Electrical Transient Analyzer Program

Reliability Analysis

Loading Category (1): Design

Load Diversity Factor: None

	Total
Number of Buses:	301

	XFMR2	XFMR3	Reactor	Line/Cable	Impedance	Tie PD	SPDT	Total
Number of Branches:	55	0	0	244	0	0	0	299

	Synchronous Generator	Power Grid	Inverter	Total
Number of Sources:	0	2	0	2

	Synchronous Motor	Induction Machines	Static Load	Lumped Load	Total
Number of Loads:	0	0	0	158	158

System Frequency: 50 Hz

Unit System: English

Project Filename: first-ETAP

Output Filename: C:\Users\user 2nta\Downloads\FINAL PROJECT_TEST\FINAL PROJECT_TEST\TEST\Untitled.RA1

Bus Input Data

Bus			λA	MTTR	Switch Time	Replacement	
						Avail.	Time
ID	kV	Sub-sys	f / yr	hour	hour	Yes/No	hour
Bus1	33.000		0.0010	2.00	2.00	No	10.00
Bus 2	33.000		0.0010	2.00	2.00	No	10.00
Bus3	11.000		0.0010	2.00	2.00	No	10.00
Bus4	11.000		0.0010	2.00	2.00	No	10.00
Bus 5	11.000		0.0010	2.00	2.00	No	10.00
Bus6	11.000		0.0010	2.00	2.00	No	10.00
Bus7	11.000		0.0010	2.00	2.00	No	10.00
Bus 8	11.000		0.0010	2.00	2.00	No	10.00
Bus 9	11.000		0.0010	2.00	2.00	No	10.00
Bus10	11.000		0.0010	2.00	2.00	No	10.00
Bus11	11.000		0.0010	2.00	2.00	No	10.00
Bus12	11.000		0.0010	2.00	2.00	No	10.00
Bus13	11.000		0.0010	2.00	2.00	No	10.00
Bus15	11.000		0.0010	2.00	2.00	No	10.00
Bus16	11.000		0.0010	2.00	2.00	No	10.00
Bus17	11.000		0.0010	2.00	2.00	No	10.00
Bus18	11.000		0.0010	2.00	2.00	No	10.00
Bus19	11.000		0.0010	2.00	2.00	No	10.00
Bus 20	0.400		0.0010	2.00	2.00	No	10.00
Bus 21	11.000		0.0010	2.00	2.00	No	10.00
Bus22	0.400		0.0010	2.00	2.00	No	10.00
Bus 23	0.400		0.0010	2.00	2.00	No	10.00
Bus 23	0.400		0.0010	2.00	2.00	No	10.00
Bus 24	0.400		0.0010	2.00	2.00	No	10.00
Bus25	0.400		0.0010	2.00	2.00	No	10.00
Bus 25	0.400		0.0010	2.00	2.00	No	10.00
Bus26	0.400		0.0010	2.00	2.00	No	10.00
Bus 26	0.400		0.0010	2.00	2.00	No	10.00
Bus 27	0.400		0.0010	2.00	2.00	No	10.00
Bus27	0.400		0.0010	2.00	2.00	No	10.00
Bus28	0.400		0.0010	2.00	2.00	No	10.00
Bus 28	0.400		0.0010	2.00	2.00	No	10.00
Bus29	0.400		0.0010	2.00	2.00	No	10.00
Bus 29	0.400		0.0010	2.00	2.00	No	10.00
Bus 30	0.400		0.0010	2.00	2.00	No	10.00
Bus 32	0.400		0.0010	2.00	2.00	No	10.00
Bus 34	0.400		0.0010	2.00	2.00	No	10.00
Bus34	0.400		0.0010	2.00	2.00	No	10.00
Bus 35	0.400		0.0010	2.00	2.00	No	10.00
Bus35	0.400		0.0010	2.00	2.00	No	10.00
Bus36	11.000		0.0010	2.00	2.00	No	10.00

Bus			λA	MTTR	Switch Time	Replacement	
						Avail.	Time
ID	kV	Sub-sys	f / yr	hour	hour	Yes/No	hour
Bus 36	0.400		0.0010	2.00	2.00	No	10.00
Bus37	11.000		0.0010	2.00	2.00	No	10.00
Bus 37	0.400		0.0010	2.00	2.00	No	10.00
Bus 38	0.400		0.0010	2.00	2.00	No	10.00
Bus38	11.000		0.0010	2.00	2.00	No	10.00
Bus39	11.000		0.0010	2.00	2.00	No	10.00
Bus 39	0.400		0.0010	2.00	2.00	No	10.00
Bus 41	0.400		0.0010	2.00	2.00	No	10.00
Bus41	11.000		0.0010	2.00	2.00	No	10.00
Bus43	11.000		0.0010	2.00	2.00	No	10.00
Bus 43	0.400		0.0010	2.00	2.00	No	10.00
Bus 44	0.400		0.0010	2.00	2.00	No	10.00
Bus44	11.000		0.0010	2.00	2.00	No	10.00
Bus45	0.400		0.0010	2.00	2.00	No	10.00
Bus 46	0.400		0.0010	2.00	2.00	No	10.00
Bus46	11.000		0.0010	2.00	2.00	No	10.00
Bus47	11.000		0.0010	2.00	2.00	No	10.00
Bus 47	0.400		0.0010	2.00	2.00	No	10.00
Bus 48	0.400		0.0010	2.00	2.00	No	10.00
Bus48	11.000		0.0010	2.00	2.00	No	10.00
Bus49	0.400		0.0010	2.00	2.00	No	10.00
Bus50	11.000		0.0010	2.00	2.00	No	10.00
Bus 51	0.400		0.0010	2.00	2.00	No	10.00
Bus51	11.000		0.0010	2.00	2.00	No	10.00
Bus52	11.000		0.0010	2.00	2.00	No	10.00
Bus 53	0.400		0.0010	2.00	2.00	No	10.00
Bus53	11.000		0.0010	2.00	2.00	No	10.00
Bus54	11.000		0.0010	2.00	2.00	No	10.00
Bus 54	0.400		0.0010	2.00	2.00	No	10.00
Bus55	11.000		0.0010	2.00	2.00	No	10.00
Bus 55	0.400		0.0010	2.00	2.00	No	10.00
Bus56	11.000		0.0010	2.00	2.00	No	10.00
Bus 56	0.400		0.0010	2.00	2.00	No	10.00
Bus 58	0.400		0.0010	2.00	2.00	No	10.00
Bus58	11.000		0.0010	2.00	2.00	No	10.00
Bus59	11.000		0.0010	2.00	2.00	No	10.00
Bus 59	0.400		0.0010	2.00	2.00	No	10.00
Bus60	11.000		0.0010	2.00	2.00	No	10.00
Bus 60	0.400		0.0010	2.00	2.00	No	10.00
Bus61	11.000		0.0010	2.00	2.00	No	10.00
Bus 61	0.400		0.0010	2.00	2.00	No	10.00
Bus64	11.000		0.0010	2.00	2.00	No	10.00
Bus 64	0.400		0.0010	2.00	2.00	No	10.00
Bus65	0.400		0.0010	2.00	2.00	No	10.00

Bus			λA	MTTR	Switch Time	Replacement	
						Avail.	Time
ID	kV	Sub-sys	f / yr	hour	hour	Yes/No	hour
Bus 66	0.400		0.0010	2.00	2.00	No	10.00
Bus66	11.000		0.0010	2.00	2.00	No	10.00
Bus 68	0.400		0.0010	2.00	2.00	No	10.00
Bus68	11.000		0.0010	2.00	2.00	No	10.00
Bus 69	0.400		0.0010	2.00	2.00	No	10.00
Bus69	11.000		0.0010	2.00	2.00	No	10.00
Bus 70	0.400		0.0010	2.00	2.00	No	10.00
Bus70	11.000		0.0010	2.00	2.00	No	10.00
Bus72	11.000		0.0010	2.00	2.00	No	10.00
Bus 77	0.400		0.0010	2.00	2.00	No	10.00
Bus77	11.000		0.0010	2.00	2.00	No	10.00
Bus 79	0.400		0.0010	2.00	2.00	No	10.00
Bus79	11.000		0.0010	2.00	2.00	No	10.00
Bus 80	0.400		0.0010	2.00	2.00	No	10.00
Bus80	11.000		0.0010	2.00	2.00	No	10.00
Bus82	11.000		0.0010	2.00	2.00	No	10.00
Bus 82	0.400		0.0010	2.00	2.00	No	10.00
Bus84	11.000		0.0010	2.00	2.00	No	10.00
Bus 84	0.400		0.0010	2.00	2.00	No	10.00
Bus85	11.000		0.0010	2.00	2.00	No	10.00
Bus 85	0.400		0.0010	2.00	2.00	No	10.00
Bus 87	0.400		0.0010	2.00	2.00	No	10.00
Bus87	11.000		0.0010	2.00	2.00	No	10.00
Bus88	11.000		0.0010	2.00	2.00	No	10.00
Bus89	11.000		0.0010	2.00	2.00	No	10.00
Bus90	11.000		0.0010	2.00	2.00	No	10.00
Bus91	11.000		0.0010	2.00	2.00	No	10.00
Bus92	11.000		0.0010	2.00	2.00	No	10.00
Bus93	11.000		0.0010	2.00	2.00	No	10.00
Bus94	11.000		0.0010	2.00	2.00	No	10.00
Bus95	11.000		0.0010	2.00	2.00	No	10.00
Bus96	11.000		0.0010	2.00	2.00	No	10.00
Bus97	11.000		0.0010	2.00	2.00	No	10.00
Bus98	11.000		0.0010	2.00	2.00	No	10.00
Bus99	11.000		0.0010	2.00	2.00	No	10.00
Bus100	11.000		0.0010	2.00	2.00	No	10.00
Bus101	11.000		0.0010	2.00	2.00	No	10.00
Bus102	11.000		0.0010	2.00	2.00	No	10.00
Bus103	11.000		0.0010	2.00	2.00	No	10.00
Bus104	11.000		0.0010	2.00	2.00	No	10.00
Bus105	11.000		0.0010	2.00	2.00	No	10.00
Bus106	11.000		0.0010	2.00	2.00	No	10.00
Bus107	11.000		0.0010	2.00	2.00	No	10.00
Bus108	11.000		0.0010	2.00	2.00	No	10.00

Bus			λA	MTTR	Switch Time	Replacement	
						Avail.	Time
ID	kV	Sub-sys	f / yr	hour	hour	Yes/No	hour
Bus109	11.000		0.0010	2.00	2.00	No	10.00
Bus110	11.000		0.0010	2.00	2.00	No	10.00
Bus111	11.000		0.0010	2.00	2.00	No	10.00
Bus112	11.000		0.0010	2.00	2.00	No	10.00
Bus113	11.000		0.0010	2.00	2.00	No	10.00
Bus114	11.000		0.0010	2.00	2.00	No	10.00
Bus115	11.000		0.0010	2.00	2.00	No	10.00
Bus116	11.000		0.0010	2.00	2.00	No	10.00
Bus117	11.000		0.0010	2.00	2.00	No	10.00
Bus118	11.000		0.0010	2.00	2.00	No	10.00
Bus119	11.000		0.0010	2.00	2.00	No	10.00
Bus120	11.000		0.0010	2.00	2.00	No	10.00
Bus121	0.400		0.0010	2.00	2.00	No	10.00
Bus122	0.400		0.0010	2.00	2.00	No	10.00
Bus123	0.400		0.0010	2.00	2.00	No	10.00
Bus124	0.400		0.0010	2.00	2.00	No	10.00
Bus125	0.400		0.0010	2.00	2.00	No	10.00
Bus126	0.400		0.0010	2.00	2.00	No	10.00
Bus127	0.400		0.0010	2.00	2.00	No	10.00
Bus128	0.400		0.0010	2.00	2.00	No	10.00
Bus129	0.400		0.0010	2.00	2.00	No	10.00
Bus130	0.400		0.0010	2.00	2.00	No	10.00
Bus131	0.400		0.0010	2.00	2.00	No	10.00
Bus132	0.400		0.0010	2.00	2.00	No	10.00
Bus133	0.400		0.0010	2.00	2.00	No	10.00
Bus134	0.400		0.0010	2.00	2.00	No	10.00
Bus135	0.400		0.0010	2.00	2.00	No	10.00
Bus136	0.400		0.0010	2.00	2.00	No	10.00
Bus137	0.400		0.0010	2.00	2.00	No	10.00
Bus138	0.400		0.0010	2.00	2.00	No	10.00
Bus139	0.400		0.0010	2.00	2.00	No	10.00
Bus140	0.400		0.0010	2.00	2.00	No	10.00
Bus141	0.400		0.0010	2.00	2.00	No	10.00
Bus142	0.400		0.0010	2.00	2.00	No	10.00
Bus143	0.400		0.0010	2.00	2.00	No	10.00
Bus144	0.400		0.0010	2.00	2.00	No	10.00
Bus145	0.400		0.0010	2.00	2.00	No	10.00
Bus146	0.400		0.0010	2.00	2.00	No	10.00
Bus147	0.400		0.0010	2.00	2.00	No	10.00
Bus148	0.400		0.0010	2.00	2.00	No	10.00
Bus149	0.400		0.0010	2.00	2.00	No	10.00
Bus150	0.400		0.0010	2.00	2.00	No	10.00
Bus151	0.400		0.0010	2.00	2.00	No	10.00
Bus152	0.400		0.0010	2.00	2.00	No	10.00

