

LAMPIRAN

Lampiran 1 Data beban Gedung SAINTEK UNISNU Jepara perhari tahun 2019

Januari										
Tgl	Perkuliahahan			Liburan			LWBP			Total Daya Pemakaian (kWh/Day)
	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	
1	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
2	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
3	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
4	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
5	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
6	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
7	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
8	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
9	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
10	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
11	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
12	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
13	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
14	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
15	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
16	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
17	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
18	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
19	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
20	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
21	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
22	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
23	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
24	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
25	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
26	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
27	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
28	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
29	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
30	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
31	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
Total										11.197.30

Februari										
Tgl	Perkuliahhan			Liburan			LWBP			Total Daya Pemakaian (kWh/Day)
	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	
1	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
2	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
3	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
4	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
5	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
6	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
7	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
8	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
9	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
10	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
11	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
12	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
13	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
14	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
15	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
16	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
17	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
18	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
19	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
20	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
21	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
22	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
23	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
24	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
25	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
26	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
27	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
28	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
Total										6295,40

Maret										
Tgl	Perkuliahhan			Liburan			LWBP			Total Daya pemakaian (kWh/Day)
	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	
1	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
2	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
3	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
4	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
5	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
6	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
7	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
8	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
9	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
10	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
11	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
12	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
13	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
14	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
15	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
16	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
17	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
18	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
19	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
20	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
21	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
22	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
23	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
24	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
25	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
26	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
27	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
28	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
29	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
30	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
31	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
Total										14653,27

April										
Tgl	Perkuliahahan			Liburan			LWBP			Total Daya pemakaian (kWh/Day)
	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	
1	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
2	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
3	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
4	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
5	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
6	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
7	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
8	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
9	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
10	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
11	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
12	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
13	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
14	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
15	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
16	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
17	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
18	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
19	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
20	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
21	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
22	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
23	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
24	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
25	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
26	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
27	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
28	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
29	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
30	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
Total										14171,30

Mei										
Tgl	Perkuliahahan			Liburan			LWBP			Total Daya pemakaian (kWh/Day)
	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	
1	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
2	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
3	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
4	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
5	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
6	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
7	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
8	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
9	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
10	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
11	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
12	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
13	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
14	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
15	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
16	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
17	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
18	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
19	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
20	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
21	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
22	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
23	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
24	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
25	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
26	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
27	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
28	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
29	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
30	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
31	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
Total										13213,29

Juni										
Tgl	Perkuliahahan			Liburan			LWBP			Total Daya pemakaian (kWh/Day)
	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	
1	0	9	0	12,45	9	112,08	5,46	15	81,9	481,98
2	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
3	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
4	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
5	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
6	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
7	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
8	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
9	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
10	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
11	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
12	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
13	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
14	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
15	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
16	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
17	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
18	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
19	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
20	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
21	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
22	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
23	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
24	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
25	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
26	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
27	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
28	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
29	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
30	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
Total										10715,33

Juli										
Tgl	Perkuliahahan			Liburan			LWBP			Total Daya pemakaian (kWh/Day)
	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	
1	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
2	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
3	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
4	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
5	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
6	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
7	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
8	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
9	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
10	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
11	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
12	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
13	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
14	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
15	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
16	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
17	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
18	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
19	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
20	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
21	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
22	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
23	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
24	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
25	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
26	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
27	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
28	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
29	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
30	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
31	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
Total										10333,31

Agustus										
Tgl	Perkuliahan			Liburan			LWBP			Total Daya pemakaian (kWh/Day)
	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	
1	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
2	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
3	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
4	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
5	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
6	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
7	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
8	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
9	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
10	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
11	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
12	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
13	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
14	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
15	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
16	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
17	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
18	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
19	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
20	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
21	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
22	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
23	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
24	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
25	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
26	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
27	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
28	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
29	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
30	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
31	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
Total										6013,34

September										
Tgl	Perkuliahahan			Liburan			LWBP			Total Daya pemakaian (kWh/Day)
	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	
1	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
2	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
3	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
4	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
5	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
6	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
7	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
8	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
9	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
10	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
11	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
12	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
13	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
14	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
15	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
16	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
17	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
18	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
19	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
20	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
21	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
22	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
23	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
24	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
25	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
26	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
27	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
28	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
29	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
30	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
Total										9851,33

Oktober										
Tgl	Perkuliahahan			Liburan			LWBP			Total Daya pemakaian (kWh/Day)
	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	
1	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
2	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
3	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
4	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
5	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
6	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
7	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
8	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
9	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
10	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
11	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
12	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
13	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
14	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
15	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
16	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
17	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
18	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
19	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
20	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
21	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
22	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
23	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
24	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
25	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
26	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
27	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
28	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
29	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
30	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
31	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
Total										14653,27

November										
Tgl	Perkuliahahan			Liburan			LWBP			Total Daya pemakaian (kWh/Day)
	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	
1	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
2	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
3	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
4	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
5	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
6	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
7	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
8	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
9	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
10	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
11	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
12	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
13	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
14	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
15	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
16	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
17	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
18	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
19	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
20	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
21	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
22	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
23	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
24	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
25	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
26	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
27	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
28	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
29	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
30	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
Total										14171,30

Desember										
Tgl	Perkuliahahan			Liburan			LWBP			Total Daya pemakaian (kWh/Day)
	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	Daya (kW)	Durasi	Total (kWh)	
1	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
2	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
3	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
4	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
5	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
6	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
7	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
8	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
9	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
10	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
11	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
12	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
13	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
14	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
15	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
16	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
17	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
18	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
19	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
20	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
21	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
22	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
23	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
24	0	9	0	12,45	9	112,08	5,46	15	81,9	193,98
25	0	9	0	12,45	9	112,08	5,46	15	81,9	193,95
26	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
27	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
28	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
29	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
30	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
31	44,45	9	400,08	0	9	0	5,46	15	81,9	481,98
Total										14365,28

