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Location:	12.6.0H	Date:	14-02-2018
Contract:		SN:	
Engineer:		Revision:	Base
Filename: etap ade f	Study Case: LF	Config.:	Normal

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:	1	0	81	82

	<u>XFMR2</u>	<u>XFMR3</u>	<u>Reactor</u>	<u>Line/Cable</u>	<u>Impedance</u>	<u>Tie PD</u>	<u>Total</u>
Number of Branches:	34	0	0	47	0	0	81

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:	etap ade f
Output Filename:	I:\Skripsi Fix\Etap Skripsi\Untitled.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
BADS	20.000	1	100.0	0.0								
BADS1	0.400	1	100.0	0.0	0.040	0.013						
BADSB	20.000	1	100.0	0.0								
BADSB1	0.400	1	100.0	0.0	0.006	0.002						
BBGG	20.000	1	100.0	0.0								
BBGG1	0.400	1	100.0	0.0	0.086	0.028						
BCKS	20.000	1	100.0	0.0								
BCKS1	0.400	1	100.0	0.0	0.096	0.059	0.024	0.015				
BCPHB	20.000	1	100.0	0.0								
BCPHB1	0.400	1	100.0	0.0	0.035	0.012						
BCPL	20.000	1	100.0	0.0								
BCPL1	0.400	1	100.0	0.0	0.078	0.026						
BCPN	20.000	1	100.0	0.0								
BCPN1	0.400	1	100.0	0.0	0.087	0.029						
BCPN4	0.400	1	100.0	0.0	0.071	0.023						
BCPN5	20.000	1	100.0	0.0								
BDLH	20.000	1	100.0	0.0			0.000	-0.600				
BDLH1	0.400	1	100.0	0.0	0.071	0.023						
BDLR	20.000	1	100.0	0.0								
BDLR1	0.400	1	100.0	0.0	0.088	0.029						
BGI	20.000	1	100.0	0.0								
BGI1	150.000	1	100.0	0.0								
BGSBR	20.000	1	100.0	0.0								
BGSBR1	0.400	1	100.0	0.0	0.009	0.005	0.002	0.001				
BJCPN	20.000	1	100.0	0.0								
BJCPN1	0.400	1	100.0	0.0	0.038	0.012						
BJGR	20.000	1	100.0	0.0								
BJGR1	0.400	1	100.0	0.0	0.082	0.027						
BKDL	20.000	1	100.0	0.0								
BKDL1	0.400	1	100.0	0.0			0.040	0.013				
BLPN	20.000	1	100.0	0.0								
BLPN1	0.400	1	100.0	0.0	0.049	0.016						
BLPS	20.000	1	100.0	0.0								

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Bus			Initial Voltage		Load							
					Constant kVA		Constant Z		Constant I		Generic	
					MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
BLPS1	0.400	1	100.0	0.0	0.112	0.069	0.028	0.017				
BPBSP	20.000	1	100.0	0.0								
BPBSP1	0.400	1	100.0	0.0			0.022	0.007				
BPCT	20.000	1	100.0	0.0								
BPCT1	0.400	1	100.0	0.0			0.014	0.008				
BPCTB	20.000	1	100.0	0.0								
BPCTB1	0.400	1	100.0	0.0	0.060	0.037	0.015	0.009				
BPJR	20.000	1	100.0	0.0								
BPJR1	0.400	1	100.0	0.0	0.045	0.028	0.011	0.007				
BPRL	20.000	1	100.0	0.0								
BPRL1	0.400	1	100.0	0.0			0.075	0.025				
BPSLG	20.000	1	100.0	0.0								
BPSLG1	0.400	1	100.0	0.0			0.036	0.012				
BRAK	20.000	1	100.0	0.0								
BRAK1	0.400	1	100.0	0.0	0.061	0.020						
BSBG	20.000	1	100.0	0.0								
BSBG1	0.400	1	100.0	0.0	0.025	0.008						
BSDH	20.000	1	100.0	0.0								
BSDH1	0.400	1	100.0	0.0	0.090	0.056	0.022	0.014				
BSEFM	20.000	1	100.0	0.0								
BSEFM1	0.400	1	100.0	0.0	0.071	0.023						
BSLEH	20.000	1	100.0	0.0								
BSLEH1	0.400	1	100.0	0.0	0.062	0.038	0.015	0.010				
BSPM	20.000	1	100.0	0.0								
BSPM1	0.400	1	100.0	0.0			0.064	0.021				
BSPM4	0.400	1	100.0	0.0			0.034	0.011				
BSPM5	20.000	1	100.0	0.0								
BSRAP	20.000	1	100.0	0.0								
BSRAP1	0.400	1	100.0	0.0	0.033	0.020	0.008	0.005				
BST	20.000	1	100.0	0.0			0.000	-0.600				
BST1	0.400	1	100.0	0.0	0.043	0.014						
BTMBS	20.000	1	100.0	0.0								
BTMBS1	0.400	1	100.0	0.0	0.070	0.043	0.018	0.011				
Bus14	20.000	1	100.0	0.0								
Bus21	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
Bus33	20.000	1	100.0	0.0								
Bus36	20.000	1	100.0	0.0								
Bus37	20.000	1	100.0	0.0								
Bus54	20.000	1	100.0	0.0								
Bus57	20.000	1	100.0	0.0								
Bus60	20.000	1	100.0	0.0								
Bus63	20.000	1	100.0	0.0								
Bus90	20.000	1	100.0	0.0								
Bus91	20.000	1	100.0	0.0								
Bus96	20.000	1	100.0	0.0								
Bus97	20.000	1	100.0	0.0								
Bus112	20.000	1	100.0	0.0								
BYHPB	20.000	1	100.0	0.0								
BYHPB1	0.400	1	100.0	0.0	0.060	0.037	0.015	0.009				
Total Number of Buses: 82					1.566	0.700	0.444	-1.004	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
BG11	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									
ID	Library	Size	Length		#/Phase	T (°C)	R	X	Y
			Adj. (m)	% Tol.					
BADS-BRAK1			600.0	0.0	1	75	0.709318	1.084318	
BADS-BRAK2			500.0	0.0	1	75	0.709318	1.084318	
BADSB-BADS1			500.0	0.0	1	75	0.709318	1.084318	
BADSB-BADS2			400.0	0.0	1	75	0.709318	1.084318	
BBGG-BLDH			700.0	0.0	1	75	0.709318	1.084318	
BCPL-BCPHB			700.0	0.0	1	75	0.709318	1.084318	
BCPN-BPCTB			600.0	0.0	1	75	0.709318	1.084318	
BCPN-BSEFM1			700.0	0.0	1	75	0.709318	1.084318	
BCPN-BSEFM2			800.0	0.0	1	75	0.709318	1.084318	
BCPN-BSEFM3			800.0	0.0	1	75	0.709318	1.084318	
BCPN5-BCPN			200.0	0.0	1	75	0.216200	0.330500	
BDLH-BDLR1			600.0	0.0	1	75	0.709318	1.084318	
BDLH-BDLR2			400.0	0.0	1	75	0.709318	1.084318	
BDLH-BDLR3			600.0	0.0	1	75	0.000216	0.000331	
BDLH-BSLEH			300.0	0.0	1	75	0.709318	1.084318	
BDLH-BST			500.0	0.0	1	75	0.709318	1.084318	
BDLR-BCPL			400.0	0.0	1	75	0.709318	1.084318	
BGI-BPSLG			500.0	0.0	1	75	0.709318	1.084318	
BJCPN-BCPN1			700.0	0.0	1	75	0.709318	1.084318	
BJCPN-BCPN2			600.0	0.0	1	75	0.709318	1.084318	
BJCPN-BLPS			600.0	0.0	1	75	0.709318	1.084318	
BJGR-BADSB1			300.0	0.0	1	75	0.709318	1.084318	
BJGR-BADSB2			500.0	0.0	1	75	0.709318	1.084318	
BKDL-BSPM			400.0	0.0	1	75	0.709318	1.084318	
BLPN-BPJR1			500.0	0.0	1	75	0.709318	1.084318	
BLPN-BPJR2			600.0	0.0	1	75	0.709318	1.084318	
BPBSP-BCKS			1020.0	0.0	1	75	0.709318	1.084318	
BPBSP-BJCPN1			500.0	0.0	1	75	0.709318	1.084318	
BPBSP-BJCPN2			500.0	0.0	1	75	0.709318	1.084318	
BPCT-BSEFM			700.0	0.0	1	75	0.709318	1.084318	
BPJR-BSDH1			700.0	0.0	1	75	0.709318	1.084318	
BPJR-BSDH2			600.0	0.0	1	75	0.709318	1.084318	
BPRL-BKDL			200.0	0.0	1	75	0.709318	1.084318	
BPSLG-BPRL			300.0	0.0	1	75	0.709318	1.084318	

