

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)
Main grid	142	4.11E-05	1.93E-05	7.274614
Main grid	18	0.000123	5.78E-05	7.274614
Main grid	25	9.37E-05	4.4E-05	7.274614
Main grid	63	7.94E-05	3.73E-05	7.274614
Main grid	89	0.000212	9.93E-05	7.274614
Main grid	99	0.000106	4.98E-05	7.274614
1	109	4.81E-05	2.26E-05	7.274614
2	3	8.12E-05	2.38E-05	5.369358
2	6	3.26E-05	1.53E-05	7.274614
3	4	0.000113	3.31E-05	5.369358
4	121	9.03E-05	2.64E-05	5.369358
5	98	7.97E-05	2.33E-05	5.369358
6	1	3.21E-05	1.51E-05	7.274614
7	83	5.1E-05	2.39E-05	7.274614
7	115	3.06E-05	1.44E-05	7.274614
8	108	4.53E-05	2.13E-05	7.274614
8	131	6.84E-05	2E-05	5.369358
9	10	0.000225	6.58E-05	5.369358
10	104	4.79E-05	1.4E-05	5.369358
12	55	6.33E-05	2.97E-05	7.274614
12	70	0.000128	3.75E-05	5.369358
13	71	0.000126	5.9E-05	7.274614
13	129	9.89E-05	2.89E-05	5.369358
14	49	0.000106	3.1E-05	5.369358
14	62	2.3E-05	1.08E-05	7.274614
15	82	0.000125	5.85E-05	7.274614
16	17	6.06E-05	2.84E-05	7.274614
17	53	0.00011	3.22E-05	5.369358
17	96	8.94E-05	2.62E-05	5.369358
17	133	7.53E-05	2.2E-05	5.369358
18	125	6.36E-05	2.99E-05	7.274614
19	113	8.63E-05	2.52E-05	5.369358
20	76	8.83E-05	2.58E-05	5.369358
21	61	0.000149	4.36E-05	5.369358
21	114	0.000131	3.84E-05	5.369358
22	97	6.4E-05	1.87E-05	5.369358
23	116	0.000104	3.04E-05	5.369358
24	100	5.48E-05	2.57E-05	7.274614
25	120	8.5E-05	3.99E-05	7.274614
26	87	0.000111	3.24E-05	5.369358
26	88	0.000129	3.78E-05	5.369358
26	123	0.000105	3.07E-05	5.369358
27	124	0.00013	3.79E-05	5.369358
28	29	0.000213	6.24E-05	5.369358
30	68	0.000159	4.65E-05	5.369358
30	69	0.00024	7.02E-05	5.369358
31	128	0.000108	3.16E-05	5.369358
31	132	1.88E-05	5.51E-06	5.369358
32	78	0.000167	4.9E-05	5.369358
33	58	7.69E-05	2.25E-05	5.369358
34	135	0.000128	3.76E-05	5.369358
35	143	6.07E-05	1.78E-05	5.369358
37	59	3.65E-05	1.71E-05	7.274614
38	52	4.11E-05	1.93E-05	7.274614
38	118	0.000195	5.72E-05	5.369358
39	51	6.41E-05	3.01E-05	7.274614
40	84	0.000129	3.76E-05	5.369358
40	137	5.49E-05	1.61E-05	5.369358
41	112	4.71E-05	2.21E-05	7.274614
42	39	8.15E-05	3.83E-05	7.274614