Bus			λA	MTTR	Switch Time	Replacement	
						Avail.	Time
ID	kV	Sub-sys	f / yr	hour	hour	Yes/No	hour
Bus153	0.400		0.0010	2.00	2.00	No	10.00
Bus154	0.400		0.0010	2.00	2.00	No	10.00
Bus155	0.400		0.0010	2.00	2.00	No	10.00
Bus156	0.400		0.0010	2.00	2.00	No	10.00
Bus157	0.400		0.0010	2.00	2.00	No	10.00
Bus158	0.400		0.0010	2.00	2.00	No	10.00
Bus159	0.400		0.0010	2.00	2.00	No	10.00
Bus160	0.400		0.0010	2.00	2.00	No	10.00
Bus161	0.400		0.0010	2.00	2.00	No	10.00
Bus162	0.400		0.0010	2.00	2.00	No	10.00
Bus163	0.400		0.0010	2.00	2.00	No	10.00
Bus164	0.400		0.0010	2.00	2.00	No	10.00
Bus165	0.400		0.0010	2.00	2.00	No	10.00
Bus166	0.400		0.0010	2.00	2.00	No	10.00
Bus167	0.400		0.0010	2.00	2.00	No	10.00
Bus168	0.400		0.0010	2.00	2.00	No	10.00
Bus169	0.400		0.0010	2.00	2.00	No	10.00
Bus170	0.400		0.0010	2.00	2.00	No	10.00
Bus171	0.400		0.0010	2.00	2.00	No	10.00
Bus172	0.400		0.0010	2.00	2.00	No	10.00
Bus173	0.400		0.0010	2.00	2.00	No	10.00
Bus174	0.400		0.0010	2.00	2.00	No	10.00
Bus175	0.400		0.0010	2.00	2.00	No	10.00
Bus176	0.400		0.0010	2.00	2.00	No	10.00
Bus177	0.400		0.0010	2.00	2.00	No	10.00
Bus178	0.400		0.0010	2.00	2.00	No	10.00
Bus179	0.400		0.0010	2.00	2.00	No	10.00
Bus180	0.400		0.0010	2.00	2.00	No	10.00
Bus181	0.400		0.0010	2.00	2.00	No	10.00
Bus182	0.400		0.0010	2.00	2.00	No	10.00
Bus183	0.400		0.0010	2.00	2.00	No	10.00
Bus184	0.400		0.0010	2.00	2.00	No	10.00
Bus185	0.400		0.0010	2.00	2.00	No	10.00
Bus186	0.400		0.0010	2.00	2.00	No	10.00
Bus187	0.400		0.0010	2.00	2.00	No	10.00
Bus188	0.400		0.0010	2.00	2.00	No	10.00
Bus189	0.400		0.0010	2.00	2.00	No	10.00
Bus190	0.400		0.0010	2.00	2.00	No	10.00
Bus191	0.400		0.0010	2.00	2.00	No	10.00
Bus192	0.400		0.0010	2.00	2.00	No	10.00
Bus193	0.400		0.0010	2.00	2.00	No	10.00
Bus194	0.400		0.0010	2.00	2.00	No	10.00
Bus195	0.400		0.0010	2.00	2.00	No	10.00
Bus196	0.400		0.0010	2.00	2.00	No	10.00

Bus			λA	MTTR	Switch Time	Replacement	
						Avail.	Time
ID	kV	Sub-sys	f / yr	hour	hour	Yes/No	hour
Bus197	0.400		0.0010	2.00	2.00	No	10.00
Bus198	0.400		0.0010	2.00	2.00	No	10.00
Bus199	0.400		0.0010	2.00	2.00	No	10.00
Bus200	0.400		0.0010	2.00	2.00	No	10.00
Bus201	0.400		0.0010	2.00	2.00	No	10.00
Bus202	0.400		0.0010	2.00	2.00	No	10.00
Bus203	0.400		0.0010	2.00	2.00	No	10.00
Bus204	0.400		0.0010	2.00	2.00	No	10.00
Bus205	0.400		0.0010	2.00	2.00	No	10.00
Bus206	0.400		0.0010	2.00	2.00	No	10.00
Bus207	0.400		0.0010	2.00	2.00	No	10.00
Bus208	0.400		0.0010	2.00	2.00	No	10.00
Bus209	0.400		0.0010	2.00	2.00	No	10.00
Bus210	0.400		0.0010	2.00	2.00	No	10.00
Bus211	0.400		0.0010	2.00	2.00	No	10.00
Bus212	0.400		0.0010	2.00	2.00	No	10.00
Bus213	0.400		0.0010	2.00	2.00	No	10.00
Bus214	0.400		0.0010	2.00	2.00	No	10.00
Bus215	0.400		0.0010	2.00	2.00	No	10.00
Bus216	0.400		0.0010	2.00	2.00	No	10.00
Bus217	0.400		0.0010	2.00	2.00	No	10.00
Bus218	0.400		0.0010	2.00	2.00	No	10.00
Bus219	0.400		0.0010	2.00	2.00	No	10.00
Bus220	0.400		0.0010	2.00	2.00	No	10.00
Bus221	0.400		0.0010	2.00	2.00	No	10.00
Bus222	0.400		0.0010	2.00	2.00	No	10.00
Bus223	0.400		0.0010	2.00	2.00	No	10.00
Bus224	0.400		0.0010	2.00	2.00	No	10.00
Bus225	0.400		0.0010	2.00	2.00	No	10.00
Bus226	0.400		0.0010	2.00	2.00	No	10.00
Bus227	0.400		0.0010	2.00	2.00	No	10.00
Bus228	0.400		0.0010	2.00	2.00	No	10.00
Bus229	0.400		0.0010	2.00	2.00	No	10.00
Bus230	0.400		0.0010	2.00	2.00	No	10.00
Bus231	0.400		0.0010	2.00	2.00	No	10.00
Bus232	0.400		0.0010	2.00	2.00	No	10.00
Bus233	0.400		0.0010	2.00	2.00	No	10.00
Bus234	0.400		0.0010	2.00	2.00	No	10.00
Bus235	0.400		0.0010	2.00	2.00	No	10.00
Bus236	0.400		0.0010	2.00	2.00	No	10.00
Bus237	0.400		0.0010	2.00	2.00	No	10.00
Bus238	0.400		0.0010	2.00	2.00	No	10.00
Bus239	0.400		0.0010	2.00	2.00	No	10.00
Bus240	0.400		0.0010	2.00	2.00	No	10.00

Bus			λA	MTTR	Switch Time	Replacement	
						Avail.	Time
ID	kV	Sub-sys	f / yr	hour	hour	Yes/No	hour
Bus241	0.400		0.0010	2.00	2.00	No	10.00
Bus242	0.400		0.0010	2.00	2.00	No	10.00
Bus243	0.400		0.0010	2.00	2.00	No	10.00
Bus244	0.400		0.0010	2.00	2.00	No	10.00
Bus246	0.400		0.0010	2.00	2.00	No	10.00
Bus247	0.400		0.0010	2.00	2.00	No	10.00
Bus248	0.400		0.0010	2.00	2.00	No	10.00
Bus249	0.400		0.0010	2.00	2.00	No	10.00
Bus250	0.400		0.0010	2.00	2.00	No	10.00
Bus251	0.400		0.0010	2.00	2.00	No	10.00
Bus252	0.400		0.0010	2.00	2.00	No	10.00
Bus253	0.400		0.0010	2.00	2.00	No	10.00
Bus254	0.400		0.0010	2.00	2.00	No	10.00
Bus255	0.400		0.0010	2.00	2.00	No	10.00
Bus256	0.400		0.0010	2.00	2.00	No	10.00
Bus257	0.400		0.0010	2.00	2.00	No	10.00
Bus258	0.400		0.0010	2.00	2.00	No	10.00
Bus259	0.400		0.0010	2.00	2.00	No	10.00
Bus260	0.400		0.0010	2.00	2.00	No	10.00
Bus261	0.400		0.0010	2.00	2.00	No	10.00
Bus262	0.400		0.0010	2.00	2.00	No	10.00
Bus263	0.400		0.0010	2.00	2.00	No	10.00
Bus264	0.400		0.0010	2.00	2.00	No	10.00
Bus265	0.400		0.0010	2.00	2.00	No	10.00
Bus266	0.400		0.0010	2.00	2.00	No	10.00
Bus267	0.400		0.0010	2.00	2.00	No	10.00
Bus268	0.400		0.0010	2.00	2.00	No	10.00
Bus269	0.400		0.0010	2.00	2.00	No	10.00
Bus270	0.400		0.0010	2.00	2.00	No	10.00
Bus271	0.400		0.0010	2.00	2.00	No	10.00
Bus272	0.400		0.0010	2.00	2.00	No	10.00
Bus273	0.400		0.0010	2.00	2.00	No	10.00
Bus274	0.400		0.0010	2.00	2.00	No	10.00
Bus275	0.400		0.0010	2.00	2.00	No	10.00
Bus276	0.400		0.0010	2.00	2.00	No	10.00
Bus277	0.400		0.0010	2.00	2.00	No	10.00
Grid Bus1	33.000		0.0010	2.00	2.00	No	10.00
Grid Bus2	33.000		0.0010	2.00	2.00	No	10.00
Main Bus1	11.000		0.0010	2.00	2.00	No	10.00
Main Bus2	11.000		0.0010	2.00	2.00	No	10.00

Branch Input Data

Cable/Line		λA	λP	MTTR	Switch Time	Replacement		Unit Length		
						Avail.	Time			
ID	Type	f / yr	f / yr	hour	hour	Yes/No	hour	for λA & λP	Length	Unit
Cable74	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	10.00	m
Cable75	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	25.00	m
Cable76	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	135.00	m
Cable77	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	30.00	m
Cable78	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	30.00	m
Cable79	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	100.00	m
Cable80	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	10.00	m
Cable81	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	10.00	m
Cable82	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable83	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	5.00	m
Cable84	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	5.00	m
Cable200	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable201	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable202	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable203	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable204	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable205	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable206	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable207	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable208	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable209	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable210	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable211	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable212	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable213	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable214	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable215	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable216	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable217	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable218	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable219	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable220	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable221	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable222	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable223	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable53	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	30.00	m
Cable54	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	20.00	m
Cable55	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	60.00	m

Cable/Line		λA	λP	MTTR	Switch Time	Replacement		Unit Length		
ID	Type	f / yr	f / yr	hour	hour	Avail. Yes/No	Time hour	for λA & λP	Length	Unit
Cable56	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	30.00	m
Cable57	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	30.00	m
Cable58	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	30.00	m
Cable59	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	10.00	m
Cable60	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	50.00	m
Cable61	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	60.00	m
Cable62	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	10.00	m
Cable111	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable112	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable113	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable114	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable115	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable116	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable117	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable118	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable119	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable120	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable121	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable122	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable123	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable124	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable125	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable126	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable127	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable128	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable129	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable130	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable131	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable39	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	10.00	m
Cable40	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	10.00	m
Cable41	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	60.00	m
Cable42	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	10.00	m
Cable43	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	10.00	m
Cable44	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	50.00	m
Cable45	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	35.00	m
Cable46	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	10.00	m
Cable47	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	40.00	m
Cable48	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	30.00	m
Cable49	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	20.00	m
Cable50	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	50.00	m

Cable/Line		λA	λP	MTTR	Switch Time	Replacement		Unit Length		
						Avail.	Time			
ID	Type	f / yr	f / yr	hour	hour	Yes/No	hour	for λA & λP	Length	Unit
Cable51	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	10.00	m
Cable52	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	20.00	m
Cable151	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable152	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable153	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable154	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable155	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable156	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable157	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable158	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable159	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable160	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable161	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable162	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable163	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable164	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable165	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable166	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable167	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable168	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable169	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable170	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable171	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable172	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable173	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable174	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable175	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable176	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable177	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable178	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable179	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable180	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable181	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable182	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable183	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable184	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable185	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable186	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable187	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable188	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m

Cable/Line		λA	λP	MTTR	Switch Time	Replacement		Unit Length		
						Avail.	Time			
ID	Type	f / yr	f / yr	hour	hour	Yes/No	hour	for λA & λP	Length	Unit
Cable189	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable190	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable191	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable192	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable193	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable194	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable195	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable196	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable197	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable198	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable199	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable 15	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	50.00	m
Cable16	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	80.00	m
Cable 16	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	40.00	m
Cable17	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	40.00	m
Cable19	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	60.00	m
Cable20	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	40.00	m
Cable18	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	40.00	m
Cable21	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	40.00	m
Cable22	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	50.00	m
Cable23	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	50.00	m
Cable24	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	60.00	m
Cable25	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	20.00	m
Cable1	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	40.00	m
Cable37	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable38	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable101	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable102	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable103	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable104	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable105	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable106	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable107	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable108	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable109	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable110	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable63	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	40.00	m
Cable64	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	30.00	m
Cable65	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	20.00	m
Cable66	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	10.00	m

Cable/Line		λA	λP	MTTR	Switch Time	Replacement		Unit Length		
						Avail.	Time			
ID	Type	f / yr	f / yr	hour	hour	Yes/No	hour	for λA & λP	Length	Unit
Cable67	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	45.00	m
Cable68	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	70.00	m
Cable69	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	30.00	m
Cable70	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable71	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	40.00	m
Cable72	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	10.00	m
Cable73	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	10.00	m
Cable132	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable133	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable134	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable135	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable136	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable137	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable138	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable139	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable140	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable141	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable142	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable143	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable144	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable145	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable146	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable147	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable148	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable149	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable150	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable85	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	5.00	m
Cable86	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	55.00	m
Cable87	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	35.00	m
Cable88	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	20.00	m
Cable89	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	10.00	m
Cable90	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	60.00	m
Cable91	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	20.00	m
Cable92	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	25.00	m
Cable93	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	90.00	m
Cable94	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	10.00	m
Cable95	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	20.00	m
Cable96	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	30.00	m
Cable97	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	5.00	m
Cable98	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	30.00	m

