

Appendix A.

See Table A1, Table A2, Table A3

Table A1

Discounted Cash Flow - Mono C-Sf (all values in Rand).

Description	Initial Investment	Savings / Income	Expenses (Excl. degr and int)	Monitoring	Maintenance and Operation	Earnings Before Int, Tax, Depr	Depreciation (\$12J Allowance)	Earnings Before Int, Tax	Tax	Net Operating Profit After Tax	Depreciation	Operating Cash Flow After Tax
Year	0	-1600000				-1600000	0	-1600000		-1600000	0	-1600000
1	0	267941	-23000	-2300	-20700	244941	-1600000	-1355059	379416	-975642	1600000	624358
2	0	289701	-24610	-2461	-22149	265091	0	265091	-74225	190865	0	190865
3	0	313206	-26333	-2633	-23699	286874	0	286874	-80325	206549	0	206549
4	0	338597	-28176	-2818	-25358	310421	0	310421	-86918	223503	0	223503
5	0	366020	-30148	-3015	-27133	335872	0	335872	-94044	241828	0	241828
6	0	390822	-32259	-3226	-29033	361564	0	361564	-101238	260326	0	260326
7	0	423707	-34517	-3452	-31065	389190	0	389190	-108973	280217	0	280217
8	0	455826	-36933	-3693	-33240	418893	0	418893	-117290	301603	0	301603
9	0	490344	-39518	-3952	-35566	450826	0	450826	-126231	324594	0	324594
10	0	527437	-42285	-4228	-38056	485152	0	485152	-135843	349310	0	349310
11	0	567293	-45244	-4524	-40720	522048	0	522048	-146173	375875	0	375875
12	0	610113	-48412	-4841	-43570	561702	0	561702	-157276	404425	0	404425
13	0	656115	-51800	-5180	-46620	604314	0	604314	-169208	435106	0	435106
14	0	706528	-55426	-5543	-49884	650102	0	650102	-182029	468073	0	468073
15	0	758602	-59306	-5931	-53376	699295	0	699295	-195803	503493	0	503493
16	0	811842	-63458	-6346	-57112	748384	0	748384	-209548	538837	0	538837
17	0	868745	-67900	-6790	-61110	800845	0	800845	-224237	576609	0	576609
18	0	929557	-72653	-7265	-65387	856905	0	856905	-239933	616971	0	616971
19	0	994540	-77738	-7774	-69965	916801	0	916801	-256704	660097	0	660097
20	0	1063970	-83180	-8318	-74862	980790	0	980790	-274621	706168	0	706168
21	0	1138144	-89003	-8900	-80102	1049141	0	1049141	-293759	755381	0	755381
22	0	1217376	-95233	-9523	-85710	1122143	0	1122143	-314200	807943	0	807943
23	0	1302001	-101899	-10190	-91709	1200102	0	1200102	-336029	864073	0	864073
24	0	1392375	-109032	-10903	-98129	1283343	0	1283343	-359336	924007	0	924007
25	0	1488877	-116664	-11666	-104998	1372212	0	1372212	-384219	987993	0	987993

Table A2

Discounted Cash Flow - Poly CSi (all values in Rand).