Lampiran 2 Hasil daya yang dibangkitkan PLTS hitungan manual

Januari		
Tgl	Radiasi Matahari (kWh/m ² /hari)	Daya Keluaran PLTS (kWh)
1	5,72	455,36
2	5,27	419,54
3	5,68	452,18
4	4,42	351,87
5	3,99	317,64
6	3,65	290,57
7	2,23	177,53
8	3,57	284,20
9	6	477,65
10	5,53	440,23
11	4,35	346,30
12	3,32	264,30
13	3,2	254,75
14	3,82	304,10
15	4,68	372,57
16	2,95	234,84
17	4,13	328,78
18	3,66	291,37
19	3,62	288,18
20	4,26	339,13
21	4,69	373,36
22	2,55	203,00
23	3,66	291,37
24	6,07	483,22
25	2,83	225,29
26	5,52	439,44
27	3,89	309,68
28	3,39	269,87
29	5,32	423,52
30	5,68	452,18
31	4,28	340,72
Total	4,26	10502,72

Februari		
Tgl	Radiasi Matahari (kWh/m ² /hari)	Daya Keluaran PLTS (kWh)
1	3,21	255,54
2	4,77	379,73
3	1,33	105,88
4	2,57	204,59
5	1,45	115,43
6	2,82	224,50
7	2,53	201,41
8	2,17	172,75
9	4,82	383,71
10	5,83	464,12
11	3,71	295,35
12	3,94	313,66
13	2,16	171,95
14	4,42	351,87
15	2,91	231,66
16	4,96	394,86
17	6,34	504,72
18	6,04	480,83
19	6,27	499,14
20	6,32	503,12
21	7	557,26
22	6,06	482,43
23	5,75	457,75
24	1,59	126,58
25	6,43	511,88
26	4,2	334,35
27	6,69	532,58
28	6,68	531,78
Total	4,39	9789,43

Maret		
Tgl	Radiasi Matahari (kWh/m ² /hari)	Daya Keluaran PLTS (kWh)
1	3,45	274,65
2	6,36	506,31
3	3,99	317,64
4	6,69	532,58
5	4,87	387,69
6	6,43	511,88
7	5,15	409,98
8	2,16	171,95
9	6,96	554,07
10	6,32	503,12
11	5,16	410,78
12	5,21	414,76
13	2,37	188,67
14	6,31	502,33
15	6,98	555,67
16	6,4	509,49
17	5,16	410,78
18	0	0,00
19	6,01	478,45
20	6,56	522,23
21	3,84	305,70
22	3,14	249,97
23	6,72	534,97
24	5,73	456,16
25	4,67	371,77
26	3,86	307,29
27	0	0,00
28	5,38	428,29
29	6,84	544,52
30	5,92	471,28
31	6,21	494,37
Total	5,00	12327,34

April		
Tgl	Radiasi Matahari (kWh/m ² /hari)	Daya Keluaran PLTS (kWh)
1	6,57	523,03
2	2,34	186,28
3	6,62	527,01
4	6,7	533,38
5	6,57	523,03
6	6,57	523,03
7	5,67	451,38
8	4,23	336,74
9	5,98	476,06
10	6,54	520,64
11	6,51	518,25
12	4,88	388,49
13	6,26	498,35
14	5,79	460,93
15	6,25	497,55
16	5,63	448,19
17	5,62	447,40
18	4,39	349,48
19	6,11	486,41
20	4,62	367,79
21	5	398,04
22	4,24	337,54
23	4,47	355,85
24	6,01	478,45
25	4,93	392,47
26	5,53	440,23
27	5,66	450,58
28	5,34	425,11
29	6,26	498,35
30	6,33	503,92
Total	5,59	13343,94

Mei		
Tgl	Radiasi Matahari (kWh/m ² /hari)	Daya Keluaran PLTS (kWh)
1	6,17	491,18
2	5,65	449,79
3	6,04	480,83
4	5,97	475,26
5	6,21	494,37
6	5,97	475,26
7	6,13	488,00
8	5,72	455,36
9	6,06	482,43
10	6,06	482,43
11	6,08	484,02
12	5,71	454,56
13	5,89	468,89
14	5,95	473,67
15	2,45	195,04
16	2,86	227,68
17	4,33	344,70
18	4,7	374,16
19	3,36	267,48
20	4,26	339,13
21	5,34	425,11
22	5,29	421,13
23	4,1	326,39
24	3,2	254,75
25	4,22	335,95
26	5,61	446,60
27	4,16	331,17
28	4,88	388,49
29	5,51	438,64
30	5,57	443,42
31	5,36	426,70
Total	5,12	12642,59

Juni		
Tgl	Radiasi Matahari (kWh/m ² /hari)	Daya Keluaran PLTS (kWh)
1	5,63	448,19
2	5,43	432,27
3	5,41	430,68
4	5,56	442,62
5	5,48	436,25
6	5,39	429,09
7	5,4	429,88
8	5,39	429,09
9	5,51	438,64
10	5,02	399,63
11	5,28	420,33
12	4,99	397,25
13	5	398,04
14	5,55	441,83
15	5,48	436,25
16	5,51	438,64
17	5,52	439,44
18	5,44	433,07
19	4,6	366,20
20	3,83	304,90
21	4,76	378,94
22	5,35	425,90
23	5,17	411,57
24	4,91	390,88
25	2,96	235,64
26	3,39	269,87
27	5,48	436,25
28	5,24	417,15
29	5,26	418,74
30	5,52	439,44
Total	5,12	12216,69

