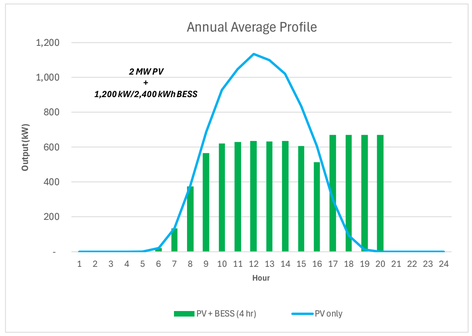
PV system nameplate capacity (kW DC)	2,400
PV system nameplate capacity (kW AC)	2,000
BESS power capacity (kW)	1,200
BESS storage capacity (kWh)	2,400
Roundtrip loss rate	10%
Energy Payment Price ($/kWh)	0.15
Capacity Payment Price ($/kW)	0.50

	Performance				Revenue ($)			
			kW (4 hr)	kW (6 Hr)	Standalone	Multipart Payments		
	PV kWh	PV+BESS kWh			PV	Energy	Capacity (4hr)	Capacity (6 hr)
Jan	178,127	170,678	576	384	26,719.04	25,602	8,931	8,931
Feb	218,522	211,794	636	412	32,778.35	31,769	8,899	8,648
Mar	273,909	266,460	668	432	41,086.40	39,969	10,361	10,037
Apr	300,843	293,634	702	445	45,126.44	44,045	10,528	10,004
May	312,950	305,501	743	473	46,942.54	45,825	11,517	11,007
Jun	305,984	298,775	780	494	45,897.66	44,816	11,703	11,120
Jul	332,772	325,323	798	505	49,915.80	48,798	12,374	11,749
Aug	298,908	291,459	730	472	44,836.24	43,719	11,308	10,973
Sep	270,564	263,355	667	426	40,584.64	39,503	10,012	9,587
Oct	209,926	202,477	594	396	31,488.95	30,372	9,201	9,201
Nov	177,748	170,539	569	380	26,662.19	25,581	8,542	8,542
Dec	145,373	137,924	569	379	21,805.97	20,689	8,823	8,823
	3,025,628	2,937,918	670	433	453,844	440,688	122,199	118,622
$/Total kWh adder							0.036	0.035
$/kW-year							162.85	243.39
$/Discharged MWh							274.48	270.39



BESS Power Constraint

Frequency	-
kWh	-
%	

Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PV-only																								
1	-	-	-	-	-	-	-	19	423	690	797	962	951	835	664	376	28	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	175	553	937	1,082	1,142	1,082	1,062	897	608	266	-	-	-	-	-	-	-
3	-	-	-	-	-	-	51	359	700	932	1,025	1,224	1,265	1,166	974	742	352	45	-	-	-	-	-	-
4	-	-	-	-	-	10	208	563	875	1,074	1,184	1,242	1,274	1,175	1,093	799	408	122	1	-	-	-	-	-
5	-	-	-	-	0	61	316	611	859	1,092	1,167	1,250	1,181	1,156	948	758	484	189	22	-	-	-	-	-
6	-	-	-	-	0	89	335	641	852	1,050	1,189	1,259	1,120	1,111	909	800	520	269	55	-	-	-	-	-
7	-	-	-	-	-	62	283	594	895	1,139	1,234	1,282	1,229	1,205	1,043	853	594	274	49	-	-	-	-	-
8	-	-	-	-	-	17	213	524	852	983	1,154	1,222	1,223	1,125	900	787	455	180	7	-	-	-	-	-
9	-	-	-	-	-	0	160	459	744	941	1,111	1,211	1,224	1,169	930	677	350	44	-	-	-	-	-	-
10	-	-	-	-	-	-	42	337	609	897	972	1,030	943	816	637	391	98	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	207	517	785	901	945	913	803	565	288	1	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	23	361	606	751	850	775	629	481	214	-	-	-	-	-	-	-	-
Annual	-	-	-	-	0	20	134	376	687	927	1,047	1,135	1,098	1,021	837	608	296	94	11	-	-	-	-	-
PV+BESS (4 hr)																								
1	-	-	-	-	-	-	-	19	323	407	422	442	443	447	415	283	576	576	576	576	-	-	-	-
2	-	-	-	-	-	-	-	175	489	633	634	647	640	669	650	485	636	636	636	636	-	-	-	-
3	-	-	-	-	-	-	51	359	583	707	706	733	733	724	706	619	668	668	668	668	-	-	-	-
4	-	-	-	-	-	10	208	563	757	779	797	794	779	794	798	702	702	702	702	702	-	-	-	-
5	-	-	-	-	0	61	316	611	697	746	769	771	756	761	720	674	743	743	743	743	-	-	-	-
6	-	-	-	-	0	89	335	641	688	731	746	746	732	746	703	680	780	780	780	780	-	-	-	-
7	-	-	-	-	-	62	283	594	790	814	801	810	797	817	772	763	798	798	798	798	-	-	-	-
8	-	-	-	-	-	17	213	524	710	717	738	728	749	732	686	669	730	730	730	730	-	-	-	-
9	-	-	-	-	-	0	160	459	670	681	688	713	713	713	697	617	667	667	667	667	-	-	-	-
10	-	-	-	-	-	-	42	337	455	516	516	516	513	497	460	304	594	594	594	594	-	-	-	-
11	-	-	-	-	-	-	-	207	396	431	433	433	433	424	398	251	569	569	569	569	-	-	-	-
12	-	-	-	-	-	-	-	23	238	285	302	302	302	302	288	131	569	569	569	569	-	-	-	-
Annual	-	-	-	-	0	20	134	376	566	621	629	636	633	635	608	515	669	669	669	669	-	-	-	-
PV+BESS (6 hr)																								
1	-	-	-	-	-	-	-	19	323	407	422	442	443	447	415	283	384	384	384	384	384	384	-	-
2	-	-	-	-	-	-	-	175	489	633	634	647	640	669	650	485	415	426	426	426	426	426	-	-
3	-	-	-	-	-	-	51	359	583	707	706	733	733	724	706	619	479	439	439	439	439	439	-	-
4	-	-	-	-	-	10	208	563	757	779	797	794	779	794	798	702	515	459	459	459	459	459	-	-
5	-	-	-	-	0	61	316	611	697	746	769	771	756	761	720	674	559	483	483	483	483	483	-	-
6	-	-	-	-	0	89	335	641	688	731	746	746	732	746	703	680	589	506	506	506	506	506	-	-
7	-	-	-	-	-	62	283	594	790	814	801	810	797	817	772	763	622	514	514	514	514	514	-	-
8	-	-	-	-	-	17	213	524	710	717	738	728	749	732	686	669	549	474	474	474	474	474	-	-
9	-	-	-	-	-	0	160	459	670	681	688	713	713	713	697	617	429	448	448	448	448	448	-	-
10	-	-	-	-	-	-	42	337	455	516	516	516	513	497	460	304	396	396	396	396	396	396	-	-
11	-	-	-	-	-	-	-	207	396	431	433	433	433	424	398	251	380	380	380	380	380	380	-	-
12	-	-	-	-	-	-	-	23	238	285	302	302	302	302	288	131	379	379	379	379	379	379	-	-
Annual	-	-	-	-	0	20	134	376	566	621	629	636	633	635	608	515	475	441	441	441	441	441	-	-

PV system nameplate capacity (kW AC)	2,000
BESS power capacity (kW)	1,200
BESS storage capacity (kWh)	2,400
Roundtrip loss rate	10%