Cable/Line		λ_A	λ_P	MTTR	Switch Time	Replacement		Unit Length		
						Avail.	Time			
ID	Type	f / yr	f / yr	hour	hour	Yes/No	hour	for λ_A & λ_P	Length	Unit
Cable99	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	25.00	m
Cable100	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	5.00	m
Cable224	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable225	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable226	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable227	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable228	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable229	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable230	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable231	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable232	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable233	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable234	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable235	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable236	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable237	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable238	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable239	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable240	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable241	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable242	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable243	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable244	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable245	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable246	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable247	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable248	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable249	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable250	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable251	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable252	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable253	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable254	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable255	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable256	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	15.00	m
Cable4	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	210.00	m
Cable5	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	240.00	m
Cable14	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	20.00	m
Cable8	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	65.00	m
Cable7	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	10.00	m

Cable/Line		λA	λP	MTTR	Switch Time	Replacement Avail.	Replacement Time	Unit Length		
ID	Type	f / yr	f / yr	hour	hour	Yes/No	hour	for λA & λP	Length	Unit
Cable13	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	20.00	m
Cable3	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	40.00	m
Cable12	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	20.00	m
Cable6	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	340.00	m
Cable1(GridTOsubstation)	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	1600.00	m
Cablel 2	Cable	0.0200	0.0200	25.00	30.00	No	8.00	km	600.00	m

Transformer		λA	λP	MTTR	Switch Time	Replacement Avail.	Replacement Time
ID	Type	f / yr	f / yr	hour	hour	Yes/No	hour
T40	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T41	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T42	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T43	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T45	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T46	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T47	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T48	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T 12	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T 14	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T15	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T16	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T17	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T18	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T19	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T51	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T52	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T54	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T55	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T56	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T62	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T63	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T65	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T67	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T68	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T3	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T 5	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T6	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T7	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T1	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T2	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00

Transformer		λ_A	λ_P	MTTR	Switch Time	Replacement	
						Avail.	Time
ID	Type	f / yr	f / yr	hour	hour	Yes/No	hour
T8	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T9	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T10	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T11	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T 4	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T20	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T22	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T23	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T24	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T25	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T26	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T27	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T60	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T28	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T30	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T31	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T32	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T33	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T34	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T35	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T36	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T37	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T38	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00
T70	2W XFMR	0.0150	0.0000	200.00	200.00	No	10.00

Switching Device Input Data

Switching Device			λ_A	λ_P	MTTR	Switch Time	Replacement	
ID	Type	Status	f / yr	f / yr	hour	hour	Avail. Yes/No	Time hour
REC 2	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
REC 3	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
REC 6	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
REC 5	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
REC 1	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
REC 4	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse93	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC76	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse94	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC77	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse95	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC78	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse96	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC79	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse97	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC80	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse98	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC81	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse99	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC82	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse100	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC83	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse68	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC35	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse69	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC36	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse70	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC37	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse71	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC38	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse72	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC39	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse73	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC40	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse74	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC41	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse83	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC66	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00

Switching Device			λ_A	λ_P	MTTR	Switch Time	Replacement Avail.	Replacement Time
ID	Type	Status	f / yr	f / yr	hour	hour	Yes/No	hour
Fuse84	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC67	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse85	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC68	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse86	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC69	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse87	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC70	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse88	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC71	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse89	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC72	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse90	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC73	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse91	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC74	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse92	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC75	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse 1	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC 10	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse 3	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC 12	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse 4	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC 13	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse 5	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC 14	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse 6	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC 15	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse 7	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC 16	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse 8	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC 17	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse 9	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC 9	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse 2	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC 11	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse75	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC58	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse76	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC59	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse77	Fuse		0.0030	0.0020	30.00	30.00	No	10.00

Switching Device			λ_A	λ_P	MTTR	Switch Time	Replacement	
							Avail.	Time
ID	Type	Status	f / yr	f / yr	hour	hour	Yes/No	hour
REC60	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse78	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC61	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse79	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC62	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse80	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC63	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse81	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC64	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse82	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC65	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse101	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC84	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse102	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC85	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse103	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC86	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse104	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC87	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse105	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC88	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse106	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC89	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse107	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC90	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse108	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC91	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse109	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC92	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse110	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC93	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
Fuse111	Fuse		0.0030	0.0020	30.00	30.00	No	10.00
REC94	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
REC Main1	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00
REC Main2	LVBreaker		0.0030	0.0030	200.00	200.00	No	10.00

Load Input Data

Load			Load	Load	No. of	λ_A	MTTR	Replacement	
								Avail.	Time
ID	Type	Connected Bus ID	kW	Sector	Loads	f / yr	hour	Yes/No	hour
Lump117	LumpLd	Bus220	161.50	None	1	0.0200	50.00	No	10.00
Lump118	LumpLd	Bus221	141.95	None	1	0.0200	50.00	No	10.00
Lump119	LumpLd	Bus222	141.95	None	1	0.0200	50.00	No	10.00
Lump120	LumpLd	Bus223	141.95	None	1	0.0200	50.00	No	10.00
Lump121	LumpLd	Bus224	141.95	None	1	0.0200	50.00	No	10.00
Lump122	LumpLd	Bus225	141.95	None	1	0.0200	50.00	No	10.00
Lump123	LumpLd	Bus226	141.95	None	1	0.0200	50.00	No	10.00
Lump124	LumpLd	Bus227	141.95	None	1	0.0200	50.00	No	10.00
Lump125	LumpLd	Bus228	141.95	None	1	0.0200	50.00	No	10.00
Lump126	LumpLd	Bus229	141.95	None	1	0.0200	50.00	No	10.00
Lump127	LumpLd	Bus230	141.95	None	1	0.0200	50.00	No	10.00
Lump129	LumpLd	Bus234	141.95	None	1	0.0200	50.00	No	10.00
Lump130	LumpLd	Bus233	141.95	None	1	0.0200	50.00	No	10.00
Lump132	LumpLd	Bus235	142.80	None	1	0.0200	50.00	No	10.00
Lump133	LumpLd	Bus236	143.65	None	1	0.0200	50.00	No	10.00
Lump135	LumpLd	Bus240	143.65	None	1	0.0200	50.00	No	10.00
Lump136	LumpLd	Bus239	143.65	None	1	0.0200	50.00	No	10.00
Lump138	LumpLd	Bus243	143.65	None	1	0.0200	50.00	No	10.00
Lump139	LumpLd	Bus242	142.80	None	1	0.0200	50.00	No	10.00
Lump140	LumpLd	Bus241	142.80	None	1	0.0200	50.00	No	10.00
Lump175	LumpLd	Bus231	141.95	None	1	0.0200	50.00	No	10.00
Lump176	LumpLd	Bus232	141.95	None	1	0.0200	50.00	No	10.00
Lump177	LumpLd	Bus237	143.65	None	1	0.0200	50.00	No	10.00
Lump178	LumpLd	Bus238	143.65	None	1	0.0200	50.00	No	10.00
Lump19	LumpLd	Bus134	215.05	None	1	0.0200	50.00	No	10.00
Lump20	LumpLd	Bus135	214.20	None	1	0.0200	50.00	No	10.00
Lump21	LumpLd	Bus136	214.20	None	1	0.0200	50.00	No	10.00
Lump22	LumpLd	Bus131	215.05	None	1	0.0200	50.00	No	10.00
Lump23	LumpLd	Bus132	214.20	None	1	0.0200	50.00	No	10.00
Lump24	LumpLd	Bus133	214.20	None	1	0.0200	50.00	No	10.00
Lump25	LumpLd	Bus140	214.20	None	1	0.0200	50.00	No	10.00
Lump26	LumpLd	Bus141	214.20	None	1	0.0200	50.00	No	10.00
Lump27	LumpLd	Bus142	214.20	None	1	0.0200	50.00	No	10.00
Lump28	LumpLd	Bus137	214.20	None	1	0.0200	50.00	No	10.00
Lump31	LumpLd	Bus138	214.20	None	1	0.0200	50.00	No	10.00
Lump32	LumpLd	Bus139	178.50	None	1	0.0200	50.00	No	10.00
Lump33	LumpLd	Bus143	178.50	None	1	0.0200	50.00	No	10.00
Lump34	LumpLd	Bus144	214.20	None	1	0.0200	50.00	No	10.00
Lump38	LumpLd	Bus145	214.20	None	1	0.0200	50.00	No	10.00
Lump40	LumpLd	Bus146	179.35	None	1	0.0200	50.00	No	10.00
Lump41	LumpLd	Bus147	215.05	None	1	0.0200	50.00	No	10.00
Lump43	LumpLd	Bus148	215.05	None	1	0.0200	50.00	No	10.00
Lump45	LumpLd	Bus149	179.35	None	1	0.0200	50.00	No	10.00

Load			Load	Load	No. of	λ_A	MTTR	Replacement	
								Avail.	Time
ID	Type	Connected Bus ID	kW	Sector	Loads	f / yr	hour	Yes/No	hour
Lump46	LumpLd	Bus150	214.20	None	1	0.0200	50.00	No	10.00
Lump48	LumpLd	Bus151	215.05	None	1	0.0200	50.00	No	10.00
Lump68	LumpLd	Bus177	10.20	None	1	0.0200	50.00	No	10.00
Lump69	LumpLd	Bus176	22.10	None	1	0.0200	50.00	No	10.00
Lump70	LumpLd	Bus178	22.10	None	1	0.0200	50.00	No	10.00
Lump71	LumpLd	Bus179	35.70	None	1	0.0200	50.00	No	10.00
Lump72	LumpLd	Bus180	35.70	None	1	0.0200	50.00	No	10.00
Lump73	LumpLd	Bus181	35.70	None	1	0.0200	50.00	No	10.00
Lump74	LumpLd	Bus182	35.70	None	1	0.0200	50.00	No	10.00
Lump75	LumpLd	Bus175	43.35	None	1	0.0200	50.00	No	10.00
Lump76	LumpLd	Bus174	54.40	None	1	0.0200	50.00	No	10.00
Lump77	LumpLd	Bus173	54.40	None	1	0.0200	50.00	No	10.00
Lump78	LumpLd	Bus172	54.40	None	1	0.0200	50.00	No	10.00
Lump79	LumpLd	Bus171	54.40	None	1	0.0200	50.00	No	10.00
Lump80	LumpLd	Bus219	54.40	None	1	0.0200	50.00	No	10.00
Lump81	LumpLd	Bus218	72.25	None	1	0.0200	50.00	No	10.00
Lump82	LumpLd	Bus217	54.40	None	1	0.0200	50.00	No	10.00
Lump83	LumpLd	Bus216	54.40	None	1	0.0200	50.00	No	10.00
Lump84	LumpLd	Bus215	43.35	None	1	0.0200	50.00	No	10.00
Lump85	LumpLd	Bus183	43.35	None	1	0.0200	50.00	No	10.00
Lump86	LumpLd	Bus184	54.40	None	1	0.0200	50.00	No	10.00
Lump87	LumpLd	Bus185	54.40	None	1	0.0200	50.00	No	10.00
Lump88	LumpLd	Bus186	49.30	None	1	0.0200	50.00	No	10.00
Lump89	LumpLd	Bus187	54.40	None	1	0.0200	50.00	No	10.00
Lump90	LumpLd	Bus188	72.25	None	1	0.0200	50.00	No	10.00
Lump91	LumpLd	Bus189	72.25	None	1	0.0200	50.00	No	10.00
Lump92	LumpLd	Bus190	72.25	None	1	0.0200	50.00	No	10.00
Lump93	LumpLd	Bus191	72.25	None	1	0.0200	50.00	No	10.00
Lump94	LumpLd	Bus192	72.25	None	1	0.0200	50.00	No	10.00
Lump95	LumpLd	Bus193	56.95	None	1	0.0200	50.00	No	10.00
Lump96	LumpLd	Bus194	72.25	None	1	0.0200	50.00	No	10.00
Lump97	LumpLd	Bus195	72.25	None	1	0.0200	50.00	No	10.00
Lump98	LumpLd	Bus196	72.25	None	1	0.0200	50.00	No	10.00
Lump99	LumpLd	Bus197	72.25	None	1	0.0200	50.00	No	10.00
Lump100	LumpLd	Bus198	72.25	None	1	0.0200	50.00	No	10.00
Lump101	LumpLd	Bus199	72.25	None	1	0.0200	50.00	No	10.00
Lump102	LumpLd	Bus200	72.25	None	1	0.0200	50.00	No	10.00
Lump103	LumpLd	Bus201	72.25	None	1	0.0200	50.00	No	10.00
Lump104	LumpLd	Bus202	72.25	None	1	0.0200	50.00	No	10.00
Lump105	LumpLd	Bus203	72.25	None	1	0.0200	50.00	No	10.00
Lump106	LumpLd	Bus204	72.25	None	1	0.0200	50.00	No	10.00
Lump107	LumpLd	Bus205	72.25	None	1	0.0200	50.00	No	10.00
Lump108	LumpLd	Bus206	143.65	None	1	0.0200	50.00	No	10.00
Lump109	LumpLd	Bus207	143.65	None	1	0.0200	50.00	No	10.00
Lump110	LumpLd	Bus208	143.65	None	1	0.0200	50.00	No	10.00
Lump111	LumpLd	Bus209	143.65	None	1	0.0200	50.00	No	10.00

