

In the following, you can find almost all of the information used in [1].

Distribution network information:

Feeder information:

From bus	To bus	Resistance (p.u.)	Reactance (p.u.)	Capacity (MW)	Availability
Main grid	142	8.2268e-05	3.8622e-05	14.5492285280000	0.9999380640
Main grid	18	0.00024615	0.0001155586000	14.5492285280000	0.9998147080
Main grid	25	0.0001874610000	8.800660000e-05	14.5492285280000	0.9998588800
Main grid	63	0.0001587720000	7.4538e-05	14.5492285280000	0.9998804750
Main grid	89	0.00042313	0.0001986450000	14.5492285280000	0.9996815260
Main grid	99	0.00021222	9.9630e-05	14.5492285280000	0.9998402450
1	109	9.6285e-05	4.520260000e-05	14.5492285280000	0.9999275120
2	3	0.00016236	4.7520e-05	10.7387162940000	0.9999289910
2	6	6.5107e-05	3.056560000e-05	14.5492285280000	0.9999509830
3	4	0.0002261760000	6.6198e-05	10.7387162940000	0.9999010840
4	121	0.0001806256000	5.2866e-05	10.7387162940000	0.9999210040
5	98	0.0001594286000	4.6662e-05	10.7387162940000	0.9999302730
6	1	6.4190e-05	3.0135e-05	14.5492285280000	0.9999516740
83	7	0.0001019180000	4.7847e-05	14.5492285280000	0.9999232720
7	115	6.1177e-05	2.872060000e-05	14.5492285280000	0.9999539420
8	108	9.0652e-05	4.2558e-05	14.5492285280000	0.9999317530
8	131	0.0001368786000	4.0062e-05	10.7387162940000	0.9999401350
10	9	0.0004498720000	0.00013167	10.7387162940000	0.9998032720
10	104	9.583760000e-05	2.8050e-05	10.7387162940000	0.9999580840
12	55	0.0001265460000	5.9409e-05	14.5492285280000	0.9999047320
12	70	0.0002563940000	7.5042e-05	10.7387162940000	0.9998878700
13	71	0.00025152	0.00011808	14.5492285280000	0.9998106660
13	129	0.0001977636000	5.7882e-05	10.7387162940000	0.9999135090
14	49	0.0002117440000	6.1974e-05	10.7387162940000	0.9999073950
14	62	4.5981e-05	2.158660000e-05	14.5492285280000	0.9999653820
15	82	0.0002492940000	0.0001170346000	14.5492285280000	0.9998123420
16	17	0.0001211750000	5.688760000e-05	14.5492285280000	0.9999087750
17	53	0.0002203140000	6.4482e-05	10.7387162940000	0.9999036480
17	96	0.0001788216000	5.2338e-05	10.7387162940000	0.9999217920
17	133	0.0001506340000	4.4088e-05	10.7387162940000	0.9999341190
18	125	0.0001272010000	5.971660000e-05	14.5492285280000	0.9999042390
113	19	0.0001725076000	5.0490e-05	10.7387162940000	0.9999245540
76	20	0.0001765666000	5.1678e-05	10.7387162940000	0.9999227790
21	61	0.0002978860000	8.7186e-05	10.7387162940000	0.9998697270
21	114	0.0002622560000	7.6758e-05	10.7387162940000	0.9998853060
22	97	0.0001280840000	3.7488e-05	10.7387162940000	0.9999439810
23	116	0.0002079120000	6.0852e-05	10.7387162940000	0.9999090710
24	100	0.0001095160000	5.1414e-05	14.5492285280000	0.9999175520
25	120	0.0001700380000	7.9827e-05	14.5492285280000	0.9998719940
26	87	0.0002216660000	6.4878e-05	10.7387162940000	0.9999030560
26	88	0.0002581980000	7.5570e-05	10.7387162940000	0.9998870810
26	123	0.0002097160000	6.1380e-05	10.7387162940000	0.9999082820
27	124	0.00025910	7.5834e-05	10.7387162940000	0.9998866870
28	29	0.0004261960000	0.00012474	10.7387162940000	0.9998136240
30	68	0.00031773	9.2994e-05	10.7387162940000	0.9998610490
30	69	0.0004794140000	0.0001403160000	10.7387162940000	0.9997903560
128	31	0.0002162540000	6.3294e-05	10.7387162940000	0.9999054230
31	132	3.765860000e-05	1.1022e-05	10.7387162940000	0.9999835290
78	32	0.0003346420000	9.7944e-05	10.7387162940000	0.9998536540
33	58	0.0001537910000	4.5012e-05	10.7387162940000	0.9999327390
34	135	0.00025662	7.5108e-05	10.7387162940000	0.9998877720
143	35	0.0001213190000	3.5508e-05	10.7387162940000	0.9999469400
37	59	7.2967e-05	3.425560000e-05	14.5492285280000	0.9999450660
38	52	8.2268e-05	3.8622e-05	14.5492285280000	0.9999380640
38	118	0.0003905660000	0.0001143120000	10.7387162940000	0.9998292020
51	39	0.0001282490000	6.020860000e-05	14.5492285280000	0.9999034500
40	84	0.00025707	7.5240e-05	10.7387162940000	0.9998875740
40	137	0.0001098186000	3.2142e-05	10.7387162940000	0.9999519690
41	112	9.4189e-05	4.421860000e-05	14.5492285280000	0.9999290900
39	42	0.0001630950000	7.656760000e-05	14.5492285280000	0.9998772210

