

TABLE I. Small-scale system unit economic operating parameters.

| category | c_1^{CHP} | c_2^{CHP} | c_3^{CHP} |
|----------|-------------|-------------|-------------|
| CHP#1 | 0.1029 | 28.7429 | 14.618 |
| category | c_4^{CHP} | c_5^{CHP} | c_6^{CHP} |
| CHP#1 | 0.161 | 36.5571 | 0.0154 |
| category | c_1^{CON} | c_2^{CON} | c_3^{CON} |
| CON#1 | 0.244 | 39.6429 | 11.537 |
| CON#2 | 0.290 | 37.0358 | 12.049 |
| CON#3 | 0.336 | 38.4286 | 12.049 |

TABLE II. Output range of Small-scale system controllable unit.

| category | $[P_{i,min}^{CHP}, P_{i,max}^{CHP}]$ | category | $[P_{i,min}^{CON}, P_{i,max}^{CON}]$ | category | $[P_{i,min}^{EB}, P_{i,max}^{EB}]$ |
|----------|--------------------------------------|-----------|--------------------------------------|----------|------------------------------------|
| CHP#1 | [30,120] | CON#1 | [15,60] | EB#1 | [0,40] |
| category | $[H_{i,min}^{CHP}, H_{i,max}^{CHP}]$ | category | $[V_{i,min}^{GB}, V_{i,max}^{GB}]$ | | |
| CHP#1 | [0,100] | CON#2 | [25,80] | GB#1 | [0,6] |
| category | $c_{i,m}$ | $c_{i,k}$ | $c_{i,v}$ | | |
| CHP#1 | 0.5 | 5 | 0.1 | GB#2 | [0,5] |

TABLE III. Large-scale system unit economic operating parameters.

| category | c_1^{CHP} | c_2^{CHP} | c_3^{CHP} |
|----------|-------------|-------------|-------------|
| CHP#1 | 0.10286 | 32.7429 | 14.618 |
| CHP#2 | 0.10857 | 38.80 | 18.822 |
| category | c_4^{CHP} | c_5^{CHP} | c_6^{CHP} |
| CHP#1 | 0.05786 | 22.5571 | 0.0154 |
| CHP#2 | 0.06107 | 24.10 | 0.01629 |
| category | $c_{i,k}$ | $c_{i,m}$ | $c_{i,v}$ |
| CHP#1 | 4 | 0.75 | 0.1 |
| CHP#2 | 3 | 0.7 | 0.1 |
| category | c_1^{CON} | c_2^{CON} | c_3^{CON} |
| CON#1 | 0.24429 | 39.6429 | 11.537 |
| CON#2 | 0.29 | 37.0358 | 12.049 |
| CON#3 | 0.33571 | 38.4286 | 12.56 |
| CON#4 | 0.31571 | 27.0358 | 13.27 |
| CON#5 | 0.2854 | 35.854 | 14.58 |

TABLE IV. Carbon emission cost parameters.

| category | c^{DR} | c^{CE} | r^{CE} |
|----------|----------|----------|----------|
| | 12 | 75 | 35 |