

Project:
Location:
Contract:
Engineer:
Filename: project

ETAP
12.6.0H

Study Case: LF

Page: 1
Date: 01-09-2019
SN:
Revision: Base
Config.: Normal

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	

Project:
Location:
Contract:
Engineer:
Filename: project

ETAP
12.6.0H

Study Case: LF

Page: 2
Date: 01-09-2019
SN:
Revision: Base
Config.: Normal

Marginal Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
alrfaid	Transformer	Overload	0.157	MVA	0.150	95.3	3-Phase
Bus100	Bus	Under Voltage	33.000	kV	31.836	96.5	3-Phase
Bus101	Bus	Under Voltage	33.000	kV	31.821	96.4	3-Phase
Bus102	Bus	Under Voltage	33.000	kV	31.821	96.4	3-Phase
Bus103	Bus	Under Voltage	33.000	kV	31.821	96.4	3-Phase
Bus104	Bus	Under Voltage	33.000	kV	31.817	96.4	3-Phase
Bus105	Bus	Under Voltage	33.000	kV	31.815	96.4	3-Phase
Bus106	Bus	Under Voltage	33.000	kV	31.813	96.4	3-Phase
Bus109	Bus	Under Voltage	33.000	kV	31.812	96.4	3-Phase
Bus110	Bus	Under Voltage	33.000	kV	31.811	96.4	3-Phase
Bus111	Bus	Under Voltage	33.000	kV	31.821	96.4	3-Phase
Bus112	Bus	Under Voltage	33.000	kV	31.835	96.5	3-Phase
Bus113	Bus	Under Voltage	33.000	kV	31.835	96.5	3-Phase
Bus114	Bus	Under Voltage	33.000	kV	31.734	96.2	3-Phase
Bus115	Bus	Under Voltage	33.000	kV	31.734	96.2	3-Phase
Bus116	Bus	Under Voltage	33.000	kV	31.721	96.1	3-Phase
Bus118	Bus	Under Voltage	33.000	kV	31.713	96.1	3-Phase
Bus119	Bus	Under Voltage	33.000	kV	31.712	96.1	3-Phase
Bus12	Bus	Under Voltage	33.000	kV	32.117	97.3	3-Phase
Bus120	Bus	Under Voltage	33.000	kV	31.712	96.1	3-Phase
Bus122	Bus	Under Voltage	33.000	kV	31.712	96.1	3-Phase
Bus123	Bus	Under Voltage	33.000	kV	31.714	96.1	3-Phase
Bus124	Bus	Under Voltage	33.000	kV	31.695	96.0	3-Phase
Bus125	Bus	Under Voltage	33.000	kV	31.687	96.0	3-Phase
Bus126	Bus	Under Voltage	33.000	kV	31.678	96.0	3-Phase
Bus127	Bus	Under Voltage	33.000	kV	31.675	96.0	3-Phase
Bus13	Bus	Under Voltage	33.000	kV	32.028	97.1	3-Phase
Bus135	Bus	Under Voltage	33.000	kV	31.674	96.0	3-Phase
Bus137	Bus	Under Voltage	33.000	kV	31.672	96.0	3-Phase
Bus138	Bus	Under Voltage	33.000	kV	31.667	96.0	3-Phase
Bus139	Bus	Under Voltage	33.000	kV	31.660	95.9	3-Phase
Bus14	Bus	Under Voltage	33.000	kV	31.923	96.7	3-Phase
Bus140	Bus	Under Voltage	33.000	kV	31.659	95.9	3-Phase
Bus141	Bus	Under Voltage	33.000	kV	31.659	95.9	3-Phase
Bus142	Bus	Under Voltage	33.000	kV	31.718	96.1	3-Phase
Bus143	Bus	Under Voltage	33.000	kV	31.718	96.1	3-Phase