Description	Initial Investment	Savings / Income	Expenses (Excl. depr and int)	Monitoring	Maintenance and Operation	Earnings Before Int, Tax, Depr	Depreciation (\$12J Allowance)	Earnings Before Int, Tax	Tax	Net Operating Profit After Tax	Depreciation	Operating Cash Flow After Tax
Year	0	- 1600000				- 1600000	0	- 1600000		- 1600000	0	- 1600000
1	0	271423	- 23000	- 2300	- 20700	248423	- 1600000	- 1351577	378442	- 973136	1600000	626864
2	0	293465	- 24610	- 2451	- 22149	268855	0	268855	- 75279	193576	0	193576
3	0	317276	- 26333	- 2633	- 23699	290944	0	290944	- 81464	209479	0	209479
4	0	342996	- 28176	- 2818	- 25358	314820	0	314820	- 88150	226671	0	226671
5	0	370776	- 30148	- 3015	- 27133	340628	0	340628	- 95376	245252	0	245252
6	0	398940	- 32259	- 3226	- 29033	366681	0	366681	- 102671	264010	0	264010
7	0	429212	- 34517	- 3452	- 31065	394696	0	394696	- 110515	284181	0	284181
8	0	461749	- 36933	- 3693	- 33240	424816	0	424816	- 118948	305867	0	305867
9	0	496716	- 39518	- 3952	- 35566	457197	0	457197	- 128015	329182	0	329182
10	0	534290	- 42285	- 4228	- 38056	492006	0	492006	- 137762	354244	0	354244
11	0	574664	- 45244	- 4524	- 40720	529420	0	529420	- 148237	381182	0	381182
12	0	618041	- 48412	- 4841	- 43570	569630	0	569630	- 159496	410133	0	410133
13	0	664640	- 51800	- 5180	- 46620	612840	0	612840	- 171595	441245	0	441245
14	0	714696	- 55426	- 5543	- 49884	659270	0	659270	- 184596	474674	0	474674
15	0	768459	- 59306	- 5931	- 53376	709153	0	709153	- 198563	510590	0	510590
16	0	822391	- 63458	- 6346	- 57112	758933	0	758933	- 212501	546432	0	546432
17	0	880034	- 67900	- 6790	- 61110	812134	0	812134	- 227398	584737	0	584737
18	0	941636	- 72653	- 7265	- 65387	868984	0	868984	- 243315	625668	0	625668
19	0	1007463	- 77738	- 7774	- 69965	929724	0	929724	- 260323	669402	0	669402
20	0	1077795	- 83180	- 8318	- 74862	994615	0	994615	- 278492	716123	0	716123
21	0	1152933	- 89003	- 8900	- 80102	1063930	0	1063930	- 297900	766030	0	766030
22	0	1233195	- 95233	- 9523	- 85710	1137962	0	1137962	- 318629	819333	0	819333
23	0	1318920	- 101899	- 10190	- 91709	1217021	0	1217021	- 340766	876255	0	876255
24	0	1410468	- 109032	- 10903	- 98129	1301436	0	1301436	- 364402	937034	0	937034
25	0	1508224	- 116654	- 11666	- 104998	1391559	0	1391559	- 389637	1001923	0	1001923

Table A3

Discounted Cash Flow – CIGS (all values in Rand).

Description	Initial Investment	Savings / Income	Expenses (Excl. depr and int)	Monitoring	Maintenance and Operation	Earnings Before Int, Tax, Depr	Depreciation (\$12J Allowance)	Earnings Before Int, Tax	Tax	Net Operating Profit After Tax	Depreciation	Operating Cash Flow After Tax
Year	0 -1600000					-1600000	0	-1600000		-1600000	0	-1600000
1 0	299125	-23000	-2300	-20700	276125	-1600000	-1323875	370685	-953190	1600000	646810	
2 0	323417	-24610	-2461	-22149	298807	0	298807	-83666	215141	0	215141	
3 0	349659	-26333	-2633	-23699	323326	0	323326	-90531	232795	0	232795	
4 0	378004	-28176	-2818	-25358	349828	0	349828	-97952	251876	0	251876	
5 0	408619	-30148	-3015	-27133	378471	0	378471	-105972	272499	0	272499	
6 0	439657	-32259	-3226	-29033	407398	0	407398	-114072	293327	0	293327	
7 0	473019	-34517	-3452	-31065	438503	0	438503	-1222781	315722	0	315722	
8 0	508577	-36933	-3693	-33240	471944	0	471944	-132144	339799	0	339799	
9 0	547412	-39518	-3952	-35566	507894	0	507894	-142210	365684	0	365684	
10 0	588822	-42285	-4228	-38056	546537	0	546537	-153030	393507	0	393507	
11 0	633316	-45244	-4524	-40720	588072	0	588072	-164660	423412	0	423412	
12 0	681121	-48412	-4841	-43570	632709	0	632709	-177159	455551	0	455551	
13 0	732476	-51800	-5180	-46620	680676	0	680676	-190589	490086	0	490086	
14 0	787641	-55426	-5543	-49884	732214	0	732214	-205020	527194	0	527194	
15 0	846891	-59306	-5931	-53376	787585	0	787585	-220524	567061	0	567061	
16 0	906327	-63458	-6346	-57112	842870	0	842870	-236003	606866	0	606866	
17 0	969853	-67900	-6790	-61110	901954	0	901954	-252547	649407	0	649407	
18 0	1037743	-72653	-7265	-65387	965090	0	965090	-270225	694865	0	694865	
19 0	1110288	-77738	-7774	-69965	1032550	0	1032550	-289114	743436	0	743436	
20 0	1187799	-83180	-8318	-74862	1104619	0	1104619	-309293	795325	0	795325	
21 0	1270605	-89003	-8900	-80102	1181603	0	1181603	-330849	850754	0	850754	
22 0	1359059	-95233	-9523	-85710	1263826	0	1263826	-353871	909955	0	909955	
23 0	1453534	-101899	-10190	-91709	1351634	0	1351634	-378458	973177	0	973177	
24 0	1554426	-109032	-10903	-98129	1445394	0	1445394	-404710	1040683	0	1040683	
25 0	1662158	-116664	-11666	-104998	1545494	0	1545494	-432738	1112756	0	1112756	

