Electrical Transient Analyzer Program

Load Flow Analysis

Loading Category (1): Design

Generation Category (1): Design

Load Diversity Factor: None

	Swing	V-Control	Load	Total
Number of Buses:	1	0	32	33

	XFMR2	XFMR3	Reactor	Line/Cable	Impedance	Tie PD	Total
Number of Branches:	17	0	0	15	0	1	33

Method of Solution:	Adaptive Newton-Raphson Method
Maximum No. of Iteration:	99
Precision of Solution:	0.0001000
System Frequency:	50.00 Hz
Unit System:	English
Project Filename:	ftmh
Output Filename:	F:\citra\Untitled.lfr

Adjustments

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

Temperature Correction	Apply Adjustments	Individual /Global	Degree C
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
Bus GI ANGKE	20.000	1	100.0	0.0								
Bus12	0.400	1	100.0	0.0	0.044	0.027	0.011	0.007				
Bus17	0.400	1	100.0	0.0	0.148	0.092	0.037	0.023				
Bus18	0.400	1	100.0	0.0	0.015	0.009	0.004	0.002				
Bus24	0.400	1	100.0	0.0	0.014	0.008	0.003	0.002				
Bus26	0.400	1	100.0	0.0	0.082	0.051	0.020	0.013				
Bus27	20.000	1	100.0	0.0								
Bus28	0.400	1	100.0	0.0	0.136	0.084	0.034	0.021				
Bus29	20.000	1	100.0	0.0								
Bus30	0.400	1	100.0	0.0	0.034	0.021	0.009	0.005				
Bus31	0.390	1	100.0	0.0	0.068	0.042	0.016	0.010				
Bus32	0.400	1	100.0	0.0	0.057	0.035	0.014	0.009				
Bus33	0.400	1	100.0	0.0	0.068	0.042	0.017	0.011				
Bus34	0.400	1	100.0	0.0	0.034	0.021	0.009	0.005				
Bus36	0.400	1	100.0	0.0	0.054	0.034	0.014	0.008				
Bus38	0.400	1	100.0	0.0	0.082	0.051	0.020	0.013				
Bus39	0.400	1	100.0	0.0	0.245	0.152	0.061	0.038				
Bus40	0.400	1	100.0	0.0	0.014	0.008	0.003	0.002				
Bus46	0.400	1	100.0	0.0								
KPK 38 G	20.000	1	100.0	0.0								
KPK 44 G	20.000	1	100.0	0.0								
KPK 47 P	20.000	1	100.0	0.0								
KPK 50 P	20.000	1	100.0	0.0								
MK 58	20.000	1	100.0	0.0								
MK 100	20.000	1	100.0	0.0								
MK 125	20.000	1	100.0	0.0								
MK 146	20.000	1	100.0	0.0								
MK 223	20.000	1	100.0	0.0								
MK 309	20.000	1	100.0	0.0								
TA 2	20.000	1	100.0	0.0								
TA 10	20.000	1	100.0	0.0								
TA 28	20.000	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
TA 32	20.000	1	100.0	0.0								
Total Number of Buses: 33					1.094	0.678	0.273	0.169	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
Bus GI ANGKE	20.000	Swing	1	100.0	0.0					
						0.000	0.000			