42	111	0.0001731840000	5.0688e-05	10.7387162940000	0.9999242580
43	44	0.0003238180000	9.4776e-05	10.7387162940000	0.9998583870
44	45	0.0003348680000	9.8010e-05	10.7387162940000	0.9998535560
45	81	0.00065350	0.0001912680000	10.7387162940000	0.9997142520
127	46	0.0001880670000	5.5044e-05	10.7387162940000	0.9999177490
47	65	9.3010e-05	4.3665e-05	14.5492285280000	0.9999299780
48	24	0.00010742	5.0430e-05	14.5492285280000	0.9999191300
50	101	0.0001638810000	7.693660000e-05	14.5492285280000	0.9998766290
125	51	0.0002533540000	0.0001189410000	14.5492285280000	0.9998092860
52	103	0.00013493	6.3345e-05	14.5492285280000	0.9998984210
53	21	0.0006550780000	0.00019173	10.7387162940000	0.9997135620
55	11	0.00031322	9.1674e-05	10.7387162940000	0.9998630220
55	130	9.6547e-05	4.532560000e-05	14.5492285280000	0.9999273150
56	74	6.7199e-05	1.9668e-05	10.7387162940000	0.9999706090
58	80	0.0001592030000	4.6596e-05	10.7387162940000	0.9999303720
59	33	0.0002403840000	7.0356e-05	10.7387162940000	0.9998948710
59	143	0.0002818760000	8.2500e-05	10.7387162940000	0.9998767280
60	13	0.0002773280000	0.0001301956000	14.5492285280000	0.9997912440
61	94	0.0002045280000	5.9862e-05	10.7387162940000	0.9999105500
62	50	0.0001680730000	7.890460000e-05	14.5492285280000	0.9998734740
63	16	5.8557e-05	2.749060000e-05	14.5492285280000	0.9999559140
64	90	0.0001919006000	5.6166e-05	10.7387162940000	0.9999160730
65	26	0.0001247120000	5.8548e-05	14.5492285280000	0.9999061130
67	30	0.00031570	9.2400e-05	10.7387162940000	0.9998619370
68	119	0.00049159	0.00014388	10.7387162940000	0.9997850330
70	105	0.0001389080000	4.0656e-05	10.7387162940000	0.9999392480
71	12	0.0001379430000	6.475960000e-05	14.5492285280000	0.9998961530
72	77	0.0002471480000	7.2336e-05	10.7387162940000	0.9998919130
72	136	0.0002155780000	6.3096e-05	10.7387162940000	0.9999057180
73	23	0.0001997930000	5.8476e-05	10.7387162940000	0.9999126210
75	141	0.00020949	6.1314e-05	10.7387162940000	0.9999083810
42	76	0.00032923	9.6360e-05	10.7387162940000	0.9998560210
79	86	0.0006958940000	0.0002036760000	10.7387162940000	0.9996957200
80	72	0.0002169320000	6.3492e-05	10.7387162940000	0.9999051270
81	140	0.0002572960000	7.5306e-05	10.7387162940000	0.9998874760
82	14	9.6154e-05	4.5141e-05	14.5492285280000	0.9999276110
102	83	0.0001830070000	8.591560000e-05	14.5492285280000	0.9998622330
87	27	0.0005175220000	0.00015147	10.7387162940000	0.9997736950
88	67	0.0004559620000	0.0001334520000	10.7387162940000	0.9998006100
89	41	0.0002061940000	9.6801e-05	14.5492285280000	0.9998447800
92	91	0.00012628	3.6960e-05	10.7387162940000	0.9999447700
92	95	0.00026361	7.7154e-05	10.7387162940000	0.9998847150
94	22	0.0002043040000	5.9796e-05	10.7387162940000	0.9999106490
94	93	0.00023700	6.9366e-05	10.7387162940000	0.9998963500
96	64	0.00020250	5.9268e-05	10.7387162940000	0.9999114380
97	73	0.00022505	6.5868e-05	10.7387162940000	0.9999015770
98	54	0.00050264	0.0001471140000	10.7387162940000	0.9997802020
99	110	4.8863e-05	2.293960000e-05	14.5492285280000	0.9999632120
100	56	0.0001698016000	4.9698e-05	10.7387162940000	0.9999257370
100	60	3.8383e-05	1.801950000e-05	14.5492285280000	0.9999711020
101	102	0.0002896420000	0.0001359766000	14.5492285280000	0.9997819760
103	144	0.0001376810000	6.463660000e-05	14.5492285280000	0.9998963500
105	106	0.0001321430000	3.8676e-05	10.7387162940000	0.9999422060
108	10	0.0002338360000	0.0001097776000	14.5492285280000	0.9998239760
108	57	0.0001452220000	4.2504e-05	10.7387162940000	0.9999364860
110	48	9.5761e-05	4.495660000e-05	14.5492285280000	0.9999279070
111	43	0.0001422906000	4.1646e-05	10.7387162940000	0.9999377680
112	38	0.0002012160000	9.4464e-05	14.5492285280000	0.9998485270
20	113	0.0001589776000	4.6530e-05	10.7387162940000	0.9999304710
115	2	0.00017685	8.3025e-05	14.5492285280000	0.9998668670
117	37	7.1002e-05	3.3333e-05	14.5492285280000	0.9999465450
117	40	0.0003682420000	0.0001077780000	10.7387162940000	0.9998389630
120	85	0.0001743116000	5.1018e-05	10.7387162940000	0.9999237650
120	127	5.2400e-05	2.4600e-05	14.5492285280000	0.9999605500
121	5	9.9220e-05	2.9040e-05	10.7387162940000	0.9999566050
122	8	8.5805e-05	4.028260000e-05	14.5492285280000	0.9999354010

