

Project:	ETAP	Page:	1
Location:	12.6.0H	Date:	13-07-2017
Contract:		SN:	
Engineer:	Study Case: LF	Revision:	Base
Filename: citra fix~~~		Config.:	Normal

Electrical Transient Analyzer Program

Load Flow Analysis

Loading Category (3): Malam
Generation Category (1): Design
Load Diversity Factor: None

	<u>Swing</u>	<u>V-Control</u>	<u>Load</u>	<u>Total</u>
Number of Buses:	1	0	124	125

	<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:	54	0	0	69	0	1	124

Method of Solution:	Newton-Raphson Method
Maximum No. of Iteration:	99
Precision of Solution:	0.0001000
System Frequency:	50.00 Hz
Unit System:	Metric
Project Filename:	citra fix~~~
Output Filename:	D:\SKRIPS\BACKUP\BACKUP\BARU HUJAN.lfr

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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	

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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
Bus121	20.000	1	100.0	0.0								
Bus122	150.000	1	100.0	0.0								
Bus123	20.000	1	100.0	0.0								
Bus124	20.000	1	100.0	0.0								
Bus125	20.000	1	100.0	0.0								
Bus126	20.000	1	100.0	0.0								
Bus128	20.000	1	100.0	0.0								
Bus129	20.000	1	100.0	0.0								
Bus130	20.000	1	100.0	0.0								
Bus131	20.000	1	100.0	0.0								
Bus134	20.000	1	100.0	0.0								
Bus135	20.000	1	100.0	0.0								
Bus136	20.000	1	100.0	0.0								
Bus137	20.000	1	100.0	0.0								
Bus138	20.000	1	100.0	0.0								
Bus139	20.000	1	100.0	0.0								
P102	0.400	1	100.0	0.0	0.016	0.010	0.010	0.007				
P103	20.000	1	100.0	0.0								
P106	0.400	1	100.0	0.0	0.004	0.003	0.003	0.002				
P107	20.000	1	100.0	0.0								
P108	0.400	1	100.0	0.0	0.008	0.005	0.005	0.003				
P109	20.000	1	100.0	0.0								
P114	0.400	1	100.0	0.0	0.009	0.006	0.006	0.004				
P115	20.000	1	100.0	0.0								
P116	0.400	1	100.0	0.0	0.008	0.005	0.006	0.003				
P117	20.000	1	100.0	0.0								
P118	0.400	1	100.0	0.0	0.068	0.042	0.045	0.028				
P119	20.000	1	100.0	0.0								
P120	0.400	1	100.0	0.0	0.042	0.026	0.028	0.017				
P121	20.000	1	100.0	0.0								
P122	0.400	1	100.0	0.0	0.009	0.006	0.006	0.004				
P123	20.000	1	100.0	0.0								
P140	0.400	1	100.0	0.0			0.024	0.015				

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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
P141	20.000	1	100.0	0.0								
P146	0.400	1	100.0	0.0	0.006	0.004	0.004	0.002				
P147	20.000	1	100.0	0.0								
P148	0.400	1	100.0	0.0	0.010	0.006	0.007	0.004				
P149	20.000	1	100.0	0.0								
P150	0.400	1	100.0	0.0	0.004	0.002	0.003	0.002				
P151	20.000	1	100.0	0.0								
P152	0.400	1	100.0	0.0	0.006	0.004	0.004	0.003				
P153	20.000	1	100.0	0.0								
P154	0.400	1	100.0	0.0	0.007	0.004	0.005	0.003				
P155	20.000	1	100.0	0.0								
P156	0.400	1	100.0	0.0	0.009	0.006	0.006	0.004				
P157	20.000	1	100.0	0.0								
P158	0.400	1	100.0	0.0	0.009	0.006	0.006	0.004				
P159	20.000	1	100.0	0.0								
P162	0.400	1	100.0	0.0	0.056	0.034	0.037	0.023				
P163	20.000	1	100.0	0.0								
P188	0.400	1	100.0	0.0	0.008	0.005	0.005	0.003				
P189	0.400	1	100.0	0.0	0.010	0.006	0.007	0.004				
P192	0.400	1	100.0	0.0	0.010	0.006	0.006	0.004				
P193	0.400	1	100.0	0.0	0.004	0.002	0.002	0.001				
P194	20.000	1	100.0	0.0								
P195	20.000	1	100.0	0.0								
P196	20.000	1	100.0	0.0								
P197	20.000	1	100.0	0.0								
P200	0.400	1	100.0	0.0	0.022	0.013	0.014	0.009				
P201	20.000	1	100.0	0.0								
P202	0.400	1	100.0	0.0	0.015	0.009	0.010	0.006				
P203	20.000	1	100.0	0.0								
P208	0.400	1	100.0	0.0	0.007	0.004	0.004	0.003				
P209	0.400	1	100.0	0.0	0.008	0.005	0.006	0.003				
P210	20.000	1	100.0	0.0								
P211	20.000	1	100.0	0.0								
P214	0.400	1	100.0	0.0	0.040	0.025	0.027	0.017				
P215	20.000	1	100.0	0.0								

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					Constant kVA		Constant Z		Constant I		Generic	
ID	kV	Sub-sys	% Mag.	Ang.	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
P220	0.400	1	100.0	0.0	0.010	0.006	0.007	0.004				
P221	0.400	1	100.0	0.0	0.008	0.005	0.005	0.003				
P222	20.000	1	100.0	0.0								
P223	20.000	1	100.0	0.0								
P226	0.400	1	100.0	0.0	0.055	0.034	0.037	0.023				
P227	20.000	1	100.0	0.0								
P232	0.400	1	100.0	0.0	0.010	0.006	0.007	0.004				
P233	20.000	1	100.0	0.0								
P234	20.000	1	100.0	0.0								
P235	0.400	1	100.0	0.0	0.007	0.004	0.005	0.003				
P238	0.400	1	100.0	0.0	0.045	0.028	0.030	0.019				
P239	20.000	1	100.0	0.0								
P242	0.400	1	100.0	0.0	0.015	0.009	0.010	0.006				
P243	20.000	1	100.0	0.0								
P246	0.400	1	100.0	0.0	0.011	0.007	0.007	0.005				
P247	20.000	1	100.0	0.0								
P250	0.400	1	100.0	0.0	0.008	0.005	0.005	0.003				
P251	20.000	1	100.0	0.0								
P252	0.400	1	100.0	0.0	0.009	0.006	0.006	0.004				
P253	20.000	1	100.0	0.0								
P254	0.400	1	100.0	0.0	0.011	0.007	0.008	0.005				
P255	20.000	1	100.0	0.0								
P260	0.400	1	100.0	0.0	0.007	0.004	0.005	0.003				
P261	0.400	1	100.0	0.0	0.005	0.003	0.003	0.002				
P262	20.000	1	100.0	0.0								
P263	20.000	1	100.0	0.0								
P266	0.400	1	100.0	0.0	0.005	0.003	0.004	0.002				
P267	20.000	1	100.0	0.0								
P268	0.400	1	100.0	0.0	0.004	0.003	0.003	0.002				
P269	20.000	1	100.0	0.0								
P272	0.400	1	100.0	0.0	0.007	0.004	0.004	0.003				
P273	20.000	1	100.0	0.0								
P277	20.000	1	100.0	0.0								
P282	0.400	1	100.0	0.0	0.015	0.009	0.010	0.006				
P283	20.000	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
P286	20.000	1	100.0	0.0								
P288	20.000	1	100.0	0.0								
P292	20.000	1	100.0	0.0								
P293	0.400	1	100.0	0.0	0.010	0.006	0.007	0.004				
P296	20.000	1	100.0	0.0								
P297	0.400	1	100.0	0.0	0.008	0.005	0.005	0.003				
P298	20.000	1	100.0	0.0								
P299	0.400	1	100.0	0.0	0.010	0.006	0.006	0.004				
P304	0.400	1	100.0	0.0	0.026	0.016	0.017	0.011				
P305	20.000	1	100.0	0.0								
P312	20.000	1	100.0	0.0								
P313	0.400	1	100.0	0.0	0.014	0.009	0.009	0.006				
P314	20.000	1	100.0	0.0								
P315	0.400	1	100.0	0.0	0.012	0.007	0.008	0.005				
P316	20.000	1	100.0	0.0								
P317	0.400	1	100.0	0.0	0.008	0.005	0.006	0.003				
P324	0.400	1	100.0	0.0	0.012	0.007	0.008	0.005				
P325	0.400	1	100.0	0.0	0.006	0.004	0.004	0.002				
P326	20.000	1	100.0	0.0								
P327	20.000	1	100.0	0.0								
P328	20.000	1	100.0	0.0								
P329	0.400	1	100.0	0.0	0.010	0.006	0.006	0.004				
Total Number of Buses: 125					0.744	0.461	0.520	0.322	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
Bus122	150.000	Swing	1	100.0	0.0					
						0.000	0.000			

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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
Line32		147,	436.0	0.0	1	75	0.269600	0.382242	0.0000036
Line61		147,	205.0	0.0	1	75	0.269600	0.382242	0.0000036
Line63		147,	213.0	0.0	1	75	0.269600	0.382242	0.0000036
Line64		147,	700.0	0.0	1	75	0.269600	0.382242	0.0000036
Line65		147,	166.0	0.0	1	75	0.269600	0.382242	0.0000036
Line66		147,	147.0	0.0	1	75	0.269600	0.382242	0.0000036
Line67		75,6	650.0	0.0	1	75	0.524700	0.382242	0.0000034
Line68		147,	375.0	0.0	1	75	0.269600	0.382242	0.0000036
Line70		147,	550.0	0.0	1	75	0.269600	0.382242	0.0000036
Line71		75,6	500.0	0.0	1	75	0.524700	0.382242	0.0000034
Line72		147,	495.0	0.0	1	75	0.269600	0.382242	0.0000036
Line73		147,	600.0	0.0	1	75	0.269600	0.382242	0.0000036
Line74		147,	2100.0	0.0	1	75	0.269600	0.382242	0.0000036
Line75		147,	800.0	0.0	1	75	0.269600	0.382242	0.0000036
Line80		147,	3850.0	0.0	1	75	0.269600	0.382242	0.0000036
Line81		147,	850.0	0.0	1	75	0.269600	0.382242	0.0000036
Line161		75,6	600.0	0.0	1	75	0.524700	0.382242	0.0000034
Line162		75,6	900.0	0.0	1	75	0.524700	0.382242	0.0000034
Line164		75,6	384.0	0.0	1	75	0.524700	0.382242	0.0000034
Line166		75,6	960.0	0.0	1	75	0.524700	0.382242	0.0000034
Line168		75,6	295.0	0.0	1	75	0.524700	0.382242	0.0000034
Line170		75,6	1050.0	0.0	1	75	0.524700	0.382242	0.0000034
Line171		75,6	700.0	0.0	1	75	0.524700	0.382242	0.0000034
Line172		75,6	368.0	0.0	1	75	0.524700	0.382242	0.0000034
Line174		75,6	151.0	0.0	1	75	0.524700	0.382242	0.0000034
Line175		75,6	72.0	0.0	1	75	0.524700	0.382242	0.0000034
Line176		75,6	1600.0	0.0	1	75	0.524700	0.382242	0.0000034
Line177		75,6	660.0	0.0	1	75	0.524700	0.382242	0.0000034
Line178		75,6	165.0	0.0	1	75	0.524700	0.382242	0.0000034
Line179		75,6	325.0	0.0	1	75	0.524700	0.382242	0.0000034
Line181		147,	172.0	0.0	1	75	0.269600	0.382242	0.0000036
Line183		147,	375.0	0.0	1	75	0.269600	0.382242	0.0000036
Line184		147,	140.0	0.0	1	75	0.269600	0.382242	0.0000036
Line185		147,	1550.0	0.0	1	75	0.269600	0.382242	0.0000036