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.					
BSBGG-BBG			400.0	0.0	1	75	0.709318	1.084318	
BSDH-BGSBR			500.0	0.0	1	75	0.709318	1.084318	
BSDH-BJGR			700.0	0.0	1	75	0.709318	1.084318	
BSEFM-BSBG			500.0	0.0	1	75	0.709318	1.084318	
BSLEH-BSRAP			550.0	0.0	1	75	0.709318	1.084318	
BSPM-BSPM5			150.0	0.0	1	75	0.216200	0.330500	
BSPM5-BPBSP			300.0	0.0	1	75	0.216200	0.330500	
BSRAP-BYHPB			500.0	0.0	1	75	0.709318	1.084318	
BST-BLPN			600.0	0.0	1	75	0.709318	1.084318	
BST-BTMBS1			400.0	0.0	1	75	0.709318	1.084318	
BST-BTMBS2			600.0	0.0	1	75	0.709318	1.084318	
Cable6			500.0	0.0	1	75	0.709318	1.084318	
Cable28			400.0	0.0	1	75	0.709318	1.084318	

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
T-ADS	3-Phase	0.250	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-ADSB	3-Phase	0.160	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-BGG	3-Phase	0.250	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-BPSP	3-Phase	0.100	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-CKS	3-Phase	0.250	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-CPHB	3-Phase	0.100	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-CPL	3-Phase	0.200	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-CPN	3-Phase	0.250	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-CPN2	3-Phase	0.250	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-DLH	3-Phase	0.160	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-DLR	3-Phase	0.250	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-GSBR	3-Phase	0.100	0.400	20.000	4.00	1.50	0	0	0	0	0	4.0000	YNd	0.000
T-JCPN	3-Phase	0.100	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-JGR	3-Phase	0.250	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-KDL	3-Phase	0.100	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-LPN	3-Phase	0.100	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-LPS	3-Phase	0.250	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PCT	3-Phase	0.160	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PCTB	3-Phase	0.250	20.000	0.400	12.50	45.00	0	0	0	0	0	12.5000	Dyn	0.000
T-PJR	3-Phase	0.100	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PRL	3-Phase	0.160	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-PSLG	3-Phase	0.100	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-RAK	3-Phase	0.200	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-SBGG	3-Phase	0.100	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-SDH	3-Phase	0.200	0.400	20.000	4.00	1.50	0	0	0	0	0	4.0000	YNd	0.000
T-SEFM	3-Phase	0.200	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-SLEH	3-Phase	0.100	0.400	20.000	4.00	1.50	0	0	0	0	0	4.0000	YNd	0.000
T-SPM	3-Phase	0.250	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-SPM2	3-Phase	0.250	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-SRAP	3-Phase	0.200	0.400	20.000	4.00	1.50	0	0	0	0	0	4.0000	YNd	0.000
T-ST	3-Phase	0.250	20.000	0.400	4.00	2.47	0	0	0	0	0	4.0000	Dyn	0.000
T-TMBS	3-Phase	0.200	20.000	0.400	4.00	1.50	0	0	0	0	0	4.0000	Dyn	0.000
T-YHPB	3-Phase	0.100	0.400	20.000	4.00	1.50	0	0	0	0	0	4.0000	YNd	0.000
T1	3-Phase	60.000	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-ADS	2W XFMR	BADS	BADS1	600.43	1483.07	1600.00	
T-ADSB	2W XFMR	BADSB	BADSB1	938.17	2317.29	2500.00	
T-BGG	2W XFMR	BBGG	BBGG1	600.43	1483.07	1600.00	
T-BPSP	2W XFMR	BPBSP	BPBSP1	2218.80	3328.20	4000.00	
T-CKS	2W XFMR	BCKS	BCKS1	887.52	1331.28	1600.00	
T-CPHB	2W XFMR	BCPHB	BCPHB1	1501.08	3707.66	4000.00	
T-CPL	2W XFMR	BCPL	BCPL1	750.54	1853.83	2000.00	
T-CPN	2W XFMR	BCPN	BCPN1	600.43	1483.07	1600.00	
T-CPN2	2W XFMR	BCPN5	BCPN4	600.43	1483.07	1600.00	
T-DLH	2W XFMR	BDLH	BDLH1	1386.75	2080.13	2500.00	
T-DLR	2W XFMR	BDLR	BDLR1	600.43	1483.07	1600.00	
T-GSBR	2W XFMR	BGSBR1	BGSBR	2218.80	3328.20	4000.00	
T-JCPN	2W XFMR	BJCPN	BJCPN1	1501.08	3707.66	4000.00	
T-JGR	2W XFMR	BJGR	BJGR1	600.43	1483.07	1600.00	
T-KDL	2W XFMR	BKDL	BKDL1	2218.80	3328.20	4000.00	
T-LPN	2W XFMR	BLPN	BLPN1	1501.08	3707.66	4000.00	
T-LPS	2W XFMR	BLPS	BLPS1	887.52	1331.28	1600.00	
T-PCT	2W XFMR	BPCT	BPCT1	1386.75	2080.13	2500.00	
T-PCTB	2W XFMR	BPCTB	BPCTB1	111.08	4998.77	5000.00	
T-PJR	2W XFMR	BPJR	BPJR1	2218.80	3328.20	4000.00	
T-PRL	2W XFMR	BPRL	BPRL1	1386.75	2080.13	2500.00	
T-PSLG	2W XFMR	BPSLG	BPSLG1	2218.80	3328.20	4000.00	
T-RAK	2W XFMR	BRAK	BRAK1	750.54	1853.83	2000.00	
T-SBGG	2W XFMR	BSBGG	BSBGG1	1501.08	3707.66	4000.00	
T-SDH	2W XFMR	BSDH1	BSDH	1109.40	1664.10	2000.00	
T-SEFM	2W XFMR	BSEFM	BSEFM1	750.54	1853.83	2000.00	
T-SLEH	2W XFMR	BSLEH1	BSLEH	2218.80	3328.20	4000.00	
T-SPM	2W XFMR	BSPM	BSPM1	887.52	1331.28	1600.00	
T-SPM2	2W XFMR	BSPM5	BSPM4	887.52	1331.28	1600.00	
T-SRAP	2W XFMR	BSRAP1	BSRAP	1109.40	1664.10	2000.00	
T-ST	2W XFMR	BST	BST1	600.43	1483.07	1600.00	
T-TMBS	2W XFMR	BTMBS	BTMBS1	1109.40	1664.10	2000.00	
T-YHPB	2W XFMR	BYHPB1	BYHPB	2218.80	3328.20	4000.00	
T1	2W XFMR	BGI1	BGI	0.46	20.83	20.83	
BADS-BRAK1	Cable	Bus96	Bus112	10.64	16.26	19.44	
BADS-BRAK2	Cable	BRAK	Bus112	8.87	13.55	16.20	
BADSB-BADS1	Cable	Bus97	Bus96	8.87	13.55	16.20	