122	107	7.9827e-05	2.3364e-05	10.7387162940000	0.9999650860
123	128	0.0002248240000	6.5802e-05	10.7387162940000	0.9999016750
124	126	0.0001905476000	5.5770e-05	10.7387162940000	0.9999166640
126	75	0.0001923516000	5.6298e-05	10.7387162940000	0.9999158760
127	47	6.0784e-05	2.8536e-05	14.5492285280000	0.9999542380
128	66	0.0002690220000	7.8738e-05	10.7387162940000	0.9998823480
128	78	0.0003193080000	9.3456e-05	10.7387162940000	0.9998603590
130	122	6.2356e-05	2.9274e-05	14.5492285280000	0.9999530540
134	79	0.0003060040000	8.9562e-05	10.7387162940000	0.9998661770
136	34	0.00018942	5.5440e-05	10.7387162940000	0.9999171580
137	92	0.0002940520000	8.6064e-05	10.7387162940000	0.9998714030
7	138	8.636660000e-05	2.5278e-05	10.7387162940000	0.9999622260
35	139	0.0001670956000	4.8906e-05	10.7387162940000	0.9999269200
139	36	0.0002297840000	6.7254e-05	10.7387162940000	0.9998995060
141	28	0.0002126460000	6.2238e-05	10.7387162940000	0.9999070000
142	15	9.3927e-05	4.409560000e-05	14.5492285280000	0.9999292870
143	134	0.0001573990000	4.6068e-05	10.7387162940000	0.9999311610
144	117	0.00011528	5.4120e-05	14.5492285280000	0.9999132130