42	111	8.66E-05	2.53E-05	5.369358
43	44	0.000162	4.74E-05	5.369358
44	45	0.000167	4.9E-05	5.369358
45	81	0.000327	9.56E-05	5.369358
46	127	9.4E-05	2.75E-05	5.369358
47	65	4.65E-05	2.18E-05	7.274614
48	24	5.37E-05	2.52E-05	7.274614
50	101	8.19E-05	3.85E-05	7.274614
51	125	0.000127	5.95E-05	7.274614
52	103	6.75E-05	3.17E-05	7.274614
53	21	0.000328	9.59E-05	5.369358
55	11	0.000157	4.58E-05	5.369358
55	130	4.83E-05	2.27E-05	7.274614
56	74	3.36E-05	9.83E-06	5.369358
58	80	7.96E-05	2.33E-05	5.369358
59	33	0.00012	3.52E-05	5.369358
59	143	0.000141	4.13E-05	5.369358
60	13	0.000139	6.51E-05	7.274614
61	94	0.000102	2.99E-05	5.369358
62	50	8.4E-05	3.95E-05	7.274614
63	16	2.93E-05	1.37E-05	7.274614
64	90	9.6E-05	2.81E-05	5.369358
65	26	6.24E-05	2.93E-05	7.274614
67	30	0.000158	4.62E-05	5.369358
68	119	0.000246	7.19E-05	5.369358
70	105	6.95E-05	2.03E-05	5.369358
71	12	6.9E-05	3.24E-05	7.274614
72	77	0.000124	3.62E-05	5.369358
72	136	0.000108	3.15E-05	5.369358
73	23	9.99E-05	2.92E-05	5.369358
75	141	0.000105	3.07E-05	5.369358
76	42	0.000165	4.82E-05	5.369358
79	86	0.000348	0.000102	5.369358
80	72	0.000108	3.17E-05	5.369358
81	140	0.000129	3.77E-05	5.369358
82	14	4.81E-05	2.26E-05	7.274614
83	102	9.15E-05	4.3E-05	7.274614
87	27	0.000259	7.57E-05	5.369358
88	67	0.000228	6.67E-05	5.369358
89	41	0.000103	4.84E-05	7.274614
92	91	6.31E-05	1.85E-05	5.369358
92	95	0.000132	3.86E-05	5.369358
94	22	0.000102	2.99E-05	5.369358
94	93	0.000119	3.47E-05	5.369358
96	64	0.000101	2.96E-05	5.369358
97	73	0.000113	3.29E-05	5.369358
98	54	0.000251	7.36E-05	5.369358
99	110	2.44E-05	1.15E-05	7.274614
100	56	8.49E-05	2.48E-05	5.369358
100	60	1.92E-05	9.01E-06	7.274614
101	102	0.000145	6.8E-05	7.274614
103	144	6.88E-05	3.23E-05	7.274614
105	106	6.61E-05	1.93E-05	5.369358
108	10	0.000117	5.49E-05	7.274614
108	57	7.26E-05	2.13E-05	5.369358
110	48	4.79E-05	2.25E-05	7.274614
111	43	7.11E-05	2.08E-05	5.369358
112	38	0.000101	4.72E-05	7.274614
113	20	7.95E-05	2.33E-05	5.369358
115	2	8.84E-05	4.15E-05	7.274614
117	37	3.55E-05	1.67E-05	7.274614
117	40	0.000184	5.39E-05	5.369358
120	85	8.72E-05	2.55E-05	5.369358
120	127	2.62E-05	1.23E-05	7.274614
121	5	4.96E-05	1.45E-05	5.369358
122	8	4.29E-05	2.01E-05	7.274614

122	107	3.99E-05	1.17E-05	5.369358
123	128	0.000112	3.29E-05	5.369358
124	126	9.53E-05	2.79E-05	5.369358
126	75	9.62E-05	2.81E-05	5.369358
127	47	3.04E-05	1.43E-05	7.274614
128	66	0.000135	3.94E-05	5.369358
128	78	0.00016	4.67E-05	5.369358
130	122	3.12E-05	1.46E-05	7.274614
134	79	0.000153	4.48E-05	5.369358
136	34	9.47E-05	2.77E-05	5.369358
137	92	0.000147	4.3E-05	5.369358
138	7	4.32E-05	1.26E-05	5.369358
139	35	8.35E-05	2.45E-05	5.369358
139	36	0.000115	3.36E-05	5.369358
141	28	0.000106	3.11E-05	5.369358
142	15	4.7E-05	2.2E-05	7.274614
143	134	7.87E-05	2.3E-05	5.369358
144	117	5.76E-05	2.71E-05	7.274614