Appendix B.

See Table B1, Table B2, Table B3

Table B1
Regression model- Mono C-Si panels.

Regression Statistics					
Multiple R					0.987152
R Square					0.974469
Adjusted R Square					0.971636
Standard Error					2.431134
Observations					365
ANOVA					
	df	SS	MS	F	Significance F
Regression	2	81663.01	40831.51	6908.405	1.8E-288
Residual	362	2139.569	5.91041		
Total	364	83802.58			
Linear Regression					
	Coefficients	Standard Error	t Stat	P-value	
Module Temp MONO [°C]	0.235256	0.028729	8.188761	4.61E-15	
Irradiation [W/m ²]	0.002342	0.001304	1.795408	0.073425	

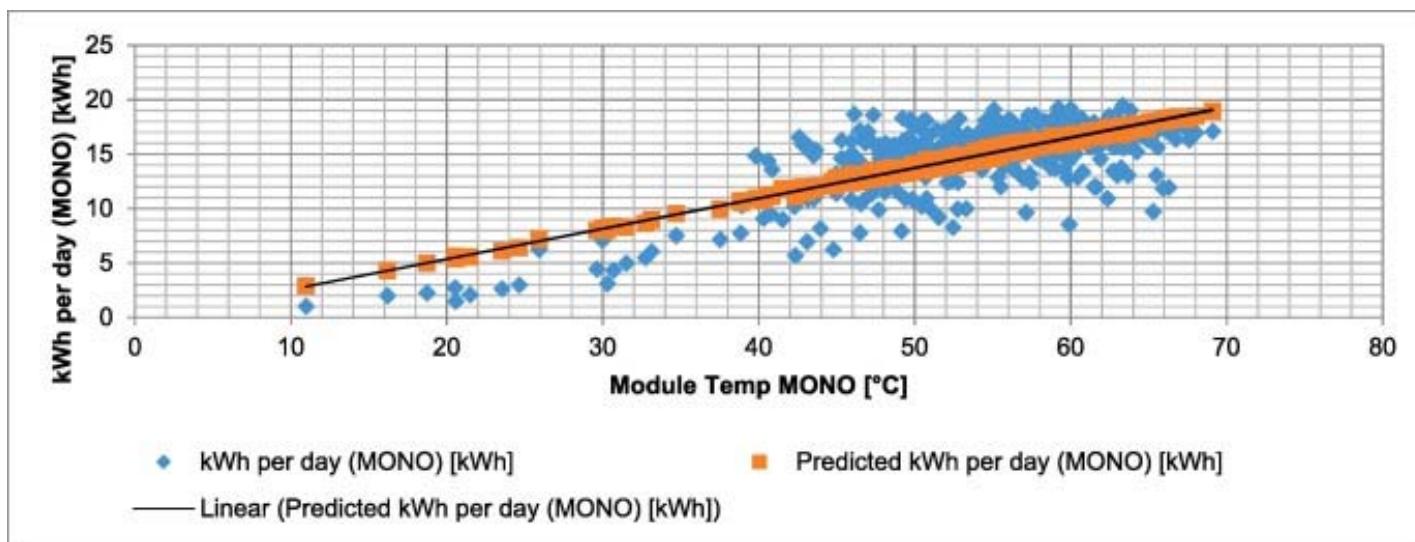


Fig. B1. Line Fit Plot - Module Temperature – Mono C-Si.