PV Operation

		Hour									Charging hours								Discharge hours									
Month	Day		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	CPD Min
1		1	-	-	-	-	-	-	-	-	6	64	269	1,025	611	243	271	96	-	-	-	-	-	-	-	-	2,586	-
1		2	-	-	-	-	-	-	-	-	15	114	232	427	681	413	371	36	-	-	-	-	-	-	-	-	2,288	-
1		3	-	-	-	-	-	-	-	-	65	27	145	314	341	52	111	14	-	-	-	-	-	-	-	-	1,069	-
1		4	-	-	-	-	-	-	-	2	402	1,086	1,370	1,497	1,488	1,324	1,023	535	-	-	-	-	-	-	-	-	8,728	-
1		5	-	-	-	-	-	-	-	16	621	1,077	389	481	338	526	424	197	-	-	-	-	-	-	-	-	4,068	-
1		6	-	-	-	-	-	-	-	15	626	1,089	1,374	1,498	1,486	1,331	1,024	239	-	-	-	-	-	-	-	-	8,683	-
1		7	-	-	-	-	-	-	-	15	606	1,065	313	1,485	1,474	1,324	866	548	-	-	-	-	-	-	-	-	7,696	-
1		8	-	-	-	-	-	-	-	-	61	274	693	176	532	329	498	508	-	-	-	-	-	-	-	-	3,071	-
1		9	-	-	-	-	-	-	-	19	660	1,148	1,439	1,572	1,560	1,407	1,111	622	-	-	-	-	-	-	-	-	9,537	-
1		10	-	-	-	-	-	-	-	20	660	1,138	976	1,551	1,553	1,114	1,097	617	-	-	-	-	-	-	-	-	8,726	-
1		11	-	-	-	-	-	-	-	13	582	1,055	1,346	1,476	1,472	1,127	723	296	-	-	-	-	-	-	-	-	8,091	-
1		12	-	-	-	-	-	-	-	1	515	686	544	904	1,474	1,346	1,068	612	13	-	-	-	-	-	-	-	7,162	-
1		13	-	-	-	-	-	-	-	21	129	785	489	588	221	97	144	121	-	-	-	-	-	-	-	-	2,595	-
1		14	-	-	-	-	-	-	-	13	553	176	713	1,451	1,444	1,306	1,009	550	12	-	-	-	-	-	-	-	7,228	-
1		15	-	-	-	-	-	-	-	-	508	71	426	1,234	1,242	964	521	92	10	-	-	-	-	-	-	-	5,067	-
1		16	-	-	-	-	-	-	-	10	592	1,036	1,316	1,450	1,443	1,309	1,036	603	13	-	-	-	-	-	-	-	8,808	-
1		17	-	-	-	-	-	-	-	2	165	359	585	221	108	123	17	13	-	-	-	-	-	-	-	-	1,592	-
1		18	-	-	-	-	-	-	-	17	555	61	190	326	1,416	1,291	1,019	591	17	-	-	-	-	-	-	-	5,483	-
1		19	-	-	-	-	-	-	-	-	22	32	108	125	90	77	104	86	-	-	-	-	-	-	-	-	645	-
1		20	-	-	-	-	-	-	-	-	2	972	631	706	458	741	1,036	617	47	-	-	-	-	-	-	-	5,211	-
1		21	-	-	-	-	-	-	-	37	665	1,116	1,372	1,501	1,497	1,373	1,115	687	35	-	-	-	-	-	-	-	9,398	-
1		22	-	-	-	-	-	-	-	2	404	754	1,038	1,095	1,152	1,038	680	379	30	-	-	-	-	-	-	-	6,572	-
1		23	-	-	-	-	-	-	-	55	713	1,162	1,431	1,560	1,558	1,424	1,161	735	80	-	-	-	-	-	-	-	9,878	-
1		24	-	-	-	-	-	-	-	10	226	372	363	304	181	81	11	21	-	-	-	-	-	-	-	-	1,568	-
1		25	-	-	-	-	-	-	-	-	-	14	2	90	19	4	9	94	25	-	-	-	-	-	-	-	257	-
1		26	-	-	-	-	-	-	-	12	575	1,011	825	585	24	120	102	147	79	-	-	-	-	-	-	-	3,482	-
1		27	-	-	-	-	-	-	-	54	635	1,074	1,377	1,503	1,501	1,357	151	228	20	-	-	-	-	-	-	-	7,900	-
1		28	-	-	-	-	-	-	-	-	246	56	93	221	165	57	1,040	613	86	-	-	-	-	-	-	-	2,577	-
1		29	-	-	-	-	-	-	-	83	778	1,273	1,582	1,730	1,737	1,585	1,297	840	175	-	-	-	-	-	-	-	11,082	-
1		30	-	-	-	-	-	-	-	88	774	1,019	1,550	1,089	569	869	308	122	17	-	-	-	-	-	-	-	6,404	-
1		31	-	-	-	-	-	-	-	89	756	1,232	1,516	1,655	1,655	1,521	1,240	809	205	-	-	-	-	-	-	-	10,677	-
2		1	-	-	-	-	-	-	-	75	668	1,114	824	530	838	318	177	136	24	-	-	-	-	-	-	-	4,705	-
2		2	-	-	-	-	-	-	-	17	606	1,027	1,289	931	346	827	1,032	213	35	-	-	-	-	-	-	-	6,322	-
2		3	-	-	-	-	-	-	-	-	18	14	28	39	77	184	195	659	187	-	-	-	-	-	-	-	1,402	-
2		4	-	-	-	-	-	-	-	35	293	670	889	836	430	220	135	49	13	-	-	-	-	-	-	-	3,570	-
2		5	-	-	-	-	-	-	-	5	184	779	1,407	1,537	775	733	394	381	103	-	-	-	-	-	-	-	6,297	-
2		6	-	-	-	-	-	-	-	139	96	1,169	1,451	1,082	1,171	1,072	521	420	128	-	-	-	-	-	-	-	7,250	-
2		7	-	-	-	-	-	-	-	157	374	301	1,042	316	955	1,507	1,239	834	285	-	-	-	-	-	-	-	7,010	-
2		8	-	-	-	-	-	-	-	209	780	1,208	935	1,078	710	768	246	46	139	-	-	-	-	-	-	-	6,120	-
2		9	-	-	-	-	-	-	-	214	788	1,240	1,521	1,664	1,676	1,553	1,301	877	318	-	-	-	-	-	-	-	11,152	-
2		10	-	-	-	-	-	-	-	139	615	742	1,024	1,185	1,609	1,125	939	471	222	-	-	-	-	-	-	-	8,070	-
2		11	-	-	-	-	-	-	-	135	664	908	1,003	1,237	983	633	836	167	192	-	-	-	-	-	-	-	6,759	-
2		12	-	-	-	-	-	-	-	16	30	86	112	244	216	223	372	421	87	-	-	-	-	-	-	-	1,807	-
2		13	-	-	-	-	-	-	-	274	855	1,289	1,557	1,697	1,704	799	962	855	306	-	-	-	-	-	-	-	10,298	-
2		14	-	-	-	-	-	-	-	136	355	1,225	1,292	1,631	1,641	1,514	1,036	627	270	-	-	-	-	-	-	-	9,727	-
2		15	-	-	-	-	-	-	-	245	804	1,243	1,534	1,672	1,421	1,555	1,303	904	345	-	-	-	-	-	-	-	11,025	-
2		16	-	-	-	-	-	-	-	246	791	1,221	1,503	1,636	1,633	1,507	1,246	740	264	-	-	-	-	-	-	-	10,787	-
2		17	-	-	-	-	-	-	-	27	304	36	138	263	1,601	1,588	1,352	964	406	-	-	-	-	-	-	-	6,680	-
2		18	-	-	-	-	-	-	-	66	570	637	413	1,010	1,234	1,662	1,419	1,018	442	-	-	-	-	-	-	-	8,471	-
2		19	-	-	-	-	-	-	-	306	881	1,318	1,637	1,774	1,782	1,657	1,401	991	424	-	-	-	-	-	-	-	12,171	-
2		20	-	-	-	-	-	-	-	336	912	1,334	1,608	1,737	1,743	1,623	1,354	953	400	-	-	-	-	-	-	-	12,000	-
2		21	-	-	-	-	-	-	-	89	241	1,207	1,452	1,588	238	1,516	738	306	207	-	-	-	-	-	-	-	7,582	-
2		22	-	-	-	-	-	-	-	322	859	1,244	1,510	1,169	857	992	714	262	331	-	-	-	-	-	-	-	8,258	-
2		23	-	-	-	-	-	-	-	46	49	100	229	124	267	74	120	240	293	-	-	-	-	-	-	-	1,542	-
2		24	-	-	-	-	-	-	-	358	555	1,325	636	1,742	593	1,107	1,394	1,018	465	-	-	-	-	-	-	-	9,193	-
2		25	-	-	-	-	-	-	-	25	148	488	93	109	573	142	298	823	318	-	-	-	-	-	-	-	3,016	-
2		26	-	-	-	-	-	-	-	423	1,012	1,437	1,710	1,411	1,483	1,371	1,462	533	253	-	-	-	-	-	-	-	11,094	-
2		27	-	-	-	-	-	-	-	442	1,048	1,474	1,750	1,886	1,893	1,753	1,489	1,078	499	-	-	-	-	-	-	-	13,313	-
2		28	-	-	-	-	-	-	-	408	985	1,408	1,707	1,848	1,854	1,714	1,450	1,047	485	-	-	-	-	-	-	-	12,906	-
3		1	-	-	-	-	-	-	-	244	934	1,490	1,778	1,910	1,907	1,764	1,494	946	405	3	-	-	-	-	-	-	12,875	-
3		2	-	-	-	-	-	-	-	412	973	1,192	1,630	1,748	1,531	1,459	873	783	12	10	-	-	-	-	-	-	10,622	-
3		3	-	-	-	-	-	-	-	524	1,137	1,562	1,817	1,946	1,938	1,792	1,534	1,124	548	17	-	-	-	-	-	-	13,939	-
3		4	-	-	-	-	-	-	-	416	986	1,403	1,686	1,824	1,821	1,690	1,422	903	460	10	-	-	-	-	-	-	12,622	-
3		5	-	-	-	-	-	-	-	391	84	231	543	604	1,730	1,613	1,352	478	95	-	-	-	-	-	-	-	7,120	-
3		6	-	-	-	-	-	-	-	60	178	186	136	207	292	247	143	118	25	-	-	-	-	-	-	-	1,592	-
3		7	-	-	-	-	-	-	-	295	129	319	237	898	951	1,697	1,458	1,068	526	25	-	-	-	-	-	-	7,603	-
3		8	-	-	-	-	-	-	16	501	700	1,411	1,656	1,756	1,747	1,311	1,372	1,000	284	8	-	-	-	-	-	-	11,760	-
3		9	-	-	-	-	-	-	-	192	838	628	1,231	1,191	1,052	1,078	603	545	213	5	-	-	-	-	-	-	7,577	-
3		10	-	-	-	-	-	-	-	72	79	399	145	173	159	150	192	195	54	-	-	-	-	-	-	-	1,618	-
3		11	-	-	-	-	-	-	-	16	82	141	330	549	527	670	918	351	57	28	-	-	-	-	-	-	3,669	-
3		12	-	-	-	-	-	-	28	225	1,025	1,387	753	1,752	1,716	994	684	724	89	24	-	-	-	-	-	-	9,401	-
3		13	-	-	-	-	-	-	-	306	55	740	556	1,765	1,742	354	293	1,005	522	41	-	-	-	-	-	-	7,380	-
3		14	-	-	-	-	-	-	-	43	75	580	518	682	754	453	172	143	19	-	-	-	-	-	-	-	3,439	-
3		15	-	-	-	-	-	-	60	176	386	538	422	842	553	403	607	122	416	42	-	-	-	-	-	-	4,565	-
3		16	-	-	-	-	-	-	-	143	166	101	303	114	199	457	305	697	177	18	-	-	-	-	-	-	2,680	-
3		17	-	-	-	-	-	-	80	574	1,066	1,412	1,634	1,742	1,727	1,602	1,360	999	527	64	-	-	-	-	-	-	12,787	-
3		18	-	-	-	-	-	-	72	503	810	976	1,260	1,347	1,417	1,176	1,339	1,004	533	70	-	-	-	-	-	-	10,506	-
3		19	-	-	-	-	-	-	94	250	700	674	521	873	864	1,689	1,454	1,099	593	85	-	-	-	-	-	-	8,896	-
3		20	-	-	-	-	-	-	115	653	1,149	1,488	1,706	1,791	1,751	1,659	1,404	1,016	540	77	-	-	-	-	-	-	13,348	-
3		21	-	-	-	-	-	-	12	15	121	213	48	189	257	160	130	970	480	68	-	-	-	-	-	-	2,662	-
3		22	-	-	-	-	-	-	23	184	1,107	364	188	225	436	656	614	102	58	-	-	-	-	-	-	-	3,957	-
3		23	-	-	-	-	-	-	33	338	1,117	579	280	378	494	597	425	151	31	30	-	-	-	-	-	-	4,453	-
3		24	-	-	-	-	-	-	27	267	615	1,548	1,812	1,723	1,935	1,810	1,555	714	638	114	-	-	-	-	-	-	12,760	-
3		25	-	-	-	-	-	-	160	708	1,205	1,151	967	1,873	1,864	1,725	901	876	526	48	-	-	-	-	-	-	12,004	-
3		26	-	-	-	-	-	-	175	745	1,257	1,612	1,852	1,950	1,928	1,794	1,539	1,165	650	119	-	-	-	-	-	-	14,787	-
3		27	-	-	-	-	-	-	88	738	1,243	1,598	1,827	1,933	1,918	1,786	1,531	1,155	660	125	-	-	-	-	-	-	14,604	-
3		28	-	-	-	-	-	-	187	760	1,258	1,599	1,815	1,905	1,886	1,757	1,493	1,130	657	126	-	-	-	-	-	-	14,572	-
3		29	-	-	-	-	-	-	188	497	784	1,225	1,784	1,881	1,866	1,456	1,503	1,147	656	130	-	-	-	-	-	-	13,117	-
3		30	-	-	-	-	-	-	195	744	1,209	1,530	1,717	1,452	1,554	1,618	1,138	1,044	350	106	-	-	-	-	-	-	12,657	-
3		31	-	-	-	-	-	-	29	148	234	616	609	716	709	538	390	236	109	2	-	-	-	-	-	-	4,336	-
4		1	-	-	-	-	-	-	213	748	1,213	1,522	1,719	1,801	1,774	1,638	1,406	785	150	38	-	-	-	-	-	-	13,007	-
4		2	-	-	-	-	-	-	156	489	462	874	685	1,358	277	1,266	1,379	1,043	613	134	-	-	-	-	-	-	8,735	-
4		3	-	-	-	-	-	-	234	778	1,238	1,550	1,751	1,832	1,804	1,675	1,283	707	359	62	-	-	-	-	-	-	13,273	-
4		4	-	-	-	-	-	-	40	305	774	1,156	1,274	574	161	270	258	503	33	47	-	-	-	-	-	-	5,396	-
4		5	-	-	-	-	-	-	67	254	837	216	501	573	1,266	614	1,215	1,106	277	150	-	-	-	-	-	-	7,077	-
4		6	-	-	-	-	-	-	265	819	1,267	1,574	1,776	1,860	1,833	1,691	1,458	1,106	653	152	-	-	-	-	-	-	14,454	-
4		7	-	-	-	-	-	-	131	556	799	917	1,064	722	1,071	494	471	184	99	29	-	-	-	-	-	-	6,536	-
4		8	-	-	-	-	-	-	159	78	308	842	940	1,148	1,235	1,084	915	503	23	54	-	-	-	-	-	-	7,289	-
4		9	-	-	-	-	-	-	260	781	1,212	1,525	1,729	1,836	1,823	1,695	1,474	1,134	666	163	-	-	-	-	-	-	14,299	-
4		10	-	-	-	-	-	3	288	820	1,253	1,553	1,744	1,822	1,809	1,687	1,456	1,109	649	161	-	-	-	-	-	-	14,353	-
4		11	-	-	-	-	-	-	4	84	723	265	1,062	785	171	351	671	182	168	-	-	-	-	-	-	-	4,467	-
4		12	-	-	-	-	-	5	291	801	1,206	1,500	1,400	1,761	1,499	1,620	1,401	1,067	626	159	-	-	-	-	-	-	13,336	-
4		13	-	-	-	-	-	3	68	434	296	397	666	780	1,609	1,367	1,254	938	427	132	-	-	-	-	-	-	8,371	-
4		14	-	-	-	-	-	3	271	705	888	1,116	1,175	1,497	1,101	1,114	1,105	924	396	144	-	-	-	-	-	-	10,440	-
4		15	-	-	-	-	-	-	-	77	120	265	244	320	122	325	214	193	75	54	-	-	-	-	-	-	2,009	-
4		16	-	-	-	-	-	23	357	908	1,345	1,663	1,849	1,925	1,893	1,757	1,526	1,175	698	191	-	-	-	-	-	-	15,311	-
4		17	-	-	-	-	-	12	233	611	989	1,406	1,538	1,626	1,635	1,713	1,484	1,143	534	191	-	-	-	-	-	-	13,115	-
4		18	-	-	-	-	-	14	350	351	765	1,206	1,380	1,167	1,285	1,237	759	760	452	144	-	-	-	-	-	-	9,870	-
4		19	-	-	-	-	-	8	256	853	1,282	1,569	1,734	1,809	1,792	1,668	1,300	1,122	674	191	-	-	-	-	-	-	14,259	-
4		20	-	-	-	-	-	21	258	689	1,281	1,560	1,739	1,814	1,787	1,658	1,440	1,119	674	191	-	-	-	-	-	-	14,230	-
4		21	-	-	-	-	-	23	356	858	1,247	1,517	1,682	1,752	1,727	1,605	1,392	1,075	647	144	-	-	-	-	-	-	14,027	-
4		22	-	-	-	-	-	14	280	669	1,089	1,118	1,191	1,261	1,360	1,101	1,086	883	143	14	-	-	-	-	-	-	10,208	-
4		23	-	-	-	-	-	-	102	493	81	428	60	629	661	914	615	216	425	87	-	-	-	-	-	-	4,712	-
4		24	-	-	-	-	-	30	406	943	1,352	1,638	1,816	1,886	1,855	1,725	1,497	1,169	714	208	1	-	-	-	-	-	15,238	-
4		25	-	-	-	-	-	37	304	885	1,265	1,523	1,681	1,444	1,710	1,577	1,368	993	397	140	-	-	-	-	-	-	13,324	-
4		26	-	-	-	-	-	10	41	232	229	275	350	612	808	373	1,383	1,062	634	69	-	-	-	-	-	-	6,077	-
4		27	-	-	-	-	-	44	262	556	928	911	338	162	1,371	241	833	245	187	184	8	-	-	-	-	-	6,270	-
4		28	-	-	-	-	-	47	403	902	1,284	1,555	1,717	1,784	1,755	1,635	1,419	1,104	674	201	8	-	-	-	-	-	14,487	-
4		29	-	-	-	-	-	-	28	98	230	370	376	486	697	822	513	308	47	177	1	-	-	-	-	-	4,152	-
4		30	-	-	-	-	-	19	164	97	288	208	341	225	345	339	211	106	117	60	-	-	-	-	-	-	2,520	-
5		1	-	-	-	-	-	50	371	741	1,146	1,548	1,730	1,519	1,459	1,438	957	976	533	138	-	-	-	-	-	-	12,607	-
5		2	-	-	-	-	-	15	192	167	197	309	838	506	456	1,636	1,439	1,137	713	229	6	-	-	-	-	-	7,839	-
5		3	-	-	-	-	-	61	426	913	1,282	1,546	1,715	1,782	1,761	1,638	1,424	1,121	694	230	7	-	-	-	-	-	14,599	-
5		4	-	-	-	-	-	72	408	860	1,224	1,481	1,626	1,703	1,686	1,431	1,064	743	568	149	2	-	-	-	-	-	13,018	-
5		5	-	-	-	-	-	63	114	112	1,029	1,296	1,260	1,083	470	1,041	643	242	215	153	2	-	-	-	-	-	7,723	-
5		6	-	-	-	-	-	58	259	755	1,074	1,309	1,417	1,474	1,312	1,336	40	408	156	101	9	-	-	-	-	-	9,709	-
5		7	-	-	-	-	-	76	388	779	1,101	1,339	1,083	1,547	1,521	1,419	1,227	957	488	-	10	-	-	-	-	-	11,935	-
5		8	-	-	-	-	-	81	386	780	1,101	1,342	1,269	1,550	966	1,420	1,223	801	160	195	8	-	-	-	-	-	11,281	-
5		9	-	-	-	-	-	84	387	801	1,130	1,371	1,520	1,583	1,558	1,422	841	961	619	227	16	-	-	-	-	-	12,520	-
5		10	-	-	-	-	-	26	60	155	363	321	425	530	504	485	274	346	61	30	-	-	-	-	-	-	3,580	-
5		11	-	-	-	-	-	44	302	877	844	921	1,157	1,390	1,714	1,603	1,403	1,103	700	253	22	-	-	-	-	-	12,335	-
5		12	-	-	-	-	-	3	155	483	902	761	797	1,224	972	578	366	835	627	143	11	-	-	-	-	-	7,856	-
5		13	-	-	-	-	-	-	270	593	583	702	683	903	675	830	690	360	206	195	14	-	-	-	-	-	6,704	-
5		14	-	-	-	-	-	93	465	933	1,294	1,552	1,711	1,774	1,744	1,633	1,419	1,119	708	261	29	-	-	-	-	-	14,736	-
5		15	-	-	-	-	-	94	469	930	1,286	1,405	1,292	1,135	930	495	1,413	727	728	271	30	-	-	-	-	-	11,206	-
5		16	-	-	-	-	-	91	477	940	1,298	1,553	1,700	1,762	1,732	1,634	1,430	1,125	718	275	37	-	-	-	-	-	14,770	-
5		17	-	-	-	-	-	102	450	888	1,225	1,478	1,652	1,720	905	1,388	1,366	1,064	699	271	38	-	-	-	-	-	13,246	-
5		18	-	-	-	-	-	2	250	150	221	967	723	725	1,043	989	1,061	819	305	116	10	-	-	-	-	-	7,380	-
5		19	-	-	-	-	-	16	141	168	216	510	517	460	526	648	172	247	152	8	44	-	-	-	-	-	3,824	-
5		20	-	-	-	-	-	98	280	639	689	985	937	636	532	305	333	318	246	149	37	-	-	-	-	-	6,183	-
5		21	-	-	-	-	-	0	69	169	290	305	430	380	294	345	386	180	172	65	-	-	-	-	-	-	3,084	-
5		22	-	-	-	-	-	23	254	251	362	911	765	823	702	650	478	427	301	11	36	-	-	-	-	-	5,992	-
5		23	-	-	-	-	-	63	177	130	404	605	906	1,642	825	545	381	655	438	232	36	-	-	-	-	-	7,039	-
5		24	-	-	-	-	-	76	304	387	319	637	794	916	1,664	1,563	1,365	1,076	463	172	-	-	-	-	-	-	9,737	-
5		25	-	-	-	-	-	119	457	872	684	1,249	1,637	1,335	1,539	1,393	742	496	732	287	39	-	-	-	-	-	11,582	-
5		26	-	-	-	-	-	95	488	949	1,286	1,534	1,689	1,748	1,717	1,601	1,402	1,122	502	289	37	-	-	-	-	-	14,457	-
5		27	-	-	-	-	-	93	484	930	1,271	1,513	1,442	1,546	1,342	1,144	876	747	738	297	42	-	-	-	-	-	12,464	-
5		28	-	-	-	-	-	93	429	662	1,116	1,251	951	1,038	1,324	1,108	1,024	707	444	250	28	-	-	-	-	-	10,424	-
5		29	-	-	-	-	-	74	488	595	997	817	536	821	1,277	901	1,130	738	426	310	47	-	-	-	-	-	9,157	-
5		30	-	-	-	-	-	59	157	373	412	795	1,297	1,753	1,736	1,622	1,426	844	753	261	47	-	-	-	-	-	11,536	-
5		31	-	-	-	-	0	77	228	962	1,297	1,546	1,687	1,742	1,715	1,593	1,392	1,111	731	297	48	-	-	-	-	-	14,426	-
6		1	-	-	-	-	-	104	437	618	897	1,332	1,496	1,567	1,454	1,362	1,160	1,024	699	294	48	-	-	-	-	-	12,492	-
6		2	-	-	-	-	-	36	445	822	1,115	1,346	1,476	1,553	1,542	1,428	1,182	900	420	193	-	-	-	-	-	-	12,456	-
6		3	-	-	-	-	-	104	487	943	488	1,535	1,692	1,757	1,733	1,629	1,434	1,150	763	313	46	-	-	-	-	-	14,074	-
6		4	-	-	-	-	-	108	475	906	1,235	1,481	1,248	1,699	522	1,577	717	1,032	646	119	56	-	-	-	-	-	11,822	-
6		5	-	-	-	-	-	76	326	253	371	730	1,198	1,120	850	712	592	700	282	182	62	-	-	-	-	-	7,456	-
6		6	-	-	-	-	-	80	168	318	335	289	321	408	387	402	439	323	73	19	8	-	-	-	-	-	3,571	-
6		7	-	-	-	-	-	118	234	650	1,293	1,541	1,699	1,762	1,434	1,268	1,084	1,146	768	326	51	-	-	-	-	-	13,374	-
6		8	-	-	-	-	1	118	404	830	1,183	1,043	1,121	1,492	1,285	830	694	843	274