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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
BADSB-BADS2	Cable	BADS	Bus96	7.09	10.84	12.96	
BBGG-BLDH	Cable	BBGG	Bus54	12.41	18.98	22.68	
BCPL-BCPHB	Cable	BCPL	BCPHB	12.41	18.98	22.68	
BCPN-BPCTB	Cable	Bus36	BPCTB	10.64	16.26	19.44	
BCPN-BSEFM1	Cable	BCPN	Bus36	12.41	18.98	22.68	
BCPN-BSEFM2	Cable	Bus36	Bus37	14.19	21.69	25.91	
BCPN-BSEFM3	Cable	Bus37	BSEFM	14.19	21.69	25.91	
BCPN5-BCPN	Cable	BCPN5	BCPN	1.08	1.65	1.97	
BDLH-BDLR1	Cable	Bus54	Bus57	10.64	16.26	19.44	
BDLH-BDLR2	Cable	Bus57	Bus63	7.09	10.84	12.96	
BDLH-BDLR3	Cable	Bus63	BDLR	0.00	0.00	0.01	
BDLH-BSLEH	Cable	BSLEH	Bus63	5.32	8.13	9.72	
BDLH-BST	Cable	Bus57	BST	8.87	13.55	16.20	
BDLR-BCPL	Cable	BDLR	BCPL	7.09	10.84	12.96	
BGI-BPSLG	Cable	BGI	BPSLG	8.87	13.55	16.20	
BJCPN-BCPN1	Cable	BJCPN	Bus33	12.41	18.98	22.68	
BJCPN-BCPN2	Cable	Bus33	BCPN5	10.64	16.26	19.44	
BJCPN-BLPS	Cable	Bus33	BLPS	10.64	16.26	19.44	
BJGR-BADSB1	Cable	BJGR	Bus97	5.32	8.13	9.72	
BJGR-BADSB2	Cable	BADSB	Bus97	8.87	13.55	16.20	
BKDL-BSPM	Cable	Bus14	BSPM	7.09	10.84	12.96	
BLPN-BPJR1	Cable	BLPN	Bus90	8.87	13.55	16.20	
BLPN-BPJR2	Cable	Bus90	BPJR	10.64	16.26	19.44	
BPBSP-BCKS	Cable	Bus21	BCKS	18.09	27.65	33.04	
BPBSP-BJCPN1	Cable	BPBSP	Bus21	8.87	13.55	16.20	
BPBSP-BJCPN2	Cable	Bus21	BJCPN	8.87	13.55	16.20	
BPCT-BSEFM	Cable	Bus37	BPCT	12.41	18.98	22.68	
BPJR-BSDH1	Cable	Bus90	Bus91	12.41	18.98	22.68	
BPJR-BSDH2	Cable	Bus91	BSDH	10.64	16.26	19.44	
BPRL-BKDL	Cable	BPRL	Bus14	3.55	5.42	6.48	
BPSLG-BPRL	Cable	BPSLG	BPRL	5.32	8.13	9.72	
BSBGG-BBGG	Cable	BSBGG	BBGG	7.09	10.84	12.96	
BSDH-BGSBR	Cable	BSDH	BGSBR	8.87	13.55	16.20	
BSDH-BJGR	Cable	Bus91	BJGR	12.41	18.98	22.68	
BSEFM-BSBGG	Cable	BSEFM	BSBGG	8.87	13.55	16.20	
BSLEH-BSRAP	Cable	BSRAP	BSLEH	9.75	14.91	17.82	
BSPM-BSPM5	Cable	BSPM	BSPM5	0.81	1.24	1.48	
BSPM5-BPBSP	Cable	BSPM5	BPBSP	1.62	2.48	2.96	
BSRAP-BYHPB	Cable	BYHPB	BSRAP	8.87	13.55	16.20	

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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
BST-BLPN	Cable	Bus60	BLPN	10.64	16.26	19.44	
BST-BTMBS1	Cable	BST	Bus60	7.09	10.84	12.96	
BST-BTMBS2	Cable	Bus60	BTMBS	10.64	16.26	19.44	
Cable6	Cable	BKDL	Bus14	8.87	13.55	16.20	
Cable28	Cable	BDLH	Bus54	7.09	10.84	12.96	

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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
BADS	20.000	98.598	-2.7	0	0	0	0	Bus96	-0.040	-0.013	1.2	94.8	
								BADS1	0.040	0.013	1.2	94.8	
BADS1	0.400	98.156	-3.0	0	0	0.040	0.013	BADS	-0.040	-0.013	61.6	95.0	
BADSB	20.000	98.615	-2.7	0	0	0	0	Bus97	-0.006	-0.002	0.2	95.0	
								BADSB1	0.006	0.002	0.2	95.0	
BADSB1	0.400	98.515	-2.8	0	0	0.006	0.002	BADSB	-0.006	-0.002	9.0	95.0	
BBGG	20.000	99.010	-2.3	0	0	0	0	Bus54	1.023	-0.686	35.9	-83.1	
								BSBGG	-1.109	0.656	37.6	-86.1	
								BBGG1	0.086	0.029	2.6	94.6	
BBGG1	0.400	98.055	-2.9	0	0	0.086	0.028	BBGG	-0.086	-0.028	132.5	95.0	
BCKS	20.000	99.428	-0.9	0	0	0	0	Bus21	-0.120	-0.076	4.1	84.5	
								BCKS1	0.120	0.076	4.1	84.5	
BCKS1	0.400	97.337	-1.5	0	0	0.119	0.073	BCKS	-0.119	-0.073	206.9	85.0	
BCPHB	20.000	98.863	-2.5	0	0	0	0	BCPL	-0.035	-0.012	1.1	94.6	
								BCPHB1	0.035	0.012	1.1	94.6	
BCPHB1	0.400	97.879	-3.2	0	0	0.035	0.012	BCPHB	-0.035	-0.012	54.6	95.0	
BCPL	20.000	98.870	-2.5	0	0	0	0	BCPHB	0.035	0.012	1.1	94.6	
								BDLR	-0.114	-0.039	3.5	94.6	
								BCPL1	0.079	0.027	2.4	94.6	
BCPL1	0.400	97.775	-3.3	0	0	0.078	0.026	BCPL	-0.078	-0.026	121.3	95.0	
BCPN	20.000	99.169	-1.4	0	0	0	0	Bus36	1.303	-0.549	41.2	-92.1	
								BCPN5	-1.391	0.519	43.2	-93.7	
								BCPN1	0.088	0.030	2.7	94.6	
BCPN1	0.400	98.196	-2.1	0	0	0.087	0.029	BCPN	-0.087	-0.029	134.9	95.0	
BCPN4	0.400	98.384	-2.0	0	0	0.071	0.023	BCPN5	-0.071	-0.023	110.0	95.0	
BCPN5	20.000	99.176	-1.4	0	0	0	0	BCPN	1.391	-0.519	43.2	-93.7	
								Bus33	-1.463	0.495	44.9	-94.7	
								BCPN4	0.072	0.024	2.2	94.7	
BDLH	20.000	99.070	-2.5	0	0	0.000	-0.589	Bus54	-0.072	0.564	16.6	-12.7	
								BDLH1	0.072	0.025	2.2	94.6	
BDLH1	0.400	97.550	-3.1	0	0	0.071	0.023	BDLH	-0.071	-0.023	111.0	95.0	
BDLR	20.000	98.882	-2.5	0	0	0	0	Bus63	-0.203	-0.069	6.3	94.6	
								BCPL	0.114	0.039	3.5	94.6	
								BDLR1	0.089	0.030	2.7	94.6	
BDLR1	0.400	97.893	-3.2	0	0	0.088	0.029	BDLR	-0.088	-0.029	137.1	95.0	
BGI	20.000	100.030	-0.2	0	0	0	0	BPSLG	2.050	-0.192	59.4	-99.6	