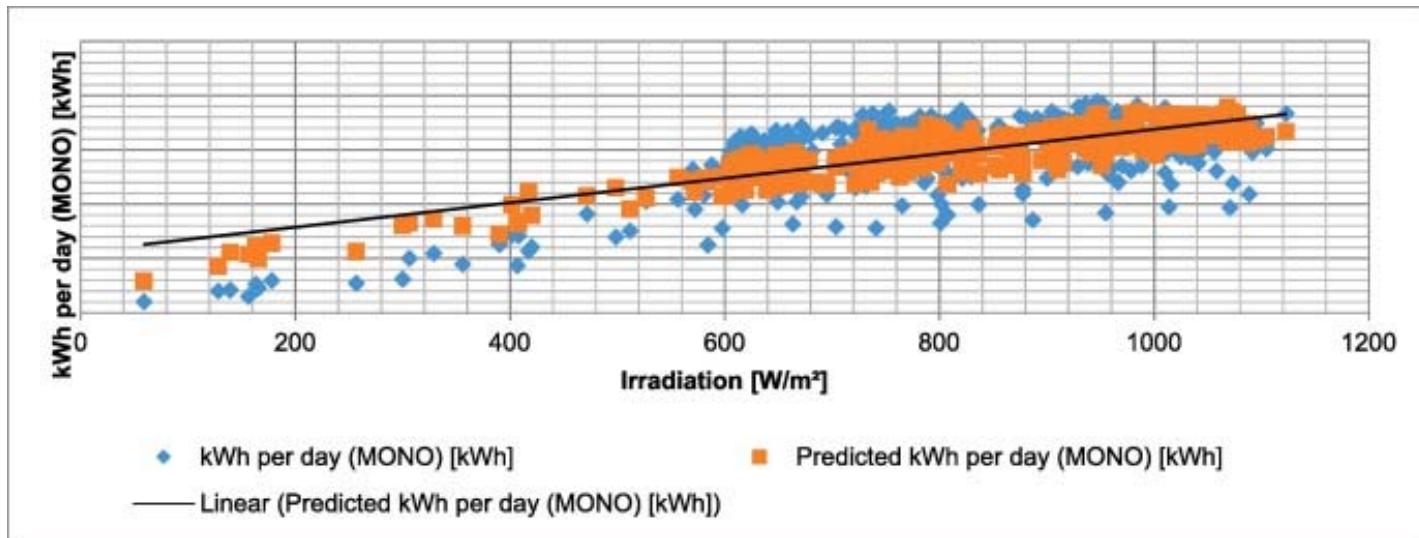


Fig. B2. Line Fit Plot - Solar Irradiation – Mono C-Si.

Table B2

Regression model- Poly C-Si panels.

SUMMARY OUTPUT					
Regression Statistics					
Multiple R	0.983534				
R Square	0.96734				
Adjusted R Square	0.964487				
Standard Error	2.776864				
Observations	365				
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance-F</i>
Regression	2	82676.19	41338.1	5360.946	3.7E-269
Residual	362	2791.371	7.710971		
Total	364	85467.56			
Linear Regression					
	Coefficients	Standard Error	<i>t Stat</i>	<i>P-value</i>	
Module Temp POLY [°C]	0.208998	0.033671	6.207117	1.48E-09	
Irradiation [W/m ²]	0.004566	0.001272	3.590094	0.000376	

