

Project:
Location:
Contract:
Engineer:
Filename: ali

ETAP
12.6.0H

Study Case: LF

Page: 1
Date: 03-26-2017
SN:
Revision: Base
Config.: Normal

LOAD FLOW REPORT

Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus1	161.000	99.706	-0.2	0	0	0	0	Bus2	235.834	85.494	902.2	94.0	
								Bus2	235.834	85.494	902.2	94.0	
								Bus3	-172.138	-64.483	661.1	93.6	
								Bus3	-344.277	-128.859	1322.1	93.7	
								Bus5	44.747	22.355	179.9	89.5	
Bus2	161.000	99.603	-0.3	0	0	0	0	Bus1	-235.673	-85.181	902.2	94.0	
								Bus1	-235.673	-85.181	902.2	94.0	
								Bus18	212.167	83.280	820.6	93.1	
								Bus18	212.167	83.280	820.6	93.1	
								Bus4	47.012	3.802	169.8	99.7	
* Bus3	161.000	100.000	0.0	517.225	195.600	0	0	Bus1	172.408	65.164	660.9	93.5	
								Bus1	344.817	130.436	1322.0	93.5	
Bus4	33.000	98.631	-1.4	0	0	0	0	Bus8	22.835	6.003	418.8	96.7	
								Bus2	-46.619	-2.832	828.5	99.8	
								Bus5	11.892	-1.586	212.8	-99.1	
								Bus6	11.892	-1.586	212.8	-99.1	
Bus5	33.000	98.631	-1.4	0	0	0	0	Bus8	22.835	6.003	418.8	96.7	
								Bus1	-44.719	-21.181	877.7	90.4	
								Bus4	-11.892	1.586	212.8	-99.1	
								Bus7	33.777	13.592	645.8	92.8	
Bus6	33.000	98.631	-1.4	0	0	0	0	Bus8	22.835	6.003	418.8	96.7	
								Bus4	-11.892	1.586	212.8	-99.1	
								Bus7	-10.942	-7.589	236.2	82.2	
Bus7	33.000	98.631	-1.4	0	0	0	0	Bus8	22.835	6.003	418.8	96.7	
								Bus5	-33.777	-13.592	645.8	92.8	
								Bus6	10.942	7.589	236.2	82.2	
Bus8	33.000	98.038	-1.9	0	0	0.000	-16.820	Bus4	-22.744	-5.791	418.8	96.9	
								Bus5	-22.744	-5.791	418.8	96.9	
								Bus7	-22.744	-5.791	418.8	96.9	
								Bus6	-22.744	-5.791	418.8	96.9	
								Bus44	11.551	4.867	223.7	92.2	
								Bus52	11.914	5.022	230.7	92.1	
								Bus53	11.914	5.022	230.7	92.1	
								Bus54	11.914	5.022	230.7	92.1	
								Bus55	10.921	5.013	214.4	90.9	
								Bus56	10.921	5.013	214.4	90.9	

Project:
Location:
Contract:
Engineer:
Filename: ali

ETAP
12.6.0H

Study Case: LF

Page: 2
Date: 03-26-2017
SN:
Revision: Base
Config.: Normal

Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus16	33.000	97.098	-2.4	0	0	0	0	Bus99	10.921	5.013	214.4	90.9	
								Bus100	10.921	5.013	214.4	90.9	
								Bus22	61.658	21.878	1178.8	94.2	
								Bus21	-30.829	-10.939	589.4	94.2	
Bus17	161.000	97.608	-1.6	0	0	0	0	Bus19	-30.829	-10.939	589.4	94.2	
								Bus18	-143.877	-50.534	560.2	94.3	
								Bus18	-143.877	-50.534	560.2	94.3	
								Bus32	92.011	31.473	357.3	94.6	
Bus18	161.000	97.671	-1.6	0	0	0	0	Bus32	95.028	31.462	367.8	94.9	
								Bus20	100.716	38.134	395.7	93.5	
								Bus17	143.939	50.655	560.2	94.3	
								Bus17	143.939	50.655	560.2	94.3	
Bus19	33.000	97.098	-2.4	0	0	0	0	Bus2	-209.895	-77.547	821.6	93.8	
								Bus2	-209.895	-77.547	821.6	93.8	
								Bus19	131.912	53.785	523.0	92.6	
								Bus22	56.961	22.131	1101.1	93.2	
Bus20	33.000	97.098	-2.4	0	0	0	0	Bus18	-131.862	-51.658	2551.8	93.1	
								Bus16	30.829	10.939	589.4	94.2	
								Bus20	44.072	18.588	861.8	92.1	
								Bus22	56.961	22.131	1101.1	93.2	
Bus21	33.000	97.098	-2.4	0	0	0	0	Bus17	-100.679	-36.613	1930.3	94.0	
								Bus19	-44.072	-18.588	861.8	92.1	
								Bus21	87.790	33.070	1690.3	93.6	
								Bus22	56.961	22.131	1101.1	93.2	
Bus22	33.000	95.324	-3.5	0	0	0.000	-15.902	Bus16	30.829	10.939	589.4	94.2	
								Bus20	-87.790	-33.070	1690.3	93.6	
								Bus16	-60.940	-20.295	1178.9	94.9	
								Bus19	-56.335	-20.634	1101.1	93.9	
								Bus20	-56.335	-20.634	1101.1	93.9	
								Bus21	-56.335	-20.634	1101.1	93.9	
								Bus63	29.507	12.702	589.6	91.9	
								Bus64	29.507	12.702	589.6	91.9	
								Bus65	29.494	12.798	590.1	91.7	
								Bus66	29.507	12.702	589.6	91.9	
								Bus67	27.356	11.748	546.4	91.9	
								Bus68	33.452	12.817	657.5	93.4	
								Bus101	10.806	4.963	218.3	90.9	
								Bus102	10.806	4.963	218.3	90.9	
								Bus104	29.507	12.702	589.6	91.9	

