.3	94.9		
Bus371	33.000	95.065	-0.4	0	0	0	0	Bus370	-0.272	-0.165	5.8	85.5		
								Bus372	0.272	0.165	5.8	85.5		
								Bus372	0.400	93.147	-0.9	0	0	0.268
Bus373	33.000	95.096	-0.4	0	0	0	0	Bus370	-0.135	-0.070	2.8	88.7		
								Bus374	0.135	0.070	2.8	88.7		
Bus374	33.000	95.084	-0.4	0	0	0	0	Bus373	-0.135	-0.072	2.8	88.1		
								Bus376	0.030	0.015	0.6	89.0		
								Bus375	0.105	0.057	2.2	87.8		
Bus375	0.400	94.379	-0.6	0	0	0.104	0.056	Bus374	-0.104	-0.056	181.3	88.0		
Bus376	33.000	95.081	-0.4	0	0	0	0	Bus374	-0.030	-0.019	0.6	84.9		
								Bus377	0.030	0.019	0.6	84.9		
Bus377	0.400	94.542	-0.5	0	0	0.030	0.018	Bus376	-0.030	-0.018	53.4	85.0		
Bus378	0.400	92.948	-1.1	0	0	0.198	0.107	Bus370	-0.198	-0.107	350.1	88.0		
Bus379	0.400	94.726	-0.6	0	0	0.067	0.022	Bus370	-0.067	-0.022	107.0	95.0		
Bus383	0.400	115.215	11.9	0.055	-0.018	0	0	Bus384	0.055	-0.018	72.4	-95.0		
Bus384	0.400	113.719	11.6	0	0	0	0	Bus383	-0.054	0.018	72.4	-94.8		
								Bus395	0.487	-0.164	651.7	-94.8		
								Bus388	-0.054	0.018	72.4	-94.8		
								Bus389	-0.054	0.018	72.4	-94.8		
								Bus390	-0.054	0.018	72.4	-94.8		
								Bus391	-0.054	0.018	72.4	-94.8		
								Bus392	-0.054	0.018	72.4	-94.8		
								Bus393	-0.054	0.018	72.4	-94.8		

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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
								Bus394	-0.054	0.018	72.4	-94.8	
								Bus560	-0.054	0.018	72.4	-94.8	
Bus388	0.400	115.215	11.9	0.055	-0.018	0	0	Bus384	0.055	-0.018	72.4	-95.0	
Bus389	0.400	115.215	11.9	0.055	-0.018	0	0	Bus384	0.055	-0.018	72.4	-95.0	
Bus390	0.400	115.215	11.9	0.055	-0.018	0	0	Bus384	0.055	-0.018	72.4	-95.0	
Bus391	0.400	115.215	11.9	0.055	-0.018	0	0	Bus384	0.055	-0.018	72.4	-95.0	
Bus392	0.400	115.215	11.9	0.055	-0.018	0	0	Bus384	0.055	-0.018	72.4	-95.0	
Bus393	0.400	115.215	11.9	0.055	-0.018	0	0	Bus384	0.055	-0.018	72.4	-95.0	
Bus394	0.400	115.215	11.9	0.055	-0.018	0	0	Bus384	0.055	-0.018	72.4	-95.0	
Bus395	0.400	95.679	1.4	0	0	0	0	Bus384	-0.379	0.208	651.6	-87.7	
								Bus396	0.379	-0.208	651.6	-87.7	
Bus396	33.000	95.474	-0.3	0	0	0	0	Bus362	2.082	-1.203	44.1	-86.6	
								Bus395	-0.372	0.219	7.9	-86.2	
								Bus429	-0.372	0.219	7.9	-86.2	
								Bus430	-0.336	0.187	7.0	-87.3	
								Bus431	-0.228	0.112	4.7	-89.7	
								Bus432	-0.403	0.248	8.7	-85.2	
								Bus433	-0.372	0.219	7.9	-86.2	
Bus408	0.400	115.099	11.9	0.049	-0.016	0	0	Bus409	0.049	-0.016	65.2	-95.0	
Bus409	0.400	113.751	11.6	0	0	0	0	Bus408	-0.049	0.016	65.2	-94.8	
								Bus524	-0.049	0.016	65.2	-94.8	
								Bus525	-0.049	0.016	65.2	-94.8	
								Bus526	-0.049	0.016	65.2	-94.8	
								Bus527	-0.049	0.016	65.2	-94.8	
								Bus528	-0.049	0.016	65.2	-94.8	
								Bus529	-0.049	0.016	65.2	-94.8	
								Bus530	-0.049	0.016	65.2	-94.8	
								Bus531	-0.049	0.016	65.2	-94.8	
								Bus429	0.487	-0.163	652.3	-94.8	
								Bus562	-0.049	0.016	65.2	-94.8	
Bus410	0.400	113.308	10.6	0.049	-0.016	0	0	Bus411	0.049	-0.016	66.3	-95.0	
Bus411	0.400	111.939	10.3	0	0	0	0	Bus410	-0.049	0.016	66.3	-94.8	
								Bus413	-0.054	0.018	73.5	-94.8	
								Bus414	-0.054	0.018	73.5	-94.8	
								Bus415	-0.054	0.018	73.5	-94.8	
								Bus416	-0.054	0.018	73.5	-94.8	
								Bus417	-0.054	0.018	73.5	-94.8	
								Bus558	-0.054	0.018	73.5	-94.8	
								Bus430	0.427	-0.144	581.0	-94.8	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Bus564	-0.054	0.018	73.5	-94.8	
Bus413	0.400	113.458	10.6	0.055	-0.018	0	0	Bus411	0.055	-0.018	73.5	-95.0	
Bus414	0.400	113.458	10.6	0.055	-0.018	0	0	Bus411	0.055	-0.018	73.5	-95.0	
Bus415	0.400	113.458	10.6	0.055	-0.018	0	0	Bus411	0.055	-0.018	73.5	-95.0	
Bus416	0.400	113.458	10.6	0.055	-0.018	0	0	Bus411	0.055	-0.018	73.5	-95.0	
Bus417	0.400	113.458	10.6	0.055	-0.018	0	0	Bus411	0.055	-0.018	73.5	-95.0	
Bus423	0.400	108.454	7.7	0.055	-0.018	0	0	Bus428	0.055	-0.018	76.9	-95.0	
Bus424	0.400	108.454	7.7	0.055	-0.018	0	0	Bus428	0.055	-0.018	76.9	-95.0	
Bus425	0.400	108.454	7.7	0.055	-0.018	0	0	Bus428	0.055	-0.018	76.9	-95.0	
Bus426	0.400	108.454	7.7	0.055	-0.018	0	0	Bus428	0.055	-0.018	76.9	-95.0	
Bus427	0.400	108.454	7.7	0.055	-0.018	0	0	Bus428	0.055	-0.018	76.9	-95.0	
Bus428	0.400	106.864	7.2	0	0	0	0	Bus423	-0.054	0.018	76.9	-94.8	
								Bus424	-0.054	0.018	76.9	-94.8	
								Bus425	-0.054	0.018	76.9	-94.8	
								Bus426	-0.054	0.018	76.9	-94.8	
								Bus427	-0.054	0.018	76.9	-94.8	
								Bus431	0.270	-0.091	384.6	-94.8	
Bus429	0.400	95.681	1.4	0	0	0	0	Bus409	-0.379	0.208	652.3	-87.7	
								Bus396	0.379	-0.208	652.3	-87.7	
Bus430	0.400	95.710	1.2	0	0	0	0	Bus411	-0.341	0.179	581.0	-88.6	
								Bus396	0.341	-0.179	581.0	-88.6	
Bus431	0.400	95.859	1.2	0	0	0	0	Bus428	-0.232	0.106	384.6	-90.9	
								Bus396	0.232	-0.106	384.6	-90.9	
Bus432	0.400	95.640	1.6	0	0	0	0	Bus545	-0.411	0.235	714.6	-86.8	
								Bus396	0.411	-0.235	714.6	-86.8	
Bus433	0.400	95.679	1.4	0	0	0	0	Bus556	-0.379	0.208	651.6	-87.7	
								Bus396	0.379	-0.208	651.6	-87.7	
Bus434	33.000	95.111	-0.4	0	0	0	0	Bus369	-0.070	-0.030	1.4	91.9	
								Bus435	0.070	0.030	1.4	91.9	
Bus435	0.400	94.686	-0.6	0	0	0.070	0.030	Bus434	-0.070	-0.030	115.5	92.0	
Bus436	33.000	95.164	-0.4	0	0	0	0	Bus366	-0.256	-0.125	5.2	89.8	
								Bus438	0.184	0.083	3.7	91.2	
								Bus437	0.072	0.043	1.5	85.9	
Bus437	0.400	94.663	-0.5	0	0	0.071	0.042	Bus436	-0.071	-0.042	126.3	86.0	
Bus438	33.000	95.151	-0.4	0	0	0	0	Bus436	-0.184	-0.085	3.7	90.9	
								Bus439	0.096	0.060	2.1	85.0	
								Bus442	0.067	0.019	1.3	96.2	
								Bus441	0.021	0.006	0.4	96.0	
Bus439	33.000	95.150	-0.4	0	0	0	0	Bus438	-0.096	-0.060	2.1	84.8	



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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
								Bus440	0.096	0.060	2.1	84.8	
Bus440	0.400	94.460	-0.6	0	0	0.096	0.059	Bus439	-0.096	-0.059	172.2	85.0	
Bus441	0.400	94.975	-0.5	0	0	0.021	0.006	Bus438	-0.021	-0.006	33.2	96.0	
Bus442	33.000	95.144	-0.4	0	0	0	0	Bus438	-0.067	-0.022	1.3	94.9	
								Bus443	0.067	0.022	1.3	94.9	
Bus443	0.400	94.773	-0.6	0	0	0.067	0.022	Bus442	-0.067	-0.022	106.9	95.0	
Bus444	33.000	95.125	-0.4	0	0	0	0	Bus365	-2.336	-0.765	45.2	95.0	
								Bus446	0.116	0.074	2.5	84.5	
								Bus450	2.220	0.692	42.8	95.5	
Bus446	33.000	95.120	-0.4	0	0	0	0	Bus444	-0.116	-0.075	2.5	84.1	
								Bus448	0.116	0.075	2.5	84.1	
Bus448	33.000	95.116	-0.4	0	0	0	0	Bus446	-0.116	-0.076	2.6	83.8	
								Bus449	0.116	0.076	2.6	83.8	
Bus449	0.400	94.265	-0.6	0	0	0.116	0.075	Bus448	-0.116	-0.075	210.7	84.0	
Bus450	33.000	95.098	-0.4	0	0	0	0	Bus444	-2.219	-0.692	42.8	95.5	
								Bus451	0.035	0.019	0.7	87.8	
								Bus453	2.185	0.673	42.1	95.6	
Bus451	33.000	95.097	-0.4	0	0	0	0	Bus450	-0.035	-0.020	0.7	86.8	
								Bus452	0.035	0.020	0.7	86.8	
Bus452	0.400	94.151	-0.7	0	0	0.035	0.020	Bus451	-0.035	-0.020	61.1	87.0	
Bus453	33.000	95.000	-0.4	0	0	0	0	Bus450	-2.182	-0.673	42.1	95.6	
								Bus454	1.123	0.402	22.0	94.1	
								Bus500	1.059	0.271	20.1	96.9	
Bus454	33.000	94.955	-0.4	0	0	0	0	Bus453	-1.123	-0.403	22.0	94.1	
								Bus455	0.217	0.086	4.3	93.1	
								Bus460	0.905	0.318	17.7	94.4	
Bus455	33.000	94.950	-0.4	0	0	0	0	Bus454	-0.217	-0.086	4.3	93.0	
								Bus457	0.058	0.017	1.1	95.8	
								Bus456	0.080	0.034	1.6	91.8	
								Bus458	0.080	0.034	1.6	91.8	
Bus456	0.400	94.183	-0.7	0	0	0.079	0.034	Bus455	-0.079	-0.034	132.0	92.0	
Bus457	33.000	94.945	-0.4	0	0	0	0	Bus455	-0.058	-0.019	1.1	94.9	
								Bus459	0.058	0.019	1.1	94.9	
Bus458	0.400	94.183	-0.7	0	0	0.079	0.034	Bus455	-0.079	-0.034	132.0	92.0	
Bus459	0.400	94.439	-0.6	0	0	0.058	0.019	Bus457	-0.058	-0.019	92.8	95.0	
Bus460	33.000	94.895	-0.4	0	0	0	0	Bus454	-0.905	-0.319	17.7	94.3	
								Bus461	0.757	0.251	14.7	94.9	
								Bus490	0.068	0.028	1.4	92.3	
								Bus492	0.080	0.040	1.6	89.4	

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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
Bus461	33.000	94.888	-0.4	0	0	0	0	Bus460	-0.757	-0.251	14.7	94.9	
								Bus470	0.552	0.192	10.8	94.5	
								Bus462	0.205	0.059	3.9	96.1	
Bus462	33.000	94.885	-0.4	0	0	0	0	Bus464	0.169	0.046	3.2	96.4	
								Bus461	-0.205	-0.060	3.9	96.0	
								Bus463	0.036	0.013	0.7	93.9	
Bus463	0.400	94.366	-0.6	0	0	0.036	0.013	Bus462	-0.036	-0.013	58.0	94.0	
Bus464	33.000	94.877	-0.4	0	0	0	0	Bus462	-0.169	-0.048	3.2	96.2	
								Bus466	0.069	0.018	1.3	96.8	
								Bus465	0.100	0.030	1.9	95.8	
Bus465	0.400	94.031	-0.8	0	0	0.099	0.029	Bus464	-0.099	-0.029	159.0	96.0	
Bus466	33.000	94.874	-0.4	0	0	0	0	Bus464	-0.069	-0.019	1.3	96.4	
								Bus468	0.039	0.008	0.7	97.9	
								Bus467	0.030	0.011	0.6	93.9	
Bus467	0.400	94.605	-0.5	0	0	0.030	0.011	Bus466	-0.030	-0.011	48.2	94.0	
Bus468	33.000	94.872	-0.4	0	0	0	0	Bus466	-0.039	-0.010	0.7	96.9	
								Bus469	0.039	0.010	0.7	96.9	
								Bus468	-0.039	-0.010	60.9	97.0	
Bus469	0.400	94.371	-0.7	0	0	0.039	0.010	Bus468	-0.039	-0.010	60.9	97.0	
Bus470	33.000	94.848	-0.4	0	0	0	0	Bus461	-0.552	-0.194	10.8	94.4	
								Bus472	0.396	0.131	7.7	95.0	
								Bus471	0.156	0.063	3.1	92.7	
Bus471	0.400	93.921	-0.8	0	0	0.155	0.061	Bus470	-0.155	-0.061	255.8	93.0	
Bus472	33.000	94.816	-0.4	0	0	0	0	Bus470	-0.396	-0.133	7.7	94.8	
								Bus474	0.305	0.105	6.0	94.5	
								Bus473	0.091	0.028	1.8	95.7	
Bus473	0.400	93.582	-1.0	0	0	0.090	0.026	Bus472	-0.090	-0.026	144.8	96.0	
Bus474	33.000	94.786	-0.4	0	0	0	0	Bus472	-0.305	-0.108	6.0	94.2	
								Bus476	0.269	0.099	5.3	93.8	
								Bus475	0.036	0.009	0.7	97.0	
Bus475	0.400	94.601	-0.5	0	0	0.036	0.009	Bus474	-0.036	-0.009	56.6	97.0	
Bus476	33.000	94.784	-0.4	0	0	0	0	Bus474	-0.269	-0.099	5.3	93.8	
								Bus477	0.269	0.099	5.3	93.8	
								Bus478	0.269	0.099	5.3	93.8	
Bus477	33.000	94.784	-0.4	0	0	0	0	Bus478	0.269	0.099	5.3	93.8	
Bus478	33.000	94.755	-0.4	0	0	0	0	Bus476	-0.269	-0.099	5.3	93.8	
								Bus477	-0.269	-0.102	5.3	93.5	
								Bus479	0.072	0.029	1.4	92.9	
Bus479	33.000	94.755	-0.4	0	0	0	0	Bus481	0.076	0.018	1.4	97.2	
								Bus485	0.121	0.055	2.5	91.0	
								Bus478	-0.072	-0.029	1.4	92.8	

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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
								Bus480	0.072	0.029	1.4	92.8	
Bus480	0.400	94.082	-0.7	0	0	0.072	0.028	Bus479	-0.072	-0.028	118.0	93.0	
Bus481	33.000	94.753	-0.4	0	0	0	0	Bus478	-0.076	-0.020	1.5	96.9	
								Bus482	0.076	0.020	1.5	96.9	
Bus482	0.400	94.137	-0.8	0	0	0.076	0.019	Bus481	-0.076	-0.019	119.8	97.0	
Bus485	33.000	94.754	-0.4	0	0	0	0	Bus478	-0.121	-0.055	2.5	90.9	
								Bus486	0.100	0.048	2.0	90.0	
								Bus488	0.021	0.007	0.4	94.9	
Bus486	33.000	94.751	-0.4	0	0	0	0	Bus485	-0.100	-0.049	2.1	89.7	
								Bus487	0.100	0.049	2.1	89.7	
Bus487	0.400	93.737	-0.8	0	0	0.099	0.048	Bus486	-0.099	-0.048	169.5	90.0	
Bus488	33.000	94.753	-0.4	0	0	0	0	Bus485	-0.021	-0.008	0.4	92.9	
								Bus489	0.021	0.008	0.4	92.9	
Bus489	0.400	94.440	-0.6	0	0	0.021	0.008	Bus488	-0.021	-0.008	34.3	93.0	
Bus490	33.000	94.891	-0.4	0	0	0	0	Bus460	-0.068	-0.030	1.4	91.7	
								Bus491	0.068	0.030	1.4	91.7	
Bus491	0.400	93.840	-0.8	0	0	0.068	0.029	Bus490	-0.068	-0.029	113.1	92.0	
Bus492	33.000	94.884	-0.4	0	0	0	0	Bus460	-0.080	-0.044	1.7	87.7	
								Bus493	0.011	0.007	0.2	85.0	
								Bus495	0.069	0.037	1.4	88.1	
Bus493	33.000	94.883	-0.4	0	0	0	0	Bus492	-0.011	-0.007	0.2	83.9	
								Bus494	0.011	0.007	0.2	83.9	
Bus494	0.400	94.681	-0.5	0	0	0.011	0.007	Bus493	-0.011	-0.007	19.9	84.0	
Bus495	33.000	94.880	-0.4	0	0	0	0	Bus492	-0.069	-0.038	1.5	87.5	
								Bus497	0.008	0.003	0.2	95.4	
								Bus496	0.061	0.036	1.3	86.4	
Bus496	33.000	94.874	-0.4	0	0	0	0	Bus495	-0.061	-0.038	1.3	84.8	
								Bus498	0.061	0.038	1.3	84.8	
Bus497	33.000	94.880	-0.4	0	0	0	0	Bus495	-0.008	-0.003	0.2	93.0	
								Bus499	0.008	0.003	0.2	93.0	
Bus498	0.400	94.185	-0.6	0	0	0.061	0.038	Bus496	-0.061	-0.038	109.3	85.0	
Bus499	0.400	94.762	-0.5	0	0	0.008	0.003	Bus497	-0.008	-0.003	13.0	93.0	
Bus500	33.000	94.985	-0.4	0	0	0	0	Bus453	-1.059	-0.271	20.1	96.9	
								Bus501	0.248	0.070	4.8	96.2	
								Bus503	0.154	0.031	2.9	98.0	
								Bus508	0.656	0.169	12.5	96.8	
Bus501	33.000	94.983	-0.4	0	0	0	0	Bus500	-0.248	-0.070	4.8	96.2	
								Bus502	0.248	0.070	4.8	96.2	
Bus502	0.400	91.717	-2.2	0	0	0.242	0.061	Bus501	-0.242	-0.061	392.4	97.0	

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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
Bus503	33.000	94.981	-0.4	0	0	0	0	Bus500	-0.154	-0.032	2.9	97.9	
								Bus505	0.018	0.002	0.3	99.2	
								Bus504	0.136	0.030	2.6	97.7	
Bus504	33.000	94.980	-0.4	0	0	0	0	Bus503	-0.136	-0.030	2.6	97.6	
								Bus506	0.136	0.030	2.6	97.6	
Bus505	33.000	94.981	-0.4	0	0	0	0	Bus503	-0.018	-0.003	0.3	99.0	
								Bus507	0.018	0.003	0.3	99.0	
Bus506	0.400	93.300	-1.4	0	0	0.134	0.027	Bus504	-0.134	-0.027	211.9	98.0	
Bus507	0.400	94.854	-0.5	0	0	0.018	0.003	Bus505	-0.018	-0.003	27.4	99.0	
Bus508	33.000	94.970	-0.4	0	0	0	0	Bus500	-0.656	-0.170	12.5	96.8	
								Bus510	0.568	0.151	10.8	96.6	
								Bus509	0.088	0.018	1.7	97.9	
Bus509	0.400	94.542	-0.7	0	0	0.088	0.018	Bus508	-0.088	-0.018	136.8	98.0	
Bus510	33.000	94.951	-0.4	0	0	0	0	Bus508	-0.568	-0.152	10.8	96.6	
								Bus512	0.074	0.015	1.4	98.1	
								Bus514	0.474	0.129	9.0	96.5	
								Bus520	0.012	0.002	0.2	98.0	
								Bus511	0.008	0.006	0.2	80.0	
Bus511	0.400	94.888	-0.4	0	0	0.008	0.006	Bus510	-0.008	-0.006	15.2	80.0	
Bus512	33.000	94.950	-0.4	0	0	0	0	Bus510	-0.074	-0.015	1.4	97.9	
								Bus513	0.074	0.015	1.4	97.9	
Bus513	0.400	94.590	-0.6	0	0	0.074	0.015	Bus512	-0.074	-0.015	115.2	98.0	
Bus514	33.000	94.943	-0.4	0	0	0	0	Bus510	-0.474	-0.130	9.0	96.5	
								Bus516	0.391	0.074	7.3	98.3	
								Bus515	0.083	0.056	1.8	82.8	
Bus515	0.400	93.971	-0.7	0	0	0.082	0.055	Bus514	-0.082	-0.055	151.7	83.0	
Bus516	33.000	94.941	-0.4	0	0	0	0	Bus514	-0.391	-0.074	7.3	98.3	
								Bus518	0.338	0.058	6.3	98.6	
								Bus517	0.053	0.016	1.0	95.8	
Bus517	0.400	94.227	-0.8	0	0	0.053	0.015	Bus516	-0.053	-0.015	84.0	96.0	
Bus518	33.000	94.939	-0.4	0	0	0	0	Bus516	-0.338	-0.058	6.3	98.6	
								Bus519	0.338	0.058	6.3	98.6	
Bus519	0.400	92.492	-2.0	0	0	0.331	0.047	Bus518	-0.331	-0.047	521.7	99.0	
Bus520	33.000	94.951	-0.4	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	94.854	-0.5	0	0	0.012	0.003	Bus520	-0.012	-0.003	18.8	97.0	
Bus524	0.400	115.099	11.9	0.049	-0.016	0	0	Bus409	0.049	-0.016	65.2	-95.0	
Bus525	0.400	115.099	11.9	0.049	-0.016	0	0	Bus409	0.049	-0.016	65.2	-95.0	
Bus526	0.400	115.099	11.9	0.049	-0.016	0	0	Bus409	0.049	-0.016	65.2	-95.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus527	0.400	115.099	11.9	0.049	-0.016	0	0	Bus409	0.049	-0.016	65.2	-95.0	
Bus528	0.400	115.099	11.9	0.049	-0.016	0	0	Bus409	0.049	-0.016	65.2	-95.0	
Bus529	0.400	115.099	11.9	0.049	-0.016	0	0	Bus409	0.049	-0.016	65.2	-95.0	
Bus530	0.400	115.099	11.9	0.049	-0.016	0	0	Bus409	0.049	-0.016	65.2	-95.0	
Bus531	0.400	115.099	11.9	0.049	-0.016	0	0	Bus409	0.049	-0.016	65.2	-95.0	
Bus533	0.400	116.741	13.1	0.055	-0.018	0	0	Bus545	0.055	-0.018	71.5	-95.0	
Bus536	0.400	116.741	13.1	0.055	-0.018	0	0	Bus545	0.055	-0.018	71.5	-95.0	
Bus537	0.400	116.741	13.1	0.055	-0.018	0	0	Bus545	0.055	-0.018	71.5	-95.0	
Bus538	0.400	116.741	13.1	0.055	-0.018	0	0	Bus545	0.055	-0.018	71.5	-95.0	
Bus539	0.400	116.741	13.1	0.055	-0.018	0	0	Bus545	0.055	-0.018	71.5	-95.0	
Bus540	0.400	116.741	13.1	0.055	-0.018	0	0	Bus545	0.055	-0.018	71.5	-95.0	
Bus541	0.400	116.741	13.1	0.055	-0.018	0	0	Bus545	0.055	-0.018	71.5	-95.0	
Bus542	0.400	116.741	13.1	0.055	-0.018	0	0	Bus545	0.055	-0.018	71.5	-95.0	
Bus543	0.400	116.741	13.1	0.055	-0.018	0	0	Bus545	0.055	-0.018	71.5	-95.0	
Bus544	0.400	116.741	13.1	0.055	-0.018	0	0	Bus545	0.055	-0.018	71.5	-95.0	
Bus545	0.400	115.264	12.7	0	0	0	0	Bus533	-0.054	0.018	71.5	-94.8	
								Bus536	-0.054	0.018	71.5	-94.8	
								Bus537	-0.054	0.018	71.5	-94.8	
								Bus538	-0.054	0.018	71.5	-94.8	
								Bus539	-0.054	0.018	71.5	-94.8	
								Bus540	-0.054	0.018	71.5	-94.8	
								Bus541	-0.054	0.018	71.5	-94.8	
								Bus542	-0.054	0.018	71.5	-94.8	
								Bus543	-0.054	0.018	71.5	-94.8	
								Bus544	-0.054	0.018	71.5	-94.8	
								Bus432	0.541	-0.182	714.6	-94.8	
Bus546	0.400	115.215	11.9	0.055	-0.018	0	0	Bus556	0.055	-0.018	72.4	-95.0	
Bus547	0.400	115.215	11.9	0.055	-0.018	0	0	Bus556	0.055	-0.018	72.4	-95.0	
Bus548	0.400	115.215	11.9	0.055	-0.018	0	0	Bus556	0.055	-0.018	72.4	-95.0	
Bus549	0.400	115.215	11.9	0.055	-0.018	0	0	Bus556	0.055	-0.018	72.4	-95.0	
Bus550	0.400	115.215	11.9	0.055	-0.018	0	0	Bus556	0.055	-0.018	72.4	-95.0	
Bus551	0.400	115.215	11.9	0.055	-0.018	0	0	Bus556	0.055	-0.018	72.4	-95.0	
Bus552	0.400	115.215	11.9	0.055	-0.018	0	0	Bus556	0.055	-0.018	72.4	-95.0	
Bus553	0.400	115.215	11.9	0.055	-0.018	0	0	Bus556	0.055	-0.018	72.4	-95.0	
Bus554	0.400	115.215	11.9	0.055	-0.018	0	0	Bus556	0.055	-0.018	72.4	-95.0	
Bus556	0.400	113.719	11.6	0	0	0	0	Bus546	-0.054	0.018	72.4	-94.8	
								Bus547	-0.054	0.018	72.4	-94.8	
								Bus548	-0.054	0.018	72.4	-94.8	
								Bus549	-0.054	0.018	72.4	-94.8	