Line/Cable Input Data

Line/Cable			Ohms or Siemens/1000 ft per Conductor (Cable) or per Phase (Line)						
			Length						
ID	Library	Size	Adj. (ft)	% Tol.	#/Phase	T (°C)	R	X	Y
GI ANGKE - MK 58	20NCUS3	300	10420.0	0.0	1	75	0.023228	0.028255	
KPK38G KPK44G	20NCUS3	240	692.3	0.0	1	75	0.028693	0.028895	
KPK44G TA32	20NCUS3	240	439.6	0.0	1	75	0.028693	0.028895	
KPK47P TA10	20NCUS3	240	351.0	0.0	1	75	0.028693	0.028895	
KPK50P MK223	20NCUS3	240	984.3	0.0	1	75	0.028693	0.028895	
MK58 TA28	20NCUS3	240	3638.5	0.0	1	75	0.028693	0.028895	
MK100 GH135	20NCUS3	240	3116.8	0.0	1	75	0.028693	0.028895	
MK125 MK309	20NCUS3	240	469.2	0.0	1	75	0.021513	0.000079	
MK146 MK100	20NCUS3	240	2296.6	0.0	1	75	0.028693	0.028895	
MK223 KPK38G	20NCUS3	240	1988.2	0.0	1	75	0.028693	0.028895	
MK309 KPK50P	20NCUS3	240	1246.7	0.0	1	75	0.028693	0.028895	
TA2 MK125	20NCUS3	240	374.0	0.0	1	75	0.028693	0.028895	
TA10 TA2	20NCUS3	240	3254.6	0.0	1	75	0.028693	0.028895	
TA28 KPK47P	20NCUS3	240	1807.7	0.0	1	75	0.028693	0.028895	
TA32 MK146	20NCUS3	240	1492.8	0.0	1	75	0.028693	0.028895	

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
T4	3-Phase	0.315	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T6	3-Phase	0.400	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T7	3-Phase	0.400	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T8	3-Phase	0.630	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T9	3-Phase	0.630	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T10	3-Phase	0.630	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T11	3-Phase	1.000	20.000	0.400	7.40	0.00	0	0	0	0	0	7.4000	Dyn	0.000
T12	3-Phase	1.000	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T13	3-Phase	1.000	20.000	0.400	7.40	0.00	0	0	0	0	0	7.4000	Dyn	0.000
T14	3-Phase	0.630	20.000	0.400	7.40	0.00	0	0	0	0	0	7.4000	Dyn	0.000
T15	3-Phase	0.630	20.000	0.400	7.40	0.00	0	0	0	0	0	7.4000	Dyn	0.000
T16	3-Phase	1.000	20.000	0.400	7.40	0.00	0	0	0	0	0	7.4000	Dyn	0.000
T17	3-Phase	1.000	20.000	0.400	7.40	0.00	0	0	0	0	0	7.4000	Dyn	0.000
T18	3-Phase	1.000	20.000	0.400	7.40	0.00	0	0	0	0	0	7.4000	Dyn	0.000
T21	3-Phase	60.000	20.000	0.410	6.01	0.00	0	0	0	0	0	6.0100	Dyn	0.000
T23	3-Phase	0.630	20.000	0.400	7.40	0.00	0	0	0	0	0	7.4000	Dyn	0.000
T25	3-Phase	1.000	20.000	0.400	7.40	0.00	0	0	0	0	0	7.4000	Dyn	0.000