Load			Load	Load	No. of	λ_A	MTTR	Replacement	
								Avail.	Time
ID	Type	Connected Bus ID	kW	Sector	Loads	f / yr	hour	Yes/No	hour
Lump112	LumpLd	Bus210	143.65	None	1	0.0200	50.00	No	10.00
Lump113	LumpLd	Bus211	143.65	None	1	0.0200	50.00	No	10.00
Lump114	LumpLd	Bus214	143.65	None	1	0.0200	50.00	No	10.00
Lump115	LumpLd	Bus213	143.65	None	1	0.0200	50.00	No	10.00
Lump116	LumpLd	Bus212	143.65	None	1	0.0200	50.00	No	10.00
Lump16	LumpLd	Bus128	626.45	None	1	0.0200	50.00	No	10.00
Lump17	LumpLd	Bus129	644.30	None	1	0.0200	50.00	No	10.00
Lump18	LumpLd	Bus130	670.65	None	1	0.0200	50.00	No	10.00
Lump1	LumpLd	Bus34	322.15	None	1	0.0200	50.00	No	10.00
Lump2	LumpLd	Bus35	322.15	None	1	0.0200	50.00	No	10.00
Lump3	LumpLd	Bus121	322.15	None	1	0.0200	50.00	No	10.00
Lump4	LumpLd	Bus122	322.15	None	1	0.0200	50.00	No	10.00
Lump10	LumpLd	Bus123	322.15	None	1	0.0200	50.00	No	10.00
Lump11	LumpLd	Bus124	322.15	None	1	0.0200	50.00	No	10.00
Lump13	LumpLd	Bus125	447.10	None	1	0.0200	50.00	No	10.00
Lump14	LumpLd	Bus126	447.10	None	1	0.0200	50.00	No	10.00
Lump15	LumpLd	Bus127	447.10	None	1	0.0200	50.00	No	10.00
Lump49	LumpLd	Bus154	322.15	None	1	0.0200	50.00	No	10.00
Lump50	LumpLd	Bus155	322.15	None	1	0.0200	50.00	No	10.00
Lump51	LumpLd	Bus152	322.15	None	1	0.0200	50.00	No	10.00
Lump52	LumpLd	Bus153	322.15	None	1	0.0200	50.00	No	10.00
Lump53	LumpLd	Bus156	322.15	None	1	0.0200	50.00	No	10.00
Lump54	LumpLd	Bus157	322.15	None	1	0.0200	50.00	No	10.00
Lump55	LumpLd	Bus158	322.15	None	1	0.0200	50.00	No	10.00
Lump56	LumpLd	Bus159	322.15	None	1	0.0200	50.00	No	10.00
Lump57	LumpLd	Bus160	322.15	None	1	0.0200	50.00	No	10.00
Lump58	LumpLd	Bus161	322.15	None	1	0.0200	50.00	No	10.00
Lump60	LumpLd	Bus163	215.05	None	1	0.0200	50.00	No	10.00
Lump61	LumpLd	Bus164	215.05	None	1	0.0200	50.00	No	10.00
Lump62	LumpLd	Bus165	215.05	None	1	0.0200	50.00	No	10.00
Lump63	LumpLd	Bus166	215.05	None	1	0.0200	50.00	No	10.00
Lump64	LumpLd	Bus167	215.05	None	1	0.0200	50.00	No	10.00
Lump65	LumpLd	Bus168	222.70	None	1	0.0200	50.00	No	10.00
Lump66	LumpLd	Bus169	215.05	None	1	0.0200	50.00	No	10.00
Lump67	LumpLd	Bus170	215.05	None	1	0.0200	50.00	No	10.00
Lump184	LumpLd	Bus162	215.05	None	1	0.0200	50.00	No	10.00
Lump142	LumpLd	Bus244	107.10	None	1	0.0200	50.00	No	10.00
Lump144	LumpLd	Bus246	107.10	None	1	0.0200	50.00	No	10.00
Lump145	LumpLd	Bus249	124.95	None	1	0.0200	50.00	No	10.00
Lump146	LumpLd	Bus248	89.25	None	1	0.0200	50.00	No	10.00
Lump148	LumpLd	Bus250	124.95	None	1	0.0200	50.00	No	10.00
Lump149	LumpLd	Bus251	107.10	None	1	0.0200	50.00	No	10.00
Lump150	LumpLd	Bus252	89.25	None	1	0.0200	50.00	No	10.00
Lump151	LumpLd	Bus254	107.10	None	1	0.0200	50.00	No	10.00
Lump152	LumpLd	Bus253	89.25	None	1	0.0200	50.00	No	10.00
Lump154	LumpLd	Bus256	107.10	None	1	0.0200	50.00	No	10.00

Load			Load	Load	No. of	λ_A	MTTR	Replacement	
								Avail.	Time
ID	Type	Connected Bus ID	kW	Sector	Loads	f / yr	hour	Yes/No	hour
Lump155	LumpLd	Bus257	89.25	None	1	0.0200	50.00	No	10.00
Lump157	LumpLd	Bus259	107.10	None	1	0.0200	50.00	No	10.00
Lump158	LumpLd	Bus260	107.10	None	1	0.0200	50.00	No	10.00
Lump159	LumpLd	Bus261	113.05	None	1	0.0200	50.00	No	10.00
Lump160	LumpLd	Bus264	89.25	None	1	0.0200	50.00	No	10.00
Lump161	LumpLd	Bus263	89.25	None	1	0.0200	50.00	No	10.00
Lump162	LumpLd	Bus262	89.25	None	1	0.0200	50.00	No	10.00
Lump163	LumpLd	Bus265	107.10	None	1	0.0200	50.00	No	10.00
Lump164	LumpLd	Bus266	89.25	None	1	0.0200	50.00	No	10.00
Lump165	LumpLd	Bus267	89.25	None	1	0.0200	50.00	No	10.00
Lump166	LumpLd	Bus268	107.10	None	1	0.0200	50.00	No	10.00
Lump167	LumpLd	Bus269	89.25	None	1	0.0200	50.00	No	10.00
Lump169	LumpLd	Bus271	89.25	None	1	0.0200	50.00	No	10.00
Lump170	LumpLd	Bus272	89.25	None	1	0.0200	50.00	No	10.00
Lump172	LumpLd	Bus274	107.10	None	1	0.0200	50.00	No	10.00
Lump173	LumpLd	Bus275	89.25	None	1	0.0200	50.00	No	10.00
Lump174	LumpLd	Bus276	89.25	None	1	0.0200	50.00	No	10.00
Lump179	LumpLd	Bus247	107.10	None	1	0.0200	50.00	No	10.00
Lump180	LumpLd	Bus255	124.95	None	1	0.0200	50.00	No	10.00
Lump181	LumpLd	Bus258	124.95	None	1	0.0200	50.00	No	10.00
Lump182	LumpLd	Bus270	107.10	None	1	0.0200	50.00	No	10.00
Lump183	LumpLd	Bus273	89.25	None	1	0.0200	50.00	No	10.00
Lump189	LumpLd	Bus277	124.95	None	1	0.0200	50.00	No	10.00

Source Input Data

Source			λ_A	MTTR	Switch Time	Replacement Avail.	Replacement Time
ID	Type	Connected Bus ID	f / yr	hour	hour	Yes/No	hour
U1	Syn. Gen	Grid Bus1	0.0030	2.00	2.00	No	10.00
U2	Syn. Gen	Grid Bus2	0.6430	2.00	2.00	No	10.00

Branch Connections

CKT/Branch		Connected Bus ID	
ID	Type	From Bus	To Bus
Cable74	Cable	Bus93	Bus92
Cable75	Cable	Bus92	Bus94
Cable76	Cable	Bus92	Bus95
Cable77	Cable	Bus96	Bus95
Cable78	Cable	Bus95	Bus97
Cable79	Cable	Bus95	Bus98
Cable80	Cable	Bus99	Bus98
Cable81	Cable	Bus98	Bus100
Cable82	Cable	Bus98	Bus101
Cable83	Cable	Bus102	Bus101
Cable84	Cable	Bus101	Bus103
Cable200	Cable	Bus 53	Bus220
Cable201	Cable	Bus 53	Bus221
Cable202	Cable	Bus 53	Bus222
Cable203	Cable	Bus 54	Bus223
Cable204	Cable	Bus 54	Bus224
Cable205	Cable	Bus 54	Bus225
Cable206	Cable	Bus 55	Bus226
Cable207	Cable	Bus 55	Bus227
Cable208	Cable	Bus 55	Bus228
Cable209	Cable	Bus 56	Bus229
Cable210	Cable	Bus 56	Bus230
Cable211	Cable	Bus 56	Bus231
Cable212	Cable	Bus 58	Bus234
Cable213	Cable	Bus 58	Bus233
Cable214	Cable	Bus 58	Bus232
Cable215	Cable	Bus 59	Bus235
Cable216	Cable	Bus 59	Bus236
Cable217	Cable	Bus 59	Bus237
Cable218	Cable	Bus 60	Bus238
Cable219	Cable	Bus 60	Bus239
Cable220	Cable	Bus 60	Bus240
Cable221	Cable	Bus 61	Bus243
Cable222	Cable	Bus 61	Bus242
Cable223	Cable	Bus 61	Bus241
Cable53	Cable	Bus56	Bus55
Cable54	Cable	Bus55	Bus58
Cable55	Cable	Bus55	Bus59

CKT/Branch		Connected Bus ID	
ID	Type	From Bus	To Bus
Cable56	Cable	Bus60	Bus59
Cable57	Cable	Bus59	Bus61
Cable58	Cable	Bus59	Bus64
Cable59	Cable	Bus66	Bus64
Cable60	Cable	Bus64	Bus68
Cable61	Cable	Bus64	Bus69
Cable62	Cable	Bus70	Bus69
Cable111	Cable	Bus 25	Bus131
Cable112	Cable	Bus 25	Bus132
Cable113	Cable	Bus 25	Bus133
Cable114	Cable	Bus 23	Bus134
Cable115	Cable	Bus 23	Bus135
Cable116	Cable	Bus 23	Bus136
Cable117	Cable	Bus27	Bus137
Cable118	Cable	Bus27	Bus138
Cable119	Cable	Bus27	Bus139
Cable120	Cable	Bus 26	Bus140
Cable121	Cable	Bus 26	Bus141
Cable122	Cable	Bus 26	Bus142
Cable123	Cable	Bus 28	Bus143
Cable124	Cable	Bus 28	Bus144
Cable125	Cable	Bus 28	Bus145
Cable126	Cable	Bus 29	Bus146
Cable127	Cable	Bus 29	Bus147
Cable128	Cable	Bus 29	Bus148
Cable129	Cable	Bus 30	Bus149
Cable130	Cable	Bus 30	Bus150
Cable131	Cable	Bus 30	Bus151
Cable39	Cable	Bus37	Bus36
Cable40	Cable	Bus36	Bus38
Cable41	Cable	Bus36	Bus39
Cable42	Cable	Bus41	Bus39
Cable43	Cable	Bus39	Bus43
Cable44	Cable	Bus39	Bus44
Cable45	Cable	Bus46	Bus44
Cable46	Cable	Bus44	Bus47
Cable47	Cable	Bus44	Bus48
Cable48	Cable	Bus50	Bus48
Cable49	Cable	Bus48	Bus51
Cable50	Cable	Bus48	Bus52

CKT/Branch		Connected Bus ID	
ID	Type	From Bus	To Bus
Cable51	Cable	Bus53	Bus52
Cable52	Cable	Bus52	Bus54
Cable151	Cable	Bus 66	Bus171
Cable152	Cable	Bus 66	Bus172
Cable153	Cable	Bus 66	Bus173
Cable154	Cable	Bus 66	Bus174
Cable155	Cable	Bus 66	Bus175
Cable156	Cable	Bus 64	Bus177
Cable157	Cable	Bus 64	Bus176
Cable158	Cable	Bus 64	Bus178
Cable159	Cable	Bus 64	Bus179
Cable160	Cable	Bus 64	Bus180
Cable161	Cable	Bus 64	Bus181
Cable162	Cable	Bus 64	Bus182
Cable163	Cable	Bus 69	Bus183
Cable164	Cable	Bus 69	Bus184
Cable165	Cable	Bus 69	Bus185
Cable166	Cable	Bus 69	Bus186
Cable167	Cable	Bus 69	Bus187
Cable168	Cable	Bus 70	Bus188
Cable169	Cable	Bus 70	Bus189
Cable170	Cable	Bus 70	Bus190
Cable171	Cable	Bus 70	Bus191
Cable172	Cable	Bus 70	Bus192
Cable173	Cable	Bus 70	Bus193
Cable174	Cable	Bus 79	Bus194
Cable175	Cable	Bus 79	Bus195
Cable176	Cable	Bus 79	Bus196
Cable177	Cable	Bus 79	Bus197
Cable178	Cable	Bus 79	Bus198
Cable179	Cable	Bus 79	Bus199
Cable180	Cable	Bus 80	Bus200
Cable181	Cable	Bus 80	Bus201
Cable182	Cable	Bus 80	Bus202
Cable183	Cable	Bus 80	Bus203
Cable184	Cable	Bus 80	Bus204
Cable185	Cable	Bus 80	Bus205
Cable186	Cable	Bus 82	Bus206
Cable187	Cable	Bus 82	Bus207
Cable188	Cable	Bus 82	Bus208

CKT/Branch		Connected Bus ID	
ID	Type	From Bus	To Bus
Cable189	Cable	Bus 84	Bus209
Cable190	Cable	Bus 84	Bus210
Cable191	Cable	Bus 84	Bus211
Cable192	Cable	Bus 85	Bus212
Cable193	Cable	Bus 85	Bus213
Cable194	Cable	Bus 85	Bus214
Cable195	Cable	Bus 68	Bus215
Cable196	Cable	Bus 68	Bus216
Cable197	Cable	Bus 68	Bus217
Cable198	Cable	Bus 68	Bus218
Cable199	Cable	Bus 68	Bus219
Cable 15	Cable	Bus6	Bus7
Cable16	Cable	Bus6	Bus 8
Cable 16	Cable	Bus 8	Bus 9
Cable17	Cable	Bus10	Bus 8
Cable19	Cable	Bus11	Bus12
Cable20	Cable	Bus13	Bus11
Cable18	Cable	Bus 8	Bus11
Cable21	Cable	Bus11	Bus15
Cable22	Cable	Bus15	Bus16
Cable23	Cable	Bus17	Bus15
Cable24	Cable	Bus15	Bus18
Cable25	Cable	Bus19	Bus18
Cable1	Cable	Bus 21	Bus6
Cable37	Cable	Bus22	Bus34
Cable38	Cable	Bus22	Bus35
Cable101	Cable	Bus 20	Bus121
Cable102	Cable	Bus 20	Bus122
Cable103	Cable	Bus 24	Bus123
Cable104	Cable	Bus 24	Bus124
Cable105	Cable	Bus 23	Bus125
Cable106	Cable	Bus26	Bus126
Cable107	Cable	Bus25	Bus127
Cable108	Cable	Bus28	Bus128
Cable109	Cable	Bus 27	Bus129
Cable110	Cable	Bus29	Bus130
Cable63	Cable	Bus77	Bus72
Cable64	Cable	Bus72	Bus79
Cable65	Cable	Bus72	Bus80
Cable66	Cable	Bus82	Bus80