PV system nameplate capacity (kW AC)	2,000
BESS power capacity (kW)	1,200
BESS storage capacity (kWh)	2,400
Roundtrip loss rate	10%

PV Operation

		Hour									Charging hours								Discharge hours									
Month	Day		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	CPD Min
6		24	-	-	-	-	1	91	451	875	1,205	1,446	1,422	1,464	1,209	1,282	1,239	1,045	697	342	80	-	-	-	-	-	12,849	-
6		25	-	-	-	-	-	128	375	309	559	976	1,362	1,460	1,543	1,465	1,298	1,045	713	336	78	-	-	-	-	-	11,644	-
6		26	-	-	-	-	-	11	89	449	848	341	1,124	1,496	1,119	1,209	1,030	973	669	329	82	-	-	-	-	-	9,767	-
6		27	-	-	-	-	-	98	383	713	1,099	1,347	1,149	1,276	1,270	985	405	156	315	215	40	-	-	-	-	-	9,451	-
6		28	-	-	-	-	-	101	437	804	1,052	1,231	1,582	1,407	1,149	1,364	1,277	1,097	752	305	72	-	-	-	-	-	12,631	-
6		29	-	-	-	-	-	102	354	308	653	877	1,229	746	1,077	1,121	1,139	1,034	698	342	76	-	-	-	-	-	9,756	-
6		30	-	-	-	-	-	97	425	839	813	1,428	1,583	1,332	1,189	1,559	1,392	1,132	780	348	52	-	-	-	-	-	12,968	-
7		1	-	-	-	-	-	46	155	301	728	740	571	1,533	1,164	1,439	1,263	1,007	690	331	73	-	-	-	-	-	10,039	-
7		2	-	-	-	-	-	99	404	840	1,163	1,405	1,554	1,308	1,247	1,041	994	735	547	228	76	-	-	-	-	-	11,641	-
7		3	-	-	-	-	-	77	432	880	1,214	1,461	1,625	1,693	1,683	1,581	1,399	1,133	738	316	69	-	-	-	-	-	14,302	-
7		4	-	-	-	-	-	29	91	520	602	548	519	301	400	244	617	1,003	737	337	66	-	-	-	-	-	6,013	-
7		5	-	-	-	-	-	99	399	793	1,119	1,372	1,501	1,569	1,559	1,425	1,249	995	674	326	67	-	-	-	-	-	13,147	-
7		6	-	-	-	-	-	96	346	667	1,038	1,256	1,371	1,321	1,245	1,173	1,175	859	588	314	70	-	-	-	-	-	11,519	-
7		7	-	-	-	-	-	91	112	213	445	1,335	1,468	596	126	771	1,286	420	487	312	75	-	-	-	-	-	7,737	-
7		8	-	-	-	-	-	89	102	177	548	1,042	1,398	775	1,387	1,362	1,125	807	490	255	71	-	-	-	-	-	9,626	-
7		9	-	-	-	-	-	55	297	443	481	448	492	865	617	393	753	444	495	87	73	-	-	-	-	-	5,942	-
7		10	-	-	-	-	-	78	241	821	1,151	1,400	1,580	1,160	1,649	1,535	1,360	1,096	745	334	59	-	-	-	-	-	13,209	-
7		11	-	-	-	-	-	72	393	811	1,143	1,389	1,545	1,623	1,612	1,520	1,351	1,088	743	333	51	-	-	-	-	-	13,675	-
7		12	-	-	-	-	-	79	379	772	1,094	1,342	1,483	1,556	1,409	1,439	1,191	977	685	271	9	-	-	-	-	-	12,686	-
7		13	-	-	-	-	-	16	229	588	751	1,122	1,308	1,365	1,067	1,082	1,249	1,007	696	327	59	-	-	-	-	-	10,866	-
7		14	-	-	-	-	-	70	221	116	725	1,070	495	1,202	901	722	433	487	400	150	67	-	-	-	-	-	7,058	-
7		15	-	-	-	-	-	75	296	637	586	949	1,138	1,198	1,144	539	684	558	369	277	59	-	-	-	-	-	8,508	-
7		16	-	-	-	-	-	59	404	856	1,201	1,458	1,613	1,388	1,675	1,583	1,396	1,137	780	339	42	-	-	-	-	-	13,929	-
7		17	-	-	-	-	-	78	384	641	915	1,270	1,409	1,463	1,421	1,502	1,326	613	717	286	52	-	-	-	-	-	12,078	-
7		18	-	-	-	-	-	1	91	215	598	489	556	463	451	1,459	750	380	678	317	62	-	-	-	-	-	6,508	-
7		19	-	-	-	-	-	68	355	746	1,063	1,303	1,471	1,539	702	1,101	403	1,031	289	182	15	-	-	-	-	-	10,270	-
7		20	-	-	-	-	-	64	351	746	1,072	1,313	502	1,553	1,113	1,453	748	385	705	300	58	-	-	-	-	-	10,363	-
7		21	-	-	-	-	-	70	103	151	816	766	1,151	602	1,561	1,471	1,301	1,046	705	288	36	-	-	-	-	-	10,065	-
7		22	-	-	-	-	-	48	374	820	1,166	1,421	1,584	1,664	1,652	1,553	1,378	1,119	762	323	39	-	-	-	-	-	13,903	-
7		23	-	-	-	-	-	49	372	815	1,165	1,416	1,580	1,651	1,636	1,543	1,364	1,105	745	321	44	-	-	-	-	-	13,806	-
7		24	-	-	-	-	-	51	361	801	1,146	1,399	1,563	1,636	1,630	1,295	750	964	568	316	52	-	-	-	-	-	12,530	-
7		25	-	-	-	-	-	47	361	804	880	1,398	1,550	1,616	1,433	995	202	817	415	258	47	-	-	-	-	-	10,823	-
7		26	-	-	-	-	-	49	67	312	612	672	755	1,275	939	702	961	943	187	157	-	-	-	-	-	-	7,632	-
7		27	-	-	-	-	-	52	160	405	462	734	1,108	1,035	1,146	1,454	1,277	1,019	674	237	20	-	-	-	-	-	9,782	-
7		28	-	-	-	-	-	53	341	755	1,087	1,330	1,487	1,555	1,180	1,252	1,122	956	603	290	40	-	-	-	-	-	12,052	-
7		29	-	-	-	-	-	53	332	576	971	1,215	1,334	1,378	1,390	1,193	1,270	1,014	674	286	40	-	-	-	-	-	11,726	-
7		30	-	-	-	-	-	58	267	416	675	873	988	1,232	1,351	1,012	598	214	89	87	-	-	-	-	-	-	7,859	-
7		31	-	-	-	-	-	45	342	781	1,127	1,379	1,546	1,621	1,612	1,525	1,355	1,091	734	295	27	-	-	-	-	-	13,480	-
8		1	-	-	-	-	-	54	265	620	871	830	1,265	1,368	1,298	1,240	1,014	450	67	201	24	-	-	-	-	-	9,568	-
8		2	-	-	-	-	-	47	315	715	1,051	1,298	1,448	1,519	1,506	1,405	1,225	968	557	97	24	-	-	-	-	-	12,175	-
8		3	-	-	-	-	-	41	316	730	1,071	1,314	1,452	1,527	1,241	1,189	61	884	550	153	-	-	-	-	-	-	10,529	-
8		4	-	-	-	-	-	-	194	506	1,032	41	468	1,080	1,361	1,336	1,325	1,068	649	276	24	-	-	-	-	-	9,358	-
8		5	-	-	-	-	-	37	325	761	1,115	1,375	1,545	1,626	832	674	588	1,076	713	275	23	-	-	-	-	-	10,966	-
8		6	-	-	-	-	-	34	331	779	926	1,168	1,377	1,631	1,614	516	854	1,044	673	267	27	-	-	-	-	-	11,242	-
8		7	-	-	-	-	-	16	1	511	1,007	767	769	1,520	1,508	1,381	1,039	883	522	210	14	-	-	-	-	-	10,150	-
8		8	-	-	-	-	-	33	323	772	1,137	1,395	1,562	1,644	1,638	1,543	1,365	837	718	266	15	-	-	-	-	-	13,250	-
8		9	-	-	-	-	-	27	333	799	1,167	1,432	1,605	1,679	1,663	1,565	1,375	1,095	712	263	13	-	-	-	-	-	13,727	-
8		10	-	-	-	-	-	33	258	677	937	1,220	1,222	1,264	1,211	1,413	554	646	501	212	12	-	-	-	-	-	10,161	-
8		11	-	-	-	-	-	28	264	814	1,187	1,458	1,628	1,704	1,695	1,592	604	637	551	258	9	-	-	-	-	-	12,430	-
8		12	-	-	-	-	-	24	333	818	1,200	1,474	1,648	1,722	1,708	1,595	1,394	1,111	717	240	7	-	-	-	-	-	13,989	-
8		13	-	-	-	-	-	28	300	801	1,176	1,287	1,616	1,691	1,683	1,577	1,116	984	672	248	6	-	-	-	-	-	13,184	-
8		14	-	-	-	-	-	25	312	764	1,123	1,376	1,528	1,599	1,571	932	1,103	323	103	18	-	-	-	-	-	-	10,776	-
8		15	-	-	-	-	-	-	94	13	130	567	1,235	1,291	869	693	1,030	896	531	204	4	-	-	-	-	-	7,557	-
8		16	-	-	-	-	-	18	305	766	1,138	1,405	1,574	1,647	1,054	1,522	1,326	1,047	664	225	4	-	-	-	-	-	12,693	-
8		17	-	-	-	-	-	17	299	750	1,112	1,377	1,549	1,629	1,613	1,505	1,320	1,039	205	186	5	-	-	-	-	-	12,606	-
8		18	-	-	-	-	-	13	165	351	670	1,012	1,173	912	1,603	1,487	672	1,016	643	214	5	-	-	-	-	-	9,936	-
8		19	-	-	-	-	-	15	272	530	1,064	1,330	1,229	1,183	952	739	662	629	173	85	-	-	-	-	-	-	8,863	-
8		20	-	-	-	-	-	-	21	282	873	1,161	1,008	106	1,228	1,422	1,236	962	588	196	-	-	-	-	-	-	9,083	-
8		21	-	-	-	-	-	8	289	308	718	307	396	813	799	845	475	967	648	198	1	-	-	-	-	-	6,770	-
8		22	-	-	-	-	-	8	301	689	1,151	1,417	1,586	1,658	1,359	1,525	1,323	1,036	632	192	-	-	-	-	-	-	12,874	-
8		23	-	-	-	-	-	8	277	726	1,103	1,381	1,541	1,621	1,607	1,508	1,308	1,019	618	186	-	-	-	-	-	-	12,905	-
8		24	-	-	-	-	-	6	274	707	1,075	1,339	1,346	1,355	1,258	900	1,003	625	18	177	-	-	-	-	-	-	10,083	-
8		25	-	-	-	-	-	-	210	127	187	85	202	177	294	168	174	292	133	128	-	-	-	-	-	-	2,176	-
8		26	-	-	-	-	-	-	-	59	326	420	306	322	304	623	457	176	152	120	-	-	-	-	-	-	3,264	-
8		27	-	-	-	-	-	-	101	145	235	160	248	101	334	256	224	84	114	68	-	-	-	-	-	-	2,072	-
8		28	-	-	-	-	-	-	8	41	110	360	583	655	696	657	653	726	292	114	-	-	-	-	-	-	4,894	-
8		29	-	-	-	-	-	-	-	67	332	218	310	166	332	289	184	63	7	49	-	-	-	-	-	-	2,015	-
8		30	-	-	-	-	-	-	29	187	559	641	1,096	1,193	1,567	1,458	1,081	953	551	141	-	-	-	-	-	-	9,456	-
8		31	-	-	-	-	-	-	96	436	615	869	1,276	1,483	1,522	1,315	1,160	857	420	107	-	-	-	-	-	-	10,158	-
9		1	-	-	-	-	-	-	83	296	287	260	184	789	1,234	1,142	845	615	225	124	-	-	-	-	-	-	6,083	-
9		2	-	-	-	-	-	1	260	740	1,123	1,390	1,556	1,623	1,599	1,488	1,045	625	452	110	-	-	-	-	-	-	12,012	-
9		3	-	-	-	-	-	-	188	423	705	1,161	1,224	1,326	1,006	977	950	799	445	104	-	-	-	-	-	-	9,308	-
9		4	-	-	-	-	-	-	245	705	1,091	1,365	1,527	1,595	1,570	1,460	1,244	924	499	110	-	-	-	-	-	-	12,334	-