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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
Line187		147,	250.0	0.0	1	75	0.269600	0.382242	0.0000036
Line190		147,	500.0	0.0	1	75	0.269600	0.382242	0.0000036
Line191		147,	750.0	0.0	1	75	0.269600	0.382242	0.0000036
Line193		147,	123.0	0.0	1	75	0.269600	0.382242	0.0000036
Line196		147,	325.0	0.0	1	75	0.269600	0.382242	0.0000036
Line198		147,	403.0	0.0	1	75	0.269600	0.382242	0.0000036
Line200		147,	325.0	0.0	1	75	0.269600	0.382242	0.0000036
Line202		147,	700.0	0.0	1	75	0.269600	0.382242	0.0000036
Line204		147,	700.0	0.0	1	75	0.269600	0.382242	0.0000036
Line206		147,	475.0	0.0	1	75	0.269600	0.382242	0.0000036
Line208		147,	128.0	0.0	1	75	0.269600	0.382242	0.0000036
Line210		147,	650.0	0.0	1	75	0.269600	0.382242	0.0000036
Line212		147,	1050.0	0.0	1	75	0.269600	0.382242	0.0000036
Line214		147,	1800.0	0.0	1	75	0.269600	0.382242	0.0000036
Line216		75,6	250.0	0.0	1	75	0.524700	0.382242	0.0000034
Line218		75,6	236.0	0.0	1	75	0.524700	0.382242	0.0000034
Line219		75,6	1000.0	0.0	1	75	0.524700	0.382242	0.0000034
Line221		75,6	136.0	0.0	1	75	0.524700	0.382242	0.0000034
Line223		75,6	281.0	0.0	1	75	0.524700	0.382242	0.0000034
Line225		75,6	418.0	0.0	1	75	0.524700	0.382242	0.0000034
Line227		75,6	1700.0	0.0	1	75	0.524700	0.382242	0.0000034
Line229		75,6	432.0	0.0	1	75	0.524700	0.382242	0.0000034
Line231		75,6	1000.0	0.0	1	75	0.524700	0.382242	0.0000034
Line233		75,6	446.0	0.0	1	75	0.524700	0.382242	0.0000034
Line235		75,6	446.0	0.0	1	75	0.524700	0.382242	0.0000034
Line237		75,6	235.0	0.0	1	75	0.524700	0.382242	0.0000034
Line241		75,6	900.0	0.0	1	75	0.524700	0.382242	0.0000034
Line243		75,6	408.0	0.0	1	75	0.524700	0.382242	0.0000034
Line245		75,6	306.0	0.0	1	75	0.524700	0.382242	0.0000034
Line247		75,6	163.0	0.0	1	75	0.524700	0.382242	0.0000034
Line249		75,6	1700.0	0.0	1	75	0.524700	0.382242	0.0000034
Line251		75,6	376.0	0.0	1	75	0.524700	0.382242	0.0000034
Line254		75,6	1250.0	0.0	1	75	0.524700	0.382242	0.0000034
Line255		75,6	234.0	0.0	1	75	0.524700	0.382242	0.0000034
Line257		75,6	700.0	0.0	1	75	0.524700	0.382242	0.0000034

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Line / Cable resistances are listed at the specified temperatures.

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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
T-KA 008	3-Phase	0.100	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-KA 09	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-KA 010	3-Phase	0.200	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-KA 11	3-Phase	0.100	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-KA 38	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-KA 40	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-KA 45	3-Phase	0.250	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-KA 49	3-Phase	0.025	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-KA 61	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-KA 62	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-KA 75	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-KA 94	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 01	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 02	3-Phase	0.200	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 03	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 04	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 05	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 06	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 07	3-Phase	0.100	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 08	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 10	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 12	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 13	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 14	3-Phase	0.100	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 014	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 16	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 17	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 18	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 19	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 20	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 021	3-Phase	0.200	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 022	3-Phase	0.200	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PA 23	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 01	3-Phase	0.050	20.000	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
T-PD 02	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 03	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 04	3-Phase	0.100	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 05	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 06	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 07	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 08	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 12	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 13	3-Phase	0.100	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 14	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 16	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 17	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 18	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 19	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 020	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 21	3-Phase	0.025	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 22	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 23	3-Phase	0.050	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PD 024	3-Phase	0.200	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T56	3-Phase	30.000	150.000	20.000	12.50	45.00	0	0	0	0	0	12.5000	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
T-KA 008	2W XFMR	P103	P102	1501.08	3707.66	4000.00	
T-KA 09	2W XFMR	P115	P114	4437.60	6656.40	8000.00	
T-KA 010	2W XFMR	P121	P120	1109.40	1664.10	2000.00	
T-KA 11	2W XFMR	P141	P140	1501.08	3707.66	4000.00	
T-KA 38	2W XFMR	P117	P116	4437.60	6656.40	8000.00	
T-KA 40	2W XFMR	P123	P122	4437.60	6656.40	8000.00	
T-KA 45	2W XFMR	P119	P118	887.52	1331.28	1600.00	
T-KA 49	2W XFMR	P107	P106	8875.20	13312.80	16000.00	
T-KA 61	2W XFMR	P147	P146	4437.60	6656.40	8000.00	
T-KA 62	2W XFMR	P149	P148	4437.60	6656.40	8000.00	
T-KA 75	2W XFMR	P151	P150	4437.60	6656.40	8000.00	
T-KA 94	2W XFMR	P109	P108	4437.60	6656.40	8000.00	
T-PA 01	2W XFMR	P159	P158	4437.60	6656.40	8000.00	
T-PA 02	2W XFMR	P163	P162	1109.40	1664.10	2000.00	
T-PA 03	2W XFMR	P234	P235	4437.60	6656.40	8000.00	
T-PA 04	2W XFMR	P196	P189	4437.60	6656.40	8000.00	
T-PA 05	2W XFMR	P262	P261	4437.60	6656.40	8000.00	
T-PA 06	2W XFMR	P194	P193	4437.60	6656.40	8000.00	
T-PA 07	2W XFMR	P201	P200	1501.08	3707.66	4000.00	
T-PA 08	2W XFMR	P211	P208	4437.60	6656.40	8000.00	
T-PA 10	2W XFMR	P210	P209	4437.60	6656.40	8000.00	
T-PA 12	2W XFMR	P222	P221	4437.60	6656.40	8000.00	
T-PA 13	2W XFMR	P197	P188	4437.60	6656.40	8000.00	
T-PA 14	2W XFMR	P203	P202	1501.08	3707.66	4000.00	
T-PA 014	2W XFMR	P233	P232	4437.60	6656.40	8000.00	
T-PA 16	2W XFMR	P157	P156	4437.60	6656.40	8000.00	
T-PA 17	2W XFMR	P155	P154	4437.60	6656.40	8000.00	
T-PA 18	2W XFMR	P153	P152	4437.60	6656.40	8000.00	
T-PA 19	2W XFMR	P195	P192	4437.60	6656.40	8000.00	
T-PA 20	2W XFMR	P223	P220	4437.60	6656.40	8000.00	
T-PA 021	2W XFMR	P215	P214	1109.40	1664.10	2000.00	
T-PA 022	2W XFMR	P227	P226	1109.40	1664.10	2000.00	
T-PA 23	2W XFMR	P263	P260	4437.60	6656.40	8000.00	
T-PD 01	2W XFMR	P255	P254	4437.60	6656.40	8000.00	
T-PD 02	2W XFMR	P269	P268	4437.60	6656.40	8000.00	
T-PD 03	2W XFMR	P292	P293	4437.60	6656.40	8000.00	
T-PD 04	2W XFMR	P312	P313	2218.80	3328.20	4000.00	

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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
T-PD 05	2W XFMR	P316	P317	4437.60	6656.40	8000.00	
T-PD 06	2W XFMR	P251	P250	4437.60	6656.40	8000.00	
T-PD 07	2W XFMR	P298	P299	4437.60	6656.40	8000.00	
T-PD 08	2W XFMR	P243	P242	4437.60	6656.40	8000.00	
T-PD 12	2W XFMR	P253	P252	4437.60	6656.40	8000.00	
T-PD 13	2W XFMR	P305	P304	1501.08	3707.66	4000.00	
T-PD 14	2W XFMR	P328	P329	4437.60	6656.40	8000.00	
T-PD 16	2W XFMR	P326	P325	4437.60	6656.40	8000.00	
T-PD 17	2W XFMR	P273	P272	4437.60	6656.40	8000.00	
T-PD 18	2W XFMR	P283	P282	4437.60	6656.40	8000.00	
T-PD 19	2W XFMR	P267	P266	4437.60	6656.40	8000.00	
T-PD 020	2W XFMR	P314	P315	4437.60	6656.40	8000.00	
T-PD 21	2W XFMR	P247	P246	8875.20	13312.80	16000.00	
T-PD 22	2W XFMR	P296	P297	4437.60	6656.40	8000.00	
T-PD 23	2W XFMR	P327	P324	4437.60	6656.40	8000.00	
T-PD 024	2W XFMR	P239	P238	1109.40	1664.10	2000.00	
T56	2W XFMR	Bus122	Bus121	0.93	41.66	41.67	
Line32	Line	P103	Bus121	2.94	4.17	5.10	0.0006345
Line61	Line	P107	P109	1.38	1.96	2.40	0.0002983
Line63	Line	P109	P115	1.44	2.04	2.49	0.0003100
Line64	Line	P115	P117	4.72	6.69	8.19	0.0010187
Line65	Line	P117	Bus123	1.12	1.59	1.94	0.0002416
Line66	Line	Bus123	P121	0.99	1.40	1.72	0.0002139
Line67	Line	Bus123	P119	8.53	6.21	10.55	0.0008835
Line68	Line	P121	Bus124	2.53	3.58	4.39	0.0005457
Line70	Line	Bus124	Bus126	3.71	5.26	6.43	0.0008004
Line71	Line	Bus126	P141	6.56	4.78	8.11	0.0006796
Line72	Line	P141	P147	3.34	4.73	5.79	0.0007203
Line73	Line	P147	P149	4.04	5.73	7.02	0.0008732
Line74	Line	P151	P153	14.15	20.07	24.56	0.0030560
Line75	Line	P153	P155	5.39	7.64	9.36	0.0011642
Line80	Line	P155	P157	25.95	36.79	45.02	0.0056027
Line81	Line	P157	P159	5.73	8.12	9.94	0.0012370
Line161	Line	Bus128	Bus129	7.87	5.73	9.74	0.0008155
Line162	Line	Bus129	P215	11.81	8.60	14.61	0.0012232
Line164	Line	P223	P222	5.04	3.67	6.23	0.0005219
Line166	Line	P222	Bus130	12.59	9.17	15.58	0.0013048
Line168	Line	Bus130	P227	3.87	2.82	4.79	0.0004010
Line170	Line	P234	P233	13.77	10.03	17.04	0.0014271