Juli		
Tgl	Radiasi Matahari (kWh/m ² /hari)	Daya Keluaran PLTS (kWh)
1	5,37	427,50
2	4,94	393,26
3	5,51	438,64
4	0	0,00
5	5,58	444,21
6	5,79	460,93
7	5,62	447,40
8	5,57	443,42
9	5,59	445,01
10	5,4	429,88
11	5,24	417,15
12	5,7	453,77
13	5,5	437,85
14	5,5	437,85
15	5,58	444,21
16	5,67	451,38
17	5,64	448,99
18	5,66	450,58
19	5,68	452,18
20	5,77	459,34
21	5,43	432,27
22	5,46	434,66
23	5,72	455,36
24	5,81	462,52
25	5,97	475,26
26	5,98	476,06
27	5,99	476,85
28	5,92	471,28
29	4,85	386,10
30	5,85	465,71
31	5,92	471,28
Total	5,43	13390,91

Agustus		
Tgl	Radiasi Matahari (kWh/m ² /hari)	Daya Keluaran PLTS (kWh)
1	5,52	439,44
2	6,1	485,61
3	6,11	486,41
4	6,02	479,24
5	5,96	474,47
6	6,12	487,20
7	5,47	435,46
8	5,33	424,31
9	5,99	476,85
10	5,93	472,08
11	6,11	486,41
12	5,87	467,30
13	6,02	479,24
14	6,17	491,18
15	6,21	494,37
16	6,43	511,88
17	6,45	513,47
18	6,44	512,68
19	6,32	503,12
20	6,34	504,72
21	6,14	488,79
22	6,28	499,94
23	6,33	503,92
24	6,38	507,90
25	6,41	510,29
26	6,33	503,92
27	6,37	507,10
28	6,32	503,12
29	5,72	455,36
30	6,4	509,49
31	6,32	503,12
Total	6,13	15118,41

September		
Tgl	Radiasi Matahari (kWh/m ² /hari)	Daya Keluaran PLTS (kWh)
1	5,83	464,12
2	6,22	495,16
3	6,51	518,25
4	6,44	512,68
5	5,74	456,95
6	6,25	497,55
7	5,85	465,71
8	6,55	521,43
9	6,59	524,62
10	6,57	523,03
11	6,43	511,88
12	6,5	517,45
13	6,66	530,19
14	5,87	467,30
15	6,46	514,27
16	6,65	529,40
17	6,63	527,80
18	5,61	446,60
19	3,02	240,42
20	5,42	431,48
21	4,83	384,51
22	6,24	496,76
23	6,74	536,56
24	6,86	546,11
25	6,86	546,11
26	6,67	530,99
27	6,83	543,72
28	7,04	560,44
29	6,78	539,74
30	6,87	546,91
Total	6,25	14928,15

Oktober		
Tgl	Radiasi Matahari (kWh/m ² /hari)	Daya Keluaran PLTS (kWh)
1	6,73	535,76
2	6,75	537,36
3	6,63	527,80
4	6,53	519,84
5	5,91	470,48
6	6,23	495,96
7	6,5	517,45
8	6,85	545,32
9	5,64	448,99
10	6,86	546,11
11	6,76	538,15
12	6,5	517,45
13	5,82	463,32
14	5,84	464,91
15	6,68	531,78
16	6,62	527,01
17	6,77	538,95
18	6,85	545,32
19	6,78	539,74
20	6,35	505,51
21	6,91	550,09
22	6,36	506,31
23	6,59	524,62
24	6,63	527,80
25	6,55	521,43
26	6,59	524,62
27	6,7	533,38
28	6,62	527,01
29	4,76	378,94
30	5,85	465,71
31	6,58	523,82
Total	6,44	15900,96

November		
Tgl	Radiasi Matahari (kWh/m ² /hari)	Daya Keluaran PLTS (kWh)
1	6,66	530,19
2	5,36	426,70
3	5,58	444,21
4	5,15	409,98
5	5,95	473,67
6	4,6	366,20
7	4,11	327,19
8	3,63	288,98
9	5,64	448,99
10	6,28	499,94
11	6,41	510,29
12	5,45	433,87
13	6,07	483,22
14	5,41	430,68
15	0	0,00
16	6,75	537,36
17	6,27	499,14
18	4,74	377,34
19	6,89	548,50
20	6,57	523,03
21	5,91	470,48
22	6,09	484,81
23	6,46	514,27
24	5,63	448,19
25	4,52	359,83
26	2,3	183,10
27	5,8	461,73
28	2,32	184,69
29	5,09	405,21
30	4,14	329,58
Total	5,19	12401,38

Desember		
Tgl	Radiasi Matahari (kWh/m ² /hari)	Daya Keluaran PLTS (kWh)
1	4,42	351,87
2	6,1	485,61
3	4,27	339,93
4	6,66	530,19
5	3,03	241,21
6	5,65	449,79
7	6,44	512,68
8	4,63	368,59
9	3,92	312,06
10	6,24	496,76
11	4,77	379,73
12	4,61	366,99
13	3,49	277,83
14	3,44	273,85
15	3,86	307,29
16	2,22	176,73
17	5,09	405,21
18	6,74	536,56
19	6,65	529,40
20	2,55	203,00
21	3,26	259,52
22	4,32	343,91
23	3,92	312,06
24	3,42	272,26
25	2,02	160,81
26	4,38	348,68
27	4,95	394,06
28	6,35	505,51
29	6,13	488,00
30	5,2	413,96
31	5,13	408,39
Total	4,64	11452,45

