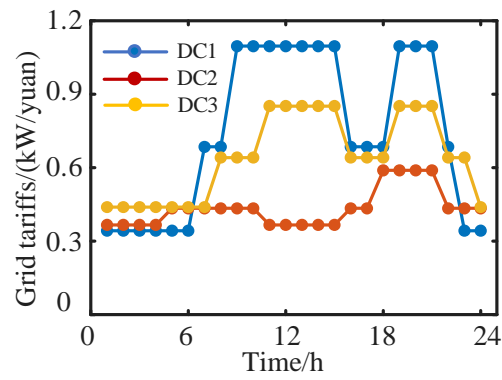
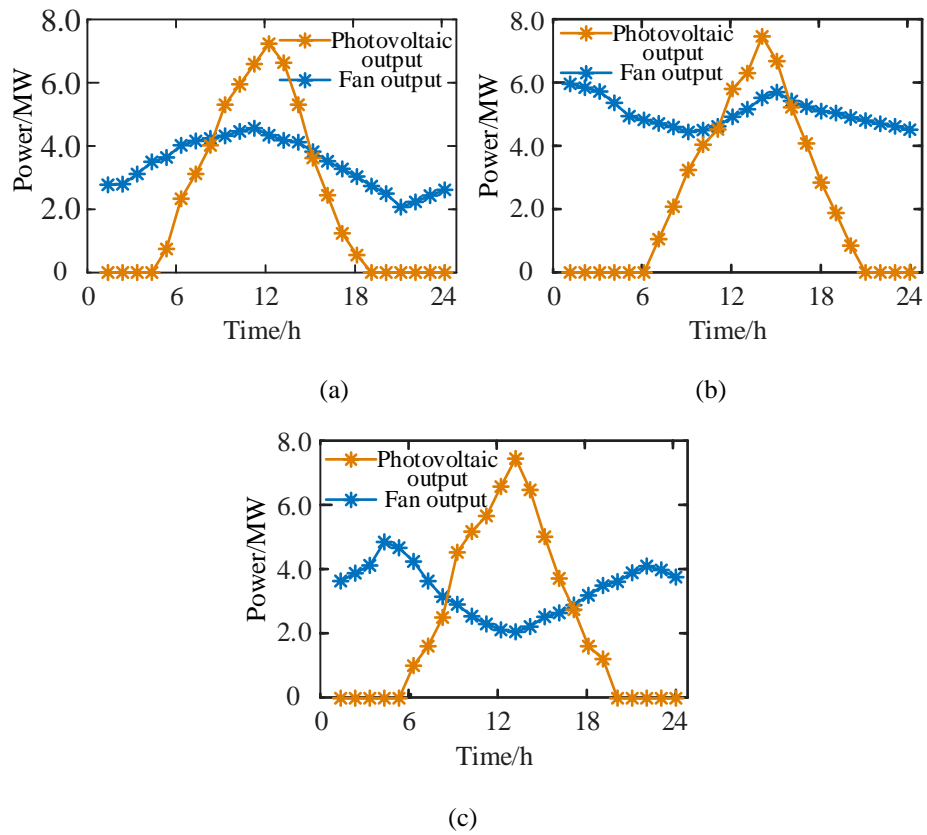