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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
Line171	Line	Bus130	P234	9.18	6.69	11.36	0.0009514
Line172	Line	P233	Bus137	4.83	3.52	5.97	0.0005002
Line174	Line	Bus131	P239	1.98	1.44	2.45	0.0002052
Line175	Line	Bus131	P243	0.94	0.69	1.17	0.0000979
Line176	Line	P243	P247	20.99	15.29	25.97	0.0021747
Line177	Line	P247	P251	8.66	6.31	10.71	0.0008970
Line178	Line	P251	P253	2.16	1.58	2.68	0.0002243
Line179	Line	P253	P255	4.26	3.11	5.27	0.0004417
Line181	Line	P103	P107	1.16	1.64	2.01	0.0002503
Line183	Line	Bus124	P123	2.53	3.58	4.39	0.0005457
Line184	Line	P149	Bus134	0.94	1.34	1.64	0.0002037
Line185	Line	Bus134	P151	10.45	14.81	18.13	0.0022556
Line187	Line	P159	Bus128	1.69	2.39	2.92	0.0003638
Line190	Line	Bus128	P163	3.37	4.78	5.85	0.0007276
Line191	Line	P163	P197	5.06	7.17	8.77	0.0010914
Line193	Line	P197	P196	0.83	1.18	1.44	0.0001790
Line196	Line	P196	Bus135	2.19	3.11	3.80	0.0004730
Line198	Line	P263	P262	2.72	3.85	4.71	0.0005865
Line200	Line	Bus135	P263	2.19	3.11	3.80	0.0004730
Line202	Line	P262	P195	4.72	6.69	8.19	0.0010187
Line204	Line	P195	P194	4.72	6.69	8.19	0.0010187
Line206	Line	P194	P201	3.20	4.54	5.55	0.0006912
Line208	Line	P201	P203	0.86	1.22	1.50	0.0001863
Line210	Line	P203	P211	4.38	6.21	7.60	0.0009459
Line212	Line	P211	P210	7.08	10.03	12.28	0.0015280
Line214	Line	P210	Bus136	12.13	17.20	21.05	0.0026195
Line216	Line	Bus129	P223	3.28	2.39	4.06	0.0003398
Line218	Line	Bus137	Bus131	3.10	2.26	3.83	0.0003208
Line219	Line	Bus139	P255	13.12	9.56	16.23	0.0013592
Line221	Line	P255	P267	1.78	1.30	2.21	0.0001848
Line223	Line	P267	P269	3.69	2.69	4.56	0.0003819
Line225	Line	P269	Bus138	5.48	3.99	6.78	0.0005681
Line227	Line	Bus138	P273	22.30	16.25	27.59	0.0023106
Line229	Line	P273	P277	5.67	4.13	7.01	0.0005872
Line231	Line	P292	Bus139	13.12	9.56	16.23	0.0013592
Line233	Line	P277	P286	5.85	4.26	7.24	0.0006062
Line235	Line	P286	P288	5.85	4.26	7.24	0.0006062
Line237	Line	P288	P283	3.08	2.25	3.81	0.0003194
Line241	Line	P292	P296	11.81	8.60	14.61	0.0012232

CKT/Branch		Connected Bus ID		% Impedance, Pos. Seq., 100 MVA Base			
ID	Type	From Bus	To Bus	R	X	Z	Y
Line243	Line	P296	P298	5.35	3.90	6.62	0.0005545
Line245	Line	P298	P305	4.01	2.92	4.97	0.0004159
Line247	Line	P305	P312	2.14	1.56	2.65	0.0002215
Line249	Line	P312	P314	22.30	16.25	27.59	0.0023106
Line251	Line	P314	P316	4.93	3.59	6.10	0.0005110
Line254	Line	P327	P326	16.40	11.95	20.29	0.0016990
Line255	Line	P328	P327	3.07	2.24	3.80	0.0003180
Line257	Line	P316	P328	9.18	6.69	11.36	0.0009514
LBS KAMPUNG BARU	Tie Switch	P123	Bus125				

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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
Bus121	20.000	99.676	-0.3	0	0	0	0	P103	1.258	0.743	42.3	86.1	
								Bus122	-1.258	-0.743	42.3	86.1	
* Bus122	150.000	100.000	0.0	1.259	0.752	0	0	Bus121	1.259	0.752	5.6	85.8	
Bus123	20.000	99.390	-0.4	0	0	0	0	P117	-1.180	-0.695	39.8	86.2	
								P121	1.067	0.624	35.9	86.3	
								P119	0.113	0.070	3.9	84.8	
Bus124	20.000	99.324	-0.4	0	0	0	0	P121	-0.997	-0.581	33.5	86.4	
								Bus126	0.982	0.571	33.0	86.4	
								P123	0.015	0.009	0.5	86.0	
Bus125	20.000	99.324	-0.4	0	0	0	0	P123	0.000	0.000	0.0	0.0	
Bus126	20.000	99.258	-0.4	0	0	0	0	Bus124	-0.981	-0.572	33.0	86.4	
								P141	0.981	0.572	33.0	86.4	
Bus128	20.000	97.955	-0.7	0	0	0	0	Bus129	0.616	0.362	21.1	86.2	
								P159	-0.864	-0.507	29.5	86.2	
								P163	0.247	0.145	8.4	86.3	
Bus129	20.000	97.884	-0.7	0	0	0	0	Bus128	-0.616	-0.363	21.1	86.2	
								P215	0.066	0.040	2.3	85.3	
								P223	0.550	0.322	18.8	86.3	
Bus130	20.000	97.723	-0.7	0	0	0	0	P222	-0.519	-0.305	17.8	86.2	
								P227	0.090	0.057	3.1	84.7	
								P234	0.429	0.248	14.6	86.6	
Bus131	20.000	97.535	-0.8	0	0	0	0	P239	0.074	0.046	2.6	84.7	
								P243	0.327	0.187	11.2	86.8	
								Bus137	-0.401	-0.233	13.7	86.4	
Bus134	20.000	99.020	-0.5	0	0	0	0	P149	-0.929	-0.540	31.3	86.4	
								P151	0.929	0.540	31.3	86.4	
Bus135	20.000	97.917	-0.7	0	0	0	0	P196	-0.126	-0.071	4.3	87.2	
								P263	0.126	0.071	4.3	87.2	
Bus136	20.000	97.881	-0.8	0	0	0	0	P210	0.000	0.000	0.0	-99.4	
Bus137	20.000	97.554	-0.8	0	0	0	0	P233	-0.401	-0.233	13.7	86.4	
								Bus131	0.401	0.233	13.7	86.4	
Bus138	20.000	97.372	-0.8	0	0	0	0	P269	-0.035	-0.018	1.2	89.0	
								P273	0.035	0.018	1.2	89.0	
Bus139	20.000	97.342	-0.8	0	0	0	0	P255	-0.188	-0.109	6.4	86.4	
								P292	0.188	0.109	6.4	86.4	
P102	0.400	98.606	-0.7	0	0	0.026	0.016	P103	-0.026	-0.016	44.7	85.0	

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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
P103	20.000	99.608	-0.3	0	0	0	0	Bus121	-1.258	-0.743	42.3	86.1	
								P107	1.232	0.727	41.4	86.1	
								P102	0.026	0.016	0.9	84.6	
P106	0.400	98.318	-0.7	0	0	0.007	0.004	P107	-0.007	-0.004	12.5	85.0	
P107	20.000	99.582	-0.3	0	0	0	0	P109	1.224	0.722	41.2	86.1	
								P103	-1.231	-0.727	41.4	86.1	
								P106	0.007	0.005	0.3	84.7	
P108	0.400	98.419	-0.6	0	0	0.013	0.008	P109	-0.013	-0.008	22.4	85.0	
P109	20.000	99.551	-0.3	0	0	0	0	P107	-1.224	-0.722	41.2	86.1	
								P115	1.211	0.714	40.8	86.1	
								P108	0.013	0.008	0.4	84.7	
P114	0.400	98.169	-0.7	0	0	0.015	0.010	P115	-0.015	-0.010	26.7	85.0	
								P109	-1.210	-0.714	40.8	86.1	
								P117	1.195	0.704	40.2	86.2	
P116	0.400	98.210	-0.7	0	0	0.014	0.009	P114	0.016	0.010	0.5	84.7	
								P117	-0.014	-0.009	23.9	85.0	
								P115	-1.194	-0.703	40.2	86.2	
P117	20.000	99.415	-0.4	0	0	0	0	Bus123	1.180	0.695	39.8	86.2	
								P116	0.014	0.009	0.5	84.7	
								P119	-0.111	-0.069	193.3	85.0	
P118	0.400	97.422	-0.9	0	0	0.111	0.069	P119	-0.111	-0.069	193.3	85.0	
P119	20.000	99.376	-0.4	0	0	0	0	Bus123	-0.113	-0.071	3.9	84.5	
								P118	0.113	0.071	3.9	84.5	
								P121	-0.069	-0.043	119.4	85.0	
P120	0.400	97.863	-0.8	0	0	0.069	0.043	P121	-0.069	-0.043	119.4	85.0	
P121	20.000	99.371	-0.4	0	0	0	0	Bus123	-1.067	-0.624	35.9	86.3	
								Bus124	0.997	0.581	33.5	86.4	
								P120	0.070	0.044	2.4	84.6	
P122	0.400	97.986	-0.7	0	0	0.015	0.009	P123	-0.015	-0.009	26.5	85.0	
P123	20.000	99.324	-0.4	0	0	0	0	Bus124	-0.015	-0.010	0.5	84.7	
								P122	0.015	0.010	0.5	84.7	
								Bus125	0.000	0.000	0.0	0.0	
P140	0.400	98.255	-0.8	0	0	0.023	0.015	P141	-0.023	-0.015	40.6	85.0	
P141	20.000	99.165	-0.4	0	0	0	0	Bus126	-0.980	-0.572	33.0	86.4	
								P147	0.957	0.557	32.2	86.4	
								P140	0.024	0.015	0.8	84.6	
P146	0.400	98.284	-0.6	0	0	0.009	0.006	P147	-0.009	-0.006	16.3	85.0	
P147	20.000	99.106	-0.4	0	0	0	0	P141	-0.956	-0.557	32.2	86.4	
								P149	0.947	0.551	31.9	86.4	
								P146	0.009	0.006	0.3	84.8	
P148	0.400	97.545	-0.8	0	0	0.017	0.011	P149	-0.017	-0.011	29.5	85.0	