9		5	-	-	-	-	-	-	145	426	462	630	1,173	1,435	1,607	1,290	1,009	719	453	95	-	-	-	-	-	-	9,445	-
9		6	-	-	-	-	-	-	234	143	181	348	185	340	275	669	610	551	128	96	-	-	-	-	-	-	3,761	-
9		7	-	-	-	-	-	-	218	54	237	244	587	457	224	1,389	543	158	459	89	-	-	-	-	-	-	4,659	-
9		8	-	-	-	-	-	-	221	656	824	1,050	1,449	1,318	1,479	1,002	1,139	831	429	79	-	-	-	-	-	-	10,476	-
9		9	-	-	-	-	-	-	104	301	785	1,013	1,446	1,511	1,203	1,370	821	869	457	74	-	-	-	-	-	-	9,955	-
9		10	-	-	-	-	-	-	34	154	653	379	959	1,445	1,425	1,287	964	400	208	36	-	-	-	-	-	-	7,946	-
9		11	-	-	-	-	-	-	21	72	23	565	523	1,149	1,587	1,495	1,280	965	509	72	-	-	-	-	-	-	8,261	-
9		12	-	-	-	-	-	-	243	745	1,142	1,414	1,583	1,651	1,622	1,500	1,278	956	499	64	-	-	-	-	-	-	12,697	-
9		13	-	-	-	-	-	-	226	707	1,103	1,368	1,543	1,609	1,576	1,456	1,241	914	459	56	-	-	-	-	-	-	12,258	-
9		14	-	-	-	-	-	-	206	655	1,035	1,293	1,463	1,523	1,487	1,078	551	610	299	37	-	-	-	-	-	-	10,236	-
9		15	-	-	-	-	-	-	237	746	1,148	1,430	1,203	1,659	1,626	1,503	1,273	941	474	45	-	-	-	-	-	-	12,285	-
9		16	-	-	-	-	-	-	218	702	1,108	1,041	1,564	971	1,599	1,061	1,250	921	454	36	-	-	-	-	-	-	10,926	-
9		17	-	-	-	-	-	-	218	706	1,109	1,366	1,528	1,587	1,548	1,422	1,189	858	405	26	-	-	-	-	-	-	11,962	-
9		18	-	-	-	-	-	-	1	21	264	772	597	668	817	605	632	374	173	5	-	-	-	-	-	-	4,930	-
9		19	-	-	-	-	-	-	148	502	206	160	104	117	505	588	352	346	158	4	-	-	-	-	-	-	3,189	-
9		20	-	-	-	-	-	-	43	147	698	796	1,138	1,316	1,227	1,125	925	573	270	10	-	-	-	-	-	-	8,268	-
9		21	-	-	-	-	-	-	164	551	872	1,170	1,506	1,249	1,213	1,167	965	585	273	9	-	-	-	-	-	-	9,724	-
9		22	-	-	-	-	-	-	191	661	1,045	1,298	1,463	1,531	1,495	1,377	1,161	830	377	9	-	-	-	-	-	-	11,437	-
9		23	-	-	-	-	-	-	179	626	564	742	321	1,093	1,089	1,045	1,105	767	320	3	-	-	-	-	-	-	7,853	-
9		24	-	-	-	-	-	-	177	364	1,106	947	1,584	1,655	1,620	1,486	1,249	897	395	7	-	-	-	-	-	-	11,489	-
9		25	-	-	-	-	-	-	207	732	1,158	1,446	1,623	1,691	1,652	1,509	1,270	909	404	5	-	-	-	-	-	-	12,607	-
9		26	-	-	-	-	-	-	202	720	1,139	1,418	1,582	1,388	1,296	1,424	820	803	330	1	-	-	-	-	-	-	11,121	-
9		27	-	-	-	-	-	-	118	478	636	794	1,078	1,091	1,138	1,026	918	722	336	-	-	-	-	-	-	-	8,335	-
9		28	-	-	-	-	-	-	20	89	326	670	624	663	364	273	134	59	289	-	-	-	-	-	-	-	3,512	-
9		29	-	-	-	-	-	-	149	284	1,023	1,154	1,283	1,277	1,318	1,387	905	781	309	-	-	-	-	-	-	-	9,870	-
9		30	-	-	-	-	-	-	90	360	274	540	717	617	313	461	238	16	0	-	-	-	-	-	-	-	3,625	-
10		1	-	-	-	-	-	-	-	-	135	30	60	487	222	174	284	102	53	-	-	-	-	-	-	-	1,547	-
10		2	-	-	-	-	-	-	-	233	1,024	1,338	1,524	1,596	1,552	1,028	929	26	55	-	-	-	-	-	-	-	9,307	-
10		3	-	-	-	-	-	-	48	135	230	339	706	1,586	521	1,126	288	344	94	-	-	-	-	-	-	-	5,417	-
10		4	-	-	-	-	-	-	5	29	116	227	493	479	156	351	147	230	107	-	-	-	-	-	-	-	2,337	-
10		5	-	-	-	-	-	-	138	283	460	1,321	1,519	1,582	1,554	796	425	783	279	-	-	-	-	-	-	-	9,139	-
10		6	-	-	-	-	-	-	155	661	893	1,421	1,588	1,653	1,607	1,453	1,191	796	280	-	-	-	-	-	-	-	11,698	-
10		7	-	-	-	-	-	-	140	645	1,075	1,356	1,524	1,579	1,528	1,380	1,123	737	248	-	-	-	-	-	-	-	11,335	-
10		8	-	-	-	-	-	-	119	590	1,011	1,289	1,449	1,508	1,468	1,313	1,065	689	221	-	-	-	-	-	-	-	10,721	-
10		9	-	-	-	-	-	-	117	602	1,020	1,297	1,455	1,514	1,471	1,317	1,066	685	215	-	-	-	-	-	-	-	10,758	-
10		10	-	-	-	-	-	-	110	601	1,031	1,306	1,459	1,513	1,470	1,319	1,061	679	205	-	-	-	-	-	-	-	10,753	-
10		11	-	-	-	-	-	-	58	531	752	1,317	1,482	1,541	1,295	1,216	786	473	189	-	-	-	-	-	-	-	9,639	-
10		12	-	-	-	-	-	-	94	394	833	736	642	831	625	185	398	63	39	-	-	-	-	-	-	-	4,840	-
10		13	-	-	-	-	-	-	-	60	29	245	259	296	453	315	173	634	166	-	-	-	-	-	-	-	2,630	-
10		14	-	-	-	-	-	-	-	226	330	348	240	201	250	475	175	162	-	-	-	-	-	-	-	-	2,409	-
10		15	-	-	-	-	-	-	63	545	984	1,282	991	575	642	719	72	60	11	-	-	-	-	-	-	-	5,946	-
10		16	-	-	-	-	-	-	55	570	1,015	1,307	1,493	1,549	1,222	467	208	89	15	-	-	-	-	-	-	-	7,990	-
10		17	-	-	-	-	-	-	56	589	1,053	1,350	1,525	1,581	1,533	1,365	1,091	672	160	-	-	-	-	-	-	-	10,973	-
10		18	-	-	-	-	-	-	-	74	64	564	529	562	1,436	1,276	998	502	122	-	-	-	-	-	-	-	6,128	-
10		19	-	-	-	-	-	-	-	26	23	153	48	48	82	291	118	85	119	-	-	-	-	-	-	-	993	-
10		20	-	-	-	-	-	-	-	2	370	1,232	1,445	1,029	999	882	539	600	108	-	-	-	-	-	-	-	7,206	-
10		21	-	-	-	-	-	-	36	546	996	1,285	1,468	1,531	1,473	1,322	1,039	197	24	-	-	-	-	-	-	-	9,918	-
10		22	-	-	-	-	-	-	31	543	515	1,291	209	579	140	207	1,030	278	95	-	-	-	-	-	-	-	4,919	-
10		23	-	-	-	-	-	-	27	66	159	198	326	299	703	498	890	598	73	-	-	-	-	-	-	-	3,838	-
10		24	-	-	-	-	-	-	8	293	720	978	1,050	771	286	134	132	365	24	-	-	-	-	-	-	-	4,760	-
10		25	-	-	-	-	-	-	17	518	494	1,296	1,485	1,544	1,493	1,336	1,044	602	61	-	-	-	-	-	-	-	9,891	-
10		26	-	-	-	-	-	-	-	56	81	244	482	397	263	313	317	21	-	-	-	-	-	-	-	-	2,174	-
10		27	-	-	-	-	-	-	-	0	234	164	156	360	246	131	128	81	-	-	-	-	-	-	-	-	1,500	-
10		28	-	-	-	-	-	-	13	557	1,048	1,361	1,548	1,609	1,545	1,367	1,065	602	29	-	-	-	-	-	-	-	10,744	-
10		29	-	-	-	-	-	-	-	74	197	158	143	139	110	59	55	17	-	-	-	-	-	-	-	-	953	-
10		30	-	-	-	-	-	-	-	524	1,038	1,381	1,570	1,647	1,599	1,411	1,091	609	30	-	-	-	-	-	-	-	10,901	-
10		31	-	-	-	-	-	-	-	466	961	1,001	1,262	1,356	1,276	1,066	832	339	6	-	-	-	-	-	-	-	8,566	-
11		1	-	-	-	-	-	-	-	186	926	1,243	1,431	1,493	1,446	653	1,004	548	19	-	-	-	-	-	-	-	8,950	-
11		2	-	-	-	-	-	-	-	47	51	60	391	521	459	752	417	258	2	-	-	-	-	-	-	-	2,958	-
11		3	-	-	-	-	-	-	-	451	949	1,283	1,465	1,532	1,478	1,308	1,017	548	13	-	-	-	-	-	-	-	10,044	-
11		4	-	-	-	-	-	-	-	306	408	812	790	712	502	241	416	97	-	-	-	-	-	-	-	-	4,284	-
11		5	-	-	-	-	-	-	-	425	920	872	989	996	1,175	1,300	999	524	-	-	-	-	-	-	-	-	8,201	-
11		6	-	-	-	-	-	-	-	285	538	250	457	943	907	958	557	254	-	-	-	-	-	-	-	-	5,149	-
11		7	-	-	-	-	-	-	-	389	862	1,172	1,356	1,418	1,362	1,190	891	441	-	-	-	-	-	-	-	-	9,080	-
11		8	-	-	-	-	-	-	-	455	968	1,288	1,475	1,532	1,128	1,291	638	217	-	-	-	-	-	-	-	-	8,993	-
11		9	-	-	-	-	-	-	-	433	962	1,303	1,505	1,572	1,514	1,335	1,026	530	-	-	-	-	-	-	-	-	10,182	-
11		10	-	-	-	-	-	-	-	103	348	1,228	1,423	1,475	785	1,216	903	437	-	-	-	-	-	-	-	-	7,918	-
11		11	-	-	-	-	-	-	-	188	316	826	591	561	996	1,113	825	382	-	-	-	-	-	-	-	-	5,799	-
11		12	-	-	-	-	-	-	-	109	28	156	163	171	140	186	64	66	-	-	-	-	-	-	-	-	1,083	-
11		13	-	-	-	-	-	-	-	96	537	1,252	1,493	1,590	1,545	1,359	1,025	502	-	-	-	-	-	-	-	-	9,399	-
11		14	-	-	-	-	-	-	-	371	897	1,247	1,454	1,526	1,464	1,267	944	442	-	-	-	-	-	-	-	-	9,612	-
11		15	-	-	-	-	-	-	-	367	898	1,245	1,439	1,504	1,444	1,254	934	451	-	-	-	-	-	-	-	-	9,535	-
11		16	-	-	-	-	-	-	-	218	494	706	840	852	854	920	873	401	-	-	-	-	-	-	-	-	6,158	-
11		17	-	-	-	-	-	-	-	284	766	550	794	1,369	937	299	89	386	-	-	-	-	-	-	-	-	5,475	-
11		18	-	-	-	-	-	-	-	275	759	772	1,277	658	615	550	374	338	-	-	-	-	-	-	-	-	5,619	-
11		19	-	-	-	-	-	-	-	41	356	679	1,008	1,065	995	825	522	336	-	-	-	-	-	-	-	-	5,828	-
11		20	-	-	-	-	-	-	-	78	163	1,085	670	195	448	249	145	28	-	-	-	-	-	-	-	-	3,062	-
11		21	-	-	-	-	-	-	-	23	27	74	243	80	236	265	186	-	-	-	-	-	-	-	-	-	1,136	-
11		22	-	-	-	-	-	-	-	145	464	703	824	890	875	383	363	154	-	-	-	-	-	-	-	-	4,802	-
11		23	-	-	-	-	-	-	-	224	747	1,090	1,287	1,346	850	734	41	321	-	-	-	-	-	-	-	-	6,642	-
11		24	-	-	-	-	-	-	-	20	133	60	126	231	174	83	12	-	-	-	-	-	-	-	-	-	840	-
11		25	-	-	-	-	-	-	-	164	98	142	140	372	849	1,024	101	30	-	-	-	-	-	-	-	-	2,920	-
11		26	-	-	-	-	-	-	-	208	763	1,118	922	1,012	633	1,181	859	378	-	-	-	-	-	-	-	-	7,072	-
11		27	-	-	-	-	-	-	-	159	302	1,034	949	820	842	581	574	136	-	-	-	-	-	-	-	-	5,397	-
11		28	-	-	-	-	-	-	-	-