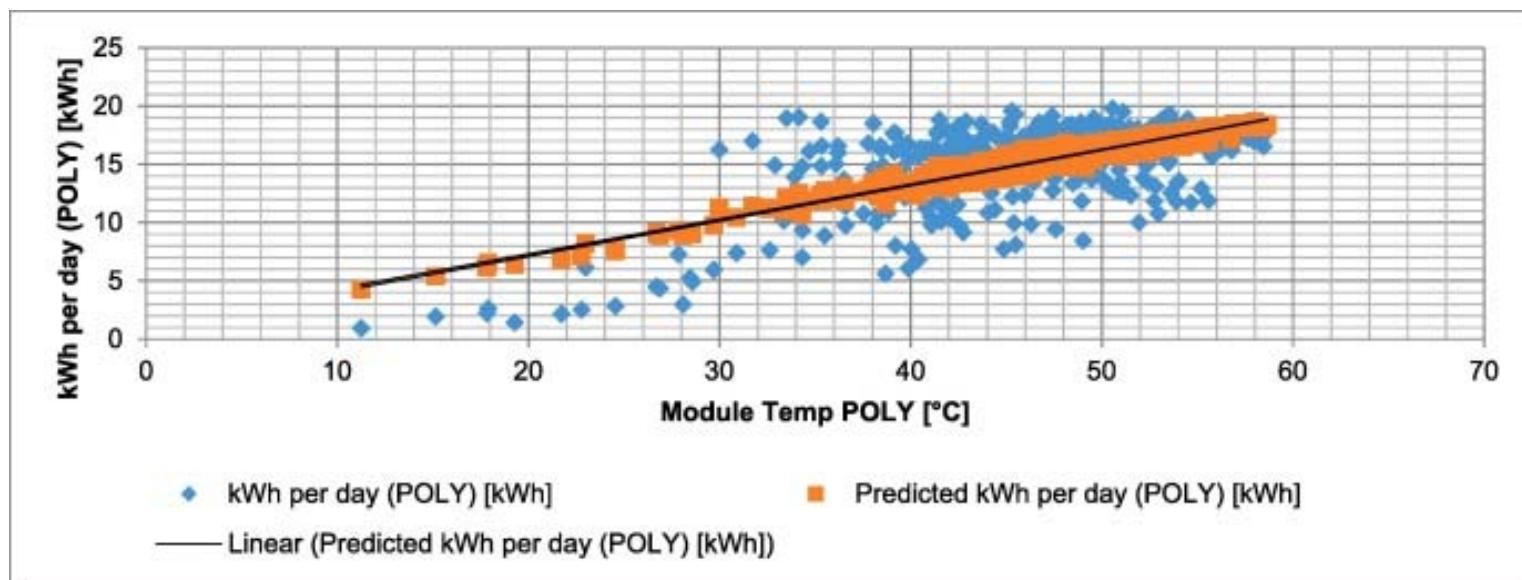


Fig. B3. Line Fit Plot - Module Temperature – Poly C-Si.

