

Fig. 1. Improved IEEE-39 node system structure

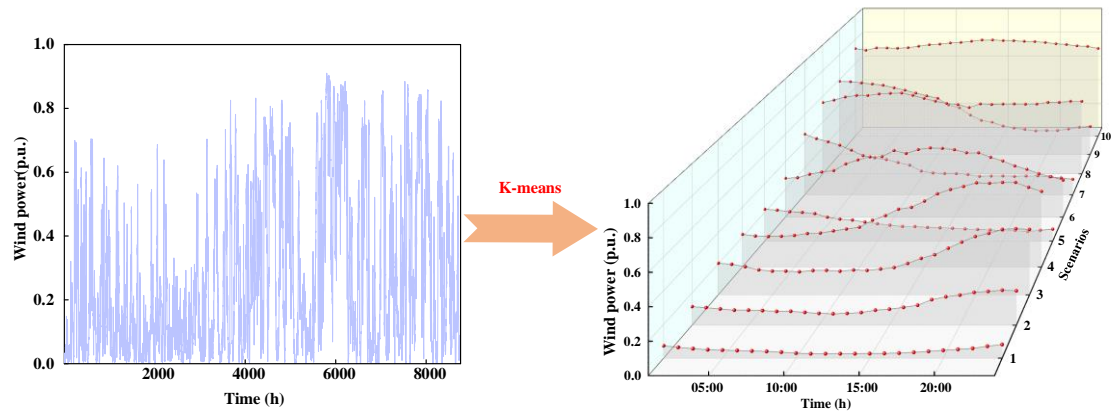


Fig. 2. 10 wind power curves

TABLE I
LOAD DEMAND

Time	Power/MW	Time	Power/MW	Time	Power/MW
01:00	777	09:00	1168	17:00	1382
02:00	764	10:00	1278	18:00	1440
03:00	741	11:00	1324	19:00	1460
04:00	770	12:00	1243	20:00	1473
05:00	815	13:00	1165	21:00	1362
06:00	893	14:00	1210	22:00	1178
07:00	945	15:00	1298	23:00	1081
08:00	1087	16:00	1359	24:00	1007

TABLE II
UNIT TECHNIQUE PARAMETERS

No.	Node	$P_{i,\max}^G$ (MW)	$P_{i,\min}^G$ (MW)	R_i^U / R_i^D (MW/h)	$T_{s,i}^G / T_{o,i}^G$ (h)
1	30	455	200	100	6
2	31	455	150	100	5
3	32	130	30	80	5
4	33	130	25	80	5
5	34	162	45	65	5
6	35	80	20	65	3
7	36	85	25	60	3
8	37	55	10	40	1
9	38	55	10	40	1
10	39	55	10	40	1