**Parameters in the Numerical Test**

Table A. 1 Parameters of the general flexible load

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| --- | --- | --- |
| **Parameters** | **Interpretation** | **Value** |
| (h) | Length of time interval | 1 |
| *T* (h) | Length of period | 2 |
|  | The number of samples | 200 |
|  | The number of fixed loads | 1 |
|  | The number of adjustable loads | 1 |
|  | The number of battery | 4 |
| () | Power of fixed load | [120 150] |
| () | Lower limit of power of adjustable loads | 10 |
| () | Upper limit power of adjustable loads | 70 |
| () | Lower limits of power of battery | [-95; -75; -60; -20] |
| () | Upper limits of power of battery | [40; 140; 120; 40] |
| () | Lower limits of energy of virtual battery | [40; 80; 120; 240] |
| () | Upper limits of energy virtual battery | [180; 250; 300; 450] |
| () | Initial energy level of battery | [40; 80; 120; 240] |
|  | Storage coefficients of battery | [0.95; 0.90; 0.85; 0.88] |
| () | Random price signals | [-1, 1] |

Table A. 2 Parameters of the physical model

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| **Test #** | **Parameters** | **Interpretation** | **Value** |
| 1 |  | The number of fixed loads | 1 |
|  | The number of adjustable loads | 1 |
|  | The number of virtual battery | 1 |
|  | Storage coefficients of virtual battery | 1 |
| 2 |  | The number of fixed loads | 1 |
|  | The number of adjustable loads | 1 |
|  | The number of virtual battery | 2 |
|  | Storage coefficients of virtual battery | [1; 0.95] |