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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
								Bus550	-0.054	0.018	72.4	-94.8	
								Bus551	-0.054	0.018	72.4	-94.8	
								Bus552	-0.054	0.018	72.4	-94.8	
								Bus553	-0.054	0.018	72.4	-94.8	
								Bus554	-0.054	0.018	72.4	-94.8	
								Bus433	0.487	-0.164	651.7	-94.8	
Bus558	0.400	113.458	10.6	0.055	-0.018	0	0	Bus411	0.055	-0.018	73.5	-95.0	
Bus560	0.400	115.215	11.9	0.055	-0.018	0	0	Bus384	0.055	-0.018	72.4	-95.0	
Bus562	0.400	115.099	11.9	0.049	-0.016	0	0	Bus409	0.049	-0.016	65.2	-95.0	
Bus564	0.400	113.458	10.6	0.055	-0.018	0	0	Bus411	0.055	-0.018	73.5	-95.0	
Line43~	33.000	96.459	-0.5	0	0	0	0	Bus54	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

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### Bus Loading Summary Report

Bus			Directly Connected Load								Total Bus Load			
			Constant kVA		Constant Z		Constant I		Generic		MVA	% PF	Amp	Percent Loading
ID	kV	Rated Amp	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar				
Bus2	33.000		0	0	0	0	0	0	0	0	5.951	73.8	104.1	
Bus3	33.000		0	0	0	0	0	0	0	0	5.951	73.8	104.1	
Bus4	33.000		0	0	0	0	0	0	0	0	0.035	87.8	0.6	
Bus5	33.000		0	0	0	0	0	0	0	0	0.035	87.8	0.6	
Bus6	33.000		0	0	0	0	0	0	0	0	0.038	81.8	0.7	
Bus7	33.000		0	0	0	0	0	0	0	0	5.909	73.8	103.6	
Bus8	33.000		0	0	0	0	0	0	0	0	5.747	72.9	101.4	
Bus9	33.000		0	0	0	0	0	0	0	0	5.720	72.8	101.0	
Bus10	33.000		0	0	0	0	0	0	0	0	5.720	72.8	101.0	
Bus11	33.000		0	0	0	0	0	0	0	0	5.715	72.8	101.0	
Bus12	33.000		0	0	0	0	0	0	0	0	5.620	73.9	101.0	
Bus13	33.000		0	0	0	0	0	0	0	0	5.605	73.8	101.0	
Bus14	33.000		0	0	0	0	0	0	0	0	5.510	73.3	99.6	
Bus15	33.000		0	0	0	0	0	0	0	0	5.420	72.7	98.2	
Bus16	33.000		0	0	0	0	0	0	0	0	5.414	72.7	98.2	
Bus17	33.000		0	0	0	0	0	0	0	0	5.393	72.5	97.9	
Bus18	33.000		0	0	0	0	0	0	0	0	0.927	77.3	16.8	
Bus19	33.000		0	0	0	0	0	0	0	0	0.821	74.1	14.9	
Bus20	33.000		0	0	0	0	0	0	0	0	0.283	96.9	5.1	
Bus21	33.000		0	0	0	0	0	0	0	0	0.191	96.7	3.5	
Bus22	33.000		0	0	0	0	0	0	0	0	0.092	97.4	1.7	
Bus23	33.000		0	0	0	0	0	0	0	0	0.092	97.4	1.7	
Bus24	33.000		0	0	0	0	0	0	0	0	0.092	97.2	1.7	
Bus25	33.000		0	0	0	0	0	0	0	0	0.092	96.9	1.7	
Bus26	33.000		0	0	0	0	0	0	0	0	0.587	57.0	10.7	
Bus27	33.000		0	0	0	0	0	0	0	0	0.587	57.0	10.7	
Bus28	33.000		0	0	0	0	0	0	0	0	0.587	56.9	10.7	
Bus29	33.000		0	0	0	0	0	0	0	0	0.139	93.7	2.5	
Bus30	33.000		0	0	0	0	0	0	0	0	0.444	37.1	8.1	
Bus31	33.000		0	0	0	0	0	0	0	0	0.039	99.8	0.7	
Bus32	33.000		0	0	0	0	0	0	0	0	0.039	99.8	0.7	
Bus33	33.000		0	0	0	0	0	0	0	0	0.039	99.8	0.7	
Bus34	33.000		0	0	0	0	0	0	0	0	0.030	100.0	0.5	
Bus35	33.000		0	0	0	0	0	0	0	0	0.398	28.1	7.2	
Bus36	33.000		0	0	0	0	0	0	0	0	0.027	95.9	0.5	
Bus37	33.000		0	0	0	0	0	0	0	0	0.402	35.2	7.3	

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Bus			Directly Connected Load								Total Bus Load			
			Constant kVA		Constant Z		Constant I		Generic		MVA	% PF	Amp	Percent Loading
ID	kV	Rated Amp	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar				
Bus38	33.000		0	0	0	0	0	0	0	0	0.454	61.9	8.3	
Bus39	33.000		0	0	0	0	0	0	0	0	0.155	89.9	2.8	
Bus40	33.000		0	0	0	0	0	0	0	0	0.154	89.8	2.8	
Bus41	33.000		0	0	0	0	0	0	0	0	0.466	72.9	8.5	
Bus42	33.000		0	0	0	0	0	0	0	0	0.585	86.0	10.6	
Bus43	33.000		0	0	0	0	0	0	0	0	0.025	95.7	0.5	
Bus44	33.000		0	0	0	0	0	0	0	0	0.007	95.9	0.1	
Bus45	33.000		0	0	0	0	0	0	0	0	0.687	92.6	12.5	
Bus46	33.000		0	0	0	0	0	0	0	0	0.690	95.5	12.5	
Bus47	33.000		0	0	0	0	0	0	0	0	0.688	95.7	12.5	
Bus48	33.000		0	0	0	0	0	0	0	0	0.688	95.7	12.5	
Bus49	33.000		0	0	0	0	0	0	0	0	0.688	95.7	12.5	
Bus50	33.000		0	0	0	0	0	0	0	0	0.690	95.6	12.5	
Bus51	33.000		0	0	0	0	0	0	0	0	0.002	0.0	0.0	
Bus52	33.000		0	0	0	0	0	0	0	0	0.002	0.0	0.0	
Bus53	33.000		0	0	0	0	0	0	0	0	0.002	0.0	0.0	
Bus54	33.000		0	0	0	0	0	0	0	0	0.002	0.0	0.0	
Bus55	33.000		0	0	0	0	0	0	0	0	0.698	95.7	12.7	
Bus56	33.000		0	0	0	0	0	0	0	0	0.708	95.9	12.8	
Bus57	33.000		0	0	0	0	0	0	0	0	0.709	96.1	12.9	
Bus58	33.000		0	0	0	0	0	0	0	0	2.352	97.6	42.6	
Bus59	33.000		0	0	0	0	0	0	0	0	2.436	98.3	44.1	
Bus60	33.000		0	0	0	0	0	0	0	0	0.103	95.7	1.9	
Bus61	33.000		0	0	0	0	0	0	0	0	2.571	98.1	46.6	
Bus62	33.000		0	0	0	0	0	0	0	0	2.714	98.2	49.2	
Bus63	33.000		0	0	0	0	0	0	0	0	0.146	98.0	2.6	
Bus64	33.000		0	0	0	0	0	0	0	0	0.065	98.2	1.2	
Bus65	33.000		0	0	0	0	0	0	0	0	0.065	98.1	1.2	
Bus66	33.000		0	0	0	0	0	0	0	0	0.068	93.8	1.2	
Bus67	33.000		0	0	0	0	0	0	0	0	2.786	98.2	50.4	
Bus68	33.000		0	0	0	0	0	0	0	0	2.836	98.1	51.0	
Bus69	33.000		0	0	0	0	0	0	0	0	2.928	98.1	52.6	
Bus70	33.000		0	0	0	0	0	0	0	0	3.205	97.5	57.5	
Bus71	33.000		0	0	0	0	0	0	0	0	0.289	86.5	5.2	
Bus72	33.000		0	0	0	0	0	0	0	0	0.248	83.6	4.4	
Bus73	33.000		0	0	0	0	0	0	0	0	3.278	97.4	58.8	
Bus74	33.000		0	0	0	0	0	0	0	0	3.484	97.2	61.9	
Bus75	33.000		0	0	0	0	0	0	0	0	0.087	92.5	1.5	



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Bus			Directly Connected Load								Total Bus Load			
			Constant kVA		Constant Z		Constant I		Generic		MVA	% PF	Amp	Percent Loading
ID	kV	Rated Amp	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar				
Bus76	33.000		0	0	0	0	0	0	0	0	3.514	97.1	62.4	
Bus77	33.000		0	0	0	0	0	0	0	0	0.029	77.9	0.5	
Bus78	33.000		0	0	0	0	0	0	0	0	3.540	97.1	62.5	
Bus79	33.000		0	0	0	0	0	0	0	0	0.008	96.9	0.1	
Bus80	33.000		0	0	0	0	0	0	0	0	3.954	97.2	69.8	
Bus81	33.000		0	0	0	0	0	0	0	0	3.995	97.1	70.0	
Bus82	33.000		0	0	0	0	0	0	0	0	0.018	77.9	0.3	
Bus83	33.000		0	0	0	0	0	0	0	0	4.061	97.1	71.1	
Bus84	33.000		0	0	0	0	0	0	0	0	0.025	96.9	0.4	
Bus87	33.000		0	0	0	0	0	0	0	0	0.410	97.3	7.2	
Bus88	33.000		0	0	0	0	0	0	0	0	0.061	97.1	1.1	
Bus89	33.000		0	0	0	0	0	0	0	0	0.020	92.8	0.4	
Bus90	33.000		0	0	0	0	0	0	0	0	0.349	97.2	6.2	
Bus91	33.000		0	0	0	0	0	0	0	0	0.013	97.0	0.2	
Bus92	33.000		0	0	0	0	0	0	0	0	0.242	96.7	4.3	
Bus93	33.000		0	0	0	0	0	0	0	0	0.205	97.2	3.6	
Bus94	33.000		0	0	0	0	0	0	0	0	0.171	95.2	3.0	
Bus95	33.000		0	0	0	0	0	0	0	0	0.075	90.7	1.3	
Bus96	33.000		0	0	0	0	0	0	0	0	1.693	95.3	30.7	
Bus97	33.000		0	0	0	0	0	0	0	0	1.693	95.3	30.7	
Bus98	33.000		0	0	0	0	0	0	0	0	1.693	95.3	30.7	
Bus99	33.000		0	0	0	0	0	0	0	0	0.287	93.0	5.2	
Bus100	33.000		0	0	0	0	0	0	0	0	0.212	93.2	3.8	
Bus101	33.000		0	0	0	0	0	0	0	0	0.196	93.1	3.6	
Bus102	33.000		0	0	0	0	0	0	0	0	0.196	93.1	3.6	
Bus103	33.000		0	0	0	0	0	0	0	0	0.198	92.3	3.6	
Bus104	33.000		0	0	0	0	0	0	0	0	0.198	92.0	3.6	
Bus105	33.000		0	0	0	0	0	0	0	0	0.151	91.9	2.7	
Bus106	33.000		0	0	0	0	0	0	0	0	0.105	91.2	1.9	
Bus109	33.000		0	0	0	0	0	0	0	0	0.106	91.0	1.9	
Bus110	33.000		0	0	0	0	0	0	0	0	0.052	91.8	1.0	
Bus111	33.000		0	0	0	0	0	0	0	0	0	0.0	0.0	
Bus112	33.000		0	0	0	0	0	0	0	0	1.406	95.7	25.5	
Bus113	33.000		0	0	0	0	0	0	0	0	1.406	95.7	25.5	
Bus114	33.000		0	0	0	0	0	0	0	0	1.404	95.5	25.5	
Bus115	33.000		0	0	0	0	0	0	0	0	0.076	100.0	1.4	
Bus116	33.000		0	0	0	0	0	0	0	0	1.331	95.0	24.2	
Bus118	33.000		0	0	0	0	0	0	0	0	0.317	96.1	5.8	

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Bus			Directly Connected Load								Total Bus Load			
			Constant kVA		Constant Z		Constant I		Generic		MVA	% PF	Amp	Percent Loading
ID	kV	Rated Amp	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar				
Bus119	33.000		0	0	0	0	0	0	0	0	0.202	94.3	3.7	
Bus120	33.000		0	0	0	0	0	0	0	0	0.139	96.0	2.5	
Bus122	33.000		0	0	0	0	0	0	0	0	0.139	95.9	2.5	
Bus123	33.000		0	0	0	0	0	0	0	0	0.717	96.5	13.1	
Bus124	33.000		0	0	0	0	0	0	0	0	0.402	96.5	7.3	
Bus125	33.000		0	0	0	0	0	0	0	0	0.400	96.4	7.3	
Bus126	33.000		0	0	0	0	0	0	0	0	0.355	96.0	6.5	
Bus127	33.000		0	0	0	0	0	0	0	0	0.061	94.5	1.1	
Bus135	33.000		0	0	0	0	0	0	0	0	0.062	93.9	1.1	
Bus137	33.000		0	0	0	0	0	0	0	0	0.216	95.8	3.9	
Bus138	33.000		0	0	0	0	0	0	0	0	0.194	96.7	3.5	
Bus139	33.000		0	0	0	0	0	0	0	0	0.169	96.1	3.1	
Bus140	33.000		0	0	0	0	0	0	0	0	0.088	95.9	1.6	
Bus141	33.000		0	0	0	0	0	0	0	0	0.012	92.9	0.2	
Bus142	33.000		0	0	0	0	0	0	0	0	0.616	92.9	11.2	
Bus143	33.000		0	0	0	0	0	0	0	0	0.059	92.9	1.1	
Bus144	33.000		0	0	0	0	0	0	0	0	0.557	92.9	10.1	
Bus145	33.000		0	0	0	0	0	0	0	0	0.464	91.9	8.4	
Bus146	33.000		0	0	0	0	0	0	0	0	0.344	91.3	6.3	
Bus147	33.000		0	0	0	0	0	0	0	0	0.142	98.9	2.6	
Bus148	33.000		0	0	0	0	0	0	0	0	0.087	97.9	1.6	
Bus149	33.000		0	0	0	0	0	0	0	0	0.163	60.7	3.0	
Bus150	33.000		0	0	0	0	0	0	0	0	0.057	97.9	1.0	
Bus151	33.000		0	0	0	0	0	0	0	0	0.126	34.0	2.3	
Bus152	33.000		0	0	0	0	0	0	0	0	0.121	92.5	2.2	
Bus153	33.000		0	0	0	0	0	0	0	0	0.030	98.9	0.6	
Bus154	33.000		0	0	0	0	0	0	0	0	0.094	87.3	1.7	
Bus155	33.000		0	0	0	0	0	0	0	0	0.093	86.9	1.7	
Bus156	33.000		0	0	0	0	0	0	0	0	0.071	85.3	1.3	
Bus157	33.000		0	0	0	0	0	0	0	0	0.001	92.0	0.0	
Bus158	33.000		0	0	0	0	0	0	0	0	4.470	71.5	81.1	
Bus159	33.000		0	0	0	0	0	0	0	0	0.132	94.6	2.4	
Bus160	33.000		0	0	0	0	0	0	0	0	4.350	70.6	79.0	
Bus161	33.000		0	0	0	0	0	0	0	0	4.330	70.3	78.7	
Bus162	33.000		0	0	0	0	0	0	0	0	4.166	68.9	75.7	
Bus163	33.000		0	0	0	0	0	0	0	0	4.166	68.9	75.7	
Bus164	33.000		0	0	0	0	0	0	0	0	4.159	68.9	75.7	
Bus165	33.000		0	0	0	0	0	0	0	0	4.004	66.9	72.9	

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Bus			Directly Connected Load								Total Bus Load			
			Constant kVA		Constant Z		Constant I		Generic		MVA	% PF	Amp	Percent Loading
ID	kV	Rated Amp	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar				
Bus167	33.000		0	0	0	0	0	0	0	0	4.001	66.8	72.9	
Bus168	33.000		0	0	0	0	0	0	0	0	0.146	89.4	2.7	
Bus169	33.000		0	0	0	0	0	0	0	0	3.864	65.8	70.5	
Bus170	33.000		0	0	0	0	0	0	0	0	3.864	65.8	70.5	
Bus171	33.000		0	0	0	0	0	0	0	0	3.861	65.7	70.5	
Bus173	33.000		0	0	0	0	0	0	0	0	1.104	95.9	20.1	
Bus174	33.000		0	0	0	0	0	0	0	0	0.039	98.0	0.7	
Bus175	33.000		0	0	0	0	0	0	0	0	0.039	96.5	0.7	
Bus176	33.000		0	0	0	0	0	0	0	0	0.035	95.5	0.6	
Bus177	33.000		0	0	0	0	0	0	0	0	0.036	94.8	0.7	
Bus178	33.000		0	0	0	0	0	0	0	0	1.066	95.7	19.5	
Bus179	33.000		0	0	0	0	0	0	0	0	0.992	96.0	18.1	
Bus180	33.000		0	0	0	0	0	0	0	0	0.035	96.9	0.6	
Bus181	33.000		0	0	0	0	0	0	0	0	0.958	95.8	17.5	
Bus182	33.000		0	0	0	0	0	0	0	0	0.908	95.7	16.6	
Bus183	33.000		0	0	0	0	0	0	0	0	0.101	94.7	1.8	
Bus184	33.000		0	0	0	0	0	0	0	0	0.807	95.9	14.8	
Bus185	33.000		0	0	0	0	0	0	0	0	0.751	95.6	13.8	
Bus186	33.000		0	0	0	0	0	0	0	0	0.078	95.7	1.4	
Bus187	33.000		0	0	0	0	0	0	0	0	0.050	94.6	0.9	
Bus188	33.000		0	0	0	0	0	0	0	0	0.624	95.6	11.4	
Bus189	33.000		0	0	0	0	0	0	0	0	0.418	94.8	7.7	
Bus190	33.000		0	0	0	0	0	0	0	0	0.269	94.9	4.9	
Bus191	33.000		0	0	0	0	0	0	0	0	0.230	94.4	4.2	
Bus192	33.000		0	0	0	0	0	0	0	0	0.157	93.4	2.9	
Bus193	33.000		0	0	0	0	0	0	0	0	0.040	95.9	0.7	
Bus194	33.000		0	0	0	0	0	0	0	0	0.126	97.0	2.3	
Bus195	33.000		0	0	0	0	0	0	0	0	0.126	97.0	2.3	
Bus196	33.000		0	0	0	0	0	0	0	0	0.127	96.6	2.3	
Bus197	33.000		0	0	0	0	0	0	0	0	0.112	95.1	2.1	
Bus198	33.000		0	0	0	0	0	0	0	0	0.017	96.0	0.3	
Bus199	33.000		0	0	0	0	0	0	0	0	0.008	97.0	0.2	
Bus201	33.000		0	0	0	0	0	0	0	0	0.097	93.1	1.8	
Bus202	33.000		0	0	0	0	0	0	0	0	0.086	92.9	1.6	
Bus203	33.000		0	0	0	0	0	0	0	0	0.013	87.0	0.2	
Bus229	0.400		0.183	0.037	0	0	0	0	0	0	0.187	98.0	283.6	
Bus230	0.400		0.031	0.021	0	0	0	0	0	0	0.037	82.0	54.5	
Bus231	0.400		0.128	0.042	0	0	0	0	0	0	0.134	95.0	197.8	

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Bus			Directly Connected Load								Total Bus Load			
			Constant kVA		Constant Z		Constant I		Generic		MVA	% PF	Amp	Percent Loading
ID	kV	Rated Amp	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar				
Bus233	0.400		0.024	0.009	0	0	0	0	0	0	0.025	94.0	37.0	
Bus234	0.400		0.084	0.021	0	0	0	0	0	0	0.087	97.0	131.8	
Bus235	0.400		0.086	0.025	0	0	0	0	0	0	0.090	96.0	135.3	
Bus237	0.400		0.021	0.003	0	0	0	0	0	0	0.021	99.0	31.7	
Bus238	0.400		0.123	0.040	0	0	0	0	0	0	0.130	95.0	197.8	
Bus239	0.400		0.172	0.056	0	0	0	0	0	0	0.181	95.0	275.5	
Bus240	0.400		0.019	0.006	0	0	0	0	0	0	0.020	95.0	29.9	
Bus246	0.400		0.107	0.035	0	0	0	0	0	0	0.113	95.0	171.4	
Bus247	0.400		0.182	0.046	0	0	0	0	0	0	0.188	97.0	285.6	
Bus248	0.400		0.089	0.022	0	0	0	0	0	0	0.092	97.0	138.4	
Bus249	0.400		0.123	0.041	0	0	0	0	0	0	0.130	95.0	198.3	
Bus250	0.400		0.129	0.047	0	0	0	0	0	0	0.137	94.0	208.1	
Bus251	0.400		0.124	0.031	0	0	0	0	0	0	0.128	97.0	194.5	
Bus252	0.400		0.009	0.002	0	0	0	0	0	0	0.009	97.0	13.9	
Bus253	0.400		0.030	0	0	0	0	0	0	0	0.030	100.0	45.1	
Bus254	0.400		0.026	0.008	0	0	0	0	0	0	0.027	96.0	40.5	
Bus255	0.400		0.030	0.020	0	0	0	0	0	0	0.036	83.0	54.2	
Bus256	0.400		0.138	0.067	0	0	0	0	0	0	0.153	90.0	231.4	
Bus257	0.400		0.001	0	0	0	0	0	0	0	0.001	98.0	1.5	
Bus258	0.400		0.058	0.023	0	0	0	0	0	0	0.062	93.0	93.8	
Bus259	0.400		0.138	0.035	0	0	0	0	0	0	0.143	97.0	216.2	
Bus260	0.400		0.017	0.007	0	0	0	0	0	0	0.018	92.0	27.6	
Bus261	0.400		0.007	0.002	0	0	0	0	0	0	0.007	96.0	10.9	
Bus262	0.400		0.132	0.056	0	0	0	0	0	0	0.143	92.0	217.3	
Bus263	0.400		0.022	0.007	0	0	0	0	0	0	0.023	95.0	34.7	
Bus264	0.400		0.009	0.004	0	0	0	0	0	0	0.010	91.0	14.8	
Bus268	0.400		0.011	0.008	0	0	0	0	0	0	0.014	80.0	20.4	
Bus269	0.400		0.001	0.115	0	0.001	0	0	0	0	0.116	1.0	175.1	
Bus270	0.400		0.098	0.028	0	0	0	0	0	0	0.102	96.0	154.0	
Bus271	0.400		0.126	0.050	0	0	0	0	0	0	0.135	93.0	204.5	
Bus272	0.400		0.068	0.010	0	0	0	0	0	0	0.069	99.0	102.9	
Bus273	0.400		0.035	0.018	0	0	0	0	0	0	0.039	89.0	57.9	
Bus274	0.400		0.084	0.021	0	0	0	0	0	0	0.087	97.0	129.2	
Bus275	0.400		0.043	0.012	0	0	0	0	0	0	0.044	96.0	66.7	
Bus276	0.400		0.205	0.132	0	0	0	0	0	0	0.244	84.0	366.8	
Bus277	0.400		0.084	0.041	0	0	0	0	0	0	0.094	90.0	138.3	
Bus278	0.400		0.079	0.031	0	0	0	0	0	0	0.085	93.0	127.7	
Bus279	0.400		0.023	0.018	0	0	0	0	0	0	0.029	78.0	43.0	