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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
P149	20.000	99.036	-0.4	0	0	0	0	P147	-0.946	-0.551	31.9	86.4	
								Bus134	0.929	0.540	31.3	86.4	
								P148	0.017	0.011	0.6	84.6	
P150	0.400	98.268	-0.6	0	0	0.007	0.004	P151	-0.007	-0.004	11.3	85.0	
P151	20.000	98.841	-0.5	0	0	0	0	P153	0.921	0.537	31.1	86.4	
								Bus134	-0.928	-0.541	31.4	86.4	
								P150	0.007	0.004	0.2	84.9	
P152	0.400	97.690	-0.8	0	0	0.010	0.006	P153	-0.010	-0.006	18.0	85.0	
P153	20.000	98.600	-0.6	0	0	0	0	P151	-0.920	-0.537	31.2	86.3	
								P155	0.909	0.531	30.8	86.4	
								P152	0.010	0.007	0.4	84.8	
P154	0.400	97.513	-0.8	0	0	0.011	0.007	P155	-0.011	-0.007	19.7	85.0	
P155	20.000	98.509	-0.6	0	0	0	0	P153	-0.909	-0.531	30.8	86.3	
								P157	0.897	0.524	30.4	86.4	
								P154	0.011	0.007	0.4	84.8	
P156	0.400	96.728	-1.1	0	0	0.015	0.009	P157	-0.015	-0.009	26.7	85.0	
P157	20.000	98.076	-0.7	0	0	0	0	P155	-0.894	-0.525	30.5	86.2	
								P159	0.879	0.516	30.0	86.3	
								P156	0.015	0.010	0.5	84.7	
P158	0.400	96.700	-1.1	0	0	0.014	0.009	P159	-0.014	-0.009	25.4	85.0	
P159	20.000	97.982	-0.7	0	0	0	0	P157	-0.878	-0.516	30.0	86.2	
								Bus128	0.864	0.507	29.5	86.2	
								P158	0.015	0.009	0.5	84.7	
P162	0.400	95.935	-1.3	0	0	0.090	0.056	P163	-0.090	-0.056	158.6	85.0	
P163	20.000	97.939	-0.7	0	0	0	0	Bus128	-0.247	-0.145	8.5	86.2	
								P197	0.156	0.088	5.3	87.1	
								P162	0.091	0.058	3.2	84.5	
P188	0.400	96.788	-1.0	0	0	0.013	0.008	P197	-0.013	-0.008	22.5	85.0	
P189	0.400	96.414	-1.1	0	0	0.017	0.011	P196	-0.017	-0.011	29.9	85.0	
P192	0.400	96.496	-1.1	0	0	0.016	0.010	P195	-0.016	-0.010	27.8	85.0	
P193	0.400	97.369	-0.9	0	0	0.006	0.004	P194	-0.006	-0.004	10.3	85.0	
P194	20.000	97.889	-0.8	0	0	0	0	P195	-0.090	-0.051	3.1	87.0	
								P201	0.085	0.048	2.9	87.1	
								P193	0.006	0.004	0.2	84.9	
P195	20.000	97.897	-0.7	0	0	0	0	P262	-0.106	-0.060	3.6	87.0	
								P194	0.090	0.050	3.1	87.4	
								P192	0.016	0.010	0.6	84.7	
P196	20.000	97.922	-0.7	0	0	0	0	P197	-0.143	-0.081	4.8	87.0	
								Bus135	0.126	0.070	4.3	87.4	

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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
P197	20.000	97.924	-0.7	0	0	0	0	P189	0.017	0.011	0.6	84.6	
								P163	-0.156	-0.089	5.3	86.9	
								P196	0.143	0.081	4.8	87.1	
								P188	0.013	0.008	0.5	84.7	
P200	0.400	96.494	-1.3	0	0	0.035	0.022	P201	-0.035	-0.022	61.9	85.0	
P201	20.000	97.884	-0.8	0	0	0	0	P194	-0.085	-0.048	2.9	86.8	
P202	0.400	96.933	-1.2	0	0	0.024	0.015	P203	0.049	0.026	1.6	88.5	
								P200	0.035	0.022	1.2	84.5	
								P203	-0.024	-0.015	42.4	85.0	
								P201	-0.049	-0.026	1.6	88.4	
P203	20.000	97.884	-0.8	0	0	0	0	P211	0.025	0.011	0.8	91.9	
P208	0.400	96.918	-1.0	0	0	0.011	0.007	P202	0.024	0.015	0.8	84.6	
								P211	-0.011	-0.007	19.1	85.0	
								P210	-0.014	-0.008	23.9	85.0	
								P210	-0.014	-0.008	23.9	85.0	
P209	0.400	96.671	-1.1	0	0	0.014	0.008	P211	-0.014	-0.006	0.4	91.4	
P210	20.000	97.880	-0.8	0	0	0	0	Bus136	0.000	-0.003	0.1	0.0	
P211	20.000	97.882	-0.8	0	0	0	0	P209	0.014	0.009	0.5	84.7	
								P203	-0.025	-0.012	0.8	90.6	
								P210	0.014	0.005	0.4	94.7	
								P208	0.011	0.007	0.4	84.8	
P214	0.400	96.422	-1.1	0	0	0.065	0.040	P215	-0.065	-0.040	114.8	85.0	
P215	20.000	97.872	-0.7	0	0	0	0	Bus129	-0.066	-0.041	2.3	84.6	
P220	0.400	96.356	-1.1	0	0	0.017	0.010	P214	0.066	0.041	2.3	84.6	
								P223	-0.017	-0.010	29.7	85.0	
								P222	-0.013	-0.008	22.9	85.0	
								P223	-0.533	-0.312	18.2	86.3	
P221	0.400	96.662	-1.0	0	0	0.013	0.008	Bus130	0.520	0.304	17.8	86.3	
P222	20.000	97.818	-0.7	0	0	0	0	P221	0.013	0.008	0.5	84.7	
P223	20.000	97.857	-0.7	0	0	0	0	P222	0.533	0.312	18.2	86.3	
								Bus129	-0.550	-0.322	18.8	86.3	
								P220	0.017	0.011	0.6	84.6	
								P227	-0.089	-0.055	157.4	85.0	
P226	0.400	95.729	-1.3	0	0	0.089	0.055	Bus130	-0.090	-0.057	3.1	84.5	
P227	20.000	97.718	-0.7	0	0	0	0	P226	0.090	0.057	3.1	84.5	
P232	0.400	96.133	-1.1	0	0	0.016	0.010	P233	-0.016	-0.010	28.7	85.0	
								P234	-0.417	-0.243	14.3	86.4	
								Bus137	0.401	0.233	13.7	86.5	
								P232	0.016	0.010	0.6	84.6	
P233	20.000	97.582	-0.8	0	0	0	0	P233	0.418	0.242	14.3	86.5	
P234	20.000	97.666	-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
								Bus130	-0.429	-0.249	14.7	86.5	
								P235	0.011	0.007	0.4	84.8	
P235	0.400	96.688	-1.0	0	0	0.011	0.007	P234	-0.011	-0.007	19.4	85.0	
P238	0.400	95.909	-1.2	0	0	0.073	0.045	P239	-0.073	-0.045	128.6	85.0	
P239	20.000	97.533	-0.8	0	0	0	0	Bus131	-0.074	-0.046	2.6	84.6	
								P238	0.074	0.046	2.6	84.6	
P242	0.400	95.388	-1.3	0	0	0.024	0.015	P243	-0.024	-0.015	42.4	85.0	
P243	20.000	97.531	-0.8	0	0	0	0	Bus131	-0.327	-0.187	11.2	86.8	
								P247	0.303	0.172	10.3	87.0	
								P242	0.024	0.015	0.8	84.5	
P246	0.400	94.214	-1.6	0	0	0.018	0.011	P247	-0.018	-0.011	31.9	85.0	
P247	20.000	97.439	-0.8	0	0	0	0	P243	-0.303	-0.174	10.3	86.7	
								P251	0.285	0.162	9.7	86.9	
								P246	0.018	0.012	0.6	84.2	
P250	0.400	96.318	-1.1	0	0	0.012	0.008	P251	-0.012	-0.008	21.5	85.0	
P251	20.000	97.403	-0.8	0	0	0	0	P247	-0.285	-0.163	9.7	86.8	
								P253	0.272	0.155	9.3	86.9	
								P250	0.012	0.008	0.4	84.7	
P252	0.400	96.051	-1.1	0	0	0.015	0.009	P253	-0.015	-0.009	26.6	85.0	
P253	20.000	97.394	-0.8	0	0	0	0	P251	-0.272	-0.156	9.3	86.8	
								P255	0.257	0.146	8.8	87.0	
								P252	0.015	0.010	0.5	84.7	
P254	0.400	95.742	-1.2	0	0	0.018	0.011	P255	-0.018	-0.011	32.4	85.0	
P255	20.000	97.378	-0.8	0	0	0	0	P253	-0.257	-0.146	8.8	86.9	
								Bus139	0.188	0.108	6.4	86.7	
								P267	0.051	0.027	1.7	88.5	
								P254	0.018	0.012	0.6	84.6	
P260	0.400	96.875	-1.0	0	0	0.012	0.007	P263	-0.012	-0.007	20.5	85.0	
P261	0.400	97.221	-0.9	0	0	0.008	0.005	P262	-0.008	-0.005	13.6	85.0	
P262	20.000	97.906	-0.7	0	0	0	0	P263	-0.114	-0.064	3.9	87.2	
								P195	0.106	0.059	3.6	87.3	
								P261	0.008	0.005	0.3	84.8	
P263	20.000	97.912	-0.7	0	0	0	0	P262	0.114	0.064	3.9	87.3	
								Bus135	-0.126	-0.071	4.3	87.1	
								P260	0.012	0.007	0.4	84.7	
P266	0.400	96.604	-1.0	0	0	0.009	0.005	P267	-0.009	-0.005	15.3	85.0	
P267	20.000	97.377	-0.8	0	0	0	0	P255	-0.051	-0.027	1.7	88.4	
								P269	0.042	0.021	1.4	89.1	
								P266	0.009	0.005	0.3	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
P268	0.400	96.761	-0.9	0	0	0.007	0.004	P269	-0.007	-0.004	12.2	85.0	
P269	20.000	97.375	-0.8	0	0	0	0	P267	-0.042	-0.022	1.4	88.8	
								Bus138	0.035	0.017	1.2	89.6	
								P268	0.007	0.004	0.2	84.8	
P272	0.400	96.409	-1.0	0	0	0.011	0.007	P273	-0.011	-0.007	18.9	85.0	
P273	20.000	97.361	-0.8	0	0	0	0	Bus138	-0.035	-0.020	1.2	86.7	
								P277	0.024	0.013	0.8	87.6	
								P272	0.011	0.007	0.4	84.8	
P277	20.000	97.359	-0.8	0	0	0	0	P273	-0.024	-0.014	0.8	86.7	
								P286	0.024	0.014	0.8	86.7	
P282	0.400	95.210	-1.3	0	0	0.024	0.015	P283	-0.024	-0.015	42.4	85.0	
P283	20.000	97.354	-0.8	0	0	0	0	P288	-0.024	-0.015	0.8	84.5	
								P282	0.024	0.015	0.8	84.5	
P286	20.000	97.357	-0.8	0	0	0	0	P277	-0.024	-0.014	0.8	85.8	
								P288	0.024	0.014	0.8	85.8	
P288	20.000	97.355	-0.8	0	0	0	0	P286	-0.024	-0.015	0.8	84.9	
								P283	0.024	0.015	0.8	84.9	
P292	20.000	97.306	-0.8	0	0	0	0	Bus139	-0.188	-0.111	6.5	86.2	
								P296	0.171	0.100	5.9	86.3	
								P293	0.017	0.011	0.6	84.6	
P293	0.400	95.796	-1.2	0	0	0.017	0.010	P292	-0.017	-0.010	29.9	85.0	
P296	20.000	97.277	-0.8	0	0	0	0	P292	-0.171	-0.101	5.9	86.1	
								P298	0.158	0.093	5.4	86.2	
								P297	0.013	0.008	0.5	84.7	
P297	0.400	96.126	-1.1	0	0	0.013	0.008	P296	-0.013	-0.008	22.8	85.0	
P298	20.000	97.264	-0.8	0	0	0	0	P296	-0.158	-0.093	5.4	86.0	
								P305	0.142	0.083	4.9	86.2	
								P299	0.016	0.010	0.5	84.7	
P299	0.400	95.880	-1.1	0	0	0.015	0.010	P298	-0.015	-0.010	27.4	85.0	
P304	0.400	95.614	-1.5	0	0	0.041	0.026	P305	-0.041	-0.026	73.1	85.0	
P305	20.000	97.256	-0.8	0	0	0	0	P298	-0.142	-0.084	4.9	86.1	
								P312	0.100	0.057	3.4	86.8	
								P304	0.042	0.026	1.5	84.3	
P312	20.000	97.253	-0.8	0	0	0	0	P305	-0.100	-0.058	3.4	86.7	
								P314	0.078	0.043	2.6	87.3	
								P313	0.023	0.014	0.8	84.8	
P313	0.400	96.244	-1.0	0	0	0.023	0.014	P312	-0.023	-0.014	40.0	85.0	
P314	20.000	97.228	-0.8	0	0	0	0	P312	-0.078	-0.046	2.7	86.2	
								P316	0.058	0.033	2.0	86.8	

