Bus Loading Summary Report

Bus			Directly Connected Load								Total Bus Load			
			Constant kVA		Constant Z		Constant I		Generic					Percent
ID	kV	Rated Amp	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar	MVA	% PF	Amp	Loading
Bus1	34.500										0.570	78.8	9.5	
Bus2	0.480										0.546	80.9	685.6	
Bus3	0.480										0.544	81.0	685.6	
Bus5	0.480										0.544	81.0	685.6	
Bus6	0.480		0.236	0.214							0.544	81.0	685.6	
Bus7	0.460		0.109	0.048							0.119	91.5	144.7	
Bus8	0.460		0.109	0.048							0.119	91.5	145.0	
Bus9	0.460		0.109	0.048							0.119	91.5	152.3	
Bus10	0.460		0.010	0.006							0.011	86.5	14.1	
Bus11	0.460		0.010	0.006							0.011	86.5	14.2	
Bus13	0.460		0.010	0.006							0.011	86.5	14.2	
Bus14	0.480		0.002	0.002							0.003	81.0	3.3	
Bus15	0.240		0.002	0.002							0.003	81.5	7.6	
Bus16	0.460										0.120	91.6	144.7	
Bus17	0.460										0.121	91.6	145.0	
Bus19	0.460		0.048	0.029	0.012	0.007					0.070	85.0	88.1	

* 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				
						Loading (input)		Loading (output)	
ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (MVA)	MVA	%	MVA	%
Cable1	Cable	1003.37	685.58	68.33					
Cable3	Cable	1003.37	685.58	68.33					
* Cable10	Cable	76.20	88.15	115.68					
T1	Transformer				0.750	0.570	76.0	0.546	72.7
T2	Transformer				0.005	0.003	60.1	0.003	59.2

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

Branch Losses Summary Report

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	
T1	0.449	0.351	-0.441	-0.321	7.7	30.4	100.0	95.7	4.29
Cable1	0.441	0.321	-0.441	-0.319	0.9	1.2	95.7	95.5	0.24
Cable3	0.441	0.319	-0.440	-0.319	0.1	0.1	95.5	95.4	0.02
Cable6	0.111	0.048	-0.109	-0.048	1.7	0.3	95.4	98.2	1.33
Cable7	0.010	0.006	-0.010	-0.006	0.1	0.0	95.4	99.0	0.55
Cable8	0.010	0.006	-0.010	-0.006	0.1	0.0	95.4	98.9	0.64
Cable9	0.010	0.006	-0.010	-0.006	0.1	0.0	95.4	98.8	0.73
Cable10	0.059	0.037	-0.059	-0.037	0.1	0.0	95.4	99.5	0.14
Cable11	0.002	0.002	-0.002	-0.002	0.0	0.0	95.4	95.4	0.03
T2	0.002	0.002	-0.002	-0.002	0.0	0.0	95.4	94.0	1.44
Cable4	-0.109	-0.048	0.110	0.048	1.2	0.2	103.4	104.3	0.99
Cable5	-0.109	-0.048	0.110	0.048	1.3	0.3	103.2	104.3	1.16
					13.2	32.6			

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	

Critical Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Bus15	Bus	Under Voltage	0.240	kV	0.226	94.0	3-Phase
Cable10	Cable	Overload	76.202	Amp	88.15	115.7	3-Phase
VFD1	VFD	Overload	180.422	Amp	189.37	105.0	3-Phase
VFD2	VFD	Overload	180.422	Amp	189.71	105.1	3-Phase

Marginal Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Bus14	Bus	Under Voltage	0.480	kV	0.458	95.4	3-Phase
Bus2	Bus	Under Voltage	0.480	kV	0.46	95.7	3-Phase
Bus3	Bus	Under Voltage	0.480	kV	0.46	95.5	3-Phase
Bus5	Bus	Under Voltage	0.480	kV	0.46	95.5	3-Phase
Bus6	Bus	Under Voltage	0.480	kV	0.46	95.4	3-Phase

SUMMARY OF TOTAL GENERATION, LOADING & DEMAND

	MW	Mvar	MVA	% PF
Source (Swing Buses):	0.449	0.351	0.570	78.79 Lagging
Source (Non-Swing Buses):	0.000	0.000	0.000	
Total Demand:	0.449	0.351	0.570	78.79 Lagging
Total Motor Load:	0.424	0.203	0.470	90.18 Lagging
Total Static Load:	0.012	0.007	0.014	85.00 Lagging
Total Constant I Load:	0.000	0.000	0.000	
Total Generic Load:	0.000	0.000	0.000	
Apparent Losses:	0.013	0.140		
System Mismatch:	0.000	0.000		

Number of Iterations: 3