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Bus			Directly Connected Load								Total Bus Load			
			Constant kVA		Constant Z		Constant I		Generic		MVA	% PF	Amp	Percent Loading
ID	kV	Rated Amp	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar				
Bus280	0.400		0.055	0.022	0	0	0	0	0	0	0.059	93.0	88.9	
Bus281	0.400		0.091	0.023	0	0	0	0	0	0	0.094	97.0	141.3	
Bus282	0.400		0.075	0.011	0	0	0	0	0	0	0.076	99.0	114.7	
Bus283	0.400		0.084	0.017	0	0	0	0	0	0	0.086	98.0	130.0	
Bus284	0.400		0.056	0.011	0	0	0	0	0	0	0.057	98.0	85.8	
Bus285	0.400		0.021	0.059	0	0	0	0	0	0	0.063	34.0	94.9	
Bus286	0.400		0.021	0.059	0	0	0	0	0	0	0.063	34.0	94.9	
Bus287	0.400		0.008	0.002	0	0	0	0	0	0	0.008	97.0	12.1	
Bus288	0.400		0.040	0.010	0	0	0	0	0	0	0.041	97.0	61.3	
Bus289	0.400		0.019	0.007	0	0	0	0	0	0	0.020	93.0	29.7	
Bus290	0.400		0.013	0.003	0	0	0	0	0	0	0.013	97.0	19.4	
Bus291	0.400		0.035	0.015	0	0	0	0	0	0	0.038	92.0	55.6	
Bus292	0.400		0.036	0	0	0	0	0	0	0	0.036	100.0	52.9	
Bus293	0.400		0.092	0.023	0	0	0	0	0	0	0.095	97.0	139.1	
Bus294	0.400		0.094	0.024	0	0	0	0	0	0	0.097	97.0	142.5	
Bus295	0.400		0.067	0.031	0	0	0	0	0	0	0.074	91.0	108.8	
Bus296	0.400		0.014	0.011	0	0	0	0	0	0	0.018	78.0	25.9	
Bus297	0.400		0.034	0.008	0	0	0	0	0	0	0.035	97.0	50.6	
Bus298	0.400		0.024	0.006	0	0	0	0	0	0	0.025	97.0	35.8	
Bus299	0.400		0.068	0.027	0	0	0	0	0	0	0.073	93.0	108.5	
Bus300	0.400		0.078	0.028	0	0	0	0	0	0	0.083	94.0	125.2	
Bus301	0.400		0.064	0.023	0	0	0	0	0	0	0.068	94.0	102.1	
Bus302	0.400		0.074	0	0	0	0	0	0	0	0.074	100.0	113.6	
Bus303	0.400		0.069	0.030	0	0	0	0	0	0	0.075	92.0	113.3	
Bus304	0.400		0.015	0.012	0	0	0	0	0	0	0.019	78.0	28.8	
Bus305	0.400		0.043	0.018	0	0	0	0	0	0	0.047	92.0	71.0	
Bus306	0.400		0.055	0.011	0	0	0	0	0	0	0.056	98.0	84.9	
Bus307	0.400		0.030	0.004	0	0	0	0	0	0	0.030	99.0	45.5	
Bus308	0.400		0.001	0	0	0	0	0	0	0	0.001	92.0	1.6	
Bus309	0.400		0.020	0.009	0	0	0	0	0	0	0.022	91.0	33.0	
Bus310	0.400		0.059	0.037	0	0	0	0	0	0	0.070	85.0	105.6	
Bus311	0.400		0.001	0	0	0	0	0	0	0	0.001	92.0	1.6	
Bus312	0.400		0.002	0	0	0	0	0	0	0	0.002	100.0	2.9	
Bus313	0.400		0.069	0.014	0	0	0	0	0	0	0.071	98.0	107.0	
Bus314	0.400		0.045	0.009	0	0	0	0	0	0	0.046	98.0	69.1	
Bus315	0.400		0.044	0.006	0	0	0	0	0	0	0.044	99.0	66.8	
Bus316	0.400		0	0	0	0	0	0	0	0	0	0.0	0.0	
Bus317	0.400		0.075	0.025	0	0	0	0	0	0	0.079	95.0	120.2	

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Bus			Directly Connected Load								Total Bus Load			
			Constant kVA		Constant Z		Constant I		Generic		MVA	% PF	Amp	Percent Loading
ID	kV	Rated Amp	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar				
Bus319	0.400		0.058	0.021	0	0	0	0	0	0	0.061	94.0	92.8	
Bus320	0.400		0.019	0.015	0	0	0	0	0	0	0.024	78.0	36.6	
Bus321	0.400		0.078	0.023	0	0	0	0	0	0	0.081	96.0	123.3	
Bus322	0.400		0.025	0.006	0	0	0	0	0	0	0.026	97.0	39.0	
Bus323	0.400		0.073	0.024	0	0	0	0	0	0	0.077	95.0	116.4	
Bus324	0.400		0.011	0.004	0	0	0	0	0	0	0.012	93.0	17.7	
Bus325	0.400		0.058	0.028	0	0	0	0	0	0	0.064	90.0	96.5	
Bus327	0.400		0.075	0.011	0	0	0	0	0	0	0.076	99.0	114.3	
Bus328	0.400		0.058	0.028	0	0	0	0	0	0	0.064	90.0	96.5	
Bus329	0.400		0.048	0.024	0	0	0	0	0	0	0.054	89.0	81.0	
Bus330	0.400		0.048	0.020	0	0	0	0	0	0	0.052	92.0	78.5	
Bus331	0.400		0.043	0.018	0	0	0	0	0	0	0.047	92.0	70.1	
Bus332	0.400		0.128	0.062	0	0	0	0	0	0	0.143	90.0	219.4	
Bus333	0.400		0.032	0.010	0	0	0	0	0	0	0.034	95.0	50.9	
Bus334	0.400		0.066	0.032	0	0	0	0	0	0	0.074	90.0	112.1	
Bus335	0.400		0.004	0.001	0	0	0	0	0	0	0.004	97.0	6.2	
Bus336	0.400		0.034	0.011	0	0	0	0	0	0	0.035	95.0	53.8	
Bus337	0.400		0.034	0.008	0	0	0	0	0	0	0.035	97.0	52.6	
Bus338	0.400		0.048	0.014	0	0	0	0	0	0	0.050	96.0	75.3	
Bus339	0.400		0.094	0.031	0	0	0	0	0	0	0.099	95.0	152.2	
Bus340	0.400		0.055	0.011	0	0	0	0	0	0	0.056	98.0	85.3	
Bus341	0.400		0.074	0.022	0	0	0	0	0	0	0.077	96.0	118.2	
Bus342	0.400		0.047	0.015	0	0	0	0	0	0	0.049	95.0	75.4	
Bus343	0.400		0.076	0.019	0	0	0	0	0	0	0.078	97.0	120.4	
Bus344	0.400		0.139	0.046	0	0	0	0	0	0	0.146	95.0	226.1	
Bus345	0.400		0.069	0.020	0	0	0	0	0	0	0.072	96.0	111.0	
Bus346	0.400		0.038	0.011	0	0	0	0	0	0	0.040	96.0	60.1	
Bus347	0.400		0.144	0.052	0	0	0	0	0	0	0.154	94.0	237.8	
Bus348	0.400		0.016	0.005	0	0	0	0	0	0	0.017	95.0	25.4	
Bus349	0.400		0.008	0.003	0	0	0	0	0	0	0.009	93.0	12.9	
Bus350	0.400		0.008	0.002	0	0	0	0	0	0	0.008	97.0	12.5	
Bus351	0.400		0.079	0.031	0	0	0	0	0	0	0.085	93.0	129.8	
Bus352	0.400		0.011	0.006	0	0	0	0	0	0	0.013	87.0	19.0	
Bus353	33.000		0	0	0	0	0	0	0	0	2.961	48.7	54.1	
Bus354	33.000		0	0	0	0	0	0	0	0	2.961	48.7	54.1	
Bus355	33.000		0	0	0	0	0	0	0	0	2.958	48.6	54.2	
Bus356	33.000		0	0	0	0	0	0	0	0	0.070	89.8	1.3	
Bus357	0.400		0.063	0.030	0	0	0	0	0	0	0.070	90.0	106.1	

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Bus			Directly Connected Load								Total Bus Load			
			Constant kVA		Constant Z		Constant I		Generic		MVA	% PF	Amp	Percent Loading
ID	kV	Rated Amp	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar				
Bus358	33.000		0	0	0	0	0	0	0	0	2.900	47.3	53.1	
Bus359	33.000		0	0	0	0	0	0	0	0	0.003	88.9	0.1	
Bus360	0.400		0.003	0.002	0	0	0	0	0	0	0.003	89.0	5.1	
Bus361	33.000		0	0	0	0	0	0	0	0	4.290	80.4	78.6	
Bus362	33.000		0	0	0	0	0	0	0	0	2.403	86.6	44.0	
Bus363	33.000		0	0	0	0	0	0	0	0	3.698	93.1	67.9	
Bus364	0.400		0.099	0.064	0	0	0	0	0	0	0.118	84.0	180.4	
Bus365	33.000		0	0	0	0	0	0	0	0	3.577	93.3	65.8	
Bus366	33.000		0	0	0	0	0	0	0	0	1.127	88.8	20.7	
Bus367	33.000		0	0	0	0	0	0	0	0	0.843	88.4	15.5	
Bus368	33.000		0	0	0	0	0	0	0	0	0.843	88.4	15.5	
Bus369	33.000		0	0	0	0	0	0	0	0	0.843	88.4	15.5	
Bus370	33.000		0	0	0	0	0	0	0	0	0.768	87.9	14.1	
Bus371	33.000		0	0	0	0	0	0	0	0	0.318	85.5	5.8	
Bus372	0.400		0.268	0.159	0	0	0	0	0	0	0.311	86.0	482.4	
Bus373	33.000		0	0	0	0	0	0	0	0	0.152	88.7	2.8	
Bus374	33.000		0	0	0	0	0	0	0	0	0.153	88.1	2.8	
Bus375	0.400		0.104	0.056	0	0	0	0	0	0	0.119	88.0	181.3	
Bus376	33.000		0	0	0	0	0	0	0	0	0.035	84.9	0.6	
Bus377	0.400		0.030	0.018	0	0	0	0	0	0	0.035	85.0	53.4	
Bus378	0.400		0.198	0.107	0	0	0	0	0	0	0.225	88.0	350.1	
Bus379	0.400		0.067	0.022	0	0	0	0	0	0	0.070	95.0	107.0	
Bus383	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus384	0.400		0	0	0	0	0	0	0	0	0.513	94.8	651.7	
Bus388	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus389	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus390	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus391	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus392	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus393	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus394	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus395	0.400		0	0	0	0	0	0	0	0	0.432	87.7	651.6	
Bus396	33.000		0	0	0	0	0	0	0	0	2.404	86.6	44.1	
Bus408	0.400		0	0	0	0	0	0	0	0	0.049	100.0	62.0	
Bus409	0.400		0	0	0	0	0	0	0	0	0.514	94.8	652.3	
Bus410	0.400		0	0	0	0	0	0	0	0	0.049	100.0	62.9	
Bus411	0.400		0	0	0	0	0	0	0	0	0.451	94.8	581.0	
Bus413	0.400		0	0	0	0	0	0	0	0	0.055	100.0	69.9	

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Bus			Directly Connected Load								Total Bus Load			
			Constant kVA		Constant Z		Constant I		Generic		MVA	% PF	Amp	Percent Loading
ID	kV	Rated Amp	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar				
Bus414	0.400		0	0	0	0	0	0	0	0	0.055	100.0	69.9	
Bus415	0.400		0	0	0	0	0	0	0	0	0.055	100.0	69.9	
Bus416	0.400		0	0	0	0	0	0	0	0	0.055	100.0	69.9	
Bus417	0.400		0	0	0	0	0	0	0	0	0.055	100.0	69.9	
Bus423	0.400		0	0	0	0	0	0	0	0	0.055	100.0	73.1	
Bus424	0.400		0	0	0	0	0	0	0	0	0.055	100.0	73.1	
Bus425	0.400		0	0	0	0	0	0	0	0	0.055	100.0	73.1	
Bus426	0.400		0	0	0	0	0	0	0	0	0.055	100.0	73.1	
Bus427	0.400		0	0	0	0	0	0	0	0	0.055	100.0	73.1	
Bus428	0.400		0	0	0	0	0	0	0	0	0.285	94.8	384.6	
Bus429	0.400		0	0	0	0	0	0	0	0	0.432	87.7	652.3	
Bus430	0.400		0	0	0	0	0	0	0	0	0.385	88.6	581.0	
Bus431	0.400		0	0	0	0	0	0	0	0	0.255	90.9	384.6	
Bus432	0.400		0	0	0	0	0	0	0	0	0.474	86.8	714.6	
Bus433	0.400		0	0	0	0	0	0	0	0	0.432	87.7	651.6	
Bus434	33.000		0	0	0	0	0	0	0	0	0.076	91.9	1.4	
Bus435	0.400		0.070	0.030	0	0	0	0	0	0	0.076	92.0	115.5	
Bus436	33.000		0	0	0	0	0	0	0	0	0.285	89.8	5.2	
Bus437	0.400		0.071	0.042	0	0	0	0	0	0	0.083	86.0	126.3	
Bus438	33.000		0	0	0	0	0	0	0	0	0.203	90.9	3.7	
Bus439	33.000		0	0	0	0	0	0	0	0	0.114	84.8	2.1	
Bus440	0.400		0.096	0.059	0	0	0	0	0	0	0.113	85.0	172.2	
Bus441	0.400		0.021	0.006	0	0	0	0	0	0	0.022	96.0	33.2	
Bus442	33.000		0	0	0	0	0	0	0	0	0.070	94.9	1.3	
Bus443	0.400		0.067	0.022	0	0	0	0	0	0	0.070	95.0	106.9	
Bus444	33.000		0	0	0	0	0	0	0	0	2.459	95.0	45.2	
Bus446	33.000		0	0	0	0	0	0	0	0	0.138	84.1	2.5	
Bus448	33.000		0	0	0	0	0	0	0	0	0.139	83.8	2.6	
Bus449	0.400		0.116	0.075	0	0	0	0	0	0	0.138	84.0	210.7	
Bus450	33.000		0	0	0	0	0	0	0	0	2.325	95.5	42.8	
Bus451	33.000		0	0	0	0	0	0	0	0	0.040	86.8	0.7	
Bus452	0.400		0.035	0.020	0	0	0	0	0	0	0.040	87.0	61.1	
Bus453	33.000		0	0	0	0	0	0	0	0	2.284	95.6	42.1	
Bus454	33.000		0	0	0	0	0	0	0	0	1.193	94.1	22.0	
Bus455	33.000		0	0	0	0	0	0	0	0	0.234	93.0	4.3	
Bus456	0.400		0.079	0.034	0	0	0	0	0	0	0.086	92.0	132.0	
Bus457	33.000		0	0	0	0	0	0	0	0	0.061	94.9	1.1	
Bus458	0.400		0.079	0.034	0	0	0	0	0	0	0.086	92.0	132.0	



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Bus			Directly Connected Load								Total Bus Load			
			Constant kVA		Constant Z		Constant I		Generic		MVA	% PF	Amp	Percent Loading
ID	kV	Rated Amp	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar				
Bus459	0.400		0.058	0.019	0	0	0	0	0	0	0.061	95.0	92.8	
Bus460	33.000		0	0	0	0	0	0	0	0	0.960	94.3	17.7	
Bus461	33.000		0	0	0	0	0	0	0	0	0.797	94.9	14.7	
Bus462	33.000		0	0	0	0	0	0	0	0	0.213	96.0	3.9	
Bus463	0.400		0.036	0.013	0	0	0	0	0	0	0.038	94.0	58.0	
Bus464	33.000		0	0	0	0	0	0	0	0	0.175	96.2	3.2	
Bus465	0.400		0.099	0.029	0	0	0	0	0	0	0.104	96.0	159.0	
Bus466	33.000		0	0	0	0	0	0	0	0	0.071	96.4	1.3	
Bus467	0.400		0.030	0.011	0	0	0	0	0	0	0.032	94.0	48.2	
Bus468	33.000		0	0	0	0	0	0	0	0	0.040	96.9	0.7	
Bus469	0.400		0.039	0.010	0	0	0	0	0	0	0.040	97.0	60.9	
Bus470	33.000		0	0	0	0	0	0	0	0	0.585	94.4	10.8	
Bus471	0.400		0.155	0.061	0	0	0	0	0	0	0.166	93.0	255.8	
Bus472	33.000		0	0	0	0	0	0	0	0	0.418	94.8	7.7	
Bus473	0.400		0.090	0.026	0	0	0	0	0	0	0.094	96.0	144.8	
Bus474	33.000		0	0	0	0	0	0	0	0	0.324	94.2	6.0	
Bus475	0.400		0.036	0.009	0	0	0	0	0	0	0.037	97.0	56.6	
Bus476	33.000		0	0	0	0	0	0	0	0	0.287	93.8	5.3	
Bus477	33.000		0	0	0	0	0	0	0	0	0.287	93.8	5.3	
Bus478	33.000		0	0	0	0	0	0	0	0	0.288	93.5	5.3	
Bus479	33.000		0	0	0	0	0	0	0	0	0.077	92.8	1.4	
Bus480	0.400		0.072	0.028	0	0	0	0	0	0	0.077	93.0	118.0	
Bus481	33.000		0	0	0	0	0	0	0	0	0.079	96.9	1.5	
Bus482	0.400		0.076	0.019	0	0	0	0	0	0	0.078	97.0	119.8	
Bus485	33.000		0	0	0	0	0	0	0	0	0.133	90.9	2.5	
Bus486	33.000		0	0	0	0	0	0	0	0	0.111	89.7	2.1	
Bus487	0.400		0.099	0.048	0	0	0	0	0	0	0.110	90.0	169.5	
Bus488	33.000		0	0	0	0	0	0	0	0	0.023	92.9	0.4	
Bus489	0.400		0.021	0.008	0	0	0	0	0	0	0.022	93.0	34.3	
Bus490	33.000		0	0	0	0	0	0	0	0	0.074	91.7	1.4	
Bus491	0.400		0.068	0.029	0	0	0	0	0	0	0.074	92.0	113.1	
Bus492	33.000		0	0	0	0	0	0	0	0	0.091	87.7	1.7	
Bus493	33.000		0	0	0	0	0	0	0	0	0.013	83.9	0.2	
Bus494	0.400		0.011	0.007	0	0	0	0	0	0	0.013	84.0	19.9	
Bus495	33.000		0	0	0	0	0	0	0	0	0.079	87.5	1.5	
Bus496	33.000		0	0	0	0	0	0	0	0	0.072	84.8	1.3	
Bus497	33.000		0	0	0	0	0	0	0	0	0.009	93.0	0.2	
Bus498	0.400		0.061	0.038	0	0	0	0	0	0	0.071	85.0	109.3	

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Bus			Directly Connected Load								Total Bus Load			
			Constant kVA		Constant Z		Constant I		Generic		MVA	% PF	Amp	Percent Loading
ID	kV	Rated Amp	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar				
Bus499	0.400		0.008	0.003	0	0	0	0	0	0	0.009	93.0	13.0	
Bus500	33.000		0	0	0	0	0	0	0	0	1.093	96.9	20.1	
Bus501	33.000		0	0	0	0	0	0	0	0	0.258	96.2	4.8	
Bus502	0.400		0.242	0.061	0	0	0	0	0	0	0.249	97.0	392.4	
Bus503	33.000		0	0	0	0	0	0	0	0	0.157	97.9	2.9	
Bus504	33.000		0	0	0	0	0	0	0	0	0.139	97.6	2.6	
Bus505	33.000		0	0	0	0	0	0	0	0	0.018	99.0	0.3	
Bus506	0.400		0.134	0.027	0	0	0	0	0	0	0.137	98.0	211.9	
Bus507	0.400		0.018	0.003	0	0	0	0	0	0	0.018	99.0	27.4	
Bus508	33.000		0	0	0	0	0	0	0	0	0.678	96.8	12.5	
Bus509	0.400		0.088	0.018	0	0	0	0	0	0	0.090	98.0	136.8	
Bus510	33.000		0	0	0	0	0	0	0	0	0.588	96.6	10.8	
Bus511	0.400		0.008	0.006	0	0	0	0	0	0	0.010	80.0	15.2	
Bus512	33.000		0	0	0	0	0	0	0	0	0.076	97.9	1.4	
Bus513	0.400		0.074	0.015	0	0	0	0	0	0	0.076	98.0	115.2	
Bus514	33.000		0	0	0	0	0	0	0	0	0.491	96.5	9.0	
Bus515	0.400		0.082	0.055	0	0	0	0	0	0	0.099	83.0	151.7	
Bus516	33.000		0	0	0	0	0	0	0	0	0.398	98.3	7.3	
Bus517	0.400		0.053	0.015	0	0	0	0	0	0	0.055	96.0	84.0	
Bus518	33.000		0	0	0	0	0	0	0	0	0.343	98.6	6.3	
Bus519	0.400		0.331	0.047	0	0	0	0	0	0	0.334	99.0	521.7	
Bus520	33.000		0	0	0	0	0	0	0	0	0.012	97.0	0.2	
Bus521	0.400		0.012	0.003	0	0	0	0	0	0	0.012	97.0	18.8	
Bus524	0.400		0	0	0	0	0	0	0	0	0.049	100.0	62.0	
Bus525	0.400		0	0	0	0	0	0	0	0	0.049	100.0	62.0	
Bus526	0.400		0	0	0	0	0	0	0	0	0.049	100.0	62.0	
Bus527	0.400		0	0	0	0	0	0	0	0	0.049	100.0	62.0	
Bus528	0.400		0	0	0	0	0	0	0	0	0.049	100.0	62.0	
Bus529	0.400		0	0	0	0	0	0	0	0	0.049	100.0	62.0	
Bus530	0.400		0	0	0	0	0	0	0	0	0.049	100.0	62.0	
Bus531	0.400		0	0	0	0	0	0	0	0	0.049	100.0	62.0	
Bus533	0.400		0	0	0	0	0	0	0	0	0.055	100.0	67.9	
Bus536	0.400		0	0	0	0	0	0	0	0	0.055	100.0	67.9	
Bus537	0.400		0	0	0	0	0	0	0	0	0.055	100.0	67.9	
Bus538	0.400		0	0	0	0	0	0	0	0	0.055	100.0	67.9	
Bus539	0.400		0	0	0	0	0	0	0	0	0.055	100.0	67.9	
Bus540	0.400		0	0	0	0	0	0	0	0	0.055	100.0	67.9	
Bus541	0.400		0	0	0	0	0	0	0	0	0.055	100.0	67.9	

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Bus			Directly Connected Load								Total Bus Load			
			Constant kVA		Constant Z		Constant I		Generic		MVA	% PF	Amp	Percent Loading
ID	kV	Rated Amp	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar				
Bus542	0.400		0	0	0	0	0	0	0	0	0.055	100.0	67.9	
Bus543	0.400		0	0	0	0	0	0	0	0	0.055	100.0	67.9	
Bus544	0.400		0	0	0	0	0	0	0	0	0.055	100.0	67.9	
Bus545	0.400		0	0	0	0	0	0	0	0	0.571	94.8	714.6	
Bus546	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus547	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus548	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus549	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus550	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus551	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus552	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus553	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus554	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus556	0.400		0	0	0	0	0	0	0	0	0.513	94.8	651.7	
Bus558	0.400		0	0	0	0	0	0	0	0	0.055	100.0	69.9	
Bus560	0.400		0	0	0	0	0	0	0	0	0.055	100.0	68.8	
Bus562	0.400		0	0	0	0	0	0	0	0	0.049	100.0	62.0	
Bus564	0.400		0	0	0	0	0	0	0	0	0.055	100.0	69.9	

\* Indicates operating load of a bus exceeds the bus critical limit ( 100.0% of the Continuous Ampere rating).