Lampiran 3 Hasil Simulasi PVsyst

PVSYST V6.86		19/02/20	Page 1/4																		
Grid-Connected System: Simulation parameters																					
Project : usuf unisnu																					
Geographical Site		Unisnu	Country Indonesia																		
Situation		Latitude -6.62° S	Longitude 110.69° E																		
Time defined as		Legal Time Time zone UT+7	Altitude 59 m																		
Meteo data:		Unisnu	Meteonorm 7.2 (2010-2014), Sat=100% (Modified by user) (Modi - Synthetic)																		
Simulation variant : New simulation variant																					
		Simulation date	19/02/20 12h27																		
Simulation parameters		System type	No 3D scene defined, no shadings																		
Collector Plane Orientation		Tilt	15°																		
		Azimuth	0°																		
Models used		Transposition	Perez																		
		Diffuse	Perez, Meteonorm																		
Horizon		Free Horizon																			
Near Shadings		No Shadings																			
User's needs :		Unlimited load (grid)																			
PV Array Characteristics																					
PV module																					
Original PVsyst database		Si-mono	Model CS1U - 400MS																		
		Manufacturer	Canadian Solar Inc.																		
Number of PV modules		In series	15 modules																		
		In parallel	16 strings																		
Total number of PV modules		Nb. modules	240																		
Array global power		Unit Nom. Power	400 Wp																		
Array operating characteristics (50°C)		Nominal (STC)	96.0 kWp																		
		At operating cond.	87.2 kWp (50°C)																		
Total area		U mpp	598 V																		
		Module area	495 m ²																		
		I mpp	146 A																		
		Cell area	478 m ²																		
Inverter																					
Original PVsyst database		Model	CSI-60KTL-GI-H																		
		Manufacturer	Canadian Solar Inc.																		
Characteristics		Operating Voltage	200-1000 V																		
		Unit Nom. Power	60.0 kWac																		
Inverter pack		Nb. of inverters	2 units																		
		Total Power	120 kWac																		
		Pnom ratio	0.80																		
PV Array loss factors																					
Thermal Loss factor		Uc (const)	20.0 W/m ² K																		
		Uv (wind)	0.0 W/m ² K / m/s																		
Wiring Ohmic Loss		Global array res.	68 mOhm																		
Module Quality Loss		Loss Fraction	1.5 % at STC																		
Module Mismatch Losses		Loss Fraction	-0.3 %																		
Strings Mismatch loss		Loss Fraction	1.0 % at MPP																		
Incidence effect (IAM): User defined profile		Loss Fraction	0.10 %																		
<table border="1"> <tr> <td>10°</td> <td>20°</td> <td>30°</td> <td>40°</td> <td>50°</td> <td>60°</td> <td>70°</td> <td>80°</td> <td>90°</td> </tr> <tr> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>0.990</td> <td>0.990</td> <td>0.970</td> <td>0.920</td> <td>0.760</td> <td>0.000</td> </tr> </table>				10°	20°	30°	40°	50°	60°	70°	80°	90°	1.000	1.000	1.000	0.990	0.990	0.970	0.920	0.760	0.000
10°	20°	30°	40°	50°	60°	70°	80°	90°													
1.000	1.000	1.000	0.990	0.990	0.970	0.920	0.760	0.000													

PVsyst Evaluation mode

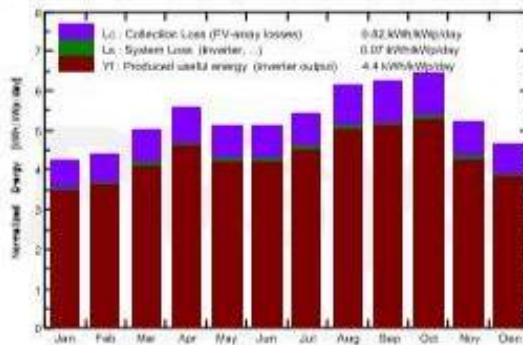
Grid-Connected System: Main results

Project : usuf unisnu
Simulation variant : New simulation variant

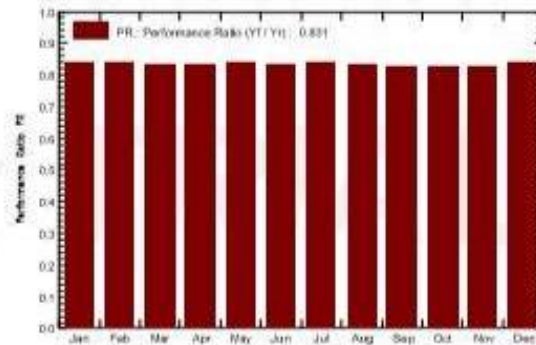
Main system parameters		System type	No 3D scene defined, no shadings	
PV Field Orientation		tilt	15°	azimuth 0°
PV modules		Model	CS1U - 400MS	Pnom 400 Wp
PV Array		Nb. of modules	240	Pnom total 96.0 kWp
Inverter		Model	CSI-60KTL-GI-H	Pnom 60.0 kW ac
Inverter pack		Nb. of units	2.0	Pnom total 120 kW ac
User's needs		Unlimited load (grid)		

Main simulation results		Produced Energy	154.3 MWh/year	Specific prod.	1607 kWh/kWp/year
System Production		Performance Ratio PR	83.14 %		

Normalized productions (per installed kWp): Nominal power 96.0 kWp



Performance Ratio PR



New simulation variant Balances and main results

	GlobHor kWh/m ²	DiffHor kWh/m ²	T_Amb °C	GlobInc kWh/m ²	GlobEff kWh/m ²	EArray MWh	E_Grid MWh	PR
January	143.3	70.60	28.90	130.5	126.9	10.67	10.49	0.838
February	129.4	64.40	28.40	122.9	119.9	10.06	9.89	0.838
March	155.2	65.00	29.10	155.0	151.7	12.56	12.36	0.830
April	157.5	46.00	29.80	167.7	164.7	13.58	13.37	0.831
May	143.7	58.00	29.60	158.7	155.8	12.92	12.73	0.835
June	143.2	99.00	29.40	153.6	150.1	12.47	12.29	0.833
July	151.7	68.00	28.60	168.3	165.0	13.71	13.51	0.836
August	178.6	89.20	28.20	190.1	186.3	15.38	15.15	0.830
September	185.5	90.00	28.40	187.5	183.6	15.07	14.84	0.824
October	207.0	99.00	29.10	199.6	195.3	16.03	15.78	0.823
November	170.4	67.00	30.10	155.8	152.1	12.59	12.39	0.828
December	162.2	56.00	29.78	143.6	139.7	11.71	11.52	0.836
Year	1927.7	872.19	29.12	1933.4	1891.1	156.76	154.31	0.831