## Electronic Supplementary Material

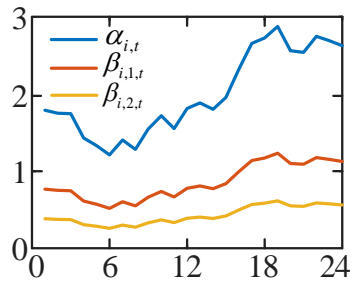


**Fig. S1** The DC power tariff of the area.

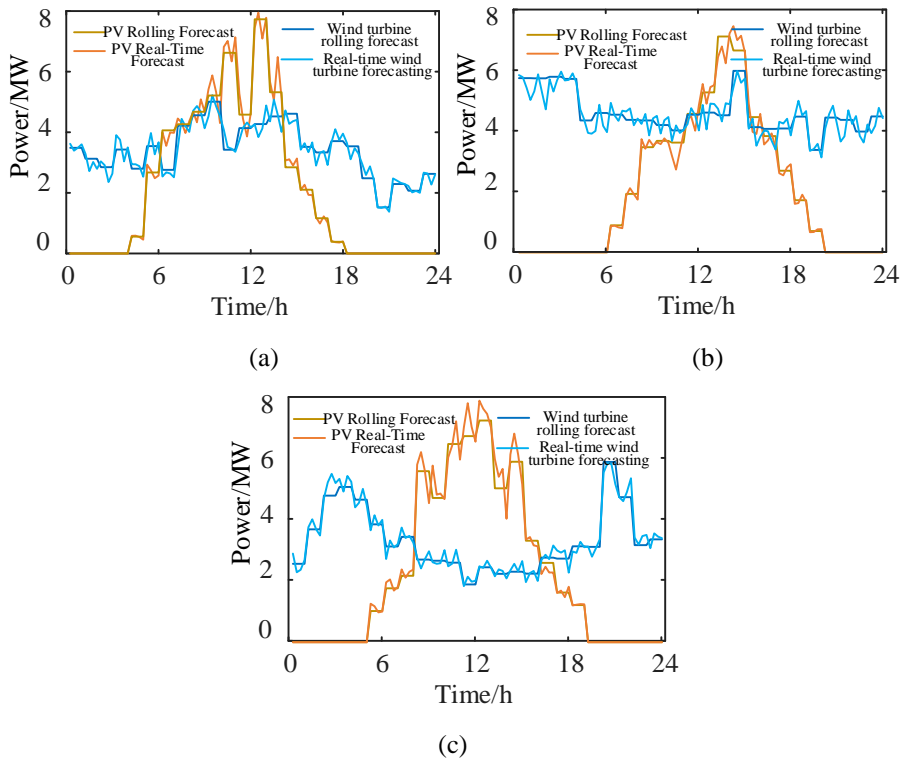


**Fig. S2** Scenery output of data centres.

(a) DC 1's scenery out of force; (b) DC 2's scenery out of force; (c) DC 3's scenery out of force.