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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
								P315	0.020	0.012	0.7	84.6	
P315	0.400	95.490	-1.2	0	0	0.019	0.012	P314	-0.019	-0.012	34.4	85.0	
P316	20.000	97.223	-0.8	0	0	0	0	P314	-0.058	-0.034	2.0	86.5	
								P328	0.044	0.025	1.5	87.0	
								P317	0.014	0.009	0.5	84.7	
P317	0.400	96.006	-1.1	0	0	0.014	0.008	P316	-0.014	-0.008	24.1	85.0	
P324	0.400	95.526	-1.2	0	0	0.019	0.012	P327	-0.019	-0.012	33.5	85.0	
P325	0.400	96.394	-1.0	0	0	0.009	0.006	P326	-0.009	-0.006	16.2	85.0	
P326	20.000	97.214	-0.8	0	0	0	0	P327	-0.009	-0.006	0.3	84.8	
								P325	0.009	0.006	0.3	84.8	
P327	20.000	97.216	-0.8	0	0	0	0	P326	0.009	0.004	0.3	91.1	
								P328	-0.028	-0.016	1.0	86.8	
								P324	0.019	0.012	0.7	84.6	
P328	20.000	97.217	-0.8	0	0	0	0	P327	0.028	0.016	1.0	87.2	
								P316	-0.044	-0.026	1.5	86.3	
								P329	0.016	0.010	0.6	84.7	
P329	0.400	95.813	-1.2	0	0	0.016	0.010	P328	-0.016	-0.010	27.8	85.0	

* 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				
Bus121	20.000		0	0	0	0	0	0	0	0	1.462	86.1	42.3	
Bus122	150.000		0	0	0	0	0	0	0	0	1.466	85.8	5.6	
Bus123	20.000		0	0	0	0	0	0	0	0	1.369	86.2	39.8	
Bus124	20.000		0	0	0	0	0	0	0	0	1.154	86.4	33.5	
Bus125	20.000		0	0	0	0	0	0	0	0	0	0.0	0.0	
Bus126	20.000		0	0	0	0	0	0	0	0	1.136	86.4	33.0	
Bus128	20.000		0	0	0	0	0	0	0	0	1.001	86.2	29.5	
Bus129	20.000		0	0	0	0	0	0	0	0	0.715	86.2	21.1	
Bus130	20.000		0	0	0	0	0	0	0	0	0.602	86.2	17.8	
Bus131	20.000		0	0	0	0	0	0	0	0	0.464	86.4	13.7	
Bus134	20.000		0	0	0	0	0	0	0	0	1.075	86.4	31.3	
Bus135	20.000		0	0	0	0	0	0	0	0	0.144	87.2	4.3	
Bus136	20.000		0	0	0	0	0	0	0	0	0	0.0	0.0	
Bus137	20.000		0	0	0	0	0	0	0	0	0.464	86.4	13.7	
Bus138	20.000		0	0	0	0	0	0	0	0	0.039	89.0	1.2	
Bus139	20.000		0	0	0	0	0	0	0	0	0.217	86.4	6.4	
P102	0.400		0.016	0.010	0.010	0.006	0	0	0	0	0.031	85.0	44.7	
P103	20.000		0	0	0	0	0	0	0	0	1.461	86.1	42.3	
P106	0.400		0.004	0.003	0.003	0.002	0	0	0	0	0.009	85.0	12.5	
P107	20.000		0	0	0	0	0	0	0	0	1.430	86.1	41.4	
P108	0.400		0.008	0.005	0.005	0.003	0	0	0	0	0.015	85.0	22.4	
P109	20.000		0	0	0	0	0	0	0	0	1.421	86.1	41.2	
P114	0.400		0.009	0.006	0.006	0.004	0	0	0	0	0.018	85.0	26.7	
P115	20.000		0	0	0	0	0	0	0	0	1.405	86.1	40.8	
P116	0.400		0.008	0.005	0.005	0.003	0	0	0	0	0.016	85.0	23.9	
P117	20.000		0	0	0	0	0	0	0	0	1.386	86.2	40.2	
P118	0.400		0.068	0.042	0.043	0.027	0	0	0	0	0.130	85.0	193.3	
P119	20.000		0	0	0	0	0	0	0	0	0.133	84.5	3.9	
P120	0.400		0.042	0.026	0.027	0.017	0	0	0	0	0.081	85.0	119.4	
P121	20.000		0	0	0	0	0	0	0	0	1.236	86.3	35.9	
P122	0.400		0.009	0.006	0.006	0.004	0	0	0	0	0.018	85.0	26.5	
P123	20.000		0	0	0	0	0	0	0	0	0.018	84.7	0.5	
P140	0.400		0	0	0.023	0.015	0	0	0	0	0.028	85.0	40.6	
P141	20.000		0	0	0	0	0	0	0	0	1.135	86.4	33.0	
P146	0.400		0.006	0.004	0.004	0.002	0	0	0	0	0.011	85.0	16.3	
P147	20.000		0	0	0	0	0	0	0	0	1.107	86.4	32.2	

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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				
P148	0.400		0.010	0.006	0.007	0.004	0	0	0	0	0.020	85.0	29.5	
P149	20.000		0	0	0	0	0	0	0	0	1.095	86.4	31.9	
P150	0.400		0.004	0.002	0.003	0.002	0	0	0	0	0.008	85.0	11.3	
P151	20.000		0	0	0	0	0	0	0	0	1.074	86.4	31.4	
P152	0.400		0.006	0.004	0.004	0.002	0	0	0	0	0.012	85.0	18.0	
P153	20.000		0	0	0	0	0	0	0	0	1.065	86.3	31.2	
P154	0.400		0.007	0.004	0.004	0.003	0	0	0	0	0.013	85.0	19.7	
P155	20.000		0	0	0	0	0	0	0	0	1.052	86.3	30.8	
P156	0.400		0.009	0.006	0.006	0.004	0	0	0	0	0.018	85.0	26.7	
P157	20.000		0	0	0	0	0	0	0	0	1.037	86.2	30.5	
P158	0.400		0.009	0.006	0.006	0.003	0	0	0	0	0.017	85.0	25.4	
P159	20.000		0	0	0	0	0	0	0	0	1.019	86.2	30.0	
P162	0.400		0.056	0.034	0.034	0.021	0	0	0	0	0.105	85.0	158.6	
P163	20.000		0	0	0	0	0	0	0	0	0.287	86.2	8.5	
P188	0.400		0.008	0.005	0.005	0.003	0	0	0	0	0.015	85.0	22.5	
P189	0.400		0.010	0.006	0.006	0.004	0	0	0	0	0.020	85.0	29.9	
P192	0.400		0.010	0.006	0.006	0.004	0	0	0	0	0.019	85.0	27.8	
P193	0.400		0.004	0.002	0.002	0.001	0	0	0	0	0.007	85.0	10.3	
P194	20.000		0	0	0	0	0	0	0	0	0.104	87.0	3.1	
P195	20.000		0	0	0	0	0	0	0	0	0.122	87.0	3.6	
P196	20.000		0	0	0	0	0	0	0	0	0.164	87.0	4.8	
P197	20.000		0	0	0	0	0	0	0	0	0.180	86.9	5.3	
P200	0.400		0.022	0.013	0.013	0.008	0	0	0	0	0.041	85.0	61.9	
P201	20.000		0	0	0	0	0	0	0	0	0.097	86.8	2.9	
P202	0.400		0.015	0.009	0.009	0.006	0	0	0	0	0.028	85.0	42.4	
P203	20.000		0	0	0	0	0	0	0	0	0.055	88.4	1.6	
P208	0.400		0.007	0.004	0.004	0.003	0	0	0	0	0.013	85.0	19.1	
P209	0.400		0.008	0.005	0.005	0.003	0	0	0	0	0.016	85.0	23.9	
P210	20.000		0	0	0	0	0	0	0	0	0.016	84.7	0.5	
P211	20.000		0	0	0	0	0	0	0	0	0.027	90.6	0.8	
P214	0.400		0.040	0.025	0.025	0.015	0	0	0	0	0.077	85.0	114.8	
P215	20.000		0	0	0	0	0	0	0	0	0.078	84.6	2.3	
P220	0.400		0.010	0.006	0.006	0.004	0	0	0	0	0.020	85.0	29.7	
P221	0.400		0.008	0.005	0.005	0.003	0	0	0	0	0.015	85.0	22.9	
P222	20.000		0	0	0	0	0	0	0	0	0.617	86.3	18.2	
P223	20.000		0	0	0	0	0	0	0	0	0.638	86.3	18.8	
P226	0.400		0.055	0.034	0.034	0.021	0	0	0	0	0.104	85.0	157.4	
P227	20.000		0	0	0	0	0	0	0	0	0.107	84.5	3.1	