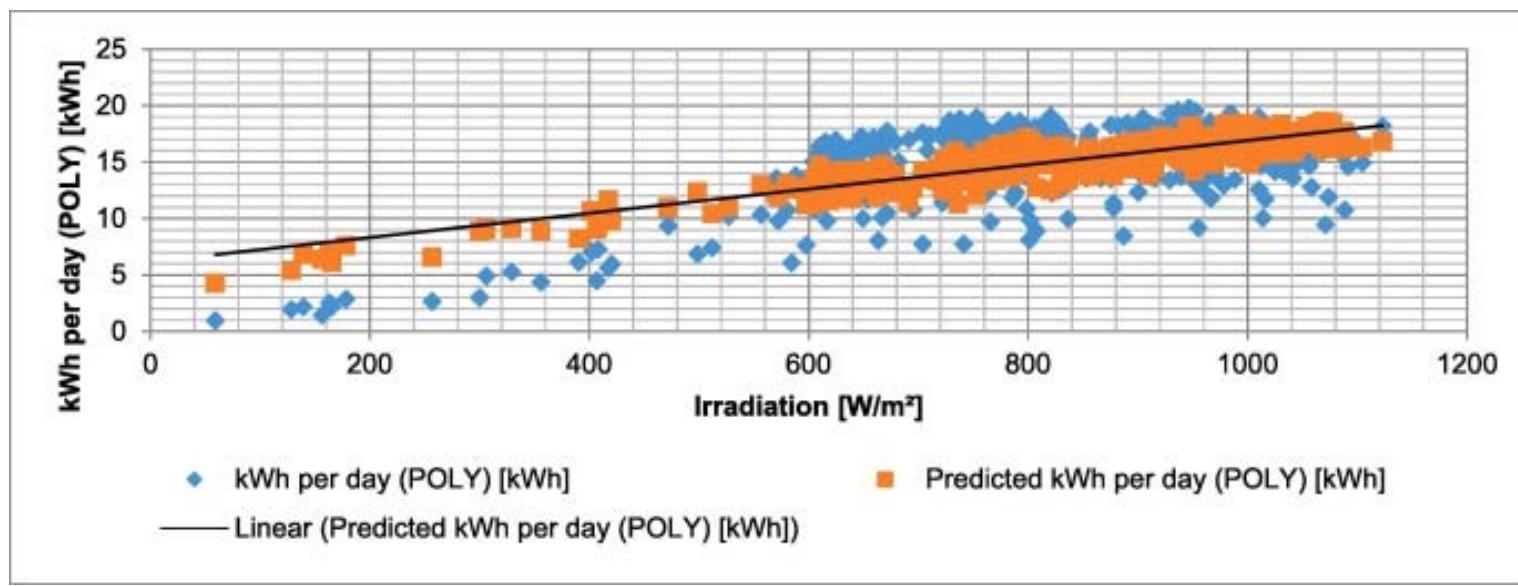


Fig. B4. Line Fit Plot - Solar Irradiation – Poly C-Si.

Table B3
Regression model- CIGS panels.

SUMMARY OUTPUT					
<i>Regression Statistics</i>					
Multiple R	0.985276				
R Square	0.970769				
Adjusted R Square	0.967926				
Standard Error	2.869114				
Observations	364				
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance-F</i>
Regression	2	98963.97	49481.98	6011.065	7.5E-278
Residual	362	2979.917	8.231816		
Total	364	101943.9			
Linear Regression					
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	
Module Temp CIGS [°C]	0.309537	0.031297	9.890435	1.44E-20	
Irradiation [W/m ²]	0.001288	0.001337	0.96321	0.336087	