Legends: GlobHor Horizontal global irradiation GlobEff Effective Global, corr. for IAM and shadings
 DiffHor Horizontal diffuse irradiation EArray Effective energy at the output of the array
 T_Amb T amb. E_Grid Energy injected into grid
 GlobInc Global incident in coll. plane PR Performance Ratio

KALENDER AKADEMIK UNIVERSITAS ISLAM NAHDLATUL ULAMA JEPARA
TAHUN AKADEMIK 2017/2018

SEMESTER GASAL							SEMESTER GENAP						
BULAN	JULI 2017						BULAN	PEBRUARI 2018					
PERKULIAHAN							PERKULIAHAN						
AHAD		2	9	16	23	30	AHAD						1
SENIN		3	10	17	24	31	SENIN						2
SELASA		4	11	18	25		SELASA						3
RABU		5	12	19	26		RABU						4
KAMIS		6	13	20	27		KAMIS						5
JUMAT		7	14	21	28		JUMAT						6
SABTU	1	8	15	22	29		SABTU	1	8	15	22	29	

SEMESTER GASAL							SEMESTER GENAP						
BULAN	AGUSTUS 2017						BULAN	MARET 2018					
PERKULIAHAN							PERKULIAHAN						
AHAD		6	13	20	27		AHAD						1
SENIN		7	14	21	28		SENIN						2
SELASA	1	8	15	22	29		SELASA						3
RABU	2	9	16	23	30		RABU						4
KAMIS	3	10	17	24	31		KAMIS						5
JUMAT	4	11	18	25			JUMAT						6
SABTU	5	12	19	26			SABTU	1	8	15	22	29	

SEMESTER GASAL							SEMESTER GENAP						
BULAN	SEPTEMBER 2017						BULAN	APRIL 2018					
PERKULIAHAN							PERKULIAHAN						
AHAD		3	10	17	24		AHAD						1
SENIN		4	11	18	25		SENIN						2
SELASA		5	12	19	26		SELASA						3
RABU		6	13	20	27		RABU						4
KAMIS		7	14	21	28		KAMIS						5
JUMAT	1	8	15	22	23		JUMAT						6
SABTU	2	9	16	23	30		SABTU	1	8	15	22	29	

SEMESTER GASAL							SEMESTER GENAP							
BULAN	OKTOBER 2017						BULAN	MEI 2018						
PERKULIAHAN							PERKULIAHAN							
AHAD		1	8	15	22	29	AHAD							1
SENIN		2	9	16	23	30	SENIN							2
SELASA		3	10	17	24		SELASA							3
RABU		4	11	18	25		RABU							4
KAMIS		5	12	19	26		KAMIS							5
JUMAT		6	13	20	27		JUMAT							6
SABTU	7	14	21	28			SABTU	1	8	15	22	29		

SEMESTER GASAL							SEMESTER GENAP							
BULAN	NOVEMBER 2017						BULAN	JUNI 2018						
PERKULIAHAN							PERKULIAHAN							
AHAD		5	12	19	26		AHAD							1
SENIN		6	13	20	27		SENIN							2
SELASA		7	14	21	28		SELASA							3
RABU		1	8	15	22	29	RABU							4
KAMIS		2	9	16	23	30	KAMIS							5
JUMAT		3	10	17	24		JUMAT							6
SABTU	4	11	18	25			SABTU	1	8	15	22	29		

SEMESTER GASAL							SEMESTER GENAP							
BULAN	DESEMBER 2017						BULAN	JULI 2018						
PERKULIAHAN							PERKULIAHAN							
AHAD		3	10	17	24	31	AHAD							1
SENIN		4	11	18	25		SENIN							2
SELASA		5	12	19	26		SELASA							3
RABU		6	13	20	27		RABU							4
KAMIS		7	14	21	28		KAMIS							5
JUMAT		1	8	15	22	29	JUMAT							6
SABTU	2	9	16	23	30		SABTU	1	8	15	22	29		

SEMESTER GASAL							SEMESTER GENAP							
BULAN	JANUARI 2018						BULAN	AGUSTUS 2018						
PERKULIAHAN							PERKULIAHAN							
AHAD		7	14	21			AHAD							1
SENIN		1	8	15	22	29	SENIN							2
SELASA		2	9	16	23	30	SELASA							3
RABU		3	10	17	24		RABU							4
KAMIS		4	11	18	25		KAMIS							5
JUMAT		5	12	19	26		JUMAT							6
SABTU	6	13	20	27			SABTU	1	8	15	22	29		

Lampiran 4 Kalender Akademik UNISNU Jepara 2018

KALENDER AKADEMIK UNIVERSITAS ISLAM NAHDLATUL ULAMA JEPARA TAHUN AKADEMIK 2018/2019

BULAN	AGUSTUS 2018
PERKULIAHAN	
AHAD	5 12 19 26
SENIN	6 13 20 27
SELASA	7 14 21 28
RABU	1 8 15 22 29
KAMIS	2 9 16 23 30
JUMAT	3 10 17 24 31
SABTU	4 11 18 25

- Registrasi/pembayaran SPP Tetap & KRS semester gasal TA 2018/2019
- HUT Kemerdekaan RI
- Idul Adha 1439 H.