# Indicates operating load of a bus exceeds the bus marginal limit ( 95.0% of the Continuous Ampere rating).

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### Branch Loading Summary Report

CKT / Branch		Cable & Reactor			Transformer				
ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (MVA)	Loading (input)		Loading (output)	
						MVA	%	MVA	%
Cable1	Cable	307.50	2.52	0.82					
Cable2	Cable	217.71	2.82	1.30					
Cable3	Cable	217.71	1.87	0.86					
Cable4	Cable	217.71	1.18	0.54					
Cable5	Cable	217.71	1.24	0.57					
Cable7	Cable	217.71	2.58	1.18					
Cable8	Cable	217.71	1.58	0.72					
Cable44	Cable	106.42	72.41	68.04					
* Cable45	Cable	217.71	651.65	299.32					
Cable48	Cable	106.42	72.41	68.04					
Cable49	Cable	106.42	72.41	68.04					
Cable50	Cable	106.42	72.41	68.04					
Cable51	Cable	106.42	72.41	68.04					
Cable52	Cable	106.42	72.41	68.04					
Cable53	Cable	106.42	72.41	68.04					
Cable54	Cable	106.42	72.41	68.04					
Cable66	Cable	106.42	65.23	61.30					
Cable67	Cable	106.42	66.26	62.27					
Cable69	Cable	106.42	73.53	69.09					
Cable70	Cable	106.42	73.53	69.09					
Cable71	Cable	106.42	73.53	69.09					
Cable72	Cable	106.42	73.53	69.09					
Cable73	Cable	106.42	73.53	69.09					
Cable79	Cable	106.42	76.92	72.28					
Cable80	Cable	106.42	76.92	72.28					
Cable81	Cable	106.42	76.92	72.28					
Cable82	Cable	106.42	76.92	72.28					
Cable83	Cable	106.42	76.92	72.28					
Cable86	Cable	106.42	65.23	61.30					
Cable87	Cable	106.42	65.23	61.30					
Cable88	Cable	106.42	65.23	61.30					
Cable89	Cable	106.42	65.23	61.30					
Cable90	Cable	106.42	65.23	61.30					

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CKT / Branch		Cable & Reactor			Transformer				
ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (MVA)	Loading (input)		Loading (output)	
						MVA	%	MVA	%
Cable91	Cable	106.42	65.23	61.30					
Cable92	Cable	106.42	65.23	61.30					
Cable93	Cable	106.42	65.23	61.30					
Cable95	Cable	106.42	71.46	67.15					
Cable98	Cable	106.42	71.46	67.15					
Cable99	Cable	106.42	71.46	67.15					
Cable100	Cable	106.42	71.46	67.15					
Cable101	Cable	106.42	71.46	67.15					
Cable102	Cable	106.42	71.46	67.15					
Cable103	Cable	106.42	71.46	67.15					
Cable104	Cable	106.42	71.46	67.15					
Cable105	Cable	106.42	71.46	67.15					
Cable106	Cable	106.42	71.46	67.15					
Cable107	Cable	106.42	72.41	68.04					
Cable108	Cable	106.42	72.41	68.04					
Cable109	Cable	106.42	72.41	68.04					
Cable110	Cable	106.42	72.41	68.04					
Cable111	Cable	106.42	72.41	68.04					
Cable112	Cable	106.42	72.41	68.04					
Cable113	Cable	106.42	72.41	68.04					
Cable114	Cable	106.42	72.41	68.04					
Cable115	Cable	106.42	72.41	68.04					
Cable118	Cable	106.42	73.53	69.09					
* Cable120	Cable	217.71	652.31	299.63					
* Cable121	Cable	217.71	580.95	266.85					
* Cable122	Cable	217.71	384.60	176.66					
* Cable123	Cable	217.71	714.60	328.24					
* Cable124	Cable	217.71	651.65	299.32					
Cable126	Cable	106.42	72.41	68.04					
Cable128	Cable	106.42	65.23	61.30					
Cable130	Cable	106.42	73.53	69.09					
* Line2	Line	103.00	104.12	101.09					
* Line3	Line	0.50	0.62	123.21					
* Line4	Line	0.50	0.66	132.21					
* Line5	Line	102.20	103.57	101.34					

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CKT / Branch		Cable & Reactor			Transformer				
ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (MVA)	Loading (input)		Loading (output)	
						MVA	%	MVA	%
* Line6	Line	100.30	101.42	101.12					
* Line7	Line	100.00	101.01	101.01					
* Line8	Line	100.00	101.02	101.02					
* Line9	Line	100.00	101.04	101.04					
* Line10	Line	98.80	99.65	100.86					
* Line11	Line	97.60	98.19	100.61					
* Line12	Line	97.60	98.20	100.62					
* Line13	Line	97.30	97.88	100.59					
Line14	Line	21.30	16.82	78.97					
Line15	Line	20.10	14.90	74.11					
* Line16	Line	4.00	5.13	128.23					
* Line17	Line	2.70	3.46	128.22					
* Line18	Line	1.30	1.67	128.47					
* Line19	Line	1.30	1.67	128.66					
* Line20	Line	1.40	1.68	119.86					
Line21	Line	17.80	10.65	59.85					
Line22	Line	17.80	10.66	59.89					
Line23	Line	16.00	7.57	47.34					
* Line24	Line	0.60	0.71	118.50					
* Line25	Line	0.60	0.71	118.44					
* Line26	Line	0.50	0.55	109.56					
Line27	Line	15.60	7.11	45.56					
* Line28	Line	0.40	0.49	122.70					
Line29	Line	15.60	7.13	45.73					
Line30	Line	15.30	6.97	45.56					
* Line31	Line	2.10	2.80	133.57					
Line32	Line	15.10	7.72	51.13					
Line33	Line	15.10	8.21	54.37					
* Line34	Line	0.30	0.45	149.90					
* Line35	Line	0.10	0.13	132.52					
Line36	Line	15.40	10.28	66.75					
Line37	Line	15.80	12.14	76.84					
Line38	Line	15.80	12.49	79.02					
Line39	Line	15.80	12.49	79.04					
Line40	Line	66.00	12.49	18.92					

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ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (MVA)	Loading (input)		Loading (output)	
						MVA	%	MVA	%
Line41	Line	0.10	0.06	64.24					
Line42	Line	0.10	0.04	37.04					
Line44	Line	15.90	12.51	78.69					
Line45	Line	16.00	12.66	79.11					
Line46	Line	66.00	12.82	19.43					
Line47	Line	16.90	12.43	73.57					
Line48	Line	45.80	42.33	92.41					
Line49	Line	47.30	44.13	93.29					
Line50	Line	49.00	46.56	95.02					
* Line51	Line	2.10	2.60	123.89					
* Line52	Line	1.00	1.18	118.29					
Line53	Line	51.10	49.15	96.18					
Line54	Line	52.10	50.39	96.72					
Line55	Line	52.60	51.05	97.05					
Line56	Line	53.80	52.60	97.77					
* Line57	Line	4.10	5.19	126.63					
* Line58	Line	3.40	4.45	130.75					
* Line59	Line	11.40	57.53	504.63					
* Line60	Line	57.40	58.83	102.48					
* Line61	Line	1.30	1.55	119.05					
* Line62	Line	60.80	61.95	101.89					
* Line63	Line	0.40	0.52	130.28					
* Line64	Line	61.10	62.41	102.15					
Line65	Line	0.20	0.15	73.19					
* Line66	Line	61.20	62.53	102.18					
* Line67	Line	67.00	69.76	104.13					
* Line68	Line	0.20	0.31	156.69					
* Line69	Line	67.10	70.02	104.35					
* Line70	Line	0.30	0.43	144.70					
* Line71	Line	5.80	7.24	124.78					
* Line72	Line	0.90	1.08	120.09					
* Line73	Line	0.20	0.36	179.87					
* Line74	Line	5.20	6.16	118.52					
* Line75	Line	0.20	0.24	117.84					
* Line76	Line	3.40	4.27	125.48					

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ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (MVA)	Loading (input)		Loading (output)	
						MVA	%	MVA	%
* Line77	Line	3.00	3.61	120.33					
* Line78	Line	2.40	3.01	125.60					
* Line79	Line	1.00	1.32	131.90					
Line81	Line	36.90	30.69	83.18					
Line83	Line	38.60	30.69	79.52					
* Line84	Line	4.10	5.21	127.08					
* Line85	Line	3.00	3.85	128.19					
* Line86	Line	2.80	3.56	127.10					
* Line87	Line	2.80	3.56	127.17					
* Line88	Line	2.80	3.60	128.61					
* Line89	Line	2.20	2.75	124.89					
* Line90	Line	1.50	1.91	127.60					
* Line91	Line	1.50	1.92	127.89					
* Line92	Line	0.70	0.95	135.85					
Line93	Line	0.10	0.07	74.06					
Line94	Line	32.70	25.50	77.98					
Line95	Line	32.70	25.54	78.09					
Line96	Line	13.70	1.38	10.05					
* Line97	Line	19.10	24.22	126.81					
* Line98	Line	10.30	13.06	126.80					
* Line99	Line	4.60	5.77	125.41					
* Line100	Line	2.90	3.68	126.91					
* Line101	Line	2.00	2.52	126.17					
* Line102	Line	2.00	2.52	126.24					
* Line103	Line	5.80	7.32	126.13					
* Line104	Line	5.80	7.29	125.70					
* Line105	Line	5.10	6.47	126.80					
* Line106	Line	0.90	1.12	124.14					
* Line108	Line	0.90	1.12	124.93					
* Line109	Line	3.10	3.94	126.95					
* Line110	Line	2.80	3.54	126.42					
* Line111	Line	2.40	3.09	128.55					
* Line112	Line	1.30	1.60	122.73					
* Line113	Line	0.20	0.21	107.01					
* Line114	Line	8.90	11.21	125.92					



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ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (MVA)	Loading (input)		Loading (output)	
						MVA	%	MVA	%
* Line115	Line	0.90	1.08	119.70					
* Line116	Line	8.00	10.14	126.70					
* Line117	Line	6.60	8.44	127.92					
* Line118	Line	5.00	6.27	125.30					
* Line120	Line	2.30	2.97	129.02					
* Line121	Line	0.80	1.04	130.06					
* Line122	Line	1.80	2.30	127.84					
* Line123	Line	1.80	2.20	122.00					
* Line124	Line	0.40	0.55	137.99					
* Line125	Line	1.40	1.70	121.62					
* Line126	Line	1.40	1.69	120.69					
* Line127	Line	1.00	1.29	129.38					
* Line129	Line	80.00	81.12	101.40					
* Line130	Line	1.80	2.40	133.17					
* Line131	Line	78.20	78.98	100.99					
* Line132	Line	77.80	78.68	101.12					
* Line133	Line	75.20	75.70	100.67					
* Line134	Line	75.20	75.72	100.69					
* Line136	Line	72.60	72.92	100.44					
* Line137	Line	2.10	2.66	126.62					
Line138	Line	70.50	70.47	99.95					
Line139	Line	70.50	70.48	99.96					
* Line141	Line	0.60	0.71	117.62					
* Line142	Line	0.60	0.72	119.46					
* Line143	Line	0.50	0.65	129.44					
* Line144	Line	0.50	0.65	130.42					
* Line145	Line	15.30	19.46	127.22					
* Line146	Line	14.20	18.13	127.70					
* Line147	Line	0.50	0.64	127.42					
* Line148	Line	13.80	17.52	126.98					
* Line149	Line	13.00	16.62	127.88					
* Line150	Line	1.40	1.84	131.74					
* Line152	Line	10.80	13.76	127.40					
* Line153	Line	1.10	1.43	130.20					
* Line154	Line	0.70	0.91	130.58					

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ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (MVA)	Loading (input)		Loading (output)	
						MVA	%	MVA	%
* Line155	Line	9.00	11.43	126.99					
* Line156	Line	6.00	7.67	127.81					
* Line157	Line	3.80	4.93	129.72					
* Line158	Line	3.30	4.22	127.77					
* Line159	Line	2.20	2.88	130.99					
* Line160	Line	0.60	0.73	121.49					
* Line161	Line	72.60	72.91	100.43					
* Line162	Line	16.00	20.15	125.92					
* Line163	Line	11.60	14.78	127.46					
* Line164	Line	1.80	2.32	128.68					
* Line165	Line	1.80	2.33	129.26					
* Line167	Line	1.60	2.04	127.34					
* Line168	Line	0.20	0.30	149.14					
Line169	Line	0.20	0.17	84.94					
* Line171	Line	1.40	1.78	127.41					
* Line172	Line	1.20	1.57	131.14					
* Line173	Line	0.20	0.23	114.91					
Line175	Line	54.20	54.13	99.86					
Line176	Line	54.20	54.16	99.93					
* Line177	Line	1.00	1.29	128.64					
Line178	Line	53.30	53.13	99.68					
Line179	Line	0.10	0.06	61.61					
Line180	Line	53.20	53.10	99.81					
* Line182	Line	53.20	67.89	127.60					
* Line183	Line	51.50	65.75	127.67					
* Line184	Line	16.20	20.73	127.94					
* Line185	Line	12.20	15.51	127.09					
* Line186	Line	12.20	15.51	127.13					
* Line187	Line	11.00	14.13	128.44					
* Line188	Line	4.60	5.85	127.12					
* Line189	Line	2.20	2.80	127.09					
* Line190	Line	2.20	2.81	127.94					
* Line191	Line	0.50	0.65	129.49					
* Line195	Line	1.10	1.40	127.27					
* Line196	Line	4.10	5.24	127.73					

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ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (MVA)	Loading (input)		Loading (output)	
						MVA	%	MVA	%
* Line197	Line	3.00	3.73	124.23					
* Line198	Line	1.60	2.09	130.44					
* Line199	Line	1.00	1.30	129.62					
* Line200	Line	35.40	45.22	127.73					
* Line201	Line	2.00	2.54	127.21					
* Line202	Line	2.00	2.55	127.69					
* Line203	Line	33.50	42.77	127.67					
* Line204	Line	0.60	0.74	123.34					
* Line205	Line	33.00	42.06	127.45					
* Line206	Line	17.30	21.98	127.07					
* Line207	Line	3.40	4.31	126.73					
* Line208	Line	0.90	1.13	125.01					
* Line209	Line	13.80	17.69	128.20					
* Line210	Line	11.50	14.70	127.83					
* Line212	Line	2.60	3.23	124.34					
* Line213	Line	1.00	1.31	131.19					
* Line214	Line	0.60	0.74	123.01					
* Line215	Line	8.50	10.79	126.96					
* Line216	Line	6.10	7.71	126.38					
* Line217	Line	4.60	5.97	129.84					
* Line218	Line	4.10	5.29	129.04					
* Line219	Line	4.10	5.31	129.50					
* Line220	Line	1.10	1.43	130.00					
* Line221	Line	1.10	1.45	131.96					
* Line222	Line	1.90	2.45	129.16					
* Line223	Line	1.60	2.05	128.40					
* Line224	Line	0.30	0.42	138.77					
* Line225	Line	1.10	1.37	124.64					
* Line226	Line	1.30	1.68	129.17					
* Line227	Line	0.20	0.24	120.46					
* Line228	Line	1.10	1.45	131.99					
Line229	Line	0.20	0.16	78.87					
* Line230	Line	1.00	1.33	132.53					
* Line231	Line	15.80	20.13	127.41					
* Line232	Line	3.90	4.76	121.97					

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ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (MVA)	Loading (input)		Loading (output)	
						MVA	%	MVA	%
* Line233	Line	2.20	2.90	131.71					
* Line234	Line	0.20	0.33	166.26					
* Line235	Line	2.00	2.57	128.40					
* Line236	Line	9.90	12.49	126.14					
* Line237	Line	8.50	10.84	127.48					
* Line238	Line	1.10	1.40	126.96					
* Line239	Line	7.00	9.05	129.29					
* Line240	Line	5.80	7.33	126.46					
* Line241	Line	5.00	6.32	126.48					
* Line242	Line	0.20	0.23	114.07					
* Line243	Line	3.10	3.93	126.70					
Line43	Line	0.10	0.03	28.27					
3en zaya	Transformer				0.063	0.035	55.9	0.035	55.3
abo hameed	Transformer				0.396	0.139	35.1	0.138	34.7
abo khadeer	Transformer				0.157	0.095	60.6	0.094	59.8
* abo omar	Transformer				0.031	0.042	134.0	0.041	130.6
abo shehab	Transformer				0.396	0.189	47.7	0.187	47.3
abo shehadeh	Transformer				0.157	0.040	25.5	0.040	25.4
abo tareq	Transformer				0.396	0.037	9.4	0.037	9.4
abu omar	Transformer				0.251	0.184	73.2	0.181	72.1
administration college	Transformer				0.251	0.059	23.6	0.059	23.5
agricultural project	Transformer				0.396	0.083	21.0	0.083	20.9
al bassateen	Transformer				0.396	0.168	42.4	0.166	42.0
al hafria	Transformer				0.157	0.074	47.4	0.074	46.8
al kafeer main	Transformer				0.063	0.010	15.7	0.010	15.7
al-3een	Transformer				0.396	0.076	19.1	0.076	19.1
al-aqapeh	Transformer				0.251	0.036	14.4	0.036	14.4
al-ashqar stone cutter	Transformer				0.396	0.070	17.8	0.070	17.7
al-battman	Transformer				0.063	0.050	79.5	0.049	78.1
al-daqnya	Transformer				0.157	0.130	82.7	0.128	81.3
al-hawooz 1	Transformer				0.251	0.139	55.3	0.137	54.7
al-helal	Transformer				0.157	0.132	84.3	0.130	82.8
al-hesba	Transformer				0.157	0.038	24.3	0.038	24.2
al-kharaz	Transformer				0.101	0.040	39.8	0.040	39.4
al-masa3eed	Transformer				0.157	0.132	84.1	0.130	82.6

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ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (MVA)	Loading (input)		Loading (output)	
						MVA	%	MVA	%
al-mtalleh	Transformer				0.101	0.012	11.6	0.012	11.6
al-shareef	Transformer				0.396	0.090	22.7	0.090	22.6
al-thoghrah	Transformer				0.101	0.089	87.8	0.087	86.2
alBATTAH	Transformer				0.101	0.073	72.7	0.072	71.6
ALJALHOOM	Transformer				0.101	0.009	8.5	0.009	8.5
* ALMISHMAS	Transformer				0.157	0.157	100.1	0.154	97.9
alrass	Transformer				0.157	0.040	25.3	0.040	25.2
alrfaid	Transformer				0.157	0.150	95.3	0.146	93.3
amnawaqa2	Transformer				0.101	0.034	33.4	0.034	33.2
anabosa	Transformer				0.157	0.021	13.5	0.021	13.4
aqapeh main	Transformer				100.536	0.038	0.0	0.037	0.0
arciticular college	Transformer				0.251	0.069	27.5	0.069	27.3
ATOOF	Transformer				0.101	0.008	8.2	0.008	8.2
* AUU intersiction ZA	Transformer				0.040	0.076	191.2	0.075	190.4
beer al- basha	Transformer				0.251	0.098	39.0	0.097	38.7
burhan	Transformer				0.157	0.078	49.8	0.077	49.3
dawajen	Transformer				0.157	0.018	11.7	0.018	11.7
dewan	Transformer				0.251	0.119	47.4	0.118	46.9
dream land	Transformer				0.251	0.057	22.8	0.057	22.7
dream land 1	Transformer				0.396	0.044	11.2	0.044	11.2
dream land 2	Transformer				0.251	0.071	28.4	0.071	28.2
east jarpa	Transformer				0.101	0.087	86.2	0.085	84.6
east of raba	Transformer				0.157	0.052	33.4	0.052	33.1
eastern al-maghura	Transformer				0.157	0.077	49.3	0.077	48.8
eastren al-jalquoua	Transformer				0.101	0.024	24.1	0.024	24.0
eastren aqapa	Transformer				0.251	0.144	57.5	0.143	56.8
eastren beer basha	Transformer				0.157	0.075	47.6	0.074	47.1
eastren maslya	Transformer				0.251	0.087	34.7	0.087	34.5
eastren zababde	Transformer				0.396	0.117	29.6	0.116	29.4
eastren zawya	Transformer				0.101	0.018	17.7	0.018	17.6
esfalt	Transformer				0.396	0.001	0.3	0.001	0.3
essawi	Transformer				0.157	0.023	14.4	0.022	14.3
farah	Transformer				0.251	0.079	31.3	0.078	31.1
faysel well	Transformer				0.396	0.119	30.2	0.119	29.9
first of the town	Transformer				0.157	0.101	64.2	0.099	63.3

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ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (MVA)	Loading (input)		Loading (output)	
						MVA	%	MVA	%
gas station	Transformer				0.157	0.063	39.9	0.062	39.5
grand plaza DL	Transformer				0.157	0.056	36.0	0.056	35.7
hafreya	Transformer				0.063	0.036	57.8	0.036	57.3
HAKIM	Transformer				0.039	0.013	32.2	0.013	32.1
hawooz aqapa	Transformer				0.157	0.023	14.8	0.023	14.7
huseen al araj	Transformer				0.157	0.035	22.4	0.035	22.3
jarpa main	Transformer				0.251	0.094	37.6	0.094	37.3
karag	Transformer				0.157	0.114	72.9	0.113	71.7
kasaret abo asaad	Transformer				0.251	0.072	28.6	0.071	28.4
kazeya	Transformer				0.251	0.105	41.6	0.104	41.3
kazeyt samara	Transformer				0.251	0.022	8.7	0.022	8.7
keshda main	Transformer				0.031	0.003	10.7	0.003	10.7
khalet al qaser 1	Transformer				0.251	0.231	91.9	0.225	89.8
khalet al qaser 2	Transformer				0.396	0.070	17.8	0.070	17.7
khalt el looz	Transformer				0.101	0.004	4.1	0.004	4.1
khrrpet aisha	Transformer				0.031	0.002	6.1	0.002	6.1
mahajeer 1	Transformer				0.396	0.014	3.4	0.014	3.4
mahta	Transformer				0.251	0.191	76.0	0.188	74.8
main om toot	Transformer				0.251	0.062	24.6	0.061	24.4
malhamah	Transformer				0.396	0.010	2.5	0.010	2.5
mamdooh	Transformer				0.251	0.077	30.9	0.077	30.6
manasheer meselya	Transformer				0.396	0.039	9.8	0.039	9.8
manasheer ZA	Transformer				157.087	0.019	0.0	0.019	0.0
marah karas	Transformer				0.063	0.026	41.3	0.026	40.9
masalya	Transformer				0.063	0.045	71.7	0.044	70.7
masria	Transformer				0.063	0.038	60.8	0.038	60.0
masriya	Transformer				0.396	0.092	23.3	0.092	23.2
mass stone	Transformer				0.396	0.022	5.5	0.022	5.5
* mass stones	Transformer				0.040	0.070	177.5	0.070	176.7
MAWAFAQ FAKHRY	Transformer				0.396	0.086	21.7	0.085	21.6
mawfak al-fakhry	Transformer				0.396	0.076	19.2	0.076	19.1
middle jalqumya	Transformer				0.251	0.080	31.9	0.079	31.6
middle of raba	Transformer				0.157	0.054	34.5	0.054	34.2
middle zababdeh	Transformer				0.251	0.137	54.5	0.135	53.9
midecin	Transformer				0.396	0.064	16.2	0.064	16.2

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ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (MVA)	Loading (input)		Loading (output)	
						MVA	%	MVA	%
midical harps	Transformer				0.101	0.025	25.2	0.025	25.0
mo2ayad fridges	Transformer				0.226	0.074	32.9	0.074	32.7
mohafada	Transformer				0.157	0.035	22.2	0.035	22.1
mohammad al basher	Transformer				0.396	0.318	80.2	0.311	78.6
national security	Transformer				0.101	0.080	78.8	0.078	77.6
* old station	Transformer				0.251	0.343	136.7	0.334	133.2
pickle factory	Transformer				0.251	0.070	28.0	0.070	27.8
plastic factory	Transformer				0.157	0.029	18.7	0.029	18.6
police	Transformer				0.157	0.056	36.0	0.056	35.7
princec palce	Transformer				0.157	0.076	48.6	0.076	48.2
rahwa	Transformer				0.251	0.047	18.7	0.047	18.6
rahwa.	Transformer				0.063	0.047	75.5	0.047	74.2
RAS AL-MATTALEH	Transformer				0.101	0.017	16.7	0.017	16.6
refat	Transformer				0.251	0.087	34.6	0.086	34.3
refat 2	Transformer				0.251	0.087	34.6	0.086	34.3
registration bulding	Transformer				0.396	0.094	23.8	0.094	23.6
royal	Transformer				0.396	0.087	21.8	0.086	21.8
safeena	Transformer				0.251	0.061	24.3	0.061	24.2
safya north	Transformer				0.157	0.027	17.2	0.027	17.2
salhab	Transformer				0.063	0.007	11.6	0.007	11.6
sameeh abo khezaran	Transformer				0.251	0.012	4.9	0.012	4.9
sameeh.	Transformer				0.157	0.020	12.7	0.020	12.7
sameer motlaq	Transformer				0.251	0.111	44.3	0.110	43.9
school	Transformer				0.251	0.032	12.6	0.032	12.6
school.	Transformer				0.157	0.139	88.8	0.137	87.2
sefferya zababdeh	Transformer				0.157	0.068	43.5	0.068	43.1
shcool maraqa	Transformer				0.251	0.096	38.1	0.095	37.8
shcool zababdeh	Transformer				0.157	0.103	65.6	0.102	64.7
shereen	Transformer				0.101	0.036	35.4	0.035	35.1
span	Transformer				0.063	0.009	14.7	0.009	14.7
sport stidium 1	Transformer				0.628	0.063	10.1	0.063	10.0
sport stidium 2	Transformer				0.628	0.063	10.1	0.063	10.0
stadium	Transformer				0.157	0.055	35.2	0.055	34.9
stone cutter	Transformer				157.087	0.030	0.0	0.030	0.0
* T1	Transformer				0.396	0.432	109.1	0.431	108.8

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CKT / Branch		Cable & Reactor			Transformer				
ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (MVA)	Loading (input)		Loading (output)	
						MVA	%	MVA	%
* T2	Transformer				0.396	0.432	109.2	0.431	109.0
T3	Transformer				0.396	0.385	97.3	0.384	97.0
T4	Transformer				15.709	5.715	36.4	5.620	35.8
* T6	Transformer				0.251	0.255	101.8	0.254	101.4
* T7	Transformer				0.396	0.474	119.6	0.473	119.4
* T8	Transformer				0.396	0.432	109.1	0.431	108.8
T63	Transformer				0.396				
tayseer main	Transformer				157.087	0.137	0.1	0.134	0.1
thiab	Transformer				0.396	0.114	28.7	0.113	28.5
* tlfeet	Transformer				0.063	0.076	120.5	0.074	118.3
tneen main	Transformer				0.101	0.030	30.0	0.030	29.9
toop factory	Transformer				0.251	0.091	36.1	0.090	35.9
tubas hospital 2	Transformer				0.396	0.154	39.0	0.153	38.6
tubas weel	Transformer				0.157	0.146	92.9	0.143	90.9
tubas well	Transformer				0.251	0.018	7.2	0.018	7.2
tupas hospital 1	Transformer				0.396	0.001	0.3	0.001	0.3
wadi al efsha	Transformer				0.031	0.008	26.4	0.008	26.3
wadi d3oqa	Transformer				0.063	0.020	32.5	0.020	32.2
wastren al-maghayer	Transformer				0.157	0.082	52.2	0.081	51.6
water pumb	Transformer				0.251	0.013	5.3	0.013	5.3
* weastern	Transformer				0.157	0.258	164.5	0.249	158.8
weel	Transformer				0.396	0.050	12.6	0.050	12.6
weels	Transformer				0.396	0.248	62.5	0.244	61.6
well	Transformer				0.251	0.100	39.7	0.099	39.3
west 1 AUU	Transformer				0.251	0.076	30.3	0.076	30.1
west 2 AUU	Transformer				0.396	0.064	16.2	0.064	16.2
westren jalqnosa	Transformer				0.101	0.046	45.5	0.046	45.1
westren maslya	Transformer				0.251	0.073	29.2	0.073	29.0
westren zababdeh	Transformer				0.251	0.084	33.4	0.083	33.1
westren zayah 2	Transformer				0.157	0.025	15.8	0.025	15.8
westwern aqapa	Transformer				0.251	0.145	57.8	0.143	57.0
yaseed east	Transformer				0.157	0.013	8.3	0.013	8.3
yaseed west	Transformer				0.157	0.009	5.4	0.009	5.4
zakarnch 1	Transformer				0.396	0.001	0.3	0.001	0.3

\* Indicates a branch with operating load exceeding the branch capability.



