

### System Impedance and Short Circuit Capabilities\*

Division	Substation	Town	Base kV	--SLG---	--TPH---	Thevenin Impedances (Ohms)			
						Rpos	Xpos	Rzero	Xzero
Northern	Keene Road	Chester	345						
Bangor	Orrington	Orrington	345						
Bangor	Orrington	Orrington	115						
Bangor	Graham	Veazie	115						
Bangor	Betts Rd	Orrington	115						
Bangor	Perc	Orrington	115	9207	11458	1.3838	+j 5.4712	3.1779	+j 9.2890
Northern	Keene Road	Chester	115	14184	11841	0.3839	+j 5.3722	0.1474	+j 2.7159
Northern	Chester	Chester	115	12697	11118	0.4399	+j 5.7199	0.4198	+j 3.5749
Northern	Stetson Wind	T8 R3	115	1316	2446	4.8424	+j 25.7921	25.4005	+j 94.1604
Northern	Oakfield	Oakfield	115	2395	1862	1.2572	+j 22.1535	0.0945	+j 7.5430
Northern	Powersville	TA R& Wels	115	4330	4969	1.3730	+j 12.8973	2.9026	+j 18.5200
Northern	Enfield Sw. Sta.	Enfield	115	6688	8356	0.6768	+j 7.5624	3.4872	+j 12.9318
Northern	Indeck5	Enfield	115	5997	7283	1.1177	+j 8.6452	3.5651	+j 13.9517
Bangor	Passadumkeag	Greenbush	115	5526	8306	0.7319	+j 7.5241	6.4028	+j 18.1367
Bangor	Pisgah		115	5942	8224	1.0190	+j 7.6134	5.3930	+j 15.7934
Hancock	Rebel Hill	Clifton	115	5094	7188	1.1998	+j 8.6317	6.1361	+j 18.6211
Hancock	Boggy Brook	Ellsworth Falls	115	4885	6333	1.4122	+j 9.8756	4.0745	+j 18.4009
Hancock	Ellsworth Falls	Ellsworth Falls	115	4631	6072	1.5835	+j 10.2833	4.6167	+j 19.5744
Hancock	Bull Hill	T16 MD BPP	115	2457	3903	2.3779	+j 15.1834	14.3113	+j 40.9919
Wash.Cty	Deblois Tap	Deblois	115	2023	3343	2.7919	+j 17.9540	17.5999	+j 51.8917
Hancock	Waltham	Ellsworth	115	4531	6003	1.5090	+j 10.4092	4.5371	+j 20.2669
Hancock	Trenton	Trenton	115	2100	3243	3.0931	+j 19.2244	12.9600	+j 50.5094
Hancock	Tunk Lake	Sullivan	115	2082	3369	2.9682	+j 18.2707	13.5488	+j 51.9435
Wash.Cty	Columbia	Columbia	115	1844	3190	3.1039	+j 19.0425	18.2923	+j 59.8034
Wash.Cty	Epping	Columbia	115	1882	3269	2.8766	+j 18.5478	18.2290	+j 58.5105
Wash.Cty	Harrington	Harrington	115	1796	3113	3.3100	+j 19.4933	18.8782	+j 61.4390
Wash.Cty	Washington County	Jonesboro	115	1306	2335	5.6427	+j 25.8406	31.7414	+j 85.3858
Bangor	Acadia		34.5	2011	2442	1.5401	+j 7.6738	3.5086	+j 12.5920
	Acadia		12.5	4090	3409	0.2855	+j 2.0207	0.0842	+j 1.0182
	B.I.A.		44	1982	3929	1.3449	+j 6.1597	3.9506	+j 25.5519
	B.I.A.		44	2565	5232	1.4629	+j 4.5017	3.5256	+j 20.0034
	B.I.A.		12.5	6794	5766	0.1517	+j 1.2217	0.0432	+j 0.7245
	Broadway		44	5442	10910	0.4353	+j 2.2279	1.5073	+j 9.1119
	Broadway		12.5	6261	5849	0.1148	+j 1.2079	0.0790	+j 1.0287
	Costigan		44	1743	3060	3.1416	+j 7.5757	6.2026	+j 26.6948
	Costigan		12.5	2068	1950	0.5082	+j 3.6661	0.2546	+j 3.0546
	East Bangor		44	3899	7502	0.8007	+j 3.2036	2.1396	+j 12.4521
	East Bangor		12.5	7979	7152	0.1131	+j 0.9861	0.0485	+j 0.7276