BULAN	SEPTEMBER 2018
PERKULIAHAN	
AHAD	2 9 16 23 30
SENIN	3 10 17 24
SELASA	4 11 18 25
RABU	5 12 19 26
KAMIS	6 13 20 27
JUMAT	7 14 21 28
SABTU	1 8 15 22 29

- Matrikulasi
- Pertemuan wali PKMKB
- Kuliah perdana mhs. baru
- Perkulahan efektif
- Tahun Baru Islam 1440 H.
- Batas akhir ujian skripsi/tesis
- Batas akhir daftar & bayar Wisuda Ke-11

BULAN	OKTOBER 2018
PERKULIAHAN	
AHAD	7 14 21 28
SENIN	8 15 22 29
SELASA	9 16 23 30
RABU	1 10 17 24 31
KAMIS	2 11 18 25
JUMAT	3 10 17 24 31
SABTU	6 13 20 27

- Perkulahan efektif
- Pembayaran SPP Variabel semester gasal
- Hari Senin Nasional
- Wisuda Ke-11

BULAN	NOVEMBER 2018
PERKULIAHAN	
AHAD	4 11 18 25
SENIN	5 12 19 26
SELASA	6 13 20 27
RABU	7 14 21 28
KAMIS	1 8 15 22 29
JUMAT	2 9 16 23 30
SABTU	3 10 17 24

- Perkulahan efektif
- Pembayaran SPP Variabel semester gasal
- UTS semester gasal
- Maulid Nabi Muhammad SAW

BULAN	DESEMBER 2018
PERKULIAHAN	
AHAD	2 9 16 23 30
SENIN	3 10 17 24 31
SELASA	4 11 18 25
RABU	5 12 19 26
KAMIS	6 13 20 27
JUMAT	7 14 21 28
SABTU	1 8 15 22 29

- Perkulahan efektif
- Pembayaran SPP Variabel semester gasal
- Cuti Bersama
- Hari Natal

BULAN	JANUARI 2019
PERKULIAHAN	
AHAD	6 13 20 27
SENIN	7 14 21 28
SELASA	1 8 15 22 29
RABU	2 9 16 23 30
KAMIS	3 10 17 24 31
JUMAT	4 11 18 25
SABTU	5 12 19

- Perkulahan efektif
- Pembayaran SPP Variabel semester gasal
- UAS semester gasal
- Yudisium
- Registrasi & KRS SPP
- Tetap semester genap TA 2018/2019
- KKN Periode I

BULAN	FEBRUARI 2019
PERKULIAHAN	
AHAD	4 11 18 25
SENIN	5 12 19 26
SELASA	6 13 20 27
RABU	7 14 21 28
KAMIS	1 8 15 22 29
JUMAT	2 9 16 23 30
SABTU	3 10 17 24

- Registrasi & KRS SPP
- Tetap semester genap TA 2018/2019
- KKN Periode I
- KKN
- Tahun Baru Imlek

BULAN	MARET 2019
PERKULIAHAN	
AHAD	3 10 17 24 31
SENIN	4 11 18 25
SELASA	5 12 19 26
RABU	6 13 20 27
KAMIS	7 14 21 28
JUMAT	1 8 15 22 29
SABTU	2 9 16 23 30

- Perkulahan efektif
- Hari Raya Nyepi
- Batas akhir ujian skripsi/tesis
- Batas akhir daftar & bayar Wisuda Ke-12

BULAN	APRIL 2019
PERKULIAHAN	
AHAD	7 14 21 28
SENIN	1 8 15 22 29
SELASA	2 9 16 23 30
RABU	3 10 17 24
KAMIS	4 11 18 25
JUMAT	5 12 19 26
SABTU	6 13 20 27

- Perkulahan efektif
- Pembayaran SPP Variabel semester genap
- Isra Mikraj Nabi Muhammad SAW
- UTS semester genap
- Wisuda ke-12
- Wala' Isa Al Masih

BULAN	MEI 2019
PERKULIAHAN	
AHAD	5 12 19 26
SENIN	6 13 20 27
SELASA	7 14 21 28
RABU	1 8 15 22 29
KAMIS	2 9 16 23 30
JUMAT	3 10 17 24 31
SABTU	4 11 18 25

- Perkulahan efektif
- Hari Buruh Internasional
- Hari Raya Waisak
- Kerenaan Isa Al Masih
- Libur Awal Ramadan 1440 H.

BULAN	JUNI 2019
PERKULIAHAN	
AHAD	2 9 16 23 30
SENIN	3 10 17 24
SELASA	4 11 18 25
RABU	5 12 19 26
KAMIS	6 13 20 27
JUMAT	7 14 21 28
SABTU	1 8 15 22 29

- Hari Lahir Pancasila
- Perkulahan efektif
- Cuti bersama
- Idul Fitri 1440 H.
- Pembayaran SPP Variabel semester genap

BULAN	JULI 2019
PERKULIAHAN	
AHAD	7 14 21
SENIN	8 15 22 29
SELASA	9 16 23 30
RABU	1 8 15 22 29
KAMIS	2 9 16 23 30
JUMAT	3 10 17 24 31
SABTU	4 11 18 25

- Registrasi SPP Variabel tahun kedua
- UAS semester genap
- Pendaftaran Semester Antara
- PPL/Kuliah KerjaKKU
- Yudisium
- KKN Periode II

BULAN	AGUSTUS 2019
PERKULIAHAN	
AHAD	5 12 19 26
SENIN	6 13 20 27
SELASA	7 14 21 28
RABU	1 8 15 22 29
KAMIS	2 9 16 23 30
JUMAT	3 10 17 24 31
SABTU	4 11 18 25

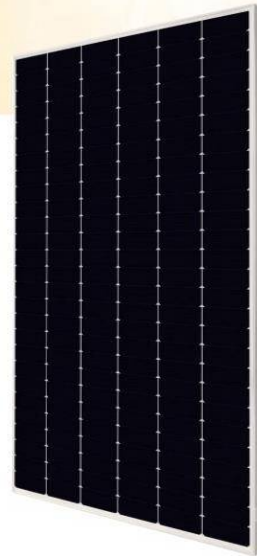
- PPL/Kuliah KerjaKKU
- KKN
- Pelaksanaan Semester Antara
- Hari Lahir Ke-28 UNISNU
- Idul Adha 1440 H.
- HUT Kemerdekaan RI
- Yudisium Semester Antara
- Registrasi/pembayaran SPP Tetap & KRS semester gasal TA 2018/2019