Project:
Location:
Contract:
Engineer:
Filename: project

ETAP
12.6.0H

Study Case: LF

Page: 3
Date: 01-09-2019
SN:
Revision: Base
Config.: Normal

Marginal Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Bus144	Bus	Under Voltage	33.000	kV	31.713	96.1	3-Phase
Bus145	Bus	Under Voltage	33.000	kV	31.712	96.1	3-Phase
Bus146	Bus	Under Voltage	33.000	kV	31.707	96.1	3-Phase
Bus147	Bus	Under Voltage	33.000	kV	31.707	96.1	3-Phase
Bus148	Bus	Under Voltage	33.000	kV	31.707	96.1	3-Phase
Bus149	Bus	Under Voltage	33.000	kV	31.706	96.1	3-Phase
Bus15	Bus	Under Voltage	33.000	kV	31.866	96.6	3-Phase
Bus150	Bus	Under Voltage	33.000	kV	31.706	96.1	3-Phase
Bus151	Bus	Under Voltage	33.000	kV	31.706	96.1	3-Phase
Bus152	Bus	Under Voltage	33.000	kV	31.710	96.1	3-Phase
Bus153	Bus	Under Voltage	33.000	kV	31.710	96.1	3-Phase
Bus154	Bus	Under Voltage	33.000	kV	31.707	96.1	3-Phase
Bus155	Bus	Under Voltage	33.000	kV	31.706	96.1	3-Phase
Bus156	Bus	Under Voltage	33.000	kV	31.706	96.1	3-Phase
Bus157	Bus	Under Voltage	33.000	kV	31.706	96.1	3-Phase
Bus158	Bus	Under Voltage	33.000	kV	31.810	96.4	3-Phase
Bus159	Bus	Under Voltage	33.000	kV	31.809	96.4	3-Phase
Bus16	Bus	Under Voltage	33.000	kV	31.830	96.5	3-Phase
Bus160	Bus	Under Voltage	33.000	kV	31.801	96.4	3-Phase
Bus161	Bus	Under Voltage	33.000	kV	31.777	96.3	3-Phase
Bus162	Bus	Under Voltage	33.000	kV	31.769	96.3	3-Phase
Bus163	Bus	Under Voltage	33.000	kV	31.769	96.3	3-Phase
Bus164	Bus	Under Voltage	33.000	kV	31.714	96.1	3-Phase
Bus165	Bus	Under Voltage	33.000	kV	31.705	96.1	3-Phase
Bus167	Bus	Under Voltage	33.000	kV	31.678	96.0	3-Phase
Bus168	Bus	Under Voltage	33.000	kV	31.677	96.0	3-Phase
Bus169	Bus	Under Voltage	33.000	kV	31.659	95.9	3-Phase
Bus17	Bus	Under Voltage	33.000	kV	31.813	96.4	3-Phase
Bus170	Bus	Under Voltage	33.000	kV	31.659	95.9	3-Phase
Bus171	Bus	Under Voltage	33.000	kV	31.632	95.9	3-Phase
Bus173	Bus	Under Voltage	33.000	kV	31.624	95.8	3-Phase
Bus174	Bus	Under Voltage	33.000	kV	31.623	95.8	3-Phase
Bus175	Bus	Under Voltage	33.000	kV	31.622	95.8	3-Phase
Bus176	Bus	Under Voltage	33.000	kV	31.622	95.8	3-Phase
Bus177	Bus	Under Voltage	33.000	kV	31.621	95.8	3-Phase
Bus178	Bus	Under Voltage	33.000	kV	31.618	95.8	3-Phase