Substation bus information:

Bus number	Active peak load (MW)	Reactive peak load (MVar)	VOLL (€/MWh)
1	0.46200	0.43890	27600
2	0.35400	0.33630	7410
3	0.35100	0.33345	24500
4	0.50100	0.47595	24500
5	0.077700	0.073815	29900
6	0.19080	0.18126	29900
7	0.27420	0.26049	29900
8	0.52800	0.50160	29900
9	0.76800	0.72960	29900
10	0.58500	0.55575	29900
11	0.089400	0.084930	29900
12	0.28830	0.2738850000	24500
13	0.21960	0.20862	29900
14	0.10710	0.1017450000	29900
15	0.28200	0.26790	29900
16	0.35700	0.33915	24500
17	0.63300	0.60135	29900
18	0.082200	0.078090	29900
19	0.17430	0.1655850000	29900
20	0.11880	0.11286	22600
21	0.59400	0.56430	18000
22	0.10200	0.096900	17100
23	0.25170	0.2391150000	20600
24	0.15900	0.15105	24100
25	0.25890	0.2459550000	23300
26	0.28530	0.2710350000	16100
27	0.092700	0.088065	29900
28	0.082800	0.078660	24500
29	0.094500	0.089775	27900
30	0.20580	0.19551	24800
31	0.12000	0.11400	25100
32	0.29730	0.2824350000	28300
33	0.066900	0.063555	26300
34	0.14970	0.1422150000	29900
35	0.10320	0.098040	29900
36	0.29820	0.28329	24500
37	0.16110	0.1530450000	15100
38	0.11400	0.10830	29900
39	0.093300	0.088635	29900
40	0.15090	0.1433550000	29900
41	0.035400	0.033630	29900
42	0.074100	0.070395	24500
43	0.092700	0.088065	26600
44	0.084600	0.080370	29600
45	0.45300	0.43035	23900

46	0.30600	0.29070	24500
47	0.11580	0.11001	60000
48	0.19050	0.1809750000	29900
49	0.12060	0.11457	25100
50	0.087600	0.083220	23800
51	0.16140	0.15333	26000
52	0.21420	0.20349	26700
53	0.31500	0.29925	29900
54	0.063300	0.060135	24500
55	0.48600	0.46170	24500
56	0.11370	0.1080150000	24500
57	0.13500	0.12825	24000
58	0.15060	0.14307	24100
59	0.19080	0.18126	27800
60	0.23280	0.22116	24500
61	0.28980	0.27531	29900
62	0.30300	0.28785	24500
63	0.10140	0.096330	24500
64	0.42000	0.39900	60000
65	0.0021900	0.0020805	24500
66	0.096300	0.091485	14000
67	0.0099300	0.0094335	28500
68	0.072000	0.068400	33100
69	0.24900	0.23655	12800
70	0.26160	0.24852	13400
71	0.12030	0.1142850000	14300
72	0.073200	0.069540	15800
73	0.27480	0.26106	21600
74	0.054000	0.051300	29900
75	0.14970	0.1422150000	24500
76	0.16950	0.1610250000	29900
77	0.11190	0.1063050000	24500
78	0.021300	0.020235	29900
79	0.25740	0.24453	29900
80	0.046200	0.043890	24500
81	0.070800	0.067260	24500
82	0.51000	0.48450	24500
83	0.034200	0.032490	24500
84	0.37200	0.35340	10200
85	0.030600	0.029070	19200
86	0.17580	0.16701	17900
87	0.16920	0.16074	33800
88	0.16680	0.15846	19200
89	0.072600	0.068970	10400
90	0.087600	0.083220	15900
91	0.16620	0.15789	29900
92	0.11790	0.1120050000	29900
93	0.19530	0.1855350000	29900
94	0.57600	0.54720	29900
95	0.26340	0.25023	24500
96	0.061800	0.058710	22300
97	0.076500	0.072675	15300
98	0.14820	0.14079	7860
99	0.042000	0.039900	16000
100	0.16320	0.15504	18100
101	0.12810	0.1216950000	33200
102	0.10890	0.1034550000	31100
103	0.17550	0.1667250000	24500
104	0.29970	0.2847150000	29900
105	0.19410	0.1843950000	24500
106	0.53100	0.50445	29900
107	0.47400	0.45030	24500
108	0.25650	0.2436750000	14300
109	0.0072900	0.0069255	15800
110	0.066900	0.063555	21600
111	0.065100	0.061845	29900