BULAN	SEPTEMBER 2019
PERKULIAHAN	
AHAD	1 8 15 22 29
SENIN	2 9 16 23 30
SELASA	3 10 17 24
RABU	4 11 18 25
KAMIS	5 12 19 26
JUMAT	6 13 20 27
SABTU	7 14 21 28

- PKMKB
- Matrikulasi
- Pertemuan wali
- Kuliah perdana
- Perkulahan efektif
- Tahun Baru Islam 1441 H.
- Batas akhir ujian skripsi/tesis
- Batas akhir daftar & bayar Wisuda Ke-13



Preliminary Technical
Information Sheet



HiDM

HIGH DENSITY MONO PERC MODULE
395 W ~ 410 W
CS1U-395 | 400 | 405 | 410MS

MORE POWER



Maximize the light absorption area,
module efficiency up to 19.89 %



Low NMOT: 42 ± 3 °C
Low temperature coefficient (Pmax):
-0.37 % / °C



Innovative module design,
better shading tolerance

MORE RELIABLE



Lower internal current,
lower hot spot temperature



Cell crack risk limited in small region,
enhance the module reliability



Heavy snow load up to 5400 Pa,
wind load up to 2400 Pa



linear power output warranty



product warranty on materials
and workmanship

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001:2008 / Quality management system

ISO 14001:2004 / Standards for environmental management system

OHSAS 18001:2007 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730: VDE / CE (Expected on August, 2018)

UL 1703: CSA (Expected on September, 2018)

* If you need specific product certificates, and if module installations are to deviate from our guidance specified in our installation manual, please contact your local Canadian Solar sales and technical representatives.

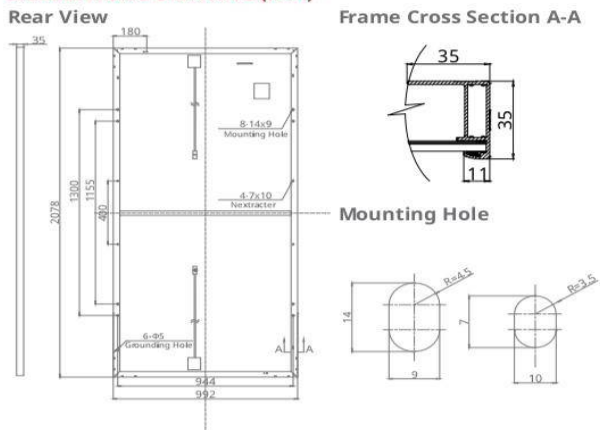
CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. As a leading PV project developer and manufacturer of solar modules with about 30 GW deployed around the world since 2001, Canadian Solar Inc. is one of the most bankable solar companies worldwide.

CANADIAN SOLAR INC.

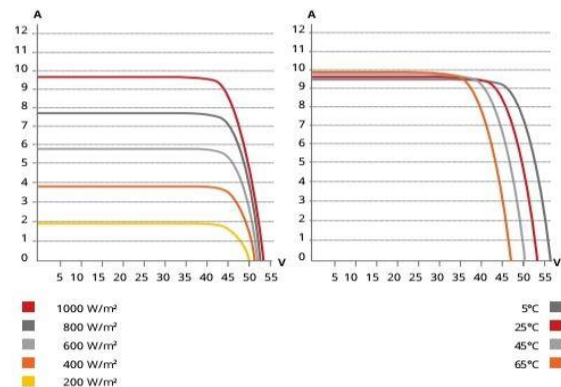
545 Speedvale Avenue West, Guelph, Ontario N1K 1E6, Canada, www.canadiansolar.com, support@canadiansolar.com

Lampiran 5 Spesifikasi Panel surya Canadian Solar

ENGINEERING DRAWING (mm)



CS1U-405MS / I-V CURVES



ELECTRICAL DATA | STC*

CS1U	395MS	400MS	405MS	410MS
Nominal Max. Power (Pmax)	395 W	400 W	405 W	410 W
Opt. Operating Voltage (Vmp)	43.9 V	44.1 V	44.3 V	44.5 V
Opt. Operating Current (Imp)	9.01 A	9.08 A	9.16 A	9.23 A
Open Circuit Voltage (Voc)	53.3 V	53.4 V	53.5 V	53.6 V
Short Circuit Current (Isc)	9.55 A	9.60 A	9.65 A	9.70 A
Module Efficiency	19.16%	19.40%	19.65%	19.89%
Operating Temperature	-40°C ~ +85°C			
Max. System Voltage	1500V (IEC/UL) or 1000V (IEC/UL)			
Module Fire Performance	TYPE 1 (UL 1703) or CLASS C (IEC 61730)			
Max. Series Fuse Rating	20 A			
Application Classification	Class A			
Power Tolerance	0 ~ + 5 W			

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

ELECTRICAL DATA | NMOT*

CS1U	395MS	400MS	405MS	410MS
Nominal Max. Power (Pmax)	295 W	298 W	302 W	306 W
Opt. Operating Voltage (Vmp)	40.1 V	40.2 V	40.4 V	40.6 V
Opt. Operating Current (Imp)	7.36 A	7.42 A	7.47 A	7.53 A
Open Circuit Voltage (Voc)	50.1 V	50.2 V	50.3 V	50.4 V
Short Circuit Current (Isc)	7.70 A	7.74 A	7.78 A	7.82 A

* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

MECHANICAL DATA

Specification	Data
Cell Type	Mono-crystalline
Dimensions	2078 × 992 × 35 mm (81.8 × 39.1 × 1.38 in)
Weight	23.4 kg (51.6 lbs)
Front Cover	3.2 mm tempered glass
Frame	Anodized aluminium alloy
J-Box	IP67, 4 bypass diodes
Cable	4.0 mm ² (IEC), 12 AWG (UL)
Connector	T4 series
Per Pallet	30 pieces
Per Container (40' HQ)	660 pieces

TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.37 % / °C
Temperature Coefficient (Voc)	-0.29 % / °C
Temperature Coefficient (Isc)	0.05 % / °C
Nominal Module Operating Temperature	42±3 °C

PARTNER SECTION



The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. Canadian Solar Inc. reserves the right to make necessary adjustment to the information described herein at any time without further notice.