Project:
Location:
Contract:
Engineer:
Filename: project

ETAP
12.6.0H

Study Case: LF

Page: 4
Date: 01-09-2019
SN:
Revision: Base
Config.: Normal

Marginal Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Bus179	Bus	Under Voltage	33.000	kV	31.599	95.8	3-Phase
Bus18	Bus	Under Voltage	33.000	kV	31.804	96.4	3-Phase
Bus180	Bus	Under Voltage	33.000	kV	31.599	95.8	3-Phase
Bus181	Bus	Under Voltage	33.000	kV	31.560	95.6	3-Phase
Bus182	Bus	Under Voltage	33.000	kV	31.534	95.6	3-Phase
Bus183	Bus	Under Voltage	33.000	kV	31.533	95.6	3-Phase
Bus184	Bus	Under Voltage	33.000	kV	31.530	95.5	3-Phase
Bus185	Bus	Under Voltage	33.000	kV	31.523	95.5	3-Phase
Bus186	Bus	Under Voltage	33.000	kV	31.522	95.5	3-Phase
Bus187	Bus	Under Voltage	33.000	kV	31.522	95.5	3-Phase
Bus188	Bus	Under Voltage	33.000	kV	31.510	95.5	3-Phase
Bus189	Bus	Under Voltage	33.000	kV	31.504	95.5	3-Phase
Bus19	Bus	Under Voltage	33.000	kV	31.800	96.4	3-Phase
Bus190	Bus	Under Voltage	33.000	kV	31.504	95.5	3-Phase
Bus191	Bus	Under Voltage	33.000	kV	31.501	95.5	3-Phase
Bus192	Bus	Under Voltage	33.000	kV	31.498	95.4	3-Phase
Bus193	Bus	Under Voltage	33.000	kV	31.503	95.5	3-Phase
Bus194	Bus	Under Voltage	33.000	kV	31.510	95.5	3-Phase
Bus195	Bus	Under Voltage	33.000	kV	31.510	95.5	3-Phase
Bus196	Bus	Under Voltage	33.000	kV	31.507	95.5	3-Phase
Bus197	Bus	Under Voltage	33.000	kV	31.503	95.5	3-Phase
Bus198	Bus	Under Voltage	33.000	kV	31.502	95.5	3-Phase
Bus199	Bus	Under Voltage	33.000	kV	31.502	95.5	3-Phase
Bus20	Bus	Under Voltage	33.000	kV	31.799	96.4	3-Phase
Bus201	Bus	Under Voltage	33.000	kV	31.502	95.5	3-Phase
Bus202	Bus	Under Voltage	33.000	kV	31.501	95.5	3-Phase
Bus203	Bus	Under Voltage	33.000	kV	31.501	95.5	3-Phase
Bus21	Bus	Under Voltage	33.000	kV	31.798	96.4	3-Phase
Bus22	Bus	Under Voltage	33.000	kV	31.799	96.4	3-Phase
Bus229	Bus	Under Voltage	0.400	kV	0.381	95.2	3-Phase
Bus23	Bus	Under Voltage	33.000	kV	31.799	96.4	3-Phase
Bus234	Bus	Under Voltage	0.400	kV	0.381	95.4	3-Phase
Bus235	Bus	Under Voltage	0.400	kV	0.384	96.0	3-Phase
Bus237	Bus	Under Voltage	0.400	kV	0.385	96.1	3-Phase
Bus24	Bus	Under Voltage	33.000	kV	31.798	96.4	3-Phase
Bus240	Bus	Under Voltage	0.400	kV	0.385	96.2	3-Phase