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### Branch Losses Summary Report

CKT / Branch		From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd
ID		MW	Mvar	MW	Mvar	kW	kvar	From	To	% Drop in Vmag
Line2		4.394	4.013	-4.394	-4.013	0.8	0.3	100.0	100.0	0.01
Line3		0.031	0.017	-0.031	-0.017	0.0	-0.2	100.0	100.0	0.00
Line5		4.363	3.997	-4.359	-3.989	4.1	7.1	100.0	99.8	0.17
Line4		0.031	0.017	-0.031	-0.022	0.0	-4.9	100.0	100.0	0.01
aqapeh main		0.031	0.022	-0.031	-0.021	0.2	0.3	100.0	99.1	0.88
Line6		4.229	3.945	-4.192	-3.931	37.3	14.2	99.8	99.1	0.69
tayseer main		0.129	0.044	-0.128	-0.042	1.7	2.5	99.8	98.1	1.73
Line7		4.168	3.922	-4.165	-3.921	3.1	1.2	99.1	99.1	0.06
midical harps		0.024	0.009	-0.024	-0.009	0.1	0.1	99.1	98.6	0.52
Line8		4.165	3.921	-4.160	-3.919	5.3	2.0	99.1	99.0	0.10
T4		4.160	3.919	-4.153	-3.786	6.7	133.2	99.0	97.3	1.65
Line9		4.153	3.786	-4.139	-3.780	14.5	5.6	97.3	97.1	0.27
Line10		4.053	3.757	-4.036	-3.751	16.9	6.5	97.1	96.7	0.32
al-thoghrah		0.086	0.023	-0.084	-0.021	1.2	1.7	97.1	95.4	1.70
Line11		3.949	3.725	-3.940	-3.721	9.2	3.5	96.7	96.6	0.17
toop factory		0.087	0.026	-0.086	-0.025	0.5	0.7	96.7	96.0	0.72
Line12		3.940	3.721	-3.934	-3.719	5.7	2.1	96.6	96.5	0.11
Line13		3.915	3.713	-3.913	-3.712	2.7	1.0	96.5	96.4	0.05
sameeh.		0.019	0.006	-0.019	-0.006	0.0	0.1	96.5	96.2	0.26
Line14		0.717	0.587	-0.717	-0.587	0.3	-0.9	96.4	96.4	0.03
Line129		3.196	3.125	-3.196	-3.125	0.3	0.2	96.4	96.4	0.01
Line15		0.608	0.550	-0.608	-0.551	0.1	-0.4	96.4	96.4	0.01
karag		0.108	0.037	-0.107	-0.035	1.3	1.9	96.4	94.9	1.50
Line16		0.274	0.069	-0.274	-0.069	0.0	-0.5	96.4	96.4	0.00
Line21		0.334	0.482	-0.334	-0.482	0.0	-0.3	96.4	96.4	0.01
Line17		0.184	0.049	-0.184	-0.049	0.0	-0.4	96.4	96.4	0.00
Line18		0.090	0.021	-0.090	-0.021	0.0	-0.2	96.4	96.4	0.00
mahta		0.184	0.049	-0.182	-0.046	2.2	3.3	96.4	94.9	1.47
Line19		0.090	0.021	-0.090	-0.022	0.0	-0.6	96.4	96.4	0.00
Line20		0.090	0.022	-0.090	-0.023	0.0	-1.2	96.4	96.4	0.00
masriya		0.090	0.023	-0.089	-0.022	0.3	0.5	96.4	95.9	0.45
Line22		0.334	0.482	-0.334	-0.483	0.0	-0.4	96.4	96.4	0.01
Cable1		0.130	0.031	-0.130	-0.049	0.0	-17.3	96.4	96.3	0.00
Line23		0.079	0.408	-0.079	-0.410	0.1	-1.3	96.4	96.3	0.01
al-helal		0.125	0.043	-0.123	-0.041	1.7	2.5	96.4	94.6	1.74

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CKT / Branch ID	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	MW	Mvar	MW	Mvar	kW	kvar	From	To	
al-hawooz 1	0.130	0.049	-0.129	-0.047	1.2	1.7	96.3	95.2	1.16
Line24	0.039	-0.003	-0.039	0.002	0.0	-0.3	96.3	96.3	0.00
Line27	-0.086	0.379	0.086	-0.382	0.1	-2.9	96.3	96.3	0.01
al-daqnya	0.125	0.033	-0.124	-0.031	1.6	2.4	96.3	94.7	1.61
Line25	0.039	-0.002	-0.039	0.000	0.0	-2.6	96.3	96.3	0.00
Line26	0.030	-0.002	-0.030	0.000	0.0	-2.3	96.3	96.3	0.00
span	0.009	0.002	-0.009	-0.002	0.0	0.0	96.3	96.1	0.28
stone cutter	0.030	0.000	-0.030	0.000	0.1	0.1	96.3	96.1	0.28
Line28	0.026	0.006	-0.026	-0.008	0.0	-1.8	96.3	96.3	0.00
Line29	-0.112	0.376	0.112	-0.377	0.0	-0.5	96.3	96.3	0.00
safya north	0.026	0.008	-0.026	-0.008	0.1	0.1	96.3	96.0	0.34
Line30	-0.142	0.356	0.142	-0.357	0.0	-0.3	96.3	96.3	0.00
al-aqapeh	0.030	0.020	-0.030	-0.020	0.1	0.1	96.3	96.0	0.35
Cable2	0.140	0.039	-0.140	-0.068	0.0	-29.4	96.3	96.3	0.00
Line32	-0.281	0.318	0.281	-0.319	0.0	-0.7	96.3	96.3	0.00
Line31	0.139	0.068	-0.139	-0.068	0.0	-0.2	96.3	96.3	0.00
tupas hospital 1	0.001	0.000	-0.001	0.000	0.0	0.0	96.3	96.3	0.00
tubas hospital 2	0.139	0.068	-0.138	-0.067	0.9	1.4	96.3	95.4	0.88
Line33	-0.339	0.295	0.340	-0.298	0.2	-3.1	96.3	96.4	0.02
gas station	0.058	0.023	-0.058	-0.023	0.4	0.6	96.3	95.5	0.86
Line34	0.024	0.004	-0.024	-0.006	0.0	-2.4	96.4	96.3	0.00
Line36	-0.503	0.258	0.503	-0.259	0.1	-1.3	96.4	96.4	0.01
eastren aqapa	0.140	0.037	-0.138	-0.035	1.2	1.9	96.4	95.2	1.11
Line35	0.007	-0.001	-0.007	-0.002	0.0	-3.0	96.3	96.3	0.00
dawajen	0.017	0.007	-0.017	-0.007	0.0	0.0	96.3	96.1	0.26
salhab	0.007	0.002	-0.007	-0.002	0.0	0.0	96.3	96.1	0.23
Line37	-0.636	0.201	0.637	-0.205	0.6	-4.1	96.4	96.4	0.07
westwern aqapa	0.133	0.058	-0.132	-0.056	1.3	1.9	96.4	95.1	1.26
Line38	-0.659	0.198	0.659	-0.199	0.1	-0.6	96.4	96.4	0.01
hawooz aqapa	0.022	0.007	-0.022	-0.007	0.1	0.1	96.4	96.1	0.30
Line39	-0.659	0.199	0.659	-0.199	0.1	-0.4	96.4	96.5	0.01
Line40	-0.659	0.199	0.659	-0.199	0.1	-0.4	96.5	96.5	0.01
Line41	0.000	-0.004	0.000	0.002	0.0	-1.5	96.5	96.5	0.00
Line44	-0.659	0.203	0.659	-0.203	0.1	-0.4	96.5	96.5	0.01
Line42	0.000	-0.002	0.000	0.002	0.0	-0.5	96.5	96.5	0.00
Line43	0.000	-0.002	0.000	0.000	0.0	-1.6	96.5	96.5	0.00
Line45	-0.668	0.199	0.668	-0.202	0.0	-2.2	96.5	96.5	0.00

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CKT / Branch ID	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	MW	Mvar	MW	Mvar	kW	kvar	From	To	
al kafeer main	0.009	0.004	-0.009	-0.004	0.0	0.0	96.5	96.1	0.35
Line46	-0.679	0.193	0.680	-0.196	0.5	-2.8	96.5	96.5	0.05
mahajeer 1	0.011	0.008	-0.011	-0.008	0.0	0.0	96.5	96.3	0.21
Line47	-0.681	0.079	0.681	-0.080	0.1	-0.9	96.5	96.5	0.02
eastren zababdeh	0.002	0.117	-0.001	-0.116	0.5	0.8	96.5	95.9	0.65
Line48	-2.295	-0.434	2.295	0.434	0.6	-0.1	96.5	96.6	0.03
Line81	1.613	0.514	-1.613	-0.515	0.6	-0.4	96.5	96.5	0.04
Cable3	0.099	0.014	-0.099	-0.030	0.0	-15.8	96.6	96.6	0.00
Line49	-2.394	-0.449	2.395	0.448	0.7	-0.1	96.6	96.6	0.03
shcool zababdeh	0.099	0.030	-0.098	-0.028	1.0	1.5	96.6	95.3	1.31
Line50	-2.521	-0.500	2.522	0.500	0.6	0.0	96.6	96.6	0.02
middle zababdeh	0.127	0.051	-0.126	-0.050	1.1	1.7	96.6	95.4	1.17
Line51	0.143	0.017	-0.143	-0.017	0.0	-0.2	96.6	96.6	0.00
Line53	-2.665	-0.517	2.667	0.517	2.8	0.1	96.6	96.7	0.11
Cable4	0.064	-0.012	-0.064	-0.012	0.0	-24.2	96.6	96.6	0.00
westren zababdeh	0.079	0.029	-0.078	-0.028	0.4	0.6	96.6	95.9	0.70
Line52	0.064	0.012	-0.064	-0.013	0.0	-0.4	96.6	96.6	0.00
Cable5	0.064	0.013	-0.064	-0.024	0.0	-11.0	96.6	96.6	0.00
sefferya zababdeh	0.064	0.024	-0.064	-0.023	0.4	0.7	96.6	95.7	0.91
Line54	-2.736	-0.527	2.749	0.528	13.0	0.8	96.7	97.2	0.49
arciticular college	0.068	0.010	-0.068	-0.010	0.3	0.4	96.7	96.2	0.48
Line55	-2.783	-0.546	2.788	0.546	4.9	0.3	97.2	97.4	0.18
manasheer meselya	0.035	0.018	-0.035	-0.018	0.1	0.1	97.2	97.0	0.22
Line56	-2.873	-0.568	2.875	0.568	2.6	0.2	97.4	97.5	0.09
eastren maslya	0.084	0.022	-0.084	-0.021	0.4	0.7	97.4	96.7	0.66
Line57	0.250	0.143	-0.250	-0.145	0.0	-1.7	97.5	97.5	0.02
Line59	-3.126	-0.711	3.126	0.711	0.2	0.0	97.5	97.5	0.01
Line58	0.207	0.132	-0.207	-0.136	0.1	-3.8	97.5	97.4	0.03
masalya	0.043	0.013	-0.043	-0.012	0.5	0.7	97.5	96.0	1.42
weels	0.207	0.136	-0.205	-0.132	2.3	3.4	97.4	96.0	1.48
Line60	-3.194	-0.738	3.222	0.743	28.4	4.8	97.5	98.4	0.92
westren maslya	0.068	0.027	-0.068	-0.027	0.3	0.5	97.5	96.9	0.62
Line61	0.081	0.032	-0.081	-0.033	0.0	-1.4	98.4	98.4	0.00
Line62	-3.387	-0.816	3.391	0.817	3.1	0.6	98.4	98.5	0.10
jarpa main	0.085	0.042	-0.084	-0.041	0.5	0.8	98.4	97.6	0.83
east jarpa	0.081	0.033	-0.079	-0.031	1.1	1.6	98.4	96.6	1.83
Line63	0.023	0.018	-0.023	-0.018	0.0	-0.3	98.5	98.5	0.00

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CKT / Branch ID	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	MW	Mvar	MW	Mvar	kW	kvar	From	To	
Line64	-3.413	-0.835	3.431	0.839	17.8	3.6	98.5	99.1	0.54
plastic factory	0.023	0.018	-0.023	-0.018	0.1	0.1	98.5	98.1	0.45
Line65	0.008	0.001	-0.008	-0.002	0.0	-0.6	99.1	99.1	0.00
Line66	-3.439	-0.840	3.443	0.841	3.7	0.7	99.1	99.2	0.11
wadi al efsHa	0.008	0.002	-0.008	-0.002	0.0	0.0	99.1	98.6	0.50
Line67	-3.842	-0.936	3.866	0.942	24.3	6.2	99.2	99.8	0.66
Line71	0.399	0.095	-0.399	-0.095	0.0	-0.7	99.2	99.2	0.01
Line68	0.014	0.010	-0.014	-0.011	0.0	-1.2	99.8	99.8	0.00
Line69	-3.880	-0.952	3.887	0.953	6.3	1.6	99.8	100.0	0.17
eastren zawya	0.014	0.011	-0.014	-0.011	0.0	0.1	99.8	99.4	0.43
Line70	0.024	0.005	-0.024	-0.006	0.0	-1.0	100.0	100.0	0.00
3en zaya	0.034	0.009	-0.034	-0.008	0.3	0.4	100.0	99.0	1.04
westren zayah 2	0.024	0.006	-0.024	-0.006	0.1	0.1	100.0	99.7	0.29
Line72	0.059	0.014	-0.059	-0.015	0.0	-0.3	99.2	99.2	0.00
Line74	0.339	0.081	-0.339	-0.083	0.0	-1.3	99.2	99.1	0.01
Line73	0.019	0.003	-0.019	-0.008	0.0	-4.2	99.2	99.2	0.00
abo omar	0.041	0.011	-0.040	-0.010	0.8	1.2	99.2	96.6	2.54
wadi d3oqa	0.019	0.008	-0.019	-0.007	0.1	0.1	99.2	98.5	0.68
Line75	0.013	0.000	-0.013	-0.003	0.0	-3.4	99.1	99.1	0.00
Line76	0.234	0.059	-0.234	-0.061	0.0	-2.3	99.1	99.1	0.02
shcool maraqa	0.093	0.024	-0.092	-0.023	0.5	0.8	99.1	98.4	0.72
water pumb	0.013	0.003	-0.013	-0.003	0.0	0.0	99.1	99.0	0.10
Line77	0.199	0.046	-0.199	-0.048	0.0	-2.0	99.1	99.1	0.01
masria	0.035	0.015	-0.035	-0.015	0.3	0.5	99.1	97.8	1.29
Line78	0.163	0.047	-0.162	-0.052	0.0	-5.0	99.1	99.1	0.03
hafreya	0.036	0.000	-0.036	0.000	0.3	0.4	99.1	98.3	0.82
Line79	0.068	0.028	-0.068	-0.031	0.0	-3.4	99.1	99.1	0.01
beer al- basha	0.095	0.024	-0.094	-0.024	0.5	0.8	99.1	98.4	0.73
eastren beer basha	0.068	0.031	-0.067	-0.031	0.5	0.8	99.1	98.1	1.03
Line83	1.613	0.515	-1.612	-0.515	0.2	-0.2	96.5	96.5	0.01
Line84	0.267	0.105	-0.267	-0.105	0.0	-0.3	96.5	96.5	0.00
Line94	1.345	0.410	-1.345	-0.410	0.2	-0.2	96.5	96.5	0.01
Line85	0.198	0.075	-0.198	-0.077	0.0	-1.2	96.5	96.5	0.01
AUU intersiction ZA	0.070	0.030	-0.069	-0.030	0.2	0.3	96.5	96.1	0.42
Line86	0.183	0.065	-0.183	-0.072	0.1	-7.0	96.5	96.4	0.04
manasheer ZA	0.015	0.012	-0.015	-0.012	0.0	0.1	96.5	96.2	0.30
Line87	0.183	0.072	-0.183	-0.072	0.0	-0.3	96.4	96.4	0.00

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CKT / Branch		From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
ID		MW	Mvar	MW	Mvar	kW	kvar	From	To	
Line88		0.183	0.076	-0.183	-0.078	0.0	-1.8	96.4	96.4	0.01
Line93		0.000	-0.004	0.000	0.000	0.0	-4.1	96.4	96.4	0.00
Line89		0.139	0.059	-0.139	-0.060	0.0	-1.0	96.4	96.4	0.00
rahwa.		0.043	0.019	-0.043	-0.018	0.5	0.8	96.4	94.8	1.65
Line90		0.096	0.041	-0.096	-0.043	0.0	-2.2	96.4	96.4	0.01
rahwa		0.043	0.018	-0.043	-0.018	0.1	0.2	96.4	96.0	0.41
Line91		0.096	0.043	-0.096	-0.044	0.0	-0.6	96.4	96.4	0.00
Line92		0.048	0.019	-0.048	-0.021	0.0	-1.7	96.4	96.4	0.00
middle of raba		0.048	0.025	-0.048	-0.024	0.3	0.4	96.4	95.6	0.79
east of raba		0.048	0.021	-0.048	-0.020	0.3	0.4	96.4	95.7	0.73
T63		0.000	0.000	0.000	0.000			96.4	96.4	0.00
Line95		1.345	0.410	-1.341	-0.415	4.1	-4.8	96.5	96.2	0.31
Line96		0.076	0.002	-0.076	-0.002	0.0	-0.3	96.2	96.2	0.00
Line97		1.265	0.413	-1.265	-0.414	0.5	-0.6	96.2	96.1	0.04
tlfeet		0.076	0.002	-0.074	0.000	1.4	2.1	96.2	94.4	1.78
Line98		0.692	0.187	-0.692	-0.188	0.1	-0.9	96.1	96.1	0.02
Line114		0.572	0.227	-0.572	-0.227	0.1	-0.5	96.1	96.1	0.01
Line99		-0.305	-0.088	0.305	0.087	0.0	-0.4	96.1	96.1	0.00
Line100		0.191	0.067	-0.191	-0.067	0.0	-0.3	96.1	96.1	0.00
dream land 1		0.044	0.006	-0.044	-0.006	0.1	0.1	96.1	95.9	0.20
dream land 2		0.070	0.015	-0.069	-0.014	0.3	0.5	96.1	95.6	0.53
Line101		0.133	0.039	-0.133	-0.039	0.0	-0.2	96.1	96.1	0.00
midecin		0.058	0.028	-0.058	-0.028	0.2	0.2	96.1	95.7	0.37
Line102		0.133	0.039	-0.133	-0.039	0.0	-0.3	96.1	96.1	0.00
west 1 AUU		0.075	0.011	-0.075	-0.011	0.3	0.5	96.1	95.6	0.53
west 2 AUU		0.058	0.028	-0.058	-0.028	0.2	0.2	96.1	95.7	0.37
Line103		0.388	0.101	-0.388	-0.105	0.2	-4.5	96.1	96.0	0.06
Line104		0.386	0.105	-0.386	-0.107	0.1	-1.7	96.0	96.0	0.02
khrrpet aisha		0.002	0.000	-0.002	0.000	0.0	0.0	96.0	96.0	0.04
Line105		0.341	0.097	-0.341	-0.100	0.1	-2.3	96.0	96.0	0.03
westren jalqnosa		0.045	0.010	-0.045	-0.009	0.3	0.5	96.0	95.2	0.85
Line106		0.058	0.015	-0.058	-0.020	0.0	-5.3	96.0	96.0	0.01
Line109		0.207	0.059	-0.207	-0.062	0.0	-2.6	96.0	96.0	0.02
middle jalqumya		0.076	0.025	-0.075	-0.025	0.4	0.6	96.0	95.3	0.66
Line108		0.058	0.020	-0.058	-0.021	0.0	-1.2	96.0	96.0	0.00
main om toot		0.058	0.021	-0.058	-0.021	0.2	0.3	96.0	95.5	0.52
Line110		0.188	0.047	-0.188	-0.049	0.0	-2.6	96.0	96.0	0.02

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CKT / Branch ID	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	MW	Mvar	MW	Mvar	kW	kvar	From	To	
eastren al-jalquoua	0.019	0.015	-0.019	-0.015	0.1	0.1	96.0	95.4	0.61
Line111	0.163	0.043	-0.163	-0.047	0.0	-3.8	96.0	95.9	0.02
marah karas	0.025	0.006	-0.025	-0.006	0.2	0.2	96.0	95.2	0.80
Line112	0.084	0.023	-0.084	-0.024	0.0	-0.9	95.9	95.9	0.00
wastren al-maghayer	0.078	0.024	-0.078	-0.023	0.6	1.0	95.9	94.9	1.05
Line113	0.011	-0.001	-0.011	-0.004	0.0	-5.3	95.9	95.9	0.00
eastern al-maghura	0.073	0.025	-0.073	-0.024	0.6	0.9	95.9	94.9	1.02
al-mtalleh	0.011	0.004	-0.011	-0.004	0.0	0.0	95.9	95.7	0.25
Line115	0.055	0.022	-0.055	-0.022	0.0	-0.3	96.1	96.1	0.00
Line116	0.517	0.205	-0.517	-0.206	0.1	-0.7	96.1	96.1	0.01
administration college	0.055	0.022	-0.055	-0.022	0.2	0.3	96.1	95.6	0.51
Line117	0.426	0.183	-0.426	-0.183	0.0	-0.3	96.1	96.1	0.00
registration bulding	0.091	0.023	-0.091	-0.023	0.3	0.5	96.1	95.6	0.46
Line118	0.314	0.139	-0.314	-0.140	0.0	-1.2	96.1	96.1	0.01
Line123	0.112	0.044	-0.112	-0.046	0.0	-1.3	96.1	96.1	0.00
Cable7	0.140	0.000	-0.140	-0.021	0.0	-21.2	96.1	96.1	0.00
Line120	0.099	0.129	-0.099	-0.130	0.0	-0.7	96.1	96.1	0.00
princec palce	0.075	0.012	-0.075	-0.011	0.6	0.8	96.1	95.2	0.85
Cable8	0.085	0.009	-0.085	-0.018	0.0	-8.4	96.1	96.1	0.00
grand plaza DL	0.055	0.012	-0.055	-0.011	0.3	0.5	96.1	95.4	0.67
royal	0.085	0.018	-0.084	-0.017	0.3	0.4	96.1	95.7	0.41
Line121	0.056	0.011	-0.056	-0.012	0.0	-0.6	96.1	96.1	0.00
Line122	0.043	0.119	-0.043	-0.119	0.0	-0.3	96.1	96.1	0.00
dream land	0.056	0.012	-0.056	-0.011	0.2	0.3	96.1	95.7	0.42
sport stidum 1	0.021	0.059	-0.021	-0.059	0.1	0.2	96.1	95.8	0.33
sport stidum 2	0.021	0.059	-0.021	-0.059	0.1	0.2	96.1	95.8	0.33
Line124	0.030	0.003	-0.030	-0.004	0.0	-1.2	96.1	96.1	0.00
Line125	0.082	0.042	-0.082	-0.046	0.0	-3.2	96.1	96.1	0.01
tneen main	0.030	0.004	-0.030	-0.004	0.1	0.2	96.1	95.6	0.53
Line126	0.081	0.045	-0.081	-0.046	0.0	-0.7	96.1	96.1	0.00
esfalt	0.001	0.000	-0.001	0.000	0.0	0.0	96.1	96.1	0.01
Line127	0.061	0.037	-0.061	-0.037	0.0	-0.2	96.1	96.1	0.00
mass stone	0.020	0.009	-0.020	-0.009	0.0	0.0	96.1	96.0	0.12
Line244	0.001	0.000	-0.001	0.000	0.0	-0.6	96.1	96.1	0.00
mass stones	0.060	0.037	-0.059	-0.037	0.2	0.3	96.1	95.7	0.42
zakarneh 1	0.001	0.000	-0.001	0.000	0.0	0.0	96.1	96.1	0.01
Line130	0.125	0.042	-0.125	-0.043	0.0	-0.6	96.4	96.4	0.00

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CKT / Branch ID	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	MW	Mvar	MW	Mvar	kW	kvar	From	To	
Line131	3.071	3.083	-3.069	-3.082	1.2	0.4	96.4	96.4	0.03
al-masa3eed	0.125	0.043	-0.123	-0.040	1.7	2.5	96.4	94.7	1.73
Line132	3.049	3.079	-3.046	-3.078	3.0	1.0	96.4	96.3	0.07
anabosa	0.021	0.003	-0.021	-0.003	0.0	0.1	96.4	96.1	0.23
Line133	2.872	3.019	-2.871	-3.018	1.0	0.3	96.3	96.3	0.02
abu omar	0.174	0.060	-0.172	-0.056	2.0	3.0	96.3	94.8	1.51
Line134	2.871	3.018	-2.864	-3.016	6.9	2.1	96.3	96.1	0.17
Line161	2.679	2.977	-2.678	-2.977	1.2	0.4	96.1	96.1	0.03
abo shehab	0.185	0.039	-0.183	-0.037	1.4	2.0	96.1	95.2	0.89
Line136	2.678	2.977	-2.675	-2.976	3.3	0.9	96.1	96.0	0.08
Line137	0.130	0.065	-0.130	-0.065	0.0	-0.3	96.0	96.0	0.00
Line138	2.544	2.911	-2.542	-2.910	2.2	0.6	96.0	95.9	0.06
tubas weel	0.130	0.065	-0.128	-0.062	2.1	3.1	96.0	93.9	2.10
Line139	2.542	2.910	-2.539	-2.909	3.2	0.9	95.9	95.9	0.08
Line162	1.058	0.312	-1.058	-0.313	0.3	-0.6	95.9	95.8	0.02
Line175	1.448	2.586	-1.444	-2.586	4.6	0.6	95.9	95.7	0.14
amnawaga2	0.032	0.011	-0.032	-0.010	0.2	0.3	95.9	95.2	0.69
Line141	0.038	0.004	-0.038	-0.008	0.0	-3.3	95.8	95.8	0.00
Line145	1.020	0.309	-1.020	-0.309	0.2	-0.5	95.8	95.8	0.02
Line142	0.038	0.008	-0.038	-0.010	0.0	-2.6	95.8	95.8	0.00
Line143	0.034	0.009	-0.034	-0.010	0.0	-1.1	95.8	95.8	0.00
khalt el looz	0.004	0.001	-0.004	-0.001	0.0	0.0	95.8	95.7	0.08
Line144	0.034	0.010	-0.034	-0.011	0.0	-0.9	95.8	95.8	0.00
shereen	0.034	0.011	-0.034	-0.011	0.2	0.3	95.8	95.1	0.73
Line146	0.953	0.276	-0.953	-0.278	0.5	-1.5	95.8	95.8	0.06
mo2ayad fridges	0.067	0.033	-0.066	-0.032	0.4	0.6	95.8	95.1	0.74
Line147	0.034	0.007	-0.034	-0.009	0.0	-1.2	95.8	95.8	0.00
Line148	0.919	0.270	-0.918	-0.274	1.1	-3.3	95.8	95.6	0.12
mohafada	0.034	0.009	-0.034	-0.008	0.1	0.2	95.8	95.3	0.43
Line149	0.870	0.260	-0.869	-0.262	0.7	-2.3	95.6	95.6	0.08
weel	0.048	0.014	-0.048	-0.014	0.1	0.1	95.6	95.4	0.25
Line150	0.095	0.032	-0.095	-0.032	0.0	-0.3	95.6	95.6	0.00
Line163	0.774	0.230	-0.774	-0.230	0.1	-0.3	95.6	95.5	0.01
first of the town	0.095	0.032	-0.094	-0.031	1.0	1.5	95.6	94.2	1.33
Line152	0.719	0.218	-0.719	-0.219	0.2	-0.9	95.5	95.5	0.02
police	0.055	0.012	-0.055	-0.011	0.3	0.5	95.5	94.9	0.67
Line153	0.075	0.022	-0.075	-0.023	0.0	-0.6	95.5	95.5	0.00