CANADIAN SOLAR INC.

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THREE PHASE STRING INVERTER 40-60 KW

CSI-40KTL-GI-HFL | CSI-50KTL-GI-HFL
CSI-60KTL-GI-H



CSI-40KTL-GI-HFL



CSI-50KTL-GI-HFL
CSI-60KTL-GI-H

Canadian Solar's grid-tied, transformer-less string inverters help to accelerate the use of three-phase string architecture for commercial rooftop and small ground-mount applications. An NRTL approved, cost-effective alternative to central inverters, these inverters are modular design building blocks that provide high yield and enable significant BoS cost savings. They provide up to 98.8% conversion efficiency, a wide operating range of 200-800 V_{dc}, and four MPPTs for maximum energy harvest.



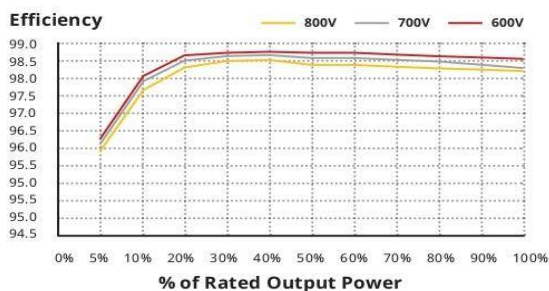
Standard warranty, extension up to 20 years

KEY FEATURES

- Maximum efficiency of 99%, Maximum IEC efficiency of 98.5%
- 4 MPPTs to achieve higher system efficiency
- Transformerless design
- High switching frequency and ultra fast MPPT (<5 sec.) for maximum efficiency over a wide load range

EFFICIENCY CURVE

CSI-60KTL-GI-H@480 Vac



*For detailed information, please refer to the Installation Manual.

CANADIAN SOLAR (USA), INC.

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HIGH RELIABILITY

- Advanced thermal design and convection cooling
- Built in over-voltage and over-current protection
- DC reverse polarity and AC short circuit protection

BROAD ADAPTABILITY

- IP65 rated for outdoor application
- Utility interactive controls: Active power derating, reactive power control and over frequency derating
- Integrated DC load rated disconnect
- Wide MPPT range for flexible string sizing
- 90 degree installation angle
- Supports up to 8 DC string inputs (2 per MPPT)

CANADIAN SOLAR (USA), INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. As a leading PV project developer and manufacturer of solar modules with over 25 GW deployed around the world since 2001, Canadian Solar Inc. (NASDAQ: CSIQ) is one of the most bankable solar companies worldwide.

SYSTEM/TECHNICAL DATA			
MODEL NAME	CSI-40KTL-GI-HFL	CSI-50KTL-GI-HFL	CSI-60KTL-GI-H
DC INPUT			
Max. PV Power	45 kW (13.5 kW/MPPT)	60 kW (16 kW/MPPT)	72 kW (22.5 kW/MPPT)
Max. DC Input Voltage	1000 V _{DC}		1100 V _{DC}
Operating DC Input Voltage Range		200-1000 V _{DC}	
Start-up DC Input Voltage/Power	350 V		200 V
Number of MPP Trackers		4	
MPPT Voltage Range	556-800 V _{DC}	568-850 V _{DC}	526-850 V _{DC}
Operating Current (Imp)	88 A (22 A per MPPT)		114 A (28.5 A per MPPT)
Max. Input Current (Isc)	137.2 A (34.3 A per MPPT)		178 A (44.5 A per MPPT)
Number of DC Inputs	8 (2 per MPPT)		12 (3 per MPPT)
DC Disconnection Type	Load rated DC switch		
AC OUTPUT			
Rated AC Output Power	40 kW	50 kW	60 kW
Max. AC Output Power	44 kW	55 kW	66 kW
Rated Output Voltage	480 V _{AC}	480/500 V _{AC}	480/500 V _{AC}
Output Voltage Range*		384-576 V _{AC}	
Grid Connection Type		3 Φ /PE	
Nominal AC Output Current @480 Vac	48.1 A	60.2/57.7 A	72.2/69.3 A
Rated Output Frequency		50/60 Hz	
Output Frequency Range*		47-52/57-62 Hz	
Power Factor		1 default (\pm 0.8 adjustable)	
Current THD		< 3 %	
SYSTEM			
Topology	Transformerless		
Max. Efficiency	98.8 %		99 %
CEC Efficiency	98.4 %		98.5 %
Night Consumption		< 1 W	
ENVIRONMENT			
Protection Degree		IP65	
Cooling	Natural Convection Cooling		Intelligent Redundant Cooling
Operating Temperature Range	-25 ° C to +60 ° C		
Storage Temperature Range	-40 ° C to +70 ° C		
Operating Humidity	0 - 100 % condensing		
Operating Altitude	4000 m		
Audible Noise	<60 dBA @ 1 m		
DISPLAY AND COMMUNICATION			
Display	LCD + LED		
Communication	Standard: RS485 (Modbus)		
MECHANICAL DATA			
Dimensions (W / H / D)	530 x 700 x 356.5 mm	630 x 700 x 357 mm	
Weight	58 kg	61 kg	63 kg
Installation Angle	90 degrees from horizontal		
DC Inputs	MC4 compatible		
SAFETY			
Safety and EMC Standard	IEC62109-1/-2, AS3100, EN61000-6-1, EN61000-6-3, NB/T 32004		
Grid Standard	EN50438, G59/3, AS4777, VDE0126-1-1, IEC61727		
Smart-Grid Features	Voltage-Ride Thru, Frequency-Ride Thru, Soft-Start, Volt-Var, Frequency-Watt, Volt-Watt		

*The "Output Voltage Range" and "Output Frequency Range" may differ according to specific grid standard.