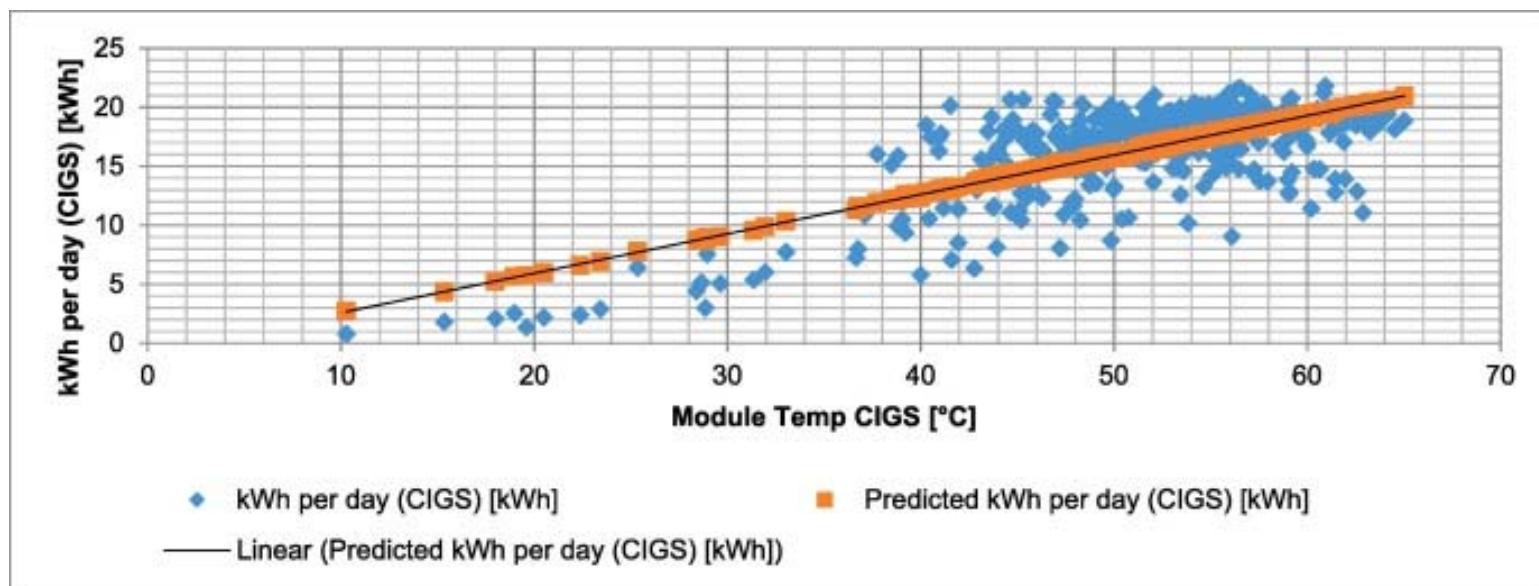


Fig. B5. Line Fit Plot - Module Temperature - CIGS.

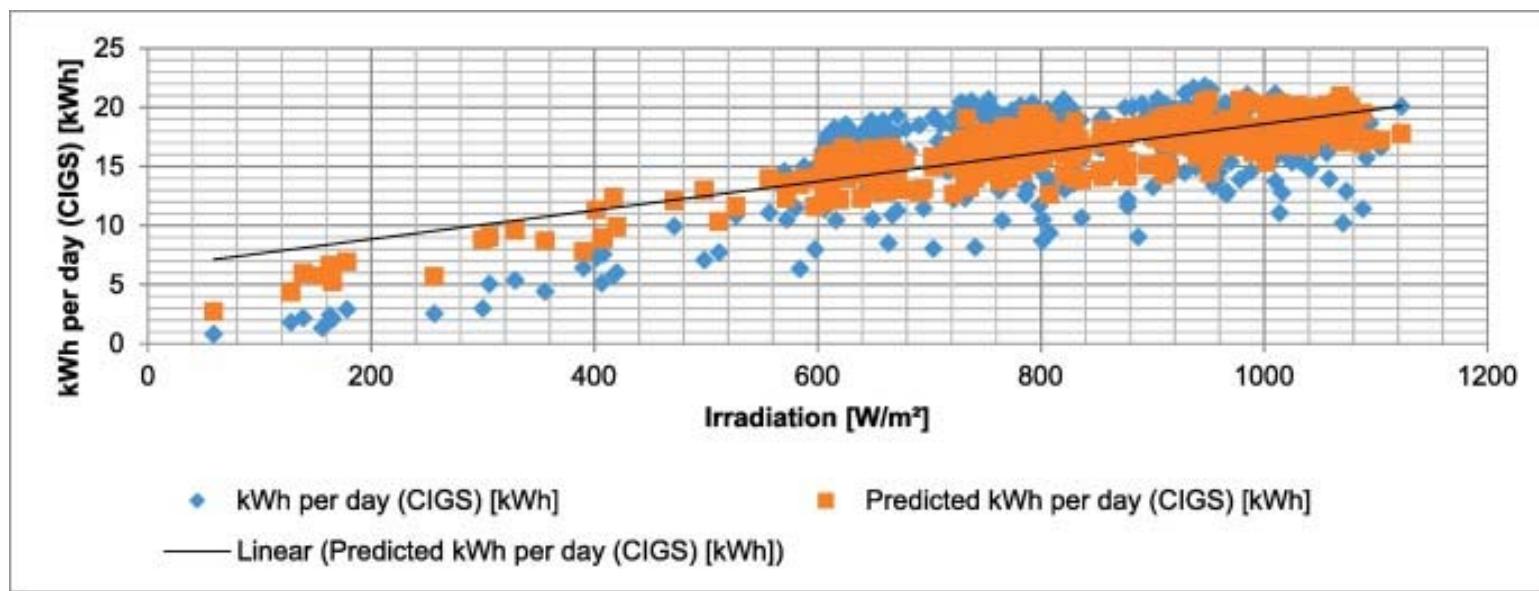


Fig. B6. Line Fit Plot - Solar Irradiation – CIGS.