Branch Connections

CKT/Branch		Connected Bus ID		% Impedance, Pos. Seq., 100 MVA Base			
ID	Type	From Bus	To Bus	R	X	Z	Y
T4	2W XFMR	MK 58	Bus12	704.38	1056.57	1269.84	
T6	2W XFMR	TA 28	Bus17	554.70	832.05	1000.00	
T7	2W XFMR	KPK 47 P	Bus18	554.70	832.05	1000.00	
T8	2W XFMR	TA 10	Bus33	352.19	528.29	634.92	
T9	2W XFMR	TA 2	Bus39	352.19	528.29	634.92	
T10	2W XFMR	MK 125	Bus24	352.19	528.29	634.92	
T11	2W XFMR	MK 309	Bus26	740.00	2.22	740.00	
T12	2W XFMR	KPK 50 P	Bus28	221.88	332.82	400.00	
T13	2W XFMR	MK 223	Bus30	740.00	2.22	740.00	
T14	2W XFMR	KPK 38 G	Bus32	1174.60	3.52	1174.60	
T15	2W XFMR	KPK 44 G	Bus34	1174.60	3.52	1174.60	
T16	2W XFMR	TA 32	Bus36	740.00	2.22	740.00	
T17	2W XFMR	MK 146	Bus38	740.00	2.22	740.00	
T18	2W XFMR	MK 100	Bus40	740.00	2.22	740.00	
T21	2W XFMR	Bus GI ANGKE	Bus46	10.02	0.04	10.02	
T23	2W XFMR	TA 2	Bus39	1174.60	3.52	1174.60	
T25	2W XFMR	TA 10	Bus31	740.00	2.22	740.00	
GI ANGKE - MK 58	Cable	Bus GI ANGKE	MK 58	6.05	7.36	9.53	
KPK38G KPK44G	Cable	KPK 44 G	KPK 38 G	0.50	0.50	0.70	
KPK44G TA32	Cable	TA 32	KPK 44 G	0.32	0.32	0.45	
KPK47P TA10	Cable	TA 10	KPK 47 P	0.25	0.25	0.36	
KPK50P MK223	Cable	MK 223	KPK 50 P	0.71	0.71	1.00	
MK58 TA28	Cable	TA 28	MK 58	2.61	2.63	3.70	
MK100 GH135	Cable	Bus27	MK 100	2.24	2.25	3.17	
MK125 MK309	Cable	MK 309	MK 125	0.25	0.00	0.25	
MK146 MK100	Cable	MK 100	MK 146	1.65	1.66	2.34	
MK223 KPK38G	Cable	KPK 38 G	MK 223	1.43	1.44	2.02	
MK309 KPK50P	Cable	KPK 50 P	MK 309	0.89	0.90	1.27	
TA2 MK125	Cable	MK 125	TA 2	0.27	0.27	0.38	
TA10 TA2	Cable	TA 2	TA 10	2.33	2.35	3.31	
TA28 KPK47P	Cable	KPK 47 P	TA 28	1.30	1.31	1.84	
TA32 MK146	Cable	MK 146	TA 32	1.07	1.08	1.52	
CB8	Tie Breakr	Bus27	Bus29				