Project:
Location:
Contract:
Engineer:
Filename: project

ETAP
12.6.0H

Study Case: LF

Page: 5
Date: 01-09-2019
SN:
Revision: Base
Config.: Normal

Marginal Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Bus248	Bus	Under Voltage	0.400	kV	0.384	95.9	3-Phase
Bus25	Bus	Under Voltage	33.000	kV	31.797	96.4	3-Phase
Bus250	Bus	Under Voltage	0.400	kV	0.381	95.2	3-Phase
Bus252	Bus	Under Voltage	0.400	kV	0.384	96.1	3-Phase
Bus253	Bus	Under Voltage	0.400	kV	0.384	96.1	3-Phase
Bus254	Bus	Under Voltage	0.400	kV	0.384	96.0	3-Phase
Bus255	Bus	Under Voltage	0.400	kV	0.384	96.0	3-Phase
Bus256	Bus	Under Voltage	0.400	kV	0.382	95.4	3-Phase
Bus257	Bus	Under Voltage	0.400	kV	0.385	96.3	3-Phase
Bus258	Bus	Under Voltage	0.400	kV	0.382	95.5	3-Phase
Bus259	Bus	Under Voltage	0.400	kV	0.381	95.2	3-Phase
Bus26	Bus	Under Voltage	33.000	kV	31.798	96.4	3-Phase
Bus260	Bus	Under Voltage	0.400	kV	0.384	96.1	3-Phase
Bus261	Bus	Under Voltage	0.400	kV	0.384	96.1	3-Phase
Bus262	Bus	Under Voltage	0.400	kV	0.380	95.1	3-Phase
Bus263	Bus	Under Voltage	0.400	kV	0.385	96.1	3-Phase
Bus264	Bus	Under Voltage	0.400	kV	0.384	96.1	3-Phase
Bus268	Bus	Under Voltage	0.400	kV	0.385	96.3	3-Phase
Bus269	Bus	Under Voltage	0.400	kV	0.383	95.9	3-Phase
Bus27	Bus	Under Voltage	33.000	kV	31.798	96.4	3-Phase
Bus270	Bus	Under Voltage	0.400	kV	0.381	95.3	3-Phase
Bus271	Bus	Under Voltage	0.400	kV	0.382	95.4	3-Phase
Bus272	Bus	Under Voltage	0.400	kV	0.385	96.2	3-Phase
Bus273	Bus	Under Voltage	0.400	kV	0.388	97.0	3-Phase
Bus274	Bus	Under Voltage	0.400	kV	0.387	96.7	3-Phase
Bus275	Bus	Under Voltage	0.400	kV	0.384	96.0	3-Phase
Bus276	Bus	Under Voltage	0.400	kV	0.384	96.0	3-Phase
Bus277	Bus	Under Voltage	0.400	kV	0.390	97.6	3-Phase
Bus278	Bus	Under Voltage	0.400	kV	0.386	96.6	3-Phase
Bus28	Bus	Under Voltage	33.000	kV	31.796	96.4	3-Phase
Bus280	Bus	Under Voltage	0.400	kV	0.382	95.6	3-Phase
Bus281	Bus	Under Voltage	0.400	kV	0.383	95.6	3-Phase
Bus282	Bus	Under Voltage	0.400	kV	0.381	95.2	3-Phase
Bus283	Bus	Under Voltage	0.400	kV	0.383	95.7	3-Phase
Bus284	Bus	Under Voltage	0.400	kV	0.383	95.7	3-Phase
Bus285	Bus	Under Voltage	0.400	kV	0.383	95.8	3-Phase