PV system nameplate capacity (kW AC)	2,000
BESS power capacity (kW)	1,200
BESS storage capacity (kWh)	2,400
Roundtrip loss rate	10%

PV Operation

		Hour	1	2	3	4	5	6	7	8	Charging hours 9	10	11	12	13	14	15	16	Discharge hours 17	18	19	20	21	22	23	24	Total	CPD Min	
Month	Day																												
12		15	-	-	-	-	-	-	-	5	136	326	714	946	546	220	424	127	-	-	-	-	-	-	-	-	3,443		-
12		16	-	-	-	-	-	-	-	5	210	78	190	232	215	312	278	93	-	-	-	-	-	-	-	-	1,613		-
12		17	-	-	-	-	-	-	-	-	34	56	47	123	237	54	23	8	-	-	-	-	-	-	-	-	582		-
12		18	-	-	-	-	-	-	-	35	671	1,101	1,348	1,435	1,218	819	611	247	-	-	-	-	-	-	-	-	7,484		-
12		19	-	-	-	-	-	-	-	29	650	1,169	1,429	1,478	1,477	1,234	959	367	-	-	-	-	-	-	-	-	8,793		-
12		20	-	-	-	-	-	-	-	37	701	1,143	1,401	1,513	1,477	1,301	981	372	-	-	-	-	-	-	-	-	8,927		-
12		21	-	-	-	-	-	-	-	16	483	931	1,168	1,128	965	655	466	275	-	-	-	-	-	-	-	-	6,088		-
12		22	-	-	-	-	-	-	-	12	321	838	997	1,255	1,027	869	657	366	-	-	-	-	-	-	-	-	6,341		-
12		23	-	-	-	-	-	-	-	22	595	1,010	1,251	1,346	1,322	1,184	893	410	-	-	-	-	-	-	-	-	8,032		-
12		24	-	-	-	-	-	-	-	26	518	825	1,318	1,421	1,400	1,233	950	401	-	-	-	-	-	-	-	-	8,092		-
12		25	-	-	-	-	-	-	-	21	620	1,041	1,158	1,064	862	807	567	236	-	-	-	-	-	-	-	-	6,376		-
12		26	-	-	-	-	-	-	-	-	46	134	152	251	252	178	30	6	-	-	-	-	-	-	-	-	1,048		-
12		27	-	-	-	-	-	-	-	-	68	102	195	197	167	109	11	14	-	-	-	-	-	-	-	-	863		-
12		28	-	-	-	-	-	-	-	16	597	1,022	1,273	1,323	1,025	871	729	422	-	-	-	-	-	-	-	-	7,277		-
12		29	-	-	-	-	-	-	-	3	340	698	914	967	780	678	203	71	-	-	-	-	-	-	-	-	4,655		-
12		30	-	-	-	-	-	-	-	-	42	70	49	32	56	34	42	397	-	-	-	-	-	-	-	-	723		-
12		31	-	-	-	-	-	-	-	9	269	215	537	334	114	91	32	7	-	-	-	-	-	-	-	-	1,607		-
																											3,025,628		