LOAD FLOW REPORT

Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
* Bus GI ANGKE	20.000	100.000	0.0	1.377	0.856	0	0	MK 58	1.377	0.856	46.8	84.9	
								Bus46	0.000	0.000	0.0	0.0	
Bus12	0.400	99.098	-0.2	0	0	0.055	0.034	MK 58	-0.055	-0.034	94.3	85.0	
Bus17	0.400	97.783	-0.6	0	0	0.184	0.114	TA 28	-0.184	-0.114	319.0	85.0	
Bus18	0.400	99.573	-0.1	0	0	0.019	0.012	KPK 47 P	-0.019	-0.012	31.8	85.0	
Bus24	0.400	99.615	-0.1	0	0	0.017	0.011	MK 125	-0.017	-0.011	28.9	85.0	
Bus26	0.400	98.967	0.2	0	0	0.102	0.063	MK 309	-0.102	-0.063	174.3	85.0	
Bus27	20.000	99.705	0.0	0	0	0	0	MK 100	0.000	0.000	0.0	0.0	
								Bus29	0.000	0.000	0.0	0.0	
Bus28	0.400	98.989	-0.2	0	0	0.169	0.105	KPK 50 P	-0.169	-0.105	290.5	85.0	
Bus29	20.000	99.705	0.0	0	0	0	0	Bus27	0.000	0.000	0.0	0.0	
Bus30	0.400	99.401	0.1	0	0	0.042	0.026	MK 223	-0.042	-0.026	72.4	85.0	
Bus31	0.390	101.677	0.2	0	0	0.085	0.052	TA 10	-0.085	-0.052	145.1	85.0	
Bus32	0.400	98.868	0.3	0	0	0.071	0.044	KPK 38 G	-0.071	-0.044	121.4	85.0	
Bus33	0.400	99.188	-0.2	0	0	0.085	0.053	TA 10	-0.085	-0.053	145.0	85.0	
Bus34	0.400	99.206	0.1	0	0	0.042	0.026	KPK 44 G	-0.042	-0.026	72.5	85.0	
Bus36	0.400	99.201	0.1	0	0	0.068	0.042	TA 32	-0.068	-0.042	116.0	85.0	
Bus38	0.400	98.943	0.2	0	0	0.102	0.063	MK 146	-0.102	-0.063	174.3	85.0	
Bus39	0.400	98.060	-0.1	0	0	0.304	0.188	TA 2	-0.164	-0.201	382.0	63.2	
								TA 2	-0.140	0.013	206.5	-99.6	
Bus40	0.400	99.579	0.0	0	0	0.017	0.011	MK 100	-0.017	-0.011	28.9	85.0	
Bus46	0.400	102.500	0.0	0	0	0	0	Bus GI ANGKE	0.000	0.000	0.0	0.0	
KPK 38 G	20.000	99.711	0.0	0	0	0	0	KPK 44 G	0.231	0.142	7.8	85.2	
								MK 223	-0.302	-0.186	10.3	85.2	
								Bus32	0.071	0.044	2.4	85.3	
KPK 44 G	20.000	99.709	0.0	0	0	0	0	KPK 38 G	-0.231	-0.142	7.8	85.2	
								TA 32	0.188	0.115	6.4	85.2	
								Bus34	0.043	0.026	1.5	85.2	
KPK 47 P	20.000	99.774	0.0	0	0	0	0	TA 10	1.114	0.689	37.9	85.0	
								TA 28	-1.133	-0.701	38.5	85.0	
								Bus18	0.019	0.012	0.6	85.0	
KPK 50 P	20.000	99.721	0.0	0	0	0	0	MK 223	0.345	0.212	11.7	85.2	
								MK 309	-0.515	-0.318	17.5	85.1	
								Bus28	0.170	0.106	5.8	84.8	
MK 58	20.000	99.854	0.0	0	0	0	0	Bus GI ANGKE	-1.375	-0.854	46.8	84.9	
								TA 28	1.320	0.820	44.9	84.9	

Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Bus12	0.055	0.035	1.9	84.8	
MK 100	20.000	99.705	0.0	0	0	0	0	Bus27	0.000	0.000	0.0	0.0	
								MK 146	-0.017	-0.011	0.6	85.0	
								Bus40	0.017	0.011	0.6	85.0	
MK 125	20.000	99.731	0.0	0	0	0	0	MK 309	0.618	0.381	21.0	85.1	
								TA 2	-0.635	-0.392	21.6	85.1	
								Bus24	0.017	0.011	0.6	85.0	
MK 146	20.000	99.706	0.0	0	0	0	0	MK 100	0.017	0.011	0.6	85.0	
								TA 32	-0.120	-0.073	4.1	85.2	
								Bus38	0.103	0.063	3.5	85.2	
MK 223	20.000	99.718	0.0	0	0	0	0	KPK 50 P	-0.345	-0.212	11.7	85.2	
								KPK 38 G	0.302	0.186	10.3	85.2	
								Bus30	0.043	0.026	1.4	85.1	
MK 309	20.000	99.729	0.0	0	0	0	0	MK 125	-0.618	-0.381	21.0	85.1	
								KPK 50 P	0.515	0.318	17.5	85.1	
								Bus26	0.103	0.063	3.5	85.2	
TA 2	20.000	99.733	0.0	0	0	0	0	MK 125	0.635	0.392	21.6	85.1	
								TA 10	-0.943	-0.584	32.1	85.0	
								Bus39	0.166	0.205	7.6	63.0	
								Bus39	0.142	-0.013	4.1	-99.6	
TA 10	20.000	99.769	0.0	0	0	0	0	KPK 47 P	-1.114	-0.689	37.9	85.0	
								TA 2	0.943	0.584	32.1	85.0	
								Bus33	0.085	0.053	2.9	84.9	
								Bus31	0.085	0.052	2.9	85.2	
TA 28	20.000	99.798	0.0	0	0	0	0	MK 58	-1.319	-0.819	44.9	85.0	
								KPK 47 P	1.133	0.701	38.5	85.0	
								Bus17	0.186	0.118	6.4	84.5	
TA 32	20.000	99.708	0.0	0	0	0	0	KPK 44 G	-0.188	-0.115	6.4	85.2	
								MK 146	0.120	0.073	4.1	85.2	
								Bus36	0.068	0.042	2.3	85.2	