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CKT / Branch ID	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	MW	Mvar	MW	Mvar	kW	kvar	From	To	
Line154	0.047	0.016	-0.047	-0.016	0.0	-0.6	95.5	95.5	0.00
Line155	0.596	0.182	-0.596	-0.183	0.2	-1.7	95.5	95.5	0.04
burhan	0.075	0.023	-0.074	-0.022	0.6	0.9	95.5	94.5	1.01
al-battman	0.047	0.016	-0.047	-0.015	0.6	0.9	95.5	93.9	1.65
Line156	0.397	0.132	-0.397	-0.134	0.1	-1.3	95.5	95.5	0.02
Line164	0.123	0.031	-0.123	-0.031	0.0	-0.1	95.5	95.5	0.00
national security	0.077	0.020	-0.076	-0.019	1.0	1.4	95.5	93.9	1.55
Line157	0.255	0.085	-0.255	-0.085	0.0	-0.3	95.5	95.5	0.00
alrfaid	0.141	0.049	-0.139	-0.046	2.2	3.3	95.5	93.5	1.98
Line158	0.217	0.075	-0.217	-0.076	0.0	-1.2	95.5	95.5	0.01
Line160	0.038	0.010	-0.038	-0.011	0.0	-1.4	95.5	95.5	0.00
Line159	0.147	0.055	-0.147	-0.056	0.0	-1.5	95.5	95.4	0.01
alBATTAH	0.070	0.021	-0.069	-0.020	0.8	1.2	95.5	94.0	1.48
ALMISHMAS	0.147	0.056	-0.144	-0.052	2.4	3.6	95.4	93.3	2.14
alrass	0.038	0.011	-0.038	-0.011	0.2	0.2	95.5	95.0	0.51
Line165	0.123	0.031	-0.123	-0.033	0.0	-2.3	95.5	95.5	0.01
Line167	0.107	0.028	-0.107	-0.031	0.0	-3.8	95.5	95.5	0.01
RAS AL-MATTALEH	0.016	0.005	-0.016	-0.005	0.0	0.1	95.5	95.1	0.35
Line168	0.016	-0.003	-0.016	0.002	0.0	-1.6	95.5	95.5	0.00
Line171	0.091	0.035	-0.091	-0.035	0.0	-0.8	95.5	95.5	0.00
Line169	0.008	-0.005	-0.008	-0.002	0.0	-6.7	95.5	95.5	0.00
ALJALHOOM	0.008	0.003	-0.008	-0.003	0.0	0.0	95.5	95.3	0.18
ATOOF	0.008	0.002	-0.008	-0.002	0.0	0.0	95.5	95.3	0.16
Line172	0.080	0.032	-0.080	-0.032	0.0	-0.3	95.5	95.5	0.00
Line173	0.011	0.004	-0.011	-0.006	0.0	-2.3	95.5	95.5	0.00
MAWAFAQ FAKHRY	0.080	0.032	-0.079	-0.031	0.3	0.4	95.5	95.0	0.47
HAKIM	0.011	0.006	-0.011	-0.006	0.0	0.0	95.5	95.4	0.07
Line176	1.444	2.586	-1.437	-2.585	6.2	0.8	95.7	95.5	0.18
Line177	0.063	0.030	-0.063	-0.031	0.0	-0.6	95.5	95.5	0.00
Line178	1.374	2.554	-1.373	-2.554	1.5	0.2	95.5	95.5	0.04
pickle factory	0.063	0.031	-0.063	-0.030	0.3	0.4	95.5	94.9	0.63
Line179	0.003	0.001	-0.003	-0.002	0.0	-0.6	95.5	95.5	0.00
Line180	1.370	2.553	-1.368	-2.553	2.2	0.3	95.5	95.4	0.07
keshda main	0.003	0.002	-0.003	-0.002	0.0	0.0	95.5	95.2	0.25
Line181	-2.080	1.203	2.081	-1.203	1.0	-0.1	95.4	95.4	0.02
Line182	3.447	1.350	-3.443	-1.349	4.5	1.2	95.4	95.3	0.13
Line192	-2.081	1.203	2.082	-1.203	1.0	-0.1	95.4	95.5	0.02

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CKT / Branch ID	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	MW	Mvar	MW	Mvar	kW	kvar	From	To	
Line183	3.343	1.284	-3.339	-1.283	3.8	1.0	95.3	95.2	0.11
dewan	0.100	0.065	-0.099	-0.064	0.9	1.3	95.3	94.1	1.15
Line184	1.001	0.518	-1.001	-0.518	0.2	-0.3	95.2	95.2	0.02
Line200	2.338	0.765	-2.336	-0.765	1.4	0.0	95.2	95.1	0.06
Line185	0.746	0.393	-0.745	-0.394	0.3	-1.2	95.2	95.1	0.04
Line196	0.256	0.125	-0.256	-0.125	0.0	-0.3	95.2	95.2	0.00
Line186	0.745	0.394	-0.745	-0.395	0.1	-0.5	95.1	95.1	0.02
Line187	0.675	0.365	-0.675	-0.366	0.1	-0.6	95.1	95.1	0.02
Line195	0.070	0.029	-0.070	-0.030	0.0	-0.9	95.1	95.1	0.00
Line188	0.272	0.162	-0.272	-0.165	0.1	-3.0	95.1	95.1	0.03
Line189	0.135	0.070	-0.135	-0.070	0.0	-0.3	95.1	95.1	0.00
khalet al qaser 1	0.202	0.112	-0.198	-0.107	3.3	4.9	95.1	92.9	2.15
khalet al qaser 2	0.067	0.022	-0.067	-0.022	0.2	0.3	95.1	94.7	0.37
mohammad al basher	0.272	0.165	-0.268	-0.159	3.9	5.9	95.1	93.1	1.92
Line190	0.135	0.070	-0.135	-0.072	0.0	-2.2	95.1	95.1	0.01
Line191	0.030	0.015	-0.030	-0.019	0.0	-3.3	95.1	95.1	0.00
faysel well	0.105	0.057	-0.104	-0.056	0.6	0.8	95.1	94.4	0.71
huseen al araj	0.030	0.019	-0.030	-0.018	0.1	0.2	95.1	94.5	0.54
Cable44	0.055	-0.018	-0.054	0.018	0.8	0.1	115.2	113.7	1.50
Cable45	0.487	-0.164	-0.379	0.208	107.9	44.2	113.7	95.7	18.04
Cable48	-0.054	0.018	0.055	-0.018	0.8	0.1	113.7	115.2	1.50
Cable49	-0.054	0.018	0.055	-0.018	0.8	0.1	113.7	115.2	1.50
Cable50	-0.054	0.018	0.055	-0.018	0.8	0.1	113.7	115.2	1.50
Cable51	-0.054	0.018	0.055	-0.018	0.8	0.1	113.7	115.2	1.50
Cable52	-0.054	0.018	0.055	-0.018	0.8	0.1	113.7	115.2	1.50
Cable53	-0.054	0.018	0.055	-0.018	0.8	0.1	113.7	115.2	1.50
Cable54	-0.054	0.018	0.055	-0.018	0.8	0.1	113.7	115.2	1.50
Cable126	-0.054	0.018	0.055	-0.018	0.8	0.1	113.7	115.2	1.50
T1	0.379	-0.208	-0.372	0.219	7.2	10.8	95.7	95.5	0.20
T2	-0.372	0.219	0.379	-0.208	7.2	10.8	95.5	95.7	0.21
T3	-0.336	0.187	0.341	-0.179	5.7	8.6	95.5	95.7	0.24
T6	-0.228	0.112	0.232	-0.106	3.9	5.9	95.5	95.9	0.38
T7	-0.403	0.248	0.411	-0.235	8.6	12.9	95.5	95.6	0.17
T8	-0.372	0.219	0.379	-0.208	7.2	10.8	95.5	95.7	0.20
Cable66	0.049	-0.016	-0.049	0.016	0.7	0.1	115.1	113.8	1.35
Cable86	-0.049	0.016	0.049	-0.016	0.7	0.1	113.8	115.1	1.35
Cable87	-0.049	0.016	0.049	-0.016	0.7	0.1	113.8	115.1	1.35

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CKT / Branch ID	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	MW	Mvar	MW	Mvar	kW	kvar	From	To	
Cable88	-0.049	0.016	0.049	-0.016	0.7	0.1	113.8	115.1	1.35
Cable89	-0.049	0.016	0.049	-0.016	0.7	0.1	113.8	115.1	1.35
Cable90	-0.049	0.016	0.049	-0.016	0.7	0.1	113.8	115.1	1.35
Cable91	-0.049	0.016	0.049	-0.016	0.7	0.1	113.8	115.1	1.35
Cable92	-0.049	0.016	0.049	-0.016	0.7	0.1	113.8	115.1	1.35
Cable93	-0.049	0.016	0.049	-0.016	0.7	0.1	113.8	115.1	1.35
Cable120	0.487	-0.163	-0.379	0.208	108.2	44.3	113.8	95.7	18.07
Cable128	-0.049	0.016	0.049	-0.016	0.7	0.1	113.8	115.1	1.35
Cable67	0.049	-0.016	-0.049	0.016	0.7	0.1	113.3	111.9	1.37
Cable69	-0.054	0.018	0.055	-0.018	0.9	0.1	111.9	113.5	1.52
Cable70	-0.054	0.018	0.055	-0.018	0.9	0.1	111.9	113.5	1.52
Cable71	-0.054	0.018	0.055	-0.018	0.9	0.1	111.9	113.5	1.52
Cable72	-0.054	0.018	0.055	-0.018	0.9	0.1	111.9	113.5	1.52
Cable73	-0.054	0.018	0.055	-0.018	0.9	0.1	111.9	113.5	1.52
Cable118	-0.054	0.018	0.055	-0.018	0.9	0.1	111.9	113.5	1.52
Cable121	0.427	-0.144	-0.341	0.179	85.8	35.1	111.9	95.7	16.23
Cable130	-0.054	0.018	0.055	-0.018	0.9	0.1	111.9	113.5	1.52
Cable79	0.055	-0.018	-0.054	0.018	0.9	0.1	108.5	106.9	1.59
Cable80	0.055	-0.018	-0.054	0.018	0.9	0.1	108.5	106.9	1.59
Cable81	0.055	-0.018	-0.054	0.018	0.9	0.1	108.5	106.9	1.59
Cable82	0.055	-0.018	-0.054	0.018	0.9	0.1	108.5	106.9	1.59
Cable83	0.055	-0.018	-0.054	0.018	0.9	0.1	108.5	106.9	1.59
Cable122	0.270	-0.091	-0.232	0.106	37.6	15.4	106.9	95.9	11.01
Cable123	-0.411	0.235	0.541	-0.182	129.8	53.2	95.6	115.3	19.62
Cable124	-0.379	0.208	0.487	-0.164	107.9	44.2	95.7	113.7	18.04
mawfak al-fakhry	0.070	0.030	-0.070	-0.030	0.2	0.3	95.1	94.7	0.43
Line197	0.184	0.083	-0.184	-0.085	0.0	-1.8	95.2	95.2	0.01
agricultural project	0.072	0.043	-0.071	-0.042	0.3	0.4	95.2	94.7	0.50
Line198	0.096	0.060	-0.096	-0.060	0.0	-0.5	95.2	95.1	0.00
Line199	0.067	0.019	-0.067	-0.022	0.0	-3.3	95.2	95.1	0.01
kazeyt samara	0.021	0.006	-0.021	-0.006	0.0	0.0	95.2	95.0	0.18
thiab	0.096	0.060	-0.096	-0.059	0.5	0.8	95.1	94.5	0.69
al-ashqar stone cutter	0.067	0.022	-0.067	-0.022	0.2	0.3	95.1	94.8	0.37
Line201	0.116	0.074	-0.116	-0.075	0.0	-1.1	95.1	95.1	0.01
Line203	2.220	0.692	-2.219	-0.692	0.6	-0.1	95.1	95.1	0.03
Line202	0.116	0.075	-0.116	-0.076	0.0	-1.0	95.1	95.1	0.00
abo hameed	0.116	0.076	-0.116	-0.075	0.8	1.1	95.1	94.3	0.85

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CKT / Branch ID	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	MW	Mvar	MW	Mvar	kW	kvar	From	To	
Line204	0.035	0.019	-0.035	-0.020	0.0	-1.0	95.1	95.1	0.00
Line205	2.185	0.673	-2.182	-0.673	2.1	-0.2	95.1	95.0	0.10
al-kharaz	0.035	0.020	-0.035	-0.020	0.2	0.4	95.1	94.2	0.95
Line206	1.123	0.402	-1.123	-0.403	0.5	-0.9	95.0	95.0	0.04
Line231	1.059	0.271	-1.059	-0.271	0.2	-0.3	95.0	95.0	0.02
Line207	0.217	0.086	-0.217	-0.086	0.0	-0.6	95.0	94.9	0.01
Line209	0.905	0.318	-0.905	-0.319	0.5	-1.6	95.0	94.9	0.06
Line208	0.058	0.017	-0.058	-0.019	0.0	-2.1	94.9	94.9	0.00
refat	0.080	0.034	-0.079	-0.034	0.5	0.7	94.9	94.2	0.77
refat 2	0.080	0.034	-0.079	-0.034	0.5	0.7	94.9	94.2	0.77
safeena	0.058	0.019	-0.058	-0.019	0.2	0.3	94.9	94.4	0.51
Line210	0.757	0.251	-0.757	-0.251	0.0	-0.2	94.9	94.9	0.01
Line225	0.068	0.028	-0.068	-0.030	0.0	-1.2	94.9	94.9	0.00
Line226	0.080	0.040	-0.080	-0.044	0.0	-3.6	94.9	94.9	0.01
Line215	0.552	0.192	-0.552	-0.194	0.2	-1.9	94.9	94.8	0.04
Line243	0.205	0.059	-0.205	-0.060	0.0	-0.5	94.9	94.9	0.00
Line212	0.169	0.046	-0.169	-0.048	0.0	-1.4	94.9	94.9	0.01
al-hesba	0.036	0.013	-0.036	-0.013	0.1	0.2	94.9	94.4	0.52
Line213	0.069	0.018	-0.069	-0.019	0.0	-1.2	94.9	94.9	0.00
kazeya	0.100	0.030	-0.099	-0.029	0.7	1.0	94.9	94.0	0.85
Line214	0.039	0.008	-0.039	-0.010	0.0	-1.8	94.9	94.9	0.00
school	0.030	0.011	-0.030	-0.011	0.1	0.1	94.9	94.6	0.27
abo shehadeh	0.039	0.010	-0.039	-0.010	0.2	0.2	94.9	94.4	0.50
Line216	0.396	0.131	-0.396	-0.133	0.1	-2.2	94.8	94.8	0.03
al bassateen	0.156	0.063	-0.155	-0.061	1.1	1.7	94.8	93.9	0.93
Line217	0.305	0.105	-0.305	-0.108	0.1	-2.7	94.8	94.8	0.03
abo khadeer	0.091	0.028	-0.090	-0.026	0.9	1.3	94.8	93.6	1.23
Line218	0.269	0.099	-0.269	-0.099	0.0	-0.2	94.8	94.8	0.00
abo tareq	0.036	0.009	-0.036	-0.009	0.1	0.1	94.8	94.6	0.18
Line219	0.269	0.099	-0.269	-0.102	0.1	-2.9	94.8	94.8	0.03
Line220	0.072	0.029	-0.072	-0.029	0.0	-0.3	94.8	94.8	0.00
Line221	0.076	0.018	-0.076	-0.020	0.0	-1.1	94.8	94.8	0.00
Line222	0.121	0.055	-0.121	-0.055	0.0	-0.4	94.8	94.8	0.00
mamdooh	0.072	0.029	-0.072	-0.028	0.4	0.6	94.8	94.1	0.67
farah	0.076	0.020	-0.076	-0.019	0.4	0.6	94.8	94.1	0.62
Line223	0.100	0.048	-0.100	-0.049	0.0	-0.6	94.8	94.8	0.00
Line224	0.021	0.007	-0.021	-0.008	0.0	-1.4	94.8	94.8	0.00

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CKT / Branch ID	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	MW	Mvar	MW	Mvar	kW	kvar	From	To	
sameer motlaq	0.100	0.049	-0.099	-0.048	0.8	1.1	94.8	93.7	1.01
essawi	0.021	0.008	-0.021	-0.008	0.1	0.1	94.8	94.4	0.31
al hafria	0.068	0.030	-0.068	-0.029	0.5	0.8	94.9	93.8	1.05
Line227	0.011	0.007	-0.011	-0.007	0.0	-0.3	94.9	94.9	0.00
Line228	0.069	0.037	-0.069	-0.038	0.0	-1.2	94.9	94.9	0.00
yaseed east	0.011	0.007	-0.011	-0.007	0.0	0.0	94.9	94.7	0.20
Line229	0.008	0.003	-0.008	-0.003	0.0	-0.6	94.9	94.9	0.00
Line230	0.061	0.036	-0.061	-0.038	0.0	-2.5	94.9	94.9	0.01
kasaret abo asaad	0.061	0.038	-0.061	-0.038	0.3	0.5	94.9	94.2	0.69
yaseed west	0.008	0.003	-0.008	-0.003	0.0	0.0	94.9	94.8	0.12
Line232	0.248	0.070	-0.248	-0.070	0.0	-0.2	95.0	95.0	0.00
Line233	0.154	0.031	-0.154	-0.032	0.0	-0.7	95.0	95.0	0.00
Line236	0.656	0.169	-0.656	-0.170	0.1	-0.6	95.0	95.0	0.01
weastern	0.248	0.070	-0.242	-0.061	6.6	9.8	95.0	91.7	3.27
Line234	0.018	0.002	-0.018	-0.003	0.0	-0.3	95.0	95.0	0.00
Line235	0.136	0.030	-0.136	-0.030	0.0	-0.2	95.0	95.0	0.00
school.	0.136	0.030	-0.134	-0.027	1.9	2.9	95.0	93.3	1.68
tubas well	0.018	0.003	-0.018	-0.003	0.0	0.0	95.0	94.9	0.13
Line237	0.568	0.151	-0.568	-0.152	0.1	-0.9	95.0	95.0	0.02
al-shareef	0.088	0.018	-0.088	-0.018	0.3	0.5	95.0	94.5	0.43
Line238	0.074	0.015	-0.074	-0.015	0.0	-0.5	95.0	95.0	0.00
Line239	0.474	0.129	-0.474	-0.130	0.0	-0.5	95.0	94.9	0.01
Line242	0.012	0.002	-0.012	-0.003	0.0	-0.6	95.0	95.0	0.00
malhameh	0.008	0.006	-0.008	-0.006	0.0	0.0	95.0	94.9	0.06
al-3een	0.074	0.015	-0.074	-0.015	0.2	0.3	95.0	94.6	0.36
Line240	0.391	0.074	-0.391	-0.074	0.0	-0.1	94.9	94.9	0.00
well	0.083	0.056	-0.082	-0.055	0.6	0.9	94.9	94.0	0.97
Line241	0.338	0.058	-0.338	-0.058	0.0	-0.2	94.9	94.9	0.00
stadium	0.053	0.016	-0.053	-0.015	0.3	0.5	94.9	94.2	0.71
old station	0.338	0.058	-0.331	-0.047	7.2	10.9	94.9	92.5	2.45
sameeh abo khezaran	0.012	0.003	-0.012	-0.003	0.0	0.0	95.0	94.9	0.10
Cable95	0.055	-0.018	-0.054	0.018	0.8	0.1	116.7	115.3	1.48
Cable98	0.055	-0.018	-0.054	0.018	0.8	0.1	116.7	115.3	1.48
Cable99	0.055	-0.018	-0.054	0.018	0.8	0.1	116.7	115.3	1.48
Cable100	0.055	-0.018	-0.054	0.018	0.8	0.1	116.7	115.3	1.48
Cable101	0.055	-0.018	-0.054	0.018	0.8	0.1	116.7	115.3	1.48
Cable102	0.055	-0.018	-0.054	0.018	0.8	0.1	116.7	115.3	1.48

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CKT / Branch ID	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	MW	Mvar	MW	Mvar	kW	kvar	From	To	
Cable103	0.055	-0.018	-0.054	0.018	0.8	0.1	116.7	115.3	1.48
Cable104	0.055	-0.018	-0.054	0.018	0.8	0.1	116.7	115.3	1.48
Cable105	0.055	-0.018	-0.054	0.018	0.8	0.1	116.7	115.3	1.48
Cable106	0.055	-0.018	-0.054	0.018	0.8	0.1	116.7	115.3	1.48
Cable107	0.055	-0.018	-0.054	0.018	0.8	0.1	115.2	113.7	1.50
Cable108	0.055	-0.018	-0.054	0.018	0.8	0.1	115.2	113.7	1.50
Cable109	0.055	-0.018	-0.054	0.018	0.8	0.1	115.2	113.7	1.50
Cable110	0.055	-0.018	-0.054	0.018	0.8	0.1	115.2	113.7	1.50
Cable111	0.055	-0.018	-0.054	0.018	0.8	0.1	115.2	113.7	1.50
Cable112	0.055	-0.018	-0.054	0.018	0.8	0.1	115.2	113.7	1.50
Cable113	0.055	-0.018	-0.054	0.018	0.8	0.1	115.2	113.7	1.50
Cable114	0.055	-0.018	-0.054	0.018	0.8	0.1	115.2	113.7	1.50
Cable115	0.055	-0.018	-0.054	0.018	0.8	0.1	115.2	113.7	1.50
					1030.7	257.7			

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### Alert Summary Report

#### **% Alert Settings**

	<u>Critical</u>	<u>Marginal</u>
<u><b>Loading</b></u>		
Bus	100.0	95.0
Cable	100.0	95.0
Reactor	100.0	95.0
Line	100.0	95.0
Transformer	100.0	95.0
Panel	100.0	95.0
Protective Device	100.0	95.0
Generator	100.0	95.0
Inverter/Charger	100.0	95.0
<u><b>Bus Voltage</b></u>		
OverVoltage	105.0	102.0
UnderVoltage	95.0	98.0
<u><b>Generator Excitation</b></u>		
OverExcited (Q Max.)	100.0	95.0
UnderExcited (Q Min.)	100.0	

### Critical Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
abo omar	Transformer	Overload	0.03	MVA	0.04	134.0	3-Phase
ALMISHMAS	Transformer	Overload	0.16	MVA	0.16	100.1	3-Phase
AUU intersiction ZA	Transformer	Overload	0.04	MVA	0.08	191.2	3-Phase
Bus238	Bus	Under Voltage	0.40	kV	0.38	94.7	3-Phase
Bus239	Bus	Under Voltage	0.40	kV	0.38	94.8	3-Phase
Bus246	Bus	Under Voltage	0.40	kV	0.38	94.9	3-Phase
Bus247	Bus	Under Voltage	0.40	kV	0.38	94.9	3-Phase
Bus249	Bus	Under Voltage	0.40	kV	0.38	94.6	3-Phase
Bus251	Bus	Under Voltage	0.40	kV	0.38	94.7	3-Phase
Bus302	Bus	Under Voltage	0.40	kV	0.38	94.4	3-Phase
Bus305	Bus	Under Voltage	0.40	kV	0.38	94.8	3-Phase
Bus321	Bus	Under Voltage	0.40	kV	0.38	94.9	3-Phase
Bus323	Bus	Under Voltage	0.40	kV	0.38	94.9	3-Phase
Bus332	Bus	Under Voltage	0.40	kV	0.38	93.9	3-Phase
Bus339	Bus	Under Voltage	0.40	kV	0.38	94.2	3-Phase

