EnergiRING dashboard

Excel file format:

A sample data format table of an excel file is shown here.

MicroCHP	GEOTERMAL	CROWD	WIND_SPEED	LIGHT	TEMPERATURE	PRICE	ENERGY_POWER	TIME_PARTS
0	0	0	15	9	7	12		0
0	0	1	2	1	25	12		1
0	0	2	15	2	9	12		2
0	0	3	2	3	-10	12		3
0	0	0	16	4	1	12		4
0	0	3	17	2	12	12		5
0	0	3	1	6	-5	12		6
0	0	20	19	3	21	12		7
0	0	8	20	1	-9	12		8
0	0	9	3	11	51	12		9
0	0	0	22	0	9	12		10
0	0	11	5	2	4	12		11
0	0	5	15	14	13	12		12
0	0	6	23	15	-7	15		13
0	0	0	9	7	4	15		14
0	0	13	23	17	22	15		15
0	0	0	15	0	-1	10		16
0	0	13	80	19	24	10		17
0	0	2	65	0	3	10		18
0	0	2	2	9	4	10		19
0	0	2	15	10	5	10		20
0	0	21	7	2	1	15		21
0	0	22	15	17	0	15		22
0	0	23	15	22	0	15		23

As can be seen in the table, the inputs of the system are as follows:

- Temperature in centigrade
- Light density
- Wind speed in m/s
- Crowd (number of people)
- Micro CHP and geo-thermal production

The produced and consumed energy is calculated based on the following formulas:

- Solar energy production

Light density	Solar Energy production
0<light<=5	1
5<light<=10	2
10<light	3

- Wind energy production

  Wind energy production = wind speed*0.5

- Lighting consumption: (lighting_consumption_0 + lighting_consumption_1)

Light density	lighting_consumption_0
0<light<=5	3
5<light<=10	2
10<light	1

Crowd (number of people)	lighting_consumption_1
crowd = 0	1
0< crowd <=5	2
5< crowd	3

- Installations consumption: (Installations_consumption_0+Installations_consumption_1)

Temperature	Installations_consumption_0
temperature <-10	5
-10< temperature <0	4
0< temperature <10	3
10< temperature <20	2
20< temperature <30	3
30< temperature	4

Crowd (number of people)	Installations_consumption_1
crowd = 0	1
0< crowd <=5	2
5< crowd	3