Project:
Location:
Contract:
Engineer:
Filename: project

ETAP
12.6.0H

Study Case: LF

Page: 6
Date: 01-09-2019
SN:
Revision: Base
Config.: Normal

Marginal Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Bus286	Bus	Under Voltage	0.400	kV	0.383	95.8	3-Phase
Bus288	Bus	Under Voltage	0.400	kV	0.386	96.6	3-Phase
Bus29	Bus	Under Voltage	33.000	kV	31.795	96.3	3-Phase
Bus291	Bus	Under Voltage	0.400	kV	0.391	97.8	3-Phase
Bus299	Bus	Under Voltage	0.400	kV	0.387	96.9	3-Phase
Bus30	Bus	Under Voltage	33.000	kV	31.792	96.3	3-Phase
Bus300	Bus	Under Voltage	0.400	kV	0.384	95.9	3-Phase
Bus301	Bus	Under Voltage	0.400	kV	0.383	95.7	3-Phase
Bus303	Bus	Under Voltage	0.400	kV	0.384	96.1	3-Phase
Bus304	Bus	Under Voltage	0.400	kV	0.385	96.2	3-Phase
Bus306	Bus	Under Voltage	0.400	kV	0.382	95.4	3-Phase
Bus307	Bus	Under Voltage	0.400	kV	0.382	95.6	3-Phase
Bus308	Bus	Under Voltage	0.400	kV	0.384	96.1	3-Phase
Bus309	Bus	Under Voltage	0.400	kV	0.384	96.0	3-Phase
Bus31	Bus	Under Voltage	33.000	kV	31.792	96.3	3-Phase
Bus310	Bus	Under Voltage	0.400	kV	0.383	95.7	3-Phase
Bus311	Bus	Under Voltage	0.400	kV	0.384	96.1	3-Phase
Bus312	Bus	Under Voltage	0.400	kV	0.384	96.0	3-Phase
Bus313	Bus	Under Voltage	0.400	kV	0.382	95.6	3-Phase
Bus314	Bus	Under Voltage	0.400	kV	0.381	95.2	3-Phase
Bus315	Bus	Under Voltage	0.400	kV	0.384	95.9	3-Phase
Bus316	Bus	Under Voltage	0.400	kV	0.386	96.4	3-Phase
Bus317	Bus	Under Voltage	0.400	kV	0.381	95.3	3-Phase
Bus319	Bus	Under Voltage	0.400	kV	0.382	95.5	3-Phase
Bus32	Bus	Under Voltage	33.000	kV	31.792	96.3	3-Phase
Bus320	Bus	Under Voltage	0.400	kV	0.381	95.4	3-Phase
Bus322	Bus	Under Voltage	0.400	kV	0.381	95.2	3-Phase
Bus324	Bus	Under Voltage	0.400	kV	0.383	95.7	3-Phase
Bus325	Bus	Under Voltage	0.400	kV	0.383	95.7	3-Phase
Bus327	Bus	Under Voltage	0.400	kV	0.382	95.6	3-Phase
Bus328	Bus	Under Voltage	0.400	kV	0.383	95.7	3-Phase
Bus329	Bus	Under Voltage	0.400	kV	0.382	95.6	3-Phase
Bus33	Bus	Under Voltage	33.000	kV	31.791	96.3	3-Phase
Bus330	Bus	Under Voltage	0.400	kV	0.383	95.7	3-Phase
Bus331	Bus	Under Voltage	0.400	kV	0.384	96.0	3-Phase
Bus333	Bus	Under Voltage	0.400	kV	0.381	95.2	3-Phase

Project:
Location:
Contract:
Engineer:
Filename: project

ETAP
12.6.0H

Study Case: LF

Page: 7
Date: 01-09-2019
SN:
Revision: Base
Config.: Normal

Marginal Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Bus334	Bus	Under Voltage	0.400	kV	0.380	95.1	3-Phase
Bus335	Bus	Under Voltage	0.400	kV	0.383	95.7	3-Phase
Bus336	Bus	Under Voltage	0.400	kV	0.380	95.1	3-Phase
Bus337	Bus	Under Voltage	0.400	kV	0.381	95.3	3-Phase
Bus338	Bus	Under Voltage	0.400	kV	0.382	95.4	3-Phase
Bus34	Bus	Under Voltage	33.000	kV	31.790	96.3	3-Phase
Bus348	Bus	Under Voltage	0.400	kV	0.381	95.1	3-Phase
Bus349	Bus	Under Voltage	0.400	kV	0.381	95.3	3-Phase
Bus35	Bus	Under Voltage	33.000	kV	31.789	96.3	3-Phase
Bus350	Bus	Under Voltage	0.400	kV	0.381	95.3	3-Phase
Bus352	Bus	Under Voltage	0.400	kV	0.382	95.4	3-Phase
Bus353	Bus	Under Voltage	33.000	kV	31.587	95.7	3-Phase
Bus354	Bus	Under Voltage	33.000	kV	31.587	95.7	3-Phase
Bus355	Bus	Under Voltage	33.000	kV	31.527	95.5	3-Phase
Bus356	Bus	Under Voltage	33.000	kV	31.526	95.5	3-Phase
Bus358	Bus	Under Voltage	33.000	kV	31.512	95.5	3-Phase
Bus359	Bus	Under Voltage	33.000	kV	31.512	95.5	3-Phase
Bus36	Bus	Under Voltage	33.000	kV	31.789	96.3	3-Phase
Bus360	Bus	Under Voltage	0.400	kV	0.381	95.2	3-Phase
Bus361	Bus	Under Voltage	33.000	kV	31.490	95.4	3-Phase
Bus362	Bus	Under Voltage	33.000	kV	31.498	95.4	3-Phase
Bus363	Bus	Under Voltage	33.000	kV	31.448	95.3	3-Phase
Bus365	Bus	Under Voltage	33.000	kV	31.411	95.2	3-Phase
Bus366	Bus	Under Voltage	33.000	kV	31.405	95.2	3-Phase
Bus367	Bus	Under Voltage	33.000	kV	31.393	95.1	3-Phase
Bus368	Bus	Under Voltage	33.000	kV	31.393	95.1	3-Phase
Bus369	Bus	Under Voltage	33.000	kV	31.388	95.1	3-Phase
Bus37	Bus	Under Voltage	33.000	kV	31.789	96.3	3-Phase
Bus370	Bus	Under Voltage	33.000	kV	31.382	95.1	3-Phase
Bus371	Bus	Under Voltage	33.000	kV	31.371	95.1	3-Phase
Bus373	Bus	Under Voltage	33.000	kV	31.382	95.1	3-Phase
Bus374	Bus	Under Voltage	33.000	kV	31.378	95.1	3-Phase
Bus376	Bus	Under Voltage	33.000	kV	31.377	95.1	3-Phase
Bus38	Bus	Under Voltage	33.000	kV	31.789	96.3	3-Phase
Bus39	Bus	Under Voltage	33.000	kV	31.788	96.3	3-Phase
Bus395	Bus	Under Voltage	0.400	kV	0.383	95.7	3-Phase