Substation bus information:

Bus number	Active peak load (MW)	Reactive peak load (MVar)	VOLL (€/MWh)
1	0.154	0.315	27600
2	0.118	0.2	7410
3	0.117	0.2	24500
4	0.167	0.315	24500
5	0.0259	0.1	29900
6	0.0636	0.1	29900
7	0.0914	0.2	29900
8	0.176	0.315	29900
9	0.256	0.5	29900
10	0.195	0.315	29900
11	0.0298	0.1	29900
12	0.0961	0.2	24500
13	0.0732	0.2	29900
14	0.0357	0.1	29900
15	0.094	0.2	29900
16	0.119	0.2	24500
17	0.211	0.315	29900
18	0.0274	0.1	29900
19	0.0581	0.1	29900
20	0.0396	0.1	22600
21	0.198	0.315	18000
22	0.034	0.1	17100
23	0.0839	0.2	20600
24	0.053	0.1	24100
25	0.0863	0.2	23300
26	0.0951	0.2	16100
27	0.0309	0.1	29900
28	0.0276	0.1	24500
29	0.0315	0.1	27900
30	0.0686	0.1	24800
31	0.04	0.1	25100
32	0.0991	0.2	28300
33	0.0223	0.1	26300
34	0.0499	0.1	29900
35	0.0344	0.1	29900
36	0.0994	0.2	24500
37	0.0537	0.1	15100
38	0.038	0.1	29900
39	0.0311	0.1	29900
40	0.0503	0.1	29900
41	0.0118	0.1	29900
42	0.0247	0.1	24500
43	0.0309	0.1	26600
44	0.0282	0.1	29600
45	0.151	0.315	23900

46	0.102	0.2	24500
47	0.0386	0.1	60000
48	0.0635	0.1	29900
49	0.0402	0.1	25100
50	0.0292	0.1	23800
51	0.0538	0.1	26000
52	0.0714	0.2	26700
53	0.105	0.2	29900
54	0.0211	0.1	24500
55	0.162	0.315	24500
56	0.0379	0.1	24500
57	0.045	0.1	24000
58	0.0502	0.1	24100
59	0.0636	0.1	27800
60	0.0776	0.2	24500
61	0.0966	0.2	29900
62	0.101	0.2	24500
63	0.0338	0.1	24500
64	0.14	0.315	60000
65	0.00073	0.1	24500
66	0.0321	0.1	14000
67	0.00331	0.1	28500
68	0.024	0.1	33100
69	0.083	0.2	12800
70	0.0872	0.2	13400
71	0.0401	0.1	14300
72	0.0244	0.1	15800
73	0.0916	0.2	21600
74	0.018	0.1	29900
75	0.0499	0.1	24500
76	0.0565	0.1	29900
77	0.0373	0.1	24500
78	0.0071	0.1	29900
79	0.0858	0.2	29900
80	0.0154	0.1	24500
81	0.0236	0.1	24500
82	0.17	0.315	24500
83	0.0114	0.1	24500
84	0.124	0.2	10200
85	0.0102	0.1	19200
86	0.0586	0.1	17900
87	0.0564	0.1	33800
88	0.0556	0.1	19200
89	0.0242	0.1	10400
90	0.0292	0.1	15900
91	0.0554	0.1	29900
92	0.0393	0.1	29900
93	0.0651	0.1	29900
94	0.192	0.315	29900
95	0.0878	0.2	24500
96	0.0206	0.1	22300
97	0.0255	0.1	15300
98	0.0494	0.1	7860
99	0.014	0.1	16000
100	0.0544	0.1	18100
101	0.0427	0.1	33200
102	0.0363	0.1	31100
103	0.0585	0.1	24500
104	0.0999	0.2	29900
105	0.0647	0.1	24500
106	0.177	0.315	29900
107	0.158	0.315	24500
108	0.0855	0.2	14300
109	0.00243	0.1	15800
110	0.0223	0.1	21600
111	0.0217	0.1	29900