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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				
P232	0.400		0.010	0.006	0.006	0.004	0	0	0	0	0.019	85.0	28.7	
P233	20.000		0	0	0	0	0	0	0	0	0.483	86.4	14.3	
P234	20.000		0	0	0	0	0	0	0	0	0.496	86.5	14.7	
P235	0.400		0.007	0.004	0.004	0.003	0	0	0	0	0.013	85.0	19.4	
P238	0.400		0.045	0.028	0.028	0.017	0	0	0	0	0.085	85.0	128.6	
P239	20.000		0	0	0	0	0	0	0	0	0.087	84.6	2.6	
P242	0.400		0.015	0.009	0.009	0.006	0	0	0	0	0.028	85.0	42.4	
P243	20.000		0	0	0	0	0	0	0	0	0.377	86.8	11.2	
P246	0.400		0.011	0.007	0.007	0.004	0	0	0	0	0.021	85.0	31.9	
P247	20.000		0	0	0	0	0	0	0	0	0.349	86.7	10.3	
P250	0.400		0.008	0.005	0.005	0.003	0	0	0	0	0.014	85.0	21.5	
P251	20.000		0	0	0	0	0	0	0	0	0.328	86.8	9.7	
P252	0.400		0.009	0.006	0.006	0.004	0	0	0	0	0.018	85.0	26.6	
P253	20.000		0	0	0	0	0	0	0	0	0.314	86.8	9.3	
P254	0.400		0.011	0.007	0.007	0.004	0	0	0	0	0.021	85.0	32.4	
P255	20.000		0	0	0	0	0	0	0	0	0.296	86.9	8.8	
P260	0.400		0.007	0.004	0.005	0.003	0	0	0	0	0.014	85.0	20.5	
P261	0.400		0.005	0.003	0.003	0.002	0	0	0	0	0.009	85.0	13.6	
P262	20.000		0	0	0	0	0	0	0	0	0.131	87.2	3.9	
P263	20.000		0	0	0	0	0	0	0	0	0.145	87.1	4.3	
P266	0.400		0.005	0.003	0.003	0.002	0	0	0	0	0.010	85.0	15.3	
P267	20.000		0	0	0	0	0	0	0	0	0.057	88.4	1.7	
P268	0.400		0.004	0.003	0.003	0.002	0	0	0	0	0.008	85.0	12.2	
P269	20.000		0	0	0	0	0	0	0	0	0.047	88.8	1.4	
P272	0.400		0.007	0.004	0.004	0.003	0	0	0	0	0.013	85.0	18.9	
P273	20.000		0	0	0	0	0	0	0	0	0.040	86.7	1.2	
P277	20.000		0	0	0	0	0	0	0	0	0.028	86.7	0.8	
P282	0.400		0.015	0.009	0.009	0.006	0	0	0	0	0.028	85.0	42.4	
P283	20.000		0	0	0	0	0	0	0	0	0.029	84.5	0.8	
P286	20.000		0	0	0	0	0	0	0	0	0.028	85.8	0.8	
P288	20.000		0	0	0	0	0	0	0	0	0.028	84.9	0.8	
P292	20.000		0	0	0	0	0	0	0	0	0.218	86.2	6.5	
P293	0.400		0.010	0.006	0.006	0.004	0	0	0	0	0.020	85.0	29.9	
P296	20.000		0	0	0	0	0	0	0	0	0.198	86.1	5.9	
P297	0.400		0.008	0.005	0.005	0.003	0	0	0	0	0.015	85.0	22.8	
P298	20.000		0	0	0	0	0	0	0	0	0.183	86.0	5.4	
P299	0.400		0.010	0.006	0.006	0.004	0	0	0	0	0.018	85.0	27.4	
P304	0.400		0.026	0.016	0.016	0.010	0	0	0	0	0.048	85.0	73.1	

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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				
P305	20.000		0	0	0	0	0	0	0	0	0.165	86.1	4.9	
P312	20.000		0	0	0	0	0	0	0	0	0.116	86.7	3.4	
P313	0.400		0.014	0.009	0.009	0.005	0	0	0	0	0.027	85.0	40.0	
P314	20.000		0	0	0	0	0	0	0	0	0.090	86.2	2.7	
P315	0.400		0.012	0.007	0.007	0.005	0	0	0	0	0.023	85.0	34.4	
P316	20.000		0	0	0	0	0	0	0	0	0.067	86.5	2.0	
P317	0.400		0.008	0.005	0.005	0.003	0	0	0	0	0.016	85.0	24.1	
P324	0.400		0.012	0.007	0.007	0.004	0	0	0	0	0.022	85.0	33.5	
P325	0.400		0.006	0.004	0.004	0.002	0	0	0	0	0.011	85.0	16.2	
P326	20.000		0	0	0	0	0	0	0	0	0.011	84.8	0.3	
P327	20.000		0	0	0	0	0	0	0	0	0.033	86.8	1.0	
P328	20.000		0	0	0	0	0	0	0	0	0.051	86.3	1.5	
P329	0.400		0.010	0.006	0.006	0.004	0	0	0	0	0.018	85.0	27.8	

* 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	%
T-KA 008	Transformer				0.100	0.031	30.8	0.031	30.5
T-KA 09	Transformer				0.050	0.018	36.9	0.018	36.4
T-KA 010	Transformer				0.200	0.082	41.1	0.081	40.5
T-KA 11	Transformer				0.100	0.028	27.9	0.028	27.6
T-KA 38	Transformer				0.050	0.016	32.9	0.016	32.5
T-KA 40	Transformer				0.031	0.018	58.0	0.018	57.3
T-KA 45	Transformer				0.250	0.133	53.2	0.130	52.2
T-KA 49	Transformer				0.016	0.009	55.0	0.009	54.3
T-KA 61	Transformer				0.031	0.011	35.6	0.011	35.3
T-KA 62	Transformer				0.031	0.020	64.5	0.020	63.5
T-KA 75	Transformer				0.031	0.008	24.7	0.008	24.6
T-KA 94	Transformer				0.050	0.015	30.9	0.015	30.6
T-PA 01	Transformer				0.031	0.017	54.9	0.017	54.2
T-PA 02	Transformer				0.200	0.108	53.8	0.105	52.7
T-PA 03	Transformer				0.031	0.013	41.7	0.013	41.3
T-PA 04	Transformer				0.031	0.020	64.5	0.020	63.5
T-PA 05	Transformer				0.031	0.009	29.4	0.009	29.2
T-PA 06	Transformer				0.031	0.007	22.3	0.007	22.2
T-PA 07	Transformer				0.100	0.042	42.0	0.041	41.4
T-PA 08	Transformer				0.031	0.013	41.2	0.013	40.8
T-PA 10	Transformer				0.031	0.016	51.7	0.016	51.1
T-PA 12	Transformer				0.031	0.016	49.4	0.015	48.8
T-PA 13	Transformer				0.031	0.015	48.6	0.015	48.1
T-PA 14	Transformer				0.100	0.029	28.7	0.028	28.5
T-PA 014	Transformer				0.031	0.019	61.8	0.019	60.9
T-PA 16	Transformer				0.031	0.018	57.8	0.018	57.0
T-PA 17	Transformer				0.031	0.013	42.9	0.013	42.4
T-PA 18	Transformer				0.031	0.012	39.2	0.012	38.8
T-PA 19	Transformer				0.031	0.019	59.9	0.019	59.1
T-PA 20	Transformer				0.031	0.020	64.2	0.020	63.2
T-PA 021	Transformer				0.200	0.078	38.9	0.077	38.4
T-PA 022	Transformer				0.200	0.107	53.3	0.104	52.2
T-PA 23	Transformer				0.031	0.014	44.4	0.014	43.9

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CKT / Branch		Cable & Reactor			Transformer				
ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (MVA)	Loading (input)		Loading (output)	
						MVA	%	MVA	%
T-PD 01	Transformer				0.050	0.022	43.7	0.021	43.0
T-PD 02	Transformer				0.050	0.008	16.4	0.008	16.3
T-PD 03	Transformer				0.050	0.020	40.3	0.020	39.7
T-PD 04	Transformer				0.050	0.027	53.8	0.027	53.3
T-PD 05	Transformer				0.050	0.016	32.5	0.016	32.1
T-PD 06	Transformer				0.050	0.014	29.0	0.014	28.7
T-PD 07	Transformer				0.050	0.018	36.9	0.018	36.4
T-PD 08	Transformer				0.050	0.029	57.3	0.028	56.0
T-PD 12	Transformer				0.050	0.018	35.9	0.018	35.4
T-PD 13	Transformer				0.100	0.049	49.2	0.048	48.4
T-PD 14	Transformer				0.050	0.019	37.4	0.018	36.9
T-PD 16	Transformer				0.050	0.011	21.9	0.011	21.7
T-PD 17	Transformer				0.050	0.013	25.4	0.013	25.2
T-PD 18	Transformer				0.050	0.029	57.2	0.028	56.0
T-PD 19	Transformer				0.050	0.010	20.7	0.010	20.5
T-PD 020	Transformer				0.050	0.023	46.3	0.023	45.5
* T-PD 21	Transformer				0.016	0.022	137.0	0.021	132.5
T-PD 22	Transformer				0.050	0.015	30.7	0.015	30.4
T-PD 23	Transformer				0.050	0.023	45.1	0.022	44.3
T-PD 024	Transformer				0.200	0.087	43.5	0.085	42.7
T56	Transformer				30.000	1.466	4.9	1.462	4.9