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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
								BGI1	-2.050	0.192	59.4	-99.6	
*BGI1	150.000	100.000	0.0	2.050	-0.183	0	0	BGI	2.050	-0.183	7.9	-99.6	
BGSBR	20.000	98.633	-2.7	0	0	0	0	BSDH	-0.011	-0.007	0.4	84.9	
								BGSBR1	0.011	0.007	0.4	84.9	
BGSBR1	0.400	98.158	-2.8	0	0	0.011	0.007	BGSBR	-0.011	-0.007	18.8	85.0	
BJCPN	20.000	99.377	-1.1	0	0	0	0	Bus33	1.609	-0.396	48.1	-97.1	
								Bus21	-1.647	0.383	49.1	-97.4	
								BJCPN1	0.038	0.013	1.2	94.6	
BJCPN1	0.400	98.319	-1.8	0	0	0.038	0.012	BJCPN	-0.038	-0.012	58.7	95.0	
BJGR	20.000	98.625	-2.7	0	0	0	0	Bus97	0.107	0.036	3.3	94.7	
								Bus91	-0.189	-0.064	5.8	94.7	
								BJGR1	0.082	0.028	2.5	94.7	
BJGR1	0.400	97.711	-3.3	0	0	0.082	0.027	BJGR	-0.082	-0.027	126.7	95.0	
BKDL	20.000	99.724	-0.6	0	0	0	0	Bus14	-0.039	-0.013	1.2	94.7	
								BKDL1	0.039	0.013	1.2	94.7	
BKDL1	0.400	98.417	-1.2	0	0	0.039	0.013	BKDL	-0.039	-0.013	59.7	95.0	
BLPN	20.000	98.785	-2.6	0	0	0	0	Bus90	0.369	0.179	12.0	90.0	
								Bus60	-0.418	-0.196	13.5	90.6	
								BLPN1	0.050	0.017	1.5	94.5	
BLPN1	0.400	97.397	-3.6	0	0	0.049	0.016	BLPN	-0.049	-0.016	76.8	95.0	
BLPS	20.000	99.222	-1.3	0	0	0	0	Bus33	-0.140	-0.089	4.8	84.4	
								BLPS1	0.140	0.089	4.8	84.4	
BLPS1	0.400	96.781	-1.9	0	0	0.138	0.085	BLPS	-0.138	-0.085	241.5	85.0	
BPBSP	20.000	99.588	-0.8	0	0	0	0	Bus21	1.773	-0.299	52.1	-98.6	
								BSPM5	-1.795	0.291	52.7	-98.7	
								BPBSP1	0.022	0.007	0.7	94.8	
BPBSP1	0.400	98.861	-1.1	0	0	0.022	0.007	BPBSP	-0.022	-0.007	33.3	95.0	
BPCT	20.000	99.066	-1.8	0	0	0	0	Bus37	-0.013	-0.008	0.5	84.9	
								BPCT1	0.013	0.008	0.5	84.9	
BPCT1	0.400	98.708	-1.9	0	0	0.013	0.008	BPCT	-0.013	-0.008	22.7	85.0	
BPCTB	20.000	99.096	-1.6	0	0	0	0	Bus36	-0.074	-0.050	2.6	82.9	
								BPCTB1	0.074	0.050	2.6	82.9	
BPCTB1	0.400	96.572	-3.8	0	0	0.074	0.046	BPCTB	-0.074	-0.046	129.8	85.0	
BPJR	20.000	98.716	-2.7	0	0	0	0	Bus90	-0.056	-0.035	1.9	84.4	
								BPJR1	0.056	0.035	1.9	84.4	
BPJR1	0.400	96.270	-3.3	0	0	0.055	0.034	BPJR	-0.055	-0.034	96.8	85.0	
BPRL	20.000	99.785	-0.5	0	0	0	0	Bus14	1.936	-0.238	56.4	-99.2	
								BPSLG	-2.009	0.213	58.4	-99.4	
								BPRL1	0.073	0.025	2.2	94.6	