BESS Operation

		Hour	1	2	3	4	5	6	7	8	Charging hours 9	10	11	12	13	14	15	16	Discharge hours 17	18	19	20	21	22	23	24
Month	Day																									
1		1	-	-	-	-	-	-	-	-	-	(55)	(260)	(1,016)	(602)	(234)	(262)	(87)	569	569	569	569	-	-	-	-
1		2	-	-	-	-	-	-	-	-	(44)	(142)	(260)	(455)	(709)	(441)	(400)	(65)	569	569	569	569	-	-	-	-
1		3	-	-	-	-	-	-	-	-	(246)	(208)	(326)	(495)	(522)	(233)	(292)	(195)	569	569	569	569	-	-	-	-
1		4	-	-	-	-	-	-	-	-	-	(208)	(491)	(618)	(610)	(446)	(144)	-	569	569	569	569	-	-	-	-
1		5	-	-	-	-	-	-	-	-	(429)	(885)	(197)	(289)	(146)	(334)	(232)	(5)	569	569	569	569	-	-	-	-
1		6	-	-	-	-	-	-	-	-	-	(208)	(493)	(617)	(605)	(450)	(143)	-	569	569	569	569	-	-	-	-
1		7	-	-	-	-	-	-	-	-	-	(326)	-	(745)	(735)	(585)	(126)	-	569	569	569	569	-	-	-	-
1		8	-	-	-	-	-	-	-	-	-	(203)	(623)	(106)	(461)	(258)	(428)	(438)	569	569	569	569	-	-	-	-
1		9	-	-	-	-	-	-	-	-	-	(195)	(485)	(619)	(607)	(454)	(158)	-	569	569	569	569	-	-	-	-
1		10	-	-	-	-	-	-	-	-	-	(319)	(157)	(732)	(734)	(296)	(279)	-	569	569	569	569	-	-	-	-
1		11	-	-	-	-	-	-	-	-	-	(275)	(566)	(696)	(692)	(347)	58	-	569	569	569	569	-	-	-	-
1		12	-	-	-	-	-	-	-	-	-	(91)	-	(308)	(878)	(750)	(473)	(17)	559	573	573	573	-	-	-	-
1		13	-	-	-	-	-	-	-	-	(122)	(778)	(482)	(581)	(214)	(90)	(137)	(114)	569	569	569	569	-	-	-	-
1		14	-	-	-	-	-	-	-	-	-	-	(32)	(769)	(763)	(625)	(327)	-	560	572	572	572	-	-	-	-
1		15	-	-	-	-	-	-	-	-	(111)	-	(30)	(838)	(845)	(568)	(125)	-	562	572	572	572	-	-	-	-
1		16	-	-	-	-	-	-	-	-	-	(190)	(471)	(604)	(598)	(463)	(191)	-	559	573	573	573	-	-	-	-
1		17	-	-	-	-	-	-	-	-	(281)	(474)	(700)	(337)	(223)	(239)	(133)	(129)	569	569	569	569	-	-	-	-
1		18	-	-	-	-	-	-	-	-	(84)	-	-	-	(945)	(820)	(548)	(120)	557	573	573	573	-	-	-	-
1		19	-	-	-	-	-	-	-	-	(256)	(266)	(342)	(359)	(324)	(311)	(338)	(320)	569	569	569	569	-	-	-	-
1		20	-	-	-	-	-	-	-	-	-	(595)	(253)	(328)	(80)	(364)	(659)	(240)	534	581	581	581	-	-	-	-
1		21	-	-	-	-	-	-	-	-	-	(206)	(463)	(591)	(587)	(463)	(206)	-	543	578	578	578	-	-	-	-
1		22	-	-	-	-	-	-	-	-	-	(214)	(498)	(555)	(612)	(498)	(140)	-	547	577	577	577	-	-	-	-
1		23	-	-	-	-	-	-	-	-	-	(199)	(468)	(596)	(595)	(461)	(198)	-	510	589	589	589	-	-	-	-
1		24	-	-	-	-	-	-	-	-	(346)	(491)	(482)	(424)	(301)	(200)	(131)	(140)	569	569	569	569	-	-	-	-
1		25	-	-	-	-	-	-	-	-	(286)	(300)	(288)	(376)	(305)	(289)	(294)	(380)	551	575	575	575	-	-	-	-
1		26	-	-	-	-	-	-	-	-	(451)	(887)	(701)	(461)	4	-	-	(23)	510	589	589	589	-	-	-	-
1		27	-	-	-	-	-	-	-	-	-	(215)	(518)	(644)	(642)	(498)	-	-	554	574	574	574	-	-	-	-
1		28	-	-	-	-	-	-	-	-	(250)	(59)	(96)	(224)	(168)	(61)	(1,043)	(617)	505	591	591	591	-	-	-	-
1		29	-	-	-	-	-	-	-	-	-	(159)	(467)	(616)	(623)	(471)	(182)	-	438	613	613	613	-	-	-	-
1		30	-	-	-	-	-	-	-	-	(215)	(460)	(991)	(530)	(11)	(310)	-	-	557	573	573	573	-	-	-	-
1		31	-	-	-	-	-	-	-	-	-	(182)	(466)	(605)	(604)	(471)	(190)	-	415	621	621	621	-	-	-	-
2		1	-	-	-	-	-	-	-	-	(372)	(818)	(528)	(234)	(542)	(22)	-	-	551	575	575	575	-	-	-	-
2		2	-	-	-	-	-	-	-	-	(73)	(494)	(756)	(399)	-	(294)	(500)	-	543	578	578	578	-	-	-	-
2		3	-	-	-	-	-	-	-	-	(181)	(177)	(191)	(202)	(240)	(347)	(358)	(821)	429	616	616	616	-	-	-	-
2		4	-	-	-	-	-	-	-	-	(157)	(533)	(752)	(699)	(294)	(84)	2	-	560	572	572	572	-	-	-	-
2		5	-	-	-	-	-	-	-	-	-	(236)	(865)	(994)	(232)	(190)	-	-	492	595	595	595	-	-	-	-
2		6	-	-	-	-	-	-	-	-	-	(483)	(766)	(397)	(486)	(386)	-	-	473	601	601	601	-	-	-	-
2		7	-	-	-	-	-	-	-	-	-	-	(430)	-	(343)	(895)	(627)	(222)	355	640	640	640	-	-	-	-
2		8	-	-	-	-	-	-	-	-	(286)	(714)	(442)	(584)	(217)	(275)	-	-	465	604	604	604	-	-	-	-
2		9	-	-	-	-	-	-	-	-	-	(167)	(448)	(591)	(603)	(480)	(228)	-	331	649	649	649	-	-	-	-
2		10	-	-	-	-	-	-	-	-	-	(58)	(340)	(500)	(925)	(441)	(254)	-	403	625	625	625	-	-	-	-
2		11	-	-	-	-	-	-	-	-	(129)	(372)	(468)	(701)	(448)	(98)	(301)	-	425	617	617	617	-	-	-	-
2		12	-	-	-	-	-	-	-	-	(131)	(188)	(213)	(346)	(317)	(325)	(473)	(523)	504	591	591	591	-	-	-	-
2		13	-	-	-	-	-	-	-	-	-	(351)	(618)	(758)	(766)	-	(23)	-	340	646	646	646	-	-	-	-
2		14	-	-	-	-	-	-	-	-	-	(255)	(321)	(661)	(670)	(544)	(66)	-	367	637	637	637	-	-	-	-
2		15	-	-	-	-	-	-	-	-	-	(208)	(499)	(637)	(386)	(520)	(268)	-	311	655	655	655	-	-	-	-
2		16	-	-	-	-	-	-	-	-	-	(183)	(464)	(598)	(595)	(469)	(208)	-	371	635	635	635	-	-	-	-
2		17	-	-	-	-	-	-	-	-	-	-	-	-	(854)	(841)	(605)	(217)	265	671	671	671	-	-	-	-
2		18	-	-	-	-	-	-	-	-	-	-	-	(244)	(469)	(897)	(654)	(253)	238	680	680	680	-	-	-	-
2		19	-	-	-	-	-	-	-	-	-	(142)	(462)	(599)	(607)	(482)	(225)	-	251	675	675	675	-	-	-	-
2		20	-	-	-	-	-	-	-	-	-	(187)	(461)	(590)	(596)	(476)	(207)	-	269	669	669	669	-	-	-	-
2		21	-	-	-	-	-	-	-	-	-	(410)	(655)	(791)	-	(720)	59	-	414	621	621	621	-	-	-	-
2		22	-	-	-	-	-	-	-	-	(169)	(554)	(820)	(479)	(167)	(302)	(24)	-	321	652	652	652	-	-	-	-
2		23	-	-	-	-	-	-	-	-	(213)	(264)	(393)	(289)	(432)	(238)	(285)	(404)	350	642	642	642	-	-	-	-
2		24	-	-	-	-	-	-	-	-	-	(511)	-	(928)	-	(293)	(580)	(204)	220	685	685	685	-	-	-	-
2		25	-	-	-	-	-	-	-	-	(128)	(468)	(74)	(90)	(553)	(123)	(278)	(804)	331	649	649	649	-	-	-	-
2		26	-	-	-	-	-	-	-	-	41	(384)	(657)	(358)	(430)	(318)	(410)	-	380	632	632	632	-	-	-	-
2		27	-	-	-	-	-	-	-	-	-	(186)	(462)	(598)	(605)	(465)	(201)	-	195	694	694	694	-	-	-	-
2		28	-	-	-	-	-	-	-	-	-	(164)	(463)	(604)	(610)	(470)	(206)	-	205	690	690	690	-	-	-	-
3		1	-	-	-	-	-	-	-	-	-	(186)	(474)	(606)	(602)	(460)	(190)	-	266	668	671	671	-	-	-	-
3		2	-	-	-	-	-	-	-	-	30	(189)	(627)	(745)	(529)	(456)	-	-	563	564	575	575	-	-	-	-
3		3	-	-	-	-	-	-	-	-	-	(217)	(471)	(600)	(593)	(447)	(188)	-	162	693	711	711	-	-	-	-
3		4	-	-	-	-	-	-	-	-	-	(181)	(465)	(603)	(599)	(468)	(200)	-	227	677	687	687	-	-	-	-
3		5	-	-	-	-	-	-	-	-	-	-	122	61	(1,065)	(948)	(687)	-	498	593	593	593	-	-	-	-
3		6	-	-	-	-	-	-	-	-	(304)	(312)	(262)	(333)	(419)	(373)	(269)	(244)	550	576	576	576	-	-	-	-
3		7	-	-	-	-	-	-	-	-	-	-	-	(187)	(240)	(986)	(748)	(357)	181	682	707	707	-	-	-	-
3		8	-	-	-	-	-	-	-	-	-	(288)	(533)	(633)	(624)	(189)	(249)	-	359	634	642	642	-	-	-	-
3		9	-	-	-	-	-	-	-	-	(252)	(42)	(644)	(605)	(465)	(492)	(17)	-	410	619	624	624	-	-	-	-
3		10	-	-	-	-	-	-	-	-	(207)	(527)	(273)	(301)	(287)	(278)	(320)	(324)	529	583	583	583	-	-	-	-
3		11	-	-	-	-	-	-	-	-	-	(2)	(192)	(411)	(388)	(532)	(780)	(213)	534	562	590	590	-	-	-	-
3		12	-	-	-	-	-	-	-	-	(154)	(516)	-	(880)	(845)	(122)	-	-	508	573	598	598	-	-	-	-
3		13	-	-	-	-	-	-	-	-	-	(82)	102	(1,107)	(1,084)	-	-	(347)	188	669	710	710	-	-	-	-
3		14	-	-	-	-	-	-	-	-	-	(468)	(406)	(569)	(642)	(341)	(60)	(31)	555	574	574	574	-	-	-	-
3		15	-	-	-	-	-	-	-	-	(210)	(362)	(246)	(666)	(377)	(227)	(430)	-	268	642	684	684	-	-	-	-
3		16	-	-	-	-	-	-	-	-	(188)	(123)	(325)	(136)	(221)	(478)	(327)	(719)	441	600	618	618	-	-	-	-
3		17	-	-	-	-	-	-	-	-	-	(252)	(474)	(582)	(567)	(442)	(200)	-	190	653	717	717	-	-	-	-
3		18	-	-	-	-	-	-	-	-	-	(118)	(402)	(490)	(559)	(319)	(482)	(147)	187	650	720	720	-	-	-	-
3		19	-	-	-	-	-	-	-	-	(9)	16	-	(182)	(173)	(998)	(763)	(408)	146	654	739	739	-	-	-	-
3		20	-	-	-	-	-	-	-	-	-	(275)	(493)	(577)	(537)	(445)	(190)	-	184	646	723	723	-	-	-	-
3		21	-	-	-	-	-	-	-	-	(175)	(267)	(101)	(242)	(311)	(213)	(184)	(1,024)	226	638	706	706	-	-	-	-
3		22	-	-	-	-	-	-	-	-	(953)	(211)	(35)	(72)	(283)	(503)	(460)	-	526	584	584	584	-	-	-	-
3		23	-	-	-	-	-	-	-	-	(924)	(386)	(87)	(185)	(300)	(404)	(231)	-	554	554	584	584	-	-	-	-
3		24	-	-	-	-	-	-	-	-	-	(237)	(501)	(412)	(624)	(499)	(243)	-	119	643	757	757	-	-	-	-
3		25	-	-	-	-	-	-	-	-	(145)	(90)	-	(813)	(804)	(665)	-	-	187	665	713	713	-	-	-	-
3		26	-	-	-	-	-	-	-	-	-	(252)	(493)	(591)	(569)	(434)	(179)	-	111	642	762	762	-	-	-	-
3		27	-	-	-	-	-	-	-	-	-	(252)	(481)	(587)	(572)	(440)	(185)	-	105	640	766	766	-	-	-	-
3		28	-	-	-	-	-	-	-	-	-	(276)	(492)	(582)	(563)	(434)	(171)	-	108	639	765	765	-	-	-	-
3		29	-	-	-	-	-	-	-	-	-	(33)	(591)	(689)	(674)	(264)	(310)	45	109	636	766	766	-	-	-	-
3		30	-	-	-	-	-	-	-	-	(109)	(430)	(617)	(352)	(454)	(518)	(38)	-	334	577	683	683	-	-	-	-
3		31	-	-	-	-	-	-	-	-	(43)	(425)	(418)	(525)	(518)	(347)	(198)	(44)	488	595	597	597	-	-	-	-
4		1	-	-	-	-	-	-	-	-	9	(300)	(497)	(578)	(551)	(416)	(184)	-	466	578	616	616	-	-	-	-
4		2	-	-	-	-	-	-	-	-	-	(193)	(4)	(677)	-	(585)	(698)	(362)	143	622	756	756	-	-	-	-
4		3	-	-	-	-	-	-	-	-	(7)	(319)	(520)	(601)	(573)	(444)	(52)	-	315	612	675	675	-	-	-	-
4		4	-	-	-	-	-	-	-	-	(421)	(804)	(921)	(221)	-	-	-	(150)	556	542	589	589	-	-	-	-
4		5	-	-	-	-	-	-	-	-	(323)	-	13	(59)	(753)	(101)	(702)	(592)	399	526	676	676	-	-	-	-
4		6	-	-	-	-	-	-	-	-	10	(297)	(498)	(583)	(556)	(414)	(181)	-	117	619	770	770	-	-	-	-
4		7	-	-	-	-	-	-	-	-	(367)	(485)	(632)	(291)	(639)	(63)	(40)	-	502	572	601	601	-	-	-	-
4		8	-	-	-	-	-	-	-	-	-	(234)	(332)	(541)	(627)	(476)	(308)	-	566	534	588	588	-	-	-	-
4		9	-	-	-	-	-	-	-	-	-	(264)	(468)	(575)	(563)	(434)	(213)	-	110	613	777	777	-	-	-	-
4		10	-	-	-	-	-	-	-	-	5	(295)	(486)	(563)	(551)	(429)	(198)	-	123	611	772	772	-	-	-	-
4		11	-	-	-	-	-	-	-	-	(500)	(41)	(839)	(562)	-	(128)	(448)	-	443	611	611	611	-	-	-	-
4		12	-	-	-	-	-	-	-	-	(82)	(376)	(275)	(637)	(375)	(496)	(276)	-	139	607	765	765	-	-	-	-
4		13	-	-	-	-	-	-	-	-	-	-	17	(97)	(926)	(685)	(571)	(255)	282	577	709	709	-	-	-	-
4		14	-	-	-	-	-	-	-	-	(88)	(316)	(375)	(696)	(300)	(314)	(305)	(124)	309	560	704	704	-	-	-	-
4		15	-	-	-	-	-	-	-	-	(210)	(355)	(333)	(409)	(211)	(414)	(304)	(282)	527	547	602	602	-	-	-	-
4		16	-	-	-	-	-	-	-	-	4	(314)	(500)	(577)	(544)	(408)	(178)	-	93	600	791	791	-	-	-	-
4		17	-	-	-	-	-	-	-	-	-	(259)	(391)	(479)	(488)	(566)	(337)	4	216	560	750	750	-	-	-	-
4		18	-	-	-	-	-	-	-	-	(10)	(451)	(624)	(412)	(529)	(482)	(4)	(5)	266	574	718	718	-	-	-	-
4		19	-	-	-	-	-	-	-	-	(48)	(335)	(500)	(575)	(558)	(435)	(66)	-	111	594	786	786	-	-	-	-
4		20	-	-	-	-	-	-	-	-	(30)	(308)	(487)	(562)	(535)	(406)	(189)	-	112	595	785	785	-	-	-	-
4		21	-	-	-	-	-	-	-	-	(47)	(317)	(481)	(551)	(526)	(404)	(191)	-	120	623	767	767	-	-	-	-
4		22	-	-	-	-	-	-	-	-	(267)	(297)	(369)	(440)	(538)	(280)	(264)	(61)	465	595	608	608	-	-	-	-
4		23	-	-	-	-	-	-	-	-	-	(270)	-	(471)	(503)	(756)	(458)	(58)	272	610	697	697	-	-	-	-
4		24	-	-	-	-	-	-	-	-	(31)	(316)	(494)	(564)	(533)	(403)	(175)	-	86	592	799	800	-	-	-	-
4		25	-	-	-	-	-	-	-	-	(115)	(373)	(531)	(293)	(560)	(427)	(218)	-	307	564	703	703	-	-	-	-
4		26	-	-	-	-	-	-	-	-	-	-	(5)	(267)	(463)	(28)	(1,038)	(717)	111	676	745	745	-	-	-	-
4		27	-	-	-	-	-	-	-	-	(555)	(539)	35	-	(998)	-	(460)	-	477	480	656	664	-	-	-	-
4		28	-	-	-	-	-	-	-	-	(51)	(322)	(483)	(551)	(521)	(402)	(186)	-	116	589	782	790	-	-	-	-
4		29	-	-	-	-	-	-	-	-	(70)	(209)	(215)	(325)	(536)	(662)	(352)	(148)	578	449	625	625	-	-	-	-
4		30	-	-	-	-	-	-	-	-	(345)	(265)	(397)	(281)	(402)	(396)	(268)	(163)	497	553	614	614	-	-	-	-
5		1	-	-	-	-	-	-	-	-	(93)	(494)	(676)	(465)	(405)	(385)	-	-	204	599	737	737	-	-	-	-
5		2	-	-	-	-	-	-	-	-	-	-	(230)	102	-	(1,028)	(831)	(529)	93	577	800	806	-	-	-	-
5		3	-	-	-	-	-	-	-	-	(49)	(313)	(482)	(550)	(528)	(405)	(191)	-	108	572	795	802	-	-	-	-
5		4	-	-	-	-	-	-	-	-	(124)	(382)	(526)	(603)	(587)	(332)	36	-	181	600	747	749	-	-	-	-
5		5	-	-	-	-	-	-	-	-	(389)	(657)	(621)	(444)	-	(402)	(4)	-	447	509	659	662	-	-	-	-
5		6	-	-	-	-	-	-	-	-	(173)	(408)	(516)	(573)	(411)	(435)	-	-	480	534	627	636	-	-	-	-
5		7	-	-	-	-	-	-	-	-	(141)	(379)	(123)	(587)	(561)	(459)	(267)	-	206	694	684	694	-	-	-	-
5		8	-	-	-	-	-	-	-	-	(193)	(434)	(362)	(642)	(59)	(512)	(315)	-	500	465	652	660	-	-	-	-
5		9	-	-	-	-	-	-	-	-	(119)	(360)	(509)	(572)	(547)	(411)	-	-	166	557	769	785	-	-	-	-
5		10	-	-	-	-	-	-	-	-	(272)	(230)	(334)	(438)	(413)	(394)	(182)	(255)	531	562	592	592	-	-	-	-
5		11	-	-	-	-	-	-	-	-	-	-	(181)	(415)	(739)	(627)	(428)	(128)	113	560	791	813	-	-	-	-
5		12	-	-	-	-	-	-	-	-	(395)	(253)	(289)	(716)	(465)	(71)	-	(328)	138	621	753	764	-	-	-	-
5		13	-	-	-	-	-	-	-	-	(219)	(338)	(319)	(539)	(311)	(466)	(326)	-	467	478	659	673	-	-	-	-
5		14	-	-	-	-	-	-	-	-	(64)	(322)	(481)	(544)	(513)	(403)	(189)	-	111	557	790	819	-	-	-	-
5		15	-	-	-	-	-	-	-	-	(462)	(581)	(468)	(311)	(106)	-	(589)	-	98	556	796	826	-	-	-	-
5		16	-	-	-	-	-	-	-	-	(70)	(325)	(473)	(535)	(505)	(406)	(202)	-	109	552	790	826	-	-	-	-
5		17	-	-	-	-	-	-	-	-	(172)	(424)	(598)	(666)	-	(334)	(312)	(10)	123	550	783	821	-	-	-	-
5		18	-	-	-	-	-	-	-	-	-	(423)	(179)	(181)	(499)	(444)	(516)	(274)	371	561	667	677	-	-	-	-
5		19	-	-	-	-	-	-	-	-	(119)	(413)	(420)	(362)	(428)	(551)	(74)	(150)	468	612	576	620	-	-	-	-
5		20	-	-	-	-	-	-	-	-	(411)	(707)	(660)	(359)	(255)	(27)	(56)	(41)	431	528	640	677	-	-	-	-
5		21	-	-	-	-	-	-	-	-	(278)	(294)	(418)	(368)	(282)	(333)	(375)	(168)	456	564	628	628	-	-	-	-
5		22	-	-	-	-	-	-	-	-	(37)	(586)	(440)	(498)	(377)	(325)	(153)	(102)	355	645	620	656	-	-	-	-
5		23	-	-	-	-	-	-	-	-	-	(161)	(463)	(1,199)	(381)	(101)	-	(211)	307	513	710	746	-	-	-	-
5		24	-	-	-	-	-	-	-	-	-	-	17	(106)	(854)	(752)	(555)	(266)	265	556	728	728	-	-	-	-
5		25	-	-	-	-	-	-	-	-	-	(322)	(710)	(407)	(612)	(466)	-	-	102	547	795	834	-	-	-	-
5		26	-	-	-	-	-	-	-	-	(77)	(325)	(481)	(540)	(509)	(393)	(193)	-	274	487	739	776	-	-	-	-
5		27	-	-	-	-	-	-	-	-	(314)	(557)	(485)	(589)	(385)	(187)	-	-	100	542	797	838	-	-	-	-
5		28	-	-	-	-	-	-	-	-	(360)	(495)	(194)	(281)	(567)	(352)	(268)	-	305	500	722	750	-	-	-	-
5		29	-	-	-	-	-	-	-	-	(402)	(222)	-	(226)	(682)	(306)	(535)	(143)	339	455	718	765	-	-	-	-
5		30	-	-	-	-	-	-	-	-	-	-	(234)	(690)	(673)	(558)	(363)	-	82	573	788	834	-	-	-	-
5		31	-	-	-	-	-	-	-	-	(90)	(338)	(479)	(534)	(508)	(385)	(184)	-	107	541	790	838	-	-	-	-
6		1	-	-	-	-	-	-	-	-	-	(350)	(513)	(584)	(471)	(379)	(178)	(42)	130	535	782	830	-	-	-	-

PV system nameplate capacity (kW AC)	2,000
BESS power capacity (kW)	1,200
BESS storage capacity (kWh)	2,400
Roundtrip loss rate	10%

