APPENDIX

Table VIII

COST COEFFICIENTS

Coefficient	C_{pd}	C_{pc}	C_g	C_n
Value ($)	130	100	150	30

TABLE IX

SMS PARAMETERS IN SMALL-SCALE SYSTEM

Capacity (MWh)	Rated power (MW)	Default/max/min SOC	η	p_e^{travel} (MW)
10	2	50%/90%/10%	95%	0.05

TABLE X

RENEWABLE ENERGY PARAMETERS IN SMALL-SCALE SYSTEM

	Type	Wind	Wind	Wind	Wind	Wind
DN1	Node	4	8	20	35	60
	Rated power (MW)	3.5	3.5	2.5	3.0	2.0
	Type	PV	PV	PV	PV	PV
DN2	Node	3	5	19	24	30
	Rated power (MW)	1.5	1.5	1	1	1

TABLE XI

PARAMETERS OF SEGMENT LINEARIZATION METHOD

ρ	K	s_1	s_2	s_3
10%	3	3	6	9

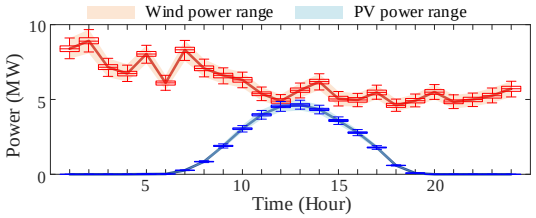

Fig. 10. Variability of renewable energy power generation.

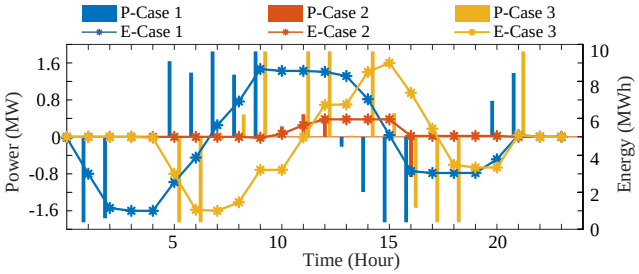

Fig. 11. SMS scheduling with different renewable energy penetration levels.

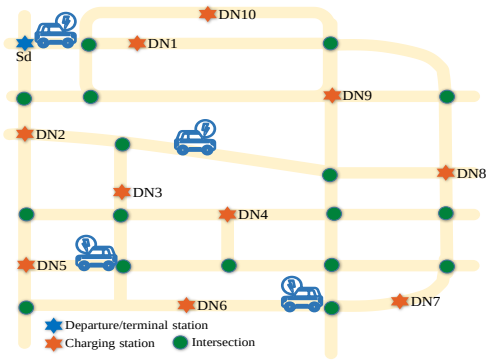

Fig. 12. Large-scale coupled transportation and power distribution networks.

TABLE XII

DISTRIBUTION SYSTEM PARAMETERS IN LARGE-SCALE SYSTEM

User	Number of nodes	Node for SMS connection	Load demands (MW)
DN1	61	9	64.69
DN2	59	6	75.63
DN3	116	70	21.07
DN4	87	35	168.73
DN5	96	24	121.11
DN6	61	9	64.69
DN7	59	6	113.44
DN8	116	70	16.85
DN9	87	35	202.48
DN10	96	24	132.07

TABLE XIII

SMS PARAMETERS IN LARGE-SCALE SYSTEM

No	Capacity (MWh)	Rated power (MW)	Default/max/min SOC	η	p_e^{travel} (MW)
1	12	2	80%/90%/10%	95%	0.05
2	10	1	20%/90%/10%	95%	0.05
3	10	0.5	50%/90%/10%	95%	0.05
4	8	0.8	80%/90%/10%	95%	0.05

TABLE XIV

RENEWABLE ENERGY PARAMETERS IN LARGE-SCALE SYSTEM

User	Type	Number of renewable energy units	Rated power of each renewable energy unit (MW)
DN1	Wind	5	3.5/3.5/2.5/3/2
DN2	PV	5	1.5/1.5/1/1/1
DN3	Wind	5	3/3/2/2.5/1.5
DN4	PV	5	3/3.5/2.5/3/2.5
DN5	PV	5	3/3.5/2.5/3/2.5
DN6	Wind	5	3.5/3.5/2.5/2.5/1.5
DN7	PV	5	1.5/1.5/1/1.5/1
DN8	Wind	5	3.5/3.5/2.5/2.5/1.5
DN9	PV	5	4/4/3/3.5/3
DN10	PV	5	1.5/2/1.5/1.5/1.5