Project:
Location:
Contract:
Engineer:
Filename: project

ETAP
12.6.0H

Study Case: LF

Page: 8
Date: 01-09-2019
SN:
Revision: Base
Config.: Normal

Marginal Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Bus396	Bus	Under Voltage	33.000	kV	31.507	95.5	3-Phase
Bus40	Bus	Under Voltage	33.000	kV	31.788	96.3	3-Phase
Bus41	Bus	Under Voltage	33.000	kV	31.790	96.3	3-Phase
Bus42	Bus	Under Voltage	33.000	kV	31.796	96.4	3-Phase
Bus429	Bus	Under Voltage	0.400	kV	0.383	95.7	3-Phase
Bus43	Bus	Under Voltage	33.000	kV	31.795	96.3	3-Phase
Bus430	Bus	Under Voltage	0.400	kV	0.383	95.7	3-Phase
Bus431	Bus	Under Voltage	0.400	kV	0.383	95.9	3-Phase
Bus432	Bus	Under Voltage	0.400	kV	0.383	95.6	3-Phase
Bus433	Bus	Under Voltage	0.400	kV	0.383	95.7	3-Phase
Bus434	Bus	Under Voltage	33.000	kV	31.387	95.1	3-Phase
Bus436	Bus	Under Voltage	33.000	kV	31.404	95.2	3-Phase
Bus438	Bus	Under Voltage	33.000	kV	31.400	95.2	3-Phase
Bus439	Bus	Under Voltage	33.000	kV	31.399	95.1	3-Phase
Bus44	Bus	Under Voltage	33.000	kV	31.795	96.3	3-Phase
Bus442	Bus	Under Voltage	33.000	kV	31.397	95.1	3-Phase
Bus444	Bus	Under Voltage	33.000	kV	31.391	95.1	3-Phase
Bus446	Bus	Under Voltage	33.000	kV	31.390	95.1	3-Phase
Bus448	Bus	Under Voltage	33.000	kV	31.388	95.1	3-Phase
Bus45	Bus	Under Voltage	33.000	kV	31.800	96.4	3-Phase
Bus450	Bus	Under Voltage	33.000	kV	31.382	95.1	3-Phase
Bus451	Bus	Under Voltage	33.000	kV	31.382	95.1	3-Phase
Bus46	Bus	Under Voltage	33.000	kV	31.823	96.4	3-Phase
Bus47	Bus	Under Voltage	33.000	kV	31.827	96.4	3-Phase
Bus48	Bus	Under Voltage	33.000	kV	31.829	96.5	3-Phase
Bus49	Bus	Under Voltage	33.000	kV	31.829	96.5	3-Phase
Bus50	Bus	Under Voltage	33.000	kV	31.831	96.5	3-Phase
Bus51	Bus	Under Voltage	33.000	kV	31.831	96.5	3-Phase
Bus52	Bus	Under Voltage	33.000	kV	31.831	96.5	3-Phase
Bus53	Bus	Under Voltage	33.000	kV	31.831	96.5	3-Phase
Bus54	Bus	Under Voltage	33.000	kV	31.831	96.5	3-Phase
Bus55	Bus	Under Voltage	33.000	kV	31.834	96.5	3-Phase
Bus56	Bus	Under Voltage	33.000	kV	31.834	96.5	3-Phase
Bus57	Bus	Under Voltage	33.000	kV	31.851	96.5	3-Phase
Bus58	Bus	Under Voltage	33.000	kV	31.857	96.5	3-Phase
Bus59	Bus	Under Voltage	33.000	kV	31.866	96.6	3-Phase