PV Operation

		Hour	1	2	3	4	5	6	7	8	Charging hours 9	10	11	12	13	14	15	16	Discharge hours 17	18	19	20	21	22	23	24	Total	CPD Min
6	2	-	-	-	-	-	-	-	-	(97)	(328)	(458)	(535)	(524)	(410)	(164)	-	303	529	722	722	-	-	-	-		
6	3	-	-	-	-	-	-	-	-	-	(333)	(490)	(555)	(531)	(427)	(232)	52	87	537	804	850	-	-	-	-		
6	4	-	-	-	-	-	-	-	-	(276)	(522)	(289)	(740)	-	(618)	-	(73)	128	656	718	774	-	-	-	-		
6	5	-	-	-	-	-	-	-	-	-	(247)	(714)	(636)	(366)	(229)	(108)	(216)	418	519	638	701	-	-	-	-		
6	6	-	-	-	-	-	-	-	-	(287)	(240)	(273)	(360)	(339)	(354)	(390)	(275)	521	575	586	594	-	-	-	-		
6	7	-	-	-	-	-	-	-	-	(204)	(452)	(610)	(673)	(344)	(178)	-	(57)	87	529	805	856	-	-	-	-		
6	8	-	-	-	-	-	-	-	-	(429)	(289)	(366)	(738)	(531)	(76)	-	(89)	460	414	669	734	-	-	-	-		
6	9	-	-	-	-	-	-	-	-	(348)	(523)	(494)	(383)	(151)	(450)	(168)	-	426	449	667	734	-	-	-	-		
6	10	-	-	-	-	-	-	-	-	(87)	(323)	(464)	(518)	(508)	(401)	(215)	-	136	524	778	839	-	-	-	-		
6	11	-	-	-	-	-	-	-	-	(344)	(560)	(786)	(849)	110	(89)	-	-	551	420	649	656	-	-	-	-		
6	12	-	-	-	-	-	-	-	-	(83)	(440)	(252)	(506)	(186)	(257)	(384)	(409)	330	614	641	692	-	-	-	-		
6	13	-	-	-	-	-	-	-	-	(465)	(397)	(517)	(372)	(549)	(216)	-	-	443	594	617	622	-	-	-	-		
6	14	-	-	-	-	-	-	-	-	(153)	(629)	(378)	(369)	(259)	(228)	(113)	(387)	136	518	773	851	-	-	-	-		
6	15	-	-	-	-	-	-	-	-	(84)	(157)	(322)	(410)	(439)	(522)	(372)	(210)	444	421	666	745	-	-	-	-		
6	16	-	-	-	-	-	-	-	-	(87)	(317)	(460)	(525)	(504)	(402)	(223)	-	138	553	757	829	-	-	-	-		
6	17	-	-	-	-	-	-	-	-	(28)	(280)	(612)	(678)	(658)	(205)	(55)	-	161	509	776	830	-	-	-	-		
6	18	-	-	-	-	-	-	-	-	(547)	(192)	(375)	(212)	(197)	(559)	(177)	(258)	491	421	646	719	-	-	-	-		
6	19	-	-	-	-	-	-	-	-	(148)	-	(368)	(441)	(428)	(604)	(294)	(233)	209	487	787	794	-	-	-	-		
6	20	-	-	-	-	-	-	-	-	(128)	(379)	(552)	(619)	(595)	(209)	-	(37)	363	436	703	774	-	-	-	-		
6	21	-	-	-	-	-	-	-	-	(186)	(407)	(33)	(369)	(496)	(448)	(423)	(155)	272	475	726	804	-	-	-	-		
6	22	-	-	-	-	-	-	-	-	-	(181)	(505)	(580)	(600)	(273)	(281)	(97)	291	501	707	779	-	-	-	-		
6	23	-	-	-	-	-	-	-	-	(170)	(38)	(97)	(627)	(618)	(526)	(349)	(92)	89	518	808	862	-	-	-	-		
6	24	-	-	-	-	-	-	-	-	(231)	(471)	(448)	(489)	(234)	(308)	(265)	(71)	152	507	769	849	-	-	-	-		
6	25	-	-	-	-	-	-	-	-	-	(29)	(414)	(513)	(596)	(517)	(350)	(98)	138	515	773	851	-	-	-	-		
6	26	-	-	-	-	-	-	-	-	(93)	-	(369)	(742)	(365)	(454)	(275)	(218)	170	510	757	839	-	-	-	-		
6	27	-	-	-	-	-	-	-	-	(331)	(578)	(380)	(508)	(502)	(217)	-	-	396	496	672	712	-	-	-	-		
6	28	-	-	-	-	-	-	-	-	(97)	(275)	(627)	(451)	(194)	(409)	(322)	(142)	99	546	780	851	-	-	-	-		
6	29	-	-	-	-	-	-	-	-	-	(205)	(557)	(73)	(405)	(449)	(466)	(362)	150	506	772	848	-	-	-	-		
6	30	-	-	-	-	-	-	-	-	-	(414)	(569)	(318)	(175)	(545)	(378)	(117)	84	517	812	864	-	-	-	-		
7	1	-	-	-	-	-	-	-	-	-	-	-	(755)	(387)	(661)	(485)	(229)	153	512	770	843	-	-	-	-		
7	2	-	-	-	-	-	-	-	-	(278)	(520)	(669)	(423)	(362)	(156)	(109)	-	235	554	706	782	-	-	-	-		
7	3	-	-	-	-	-	-	-	-	(51)	(299)	(462)	(530)	(521)	(418)	(236)	-	111	534	781	850	-	-	-	-		
7	4	-	-	-	-	-	-	-	-	(388)	(333)	(304)	(86)	(186)	(30)	(402)	(788)	117	517	788	854	-	-	-	-		
7	5	-	-	-	-	-	-	-	-	(80)	(332)	(461)	(529)	(520)	(385)	(210)	-	162	510	769	836	-	-	-	-		
7	6	-	-	-	-	-	-	-	-	(172)	(390)	(505)	(455)	(379)	(307)	(309)	-	224	498	742	812	-	-	-	-		
7	7	-	-	-	-	-	-	-	-	-	(747)	(881)	(9)	-	(183)	(698)	-	300	476	713	788	-	-	-	-		
7	8	-	-	-	-	-	-	-	-	-	(274)	(630)	(6)	(619)	(594)	(357)	(39)	283	518	702	773	-	-	-	-		
7	9	-	-	-	-	-	-	-	-	(234)	(201)	(245)	(618)	(370)	(146)	(506)	(197)	238	646	660	733	-	-	-	-		
7	10	-	-	-	-	-	-	-	-	(99)	(348)	(528)	(108)	(597)	(483)	(309)	(44)	109	520	795	854	-	-	-	-		
7	11	-	-	-	-	-	-	-	-	(48)	(294)	(450)	(528)	(517)	(425)	(256)	-	108	518	800	851	-	-	-	-		
7	12	-	-	-	-	-	-	-	-	(95)	(342)	(483)	(557)	(410)	(439)	(192)	-	125	539	802	810	-	-	-	-		
7	13	-	-	-	-	-	-	-	-	-	(310)	(496)	(554)	(255)	(270)	(437)	(195)	143	513	781	840	-	-	-	-		
7	14	-	-	-	-	-	-	-	-	(285)	(629)	(55)	(762)	(460)	(281)	-	(46)	324	573	657	723	-	-	-	-		
7	15	-	-	-	-	-	-	-	-	(51)	(415)	(603)	(663)	(609)	(4)	(149)	(23)	377	469	686	745	-	-	-	-		
7	16	-	-	-	-	-	-	-	-	(85)	(341)	(496)	(271)	(558)	(466)	(279)	(20)	79	521	818	859	-	-	-	-		
7	17	-	-	-	-	-	-	-	-	-	(291)	(430)	(484)	(442)	(523)	(347)	-	116	547	781	833	-	-	-	-		
7	18	-	-	-	-	-	-	-	-	(269)	(161)	(228)	(134)	(122)	(1,130)	(421)	(51)	156	516	771	834	-	-	-	-		
7	19	-	-	-	-	-	-	-	-	(231)	(639)	(707)	-	(269)	-	(199)	401	508	676	691	-	-	-	-		
7	20	-	-	-	-	-	-	-	-	(283)	(524)	-	(763)	(324)	(664)	41	-	130	535	777	835	-	-	-	-		
7	21	-	-	-	-	-	-	-	-	(11)	-	(346)	-	(756)	(666)	(496)	(241)	122	538	790	826	-	-	-	-		
7	22	-	-	-	-	-	-	-	-	(38)	(292)	(455)	(535)	(523)	(425)	(249)	-	88	527	812	850	-	-	-	-		
7	23	-	-	-	-	-	-	-	-	(46)	(296)	(461)	(531)	(516)	(424)	(244)	-	102	526	803	846	-	-	-	-		
7	24	-	-	-	-	-	-	-	-	(121)	(374)	(537)	(610)	(605)	(270)	-	-	235	487	751	803	-	-	-	-		
7	25	-	-	-	-	-	-	-	-	1	(516)	(668)	(734)	(551)	(113)	-	65	334	491	702	749	-	-	-	-		
7	26	-	-	-	-	-	-	-	-	(69)	(129)	(212)	(733)	(396)	(160)	(418)	(401)	468	498	655	655	-	-	-	-		
7	27	-	-	-	-	-	-	-	-	-	17	(357)	(284)	(395)	(704)	(526)	(268)	128	564	782	802	-	-	-	-		
7	28	-	-	-	-	-	-	-	-	(155)	(398)	(556)	(624)	(248)	(321)	(191)	(25)	199	513	762	803	-	-	-	-		
7	29	-	-	-	-	-	-	-	-	(65)	(309)	(428)	(472)	(484)	(287)	(364)	(108)	145	534	779	819	-	-	-	-		
7	30	-	-	-	-	-	-	-	-	(73)	(271)	(386)	(630)	(750)	(410)	3	-	524	526	613	613	-	-	-	-		
7	31	-	-	-	-	-	-	-	-	(34)	(287)	(453)	(528)	(520)	(433)	(262)	-	100	538	806	833	-	-	-	-		
8	1	-	-	-	-	-	-	-	-	(104)	(63)	(498)	(601)	(531)	(473)	(247)	-	575	441	618	642	-	-	-	-		
8	2	-	-	-	-	-	-	-	-	(61)	(307)	(457)	(529)	(516)	(414)	(234)	-	182	642	715	739	-	-	-	-		
8	3	-	-	-	-	-	-	-	-	(191)	(434)	(572)	(647)	(361)	(309)	-	(4)	195	592	745	745	-	-	-	-		
8	4	-	-	-	-	-	-	-	-	(251)	-	-	(299)	(581)	(555)	(544)	(287)	158	530	783	806	-	-	-	-		
8	5	-	-	-	-	-	-	-	-	(272)	(533)	(703)	(784)	10	-	-	(234)	109	547	799	822	-	-	-	-		
8	6	-	-	-	-	-	-	-	-	(55)	(297)	(506)	(759)	(743)	-	17	(173)	138	544	784	811	-	-	-	-		
8	7	-	-	-	-	-	-	-	-	(203)	-	-	(716)	(705)	(578)	(236)	(80)	234	545	742	756	-	-	-	-		
8	8	-	-	-	-	-	-	-	-	(27)	(286)	(452)	(534)	(528)	(434)	(256)	-	101	553	804	819	-	-	-	-		
8	9	-	-	-	-	-	-	-	-	(29)	(294)	(467)	(541)	(525)	(426)	(236)	-	104	553	804	816	-	-	-	-		
8	10	-	-	-	-	-	-	-	-	(145)	(429)	(431)	(472)	(419)	(621)	-	-	250	539	738	750	-	-	-	-		
8	11	-	-	-	-	-	-	-	-	(63)	(334)	(504)	(580)	(571)	(467)	-	-	223	515	765	774	-	-	-	-		
8	12	-	-	-	-	-	-	-	-	(26)	(299)	(473)	(547)	(533)	(420)	(219)	-	94	570	803	810	-	-	-	-		
8	13	-	-	-	-	-	-	-	-	(86)	(197)	(526)	(601)	(593)	(487)	(26)	-	129	553	794	801	-	-	-	-		
8	14	-	-	-	-	-	-	-	-	(164)	(417)	(568)	(640)	(612)	27	(144)	-	496	582	599	599	-	-	-	-		
8	15	-	-	-	-	-	-	-	-	-	13	(654)	(710)	(289)	(112)	(449)	(316)	223	550	750	754	-	-	-	-		
8	16	-	-	-	-	-	-	-	-	(113)	(380)	(549)	(623)	(29)	(498)	(302)	(23)	129	567	789	792	-	-	-	-		
8	17	-	-	-	-	-	-	-	-	(28)	(293)	(465)	(545)	(529)	(421)	(236)	-	463	482	663	668	-	-	-	-		
8	18	-	-	-	-	-	-	-	-	-	(231)	(392)	(131)	(822)	(706)	-	(235)	142	571	780	785	-	-	-	-		
8	19	-	-	-	-	-	-	-	-	(401)	(667)	(566)	(520)	(289)	(76)	1	-	461	549	634	634	-	-	-	-		
8	20	-	-	-	-	-	-	-	-	(105)	(394)	(241)	-	(460)	(654)	(469)	(194)	177	569	765	765	-	-	-	-		
8	21	-	-	-	-	-	-	-	-	(361)	-	(40)	(457)	(442)	(488)	(119)	(610)	133	583	780	781	-	-	-	-		
8	22	-	-	-	-	-	-	-	-	(80)	(345)	(514)	(586)	(287)	(453)	(252)	-	143	583	775	775	-	-	-	-		
8	23	-	-	-	-	-	-	-	-	(24)	(302)	(462)	(542)	(528)	(429)	(229)	-	152	584	770	770	-	-	-	-		
8	24	-	-	-	-	-	-	-	-	(253)	(516)	(523)	(532)	(436)	(77)	(180)	-	600	441	618	618	-	-	-	-		
8	25	-	-	-	-	-	-	-	-	(305)	(202)	(319)	(294)	(412)	(285)	(291)	(409)	502	506	634	634	-	-	-	-		
8	26	-	-	-	-	-	-	-	-	(274)	(368)	(254)	(270)	(252)	(571)	(405)	(124)	485	518	637	637	-	-	-	-		
8	27	-	-	-	-	-	-	-	-	(344)	(270)	(357)	(211)	(443)	(366)	(333)	(193)	500	547	615	615	-	-	-	-		
8	28	-	-	-	-	-	-	-	-	-	(101)	(324)	(396)	(437)	(398)	(394)	(468)	379	557	671	671	-	-	-	-		
8	29	-	-	-	-	-	-	-	-	(410)	(296)	(388)	(244)	(410)	(367)	(262)	(142)	577	534	583	583	-	-	-	-		
8	30	-	-	-	-	-	-	-	-	-	-	(291)	(388)	(762)	(652)	(276)	(148)	191	601	742	742	-	-	-	-		
8	31	-	-	-	-	-	-	-	-	-	(17)	(424)	(631)	(670)	(463)	(308)	(5)	281	594	701	701	-	-	-	-		