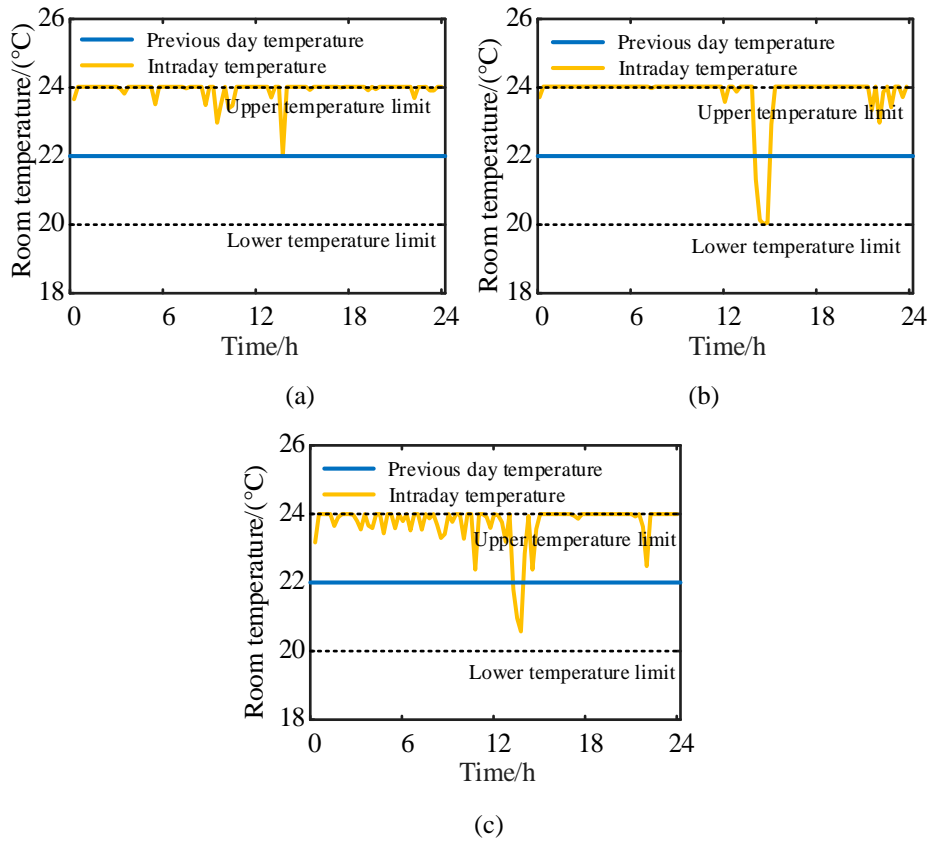


**Fig. S3** DC workload arrival rate.



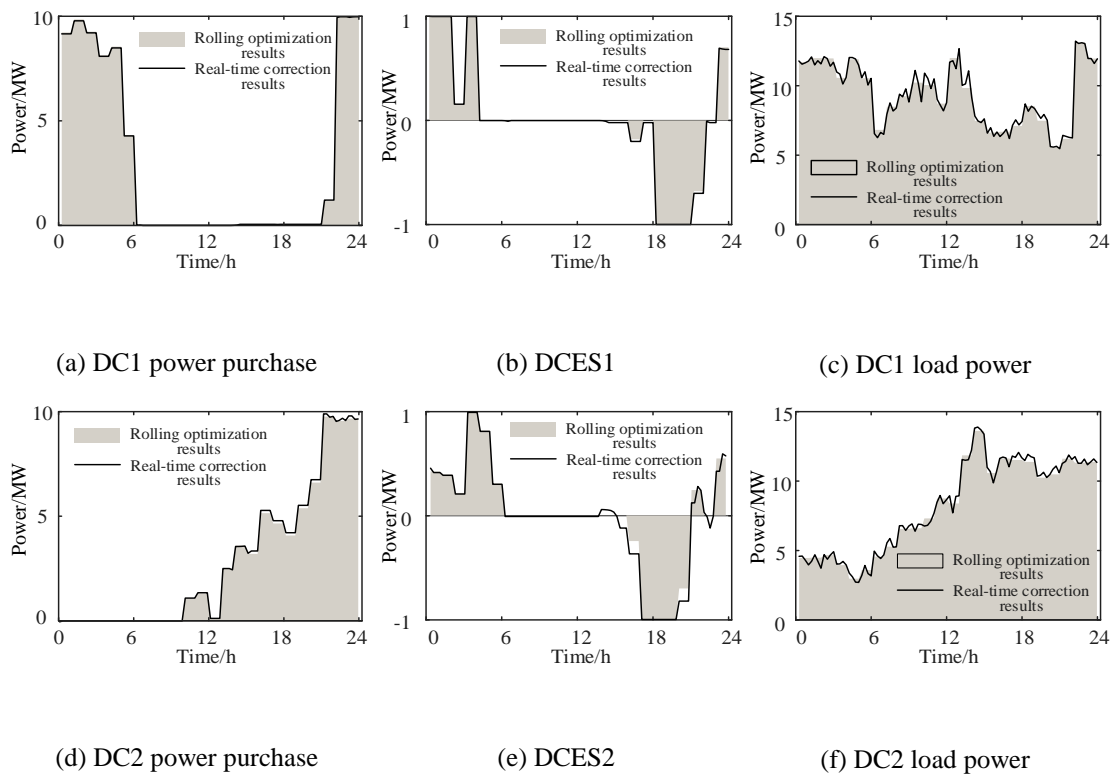
**Fig. S4** Forecast of DC day-to-day performance.

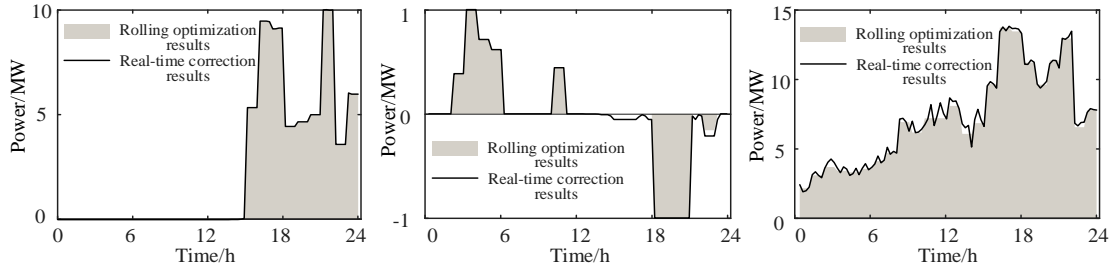
(a) Intraday scenic outlook forecast for DC1; (b) Intraday scenic outlook forecast for DC2; (c) Intraday scenic outlook forecast for DC3