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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
BPRL1	0.400	98.258	-1.2	0	0	0.072	0.024	BPRL	-0.072	-0.024	111.5	95.0	
BPSLG	20.000	99.874	-0.4	0	0	0	0	BGI	-2.046	0.198	59.4	-99.5	
								BPRL	2.011	-0.210	58.4	-99.5	
								BPSLG1	0.036	0.012	1.1	94.7	
BPSLG1	0.400	98.679	-1.0	0	0	0.035	0.012	BPSLG	-0.035	-0.012	54.6	95.0	
BRAK	20.000	98.584	-2.7	0	0	0	0	Bus112	-0.061	-0.021	1.9	94.7	
								BRAK1	0.061	0.021	1.9	94.7	
BRAK1	0.400	97.730	-3.3	0	0	0.061	0.020	BRAK	-0.061	-0.020	94.8	95.0	
BSBGG	20.000	99.017	-2.2	0	0	0	0	BBGG	1.110	-0.655	37.6	-86.1	
								BSEFM	-1.135	0.646	38.1	-86.9	
								BSBGG1	0.025	0.008	0.8	94.7	
BSBGG1	0.400	98.336	-2.6	0	0	0.025	0.008	BSBGG	-0.025	-0.008	37.9	95.0	
BSDH	20.000	98.635	-2.7	0	0	0	0	Bus91	-0.123	-0.078	4.3	84.4	
								BGSBR	0.011	0.007	0.4	84.9	
								BSDH1	0.113	0.072	3.9	84.4	
BSDH1	0.400	96.168	-3.3	0	0	0.111	0.068	BSDH	-0.111	-0.068	195.1	85.0	
BSEFM	20.000	99.031	-2.0	0	0	0	0	Bus37	-1.208	0.619	39.6	-89.0	
								BSBGG	1.136	-0.644	38.1	-87.0	
								BSEFM1	0.072	0.025	2.2	94.6	
BSEFM1	0.400	98.035	-2.7	0	0	0.071	0.023	BSEFM	-0.071	-0.023	110.4	95.0	
BSLEH	20.000	98.861	-2.5	0	0	0	0	Bus63	-0.194	-0.124	6.7	84.3	
								BSRAP	0.116	0.074	4.0	84.4	
								BSLEH1	0.078	0.050	2.7	84.2	
BSLEH1	0.400	95.441	-3.4	0	0	0.076	0.047	BSLEH	-0.076	-0.047	135.2	85.0	
BSPM	20.000	99.622	-0.7	0	0	0	0	Bus14	-1.893	0.258	55.3	-99.1	
								BSPM5	1.829	-0.279	53.6	-98.9	
								BSPM1	0.063	0.021	1.9	94.8	
BSPM1	0.400	98.777	-1.1	0	0	0.063	0.021	BSPM	-0.063	-0.021	96.7	95.0	
BSPM4	0.400	99.160	-0.9	0	0	0.034	0.011	BSPM5	-0.034	-0.011	51.5	95.0	
BSPM5	20.000	99.610	-0.7	0	0	0	0	BSPM	-1.829	0.279	53.6	-98.9	
								BPBSP	1.795	-0.291	52.7	-98.7	
								BSPM4	0.034	0.011	1.0	94.9	
BSRAP	20.000	98.839	-2.6	0	0	0	0	BSLEH	-0.116	-0.074	4.0	84.4	
								BYHPB	0.075	0.048	2.6	84.2	
								BSRAP1	0.041	0.026	1.4	84.8	
BSRAP1	0.400	97.944	-2.8	0	0	0.041	0.025	BSRAP	-0.041	-0.025	70.9	85.0	
BST	20.000	98.926	-2.6	0	0	0.000	-0.587	Bus57	-0.550	0.321	18.6	-86.4	
								Bus60	0.507	0.252	16.5	89.5	
								BST1	0.043	0.015	1.3	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
BST1	0.400	98.446	-2.9	0	0	0.043	0.014	BST	-0.043	-0.014	66.9	95.0	
BTMBS	20.000	98.844	-2.6	0	0	0	0	Bus60	-0.088	-0.055	3.0	84.5	
								BTMBS1	0.088	0.055	3.0	84.5	
BTMBS1	0.400	96.930	-3.1	0	0	0.086	0.054	BTMBS	-0.086	-0.054	151.5	85.0	
Bus14	20.000	99.729	-0.6	0	0	0	0	BSPM	1.895	-0.254	55.3	-99.1	
								BPRL	-1.934	0.240	56.4	-99.2	
								BKDL	0.039	0.013	1.2	94.7	
Bus21	20.000	99.472	-0.9	0	0	0	0	BCKS	0.120	0.076	4.1	84.5	
								BPBSP	-1.770	0.303	52.1	-98.6	
								BJCPN	1.650	-0.379	49.1	-97.5	
Bus33	20.000	99.252	-1.3	0	0	0	0	BJCPN	-1.605	0.402	48.1	-97.0	
								BCPN5	1.465	-0.491	44.9	-94.8	
								BLPS	0.140	0.089	4.8	84.4	
Bus36	20.000	99.112	-1.6	0	0	0	0	BPCTB	0.074	0.050	2.6	82.9	
								BCPN	-1.301	0.553	41.2	-92.0	
								Bus37	1.227	-0.603	39.8	-89.7	
Bus37	20.000	99.069	-1.8	0	0	0	0	Bus36	-1.224	0.607	39.8	-89.6	
								BSEFM	1.211	-0.615	39.6	-89.1	
								BPCT	0.013	0.008	0.5	84.9	
Bus54	20.000	99.013	-2.4	0	0	0	0	BBGG	-1.021	0.689	35.9	-82.9	
								Bus57	0.949	-0.125	27.9	-99.1	
								BDLH	0.072	-0.564	16.6	-12.7	
Bus57	20.000	98.932	-2.5	0	0	0	0	Bus54	-0.948	0.126	27.9	-99.1	
								Bus63	0.397	0.194	12.9	89.9	
								BST	0.550	-0.320	18.6	-86.4	
Bus60	20.000	98.863	-2.6	0	0	0	0	BLPN	0.419	0.196	13.5	90.6	
								BST	-0.506	-0.252	16.5	89.6	
								BTMBS	0.088	0.055	3.0	84.5	
Bus63	20.000	98.882	-2.5	0	0	0	0	Bus57	-0.397	-0.194	12.9	89.9	
								BDLR	0.203	0.069	6.3	94.6	
								BSLEH	0.194	0.124	6.7	84.3	
Bus90	20.000	98.728	-2.7	0	0	0	0	BLPN	-0.369	-0.178	12.0	90.0	
								BPJR	0.056	0.036	1.9	84.4	
								Bus91	0.313	0.143	10.1	91.0	
Bus91	20.000	98.661	-2.7	0	0	0	0	Bus90	-0.313	-0.143	10.1	91.0	
								BSDH	0.123	0.078	4.3	84.4	
								BJGR	0.189	0.064	5.8	94.7	
Bus96	20.000	98.602	-2.7	0	0	0	0	Bus112	0.061	0.021	1.9	94.7	
								Bus97	-0.101	-0.034	3.1	94.7	

Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus97	20.000	98.616	-2.7	0	0	0	0	BADS	0.040	0.013	1.2	94.8	
								Bus96	0.101	0.034	3.1	94.7	
								BJGR	-0.107	-0.036	3.3	94.7	
Bus112	20.000	98.592	-2.7	0	0	0	0	BADSB	0.006	0.002	0.2	95.0	
								Bus96	-0.061	-0.021	1.9	94.7	
								BRAK	0.061	0.021	1.9	94.7	
BYHPB	20.000	98.825	-2.6	0	0	0	0	BSRAP	-0.075	-0.048	2.6	84.2	
BYHPB1	0.400	95.520	-3.4	0	0	0.073	0.046	BYHPB1	0.075	0.048	2.6	84.2	
								BYHPB	-0.073	-0.046	130.6	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
			MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar				
ID	kV	Rated Amp												
BADS	20.000		0	0	0	0	0	0	0	0	0.042	94.8	1.2	
BADS1	0.400		0.040	0.013	0	0	0	0	0	0	0.042	95.0	61.6	
BADSB	20.000		0	0	0	0	0	0	0	0	0.006	95.0	0.2	
BADSB1	0.400		0.006	0.002	0	0	0	0	0	0	0.006	95.0	9.0	
BBGG	20.000		0	0	0	0	0	0	0	0	1.304	85.1	38.0	
BBGG1	0.400		0.086	0.028	0	0	0	0	0	0	0.090	95.0	132.5	
BCKS	20.000		0	0	0	0	0	0	0	0	0.143	84.5	4.1	
BCKS1	0.400		0.096	0.059	0.023	0.014	0	0	0	0	0.140	85.0	206.9	
BCPHB	20.000		0	0	0	0	0	0	0	0	0.037	94.6	1.1	
BCPHB1	0.400		0.035	0.012	0	0	0	0	0	0	0.037	95.0	54.6	
BCPL	20.000		0	0	0	0	0	0	0	0	0.121	94.6	3.5	
BCPL1	0.400		0.078	0.026	0	0	0	0	0	0	0.082	95.0	121.3	
BCPN	20.000		0	0	0	0	0	0	0	0	1.495	93.0	43.5	
BCPN1	0.400		0.087	0.029	0	0	0	0	0	0	0.092	95.0	134.9	
BCPN4	0.400		0.071	0.023	0	0	0	0	0	0	0.075	95.0	110.0	
BCPN5	20.000		0	0	0	0	0	0	0	0	1.552	94.2	45.2	
BDLH	20.000		0	0	0	-0.589	0	0	0	0	0.593	12.1	17.3	
BDLH1	0.400		0.071	0.023	0	0	0	0	0	0	0.075	95.0	111.0	
BDLR	20.000		0	0	0	0	0	0	0	0	0.214	94.6	6.3	
BDLR1	0.400		0.088	0.029	0	0	0	0	0	0	0.093	95.0	137.1	
BGI	20.000		0	0	0	0	0	0	0	0	2.059	99.6	59.4	
BGI1	150.000		0	0	0	0	0	0	0	0	2.059	99.6	7.9	
BGSBR	20.000		0	0	0	0	0	0	0	0	0.013	84.9	0.4	
BGSBR1	0.400		0.009	0.005	0.002	0.001	0	0	0	0	0.013	85.0	18.8	
BJCPN	20.000		0	0	0	0	0	0	0	0	1.694	97.2	49.2	
BJCPN1	0.400		0.038	0.012	0	0	0	0	0	0	0.040	95.0	58.7	
BJGR	20.000		0	0	0	0	0	0	0	0	0.200	94.7	5.8	
BJGR1	0.400		0.082	0.027	0	0	0	0	0	0	0.086	95.0	126.7	
BKDL	20.000		0	0	0	0	0	0	0	0	0.041	94.7	1.2	
BKDL1	0.400		0	0	0.039	0.013	0	0	0	0	0.041	95.0	59.7	
BLPN	20.000		0	0	0	0	0	0	0	0	0.462	90.6	13.5	
BLPN1	0.400		0.049	0.016	0	0	0	0	0	0	0.052	95.0	76.8	
BLPS	20.000		0	0	0	0	0	0	0	0	0.166	84.4	4.8	
BLPS1	0.400		0.112	0.069	0.026	0.016	0	0	0	0	0.162	85.0	241.5	
BPBSP	20.000		0	0	0	0	0	0	0	0	1.820	98.6	52.7	
BPBSP1	0.400		0	0	0.022	0.007	0	0	0	0	0.023	95.0	33.3	

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Bus			Directly Connected Load								Total Bus Load			
			Constant kVA		Constant Z		Constant I		Generic		MVA	% PF	Amp	Percent Loading
			MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar				
ID	kV	Rated Amp												
BPCT	20.000		0	0	0	0	0	0	0	0	0.016	84.9	0.5	
BPCT1	0.400		0	0	0.013	0.008	0	0	0	0	0.015	85.0	22.7	
BPCTB	20.000		0	0	0	0	0	0	0	0	0.089	82.9	2.6	
BPCTB1	0.400		0.060	0.037	0.014	0.009	0	0	0	0	0.087	85.0	129.8	
BPJR	20.000		0	0	0	0	0	0	0	0	0.066	84.4	1.9	
BPJR1	0.400		0.045	0.028	0.010	0.006	0	0	0	0	0.065	85.0	96.8	
BPRL	20.000		0	0	0	0	0	0	0	0	2.023	99.3	58.5	
BPRL1	0.400		0	0	0.072	0.024	0	0	0	0	0.076	95.0	111.5	
BPSLG	20.000		0	0	0	0	0	0	0	0	2.057	99.5	59.5	
BPSLG1	0.400		0	0	0.035	0.012	0	0	0	0	0.037	95.0	54.6	
BRAK	20.000		0	0	0	0	0	0	0	0	0.065	94.7	1.9	
BRAK1	0.400		0.061	0.020	0	0	0	0	0	0	0.064	95.0	94.8	
BSBGG	20.000		0	0	0	0	0	0	0	0	1.310	86.6	38.2	
BSBGG1	0.400		0.025	0.008	0	0	0	0	0	0	0.026	95.0	37.9	
BSDH	20.000		0	0	0	0	0	0	0	0	0.146	84.4	4.3	
BSDH1	0.400		0.090	0.056	0.021	0.013	0	0	0	0	0.130	85.0	195.1	
BSEFM	20.000		0	0	0	0	0	0	0	0	1.369	88.2	39.9	
BSEFM1	0.400		0.071	0.023	0	0	0	0	0	0	0.075	95.0	110.4	
BSLEH	20.000		0	0	0	0	0	0	0	0	0.231	84.3	6.7	
BSLEH1	0.400		0.062	0.038	0.014	0.009	0	0	0	0	0.089	85.0	135.2	
BSPM	20.000		0	0	0	0	0	0	0	0	1.913	98.9	55.4	
BSPM1	0.400		0	0	0.063	0.021	0	0	0	0	0.066	95.0	96.7	
BSPM4	0.400		0	0	0.034	0.011	0	0	0	0	0.035	95.0	51.5	
BSPM5	20.000		0	0	0	0	0	0	0	0	1.852	98.8	53.7	
BSRAP	20.000		0	0	0	0	0	0	0	0	0.138	84.4	4.0	
BSRAP1	0.400		0.033	0.020	0.008	0.005	0	0	0	0	0.048	85.0	70.9	
BST	20.000		0	0	0	-0.587	0	0	0	0	0.805	68.4	23.5	
BST1	0.400		0.043	0.014	0	0	0	0	0	0	0.046	95.0	66.9	
BTMBS	20.000		0	0	0	0	0	0	0	0	0.104	84.5	3.0	
BTMBS1	0.400		0.070	0.043	0.016	0.010	0	0	0	0	0.102	85.0	151.5	
Bus14	20.000		0	0	0	0	0	0	0	0	1.951	99.2	56.5	
Bus21	20.000		0	0	0	0	0	0	0	0	1.810	97.8	52.5	
Bus33	20.000		0	0	0	0	0	0	0	0	1.679	95.6	48.8	
Bus36	20.000		0	0	0	0	0	0	0	0	1.434	90.7	41.8	
Bus37	20.000		0	0	0	0	0	0	0	0	1.370	89.3	39.9	
Bus54	20.000		0	0	0	0	0	0	0	0	1.232	82.9	35.9	
Bus57	20.000		0	0	0	0	0	0	0	0	1.001	94.7	29.2	
Bus60	20.000		0	0	0	0	0	0	0	0	0.565	89.6	16.5	

Bus			Directly Connected Load								Total Bus Load			
			Constant kVA		Constant Z		Constant I		Generic		MVA	% PF	Amp	Percent Loading
			MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar				
ID	kV	Rated Amp												
Bus63	20.000		0	0	0	0	0	0	0	0	0.442	89.9	12.9	
Bus90	20.000		0	0	0	0	0	0	0	0	0.409	90.0	12.0	
Bus91	20.000		0	0	0	0	0	0	0	0	0.344	91.0	10.1	
Bus96	20.000		0	0	0	0	0	0	0	0	0.107	94.7	3.1	
Bus97	20.000		0	0	0	0	0	0	0	0	0.113	94.7	3.3	
Bus112	20.000		0	0	0	0	0	0	0	0	0.065	94.7	1.9	
BYHPB	20.000		0	0	0	0	0	0	0	0	0.089	84.2	2.6	
BYHPB1	0.400		0.060	0.037	0.014	0.008	0	0	0	0	0.086	85.0	130.6	