	East Corinth		44	826	1517	7.5649	+j 14.6647	14.7170	+j 58.0204
	East Corinth		13.2	2239	1963	0.9259	+j 3.7709	0.2451	+j 2.4511
	Eastern Ave. Sub		44	4427	7285	1.0885	+j 3.2228	2.0016	+j 9.9604
	Eastern Ave. Sub		12.47	6370	5812	0.1315	+j 1.2117	0.0441	+j 0.9528
	Graham		44	27664	26609	0.0625	+j 0.9285	0.0445	+j 0.8247
	Graham		44	260	259	9.7425	+j 97.7285	9.6810	+j 96.8097
	Graham		12.5	9738	10602	0.0662	+j 0.6673	0.4028	+j 0.8193
	Green Point Rd.		44	5323	8479	0.4328	+j 2.8912	1.2027	+j 8.1448
	Green Point Rd.		12.5	4966	4636	0.1426	+j 1.5251	0.1077	+j 1.2917
	Hampden		44	4900	7840	0.4967	+j 3.1245	1.2965	+j 8.8706
	Hampden		12.5	11473	10097	0.0635	+j 0.7008	0.0235	+j 0.4486
	Hampden Landfill		12.5	2452	3941	0.3378	+j 1.7997	1.3284	+j 4.8193
	Hermon		44	2217	4293	1.0201	+j 5.6908	3.2069	+j 22.5273
	Hermon		12.5	7687	6903	0.1119	+j 1.0251	0.0449	+j 0.7188
	Hogan Rd.		44	8105	14560	0.2767	+j 1.6781	0.9169	+j 5.7736
	Hogan Rd.		12.5	14107	12934	0.0590	+j 0.5455	0.0369	+j 0.4104
	L7 Tap		44	2608	4781	1.6664	+j 4.9283	4.7555	+j 18.1663
	Lower Main St.		12.5	7166	7868	0.1097	+j 0.8963	0.3647	+j 1.1701
	Lucerne		44	1275	2364	4.8096	+j 9.4070	8.4031	+j 38.1929
	Lucerne		12.5	3858	3364	0.4904	+j 2.0884	0.1022	+j 1.3292
	Milford		44	2189	4093	1.9669	+j 5.7525	5.3363	+j 21.9753
	Milford		12.5	4390	4003	0.2686	+j 1.7826	0.1098	+j 1.3183
	Olamon		44	1729	2648	3.6807	+j 8.7397	5.3569	+j 24.6779
	Orono		44	3914	6903	1.0804	+j 3.4351	3.7928	+j 11.3539

	Orono	12.5	11010	10246	0.0777	+j	0.6940	0.0590	+j	0.5515
	OT Fuel & Fiber Treatment	44	2513	4603	1.9968	+j	5.0202	5.1558	+j	18.8164
	Park Street	12.5	4349	4782	0.1927	+j	1.4715	0.4085	+j	1.9721
	Pushaw Road	44	3813	7273	0.8099	+j	3.3083	2.1601	+j	12.6772
	Red Shield	44	2102	5437	0.7950	+j	4.5593	6.7156	+j	26.3437
	Saxl Park	44	6622	11179	0.4665	+j	2.1653	1.0051	+j	6.8202
	Saxl Park	12.5	4578	4338	0.1588	+j	1.6281	0.1211	+j	1.4533
	Stillwater	12.5	2944	2828	0.6805	+j	2.4600	0.3586	+j	2.1762
	Tibbetts St.	44	5000	7801	0.4988	+j	3.1398	1.3949	+j	8.5147
	Tibbetts St.	12.5	8583	7673	0.0820	+j	0.9222	0.0418	+j	0.6686
	UMaine West	12.5	3811	4670	0.4601	+j	1.4754	0.9039	+j	2.4024
	UMaine West	4.16	6358	5542	0.0773	+j	0.4265	0.0263	+j	0.2630
	Union St.	44	2345	4552	1.1755	+j	5.3136	3.3831	+j	21.3607
	Univ. of ME East	44	3070	5623	1.3402	+j	4.2138	4.2246	+j	15.3732
	Univ. of ME East	4.16	9479	9022	0.0309	+j	0.2644	0.0189	+j	0.2267
	Veazie	44	10364	14976	0.4588	+j	1.5900	0.8588	+j	3.8316
	Water Works	12.5	2582	4483	0.3777	+j	1.5649	1.8801	+j	4.7930
	Water Works	4.16	6213	5404	0.0684	+j	0.4391	0.0266	+j	0.2658
	Webster Ave. North	12.5	2881	4035	0.4573	+j	1.7002	1.4445	+j	3.7321