Project:
Location:
Contract:
Engineer:
Filename: ali

ETAP
12.6.0H

Study Case: LF

Page: 3
Date: 03-26-2017
SN:
Revision: Base
Config.: Normal

Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus30	33.000	95.682	-3.2	0	0	0	0	Bus36	40.047	13.402	772.2	94.8	
								Bus35	-20.024	-6.701	386.1	94.8	
								Bus33	-20.024	-6.701	386.1	94.8	
Bus31	161.000	96.420	-2.5	0	0	0	0	Bus32	-41.112	-19.737	169.6	90.1	
								Bus32	-41.112	-19.737	169.6	90.1	
								Bus39	13.548	2.599	51.3	98.2	
								Bus39	13.548	2.599	51.3	98.2	
								Bus34	55.128	34.277	241.4	84.9	
Bus32	161.000	96.441	-2.5	0	0	0	0	Bus31	41.118	19.748	169.6	90.1	
								Bus31	41.118	19.748	169.6	90.1	
								Bus17	-91.394	-30.670	358.5	94.8	
								Bus17	-94.374	-30.612	368.9	95.1	
								Bus33	103.533	21.785	393.4	97.9	
Bus33	33.000	95.682	-3.2	0	0	0	0	Bus36	37.927	13.555	736.5	94.2	
								Bus32	-102.969	-20.391	1919.3	98.1	
								Bus30	20.024	6.701	386.1	94.8	
								Bus34	45.017	0.135	823.1	100.0	
Bus34	33.000	95.682	-3.2	0	0	0	0	Bus36	40.047	13.402	772.2	94.8	
								Bus31	-55.101	-33.371	1177.9	85.5	
								Bus33	-45.017	-0.135	823.1	100.0	
								Bus35	60.071	20.103	1158.3	94.8	
Bus35	33.000	95.682	-3.2	0	0	0	0	Bus36	40.047	13.402	772.2	94.8	
								Bus30	20.024	6.701	386.1	94.8	
								Bus34	-60.071	-20.103	1158.3	94.8	
Bus36	33.000	94.527	-4.0	0	0	0.000	-15.637	Bus30	-39.739	-12.709	772.2	95.2	
								Bus33	-37.647	-12.888	736.5	94.6	
								Bus34	-39.739	-12.709	772.2	95.2	
								Bus35	-39.739	-12.709	772.2	95.2	
								Bus69	25.489	11.093	514.5	91.7	
								Bus70	25.489	11.093	514.5	91.7	
								Bus71	26.472	11.116	531.4	92.2	
								Bus72	26.472	11.116	531.4	92.2	
								Bus73	26.472	11.116	531.4	92.2	
								Bus74	26.472	11.116	531.4	92.2	
Bus37	33.000	97.144	-3.2	0	0	0	0	Bus43	6.677	1.433	123.0	97.8	
								Bus42	-3.339	-0.717	61.5	97.8	
								Bus40	-3.339	-0.717	61.5	97.8	
Bus38	161.000	96.288	-2.7	0	0	0	0	Bus39	-6.900	-9.461	43.6	58.9	
								Bus39	-6.900	-9.461	43.6	58.9	