112	0.0114	0.1	24500
113	0.0136	0.1	29900
114	0.101	0.2	24500
115	0.0236	0.1	29900
116	0.0328	0.1	29900
117	0.00736	0.1	24500
118	0.00607	0.1	24500
119	0.143	0.315	24500
120	0.089	0.2	24500
121	0.0452	0.1	10200
122	0.0162	0.1	19200
123	0.032	0.1	17900
124	0.0227	0.1	33800
125	0.889	1.25	19200
126	0.00611	0.1	10400
127	0.0814	0.2	15900
128	0.0782	0.2	29900
129	0.103	0.2	29900
130	0.0499	0.1	29900
131	0.0546	0.1	29900
132	0.0385	0.1	24500
133	0.0534	0.1	22300
134	0.0435	0.1	15300
135	0.0237	0.1	7860
136	0.12	0.2	16000
137	0.0297	0.1	18100
138	0.0329	0.1	33200
139	0.0318	0.1	31100
140	0.0573	0.1	24500
141	0.0353	0.1	29900
142	0.0142	0.1	24500
143	0.0422	0.1	29900
144	0.0349	0.1	24500

Day-ahead market prices (€/MWh):

Hour	Price	Hour	Price	Hour	Price	Hour	Price
1	36.40	7	44.08	13	40.56	19	43.45
2	35.63	8	50.43	14	40.06	20	44.05
3	34.91	9	49.44	15	39.71	21	40.80
4	33.88	10	42.91	16	39.24	22	38.94
5	34.94	11	41.00	17	39.13	23	37.99
6	38.78	12	40.82	18	39.95	24	36.58

Scenarios prepared for real-time market prices (€/MWh):

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10
Probability	0.095923	0.129496	0.131894	0.184652	0.033573	0.148681	0.079137	0.021583	0.143885	0.031175
Hour 1	13.79	22.32	19.80	28.96	5.84	31.82	46.59	57.25	36.98	51.11
Hour 2	14.94	25.52	24.70	33.99	3.37	38.27	64.10	70.51	47.79	63.67
Hour 3	11.60	23.12	19.97	32.67	4.63	34.51	46.27	53.46	38.69	52.26
Hour 4	12.77	17.42	20.14	31.43	7.61	35.97	46.56	55.55	34.71	53.01
Hour 5	15.21	24.48	23.85	32.75	8.88	38.81	52.22	63.05	45.15	61.79
Hour 6	17.71	26.71	25.12	32.65	10.30	37.26	55.03	73.92	44.63	63.20
Hour 7	22.05	34.63	30.68	37.35	11.50	41.69	57.42	78.27	52.24	58.80
Hour 8	28.33	39.91	33.95	44.36	16.51	50.60	67.51	85.80	51.65	65.25
Hour 9	35.62	51.27	43.71	56.30	24.58	65.58	80.90	101.55	70.92	89.70
Hour 10	27.33	38.66	34.07	42.07	16.67	52.02	62.18	78.21	57.80	73.52
Hour 11	24.20	32.73	29.12	37.46	15.62	42.99	56.86	69.79	48.60	59.70
Hour 12	23.90	32.20	27.12	38.74	13.82	42.98	58.36	70.37	48.26	59.85
Hour 13	19.79	31.10	29.06	36.05	13.68	41.88	59.37	69.24	50.91	65.44
Hour 14	21.88	33.24	25.54	39.79	11.51	40.92	55.42	69.21	49.27	66.97
Hour 15	17.16	32.67	25.43	37.51	8.96	36.57	52.80	64.83	44.57	61.22
Hour 16	22.89	33.25	26.97	34.48	11.23	42.87	57.06	66.42	45.08	65.44
Hour 17	22.74	35.10	25.53	40.27	16.13	42.86	60.26	69.10	48.99	63.73
Hour 18	22.74	35.25	28.23	39.90	19.11	43.28	62.08	72.71	46.95	65.34
Hour 19	26.22	31.73	31.05	39.39	18.51	43.62	58.44	74.02	50.36	67.28