* 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

Bus Loading Summary Report

Bus			Directly Connected Load								Total Bus Load			
			Constant kVA		Constant Z		Constant I		Generic					
ID	kV	Rated Amp	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar	MVA	% PF	Amp	Percent Loading
Bus GI ANGKE	20.000		0	0	0	0	0	0	0	0	1.621	84.9	46.8	
Bus12	0.400		0.044	0.027	0.011	0.007	0	0	0	0	0.065	85.0	94.3	
Bus17	0.400		0.148	0.092	0.035	0.022	0	0	0	0	0.216	85.0	319.0	
Bus18	0.400		0.015	0.009	0.004	0.002	0	0	0	0	0.022	85.0	31.8	
Bus24	0.400		0.014	0.008	0.003	0.002	0	0	0	0	0.020	85.0	28.9	
Bus26	0.400		0.082	0.051	0.020	0.012	0	0	0	0	0.120	85.0	174.3	
Bus27	20.000		0	0	0	0	0	0	0	0	0	0.0	0.0	
Bus28	0.400		0.136	0.084	0.033	0.021	0	0	0	0	0.199	85.0	290.5	
Bus29	20.000		0	0	0	0	0	0	0	0	0	0.0	0.0	
Bus30	0.400		0.034	0.021	0.008	0.005	0	0	0	0	0.050	85.0	72.4	
Bus31	0.390		0.068	0.042	0.017	0.010	0	0	0	0	0.100	85.0	145.1	
Bus32	0.400		0.057	0.035	0.014	0.009	0	0	0	0	0.083	85.0	121.4	
Bus33	0.400		0.068	0.042	0.017	0.010	0	0	0	0	0.100	85.0	145.0	
Bus34	0.400		0.034	0.021	0.008	0.005	0	0	0	0	0.050	85.0	72.5	
Bus36	0.400		0.054	0.034	0.013	0.008	0	0	0	0	0.080	85.0	116.0	
Bus38	0.400		0.082	0.051	0.020	0.012	0	0	0	0	0.119	85.0	174.3	
Bus39	0.400		0.245	0.152	0.059	0.036	0	0	0	0	0.364	83.4	536.1	
Bus40	0.400		0.014	0.008	0.003	0.002	0	0	0	0	0.020	85.0	28.9	
Bus46	0.400		0	0	0	0	0	0	0	0	0	0.0	0.0	
KPK 38 G	20.000		0	0	0	0	0	0	0	0	0.354	85.2	10.3	
KPK 44 G	20.000		0	0	0	0	0	0	0	0	0.271	85.2	7.8	
KPK 47 P	20.000		0	0	0	0	0	0	0	0	1.332	85.0	38.5	
KPK 50 P	20.000		0	0	0	0	0	0	0	0	0.605	85.1	17.5	
MK 58	20.000		0	0	0	0	0	0	0	0	1.619	84.9	46.8	
MK 100	20.000		0	0	0	0	0	0	0	0	0.020	85.0	0.6	
MK 125	20.000		0	0	0	0	0	0	0	0	0.746	85.1	21.6	
MK 146	20.000		0	0	0	0	0	0	0	0	0.140	85.2	4.1	
MK 223	20.000		0	0	0	0	0	0	0	0	0.405	85.2	11.7	
MK 309	20.000		0	0	0	0	0	0	0	0	0.726	85.1	21.0	
TA 2	20.000		0	0	0	0	0	0	0	0	1.116	84.5	32.3	
TA 10	20.000		0	0	0	0	0	0	0	0	1.310	85.0	37.9	
TA 28	20.000		0	0	0	0	0	0	0	0	1.553	85.0	44.9	
TA 32	20.000		0	0	0	0	0	0	0	0	0.221	85.2	6.4	

* 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).