**Fig. S5** Indoor temperature of the intra-day cooling system in the DC

(a) Room temperature of cooling system of DC1; (b) Room temperature of cooling system of DC2; (c) Room temperature of cooling system of DC3



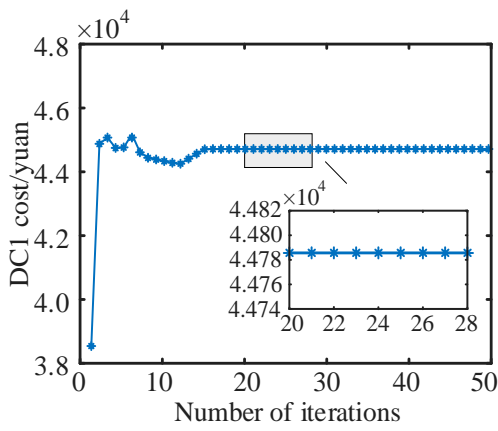


(g) DC3 power purchase

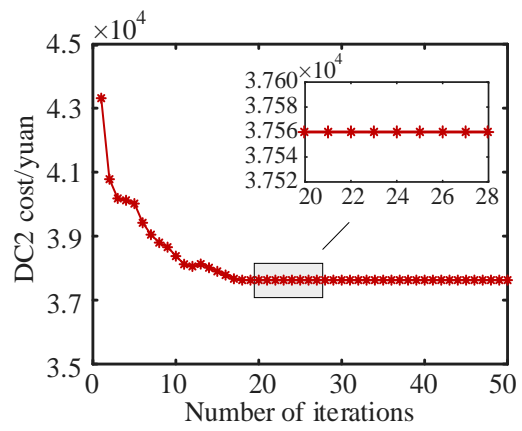
(h) DCEs3

(i) DC3 load power

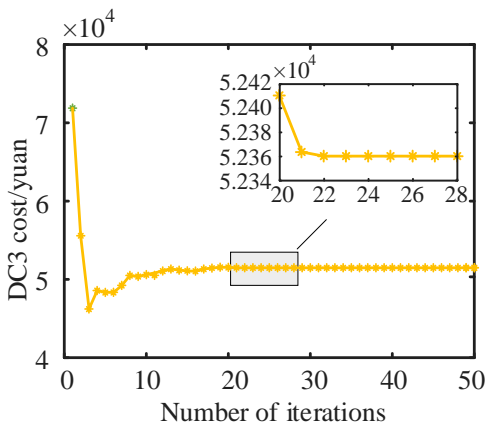
**Fig. S6** Intra-day real-time correction of power fluctuations of each device



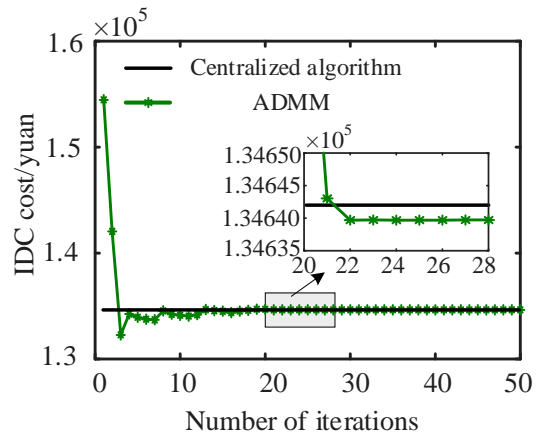
(a) DC1 convergence curve



(b) DC2 convergence curve



(c) DC3 convergence curve



(d) IDC convergence curve

**Fig. S7** Iterative convergence of the objective function