	Webster Ave. North	4.16	10316	4899	0.0802	+j	0.4837	0.0295	+j	-0.2953
Hancock	Bar Harbor	34.5	1755	2193	2.3535	+j	8.3923	4.8921	+j	14.6764
	Bar Harbor	4.16	6263	5455	0.0641	+j	0.4205	0.0299	+j	0.2985
	Blue Hill	44	715	1062	9.5252	+j	21.0642	14.3111	+j	59.0701
	Blue Hill	12.5	1867	1559	1.0341	+j	4.3532	0.2654	+j	2.6536
	Boggy Brook	44	2406	2687	0.5262	+j	9.0638	1.0355	+j	12.4234
	Brooksville	44	569	860	11.1452	+j	26.2913	18.1211	+j	75.2378
	Brooksville	12.5	2389	1846	0.9707	+j	3.6521	0.0711	+j	1.5302
	Bucks Harbor	34.5	1843	1792	3.6873	+j	9.9830	5.2678	+j	8.3589
	Bucks Harbor	4.16	2934	2646	0.1551	+j	0.8552	0.1014	+j	0.7101
	Burns Corner	34.5	2770	3001	0.8942	+j	6.3072	1.5041	+j	7.9669
	Burns Corner	12.5	3286	2871	0.2771	+j	2.4125	0.1501	+j	1.5008
	East Franklin	34.5	2013	2623	1.9165	+j	6.9774	3.7585	+j	13.4641
	East Franklin	12.5	3629	2875	0.3974	+j	2.3742	0.0902	+j	0.9021
	Ellsworth	44	2187	2519	0.6450	+j	9.6640	1.3129	+j	14.2546
	Ellsworth	34.5	3301	4931	0.6438	+j	3.8043	1.4481	+j	9.6332
	Ellsworth	4.16	9300	8668	0.0305	+j	0.2668	0.0211	+j	0.2115
	Ellsworth Falls	34.5	10188	8911	0.2078	+j	2.1192	0.0683	+j	1.3536
	Gouldsboro	34.5	1472	1816	2.9462	+j	9.9931	5.9615	+j	16.9654
	Hancock	34.5	2749	3560	1.0264	+j	5.2643	1.9507	+j	10.0403
	Hancock	12.5	6143	5062	0.1763	+j	1.3551	0.0418	+j	0.6651
	Jackson Lab	34.5	1631	2088	2.5192	+j	8.8028	5.5676	+j	16.1529
	Mill St.	34.5	4794	6179	0.4618	+j	3.0395	0.7941	+j	5.7405
	Mill St.	12.5	4534	4175	0.1581	+j	1.6657	0.0975	+j	1.2668
	Nicolin	44	852	1581	7.4405	+j	13.9355	12.7510	+j	57.1538
	Nicolin	8.32	2695	2448	0.4082	+j	1.9196	0.1421	+j	1.4210
	Northeast Harbor	34.5	1293	1631	5.5831	+j	10.3088	9.1439	+j	19.1371
	Northeast Harbor	4.16	5584	4787	0.1133	+j	0.4713	0.0321	+j	0.3214
	Raggedy Corner	34.5	2449	2768	1.0939	+j	6.8196	2.0639	+j	9.5474
	Somesville	34.5	2523	2822	0.9836	+j	6.7017	1.8294	+j	9.1622
	Southwest Harbor	34.5	1180	1518	6.1558	+j	10.9846	10.3109	+j	21.4153
	Surry	44	1011	1476	4.0777	+j	16.0112	7.1049	+j	39.2339
	Surry	12.5	1764	1539	0.5963	+j	4.4938	0.2639	+j	3.1999
	Trenton	34.5	4835	4215	0.4015	+j	4.5174	0.1231	+j	2.7872
	Tunk Lake	34.5	3536	3367	0.8133	+j	5.5609	0.3344	+j	4.9149
	Youngs Corner	34.5	2554	2865	1.0967	+j	6.5822	2.0748	+j	9.0335
Northern	Chester	44	2755	3154	0.3764	+j	7.8394	0.5216	+j	11.5138
	Chester	44	6540	6390	0.3755	+j	3.8228	0.3269	+j	3.5780
	Chester	12.5	2428	2346	0.2808	+j	3.0635	0.2505	+j	2.7550
	East Millinocket	44	1973	1927	4.3909	+j	12.3248	2.7134	+j	12.5227
	East Millinocket	12.5	2130	1929	0.6231	+j	3.6900	0.2687	+j	2.6953
	Howland	44	2683	2827	2.7580	+j	8.3336	1.6355	+j	10.7774
	Howland	12.5	1282	1340	0.5632	+j	5.3545	0.5833	+j	5.8334
	Indeck5	34.5	7044	6091	0.3498	+j	3.1017	0.1465	+j	1.8224