Hour 20	21.69	33.55	33.50	39.83	17.03	48.22	62.32	76.91	55.67	71.95
Hour 21	20.65	33.89	31.11	38.34	13.96	48.18	54.68	74.90	49.75	68.89
Hour 22	21.08	34.61	29.09	33.75	11.85	43.87	57.73	71.57	49.53	66.44
Hour 23	20.63	31.60	24.38	35.18	8.72	41.13	52.89	67.88	45.66	61.45
Hour 24	17.43	26.42	25.42	35.01	5.48	46.20	51.27	66.49	44.35	69.97

Actual real-time market prices:

Hour	Price	Hour	Price	Hour	Price	Hour	Price
1	34.49	7	40.85	13	38.55	19	43.99
2	32	8	52.34	14	38.09	20	43.85
3	30.94	9	50.54	15	37.79	21	40.12
4	31.71	10	43.44	16	38.28	22	39.23
5	32.83	11	40.72	17	38.63	23	37.64
6	35.3	12	39.49	18	39.16	24	33.81

Scenarios prepared for electricity load profile:

	Scenario 1	Scenario 2	Scenario 3		Scenario 1	Scenario 2	Scenario 3
Probability	0.266187	0.29976	0.434053	Probability	0.266187	0.29976	0.434053
Hour 1	0.569	0.522	0.558	Hour 13	0.701	0.648	0.672
Hour 2	0.563	0.504	0.542	Hour 14	0.695	0.642	0.664
Hour 3	0.555	0.507	0.533	Hour 15	0.697	0.644	0.662
Hour 4	0.562	0.506	0.529	Hour 16	0.693	0.643	0.663
Hour 5	0.584	0.527	0.562	Hour 17	0.674	0.622	0.654
Hour 6	0.64	0.602	0.622	Hour 18	0.688	0.636	0.676
Hour 7	0.694	0.652	0.677	Hour 19	0.712	0.66	0.7
Hour 8	0.708	0.659	0.679	Hour 20	0.697	0.658	0.685
Hour 9	0.72	0.661	0.686	Hour 21	0.673	0.622	0.646
Hour 10	0.722	0.652	0.679	Hour 22	0.64	0.599	0.619
Hour 11	0.716	0.649	0.683	Hour 23	0.629	0.573	0.611
Hour 12	0.703	0.655	0.681	Hour 24	0.598	0.557	0.588

Actual electricity load profile:

Hour	Load coefficient	Hour	Load coefficient	Hour	Load coefficient	Hour	Load coefficient
1	0.552	7	0.671	13	0.664	19	0.708
2	0.534	8	0.667	14	0.659	20	0.697
3	0.531	9	0.673	15	0.657	21	0.659
4	0.532	10	0.677	16	0.653	22	0.634
5	0.551	11	0.676	17	0.653	23	0.627
6	0.619	12	0.674	18	0.673	24	0.599

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	20 €/MWh ²	26 €/MWh	3 €
26	0.5 MW	0 MW	0.1 MW	-0.1 MW	20 €/MWh ²	26 €/MWh	3 €
59	0.5 MW	0 MW	0.1 MW	-0.1 MW	20 €/MWh ²	26 €/MWh	3 €

References:

[1] A. Safdarian, M. Fotuhi-Firuzabad, and M. Lehtonen, "A Stochastic Framework for Short-term Operation of a Distribution Company," *IEEE Transactions on Power Systems*.