112	0.034200	0.032490	24500
113	0.040800	0.038760	29900
114	0.30300	0.28785	24500
115	0.070800	0.067260	29900
116	0.098400	0.093480	29900
117	0.022080	0.020976	24500
118	0.018210	0.01729950000	24500
119	0.42900	0.40755	24500
120	0.26700	0.25365	24500
121	0.13560	0.12882	10200
122	0.048600	0.046170	19200
123	0.096000	0.091200	17900
124	0.068100	0.064695	33800
125	2.6670	2.533650000	19200
126	0.018330	0.01741350000	10400
127	0.24420	0.23199	15900
128	0.23460	0.22287	29900
129	0.30900	0.29355	29900
130	0.14970	0.1422150000	29900
131	0.16380	0.15561	29900
132	0.11550	0.1097250000	24500
133	0.16020	0.15219	22300
134	0.13050	0.1239750000	15300
135	0.071100	0.067545	7860
136	0.36000	0.34200	16000
137	0.089100	0.084645	18100
138	0.098700	0.093765	33200
139	0.095400	0.090630	31100
140	0.17190	0.1633050000	24500
141	0.10590	0.1006050000	29900
142	0.042600	0.040470	24500
143	0.12660	0.12027	29900
144	0.10470	0.099465	24500

Day-ahead market prices (€/MWh):

Hour	Price	Hour	Price	Hour	Price	Hour	Price
1	46.490	7	59.970	13	58.680	19	65.740
2	44.560	8	61.500	14	58.050	20	64.960
3	43.890	9	62.440	15	57.780	21	61.550
4	45.390	10	61.970	16	59.590	22	55.310
5	48.190	11	61.490	17	62.660	23	51.640
6	55.660	12	60.530	18	64.920	24	46.730

Electricity load profile:

Hour	Load coefficient	Hour	Load coefficient	Hour	Load coefficient	Hour	Load coefficient
1	0.60500	7	0.72200	13	0.71300	19	0.76100
2	0.58500	8	0.73300	14	0.70800	20	0.75600
3	0.57700	9	0.74000	15	0.70600	21	0.73300
4	0.59400	10	0.73600	16	0.71900	22	0.68700
5	0.62300	11	0.73300	17	0.74100	23	0.65500
6	0.68900	12	0.72600	18	0.75600	24	0.60800

DG units' information:

Connected bus	P_max	P_min	Q_max	Q_min	a	b	c
2	0.5 MW	0 MW	0.1 MW	-0.1 MW	50 €/MWh ²	27 €/MWh	3 €
26	0.5 MW	0 MW	0.1 MW	-0.1 MW	50 €/MWh ²	27 €/MWh	3 €
59	0.5 MW	0 MW	0.1 MW	-0.1 MW	50 €/MWh ²	27 €/MWh	3 €

References:

[1] A. Safdarian, M. Fotuhi-Firuzabad, and M. Lehtonen, "A Short-Term Operation Model for DisCos in Real-Time Electricity Pricing Environments".