Project:
Location:
Contract:
Engineer:
Filename: project

ETAP
12.6.0H

Study Case: LF

Page: 9
Date: 01-09-2019
SN:
Revision: Base
Config.: Normal

Marginal Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Bus60	Bus	Under Voltage	33.000	kV	31.866	96.6	3-Phase
Bus61	Bus	Under Voltage	33.000	kV	31.877	96.6	3-Phase
Bus62	Bus	Under Voltage	33.000	kV	31.884	96.6	3-Phase
Bus63	Bus	Under Voltage	33.000	kV	31.884	96.6	3-Phase
Bus64	Bus	Under Voltage	33.000	kV	31.884	96.6	3-Phase
Bus65	Bus	Under Voltage	33.000	kV	31.884	96.6	3-Phase
Bus66	Bus	Under Voltage	33.000	kV	31.883	96.6	3-Phase
Bus67	Bus	Under Voltage	33.000	kV	31.919	96.7	3-Phase
Bus68	Bus	Under Voltage	33.000	kV	32.080	97.2	3-Phase
Bus69	Bus	Under Voltage	33.000	kV	32.140	97.4	3-Phase
Bus70	Bus	Under Voltage	33.000	kV	32.170	97.5	3-Phase
Bus71	Bus	Under Voltage	33.000	kV	32.165	97.5	3-Phase
Bus72	Bus	Under Voltage	33.000	kV	32.155	97.4	3-Phase
Bus73	Bus	Under Voltage	33.000	kV	32.173	97.5	3-Phase
Bus96	Bus	Under Voltage	33.000	kV	31.845	96.5	3-Phase
Bus97	Bus	Under Voltage	33.000	kV	31.845	96.5	3-Phase
Bus98	Bus	Under Voltage	33.000	kV	31.840	96.5	3-Phase
Bus99	Bus	Under Voltage	33.000	kV	31.839	96.5	3-Phase
Line138	Line	Overload	70.500	Amp	70.465	100.0	3-Phase
Line139	Line	Overload	70.500	Amp	70.475	100.0	3-Phase
Line175	Line	Overload	54.200	Amp	54.126	99.9	3-Phase
Line176	Line	Overload	54.200	Amp	54.162	99.9	3-Phase
Line178	Line	Overload	53.300	Amp	53.129	99.7	3-Phase
Line180	Line	Overload	53.200	Amp	53.101	99.8	3-Phase
Line50	Line	Overload	49.000	Amp	46.558	95.0	3-Phase
Line53	Line	Overload	51.100	Amp	49.150	96.2	3-Phase
Line54	Line	Overload	52.100	Amp	50.392	96.7	3-Phase
Line55	Line	Overload	52.600	Amp	51.046	97.0	3-Phase
Line56	Line	Overload	53.800	Amp	52.603	97.8	3-Phase
T3	Transformer	Overload	0.396	MVA	0.385	97.3	3-Phase