Branch Loading Summary Report

CKT / Branch		Cable & Reactor			Transformer				
		Ampacity (Amp)	Loading Amp		Capability (MVA)	Loading (input)		Loading (output)	
ID	Type			%		MVA	%	MVA	%
GI ANGKE - MK 58	Cable	460.68	46.81	10.16					
KPK38G KPK44G	Cable	409.01	7.84	1.92					
KPK44G TA32	Cable	409.01	6.39	1.56					
KPK47P TA10	Cable	409.01	37.90	9.27					
KPK50P MK223	Cable	409.01	11.71	2.86					
MK58 TA28	Cable	409.01	44.92	10.98					
MK100 GH135	Cable	409.01	0.00	0.00					
MK125 MK309	Cable	409.01	21.01	5.14					
MK146 MK100	Cable	409.01	0.58	0.14					
MK223 KPK38G	Cable	409.01	10.26	2.51					
MK309 KPK50P	Cable	409.01	17.52	4.28					
TA2 MK125	Cable	409.01	21.59	5.28					
TA10 TA2	Cable	409.01	32.10	7.85					
TA28 KPK47P	Cable	409.01	38.54	9.42					
TA32 MK146	Cable	409.01	4.07	0.99					
T4	Transformer				0.315	0.065	20.7	0.065	20.6
T6	Transformer				0.400	0.221	55.1	0.216	54.0
T7	Transformer				0.400	0.022	5.5	0.022	5.5
T8	Transformer				0.630	0.100	15.9	0.100	15.8
T9	Transformer				0.630	0.264	41.9	0.260	41.2
T10	Transformer				0.630	0.020	3.2	0.020	3.2
T11	Transformer				1.000	0.120	12.0	0.120	12.0
T12	Transformer				1.000	0.201	20.1	0.199	19.9
T13	Transformer				1.000	0.050	5.0	0.050	5.0
T14	Transformer				0.630	0.084	13.3	0.083	13.2
T15	Transformer				0.630	0.050	8.0	0.050	7.9
T16	Transformer				1.000	0.080	8.0	0.080	8.0
T17	Transformer				1.000	0.120	12.0	0.119	11.9
T18	Transformer				1.000	0.020	2.0	0.020	2.0
T21	Transformer				60.000				
T23	Transformer				0.630	0.143	22.6	0.140	22.3
T25	Transformer				1.000	0.100	10.0	0.100	10.0