* 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
Line32		1.258	0.743	-1.258	-0.743	0.6	0.3	99.7	99.6	0.07
T56		-1.258	-0.743	1.259	0.752	0.2	9.0	99.7	100.0	0.32
Line65		-1.180	-0.695	1.180	0.695	0.2	0.1	99.4	99.4	0.02
Line66		1.067	0.624	-1.067	-0.624	0.2	0.0	99.4	99.4	0.02
Line67		0.113	0.070	-0.113	-0.071	0.0	-0.9	99.4	99.4	0.01
Line68		-0.997	-0.581	0.997	0.581	0.3	-0.1	99.3	99.4	0.05
Line70		0.982	0.571	-0.981	-0.572	0.5	-0.1	99.3	99.3	0.07
Line183		0.015	0.009	-0.015	-0.010	0.0	-0.5	99.3	99.3	0.00
Line71		0.981	0.572	-0.980	-0.572	0.9	0.0	99.3	99.2	0.09
Line161		0.616	0.362	-0.616	-0.363	0.4	-0.5	98.0	97.9	0.07
Line187		-0.864	-0.507	0.864	0.507	0.2	-0.1	98.0	98.0	0.03
Line190		0.247	0.145	-0.247	-0.145	0.0	-0.7	98.0	97.9	0.02
Line162		0.066	0.040	-0.066	-0.041	0.0	-1.2	97.9	97.9	0.01
Line216		0.550	0.322	-0.550	-0.322	0.1	-0.2	97.9	97.9	0.03
Line166		-0.519	-0.305	0.520	0.304	0.5	-0.9	97.7	97.8	0.10
Line168		0.090	0.057	-0.090	-0.057	0.0	-0.4	97.7	97.7	0.01
Line171		0.429	0.248	-0.429	-0.249	0.2	-0.7	97.7	97.7	0.06
Line174		0.074	0.046	-0.074	-0.046	0.0	-0.2	97.5	97.5	0.00
Line175		0.327	0.187	-0.327	-0.187	0.0	-0.1	97.5	97.5	0.00
Line218		-0.401	-0.233	0.401	0.233	0.1	-0.3	97.5	97.6	0.02
Line184		-0.929	-0.540	0.929	0.540	0.1	0.0	99.0	99.0	0.02
Line185		0.929	0.540	-0.928	-0.541	1.2	-0.5	99.0	98.8	0.18
Line196		-0.126	-0.071	0.126	0.070	0.0	-0.4	97.9	97.9	0.01
Line200		0.126	0.071	-0.126	-0.071	0.0	-0.4	97.9	97.9	0.01
Line214		0.000	0.000	0.000	-0.003	0.0	-2.5	97.9	97.9	0.00
Line172		-0.401	-0.233	0.401	0.233	0.1	-0.4	97.6	97.6	0.03
Line225		-0.035	-0.018	0.035	0.017	0.0	-0.5	97.4	97.4	0.00
Line227		0.035	0.018	-0.035	-0.020	0.0	-2.2	97.4	97.4	0.01
Line219		-0.188	-0.109	0.188	0.108	0.1	-1.2	97.3	97.4	0.04
Line231		0.188	0.109	-0.188	-0.111	0.1	-1.2	97.3	97.3	0.04
T-KA 008		-0.026	-0.016	0.026	0.016	0.1	0.4	98.6	99.6	1.00
Line181		1.232	0.727	-1.231	-0.727	0.2	0.1	99.6	99.6	0.03
T-KA 49		-0.007	-0.004	0.007	0.005	0.1	0.1	98.3	99.6	1.26
Line61		1.224	0.722	-1.224	-0.722	0.3	0.1	99.6	99.6	0.03
T-KA 94		-0.013	-0.008	0.013	0.008	0.1	0.2	98.4	99.6	1.13

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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	
Line63	1.211	0.714	-1.210	-0.714	0.3	0.1	99.6	99.5	0.03
T-KA 09	-0.015	-0.010	0.016	0.010	0.2	0.2	98.2	99.5	1.35
Line64	1.195	0.704	-1.194	-0.703	0.9	0.3	99.5	99.4	0.10
T-KA 38	-0.014	-0.009	0.014	0.009	0.1	0.2	98.2	99.4	1.20
T-KA 45	-0.111	-0.069	0.113	0.071	1.6	2.4	97.4	99.4	1.95
T-KA 010	-0.069	-0.043	0.070	0.044	0.8	1.1	97.9	99.4	1.51
T-KA 40	-0.015	-0.009	0.015	0.010	0.1	0.2	98.0	99.3	1.34
T-KA 11	-0.023	-0.015	0.024	0.015	0.1	0.3	98.3	99.2	0.91
Line72	0.957	0.557	-0.956	-0.557	0.4	-0.1	99.2	99.1	0.06
T-KA 61	-0.009	-0.006	0.009	0.006	0.1	0.1	98.3	99.1	0.82
Line73	0.947	0.551	-0.946	-0.551	0.5	-0.2	99.1	99.0	0.07
T-KA 62	-0.017	-0.011	0.017	0.011	0.2	0.3	97.5	99.0	1.49
T-KA 75	-0.007	-0.004	0.007	0.004	0.0	0.0	98.3	98.8	0.57
Line74	0.921	0.537	-0.920	-0.537	1.6	-0.6	98.8	98.6	0.24
T-PA 18	-0.010	-0.006	0.010	0.007	0.1	0.1	97.7	98.6	0.91
Line75	0.909	0.531	-0.909	-0.531	0.6	-0.3	98.6	98.5	0.09
T-PA 17	-0.011	-0.007	0.011	0.007	0.1	0.1	97.5	98.5	1.00
Line80	0.897	0.524	-0.894	-0.525	2.9	-1.3	98.5	98.1	0.43
T-PA 16	-0.015	-0.009	0.015	0.010	0.2	0.2	96.7	98.1	1.35
Line81	0.879	0.516	-0.878	-0.516	0.6	-0.3	98.1	98.0	0.09
T-PA 01	-0.014	-0.009	0.015	0.009	0.1	0.2	96.7	98.0	1.28
T-PA 02	-0.090	-0.056	0.091	0.058	1.3	2.0	95.9	97.9	2.00
Line191	0.156	0.088	-0.156	-0.089	0.0	-1.0	97.9	97.9	0.01
T-PA 13	-0.013	-0.008	0.013	0.008	0.1	0.2	96.8	97.9	1.14
T-PA 04	-0.017	-0.011	0.017	0.011	0.2	0.3	96.4	97.9	1.51
T-PA 19	-0.016	-0.010	0.016	0.010	0.2	0.2	96.5	97.9	1.40
T-PA 06	-0.006	-0.004	0.006	0.004	0.0	0.0	97.4	97.9	0.52
Line204	-0.090	-0.051	0.090	0.050	0.0	-1.0	97.9	97.9	0.01
Line206	0.085	0.048	-0.085	-0.048	0.0	-0.7	97.9	97.9	0.00
Line202	-0.106	-0.060	0.106	0.059	0.0	-1.0	97.9	97.9	0.01
Line193	-0.143	-0.081	0.143	0.081	0.0	-0.2	97.9	97.9	0.00
T-PA 07	-0.035	-0.022	0.035	0.022	0.3	0.7	96.5	97.9	1.39
Line208	0.049	0.026	-0.049	-0.026	0.0	-0.2	97.9	97.9	0.00
T-PA 14	-0.024	-0.015	0.024	0.015	0.1	0.3	96.9	97.9	0.95
Line210	0.025	0.011	-0.025	-0.012	0.0	-0.9	97.9	97.9	0.00
T-PA 08	-0.011	-0.007	0.011	0.007	0.1	0.1	96.9	97.9	0.96
T-PA 10	-0.014	-0.008	0.014	0.009	0.1	0.2	96.7	97.9	1.21

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	MW	Mvar	MW	Mvar	kW	kvar	From	To	
Line212	-0.014	-0.006	0.014	0.005	0.0	-1.5	97.9	97.9	0.00
T-PA 021	-0.065	-0.040	0.066	0.041	0.7	1.1	96.4	97.9	1.45
T-PA 20	-0.017	-0.010	0.017	0.011	0.2	0.3	96.4	97.9	1.50
T-PA 12	-0.013	-0.008	0.013	0.008	0.1	0.2	96.7	97.8	1.16
Line164	-0.533	-0.312	0.533	0.312	0.2	-0.4	97.8	97.9	0.04
T-PA 022	-0.089	-0.055	0.090	0.057	1.3	2.0	95.7	97.7	1.99
T-PA 014	-0.016	-0.010	0.016	0.010	0.2	0.3	96.1	97.6	1.45
Line170	-0.417	-0.243	0.418	0.242	0.3	-1.1	97.6	97.7	0.08
T-PA 03	0.011	0.007	-0.011	-0.007	0.1	0.1	97.7	96.7	0.98
T-PD 024	-0.073	-0.045	0.074	0.046	0.9	1.3	95.9	97.5	1.62
T-PD 08	-0.024	-0.015	0.024	0.015	0.4	0.6	95.4	97.5	2.14
Line176	0.303	0.172	-0.303	-0.174	0.3	-1.9	97.5	97.4	0.09
T-PD 21	-0.018	-0.011	0.018	0.012	0.4	0.6	94.2	97.4	3.22
Line177	0.285	0.162	-0.285	-0.163	0.1	-0.8	97.4	97.4	0.04
T-PD 06	-0.012	-0.008	0.012	0.008	0.1	0.1	96.3	97.4	1.08
Line178	0.272	0.155	-0.272	-0.156	0.0	-0.2	97.4	97.4	0.01
T-PD 12	-0.015	-0.009	0.015	0.010	0.2	0.2	96.1	97.4	1.34
Line179	0.257	0.146	-0.257	-0.146	0.0	-0.4	97.4	97.4	0.02
T-PD 01	-0.018	-0.011	0.018	0.012	0.2	0.3	95.7	97.4	1.64
Line221	0.051	0.027	-0.051	-0.027	0.0	-0.2	97.4	97.4	0.00
T-PA 23	-0.012	-0.007	0.012	0.007	0.1	0.1	96.9	97.9	1.04
T-PA 05	-0.008	-0.005	0.008	0.005	0.0	0.1	97.2	97.9	0.69
Line198	-0.114	-0.064	0.114	0.064	0.0	-0.6	97.9	97.9	0.01
T-PD 19	-0.009	-0.005	0.009	0.005	0.0	0.1	96.6	97.4	0.77
Line223	0.042	0.021	-0.042	-0.022	0.0	-0.4	97.4	97.4	0.00
T-PD 02	-0.007	-0.004	0.007	0.004	0.0	0.0	96.8	97.4	0.61
T-PD 17	-0.011	-0.007	0.011	0.007	0.1	0.1	96.4	97.4	0.95
Line229	0.024	0.013	-0.024	-0.014	0.0	-0.6	97.4	97.4	0.00
Line233	0.024	0.014	-0.024	-0.014	0.0	-0.6	97.4	97.4	0.00
T-PD 18	-0.024	-0.015	0.024	0.015	0.4	0.6	95.2	97.4	2.14
Line237	-0.024	-0.015	0.024	0.015	0.0	-0.3	97.4	97.4	0.00
Line235	0.024	0.014	-0.024	-0.015	0.0	-0.6	97.4	97.4	0.00
Line241	0.171	0.100	-0.171	-0.101	0.0	-1.1	97.3	97.3	0.03
T-PD 03	0.017	0.011	-0.017	-0.010	0.2	0.3	97.3	95.8	1.51
Line243	0.158	0.093	-0.158	-0.093	0.0	-0.5	97.3	97.3	0.01
T-PD 22	0.013	0.008	-0.013	-0.008	0.1	0.2	97.3	96.1	1.15
Line245	0.142	0.083	-0.142	-0.084	0.0	-0.4	97.3	97.3	0.01