* 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-ADS	Transformer				0.100	0.042	42.1	0.042	41.9
T-ADSB	Transformer				0.100	0.006	6.1	0.006	6.1
T-BGG	Transformer				0.100	0.091	90.9	0.090	90.0
T-BPSP	Transformer				0.100	0.023	23.0	0.023	22.8
T-CKS	Transformer				0.250	0.143	57.0	0.140	55.8
T-CPHB	Transformer				0.100	0.037	37.4	0.037	37.0
T-CPL	Transformer				0.100	0.083	83.1	0.082	82.2
T-CPN	Transformer				0.100	0.093	92.7	0.092	91.8
T-CPN2	Transformer				0.100	0.076	75.6	0.075	75.0
T-DLH	Transformer				0.100	0.076	76.2	0.075	75.0
T-DLR	Transformer				0.100	0.094	93.9	0.093	93.0
T-GSBR	Transformer				100.000	0.013	0.0	0.013	0.0
T-JCPN	Transformer				0.100	0.040	40.4	0.040	40.0
T-JGR	Transformer				0.100	0.087	86.6	0.086	85.8
T-KDL	Transformer				0.100	0.041	41.2	0.041	40.7
T-LPN	Transformer				0.100	0.053	52.6	0.052	51.8
T-LPS	Transformer				0.250	0.166	66.4	0.162	64.8
T-PCT	Transformer				160.000	0.016	0.0	0.015	0.0
T-PCTB	Transformer				250.000	0.089	0.0	0.087	0.0
T-PJR	Transformer				0.100	0.066	66.2	0.065	64.5
T-PRL	Transformer				0.100	0.077	77.1	0.076	75.9
T-PSLG	Transformer				0.100	0.038	37.8	0.037	37.3
T-RAK	Transformer				0.100	0.065	64.8	0.064	64.2
T-SBGG	Transformer				0.100	0.026	26.0	0.026	25.8
T-SDH	Transformer				0.200	0.133	66.7	0.130	65.0
T-SEFM	Transformer				0.100	0.076	75.8	0.075	75.0
T-SLEH	Transformer				0.100	0.093	92.6	0.089	89.4
T-SPM	Transformer				0.100	0.067	66.7	0.066	66.2
T-SPM2	Transformer				0.100	0.036	35.6	0.035	35.4
T-SRAP	Transformer				0.200	0.049	24.3	0.048	24.1
T-ST	Transformer				0.100	0.046	45.8	0.046	45.6
T-TMBS	Transformer				200.000	0.104	0.1	0.102	0.1
T-YHPB	Transformer				100.000	0.089	0.1	0.086	0.1

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CKT / Branch		Cable & Reactor			Transformer				
ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (MVA)	Loading (input)		Loading (output)	
						MVA	%	MVA	%
T1	Transformer				60.000	2.059	3.4	2.059	3.4

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

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Branch Losses Summary Report

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	
BADSB-BADS2	-0.040	-0.013	0.040	0.013	0.0	0.0	98.6	98.6	0.00
T-ADS	0.040	0.013	-0.040	-0.013	0.1	0.3	98.6	98.2	0.44
BJGR-BADSB2	-0.006	-0.002	0.006	0.002	0.0	0.0	98.6	98.6	0.00
T-ADSB	0.006	0.002	-0.006	-0.002	0.0	0.0	98.6	98.5	0.10
BBGG-BLDH	1.023	-0.686	-1.021	0.689	1.9	2.9	99.0	99.0	0.00
BSBG-BBGG	-1.109	0.656	1.110	-0.655	1.2	1.8	99.0	99.0	0.01
T-BGG	0.086	0.029	-0.086	-0.028	0.5	1.2	99.0	98.1	0.95
BPBSP-BCKS	-0.120	-0.076	0.120	0.076	0.0	0.1	99.4	99.5	0.04
T-CKS	0.120	0.076	-0.119	-0.073	1.8	2.7	99.4	97.3	2.09
BCPL-BCPHB	-0.035	-0.012	0.035	0.012	0.0	0.0	98.9	98.9	0.01
T-CPHB	0.035	0.012	-0.035	-0.012	0.2	0.5	98.9	97.9	0.98
BDLR-BCPL	-0.114	-0.039	0.114	0.039	0.0	0.0	98.9	98.9	0.01
T-CPL	0.079	0.027	-0.078	-0.026	0.5	1.3	98.9	97.8	1.09
BCPN-BSEFM1	1.303	-0.549	-1.301	0.553	2.5	3.9	99.2	99.1	0.06
BCPN5-BCPN	-1.391	0.519	1.391	-0.519	0.2	0.4	99.2	99.2	0.01
T-CPN	0.088	0.030	-0.087	-0.029	0.5	1.3	99.2	98.2	0.97
T-CPN2	-0.071	-0.023	0.072	0.024	0.3	0.9	98.4	99.2	0.79
BJCPN-BCPN2	-1.463	0.495	1.465	-0.491	2.6	3.9	99.2	99.3	0.08
Cable28	-0.072	0.564	0.072	-0.564	0.2	0.4	99.1	99.0	0.06
T-DLH	0.072	0.025	-0.071	-0.023	0.8	1.2	99.1	97.6	1.52
BDLH-BDLR3	-0.203	-0.069	0.203	0.069	0.0	0.0	98.9	98.9	0.00
T-DLR	0.089	0.030	-0.088	-0.029	0.5	1.3	98.9	97.9	0.99
BGI-BPSLG	2.050	-0.192	-2.046	0.198	3.8	5.7	100.0	99.9	0.16
T1	-2.050	0.192	2.050	-0.183	0.2	8.8	100.0	100.0	0.03
BSDH-BGSBR	-0.011	-0.007	0.011	0.007	0.0	0.0	98.6	98.6	0.00
T-GSBR	0.011	0.007	-0.011	-0.007	0.0	0.1	98.6	98.2	0.48
BJCPN-BCPN1	1.609	-0.396	-1.605	0.402	3.5	5.3	99.4	99.3	0.12
BPBSP-BJCPN2	-1.647	0.383	1.650	-0.379	2.6	3.9	99.4	99.5	0.10
T-JCPN	0.038	0.013	-0.038	-0.012	0.2	0.6	99.4	98.3	1.06
BJGR-BADSB1	0.107	0.036	-0.107	-0.036	0.0	0.0	98.6	98.6	0.01
BSDH-BJGR	-0.189	-0.064	0.189	0.064	0.1	0.1	98.6	98.7	0.04
T-JGR	0.082	0.028	-0.082	-0.027	0.5	1.1	98.6	97.7	0.91
Cable6	-0.039	-0.013	0.039	0.013	0.0	0.0	99.7	99.7	0.01
T-KDL	0.039	0.013	-0.039	-0.013	0.4	0.6	99.7	98.4	1.31
BLPN-BPJR1	0.369	0.179	-0.369	-0.178	0.2	0.2	98.8	98.7	0.06