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Bus340	Bus	Under Voltage	0.40	kV	0.38	94.9	3-Phase
Bus341	Bus	Under Voltage	0.40	kV	0.38	94.5	3-Phase
Bus342	Bus	Under Voltage	0.40	kV	0.38	93.9	3-Phase
Bus343	Bus	Under Voltage	0.40	kV	0.38	93.9	3-Phase
Bus344	Bus	Under Voltage	0.40	kV	0.37	93.5	3-Phase
Bus345	Bus	Under Voltage	0.40	kV	0.38	94.0	3-Phase
Bus346	Bus	Under Voltage	0.40	kV	0.38	95.0	3-Phase
Bus347	Bus	Under Voltage	0.40	kV	0.37	93.3	3-Phase
Bus351	Bus	Under Voltage	0.40	kV	0.38	95.0	3-Phase
Bus357	Bus	Under Voltage	0.40	kV	0.38	94.9	3-Phase
Bus364	Bus	Under Voltage	0.40	kV	0.38	94.1	3-Phase
Bus372	Bus	Under Voltage	0.40	kV	0.37	93.1	3-Phase
Bus375	Bus	Under Voltage	0.40	kV	0.38	94.4	3-Phase
Bus377	Bus	Under Voltage	0.40	kV	0.38	94.5	3-Phase
Bus378	Bus	Under Voltage	0.40	kV	0.37	92.9	3-Phase
Bus379	Bus	Under Voltage	0.40	kV	0.38	94.7	3-Phase
Bus383	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus384	Bus	Over Voltage	0.40	kV	0.45	113.7	3-Phase
Bus388	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus389	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus390	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus391	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus392	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus393	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus394	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus408	Bus	Over Voltage	0.40	kV	0.46	115.1	3-Phase
Bus409	Bus	Over Voltage	0.40	kV	0.46	113.8	3-Phase
Bus410	Bus	Over Voltage	0.40	kV	0.45	113.3	3-Phase
Bus411	Bus	Over Voltage	0.40	kV	0.45	111.9	3-Phase
Bus413	Bus	Over Voltage	0.40	kV	0.45	113.5	3-Phase
Bus414	Bus	Over Voltage	0.40	kV	0.45	113.5	3-Phase
Bus415	Bus	Over Voltage	0.40	kV	0.45	113.5	3-Phase
Bus416	Bus	Over Voltage	0.40	kV	0.45	113.5	3-Phase
Bus417	Bus	Over Voltage	0.40	kV	0.45	113.5	3-Phase
Bus423	Bus	Over Voltage	0.40	kV	0.43	108.5	3-Phase
Bus424	Bus	Over Voltage	0.40	kV	0.43	108.5	3-Phase



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Bus425	Bus	Over Voltage	0.40	kV	0.43	108.5	3-Phase
Bus426	Bus	Over Voltage	0.40	kV	0.43	108.5	3-Phase
Bus427	Bus	Over Voltage	0.40	kV	0.43	108.5	3-Phase
Bus428	Bus	Over Voltage	0.40	kV	0.43	106.9	3-Phase
Bus435	Bus	Under Voltage	0.40	kV	0.38	94.7	3-Phase
Bus437	Bus	Under Voltage	0.40	kV	0.38	94.7	3-Phase
Bus440	Bus	Under Voltage	0.40	kV	0.38	94.5	3-Phase
Bus441	Bus	Under Voltage	0.40	kV	0.38	95.0	3-Phase
Bus443	Bus	Under Voltage	0.40	kV	0.38	94.8	3-Phase
Bus449	Bus	Under Voltage	0.40	kV	0.38	94.3	3-Phase
Bus452	Bus	Under Voltage	0.40	kV	0.38	94.2	3-Phase
Bus453	Bus	Under Voltage	33.00	kV	31.35	95.0	3-Phase
Bus454	Bus	Under Voltage	33.00	kV	31.34	95.0	3-Phase
Bus455	Bus	Under Voltage	33.00	kV	31.33	94.9	3-Phase
Bus456	Bus	Under Voltage	0.40	kV	0.38	94.2	3-Phase
Bus457	Bus	Under Voltage	33.00	kV	31.33	94.9	3-Phase
Bus458	Bus	Under Voltage	0.40	kV	0.38	94.2	3-Phase
Bus459	Bus	Under Voltage	0.40	kV	0.38	94.4	3-Phase
Bus460	Bus	Under Voltage	33.00	kV	31.32	94.9	3-Phase
Bus461	Bus	Under Voltage	33.00	kV	31.31	94.9	3-Phase
Bus462	Bus	Under Voltage	33.00	kV	31.31	94.9	3-Phase
Bus463	Bus	Under Voltage	0.40	kV	0.38	94.4	3-Phase
Bus464	Bus	Under Voltage	33.00	kV	31.31	94.9	3-Phase
Bus465	Bus	Under Voltage	0.40	kV	0.38	94.0	3-Phase
Bus466	Bus	Under Voltage	33.00	kV	31.31	94.9	3-Phase
Bus467	Bus	Under Voltage	0.40	kV	0.38	94.6	3-Phase
Bus468	Bus	Under Voltage	33.00	kV	31.31	94.9	3-Phase
Bus469	Bus	Under Voltage	0.40	kV	0.38	94.4	3-Phase
Bus470	Bus	Under Voltage	33.00	kV	31.30	94.8	3-Phase
Bus471	Bus	Under Voltage	0.40	kV	0.38	93.9	3-Phase
Bus472	Bus	Under Voltage	33.00	kV	31.29	94.8	3-Phase
Bus473	Bus	Under Voltage	0.40	kV	0.37	93.6	3-Phase
Bus474	Bus	Under Voltage	33.00	kV	31.28	94.8	3-Phase
Bus475	Bus	Under Voltage	0.40	kV	0.38	94.6	3-Phase
Bus476	Bus	Under Voltage	33.00	kV	31.28	94.8	3-Phase
Bus477	Bus	Under Voltage	33.00	kV	31.28	94.8	3-Phase

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Bus478	Bus	Under Voltage	33.00	kV	31.27	94.8	3-Phase
Bus479	Bus	Under Voltage	33.00	kV	31.27	94.8	3-Phase
Bus480	Bus	Under Voltage	0.40	kV	0.38	94.1	3-Phase
Bus481	Bus	Under Voltage	33.00	kV	31.27	94.8	3-Phase
Bus482	Bus	Under Voltage	0.40	kV	0.38	94.1	3-Phase
Bus485	Bus	Under Voltage	33.00	kV	31.27	94.8	3-Phase
Bus486	Bus	Under Voltage	33.00	kV	31.27	94.8	3-Phase
Bus487	Bus	Under Voltage	0.40	kV	0.37	93.7	3-Phase
Bus488	Bus	Under Voltage	33.00	kV	31.27	94.8	3-Phase
Bus489	Bus	Under Voltage	0.40	kV	0.38	94.4	3-Phase
Bus490	Bus	Under Voltage	33.00	kV	31.31	94.9	3-Phase
Bus491	Bus	Under Voltage	0.40	kV	0.38	93.8	3-Phase
Bus492	Bus	Under Voltage	33.00	kV	31.31	94.9	3-Phase
Bus493	Bus	Under Voltage	33.00	kV	31.31	94.9	3-Phase
Bus494	Bus	Under Voltage	0.40	kV	0.38	94.7	3-Phase
Bus495	Bus	Under Voltage	33.00	kV	31.31	94.9	3-Phase
Bus496	Bus	Under Voltage	33.00	kV	31.31	94.9	3-Phase
Bus497	Bus	Under Voltage	33.00	kV	31.31	94.9	3-Phase
Bus498	Bus	Under Voltage	0.40	kV	0.38	94.2	3-Phase
Bus499	Bus	Under Voltage	0.40	kV	0.38	94.8	3-Phase
Bus500	Bus	Under Voltage	33.00	kV	31.34	95.0	3-Phase
Bus501	Bus	Under Voltage	33.00	kV	31.34	95.0	3-Phase
Bus502	Bus	Under Voltage	0.40	kV	0.37	91.7	3-Phase
Bus503	Bus	Under Voltage	33.00	kV	31.34	95.0	3-Phase
Bus504	Bus	Under Voltage	33.00	kV	31.34	95.0	3-Phase
Bus505	Bus	Under Voltage	33.00	kV	31.34	95.0	3-Phase
Bus506	Bus	Under Voltage	0.40	kV	0.37	93.3	3-Phase
Bus507	Bus	Under Voltage	0.40	kV	0.38	94.9	3-Phase
Bus508	Bus	Under Voltage	33.00	kV	31.34	95.0	3-Phase
Bus509	Bus	Under Voltage	0.40	kV	0.38	94.5	3-Phase
Bus510	Bus	Under Voltage	33.00	kV	31.33	95.0	3-Phase
Bus511	Bus	Under Voltage	0.40	kV	0.38	94.9	3-Phase
Bus512	Bus	Under Voltage	33.00	kV	31.33	95.0	3-Phase
Bus513	Bus	Under Voltage	0.40	kV	0.38	94.6	3-Phase
Bus514	Bus	Under Voltage	33.00	kV	31.33	94.9	3-Phase
Bus515	Bus	Under Voltage	0.40	kV	0.38	94.0	3-Phase

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Bus516	Bus	Under Voltage	33.00	kV	31.33	94.9	3-Phase
Bus517	Bus	Under Voltage	0.40	kV	0.38	94.2	3-Phase
Bus518	Bus	Under Voltage	33.00	kV	31.33	94.9	3-Phase
Bus519	Bus	Under Voltage	0.40	kV	0.37	92.5	3-Phase
Bus520	Bus	Under Voltage	33.00	kV	31.33	95.0	3-Phase
Bus521	Bus	Under Voltage	0.40	kV	0.38	94.9	3-Phase
Bus524	Bus	Over Voltage	0.40	kV	0.46	115.1	3-Phase
Bus525	Bus	Over Voltage	0.40	kV	0.46	115.1	3-Phase
Bus526	Bus	Over Voltage	0.40	kV	0.46	115.1	3-Phase
Bus527	Bus	Over Voltage	0.40	kV	0.46	115.1	3-Phase
Bus528	Bus	Over Voltage	0.40	kV	0.46	115.1	3-Phase
Bus529	Bus	Over Voltage	0.40	kV	0.46	115.1	3-Phase
Bus530	Bus	Over Voltage	0.40	kV	0.46	115.1	3-Phase
Bus531	Bus	Over Voltage	0.40	kV	0.46	115.1	3-Phase
Bus533	Bus	Over Voltage	0.40	kV	0.47	116.7	3-Phase
Bus536	Bus	Over Voltage	0.40	kV	0.47	116.7	3-Phase
Bus537	Bus	Over Voltage	0.40	kV	0.47	116.7	3-Phase
Bus538	Bus	Over Voltage	0.40	kV	0.47	116.7	3-Phase
Bus539	Bus	Over Voltage	0.40	kV	0.47	116.7	3-Phase
Bus540	Bus	Over Voltage	0.40	kV	0.47	116.7	3-Phase
Bus541	Bus	Over Voltage	0.40	kV	0.47	116.7	3-Phase
Bus542	Bus	Over Voltage	0.40	kV	0.47	116.7	3-Phase
Bus543	Bus	Over Voltage	0.40	kV	0.47	116.7	3-Phase
Bus544	Bus	Over Voltage	0.40	kV	0.47	116.7	3-Phase
Bus545	Bus	Over Voltage	0.40	kV	0.46	115.3	3-Phase
Bus546	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus547	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus548	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus549	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus550	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus551	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus552	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus553	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus554	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus556	Bus	Over Voltage	0.40	kV	0.45	113.7	3-Phase
Bus558	Bus	Over Voltage	0.40	kV	0.45	113.5	3-Phase

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Bus560	Bus	Over Voltage	0.40	kV	0.46	115.2	3-Phase
Bus562	Bus	Over Voltage	0.40	kV	0.46	115.1	3-Phase
Bus564	Bus	Over Voltage	0.40	kV	0.45	113.5	3-Phase
Cable120	Cable	Overload	217.71	Amp	652.31	299.6	3-Phase
Cable121	Cable	Overload	217.71	Amp	580.95	266.8	3-Phase
Cable122	Cable	Overload	217.71	Amp	384.60	176.7	3-Phase
Cable123	Cable	Overload	217.71	Amp	714.60	328.2	3-Phase
Cable124	Cable	Overload	217.71	Amp	651.65	299.3	3-Phase
Cable45	Cable	Overload	217.71	Amp	651.65	299.3	3-Phase
CB1	HV CB	Overload	0.60	Amp	0.62	102.7	3-Phase
CB2	HV CB	Overload	0.60	Amp	101.01	16835.7	3-Phase
CB4	HV CB	Overload	0.60	Amp	1.67	278.4	3-Phase
CB5	HV CB	Overload	0.60	Amp	10.65	1775.6	3-Phase
CB58	HV CB	Overload	0.60	Amp	5.29	881.8	3-Phase
Line10	Line	Overload	98.80	Amp	99.65	100.9	3-Phase
Line100	Line	Overload	2.90	Amp	3.68	126.9	3-Phase
Line101	Line	Overload	2.00	Amp	2.52	126.2	3-Phase
Line102	Line	Overload	2.00	Amp	2.52	126.2	3-Phase
Line103	Line	Overload	5.80	Amp	7.32	126.1	3-Phase
Line104	Line	Overload	5.80	Amp	7.29	125.7	3-Phase
Line105	Line	Overload	5.10	Amp	6.47	126.8	3-Phase
Line106	Line	Overload	0.90	Amp	1.12	124.1	3-Phase
Line108	Line	Overload	0.90	Amp	1.12	124.9	3-Phase
Line109	Line	Overload	3.10	Amp	3.94	126.9	3-Phase
Line11	Line	Overload	97.60	Amp	98.19	100.6	3-Phase
Line110	Line	Overload	2.80	Amp	3.54	126.4	3-Phase
Line111	Line	Overload	2.40	Amp	3.09	128.6	3-Phase
Line112	Line	Overload	1.30	Amp	1.60	122.7	3-Phase
Line113	Line	Overload	0.20	Amp	0.21	107.0	3-Phase
Line114	Line	Overload	8.90	Amp	11.21	125.9	3-Phase
Line115	Line	Overload	0.90	Amp	1.08	119.7	3-Phase
Line116	Line	Overload	8.00	Amp	10.14	126.7	3-Phase
Line117	Line	Overload	6.60	Amp	8.44	127.9	3-Phase
Line118	Line	Overload	5.00	Amp	6.27	125.3	3-Phase
Line12	Line	Overload	97.60	Amp	98.20	100.6	3-Phase
Line120	Line	Overload	2.30	Amp	2.97	129.0	3-Phase

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Line121	Line	Overload	0.80	Amp	1.04	130.1	3-Phase
Line122	Line	Overload	1.80	Amp	2.30	127.8	3-Phase
Line123	Line	Overload	1.80	Amp	2.20	122.0	3-Phase
Line124	Line	Overload	0.40	Amp	0.55	138.0	3-Phase
Line125	Line	Overload	1.40	Amp	1.70	121.6	3-Phase
Line126	Line	Overload	1.40	Amp	1.69	120.7	3-Phase
Line127	Line	Overload	1.00	Amp	1.29	129.4	3-Phase
Line129	Line	Overload	80.00	Amp	81.12	101.4	3-Phase
Line13	Line	Overload	97.30	Amp	97.88	100.6	3-Phase
Line130	Line	Overload	1.80	Amp	2.40	133.2	3-Phase
Line131	Line	Overload	78.20	Amp	78.98	101.0	3-Phase
Line132	Line	Overload	77.80	Amp	78.68	101.1	3-Phase
Line133	Line	Overload	75.20	Amp	75.70	100.7	3-Phase
Line134	Line	Overload	75.20	Amp	75.72	100.7	3-Phase
Line136	Line	Overload	72.60	Amp	72.92	100.4	3-Phase
Line137	Line	Overload	2.10	Amp	2.66	126.6	3-Phase
Line141	Line	Overload	0.60	Amp	0.71	117.6	3-Phase
Line142	Line	Overload	0.60	Amp	0.72	119.5	3-Phase
Line143	Line	Overload	0.50	Amp	0.65	129.4	3-Phase
Line144	Line	Overload	0.50	Amp	0.65	130.4	3-Phase
Line145	Line	Overload	15.30	Amp	19.46	127.2	3-Phase
Line146	Line	Overload	14.20	Amp	18.13	127.7	3-Phase
Line147	Line	Overload	0.50	Amp	0.64	127.4	3-Phase
Line148	Line	Overload	13.80	Amp	17.52	127.0	3-Phase
Line149	Line	Overload	13.00	Amp	16.62	127.9	3-Phase
Line150	Line	Overload	1.40	Amp	1.84	131.7	3-Phase
Line152	Line	Overload	10.80	Amp	13.76	127.4	3-Phase
Line153	Line	Overload	1.10	Amp	1.43	130.2	3-Phase
Line154	Line	Overload	0.70	Amp	0.91	130.6	3-Phase
Line155	Line	Overload	9.00	Amp	11.43	127.0	3-Phase
Line156	Line	Overload	6.00	Amp	7.67	127.8	3-Phase
Line157	Line	Overload	3.80	Amp	4.93	129.7	3-Phase
Line158	Line	Overload	3.30	Amp	4.22	127.8	3-Phase
Line159	Line	Overload	2.20	Amp	2.88	131.0	3-Phase
Line16	Line	Overload	4.00	Amp	5.13	128.2	3-Phase
Line160	Line	Overload	0.60	Amp	0.73	121.5	3-Phase

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Line161	Line	Overload	72.60	Amp	72.91	100.4	3-Phase
Line162	Line	Overload	16.00	Amp	20.15	125.9	3-Phase
Line163	Line	Overload	11.60	Amp	14.78	127.5	3-Phase
Line164	Line	Overload	1.80	Amp	2.32	128.7	3-Phase
Line165	Line	Overload	1.80	Amp	2.33	129.3	3-Phase
Line167	Line	Overload	1.60	Amp	2.04	127.3	3-Phase
Line168	Line	Overload	0.20	Amp	0.30	149.1	3-Phase
Line17	Line	Overload	2.70	Amp	3.46	128.2	3-Phase
Line171	Line	Overload	1.40	Amp	1.78	127.4	3-Phase
Line172	Line	Overload	1.20	Amp	1.57	131.1	3-Phase
Line173	Line	Overload	0.20	Amp	0.23	114.9	3-Phase
Line177	Line	Overload	1.00	Amp	1.29	128.6	3-Phase
Line18	Line	Overload	1.30	Amp	1.67	128.5	3-Phase
Line182	Line	Overload	53.20	Amp	67.89	127.6	3-Phase
Line183	Line	Overload	51.50	Amp	65.75	127.7	3-Phase
Line184	Line	Overload	16.20	Amp	20.73	127.9	3-Phase
Line185	Line	Overload	12.20	Amp	15.51	127.1	3-Phase
Line186	Line	Overload	12.20	Amp	15.51	127.1	3-Phase
Line187	Line	Overload	11.00	Amp	14.13	128.4	3-Phase
Line188	Line	Overload	4.60	Amp	5.85	127.1	3-Phase
Line189	Line	Overload	2.20	Amp	2.80	127.1	3-Phase
Line19	Line	Overload	1.30	Amp	1.67	128.7	3-Phase
Line190	Line	Overload	2.20	Amp	2.81	127.9	3-Phase
Line191	Line	Overload	0.50	Amp	0.65	129.5	3-Phase
Line195	Line	Overload	1.10	Amp	1.40	127.3	3-Phase
Line196	Line	Overload	4.10	Amp	5.24	127.7	3-Phase
Line197	Line	Overload	3.00	Amp	3.73	124.2	3-Phase
Line198	Line	Overload	1.60	Amp	2.09	130.4	3-Phase
Line199	Line	Overload	1.00	Amp	1.30	129.6	3-Phase
Line2	Line	Overload	103.00	Amp	104.12	101.1	3-Phase
Line20	Line	Overload	1.40	Amp	1.68	119.9	3-Phase
Line200	Line	Overload	35.40	Amp	45.22	127.7	3-Phase
Line201	Line	Overload	2.00	Amp	2.54	127.2	3-Phase
Line202	Line	Overload	2.00	Amp	2.55	127.7	3-Phase
Line203	Line	Overload	33.50	Amp	42.77	127.7	3-Phase
Line204	Line	Overload	0.60	Amp	0.74	123.3	3-Phase

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Line205	Line	Overload	33.00	Amp	42.06	127.4	3-Phase
Line206	Line	Overload	17.30	Amp	21.98	127.1	3-Phase
Line207	Line	Overload	3.40	Amp	4.31	126.7	3-Phase
Line208	Line	Overload	0.90	Amp	1.13	125.0	3-Phase
Line209	Line	Overload	13.80	Amp	17.69	128.2	3-Phase
Line210	Line	Overload	11.50	Amp	14.70	127.8	3-Phase
Line212	Line	Overload	2.60	Amp	3.23	124.3	3-Phase
Line213	Line	Overload	1.00	Amp	1.31	131.2	3-Phase
Line214	Line	Overload	0.60	Amp	0.74	123.0	3-Phase
Line215	Line	Overload	8.50	Amp	10.79	127.0	3-Phase
Line216	Line	Overload	6.10	Amp	7.71	126.4	3-Phase
Line217	Line	Overload	4.60	Amp	5.97	129.8	3-Phase
Line218	Line	Overload	4.10	Amp	5.29	129.0	3-Phase
Line219	Line	Overload	4.10	Amp	5.31	129.5	3-Phase
Line220	Line	Overload	1.10	Amp	1.43	130.0	3-Phase
Line221	Line	Overload	1.10	Amp	1.45	132.0	3-Phase
Line222	Line	Overload	1.90	Amp	2.45	129.2	3-Phase
Line223	Line	Overload	1.60	Amp	2.05	128.4	3-Phase
Line224	Line	Overload	0.30	Amp	0.42	138.8	3-Phase
Line225	Line	Overload	1.10	Amp	1.37	124.6	3-Phase
Line226	Line	Overload	1.30	Amp	1.68	129.2	3-Phase
Line227	Line	Overload	0.20	Amp	0.24	120.5	3-Phase
Line228	Line	Overload	1.10	Amp	1.45	132.0	3-Phase
Line230	Line	Overload	1.00	Amp	1.33	132.5	3-Phase
Line231	Line	Overload	15.80	Amp	20.13	127.4	3-Phase
Line232	Line	Overload	3.90	Amp	4.76	122.0	3-Phase
Line233	Line	Overload	2.20	Amp	2.90	131.7	3-Phase
Line234	Line	Overload	0.20	Amp	0.33	166.3	3-Phase
Line235	Line	Overload	2.00	Amp	2.57	128.4	3-Phase
Line236	Line	Overload	9.90	Amp	12.49	126.1	3-Phase
Line237	Line	Overload	8.50	Amp	10.84	127.5	3-Phase
Line238	Line	Overload	1.10	Amp	1.40	127.0	3-Phase
Line239	Line	Overload	7.00	Amp	9.05	129.3	3-Phase
Line24	Line	Overload	0.60	Amp	0.71	118.5	3-Phase
Line240	Line	Overload	5.80	Amp	7.33	126.5	3-Phase
Line241	Line	Overload	5.00	Amp	6.32	126.5	3-Phase

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Line242	Line	Overload	0.20	Amp	0.23	114.1	3-Phase
Line243	Line	Overload	3.10	Amp	3.93	126.7	3-Phase
Line25	Line	Overload	0.60	Amp	0.71	118.4	3-Phase
Line26	Line	Overload	0.50	Amp	0.55	109.6	3-Phase
Line28	Line	Overload	0.40	Amp	0.49	122.7	3-Phase
Line3	Line	Overload	0.50	Amp	0.62	123.2	3-Phase
Line31	Line	Overload	2.10	Amp	2.80	133.6	3-Phase
Line34	Line	Overload	0.30	Amp	0.45	149.9	3-Phase
Line35	Line	Overload	0.10	Amp	0.13	132.5	3-Phase
Line4	Line	Overload	0.50	Amp	0.66	132.2	3-Phase
Line5	Line	Overload	102.20	Amp	103.57	101.3	3-Phase
Line51	Line	Overload	2.10	Amp	2.60	123.9	3-Phase
Line52	Line	Overload	1.00	Amp	1.18	118.3	3-Phase
Line57	Line	Overload	4.10	Amp	5.19	126.6	3-Phase
Line58	Line	Overload	3.40	Amp	4.45	130.7	3-Phase
Line59	Line	Overload	11.40	Amp	57.53	504.6	3-Phase
Line6	Line	Overload	100.30	Amp	101.42	101.1	3-Phase
Line60	Line	Overload	57.40	Amp	58.83	102.5	3-Phase
Line61	Line	Overload	1.30	Amp	1.55	119.1	3-Phase
Line62	Line	Overload	60.80	Amp	61.95	101.9	3-Phase
Line63	Line	Overload	0.40	Amp	0.52	130.3	3-Phase
Line64	Line	Overload	61.10	Amp	62.41	102.1	3-Phase
Line66	Line	Overload	61.20	Amp	62.53	102.2	3-Phase
Line67	Line	Overload	67.00	Amp	69.76	104.1	3-Phase
Line68	Line	Overload	0.20	Amp	0.31	156.7	3-Phase
Line69	Line	Overload	67.10	Amp	70.02	104.4	3-Phase
Line7	Line	Overload	100.00	Amp	101.01	101.0	3-Phase
Line70	Line	Overload	0.30	Amp	0.43	144.7	3-Phase
Line71	Line	Overload	5.80	Amp	7.24	124.8	3-Phase
Line72	Line	Overload	0.90	Amp	1.08	120.1	3-Phase
Line73	Line	Overload	0.20	Amp	0.36	179.9	3-Phase
Line74	Line	Overload	5.20	Amp	6.16	118.5	3-Phase
Line75	Line	Overload	0.20	Amp	0.24	117.8	3-Phase
Line76	Line	Overload	3.40	Amp	4.27	125.5	3-Phase
Line77	Line	Overload	3.00	Amp	3.61	120.3	3-Phase
Line78	Line	Overload	2.40	Amp	3.01	125.6	3-Phase