	Keene Bog	44	4967	5567	0.6289	+j	4.3634	0.8085	+j	6.0368
	Keene Bog	12.5	3125	2943	0.2570	+j	2.4147	0.2062	+j	2.0624

	Keene Road	44	6615	6413	0.3580	+j	3.8090	0.2764	+j	3.4808
	Lincoln	44	4570	5214	0.7139	+j	4.6587	1.6341	+j	6.9288
	Lincoln	12.5	3808	3536	0.1836	+j	2.0135	0.1260	+j	1.6375
	Mattawamkeag	44	1029	1630	9.0533	+j	12.5055	12.4265	+j	42.4978
	Mattawamkeag	12.5	1506	1396	1.1338	+j	5.0452	0.4023	+j	4.0364
	Medway	44	2475	2130	3.0680	+j	11.2440	0.9731	+j	7.7567
	Millinocket	44	1113	1382	4.9494	+j	17.5559	5.3865	+j	31.9280
	Millinocket	12.5	3760	2987	0.4942	+j	2.3647	0.0948	+j	0.9478
	Milo	44	480	962	10.5783	+j	24.2106	32.5929	+j	101.0501
	Milo	13.2	3038	2491	0.8444	+j	2.9407	0.1096	+j	1.4245
	Milo Chip Mill	44	817	1297	5.4563	+j	18.6638	8.5481	+j	53.9029
	Stanford	44	3474	3232	2.1780	+j	7.3611	0.6245	+j	6.4480
	Stanford	12.5	4085	3664	0.2672	+j	1.9515	0.0915	+j	1.3574
	West Enfield	44	3548	3192	2.1767	+j	7.4639	0.4892	+j	5.8092
Wash.Cty	Cherryfield	34.5	1007	1439	2.9719	+j	12.8952	7.8306	+j	29.2249
	Cherryfield	12.5	1436	1232	0.7758	+j	5.5491	0.3857	+j	3.8563
	Cutler	34.5	752	979	11.0494	+j	16.0812	18.3969	+j	36.1582
	Cutler	12.5	1167	991	1.9114	+j	6.7204	0.4604	+j	4.6043
	Deblois Tap	34.5	1406	1350	1.4522	+j	13.6255	1.2013	+j	12.0129
	Dennysville	34.5	953	1102	4.6800	+j	16.8144	7.3270	+j	26.8127
	Eastport	34.5	908	844	6.0168	+j	22.1075	3.0182	+j	19.8076
	Eastport	12.5	1206	1034	1.1874	+j	6.8772	0.3975	+j	3.9749
	Eastport	4.16	9241	7889	0.0301	+j	0.2991	0.0220	+j	0.1772
	Harrington	34.5	4306	4005	0.6110	+j	4.6350	0.3261	+j	3.7512
	Harrington	12.5	1729	1644	0.4935	+j	4.1217	0.4133	+j	3.5133
	Jonesboro	34.5	4651	4342	0.6566	+j	4.3243	0.5980	+j	3.4817
	Jonesboro	12.5	898	840	0.8481	+j	8.1864	0.7619	+j	7.6186
	Jonesport	34.5	683	867	15.7351	+j	15.0780	23.0796	+j	38.2530
	Jonesport	12.47	1163	967	2.9456	+j	6.4193	0.8899	+j	4.4494
	L25 Dist.	34.5	1628	2123	4.8016	+j	7.4396	6.3624	+j	16.0528
	Lubec	34.5	472	618	18.8301	+j	24.5051	30.1276	+j	57.8329
	Machias	34.5	2806	3310	1.5642	+j	5.5275	3.0990	+j	8.3643
	Machias	4.16	5364	4851	0.0619	+j	0.4706	0.0393	+j	0.3917
	Milbridge	12.5	877	891	0.7901	+j	7.6177	1.4900	+j	9.2639
	Pembroke	34.5	895	975	5.4995	+j	19.0009	6.6154	+j	26.3790
	Pembroke	12.5	1604	1298	1.0191	+j	5.2820	0.2766	+j	2.7365
	Scotts Hill Rd.	34.5	2646	3180	1.6737	+j	5.7435	3.2167	+j	9.1263
	Scotts Hill Rd.	12.5	2767	2509	0.3846	+j	2.7321	0.1648	+j	1.9781
	Washington County	34.5	7227	6164	0.3509	+j	3.0611	0.1425	+j	1.6910
	Whiting	34.5	664	846	14.8598	+j	17.0116	22.8975	+j	38.9219

\* - Values are based on system model as of November 2016. Generators in the queue to be interconnected are not represented until they have an Interconnection Agreement executed.