Table1.Main equipment parameters

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Equipment | Upper limit/kW | Lower limit/kW | Climb upper limit/kW | Climb lower limit/kW | Coversion efficiency |
| CHP | 1000 | 0 | 200 | -200 | 0.92 |
| EL | 1200 | 0 | 240 | -240 | 0.88 |
| MR | 500 | 0 | 100 | -100 | 0.92 |
| HFC | 800 | 0 | 160 | -160 | 0.9 |
| CC | 500 | 150 | 100 | -100 | 0.1 |

Table2. Parameters of the energy storage equipment

|  |  |  |  |
| --- | --- | --- | --- |
| Equipment | Upper capacity limit/kW | Lower capacity limit/kW | Efficiency of charging and discharging |
| EES | 800 | 0 | 0.95 |
| TES | 500 | 0 | 0.95 |
| GES | 400 | 0 | 0.98 |
| HES | 400 | 0 | 0.98 |

Table3. EV parameter

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| EV | Upper limit of the charging and discharging/kW | Upper and lower limits of the quantity | Charging and discharging efficiencies | Capacity/kW |  |  |
| 7 | 0.9 and 0.2 | 0.95 | 82 | 0.197 | 5 |

Table4. The charging and discharging prices of EV

|  |  |  |
| --- | --- | --- |
| Time period | Price of charging/[¥/(kWh)] | Price of discharging/[¥/(kWh)] |
| 01:00-06:00,22:00-24:00 | 0.48 | 0.24 |
| 07:00-08:00,12:00-18:00 | 0.78 | 0.36 |
| 09:00-11:00,19:00-21:00 | 1.2 | 0.6 |