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Line79	Line	Overload	1.00	Amp	1.32	131.9	3-Phase
Line8	Line	Overload	100.00	Amp	101.02	101.0	3-Phase
Line84	Line	Overload	4.10	Amp	5.21	127.1	3-Phase
Line85	Line	Overload	3.00	Amp	3.85	128.2	3-Phase
Line86	Line	Overload	2.80	Amp	3.56	127.1	3-Phase
Line87	Line	Overload	2.80	Amp	3.56	127.2	3-Phase
Line88	Line	Overload	2.80	Amp	3.60	128.6	3-Phase
Line89	Line	Overload	2.20	Amp	2.75	124.9	3-Phase
Line9	Line	Overload	100.00	Amp	101.04	101.0	3-Phase
Line90	Line	Overload	1.50	Amp	1.91	127.6	3-Phase
Line91	Line	Overload	1.50	Amp	1.92	127.9	3-Phase
Line92	Line	Overload	0.70	Amp	0.95	135.8	3-Phase
Line97	Line	Overload	19.10	Amp	24.22	126.8	3-Phase
Line98	Line	Overload	10.30	Amp	13.06	126.8	3-Phase
Line99	Line	Overload	4.60	Amp	5.77	125.4	3-Phase
mass stones	Transformer	Overload	0.04	MVA	0.07	177.5	3-Phase
old station	Transformer	Overload	0.25	MVA	0.34	136.7	3-Phase
T1	Transformer	Overload	0.40	MVA	0.43	109.1	3-Phase
T2	Transformer	Overload	0.40	MVA	0.43	109.2	3-Phase
T6	Transformer	Overload	0.25	MVA	0.26	101.8	3-Phase
T7	Transformer	Overload	0.40	MVA	0.47	119.6	3-Phase
T8	Transformer	Overload	0.40	MVA	0.43	109.1	3-Phase
tlfeet	Transformer	Overload	0.06	MVA	0.08	120.5	3-Phase
weastern	Transformer	Overload	0.16	MVA	0.26	164.5	3-Phase

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Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
alrfaid	Transformer	Overload	0.16	MVA	0.15	95.3	3-Phase
Bus100	Bus	Under Voltage	33.00	kV	31.84	96.5	3-Phase
Bus101	Bus	Under Voltage	33.00	kV	31.82	96.4	3-Phase
Bus102	Bus	Under Voltage	33.00	kV	31.82	96.4	3-Phase
Bus103	Bus	Under Voltage	33.00	kV	31.82	96.4	3-Phase
Bus104	Bus	Under Voltage	33.00	kV	31.82	96.4	3-Phase
Bus105	Bus	Under Voltage	33.00	kV	31.82	96.4	3-Phase
Bus106	Bus	Under Voltage	33.00	kV	31.81	96.4	3-Phase
Bus109	Bus	Under Voltage	33.00	kV	31.81	96.4	3-Phase

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Bus110	Bus	Under Voltage	33.00	kV	31.81	96.4	3-Phase
Bus111	Bus	Under Voltage	33.00	kV	31.82	96.4	3-Phase
Bus112	Bus	Under Voltage	33.00	kV	31.84	96.5	3-Phase
Bus113	Bus	Under Voltage	33.00	kV	31.84	96.5	3-Phase
Bus114	Bus	Under Voltage	33.00	kV	31.73	96.2	3-Phase
Bus115	Bus	Under Voltage	33.00	kV	31.73	96.2	3-Phase
Bus116	Bus	Under Voltage	33.00	kV	31.72	96.1	3-Phase
Bus118	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus119	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus12	Bus	Under Voltage	33.00	kV	32.12	97.3	3-Phase
Bus120	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus122	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus123	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus124	Bus	Under Voltage	33.00	kV	31.69	96.0	3-Phase
Bus125	Bus	Under Voltage	33.00	kV	31.69	96.0	3-Phase
Bus126	Bus	Under Voltage	33.00	kV	31.68	96.0	3-Phase
Bus127	Bus	Under Voltage	33.00	kV	31.68	96.0	3-Phase
Bus13	Bus	Under Voltage	33.00	kV	32.03	97.1	3-Phase
Bus135	Bus	Under Voltage	33.00	kV	31.67	96.0	3-Phase
Bus137	Bus	Under Voltage	33.00	kV	31.67	96.0	3-Phase
Bus138	Bus	Under Voltage	33.00	kV	31.67	96.0	3-Phase
Bus139	Bus	Under Voltage	33.00	kV	31.66	95.9	3-Phase
Bus14	Bus	Under Voltage	33.00	kV	31.92	96.7	3-Phase
Bus140	Bus	Under Voltage	33.00	kV	31.66	95.9	3-Phase
Bus141	Bus	Under Voltage	33.00	kV	31.66	95.9	3-Phase
Bus142	Bus	Under Voltage	33.00	kV	31.72	96.1	3-Phase
Bus143	Bus	Under Voltage	33.00	kV	31.72	96.1	3-Phase
Bus144	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus145	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus146	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus147	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus148	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus149	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus15	Bus	Under Voltage	33.00	kV	31.87	96.6	3-Phase
Bus150	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus151	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase

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Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Bus152	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus153	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus154	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus155	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus156	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus157	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus158	Bus	Under Voltage	33.00	kV	31.81	96.4	3-Phase
Bus159	Bus	Under Voltage	33.00	kV	31.81	96.4	3-Phase
Bus16	Bus	Under Voltage	33.00	kV	31.83	96.5	3-Phase
Bus160	Bus	Under Voltage	33.00	kV	31.80	96.4	3-Phase
Bus161	Bus	Under Voltage	33.00	kV	31.78	96.3	3-Phase
Bus162	Bus	Under Voltage	33.00	kV	31.77	96.3	3-Phase
Bus163	Bus	Under Voltage	33.00	kV	31.77	96.3	3-Phase
Bus164	Bus	Under Voltage	33.00	kV	31.71	96.1	3-Phase
Bus165	Bus	Under Voltage	33.00	kV	31.70	96.1	3-Phase
Bus167	Bus	Under Voltage	33.00	kV	31.68	96.0	3-Phase
Bus168	Bus	Under Voltage	33.00	kV	31.68	96.0	3-Phase
Bus169	Bus	Under Voltage	33.00	kV	31.66	95.9	3-Phase
Bus17	Bus	Under Voltage	33.00	kV	31.81	96.4	3-Phase
Bus170	Bus	Under Voltage	33.00	kV	31.66	95.9	3-Phase
Bus171	Bus	Under Voltage	33.00	kV	31.63	95.9	3-Phase
Bus173	Bus	Under Voltage	33.00	kV	31.62	95.8	3-Phase
Bus174	Bus	Under Voltage	33.00	kV	31.62	95.8	3-Phase
Bus175	Bus	Under Voltage	33.00	kV	31.62	95.8	3-Phase
Bus176	Bus	Under Voltage	33.00	kV	31.62	95.8	3-Phase
Bus177	Bus	Under Voltage	33.00	kV	31.62	95.8	3-Phase
Bus178	Bus	Under Voltage	33.00	kV	31.62	95.8	3-Phase
Bus179	Bus	Under Voltage	33.00	kV	31.60	95.8	3-Phase
Bus18	Bus	Under Voltage	33.00	kV	31.80	96.4	3-Phase
Bus180	Bus	Under Voltage	33.00	kV	31.60	95.8	3-Phase
Bus181	Bus	Under Voltage	33.00	kV	31.56	95.6	3-Phase
Bus182	Bus	Under Voltage	33.00	kV	31.53	95.6	3-Phase
Bus183	Bus	Under Voltage	33.00	kV	31.53	95.6	3-Phase
Bus184	Bus	Under Voltage	33.00	kV	31.53	95.5	3-Phase
Bus185	Bus	Under Voltage	33.00	kV	31.52	95.5	3-Phase
Bus186	Bus	Under Voltage	33.00	kV	31.52	95.5	3-Phase

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Bus187	Bus	Under Voltage	33.00	kV	31.52	95.5	3-Phase
Bus188	Bus	Under Voltage	33.00	kV	31.51	95.5	3-Phase
Bus189	Bus	Under Voltage	33.00	kV	31.50	95.5	3-Phase
Bus19	Bus	Under Voltage	33.00	kV	31.80	96.4	3-Phase
Bus190	Bus	Under Voltage	33.00	kV	31.50	95.5	3-Phase
Bus191	Bus	Under Voltage	33.00	kV	31.50	95.5	3-Phase
Bus192	Bus	Under Voltage	33.00	kV	31.50	95.4	3-Phase
Bus193	Bus	Under Voltage	33.00	kV	31.50	95.5	3-Phase
Bus194	Bus	Under Voltage	33.00	kV	31.51	95.5	3-Phase
Bus195	Bus	Under Voltage	33.00	kV	31.51	95.5	3-Phase
Bus196	Bus	Under Voltage	33.00	kV	31.51	95.5	3-Phase
Bus197	Bus	Under Voltage	33.00	kV	31.50	95.5	3-Phase
Bus198	Bus	Under Voltage	33.00	kV	31.50	95.5	3-Phase
Bus199	Bus	Under Voltage	33.00	kV	31.50	95.5	3-Phase
Bus20	Bus	Under Voltage	33.00	kV	31.80	96.4	3-Phase
Bus201	Bus	Under Voltage	33.00	kV	31.50	95.5	3-Phase
Bus202	Bus	Under Voltage	33.00	kV	31.50	95.5	3-Phase
Bus203	Bus	Under Voltage	33.00	kV	31.50	95.5	3-Phase
Bus21	Bus	Under Voltage	33.00	kV	31.80	96.4	3-Phase
Bus22	Bus	Under Voltage	33.00	kV	31.80	96.4	3-Phase
Bus229	Bus	Under Voltage	0.40	kV	0.38	95.2	3-Phase
Bus23	Bus	Under Voltage	33.00	kV	31.80	96.4	3-Phase
Bus234	Bus	Under Voltage	0.40	kV	0.38	95.4	3-Phase
Bus235	Bus	Under Voltage	0.40	kV	0.38	96.0	3-Phase
Bus237	Bus	Under Voltage	0.40	kV	0.38	96.1	3-Phase
Bus24	Bus	Under Voltage	33.00	kV	31.80	96.4	3-Phase
Bus240	Bus	Under Voltage	0.40	kV	0.38	96.2	3-Phase
Bus248	Bus	Under Voltage	0.40	kV	0.38	95.9	3-Phase
Bus25	Bus	Under Voltage	33.00	kV	31.80	96.4	3-Phase
Bus250	Bus	Under Voltage	0.40	kV	0.38	95.2	3-Phase
Bus252	Bus	Under Voltage	0.40	kV	0.38	96.1	3-Phase
Bus253	Bus	Under Voltage	0.40	kV	0.38	96.1	3-Phase
Bus254	Bus	Under Voltage	0.40	kV	0.38	96.0	3-Phase
Bus255	Bus	Under Voltage	0.40	kV	0.38	96.0	3-Phase
Bus256	Bus	Under Voltage	0.40	kV	0.38	95.4	3-Phase
Bus257	Bus	Under Voltage	0.40	kV	0.39	96.3	3-Phase

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Bus258	Bus	Under Voltage	0.40	kV	0.38	95.5	3-Phase
Bus259	Bus	Under Voltage	0.40	kV	0.38	95.2	3-Phase
Bus26	Bus	Under Voltage	33.00	kV	31.80	96.4	3-Phase
Bus260	Bus	Under Voltage	0.40	kV	0.38	96.1	3-Phase
Bus261	Bus	Under Voltage	0.40	kV	0.38	96.1	3-Phase
Bus262	Bus	Under Voltage	0.40	kV	0.38	95.1	3-Phase
Bus263	Bus	Under Voltage	0.40	kV	0.38	96.1	3-Phase
Bus264	Bus	Under Voltage	0.40	kV	0.38	96.1	3-Phase
Bus268	Bus	Under Voltage	0.40	kV	0.39	96.3	3-Phase
Bus269	Bus	Under Voltage	0.40	kV	0.38	95.9	3-Phase
Bus27	Bus	Under Voltage	33.00	kV	31.80	96.4	3-Phase
Bus270	Bus	Under Voltage	0.40	kV	0.38	95.3	3-Phase
Bus271	Bus	Under Voltage	0.40	kV	0.38	95.4	3-Phase
Bus272	Bus	Under Voltage	0.40	kV	0.38	96.2	3-Phase
Bus273	Bus	Under Voltage	0.40	kV	0.39	97.0	3-Phase
Bus274	Bus	Under Voltage	0.40	kV	0.39	96.7	3-Phase
Bus275	Bus	Under Voltage	0.40	kV	0.38	96.0	3-Phase
Bus276	Bus	Under Voltage	0.40	kV	0.38	96.0	3-Phase
Bus277	Bus	Under Voltage	0.40	kV	0.39	97.6	3-Phase
Bus278	Bus	Under Voltage	0.40	kV	0.39	96.6	3-Phase
Bus28	Bus	Under Voltage	33.00	kV	31.80	96.4	3-Phase
Bus280	Bus	Under Voltage	0.40	kV	0.38	95.6	3-Phase
Bus281	Bus	Under Voltage	0.40	kV	0.38	95.6	3-Phase
Bus282	Bus	Under Voltage	0.40	kV	0.38	95.2	3-Phase
Bus283	Bus	Under Voltage	0.40	kV	0.38	95.7	3-Phase
Bus284	Bus	Under Voltage	0.40	kV	0.38	95.7	3-Phase
Bus285	Bus	Under Voltage	0.40	kV	0.38	95.8	3-Phase
Bus286	Bus	Under Voltage	0.40	kV	0.38	95.8	3-Phase
Bus288	Bus	Under Voltage	0.40	kV	0.39	96.6	3-Phase
Bus29	Bus	Under Voltage	33.00	kV	31.80	96.3	3-Phase
Bus291	Bus	Under Voltage	0.40	kV	0.39	97.8	3-Phase
Bus299	Bus	Under Voltage	0.40	kV	0.39	96.9	3-Phase
Bus30	Bus	Under Voltage	33.00	kV	31.79	96.3	3-Phase
Bus300	Bus	Under Voltage	0.40	kV	0.38	95.9	3-Phase
Bus301	Bus	Under Voltage	0.40	kV	0.38	95.7	3-Phase
Bus303	Bus	Under Voltage	0.40	kV	0.38	96.1	3-Phase

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Bus304	Bus	Under Voltage	0.40	kV	0.38	96.2	3-Phase
Bus306	Bus	Under Voltage	0.40	kV	0.38	95.4	3-Phase
Bus307	Bus	Under Voltage	0.40	kV	0.38	95.6	3-Phase
Bus308	Bus	Under Voltage	0.40	kV	0.38	96.1	3-Phase
Bus309	Bus	Under Voltage	0.40	kV	0.38	96.0	3-Phase
Bus31	Bus	Under Voltage	33.00	kV	31.79	96.3	3-Phase
Bus310	Bus	Under Voltage	0.40	kV	0.38	95.7	3-Phase
Bus311	Bus	Under Voltage	0.40	kV	0.38	96.1	3-Phase
Bus312	Bus	Under Voltage	0.40	kV	0.38	96.0	3-Phase
Bus313	Bus	Under Voltage	0.40	kV	0.38	95.6	3-Phase
Bus314	Bus	Under Voltage	0.40	kV	0.38	95.2	3-Phase
Bus315	Bus	Under Voltage	0.40	kV	0.38	95.9	3-Phase
Bus316	Bus	Under Voltage	0.40	kV	0.39	96.4	3-Phase
Bus317	Bus	Under Voltage	0.40	kV	0.38	95.3	3-Phase
Bus319	Bus	Under Voltage	0.40	kV	0.38	95.5	3-Phase
Bus32	Bus	Under Voltage	33.00	kV	31.79	96.3	3-Phase
Bus320	Bus	Under Voltage	0.40	kV	0.38	95.4	3-Phase
Bus322	Bus	Under Voltage	0.40	kV	0.38	95.2	3-Phase
Bus324	Bus	Under Voltage	0.40	kV	0.38	95.7	3-Phase
Bus325	Bus	Under Voltage	0.40	kV	0.38	95.7	3-Phase
Bus327	Bus	Under Voltage	0.40	kV	0.38	95.6	3-Phase
Bus328	Bus	Under Voltage	0.40	kV	0.38	95.7	3-Phase
Bus329	Bus	Under Voltage	0.40	kV	0.38	95.6	3-Phase
Bus33	Bus	Under Voltage	33.00	kV	31.79	96.3	3-Phase
Bus330	Bus	Under Voltage	0.40	kV	0.38	95.7	3-Phase
Bus331	Bus	Under Voltage	0.40	kV	0.38	96.0	3-Phase
Bus333	Bus	Under Voltage	0.40	kV	0.38	95.2	3-Phase
Bus334	Bus	Under Voltage	0.40	kV	0.38	95.1	3-Phase
Bus335	Bus	Under Voltage	0.40	kV	0.38	95.7	3-Phase
Bus336	Bus	Under Voltage	0.40	kV	0.38	95.1	3-Phase
Bus337	Bus	Under Voltage	0.40	kV	0.38	95.3	3-Phase
Bus338	Bus	Under Voltage	0.40	kV	0.38	95.4	3-Phase
Bus34	Bus	Under Voltage	33.00	kV	31.79	96.3	3-Phase
Bus348	Bus	Under Voltage	0.40	kV	0.38	95.1	3-Phase
Bus349	Bus	Under Voltage	0.40	kV	0.38	95.3	3-Phase
Bus35	Bus	Under Voltage	33.00	kV	31.79	96.3	3-Phase

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Bus350	Bus	Under Voltage	0.40	kV	0.38	95.3	3-Phase
Bus352	Bus	Under Voltage	0.40	kV	0.38	95.4	3-Phase
Bus353	Bus	Under Voltage	33.00	kV	31.59	95.7	3-Phase
Bus354	Bus	Under Voltage	33.00	kV	31.59	95.7	3-Phase
Bus355	Bus	Under Voltage	33.00	kV	31.53	95.5	3-Phase
Bus356	Bus	Under Voltage	33.00	kV	31.53	95.5	3-Phase
Bus358	Bus	Under Voltage	33.00	kV	31.51	95.5	3-Phase
Bus359	Bus	Under Voltage	33.00	kV	31.51	95.5	3-Phase
Bus36	Bus	Under Voltage	33.00	kV	31.79	96.3	3-Phase
Bus360	Bus	Under Voltage	0.40	kV	0.38	95.2	3-Phase
Bus361	Bus	Under Voltage	33.00	kV	31.49	95.4	3-Phase
Bus362	Bus	Under Voltage	33.00	kV	31.50	95.4	3-Phase
Bus363	Bus	Under Voltage	33.00	kV	31.45	95.3	3-Phase
Bus365	Bus	Under Voltage	33.00	kV	31.41	95.2	3-Phase
Bus366	Bus	Under Voltage	33.00	kV	31.41	95.2	3-Phase
Bus367	Bus	Under Voltage	33.00	kV	31.39	95.1	3-Phase
Bus368	Bus	Under Voltage	33.00	kV	31.39	95.1	3-Phase
Bus369	Bus	Under Voltage	33.00	kV	31.39	95.1	3-Phase
Bus37	Bus	Under Voltage	33.00	kV	31.79	96.3	3-Phase
Bus370	Bus	Under Voltage	33.00	kV	31.38	95.1	3-Phase
Bus371	Bus	Under Voltage	33.00	kV	31.37	95.1	3-Phase
Bus373	Bus	Under Voltage	33.00	kV	31.38	95.1	3-Phase
Bus374	Bus	Under Voltage	33.00	kV	31.38	95.1	3-Phase
Bus376	Bus	Under Voltage	33.00	kV	31.38	95.1	3-Phase
Bus38	Bus	Under Voltage	33.00	kV	31.79	96.3	3-Phase
Bus39	Bus	Under Voltage	33.00	kV	31.79	96.3	3-Phase
Bus395	Bus	Under Voltage	0.40	kV	0.38	95.7	3-Phase
Bus396	Bus	Under Voltage	33.00	kV	31.51	95.5	3-Phase
Bus40	Bus	Under Voltage	33.00	kV	31.79	96.3	3-Phase
Bus41	Bus	Under Voltage	33.00	kV	31.79	96.3	3-Phase
Bus42	Bus	Under Voltage	33.00	kV	31.80	96.4	3-Phase
Bus429	Bus	Under Voltage	0.40	kV	0.38	95.7	3-Phase
Bus43	Bus	Under Voltage	33.00	kV	31.80	96.3	3-Phase
Bus430	Bus	Under Voltage	0.40	kV	0.38	95.7	3-Phase
Bus431	Bus	Under Voltage	0.40	kV	0.38	95.9	3-Phase
Bus432	Bus	Under Voltage	0.40	kV	0.38	95.6	3-Phase

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Bus433	Bus	Under Voltage	0.40	kV	0.38	95.7	3-Phase
Bus434	Bus	Under Voltage	33.00	kV	31.39	95.1	3-Phase
Bus436	Bus	Under Voltage	33.00	kV	31.40	95.2	3-Phase
Bus438	Bus	Under Voltage	33.00	kV	31.40	95.2	3-Phase
Bus439	Bus	Under Voltage	33.00	kV	31.40	95.1	3-Phase
Bus44	Bus	Under Voltage	33.00	kV	31.79	96.3	3-Phase
Bus442	Bus	Under Voltage	33.00	kV	31.40	95.1	3-Phase
Bus444	Bus	Under Voltage	33.00	kV	31.39	95.1	3-Phase
Bus446	Bus	Under Voltage	33.00	kV	31.39	95.1	3-Phase
Bus448	Bus	Under Voltage	33.00	kV	31.39	95.1	3-Phase
Bus45	Bus	Under Voltage	33.00	kV	31.80	96.4	3-Phase
Bus450	Bus	Under Voltage	33.00	kV	31.38	95.1	3-Phase
Bus451	Bus	Under Voltage	33.00	kV	31.38	95.1	3-Phase
Bus46	Bus	Under Voltage	33.00	kV	31.82	96.4	3-Phase
Bus47	Bus	Under Voltage	33.00	kV	31.83	96.4	3-Phase
Bus48	Bus	Under Voltage	33.00	kV	31.83	96.5	3-Phase
Bus49	Bus	Under Voltage	33.00	kV	31.83	96.5	3-Phase
Bus50	Bus	Under Voltage	33.00	kV	31.83	96.5	3-Phase
Bus51	Bus	Under Voltage	33.00	kV	31.83	96.5	3-Phase
Bus52	Bus	Under Voltage	33.00	kV	31.83	96.5	3-Phase
Bus53	Bus	Under Voltage	33.00	kV	31.83	96.5	3-Phase
Bus54	Bus	Under Voltage	33.00	kV	31.83	96.5	3-Phase
Bus55	Bus	Under Voltage	33.00	kV	31.83	96.5	3-Phase
Bus56	Bus	Under Voltage	33.00	kV	31.83	96.5	3-Phase
Bus57	Bus	Under Voltage	33.00	kV	31.85	96.5	3-Phase
Bus58	Bus	Under Voltage	33.00	kV	31.86	96.5	3-Phase
Bus59	Bus	Under Voltage	33.00	kV	31.87	96.6	3-Phase
Bus60	Bus	Under Voltage	33.00	kV	31.87	96.6	3-Phase
Bus61	Bus	Under Voltage	33.00	kV	31.88	96.6	3-Phase
Bus62	Bus	Under Voltage	33.00	kV	31.88	96.6	3-Phase
Bus63	Bus	Under Voltage	33.00	kV	31.88	96.6	3-Phase
Bus64	Bus	Under Voltage	33.00	kV	31.88	96.6	3-Phase
Bus65	Bus	Under Voltage	33.00	kV	31.88	96.6	3-Phase
Bus66	Bus	Under Voltage	33.00	kV	31.88	96.6	3-Phase
Bus67	Bus	Under Voltage	33.00	kV	31.92	96.7	3-Phase
Bus68	Bus	Under Voltage	33.00	kV	32.08	97.2	3-Phase



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Bus69	Bus	Under Voltage	33.00	kV	32.14	97.4	3-Phase
Bus70	Bus	Under Voltage	33.00	kV	32.17	97.5	3-Phase
Bus71	Bus	Under Voltage	33.00	kV	32.16	97.5	3-Phase
Bus72	Bus	Under Voltage	33.00	kV	32.16	97.4	3-Phase
Bus73	Bus	Under Voltage	33.00	kV	32.17	97.5	3-Phase
Bus96	Bus	Under Voltage	33.00	kV	31.84	96.5	3-Phase
Bus97	Bus	Under Voltage	33.00	kV	31.84	96.5	3-Phase
Bus98	Bus	Under Voltage	33.00	kV	31.84	96.5	3-Phase
Bus99	Bus	Under Voltage	33.00	kV	31.84	96.5	3-Phase
Line138	Line	Overload	70.50	Amp	70.47	100.0	3-Phase
Line139	Line	Overload	70.50	Amp	70.48	100.0	3-Phase
Line175	Line	Overload	54.20	Amp	54.13	99.9	3-Phase
Line176	Line	Overload	54.20	Amp	54.16	99.9	3-Phase
Line178	Line	Overload	53.30	Amp	53.13	99.7	3-Phase
Line180	Line	Overload	53.20	Amp	53.10	99.8	3-Phase
Line50	Line	Overload	49.00	Amp	46.56	95.0	3-Phase
Line53	Line	Overload	51.10	Amp	49.15	96.2	3-Phase
Line54	Line	Overload	52.10	Amp	50.39	96.7	3-Phase
Line55	Line	Overload	52.60	Amp	51.05	97.0	3-Phase
Line56	Line	Overload	53.80	Amp	52.60	97.8	3-Phase
T3	Transformer	Overload	0.40	MVA	0.39	97.3	3-Phase

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**SUMMARY OF TOTAL GENERATION, LOADING & DEMAND**

	<u>MW</u>	<u>Mvar</u>	<u>MVA</u>	<u>% PF</u>
Source (Swing Buses):	8.339	4.981	9.713	85.85 Lagging
Source (Non-Swing Buses):	2.740	-0.901	2.884	95.00 Leading
Total Demand:	11.079	4.080	11.806	93.84 Lagging
Total Motor Load:	10.048	3.822	10.750	93.47 Lagging
Total Static Load:	0.000	0.001	0.001	1.00 Lagging
Total Constant I Load:	0.000	0.000	0.000	
Total Generic Load:	0.000	0.000	0.000	
Apparent Losses:	1.031	0.258		
System Mismatch:	0.000	0.000		

Number of Iterations: 3