APPENDIX

TABLE III
ROAD NETWORK CONNECTION RELATIONSHIP AND PARAMETERS

l_{ij}	d_{ij}(km)	mra_{ij}	mrb_{ij}	mrc_{ij}	E_{ij}	$\varphi(i,j)$
1-2	9.8	0	0	3	0.62	0.17
1-3	3.2	4	0	0	0.96	0.9
2-8	5.8	0	0	2	0.58	0.11
2-9	3.3	0	0	2	0.81	0.15
3-4	4.2	0	2	0	0.3	0.3
3-6	5.3	1	0	0	0.18	0.1
4-5	2.9	0	1	0	0.59	0.3
5-7	3.2	0	2	0	0.33	0.33
5-13	2.3	0	2	0	0.36	0.35
6-7	2.8	0	0	0	0	0
6-9	3.2	4	0	0	0.92	0.89
7-12	1.8	3	0	0	0.95	0.82
8-11	4.9	4	0	0	0.96	0.9
8-26	7	0	0	4	0.41	0.15
9-10	3.2	0	0	1	0.3	0.03
9-15	4.2	0	0	3	0.83	0.22
10-11	4.2	0	2	0	0.21	0.22
10-21	3	0	2	0	0.5	0.26
11-22	5	4	0	0	0.96	0.9
11-23	5.3	1	0	0	0.19	0.21
11-26	7.2	0	0	4	0.93	0.31
12-14	1.3	2	0	0	0.54	0.48
12-15	1.4	1	0	0	0.95	0.68
13-14	3.2	0	0	0	0	0
13-17	6.8	0	2	0	0.72	0.35
14-16	1.1	2	0	0	0.92	0.67
15-21	2.6	3	0	0	0.88	0.81
16-18	4	3	0	0	0.82	0.76
16-19	5.3	2	0	0	0.67	0.55
17-18	2.3	0	0	0	0	0
18-20	3.9	2	0	0	0.92	0.66
19-20	2	1	0	0	0.52	0.23
19-21	4.9	4	0	0	0.92	0.89
20-24	5.1	0	2	0	0.43	0.23
21-22	5	3	0	0	0..98	0.83
22-23	4	2	0	0	0.87	0.65
22-24	6.2	3	0	0	0.62	0.67
23-25	5.9	1	0	0	0.35	0.19
24-25	4.5	4	0	0	0.95	0.9

TABLE IV
PARAMETERS OF POWER SYSTEM IN THE CASE

Node Number	Node Types	Load/MW	Active Output/MW	Ld_n^a	φ_n
1	pq	0	0	0	1
2	pq	0	0	0	1
3	pq	322	0	322	1
4	pq	500	0	500	1
5	pq	0	0	0	1
6	pq	0	0	0	1
7	pq	233.8	0	233.8	1
8	pq	522	0	522	1
9	pq	0	0	0	1
10	pq	0	0	0	1
11	pq	0	0	0	1
12	pq	107.5	0	107.5	1
13	pq	0	0	0	1
14	pq	0	0	0	1
15	pq	220	0	220	0.65
16	pq	329	0	329	0.5
17	pq	0	0	0	0.45
18	pq	358	0	358	0.35
19	pq	0	0	0	0.83
20	pq	628	0	628	1
21	pq	274	0	274	0.71
22	pq	0	0	0	0.43
23	pq	247.5	0	247.5	0.43
24	pq	108.6	0	108.6	0.63
25	pq	239	0	239	0.72
26	pq	281	0	281	1
27	pq	224	0	224	1
28	pq	306	0	306	0.52
29	pq	283.5	0	283.5	0.52
30	pq	0	350	350	1
31	vθ	9.2	0	9.2	1
32	pv	0	650	650	1
33	pv	0	632	632	1
34	pv	0	508	508	1
35	pv	0	650	650	1
36	pv	0	560	560	1
37	pv	0	540	540	1
38	pv	0	830	830	1
39	pv	0	1000	1000	1