CKT/Branch		Connected Bus ID	
ID	Type	From Bus	To Bus
Cable67	Cable	Bus80	Bus84
Cable68	Cable	Bus80	Bus85
Cable69	Cable	Bus87	Bus85
Cable70	Cable	Bus85	Bus88
Cable71	Cable	Bus85	Bus89
Cable72	Cable	Bus90	Bus89
Cable73	Cable	Bus89	Bus91
Cable132	Cable	Bus 34	Bus152
Cable133	Cable	Bus 34	Bus153
Cable134	Cable	Bus 32	Bus154
Cable135	Cable	Bus 32	Bus155
Cable136	Cable	Bus 35	Bus156
Cable137	Cable	Bus 35	Bus157
Cable138	Cable	Bus 36	Bus158
Cable139	Cable	Bus 36	Bus159
Cable140	Cable	Bus 37	Bus160
Cable141	Cable	Bus 37	Bus161
Cable142	Cable	Bus 38	Bus162
Cable143	Cable	Bus 38	Bus163
Cable144	Cable	Bus 38	Bus164
Cable145	Cable	Bus 39	Bus165
Cable146	Cable	Bus 39	Bus166
Cable147	Cable	Bus 39	Bus167
Cable148	Cable	Bus 77	Bus168
Cable149	Cable	Bus 77	Bus169
Cable150	Cable	Bus 77	Bus170
Cable85	Cable	Bus105	Bus104
Cable86	Cable	Bus104	Bus106
Cable87	Cable	Bus104	Bus107
Cable88	Cable	Bus108	Bus107
Cable89	Cable	Bus107	Bus109
Cable90	Cable	Bus107	Bus110
Cable91	Cable	Bus111	Bus110
Cable92	Cable	Bus110	Bus112
Cable93	Cable	Bus110	Bus113
Cable94	Cable	Bus114	Bus113
Cable95	Cable	Bus113	Bus115
Cable96	Cable	Bus113	Bus116
Cable97	Cable	Bus117	Bus116
Cable98	Cable	Bus116	Bus118

CKT/Branch		Connected Bus ID	
ID	Type	From Bus	To Bus
Cable99	Cable	Bus116	Bus119
Cable100	Cable	Bus120	Bus119
Cable224	Cable	Bus 41	Bus277
Cable225	Cable	Bus 41	Bus244
Cable226	Cable	Bus 41	Bus246
Cable227	Cable	Bus 43	Bus249
Cable228	Cable	Bus 43	Bus248
Cable229	Cable	Bus 43	Bus247
Cable230	Cable	Bus 44	Bus250
Cable231	Cable	Bus 44	Bus251
Cable232	Cable	Bus 44	Bus252
Cable233	Cable	Bus45	Bus254
Cable234	Cable	Bus45	Bus253
Cable235	Cable	Bus45	Bus255
Cable236	Cable	Bus 46	Bus256
Cable237	Cable	Bus 46	Bus257
Cable238	Cable	Bus 46	Bus258
Cable239	Cable	Bus 47	Bus259
Cable240	Cable	Bus 47	Bus260
Cable241	Cable	Bus 47	Bus261
Cable242	Cable	Bus 48	Bus264
Cable243	Cable	Bus 48	Bus263
Cable244	Cable	Bus 48	Bus262
Cable245	Cable	Bus49	Bus265
Cable246	Cable	Bus49	Bus266
Cable247	Cable	Bus49	Bus267
Cable248	Cable	Bus65	Bus268
Cable249	Cable	Bus65	Bus269
Cable250	Cable	Bus65	Bus270
Cable251	Cable	Bus 51	Bus271
Cable252	Cable	Bus 51	Bus272
Cable253	Cable	Bus 51	Bus273
Cable254	Cable	Bus 87	Bus274
Cable255	Cable	Bus 87	Bus275
Cable256	Cable	Bus 87	Bus276
Cable4	Cable	Main Bus1	Bus55
Cable5	Cable	Main Bus1	Bus72
Cable14	Cable	Bus 5	Bus104
Cable8	Cable	Bus119	Main Bus2
Cable7	Cable	Bus101	Main Bus2

CKT/Branch		Connected Bus ID	
ID	Type	From Bus	To Bus
Cable13	Cable	Bus4	Bus92
Cable3	Cable	Main Bus1	Bus6
Cable12	Cable	Bus3	Bus36
Cable6	Cable	Bus52	Main Bus2
Cable1(GridTOsubstation)	Cable	Grid Bus1	Bus1
Cablel 2	Cable	Bus 2	Grid Bus2
T40	2W XFMR	Bus93	Bus 53
T41	2W XFMR	Bus94	Bus 54
T42	2W XFMR	Bus96	Bus 55
T43	2W XFMR	Bus97	Bus 56
T45	2W XFMR	Bus99	Bus 58
T46	2W XFMR	Bus100	Bus 59
T47	2W XFMR	Bus102	Bus 60
T48	2W XFMR	Bus103	Bus 61
T 12	2W XFMR	Bus56	Bus 23
T 14	2W XFMR	Bus58	Bus 25
T15	2W XFMR	Bus60	Bus 26
T16	2W XFMR	Bus61	Bus27
T17	2W XFMR	Bus66	Bus 28
T18	2W XFMR	Bus68	Bus 29
T19	2W XFMR	Bus70	Bus 30
T51	2W XFMR	Bus37	Bus 64
T52	2W XFMR	Bus38	Bus 66
T54	2W XFMR	Bus41	Bus 68
T55	2W XFMR	Bus43	Bus 69
T56	2W XFMR	Bus46	Bus 70
T62	2W XFMR	Bus47	Bus 79
T63	2W XFMR	Bus50	Bus 80
T65	2W XFMR	Bus51	Bus 82
T67	2W XFMR	Bus53	Bus 84
T68	2W XFMR	Bus54	Bus 85
T3	2W XFMR	Bus 21	Bus22
T 5	2W XFMR	Bus10	Bus 24
T6	2W XFMR	Bus 9	Bus 23
T7	2W XFMR	Bus13	Bus26
T8	2W XFMR	Bus12	Bus25
T9	2W XFMR	Bus17	Bus28
T10	2W XFMR	Bus16	Bus 27
T11	2W XFMR	Bus19	Bus29
T 4	2W XFMR	Bus7	Bus 20

CKT/Branch		Connected Bus ID	
ID	Type	From Bus	To Bus
T20	2W XFMR	Bus77	Bus 32
T22	2W XFMR	Bus79	Bus 34
T23	2W XFMR	Bus82	Bus 35
T24	2W XFMR	Bus84	Bus 36
T25	2W XFMR	Bus87	Bus 37
T26	2W XFMR	Bus88	Bus 38
T27	2W XFMR	Bus90	Bus 39
T60	2W XFMR	Bus91	Bus 77
T28	2W XFMR	Bus105	Bus 41
T30	2W XFMR	Bus106	Bus 43
T31	2W XFMR	Bus108	Bus 44
T32	2W XFMR	Bus109	Bus45
T33	2W XFMR	Bus111	Bus 46
T34	2W XFMR	Bus112	Bus 47
T35	2W XFMR	Bus114	Bus 48
T36	2W XFMR	Bus115	Bus49
T37	2W XFMR	Bus117	Bus65
T38	2W XFMR	Bus118	Bus 51
T70	2W XFMR	Bus120	Bus 87
T1	2W XFMR	Bus1	Main Bus1
T2	2W XFMR	Bus 2	Main Bus2

Sector Interruption Cost

Sector Name	Interruption Duration minutes	Cost $/kW
Agricultural	1.00	0.06
	20.00	0.34
	60.00	0.65
	240.00	2.06
	480.00	4.12
Commercial	1.00	0.38
	20.00	2.97
	60.00	8.55
	240.00	31.32
	480.00	83.01
Govt. & Inst.	1.00	0.04
	20.00	0.37
	60.00	1.49
	240.00	6.56
	480.00	26.04
Industrial	1.00	1.63
	20.00	3.87
	60.00	9.09
	240.00	25.16
	480.00	55.81
Office & bldg	1.00	4.78
	20.00	9.88
	60.00	21.06
	240.00	68.83
	480.00	119.20
Residential	1.00	0.00
	20.00	0.09
	60.00	0.48
	240.00	4.91
	480.00	15.69

Load Point Output Report

Bus			Average Interrupting Rate	Average Outage Duration	Annual Outage Duration	EENS	ECOST	IEAR
ID	Load Sector	Connected Bus ID	f / yr	hour	hr / yr	MW hr / yr	$ / yr	$ / kW hr
Bus1	N/A		0.0870	59.89	5.2100	0.0000	0.00	0.000
Bus 2	N/A		0.6870	7.99	5.4900	0.0000	0.00	0.000
Bus3	N/A		0.7747	19.58	15.1665	0.0000	0.00	0.000
Bus4	N/A		0.7537	18.12	13.6605	0.0000	0.00	0.000
Bus 5	N/A		0.7711	20.17	15.5555	0.0000	0.00	0.000
Bus6	N/A		0.1578	88.62	13.9850	0.0000	0.00	0.000
Bus7	N/A		0.1588	88.22	14.0100	0.0000	0.00	0.000
Bus 8	N/A		0.1594	87.99	14.0250	0.0000	0.00	0.000
Bus 9	N/A		0.1602	87.67	14.0450	0.0000	0.00	0.000
Bus10	N/A		0.1602	87.67	14.0450	0.0000	0.00	0.000
Bus11	N/A		0.1602	87.67	14.0450	0.0000	0.00	0.000
Bus12	N/A		0.1614	87.21	14.0750	0.0000	0.00	0.000
Bus13	N/A		0.1610	87.36	14.0650	0.0000	0.00	0.000
Bus15	N/A		0.1610	87.36	14.0650	0.0000	0.00	0.000
Bus16	N/A		0.1620	86.98	14.0900	0.0000	0.00	0.000
Bus17	N/A		0.1620	86.98	14.0900	0.0000	0.00	0.000
Bus18	N/A		0.1622	86.90	14.0950	0.0000	0.00	0.000
Bus19	N/A		0.1626	86.75	14.1050	0.0000	0.00	0.000
Bus 20	N/A		0.2254	87.76	19.7810	0.0000	0.00	0.000
Bus 21	N/A		0.1586	88.30	14.0050	0.0000	0.00	0.000
Bus22	N/A		0.2252	87.82	19.7760	0.0000	0.00	0.000
Bus 23	N/A		0.2385	82.20	19.6045	0.0000	0.00	0.000
Bus 23	N/A		0.2055	91.52	18.8065	0.0000	0.00	0.000
Bus 24	N/A		0.2268	87.37	19.8160	0.0000	0.00	0.000
Bus25	N/A		0.2067	91.13	18.8365	0.0000	0.00	0.000
Bus 25	N/A		0.2383	82.25	19.5995	0.0000	0.00	0.000
Bus26	N/A		0.2063	91.26	18.8265	0.0000	0.00	0.000
Bus 26	N/A		0.2397	81.91	19.6345	0.0000	0.00	0.000
Bus 27	N/A		0.2073	90.94	18.8515	0.0000	0.00	0.000
Bus27	N/A		0.2397	81.91	19.6345	0.0000	0.00	0.000
Bus28	N/A		0.2073	90.94	18.8515	0.0000	0.00	0.000
Bus 28	N/A		0.2399	81.87	19.6395	0.0000	0.00	0.000
Bus29	N/A		0.2079	90.75	18.8665	0.0000	0.00	0.000
Bus 29	N/A		0.2407	81.68	19.6595	0.0000	0.00	0.000
Bus 30	N/A		0.2411	81.58	19.6695	0.0000	0.00	0.000
Bus 32	N/A		0.2224	86.45	19.2270	0.0000	0.00	0.000
Bus 34	N/A		0.2222	86.51	19.2220	0.0000	0.00	0.000
Bus34	N/A		0.2255	87.73	19.7835	6.3733	0.00	0.000