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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	
T-PD 07	0.016	0.010	-0.015	-0.010	0.2	0.2	97.3	95.9	1.38
T-PD 13	-0.041	-0.026	0.042	0.026	0.4	1.0	95.6	97.3	1.64
Line247	0.100	0.057	-0.100	-0.058	0.0	-0.2	97.3	97.3	0.00
Line249	0.078	0.043	-0.078	-0.046	0.0	-2.2	97.3	97.2	0.03
T-PD 04	0.023	0.014	-0.023	-0.014	0.2	0.3	97.3	96.2	1.01
Line251	0.058	0.033	-0.058	-0.034	0.0	-0.5	97.2	97.2	0.00
T-PD 020	0.020	0.012	-0.019	-0.012	0.3	0.4	97.2	95.5	1.74
Line257	0.044	0.025	-0.044	-0.026	0.0	-0.9	97.2	97.2	0.01
T-PD 05	0.014	0.009	-0.014	-0.008	0.1	0.2	97.2	96.0	1.22
T-PD 23	-0.019	-0.012	0.019	0.012	0.2	0.4	95.5	97.2	1.69
T-PD 16	-0.009	-0.006	0.009	0.006	0.1	0.1	96.4	97.2	0.82
Line254	-0.009	-0.006	0.009	0.004	0.0	-1.6	97.2	97.2	0.00
Line255	-0.028	-0.016	0.028	0.016	0.0	-0.3	97.2	97.2	0.00
T-PD 14	0.016	0.010	-0.016	-0.010	0.2	0.2	97.2	95.8	1.40
					29.2	-9.6			

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Alert Summary Report

% Alert Settings

	<u>Critical</u>	<u>Marginal</u>
<u>Loading</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>Bus Voltage</u>		
OverVoltage	105.0	102.0
UnderVoltage	95.0	98.0
<u>Generator Excitation</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
P246	Bus	Under Voltage	0.40	kV	0.38	94.2	3-Phase
T-PD 21	Transformer	Overload	0.02	MVA	0.02	137.0	3-Phase

Marginal Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Bus128	Bus	Under Voltage	20.00	kV	19.59	98.0	3-Phase
Bus129	Bus	Under Voltage	20.00	kV	19.58	97.9	3-Phase
Bus130	Bus	Under Voltage	20.00	kV	19.54	97.7	3-Phase
Bus131	Bus	Under Voltage	20.00	kV	19.51	97.5	3-Phase
Bus135	Bus	Under Voltage	20.00	kV	19.58	97.9	3-Phase
Bus136	Bus	Under Voltage	20.00	kV	19.58	97.9	3-Phase
Bus137	Bus	Under Voltage	20.00	kV	19.51	97.6	3-Phase
Bus138	Bus	Under Voltage	20.00	kV	19.47	97.4	3-Phase
Bus139	Bus	Under Voltage	20.00	kV	19.47	97.3	3-Phase
P118	Bus	Under Voltage	0.40	kV	0.39	97.4	3-Phase

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Marginal Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
P120	Bus	Under Voltage	0.40	kV	0.39	97.9	3-Phase
P122	Bus	Under Voltage	0.40	kV	0.39	98.0	3-Phase
P148	Bus	Under Voltage	0.40	kV	0.39	97.5	3-Phase
P152	Bus	Under Voltage	0.40	kV	0.39	97.7	3-Phase
P154	Bus	Under Voltage	0.40	kV	0.39	97.5	3-Phase
P156	Bus	Under Voltage	0.40	kV	0.39	96.7	3-Phase
P158	Bus	Under Voltage	0.40	kV	0.39	96.7	3-Phase
P159	Bus	Under Voltage	20.00	kV	19.60	98.0	3-Phase
P162	Bus	Under Voltage	0.40	kV	0.38	95.9	3-Phase
P163	Bus	Under Voltage	20.00	kV	19.59	97.9	3-Phase
P188	Bus	Under Voltage	0.40	kV	0.39	96.8	3-Phase
P189	Bus	Under Voltage	0.40	kV	0.39	96.4	3-Phase
P192	Bus	Under Voltage	0.40	kV	0.39	96.5	3-Phase
P193	Bus	Under Voltage	0.40	kV	0.39	97.4	3-Phase
P194	Bus	Under Voltage	20.00	kV	19.58	97.9	3-Phase
P195	Bus	Under Voltage	20.00	kV	19.58	97.9	3-Phase
P196	Bus	Under Voltage	20.00	kV	19.58	97.9	3-Phase
P197	Bus	Under Voltage	20.00	kV	19.58	97.9	3-Phase
P200	Bus	Under Voltage	0.40	kV	0.39	96.5	3-Phase
P201	Bus	Under Voltage	20.00	kV	19.58	97.9	3-Phase
P202	Bus	Under Voltage	0.40	kV	0.39	96.9	3-Phase
P203	Bus	Under Voltage	20.00	kV	19.58	97.9	3-Phase
P208	Bus	Under Voltage	0.40	kV	0.39	96.9	3-Phase
P209	Bus	Under Voltage	0.40	kV	0.39	96.7	3-Phase
P210	Bus	Under Voltage	20.00	kV	19.58	97.9	3-Phase
P211	Bus	Under Voltage	20.00	kV	19.58	97.9	3-Phase
P214	Bus	Under Voltage	0.40	kV	0.39	96.4	3-Phase
P215	Bus	Under Voltage	20.00	kV	19.57	97.9	3-Phase
P220	Bus	Under Voltage	0.40	kV	0.39	96.4	3-Phase
P221	Bus	Under Voltage	0.40	kV	0.39	96.7	3-Phase
P222	Bus	Under Voltage	20.00	kV	19.56	97.8	3-Phase
P223	Bus	Under Voltage	20.00	kV	19.57	97.9	3-Phase
P226	Bus	Under Voltage	0.40	kV	0.38	95.7	3-Phase
P227	Bus	Under Voltage	20.00	kV	19.54	97.7	3-Phase
P232	Bus	Under Voltage	0.40	kV	0.38	96.1	3-Phase
P233	Bus	Under Voltage	20.00	kV	19.52	97.6	3-Phase

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Marginal Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
P234	Bus	Under Voltage	20.00	kV	19.53	97.7	3-Phase
P235	Bus	Under Voltage	0.40	kV	0.39	96.7	3-Phase
P238	Bus	Under Voltage	0.40	kV	0.38	95.9	3-Phase
P239	Bus	Under Voltage	20.00	kV	19.51	97.5	3-Phase
P242	Bus	Under Voltage	0.40	kV	0.38	95.4	3-Phase
P243	Bus	Under Voltage	20.00	kV	19.51	97.5	3-Phase
P247	Bus	Under Voltage	20.00	kV	19.49	97.4	3-Phase
P250	Bus	Under Voltage	0.40	kV	0.39	96.3	3-Phase
P251	Bus	Under Voltage	20.00	kV	19.48	97.4	3-Phase
P252	Bus	Under Voltage	0.40	kV	0.38	96.1	3-Phase
P253	Bus	Under Voltage	20.00	kV	19.48	97.4	3-Phase
P254	Bus	Under Voltage	0.40	kV	0.38	95.7	3-Phase
P255	Bus	Under Voltage	20.00	kV	19.48	97.4	3-Phase
P260	Bus	Under Voltage	0.40	kV	0.39	96.9	3-Phase
P261	Bus	Under Voltage	0.40	kV	0.39	97.2	3-Phase
P262	Bus	Under Voltage	20.00	kV	19.58	97.9	3-Phase
P263	Bus	Under Voltage	20.00	kV	19.58	97.9	3-Phase
P266	Bus	Under Voltage	0.40	kV	0.39	96.6	3-Phase
P267	Bus	Under Voltage	20.00	kV	19.48	97.4	3-Phase
P268	Bus	Under Voltage	0.40	kV	0.39	96.8	3-Phase
P269	Bus	Under Voltage	20.00	kV	19.47	97.4	3-Phase
P272	Bus	Under Voltage	0.40	kV	0.39	96.4	3-Phase
P273	Bus	Under Voltage	20.00	kV	19.47	97.4	3-Phase
P277	Bus	Under Voltage	20.00	kV	19.47	97.4	3-Phase
P282	Bus	Under Voltage	0.40	kV	0.38	95.2	3-Phase
P283	Bus	Under Voltage	20.00	kV	19.47	97.4	3-Phase
P286	Bus	Under Voltage	20.00	kV	19.47	97.4	3-Phase
P288	Bus	Under Voltage	20.00	kV	19.47	97.4	3-Phase
P292	Bus	Under Voltage	20.00	kV	19.46	97.3	3-Phase
P293	Bus	Under Voltage	0.40	kV	0.38	95.8	3-Phase
P296	Bus	Under Voltage	20.00	kV	19.46	97.3	3-Phase
P297	Bus	Under Voltage	0.40	kV	0.38	96.1	3-Phase
P298	Bus	Under Voltage	20.00	kV	19.45	97.3	3-Phase
P299	Bus	Under Voltage	0.40	kV	0.38	95.9	3-Phase
P304	Bus	Under Voltage	0.40	kV	0.38	95.6	3-Phase
P305	Bus	Under Voltage	20.00	kV	19.45	97.3	3-Phase

Project:
Location:
Contract:
Engineer:
Filename: citra fix~~~

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Marginal Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
P312	Bus	Under Voltage	20.00	kV	19.45	97.3	3-Phase
P313	Bus	Under Voltage	0.40	kV	0.38	96.2	3-Phase
P314	Bus	Under Voltage	20.00	kV	19.45	97.2	3-Phase
P315	Bus	Under Voltage	0.40	kV	0.38	95.5	3-Phase
P316	Bus	Under Voltage	20.00	kV	19.44	97.2	3-Phase
P317	Bus	Under Voltage	0.40	kV	0.38	96.0	3-Phase
P324	Bus	Under Voltage	0.40	kV	0.38	95.5	3-Phase
P325	Bus	Under Voltage	0.40	kV	0.39	96.4	3-Phase
P326	Bus	Under Voltage	20.00	kV	19.44	97.2	3-Phase
P327	Bus	Under Voltage	20.00	kV	19.44	97.2	3-Phase
P328	Bus	Under Voltage	20.00	kV	19.44	97.2	3-Phase
P329	Bus	Under Voltage	0.40	kV	0.38	95.8	3-Phase

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SUMMARY OF TOTAL GENERATION, LOADING & DEMAND

	MW	Mvar	MVA	% PF
Source (Swing Buses):	1.259	0.752	1.466	85.83 Lagging
Source (Non-Swing Buses):	0.000	0.000	0.000	
Total Demand:	1.259	0.752	1.466	85.83 Lagging
Total Motor Load:	0.744	0.461	0.875	85.00 Lagging
Total Static Load:	0.486	0.301	0.571	85.00 Lagging
Total Constant I Load:	0.000	0.000	0.000	
Total Generic Load:	0.000	0.000	0.000	
Apparent Losses:	0.029	-0.010		
System Mismatch:	0.000	0.000		

Number of Iterations: 2