Project:
Location:
Contract:
Engineer:
Filename: ali

ETAP
12.6.0H

Study Case: LF

Page: 4
Date: 03-26-2017
SN:
Revision: Base
Config.: Normal

Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus39	161.000	96.295	-2.7	0	0	0	0	Bus41	13.800	18.921	87.2	58.9	
								Bus38	6.901	9.461	43.6	58.9	
								Bus38	6.901	9.461	43.6	58.9	
								Bus31	-13.537	-3.427	52.0	96.9	
								Bus31	-13.537	-3.427	52.0	96.9	
Bus40	33.000	97.144	-3.2	0	0	0	0	Bus40	13.273	-12.068	66.8	-74.0	
								Bus43	6.677	1.433	123.0	97.8	
								Bus39	-13.265	12.311	325.9	-73.3	
								Bus37	3.339	0.717	61.5	97.8	
								Bus41	3.248	-14.461	266.9	-21.9	
Bus41	33.000	97.144	-3.2	0	0	0	0	Bus43	6.677	1.433	123.0	97.8	
								Bus38	-13.445	-18.044	405.3	59.7	5.000
								Bus40	-3.248	14.461	266.9	-21.9	
								Bus42	10.016	2.150	184.5	97.8	
								Bus43	6.677	1.433	123.0	97.8	
Bus42	33.000	97.144	-3.2	0	0	0	0	Bus37	3.339	0.717	61.5	97.8	
								Bus41	-10.016	-2.150	184.5	97.8	
								Bus37	-6.670	-1.420	123.0	97.8	
								Bus40	-6.670	-1.420	123.0	97.8	
								Bus41	-6.670	-1.420	123.0	97.8	
Bus43	33.000	96.980	-3.4	0	0	0.000	-3.292	Bus42	-6.670	-1.420	123.0	97.8	
								Bus81	8.893	2.990	169.3	94.8	
								Bus82	8.893	2.990	169.3	94.8	
								Bus83	8.893	2.990	169.3	94.8	
								Bus8	-11.526	-4.802	223.7	92.3	
Bus44	33.000	97.647	-2.1	0	0	11.526	4.802	Bus8	-11.526	-4.802	223.7	92.3	
Bus52	33.000	97.635	-2.1	0	0	11.888	4.953	Bus8	-11.888	-4.953	230.8	92.3	
Bus53	33.000	97.635	-2.1	0	0	11.888	4.953	Bus8	-11.888	-4.953	230.8	92.3	
Bus54	33.000	97.635	-2.1	0	0	11.888	4.953	Bus8	-11.888	-4.953	230.8	92.3	
Bus55	33.000	97.651	-2.1	0	0	10.898	4.954	Bus8	-10.898	-4.954	214.5	91.0	
Bus56	33.000	97.651	-2.1	0	0	10.898	4.954	Bus8	-10.898	-4.954	214.5	91.0	
Bus63	33.000	94.291	-4.2	0	0	29.334	12.223	Bus22	-29.334	-12.223	589.7	92.3	
Bus64	33.000	94.291	-4.2	0	0	29.334	12.223	Bus22	-29.334	-12.223	589.7	92.3	
Bus65	33.000	94.172	-4.3	0	0	29.321	12.217	Bus22	-29.321	-12.217	590.1	92.3	
Bus66	33.000	94.291	-4.2	0	0	29.334	12.223	Bus22	-29.334	-12.223	589.7	92.3	
Bus67	33.000	94.367	-4.1	0	0	27.208	11.337	Bus22	-27.208	-11.337	546.5	92.3	
Bus68	33.000	94.225	-4.3	0	0	33.237	12.220	Bus22	-33.237	-12.220	657.5	93.9	
Bus69	33.000	93.621	-4.6	0	0	25.358	10.728	Bus36	-25.358	-10.728	514.5	92.1	
Bus70	33.000	93.621	-4.6	0	0	25.358	10.728	Bus36	-25.358	-10.728	514.5	92.1	
Bus71	33.000	93.604	-4.6	0	0	26.331	10.728	Bus36	-26.331	-10.728	531.4	92.6	

Project:
Location:
Contract:
Engineer:
Filename: ali

ETAP
12.6.0H

Study Case: LF

Page: 5
Date: 03-26-2017
SN:
Revision: Base
Config.: Normal

Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bus72	33.000	93.604	-4.6	0	0	26.331	10.728	Bus36	-26.331	-10.728	531.4	92.6	
Bus73	33.000	93.604	-4.6	0	0	26.331	10.728	Bus36	-26.331	-10.728	531.4	92.6	
Bus74	33.000	93.604	-4.6	0	0	26.331	10.728	Bus36	-26.331	-10.728	531.4	92.6	
Bus81	33.000	96.818	-3.6	0	0	8.887	2.962	Bus43	-8.887	-2.962	169.3	94.9	
Bus82	33.000	96.817	-3.6	0	0	8.887	2.962	Bus43	-8.887	-2.962	169.3	94.9	
Bus83	33.000	96.817	-3.6	0	0	8.887	2.962	Bus43	-8.887	-2.962	169.3	94.9	
Bus99	33.000	97.651	-2.1	0	0	10.898	4.954	Bus8	-10.898	-4.954	214.5	91.0	
Bus100	33.000	97.651	-2.1	0	0	10.898	4.954	Bus8	-10.898	-4.954	214.5	91.0	
Bus101	33.000	94.930	-3.7	0	0	10.783	4.901	Bus22	-10.783	-4.901	218.3	91.0	
Bus102	33.000	94.930	-3.7	0	0	10.783	4.901	Bus22	-10.783	-4.901	218.3	91.0	
Bus104	33.000	94.291	-4.2	0	0	29.334	12.223	Bus22	-29.334	-12.223	589.7	92.3	

* 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