Bus			Average Interrupting Rate	Average Outage Duration	Annual Outage Duration	EENS	ECOST	IEAR
ID	Load Sector	Connected Bus ID	f / yr	hour	hr / yr	MW hr / yr	$ / yr	$ / kW hr
Bus 35	N/A		0.2222	86.51	19.2220	0.0000	0.00	0.000
Bus35	N/A		0.2255	87.73	19.7835	6.3733	0.00	0.000
Bus36	N/A		0.7743	19.57	15.1565	0.0000	0.00	0.000
Bus 36	N/A		0.2229	86.31	19.2395	0.0000	0.00	0.000
Bus37	N/A		0.7745	19.58	15.1615	0.0000	0.00	0.000
Bus 37	N/A		0.2240	86.01	19.2670	0.0000	0.00	0.000
Bus 38	N/A		0.2450	82.73	20.2690	0.0000	0.00	0.000
Bus38	N/A		0.7745	19.58	15.1615	0.0000	0.00	0.000
Bus39	N/A		0.7731	19.57	15.1265	0.0000	0.00	0.000
Bus 39	N/A		0.2457	82.57	20.2865	0.0000	0.00	0.000
Bus 41	N/A		0.8587	26.00	22.3285	0.0000	0.00	0.000
Bus41	N/A		0.7733	19.57	15.1315	0.0000	0.00	0.000
Bus43	N/A		0.7733	19.57	15.1315	0.0000	0.00	0.000
Bus 43	N/A		0.8597	26.00	22.3535	0.0000	0.00	0.000
Bus 44	N/A		0.8583	26.00	22.3185	0.0000	0.00	0.000
Bus44	N/A		0.7721	19.56	15.1015	0.0000	0.00	0.000
Bus45	N/A		0.8581	26.00	22.3135	0.0000	0.00	0.000
Bus 46	N/A		0.8571	26.00	22.2885	0.0000	0.00	0.000
Bus46	N/A		0.7728	19.56	15.1190	0.0000	0.00	0.000
Bus47	N/A		0.7723	19.56	15.1065	0.0000	0.00	0.000
Bus 47	N/A		0.8572	26.00	22.2910	0.0000	0.00	0.000
Bus 48	N/A		0.8551	26.01	22.2385	0.0000	0.00	0.000
Bus48	N/A		0.7713	19.55	15.0815	0.0000	0.00	0.000
Bus49	N/A		0.8553	26.01	22.2435	0.0000	0.00	0.000
Bus50	N/A		0.7719	19.56	15.0965	0.0000	0.00	0.000
Bus 51	N/A		0.8549	26.01	22.2335	0.0000	0.00	0.000
Bus51	N/A		0.7717	19.56	15.0915	0.0000	0.00	0.000
Bus52	N/A		0.7703	19.55	15.0565	0.0000	0.00	0.000
Bus 53	N/A		0.8414	24.29	20.4360	0.0000	0.00	0.000
Bus53	N/A		0.7705	19.55	15.0615	0.0000	0.00	0.000
Bus54	N/A		0.7707	19.55	15.0665	0.0000	0.00	0.000
Bus 54	N/A		0.8417	24.29	20.4435	0.0000	0.00	0.000
Bus55	N/A		0.1500	85.39	12.8090	0.0000	0.00	0.000
Bus 55	N/A		0.8391	24.29	20.3785	0.0000	0.00	0.000
Bus56	N/A		0.1506	85.15	12.8240	0.0000	0.00	0.000
Bus 56	N/A		0.8391	24.29	20.3785	0.0000	0.00	0.000
Bus 58	N/A		0.8367	24.28	20.3185	0.0000	0.00	0.000
Bus58	N/A		0.1504	85.23	12.8190	0.0000	0.00	0.000
Bus59	N/A		0.1512	84.91	12.8390	0.0000	0.00	0.000
Bus 59	N/A		0.8367	24.28	20.3185	0.0000	0.00	0.000

Bus			Average Interrupting Rate	Average Outage Duration	Annual Outage Duration	EENS	ECOST	IEAR
ID	Load Sector	Connected Bus ID	f / yr	hour	hr / yr	MW hr / yr	$ / yr	$ / kW hr
Bus60	N/A		0.1518	84.68	12.8540	0.0000	0.00	0.000
Bus 60	N/A		0.8363	24.28	20.3085	0.0000	0.00	0.000
Bus61	N/A		0.1518	84.68	12.8540	0.0000	0.00	0.000
Bus 61	N/A		0.8363	24.28	20.3085	0.0000	0.00	0.000
Bus64	N/A		0.1518	84.68	12.8540	0.0000	0.00	0.000
Bus 64	N/A		0.9476	27.42	25.9800	0.0000	0.00	0.000
Bus65	N/A		0.8544	26.01	22.2210	0.0000	0.00	0.000
Bus 66	N/A		0.9050	26.48	23.9610	0.0000	0.00	0.000
Bus66	N/A		0.1520	84.60	12.8590	0.0000	0.00	0.000
Bus 68	N/A		0.9038	26.48	23.9310	0.0000	0.00	0.000
Bus68	N/A		0.1528	84.29	12.8790	0.0000	0.00	0.000
Bus 69	N/A		0.9038	26.48	23.9310	0.0000	0.00	0.000
Bus69	N/A		0.1530	84.21	12.8840	0.0000	0.00	0.000
Bus 70	N/A		0.9246	26.96	24.9280	0.0000	0.00	0.000
Bus70	N/A		0.1532	84.13	12.8890	0.0000	0.00	0.000
Bus72	N/A		0.1550	86.68	13.4360	0.0000	0.00	0.000
Bus 77	N/A		0.2457	82.57	20.2865	0.0000	0.00	0.000
Bus77	N/A		0.1558	86.37	13.4560	0.0000	0.00	0.000
Bus 79	N/A		0.9241	26.96	24.9155	0.0000	0.00	0.000
Bus79	N/A		0.1556	86.45	13.4510	0.0000	0.00	0.000
Bus 80	N/A		0.9237	26.96	24.9055	0.0000	0.00	0.000
Bus80	N/A		0.1554	86.53	13.4460	0.0000	0.00	0.000
Bus82	N/A		0.1556	86.45	13.4510	0.0000	0.00	0.000
Bus 82	N/A		0.8596	25.44	21.8720	0.0000	0.00	0.000
Bus84	N/A		0.1563	86.17	13.4685	0.0000	0.00	0.000
Bus 84	N/A		0.8584	25.45	21.8420	0.0000	0.00	0.000
Bus85	N/A		0.1568	85.98	13.4810	0.0000	0.00	0.000
Bus 85	N/A		0.8586	25.44	21.8470	0.0000	0.00	0.000
Bus 87	N/A		0.8539	26.01	22.2085	0.0000	0.00	0.000
Bus87	N/A		0.1574	85.74	13.4960	0.0000	0.00	0.000
Bus88	N/A		0.1571	85.86	13.4885	0.0000	0.00	0.000
Bus89	N/A		0.1576	85.67	13.5010	0.0000	0.00	0.000
Bus90	N/A		0.1578	85.59	13.5060	0.0000	0.00	0.000
Bus91	N/A		0.1578	85.59	13.5060	0.0000	0.00	0.000
Bus92	N/A		0.7533	18.12	13.6505	0.0000	0.00	0.000
Bus93	N/A		0.7535	18.12	13.6555	0.0000	0.00	0.000
Bus94	N/A		0.7538	18.13	13.6630	0.0000	0.00	0.000
Bus95	N/A		0.7506	18.10	13.5830	0.0000	0.00	0.000
Bus96	N/A		0.7512	18.10	13.5980	0.0000	0.00	0.000
Bus97	N/A		0.7512	18.10	13.5980	0.0000	0.00	0.000

Bus			Average Interrupting Rate	Average Outage Duration	Annual Outage Duration	EENS	ECOST	IEAR
ID	Load Sector	Connected Bus ID	f / yr	hour	hr / yr	MW hr / yr	$ / yr	$ / kW hr
Bus98	N/A		0.7486	18.08	13.5330	0.0000	0.00	0.000
Bus99	N/A		0.7488	18.08	13.5380	0.0000	0.00	0.000
Bus100	N/A		0.7488	18.08	13.5380	0.0000	0.00	0.000
Bus101	N/A		0.7483	18.07	13.5255	0.0000	0.00	0.000
Bus102	N/A		0.7484	18.08	13.5280	0.0000	0.00	0.000
Bus103	N/A		0.7484	18.08	13.5280	0.0000	0.00	0.000
Bus104	N/A		0.7707	20.17	15.5455	0.0000	0.00	0.000
Bus105	N/A		0.7708	20.17	15.5480	0.0000	0.00	0.000
Bus106	N/A		0.7718	20.18	15.5730	0.0000	0.00	0.000
Bus107	N/A		0.7700	20.17	15.5280	0.0000	0.00	0.000
Bus108	N/A		0.7704	20.17	15.5380	0.0000	0.00	0.000
Bus109	N/A		0.7702	20.17	15.5330	0.0000	0.00	0.000
Bus110	N/A		0.7688	20.16	15.4980	0.0000	0.00	0.000
Bus111	N/A		0.7692	20.16	15.5080	0.0000	0.00	0.000
Bus112	N/A		0.7693	20.16	15.5105	0.0000	0.00	0.000
Bus113	N/A		0.7670	20.15	15.4530	0.0000	0.00	0.000
Bus114	N/A		0.7672	20.15	15.4580	0.0000	0.00	0.000
Bus115	N/A		0.7674	20.15	15.4630	0.0000	0.00	0.000
Bus116	N/A		0.7664	20.14	15.4380	0.0000	0.00	0.000
Bus117	N/A		0.7665	20.14	15.4405	0.0000	0.00	0.000
Bus118	N/A		0.7670	20.15	15.4530	0.0000	0.00	0.000
Bus119	N/A		0.7659	20.14	15.4255	0.0000	0.00	0.000
Bus120	N/A		0.7660	20.14	15.4280	0.0000	0.00	0.000
Bus121	N/A		0.2257	87.68	19.7885	6.3749	0.00	0.000
Bus122	N/A		0.2257	87.68	19.7885	6.3749	0.00	0.000
Bus123	N/A		0.2271	87.29	19.8235	6.3861	0.00	0.000
Bus124	N/A		0.2271	87.29	19.8235	6.3861	0.00	0.000
Bus125	N/A		0.2058	91.42	18.8140	8.4117	0.00	0.000
Bus126	N/A		0.2066	91.16	18.8340	8.4207	0.00	0.000
Bus127	N/A		0.2070	91.03	18.8440	8.4252	0.00	0.000
Bus128	N/A		0.2076	90.84	18.8590	11.8142	0.00	0.000
Bus129	N/A		0.2076	90.84	18.8590	12.1509	0.00	0.000
Bus130	N/A		0.2082	90.65	18.8740	12.6579	0.00	0.000
Bus131	N/A		0.2386	82.18	19.6070	4.2165	0.00	0.000
Bus132	N/A		0.2386	82.18	19.6070	4.1998	0.00	0.000
Bus133	N/A		0.2386	82.18	19.6070	4.1998	0.00	0.000
Bus134	N/A		0.2388	82.13	19.6120	4.2176	0.00	0.000
Bus135	N/A		0.2388	82.13	19.6120	4.2009	0.00	0.000
Bus136	N/A		0.2388	82.13	19.6120	4.2009	0.00	0.000
Bus137	N/A		0.2400	81.84	19.6420	4.2073	0.00	0.000

Bus			Average Interrupting Rate	Average Outage Duration	Annual Outage Duration	EENS	ECOST	IEAR
ID	Load Sector	Connected Bus ID	f / yr	hour	hr / yr	MW hr / yr	$ / yr	$ / kW hr
Bus138	N/A		0.2400	81.84	19.6420	4.2073	0.00	0.000
Bus139	N/A		0.2400	81.84	19.6420	3.5061	0.00	0.000
Bus140	N/A		0.2400	81.84	19.6420	4.2073	0.00	0.000
Bus141	N/A		0.2400	81.84	19.6420	4.2073	0.00	0.000
Bus142	N/A		0.2400	81.84	19.6420	4.2073	0.00	0.000
Bus143	N/A		0.2402	81.79	19.6470	3.5070	0.00	0.000
Bus144	N/A		0.2402	81.79	19.6470	4.2084	0.00	0.000
Bus145	N/A		0.2402	81.79	19.6470	4.2084	0.00	0.000
Bus146	N/A		0.2410	81.61	19.6670	3.5273	0.00	0.000
Bus147	N/A		0.2410	81.61	19.6670	4.2294	0.00	0.000
Bus148	N/A		0.2410	81.61	19.6670	4.2294	0.00	0.000
Bus149	N/A		0.2414	81.51	19.6770	3.5291	0.00	0.000
Bus150	N/A		0.2414	81.51	19.6770	4.2148	0.00	0.000
Bus151	N/A		0.2414	81.51	19.6770	4.2315	0.00	0.000
Bus152	N/A		0.2225	86.42	19.2295	6.1948	0.00	0.000
Bus153	N/A		0.2225	86.42	19.2295	6.1948	0.00	0.000
Bus154	N/A		0.2227	86.37	19.2345	6.1964	0.00	0.000
Bus155	N/A		0.2227	86.37	19.2345	6.1964	0.00	0.000
Bus156	N/A		0.2225	86.42	19.2295	6.1948	0.00	0.000
Bus157	N/A		0.2225	86.42	19.2295	6.1948	0.00	0.000
Bus158	N/A		0.2232	86.23	19.2470	6.2004	0.00	0.000
Bus159	N/A		0.2232	86.23	19.2470	6.2004	0.00	0.000
Bus160	N/A		0.2243	85.93	19.2745	6.2093	0.00	0.000
Bus161	N/A		0.2243	85.93	19.2745	6.2093	0.00	0.000
Bus162	N/A		0.2453	82.66	20.2765	4.3605	0.00	0.000
Bus163	N/A		0.2453	82.66	20.2765	4.3605	0.00	0.000
Bus164	N/A		0.2453	82.66	20.2765	4.3605	0.00	0.000
Bus165	N/A		0.2460	82.50	20.2940	4.3642	0.00	0.000
Bus166	N/A		0.2460	82.50	20.2940	4.3642	0.00	0.000
Bus167	N/A		0.2460	82.50	20.2940	4.3642	0.00	0.000
Bus168	N/A		0.2460	82.50	20.2940	4.5195	0.00	0.000
Bus169	N/A		0.2460	82.50	20.2940	4.3642	0.00	0.000
Bus170	N/A		0.2460	82.50	20.2940	4.3642	0.00	0.000
Bus171	N/A		0.9053	26.48	23.9685	1.3039	0.00	0.000
Bus172	N/A		0.9053	26.48	23.9685	1.3039	0.00	0.000
Bus173	N/A		0.9053	26.48	23.9685	1.3039	0.00	0.000
Bus174	N/A		0.9053	26.48	23.9685	1.3039	0.00	0.000
Bus175	N/A		0.9053	26.48	23.9685	1.0390	0.00	0.000
Bus176	N/A		0.9479	27.42	25.9875	0.5743	0.00	0.000
Bus177	N/A		0.9479	27.42	25.9875	0.2651	0.00	0.000