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

Branch Losses Summary Report

CKT / Branch	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop
ID	MW	Mvar	MW	Mvar	kW	kvar	From	To	in Vmag
GI ANGKE - MK 58	1.377	0.856	-1.375	-0.854	1.6	1.9	100.0	99.9	0.15
T21	0.000	0.000	0.000	0.000			100.0	102.5	
T4	-0.055	-0.034	0.055	0.035	0.3	0.5	99.1	99.9	0.76
T6	-0.184	-0.114	0.186	0.118	2.7	4.1	97.8	99.8	2.01
T7	-0.019	-0.012	0.019	0.012	0.0	0.0	99.6	99.8	0.20
T10	-0.017	-0.011	0.017	0.011	0.0	0.0	99.6	99.7	0.12
T11	-0.102	-0.063	0.103	0.063	1.1	0.0	99.0	99.7	0.76
MK100 GH135	0.000	0.000	0.000	0.000			99.7	99.7	0.00
T12	-0.169	-0.105	0.170	0.106	0.9	1.3	99.0	99.7	0.73
T13	-0.042	-0.026	0.043	0.026	0.2	0.0	99.4	99.7	0.32
T25	-0.085	-0.052	0.085	0.052	0.7	0.0	101.7	99.8	0.65
T14	-0.071	-0.044	0.071	0.044	0.8	0.0	98.9	99.7	0.84
T8	-0.085	-0.053	0.085	0.053	0.4	0.5	99.2	99.8	0.58
T15	-0.042	-0.026	0.043	0.026	0.3	0.0	99.2	99.7	0.50
T16	-0.068	-0.042	0.068	0.042	0.5	0.0	99.2	99.7	0.51
T17	-0.102	-0.063	0.103	0.063	1.1	0.0	98.9	99.7	0.76
T9	-0.164	-0.201	0.166	0.205	2.5	3.7	98.1	99.7	1.67
T23	-0.140	0.013	0.142	-0.013	2.4	0.0	98.1	99.7	1.67
T18	-0.017	-0.011	0.017	0.011	0.0	0.0	99.6	99.7	0.13
KPK38G KPK44G	0.231	0.142	-0.231	-0.142	0.0	0.0	99.7	99.7	0.00
MK223 KPK38G	-0.302	-0.186	0.302	0.186	0.0	0.0	99.7	99.7	0.01
KPK44G TA32	0.188	0.115	-0.188	-0.115	0.0	0.0	99.7	99.7	0.00
KPK47P TA10	1.114	0.689	-1.114	-0.689	0.0	0.0	99.8	99.8	0.00
TA28 KPK47P	-1.133	-0.701	1.133	0.701	0.2	0.2	99.8	99.8	0.02
KPK50P MK223	0.345	0.212	-0.345	-0.212	0.0	0.0	99.7	99.7	0.00
MK309 KPK50P	-0.515	-0.318	0.515	0.318	0.0	0.0	99.7	99.7	0.01
MK58 TA28	1.320	0.820	-1.319	-0.819	0.6	0.6	99.9	99.8	0.06
MK146 MK100	-0.017	-0.011	0.017	0.011	0.0	0.0	99.7	99.7	0.00
MK125 MK309	0.618	0.381	-0.618	-0.381	0.0	0.0	99.7	99.7	0.00
TA2 MK125	-0.635	-0.392	0.635	0.392	0.0	0.0	99.7	99.7	0.00
TA32 MK146	-0.120	-0.073	0.120	0.073	0.0	0.0	99.7	99.7	0.00
TA10 TA2	-0.943	-0.584	0.943	0.584	0.3	0.3	99.7	99.8	0.04
					16.8	13.4			

Alert Summary Report

	% Alert Settings	
	Critical	Marginal
Loading		
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
Bus Voltage		
OverVoltage	105.0	102.0
UnderVoltage	95.0	98.0
Generator Excitation		
OverExcited (Q Max.)	100.0	95.0
UnderExcited (Q Min.)	100.0	

Marginal Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Bus17	Bus	Under Voltage	0,40	kV	0,39	97.8	3-Phase
Bus46	Bus	Over Voltage	0,40	kV	0,41	102.5	3-Phase

SUMMARY OF TOTAL GENERATION, LOADING & DEMAND

	MW	Mvar	MVA	% PF
Source (Swing Buses):	1.377	0.856	1.621	84.92 Lagging
Source (Non-Swing Buses):	0.000	0.000	0.000	
Total Demand:	1.377	0.856	1.621	84.92 Lagging
Total Motor Load:	1.094	0.678	1.287	85.00 Lagging
Total Static Load:	0.266	0.165	0.313	85.00 Lagging
Total Constant I Load:	0.000	0.000	0.000	
Total Generic Load:	0.000	0.000	0.000	
Apparent Losses:	0.017	0.013		
System Mismatch:	0.000	0.000		

Number of Iterations: 2