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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	
BST-BLPN	-0.418	-0.196	0.419	0.196	0.2	0.4	98.8	98.9	0.08
T-LPN	0.050	0.017	-0.049	-0.016	0.4	1.1	98.8	97.4	1.39
BJCPN-BLPS	-0.140	-0.089	0.140	0.089	0.0	0.0	99.2	99.3	0.03
T-LPS	0.140	0.089	-0.138	-0.085	2.5	3.7	99.2	96.8	2.44
BPBSP-BJCPN1	1.773	-0.299	-1.770	0.303	2.9	4.4	99.6	99.5	0.12
BSPM5-BPBSP	-1.795	0.291	1.795	-0.291	0.5	0.8	99.6	99.6	0.02
T-BPSP	0.022	0.007	-0.022	-0.007	0.1	0.2	99.6	98.9	0.73
BPCT-BSEFM	-0.013	-0.008	0.013	0.008	0.0	0.0	99.1	99.1	0.00
T-PCT	0.013	0.008	-0.013	-0.008	0.0	0.1	99.1	98.7	0.36
BCPN-BPCTB	-0.074	-0.050	0.074	0.050	0.0	0.0	99.1	99.1	0.02
T-PCTB	0.074	0.050	-0.074	-0.046	0.1	4.0	99.1	96.6	2.52
BLPN-BPJ2	-0.056	-0.035	0.056	0.036	0.0	0.0	98.7	98.7	0.01
T-PJ2	0.056	0.035	-0.055	-0.034	1.0	1.5	98.7	96.3	2.45
BPRL-BKDL	1.936	-0.238	-1.934	0.240	1.4	2.1	99.8	99.7	0.06
BPSLG-BPRL	-2.009	0.213	2.011	-0.210	2.2	3.3	99.8	99.9	0.09
T-PRL	0.073	0.025	-0.072	-0.024	0.8	1.2	99.8	98.3	1.53
T-PSLG	0.036	0.012	-0.035	-0.012	0.3	0.5	99.9	98.7	1.20
BADS-BRAK2	-0.061	-0.021	0.061	0.021	0.0	0.0	98.6	98.6	0.01
T-RAK	0.061	0.021	-0.061	-0.020	0.3	0.8	98.6	97.7	0.85
BSEFM-BSBG	-1.135	0.646	1.136	-0.644	1.5	2.4	99.0	99.0	0.01
T-SBG	0.025	0.008	-0.025	-0.008	0.1	0.3	99.0	98.3	0.68
BPJ2-BSDH2	-0.123	-0.078	0.123	0.078	0.0	0.0	98.6	98.7	0.03
T-SDH	0.113	0.072	-0.111	-0.068	2.0	3.0	98.6	96.2	2.47
BCPN-BSEFM3	-1.208	0.619	1.211	-0.615	2.7	4.1	99.0	99.1	0.04
T-SEFM	0.072	0.025	-0.071	-0.023	0.4	1.1	99.0	98.0	1.00
BDLH-BSLEH	-0.194	-0.124	0.194	0.124	0.0	0.0	98.9	98.9	0.02
BSLEH-BSRAP	0.116	0.074	-0.116	-0.074	0.0	0.0	98.9	98.8	0.02
T-SLEH	0.078	0.050	-0.076	-0.047	1.9	2.9	98.9	95.4	3.42
BKDL-BSPM	-1.893	0.258	1.895	-0.254	2.6	4.0	99.6	99.7	0.11
BSPM-BSPM5	1.829	-0.279	-1.829	0.279	0.3	0.4	99.6	99.6	0.01
T-SPM	0.063	0.021	-0.063	-0.021	0.4	0.6	99.6	98.8	0.85
T-SPM2	-0.034	-0.011	0.034	0.011	0.1	0.2	99.2	99.6	0.45
BSRAP-BYHPB	0.075	0.048	-0.075	-0.048	0.0	0.0	98.8	98.8	0.01
T-SRAP	0.041	0.026	-0.041	-0.025	0.3	0.4	98.8	97.9	0.89
BDLH-BST	-0.550	0.321	0.550	-0.320	0.4	0.6	98.9	98.9	0.01
BST-BTMBS1	0.507	0.252	-0.506	-0.252	0.2	0.4	98.9	98.9	0.06
T-ST	0.043	0.015	-0.043	-0.014	0.1	0.3	98.9	98.4	0.48

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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	
BST-BTMBS2	-0.088	-0.055	0.088	0.055	0.0	0.0	98.8	98.9	0.02
T-TMBS	0.088	0.055	-0.086	-0.054	1.2	1.8	98.8	96.9	1.91
BCPN-BSEFM2	1.227	-0.603	-1.224	0.607	2.7	4.1	99.1	99.1	0.04
BDLH-BDLR1	0.949	-0.125	-0.948	0.126	1.0	1.5	99.0	98.9	0.08
BDLH-BDLR2	0.397	0.194	-0.397	-0.194	0.1	0.2	98.9	98.9	0.05
BPJR-BSDH1	0.313	0.143	-0.313	-0.143	0.2	0.2	98.7	98.7	0.07
BADS-BRAK1	0.061	0.021	-0.061	-0.021	0.0	0.0	98.6	98.6	0.01
BADSB-BADS1	-0.101	-0.034	0.101	0.034	0.0	0.0	98.6	98.6	0.01
T-YHPB	0.075	0.048	-0.073	-0.046	1.8	2.7	98.8	95.5	3.31
					58.6	106.2			

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Alert Summary Report

<u>Loading</u>	<u>% Alert Settings</u>	
	<u>Critical</u>	<u>Marginal</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	90.0	98.0
<u>Generator Excitation</u>		
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
BCKS1	Bus	Under Voltage	0.40	kV	0.39	97.3	3-Phase
BCPHB1	Bus	Under Voltage	0.40	kV	0.39	97.9	3-Phase
BCPL1	Bus	Under Voltage	0.40	kV	0.39	97.8	3-Phase
BDLH1	Bus	Under Voltage	0.40	kV	0.39	97.6	3-Phase
BDLR1	Bus	Under Voltage	0.40	kV	0.39	97.9	3-Phase
BJGR1	Bus	Under Voltage	0.40	kV	0.39	97.7	3-Phase
BLPN1	Bus	Under Voltage	0.40	kV	0.39	97.4	3-Phase
BLPS1	Bus	Under Voltage	0.40	kV	0.39	96.8	3-Phase
BPCTB1	Bus	Under Voltage	0.40	kV	0.39	96.6	3-Phase
BPJR1	Bus	Under Voltage	0.40	kV	0.39	96.3	3-Phase
BRAK1	Bus	Under Voltage	0.40	kV	0.39	97.7	3-Phase
BSDH1	Bus	Under Voltage	0.40	kV	0.38	96.2	3-Phase
BSLEH1	Bus	Under Voltage	0.40	kV	0.38	95.4	3-Phase
BSRAP1	Bus	Under Voltage	0.40	kV	0.39	97.9	3-Phase
BTMBS1	Bus	Under Voltage	0.40	kV	0.39	96.9	3-Phase

Project:

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Marginal Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
BYHPB1	Bus	Under Voltage	0.40	kV	0.38	95.5	3-Phase

Project:
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SUMMARY OF TOTAL GENERATION, LOADING & DEMAND

	MW	Mvar	MVA	% PF
Source (Swing Buses):	2.050	-0.183	2.059	99.60 Leading
Source (Non-Swing Buses):	0.000	0.000	0.000	
Total Demand:	2.050	-0.183	2.059	99.60 Leading
Total Motor Load:	1.566	0.700	1.715	91.30 Lagging
Total Static Load:	0.426	-0.989	1.077	39.52 Leading
Total Constant I Load:	0.000	0.000	0.000	
Total Generic Load:	0.000	0.000	0.000	
Apparent Losses:	0.059	0.106		
System Mismatch:	0.000	0.000		

Number of Iterations: 3