Bus			Average Interrupting Rate	Average Outage Duration	Annual Outage Duration	EENS	ECOST	IEAR
ID	Load Sector	Connected Bus ID	f / yr	hour	hr / yr	MW hr / yr	$ / yr	$ / kW hr
Bus178	N/A		0.9479	27.42	25.9875	0.5743	0.00	0.000
Bus179	N/A		0.9479	27.42	25.9875	0.9278	0.00	0.000
Bus180	N/A		0.9479	27.42	25.9875	0.9278	0.00	0.000
Bus181	N/A		0.9479	27.42	25.9875	0.9278	0.00	0.000
Bus182	N/A		0.9479	27.42	25.9875	0.9278	0.00	0.000
Bus183	N/A		0.9041	26.48	23.9385	1.0377	0.00	0.000
Bus184	N/A		0.9041	26.48	23.9385	1.3023	0.00	0.000
Bus185	N/A		0.9041	26.48	23.9385	1.3023	0.00	0.000
Bus186	N/A		0.9041	26.48	23.9385	1.1802	0.00	0.000
Bus187	N/A		0.9041	26.48	23.9385	1.3023	0.00	0.000
Bus188	N/A		0.9249	26.96	24.9355	1.8016	0.00	0.000
Bus189	N/A		0.9249	26.96	24.9355	1.8016	0.00	0.000
Bus190	N/A		0.9249	26.96	24.9355	1.8016	0.00	0.000
Bus191	N/A		0.9249	26.96	24.9355	1.8016	0.00	0.000
Bus192	N/A		0.9249	26.96	24.9355	1.8016	0.00	0.000
Bus193	N/A		0.9249	26.96	24.9355	1.4201	0.00	0.000
Bus194	N/A		0.9244	26.96	24.9230	1.8007	0.00	0.000
Bus195	N/A		0.9244	26.96	24.9230	1.8007	0.00	0.000
Bus196	N/A		0.9244	26.96	24.9230	1.8007	0.00	0.000
Bus197	N/A		0.9244	26.96	24.9230	1.8007	0.00	0.000
Bus198	N/A		0.9244	26.96	24.9230	1.8007	0.00	0.000
Bus199	N/A		0.9244	26.96	24.9230	1.8007	0.00	0.000
Bus200	N/A		0.9240	26.96	24.9130	1.8000	0.00	0.000
Bus201	N/A		0.9240	26.96	24.9130	1.8000	0.00	0.000
Bus202	N/A		0.9240	26.96	24.9130	1.8000	0.00	0.000
Bus203	N/A		0.9240	26.96	24.9130	1.8000	0.00	0.000
Bus204	N/A		0.9240	26.96	24.9130	1.8000	0.00	0.000
Bus205	N/A		0.9240	26.96	24.9130	1.8000	0.00	0.000
Bus206	N/A		0.8599	25.44	21.8795	3.1430	0.00	0.000
Bus207	N/A		0.8599	25.44	21.8795	3.1430	0.00	0.000
Bus208	N/A		0.8599	25.44	21.8795	3.1430	0.00	0.000
Bus209	N/A		0.8587	25.44	21.8495	3.1387	0.00	0.000
Bus210	N/A		0.8587	25.44	21.8495	3.1387	0.00	0.000
Bus211	N/A		0.8587	25.44	21.8495	3.1387	0.00	0.000
Bus212	N/A		0.8589	25.44	21.8545	3.1394	0.00	0.000
Bus213	N/A		0.8589	25.44	21.8545	3.1394	0.00	0.000
Bus214	N/A		0.8589	25.44	21.8545	3.1394	0.00	0.000
Bus215	N/A		0.9041	26.48	23.9385	1.0377	0.00	0.000
Bus216	N/A		0.9041	26.48	23.9385	1.3023	0.00	0.000
Bus217	N/A		0.9041	26.48	23.9385	1.3023	0.00	0.000

Bus			Average Interrupting Rate	Average Outage Duration	Annual Outage Duration	EENS	ECOST	IEAR
ID	Load Sector	Connected Bus ID	f / yr	hour	hr / yr	MW hr / yr	$ / yr	$ / kW hr
Bus218	N/A		0.9041	26.48	23.9385	1.7296	0.00	0.000
Bus219	N/A		0.9041	26.48	23.9385	1.3023	0.00	0.000
Bus220	N/A		0.8417	24.29	20.4435	3.3016	0.00	0.000
Bus221	N/A		0.8417	24.29	20.4435	2.9020	0.00	0.000
Bus222	N/A		0.8417	24.29	20.4435	2.9020	0.00	0.000
Bus223	N/A		0.8420	24.29	20.4510	2.9030	0.00	0.000
Bus224	N/A		0.8420	24.29	20.4510	2.9030	0.00	0.000
Bus225	N/A		0.8420	24.29	20.4510	2.9030	0.00	0.000
Bus226	N/A		0.8394	24.29	20.3860	2.8938	0.00	0.000
Bus227	N/A		0.8394	24.29	20.3860	2.8938	0.00	0.000
Bus228	N/A		0.8394	24.29	20.3860	2.8938	0.00	0.000
Bus229	N/A		0.8394	24.29	20.3860	2.8938	0.00	0.000
Bus230	N/A		0.8394	24.29	20.3860	2.8938	0.00	0.000
Bus231	N/A		0.8394	24.29	20.3860	2.8938	0.00	0.000
Bus232	N/A		0.8370	24.28	20.3260	2.8853	0.00	0.000
Bus233	N/A		0.8370	24.28	20.3260	2.8853	0.00	0.000
Bus234	N/A		0.8370	24.28	20.3260	2.8853	0.00	0.000
Bus235	N/A		0.8370	24.28	20.3260	2.9026	0.00	0.000
Bus236	N/A		0.8370	24.28	20.3260	2.9198	0.00	0.000
Bus237	N/A		0.8370	24.28	20.3260	2.9198	0.00	0.000
Bus238	N/A		0.8366	24.28	20.3160	2.9184	0.00	0.000
Bus239	N/A		0.8366	24.28	20.3160	2.9184	0.00	0.000
Bus240	N/A		0.8366	24.28	20.3160	2.9184	0.00	0.000
Bus241	N/A		0.8366	24.28	20.3160	2.9011	0.00	0.000
Bus242	N/A		0.8366	24.28	20.3160	2.9011	0.00	0.000
Bus243	N/A		0.8366	24.28	20.3160	2.9184	0.00	0.000
Bus244	N/A		0.8590	26.00	22.3360	2.3922	0.00	0.000
Bus246	N/A		0.8590	26.00	22.3360	2.3922	0.00	0.000
Bus247	N/A		0.8600	26.00	22.3610	2.3949	0.00	0.000
Bus248	N/A		0.8600	26.00	22.3610	1.9957	0.00	0.000
Bus249	N/A		0.8600	26.00	22.3610	2.7940	0.00	0.000
Bus250	N/A		0.8586	26.00	22.3260	2.7896	0.00	0.000
Bus251	N/A		0.8586	26.00	22.3260	2.3911	0.00	0.000
Bus252	N/A		0.8586	26.00	22.3260	1.9926	0.00	0.000
Bus253	N/A		0.8584	26.00	22.3210	1.9921	0.00	0.000
Bus254	N/A		0.8584	26.00	22.3210	2.3906	0.00	0.000
Bus255	N/A		0.8584	26.00	22.3210	2.7890	0.00	0.000
Bus256	N/A		0.8574	26.00	22.2960	2.3879	0.00	0.000
Bus257	N/A		0.8574	26.00	22.2960	1.9899	0.00	0.000
Bus258	N/A		0.8574	26.00	22.2960	2.7859	0.00	0.000

Bus			Average Interrupting Rate	Average Outage Duration	Annual Outage Duration	EENS	ECOST	IEAR
ID	Load Sector	Connected Bus ID	f / yr	hour	hr / yr	MW hr / yr	$ / yr	$ / kW hr
Bus259	N/A		0.8575	26.00	22.2985	2.3882	0.00	0.000
Bus260	N/A		0.8575	26.00	22.2985	2.3882	0.00	0.000
Bus261	N/A		0.8575	26.00	22.2985	2.5208	0.00	0.000
Bus262	N/A		0.8554	26.01	22.2460	1.9855	0.00	0.000
Bus263	N/A		0.8554	26.01	22.2460	1.9855	0.00	0.000
Bus264	N/A		0.8554	26.01	22.2460	1.9855	0.00	0.000
Bus265	N/A		0.8556	26.01	22.2510	2.3831	0.00	0.000
Bus266	N/A		0.8556	26.01	22.2510	1.9859	0.00	0.000
Bus267	N/A		0.8556	26.01	22.2510	1.9859	0.00	0.000
Bus268	N/A		0.8547	26.01	22.2285	2.3807	0.00	0.000
Bus269	N/A		0.8547	26.01	22.2285	1.9839	0.00	0.000
Bus270	N/A		0.8547	26.01	22.2285	2.3807	0.00	0.000
Bus271	N/A		0.8552	26.01	22.2410	1.9850	0.00	0.000
Bus272	N/A		0.8552	26.01	22.2410	1.9850	0.00	0.000
Bus273	N/A		0.8552	26.01	22.2410	1.9850	0.00	0.000
Bus274	N/A		0.8542	26.01	22.2160	2.3793	0.00	0.000
Bus275	N/A		0.8542	26.01	22.2160	1.9828	0.00	0.000
Bus276	N/A		0.8542	26.01	22.2160	1.9828	0.00	0.000
Bus277	N/A		0.8590	26.00	22.3360	2.7909	0.00	0.000
Grid Bus1	N/A		0.0550	80.18	4.4100	0.0000	0.00	0.000
Grid Bus2	N/A		0.6750	7.69	5.1900	0.0000	0.00	0.000
Main Bus1	N/A		0.1000	76.12	7.6120	0.0000	0.00	0.000
Main Bus2	N/A		0.7000	11.27	7.8920	0.0000	0.00	0.000
Lump117	None	Bus220	0.8417	24.29	20.4435	3.3016	0.00	0.000
Lump118	None	Bus221	0.8417	24.29	20.4435	2.9020	0.00	0.000
Lump119	None	Bus222	0.8417	24.29	20.4435	2.9020	0.00	0.000
Lump120	None	Bus223	0.8420	24.29	20.4510	2.9030	0.00	0.000
Lump121	None	Bus224	0.8420	24.29	20.4510	2.9030	0.00	0.000
Lump122	None	Bus225	0.8420	24.29	20.4510	2.9030	0.00	0.000
Lump123	None	Bus226	0.8394	24.29	20.3860	2.8938	0.00	0.000
Lump124	None	Bus227	0.8394	24.29	20.3860	2.8938	0.00	0.000
Lump125	None	Bus228	0.8394	24.29	20.3860	2.8938	0.00	0.000
Lump126	None	Bus229	0.8394	24.29	20.3860	2.8938	0.00	0.000
Lump127	None	Bus230	0.8394	24.29	20.3860	2.8938	0.00	0.000
Lump129	None	Bus234	0.8370	24.28	20.3260	2.8853	0.00	0.000
Lump130	None	Bus233	0.8370	24.28	20.3260	2.8853	0.00	0.000
Lump132	None	Bus235	0.8370	24.28	20.3260	2.9026	0.00	0.000
Lump133	None	Bus236	0.8370	24.28	20.3260	2.9198	0.00	0.000
Lump135	None	Bus240	0.8366	24.28	20.3160	2.9184	0.00	0.000
Lump136	None	Bus239	0.8366	24.28	20.3160	2.9184	0.00	0.000

Bus			Average Interrupting Rate	Average Outage Duration	Annual Outage Duration	EENS	ECOST	IEAR
ID	Load Sector	Connected Bus ID	f / yr	hour	hr / yr	MW hr / yr	$ / yr	$ / kW hr
Lump138	None	Bus243	0.8366	24.28	20.3160	2.9184	0.00	0.000
Lump139	None	Bus242	0.8366	24.28	20.3160	2.9011	0.00	0.000
Lump140	None	Bus241	0.8366	24.28	20.3160	2.9011	0.00	0.000
Lump175	None	Bus231	0.8394	24.29	20.3860	2.8938	0.00	0.000
Lump176	None	Bus232	0.8370	24.28	20.3260	2.8853	0.00	0.000
Lump177	None	Bus237	0.8370	24.28	20.3260	2.9198	0.00	0.000
Lump178	None	Bus238	0.8366	24.28	20.3160	2.9184	0.00	0.000
Lump19	None	Bus134	0.2388	82.13	19.6120	4.2176	0.00	0.000
Lump20	None	Bus135	0.2388	82.13	19.6120	4.2009	0.00	0.000
Lump21	None	Bus136	0.2388	82.13	19.6120	4.2009	0.00	0.000
Lump22	None	Bus131	0.2386	82.18	19.6070	4.2165	0.00	0.000
Lump23	None	Bus132	0.2386	82.18	19.6070	4.1998	0.00	0.000
Lump24	None	Bus133	0.2386	82.18	19.6070	4.1998	0.00	0.000
Lump25	None	Bus140	0.2400	81.84	19.6420	4.2073	0.00	0.000
Lump26	None	Bus141	0.2400	81.84	19.6420	4.2073	0.00	0.000
Lump27	None	Bus142	0.2400	81.84	19.6420	4.2073	0.00	0.000
Lump28	None	Bus137	0.2400	81.84	19.6420	4.2073	0.00	0.000
Lump31	None	Bus138	0.2400	81.84	19.6420	4.2073	0.00	0.000
Lump32	None	Bus139	0.2400	81.84	19.6420	3.5061	0.00	0.000
Lump33	None	Bus143	0.2402	81.79	19.6470	3.5070	0.00	0.000
Lump34	None	Bus144	0.2402	81.79	19.6470	4.2084	0.00	0.000
Lump38	None	Bus145	0.2402	81.79	19.6470	4.2084	0.00	0.000
Lump40	None	Bus146	0.2410	81.61	19.6670	3.5273	0.00	0.000
Lump41	None	Bus147	0.2410	81.61	19.6670	4.2294	0.00	0.000
Lump43	None	Bus148	0.2410	81.61	19.6670	4.2294	0.00	0.000
Lump45	None	Bus149	0.2414	81.51	19.6770	3.5291	0.00	0.000
Lump46	None	Bus150	0.2414	81.51	19.6770	4.2148	0.00	0.000
Lump48	None	Bus151	0.2414	81.51	19.6770	4.2315	0.00	0.000
Lump68	None	Bus177	0.9479	27.42	25.9875	0.2651	0.00	0.000
Lump69	None	Bus176	0.9479	27.42	25.9875	0.5743	0.00	0.000
Lump70	None	Bus178	0.9479	27.42	25.9875	0.5743	0.00	0.000
Lump71	None	Bus179	0.9479	27.42	25.9875	0.9278	0.00	0.000
Lump72	None	Bus180	0.9479	27.42	25.9875	0.9278	0.00	0.000
Lump73	None	Bus181	0.9479	27.42	25.9875	0.9278	0.00	0.000
Lump74	None	Bus182	0.9479	27.42	25.9875	0.9278	0.00	0.000
Lump75	None	Bus175	0.9053	26.48	23.9685	1.0390	0.00	0.000
Lump76	None	Bus174	0.9053	26.48	23.9685	1.3039	0.00	0.000
Lump77	None	Bus173	0.9053	26.48	23.9685	1.3039	0.00	0.000
Lump78	None	Bus172	0.9053	26.48	23.9685	1.3039	0.00	0.000
Lump79	None	Bus171	0.9053	26.48	23.9685	1.3039	0.00	0.000

Bus			Average Interrupting Rate	Average Outage Duration	Annual Outage Duration	EENS	ECOST	IEAR
ID	Load Sector	Connected Bus ID	f / yr	hour	hr / yr	MW hr / yr	$ / yr	$ / kW hr
Lump80	None	Bus219	0.9041	26.48	23.9385	1.3023	0.00	0.000
Lump81	None	Bus218	0.9041	26.48	23.9385	1.7296	0.00	0.000
Lump82	None	Bus217	0.9041	26.48	23.9385	1.3023	0.00	0.000
Lump83	None	Bus216	0.9041	26.48	23.9385	1.3023	0.00	0.000
Lump84	None	Bus215	0.9041	26.48	23.9385	1.0377	0.00	0.000
Lump85	None	Bus183	0.9041	26.48	23.9385	1.0377	0.00	0.000
Lump86	None	Bus184	0.9041	26.48	23.9385	1.3023	0.00	0.000
Lump87	None	Bus185	0.9041	26.48	23.9385	1.3023	0.00	0.000
Lump88	None	Bus186	0.9041	26.48	23.9385	1.1802	0.00	0.000
Lump89	None	Bus187	0.9041	26.48	23.9385	1.3023	0.00	0.000
Lump90	None	Bus188	0.9249	26.96	24.9355	1.8016	0.00	0.000
Lump91	None	Bus189	0.9249	26.96	24.9355	1.8016	0.00	0.000
Lump92	None	Bus190	0.9249	26.96	24.9355	1.8016	0.00	0.000
Lump93	None	Bus191	0.9249	26.96	24.9355	1.8016	0.00	0.000
Lump94	None	Bus192	0.9249	26.96	24.9355	1.8016	0.00	0.000
Lump95	None	Bus193	0.9249	26.96	24.9355	1.4201	0.00	0.000
Lump96	None	Bus194	0.9244	26.96	24.9230	1.8007	0.00	0.000
Lump97	None	Bus195	0.9244	26.96	24.9230	1.8007	0.00	0.000
Lump98	None	Bus196	0.9244	26.96	24.9230	1.8007	0.00	0.000
Lump99	None	Bus197	0.9244	26.96	24.9230	1.8007	0.00	0.000
Lump100	None	Bus198	0.9244	26.96	24.9230	1.8007	0.00	0.000
Lump101	None	Bus199	0.9244	26.96	24.9230	1.8007	0.00	0.000
Lump102	None	Bus200	0.9240	26.96	24.9130	1.8000	0.00	0.000
Lump103	None	Bus201	0.9240	26.96	24.9130	1.8000	0.00	0.000
Lump104	None	Bus202	0.9240	26.96	24.9130	1.8000	0.00	0.000
Lump105	None	Bus203	0.9240	26.96	24.9130	1.8000	0.00	0.000
Lump106	None	Bus204	0.9240	26.96	24.9130	1.8000	0.00	0.000
Lump107	None	Bus205	0.9240	26.96	24.9130	1.8000	0.00	0.000
Lump108	None	Bus206	0.8599	25.44	21.8795	3.1430	0.00	0.000
Lump109	None	Bus207	0.8599	25.44	21.8795	3.1430	0.00	0.000
Lump110	None	Bus208	0.8599	25.44	21.8795	3.1430	0.00	0.000
Lump111	None	Bus209	0.8587	25.44	21.8495	3.1387	0.00	0.000
Lump112	None	Bus210	0.8587	25.44	21.8495	3.1387	0.00	0.000
Lump113	None	Bus211	0.8587	25.44	21.8495	3.1387	0.00	0.000
Lump114	None	Bus214	0.8589	25.44	21.8545	3.1394	0.00	0.000
Lump115	None	Bus213	0.8589	25.44	21.8545	3.1394	0.00	0.000
Lump116	None	Bus212	0.8589	25.44	21.8545	3.1394	0.00	0.000
Lump16	None	Bus128	0.2076	90.84	18.8590	11.8142	0.00	0.000
Lump17	None	Bus129	0.2076	90.84	18.8590	12.1509	0.00	0.000
Lump18	None	Bus130	0.2082	90.65	18.8740	12.6579	0.00	0.000

Bus			Average Interrupting Rate	Average Outage Duration	Annual Outage Duration	EENS	ECOST	IEAR
ID	Load Sector	Connected Bus ID	f / yr	hour	hr / yr	MW hr / yr	$ / yr	$ / kW hr
Lump1	None	Bus34	0.2255	87.73	19.7835	6.3733	0.00	0.000
Lump2	None	Bus35	0.2255	87.73	19.7835	6.3733	0.00	0.000
Lump3	None	Bus121	0.2257	87.68	19.7885	6.3749	0.00	0.000
Lump4	None	Bus122	0.2257	87.68	19.7885	6.3749	0.00	0.000
Lump10	None	Bus123	0.2271	87.29	19.8235	6.3861	0.00	0.000
Lump11	None	Bus124	0.2271	87.29	19.8235	6.3861	0.00	0.000
Lump13	None	Bus125	0.2058	91.42	18.8140	8.4117	0.00	0.000
Lump14	None	Bus126	0.2066	91.16	18.8340	8.4207	0.00	0.000
Lump15	None	Bus127	0.2070	91.03	18.8440	8.4252	0.00	0.000
Lump49	None	Bus154	0.2227	86.37	19.2345	6.1964	0.00	0.000
Lump50	None	Bus155	0.2227	86.37	19.2345	6.1964	0.00	0.000
Lump51	None	Bus152	0.2225	86.42	19.2295	6.1948	0.00	0.000
Lump52	None	Bus153	0.2225	86.42	19.2295	6.1948	0.00	0.000
Lump53	None	Bus156	0.2225	86.42	19.2295	6.1948	0.00	0.000
Lump54	None	Bus157	0.2225	86.42	19.2295	6.1948	0.00	0.000
Lump55	None	Bus158	0.2232	86.23	19.2470	6.2004	0.00	0.000
Lump56	None	Bus159	0.2232	86.23	19.2470	6.2004	0.00	0.000
Lump57	None	Bus160	0.2243	85.93	19.2745	6.2093	0.00	0.000
Lump58	None	Bus161	0.2243	85.93	19.2745	6.2093	0.00	0.000
Lump60	None	Bus163	0.2453	82.66	20.2765	4.3605	0.00	0.000
Lump61	None	Bus164	0.2453	82.66	20.2765	4.3605	0.00	0.000
Lump62	None	Bus165	0.2460	82.50	20.2940	4.3642	0.00	0.000
Lump63	None	Bus166	0.2460	82.50	20.2940	4.3642	0.00	0.000
Lump64	None	Bus167	0.2460	82.50	20.2940	4.3642	0.00	0.000
Lump65	None	Bus168	0.2460	82.50	20.2940	4.5195	0.00	0.000
Lump66	None	Bus169	0.2460	82.50	20.2940	4.3642	0.00	0.000
Lump67	None	Bus170	0.2460	82.50	20.2940	4.3642	0.00	0.000
Lump184	None	Bus162	0.2453	82.66	20.2765	4.3605	0.00	0.000
Lump142	None	Bus244	0.8590	26.00	22.3360	2.3922	0.00	0.000
Lump144	None	Bus246	0.8590	26.00	22.3360	2.3922	0.00	0.000
Lump145	None	Bus249	0.8600	26.00	22.3610	2.7940	0.00	0.000
Lump146	None	Bus248	0.8600	26.00	22.3610	1.9957	0.00	0.000
Lump148	None	Bus250	0.8586	26.00	22.3260	2.7896	0.00	0.000
Lump149	None	Bus251	0.8586	26.00	22.3260	2.3911	0.00	0.000
Lump150	None	Bus252	0.8586	26.00	22.3260	1.9926	0.00	0.000
Lump151	None	Bus254	0.8584	26.00	22.3210	2.3906	0.00	0.000
Lump152	None	Bus253	0.8584	26.00	22.3210	1.9921	0.00	0.000
Lump154	None	Bus256	0.8574	26.00	22.2960	2.3879	0.00	0.000
Lump155	None	Bus257	0.8574	26.00	22.2960	1.9899	0.00	0.000
Lump157	None	Bus259	0.8575	26.00	22.2985	2.3882	0.00	0.000

Bus			Average Interrupting Rate	Average Outage Duration	Annual Outage Duration	EENS	ECOST	IEAR
ID	Load Sector	Connected Bus ID	f / yr	hour	hr / yr	MW hr / yr	$ / yr	$ / kW hr
Lump158	None	Bus260	0.8575	26.00	22.2985	2.3882	0.00	0.000
Lump159	None	Bus261	0.8575	26.00	22.2985	2.5208	0.00	0.000
Lump160	None	Bus264	0.8554	26.01	22.2460	1.9855	0.00	0.000
Lump161	None	Bus263	0.8554	26.01	22.2460	1.9855	0.00	0.000
Lump162	None	Bus262	0.8554	26.01	22.2460	1.9855	0.00	0.000
Lump163	None	Bus265	0.8556	26.01	22.2510	2.3831	0.00	0.000
Lump164	None	Bus266	0.8556	26.01	22.2510	1.9859	0.00	0.000
Lump165	None	Bus267	0.8556	26.01	22.2510	1.9859	0.00	0.000
Lump166	None	Bus268	0.8547	26.01	22.2285	2.3807	0.00	0.000
Lump167	None	Bus269	0.8547	26.01	22.2285	1.9839	0.00	0.000
Lump169	None	Bus271	0.8552	26.01	22.2410	1.9850	0.00	0.000
Lump170	None	Bus272	0.8552	26.01	22.2410	1.9850	0.00	0.000
Lump172	None	Bus274	0.8542	26.01	22.2160	2.3793	0.00	0.000
Lump173	None	Bus275	0.8542	26.01	22.2160	1.9828	0.00	0.000
Lump174	None	Bus276	0.8542	26.01	22.2160	1.9828	0.00	0.000
Lump179	None	Bus247	0.8600	26.00	22.3610	2.3949	0.00	0.000
Lump180	None	Bus255	0.8584	26.00	22.3210	2.7890	0.00	0.000
Lump181	None	Bus258	0.8574	26.00	22.2960	2.7859	0.00	0.000
Lump182	None	Bus270	0.8547	26.01	22.2285	2.3807	0.00	0.000
Lump183	None	Bus273	0.8552	26.01	22.2410	1.9850	0.00	0.000
Lump189	None	Bus277	0.8590	26.00	22.3360	2.7909	0.00	0.000
U1	None	Grid Bus1	0.0550	80.18	4.4100	0.0000	0.00	0.000
U2	None	Grid Bus2	0.6750	7.69	5.1900	0.0000	0.00	0.000

Expected Interrupting Cost (ECOST)
Sensitivity Analysis

System/Bus/Load Point		Contributing Element		ECOST
ID	Type	ID	Type	$ / yr

Expected Energy Not Supplied (EENS)
Sensitivity Analysis

System/Bus/Load Point		Contributing Element		EENS
ID	Type	ID	Type	MW hr / yr

SUMMARY

System Indexes

SAIFI	0.6650 f / customer.yr
SAIDI	21.7096 hr / customer.yr
CAIDI	32.648 hr / customer interruption
ASAI	0.9975 pu
ASUI	0.00248 pu
EENS	516.672 MW hr / yr
ECOST	0.00 $ / yr
AENS	3.2701 MW hr / customer.yr
IEAR	0.000 $ / kW hr

SAIFI	System Average Interruption Frequency Index
SAIDI	System Average Interruption Duration Index
CAIDI	Customer Average Interruption Duration Index
ASAI	Average service Availability Index
ASUI	Average Service Unavailability Index
EENS	Expected Energy Not Supplied
ECOST	Expected Interruption Cost
AENS	Average Energy Not Supplied
IEAR	Interruption Energy Assessment Rate