9	1	-	-	-	-	-	-	-	-	-	-	-	(367)	(813)	(720)	(423)	(194)	432	532	657	657	-	-	-	-		
9	2	-	-	-	-	-	-	-	-	(79)	(346)	(512)	(579)	(555)	(444)	(1)	-	258	600	710	710	-	-	-	-		
9	3	-	-	-	-	-	-	-	-	(2)	(457)	(520)	(622)	(302)	(274)	(246)	(95)	261	603	706	706	-	-	-	-		
9	4	-	-	-	-	-	-	-	-	(43)	(317)	(479)	(547)	(522)	(412)	(196)	-	223	612	721	721	-	-	-	-		
9	5	-	-	-	-	-	-	-	-	-	-	(374)	(635)	(807)	(491)	(209)	-	253	611	706	706	-	-	-	-		
9	6	-	-	-	-	-	-	-	-	(101)	(267)	(104)	(260)	(195)	(589)	(530)	(471)	497	530	625	625	-	-	-	-		
9	7	-	-	-	-	-	-	-	-	(71)	(78)	(420)	(290)	(58)	(1,222)	(377)	-	247	617	706	706	-	-	-	-		
9	8	-	-	-	-	-	-	-	-	(2)	(228)	(628)	(496)	(658)	(180)	(317)	(9)	267	617	696	696	-	-	-	-		
9	9	-	-	-	-	-	-	-	-	-	(196)	(630)	(695)	(386)	(553)	(4)	(53)	245	628	702	702	-	-	-	-		
9	10	-	-	-	-	-	-	-	-	49	-	(256)	(742)	(723)	(584)	(262)	-	422	594	630	630	-	-	-	-		
9	11	-	-	-	-	-	-	-	-	-	-	-	(357)	(795)	(703)	(489)	(173)	205	642	715	715	-	-	-	-		
9	12	-	-	-	-	-	-	-	-	(46)	(318)	(487)	(555)	(526)	(404)	(182)	-	211	646	710	710	-	-	-	-		
9	13	-	-	-	-	-	-	-	-	(49)	(314)	(489)	(555)	(522)	(402)	(187)	-	239	642	698	698	-	-	-	-		
9	14	-	-	-	-	-	-	-	-	(141)	(400)	(569)	(629)	(594)	(184)	-	-	354	616	653	653	-	-	-	-		
9	15	-	-	-	-	-	-	-	-	(102)	(383)	(156)	(613)	(580)	(456)	(227)	-	225	654	699	699	-	-	-	-		
9	16	-	-	-	-	-	-	-	-	(234)	(166)	(689)	(96)	(724)	(186)	(375)	(46)	238	656	692	692	-	-	-	-		
9	17	-	-	-	-	-	-	-	-	(76)	(333)	(495)	(554)	(515)	(389)	(156)	-	272	651	677	677	-	-	-	-		
9	18	-	-	-	-	-	-	-	-	-	(494)	(318)	(390)	(538)	(327)	(353)	(96)	441	608	614	614	-	-	-	-		
9	19	-	-	-	-	-	-	-	-	(224)	(177)	(121)	(134)	(522)	(605)	(369)	(364)	452	605	610	610	-	-	-	-		
9	20	-	-	-	-	-	-	-	-	(26)	(123)	(466)	(644)	(554)	(452)	(252)	-	370	629	639	639	-	-	-	-		
9	21	-	-	-	-	-	-	-	-	(68)	(366)	(703)	(446)	(409)	(364)	(161)	-	367	630	640	640	-	-	-	-		
9	22	-	-	-	-	-	-	-	-	(66)	(319)	(484)	(552)	(516)	(398)	(182)	-	289	657	666	666	-	-	-	-		
9	23	-	-	-	-	-	-	-	-	(9)	(187)	-	(538)	(534)	(489)	(549)	(212)	330	647	650	650	-	-	-	-		
9	24	-	-	-	-	-	-	-	-	(76)	-	(553)	(625)	(590)	(455)	(218)	-	275	663	670	670	-	-	-	-		
9	25	-	-	-	-	-	-	-	-	(39)	(327)	(505)	(572)	(533)	(390)	(151)	-	268	666	671	671	-	-	-	-		
9	26	-	-	-	-	-	-	-	-	(184)	(463)	(627)	(433)	(341)	(469)	-	-	322	651	652	652	-	-	-	-		
9	27	-	-	-	-	-	-	-	-	(25)	(184)	(467)	(480)	(528)	(415)	(307)	(111)	317	653	653	653	-	-	-	-		
9	28	-	-	-	-	-	-	-	-	(249)	(593)	(547)	(586)	(287)	(197)	(57)	-	352	641	641	641	-	-	-	-		
9	29	-	-	-	-	-	-	-	-	(190)	(321)	(450)	(444)	(485)	(554)	(72)	-	338	646	646	646	-	-	-	-		
9	30	-	-	-	-	-	-	-	-	(183)	(448)	(625)	(525)	(221)	(369)	(146)	-	569	569	569	569	-	-	-	-		
10	1	-	-	-	-	-	-	-	-	(263)	(158)	(188)	(614)	(350)	(302)	(412)	(230)	529	583	583	583	-	-	-	-		
10	2	-	-	-	-	-	-	-	-	(99)	(413)	(599)	(671)	(627)	(103)	(4)	-	528	583	583	583	-	-	-	-		
10	3	-	-	-	-	-	-	-	-	-	12	(356)	(1,235)	(170)	(775)	-	6	499	593	593	593	-	-	-	-		
10	4	-	-	-	-	-	-	-	-	(156)	(267)	(533)	(519)	(196)	(390)	(187)	(270)	489	596	596	596	-	-	-	-		
10	5	-	-	-	-	-	-	-	-	-	(481)	(680)	(742)	(714)	44	-	57	360	639	639	639	-	-	-	-		
10	6	-	-	-	-	-	-	-	-	-	(355)	(522)	(587)	(541)	(387)	(125)	-	359	639	639	639	-	-	-	-		
10	7	-	-	-	-	-	-	-	-	(68)	(349)	(518)	(572)	(521)	(373)	(116)	-	383	631	631	631	-	-	-	-		
10	8	-	-	-	-	-	-	-	-	(70)	(348)	(509)	(567)	(527)	(373)	(124)	-	404	624	624	624	-	-	-	-		
10	9	-	-	-	-	-	-	-	-	(74)	(351)	(509)	(568)	(525)	(371)	(119)	-	408	623	623	623	-	-	-	-		
10	10	-	-	-	-	-	-	-	-	(82)	(357)	(511)	(565)	(521)	(370)	(112)	-	416	620	620	620	-	-	-	-		
10	11	-	-	-	-	-	-	-	-	-	(450)	(615)	(674)	(428)	(349)	-	-	427	617	617	617	-	-	-	-		
10	12	-	-	-	-	-	-	-	-	(576)	(478)	(384)	(573)	(367)	-	(140)	-	540	579	579	579	-	-	-	-		
10	13	-	-	-	-	-	-	-	-	(44)	(259)	(273)	(311)	(467)	(329)	(187)	(648)	445	611	611	611	-	-	-	-		
10	14	-	-	-	-	-	-	-	-	(372)	(390)	(282)	(243)	(292)	(517)	(217)	(204)	569	569	569	569	-	-	-	-		
10	15	-	-	-	-	-	-	-	-	(538)	(836)	(545)	(129)	(196)	(273)	-	-	561	572	572	572	-	-	-	-		
10	16	-	-	-	-	-	-	-	-	(201)	(493)	(679)	(736)	(408)	-	-	-	558	573	573	573	-	-	-	-		
10	17	-	-	-	-	-	-	-	-	(56)	(353)	(528)	(584)	(536)	(368)	(94)	-	450	609	609	609	-	-	-	-		
10	18	-	-	-	-	-	-	-	-	-	(85)	(51)	(83)	(958)	(797)	(520)	(24)	478	600	600	600	-	-	-	-		
10	19	-	-	-	-	-	-	-	-	(232)	(362)	(257)	(257)	(290)	(499)	(326)	(294)	480	599	599	599	-	-	-	-		
10	20	-	-	-	-	-	-	-	-	-	(621)	(833)	(418)	(387)	(270)	-	12	488	596	596	596	-	-	-	-		
10	21	-	-	-	-	-	-	-	-	(53)	(343)	(526)	(588)	(531)	(379)	(97)	-	551	575	575	575	-	-	-	-		
10	22	-	-	-	-	-	-	-	-	(280)	(1,056)	-	(344)	-	-	(795)	(42)	498	593	593	593	-	-	-	-		
10	23	-	-	-	-	-	-	-	-	(15)	(54)	(182)	(155)	(559)	(354)	(745)	(454)	515	587	587	587	-	-	-	-		
10	24	-	-	-	-	-	-	-	-	(444)	(703)	(774)	(496)	(11)	-	-	(89)	551	575	575	575	-	-	-	-		
10	25	-	-	-	-	-	-	-	-	-	(349)	(538)	(597)	(547)	(389)	(97)	-	523	585	585	585	-	-	-	-		
10	26	-	-	-	-	-	-	-	-	(130)	(294)	(532)	(447)	(313)	(362)	(367)	(71)	569	569	569	569	-	-	-	-		
10	27	-	-	-	-	-	-	-	-	(362)	(291)	(284)	(487)	(373)	(258)	(256)	(208)	569	569	569	569	-	-	-	-		
10	28	-	-	-	-	-	-	-	-	(45)	(357)	(544)	(605)	(542)	(363)	(61)	-	547	576	576	576	-	-	-	-		
10	29	-	-	-	-	-	-	-	-	(401)	(363)	(348)	(344)	(315)	(264)	(260)	(222)	569	569	569	569	-	-	-	-		
10	30	-	-	-	-	-	-	-	-	(7)	(349)	(538)	(615)	(568)	(380)	(60)	-	547	577	577	577	-	-	-	-		
10	31	-	-	-	-	-	-	-	-	(213)	(253)	(514)	(608)	(528)	(318)	(83)	-	565	571	571	571	-	-	-	-		
11	1	-	-	-	-	-	-	-	-	(88)	(405)	(593)	(655)	(608)	-	(166)	-	555	574	574	574	-	-	-	-		
11	2	-	-	-	-	-	-	-	-	(2)	(11)	(342)	(472)	(410)	(703)	(368)	(209)	568	570	570	570	-	-	-	-		
11	3	-	-	-	-	-	-	-	-	(18)	(353)	(534)	(601)	(547)	(378)	(86)	-	559	573	573	573	-	-	-	-		
11	4	-	-	-	-	-	-	-	-	(213)	(617)	(595)	(517)	(307)	(46)	(222)	-	569	569	569	569	-	-	-	-		
11	5	-	-	-	-	-	-	-	-	(244)	(196)	(312)	(320)	(499)	(623)	(323)	-	569	569	569	569	-	-	-	-		
11	6	-	-	-	-	-	-	-	-	(231)	-	(150)	(636)	(600)	(651)	(250)	-	569	569	569	569	-	-	-	-		
11	7	-	-	-	-	-	-	-	-	(43)	(353)	(537)	(599)	(543)	(371)	(72)	-	569	569	569	569	-	-	-	-		
11	8	-	-	-	-	-	-	-	-	(107)	(427)	(614)	(671)	(267)	(430)	-	-	569	569	569	569	-	-	-	-		
11	9	-	-	-	-	-	-	-	-	(5)	(346)	(547)	(615)	(557)	(378)	(69)	-	569	569	569	569	-	-	-	-		
11	10	-	-	-	-	-	-	-	-	-	(476)	(670)	(723)	(32)	(464)	(151)	-	569	569	569	569	-	-	-	-		
11	11	-	-	-	-	-	-	-	-	-	(427)	(192)	(161)	(597)	(714)	(426)	-	569	569	569	569	-	-	-	-		
11	12	-	-	-	-	-	-	-	-	(221)	(349)	(356)	(364)	(333)	(379)	(257)	(258)	569	569	569	569	-	-	-	-		
11	13	-	-	-	-	-	-	-	-	-	(295)	(535)	(633)	(587)	(401)	(67)	-	569	569	569	569	-	-	-	-		
11	14	-	-	-	-	-	-	-	-	(0)	(349)	(557)	(629)	(566)	(369)	(47)	-	569	569	569	569	-	-	-	-		
11	15	-	-	-	-	-	-	-	-	(12)	(359)	(553)	(619)	(558)	(368)	(48)	-	569	569	569	569	-	-	-	-		
11	16	-	-	-	-	-	-	-	-	(62)	(274)	(408)	(421)	(423)	(488)	(441)	-	569	569	569	569	-	-	-	-		
11	17	-	-	-	-	-	-	-	-	(385)	(169)	(414)	(988)	(556)	-	-	(5)	569	569	569	569	-	-	-	-		
11	18	-	-	-	-	-	-	-	-	(403)	(417)	(922)	(303)	(260)	(194)	(18)	-	569	569	569	569	-	-	-	-		
11	19	-	-	-	-	-	-	-	-	-	(250)	(579)	(635)	(565)	(396)	(92)	-	569	569	569	569	-	-	-	-		
11	20	-	-	-	-	-	-	-	-	(101)	(1,023)	(607)	(133)	(386)	(187)	(82)	-	569	569	569	569	-	-	-	-		
11	21	-	-	-	-	-	-	-	-	(203)	(249)	(419)	(256)	(412)	(441)	(362)	(176)	569	569	569	569	-	-	-	-		
11	22	-	-	-	-	-	-	-	-	(181)	(419)	(540)	(607)	(591)	(99)	(80)	-	569	569	569	569	-	-	-	-		

PV system nameplate capacity (kW AC)	2,000
BESS power capacity (kW)	1,200
BESS storage capacity (kWh)	2,400
Roundtrip loss rate	10%

PV Operation

		Hour									Charging hours								Discharge hours									
Month	Day		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	CPD Min
11		23	-	-	-	-	-	-	-	-	(157)	(501)	(698)	(757)	(261)	(144)	-	-	569	569	569	569	-	-	-	-		
11		24	-	-	-	-	-	-	-	-	(346)	(272)	(338)	(443)	(386)	(295)	(224)	(212)	569	569	569	569	-	-	-	-		
11		25	-	-	-	-	-	-	-	-	(68)	(112)	(110)	(342)	(819)	(994)	(71)	(0)	569	569	569	569	-	-	-	-		
11		26	-	-	-	-	-	-	-	-	(196)	(551)	(354)	(444)	(66)	(614)	(291)	-	569	569	569	569	-	-	-	-		
11		27	-	-	-	-	-	-	-	-	-	(654)	(569)	(439)	(461)	(201)	(194)	-	569	569	569	569	-	-	-	-		
11		28	-	-	-	-	-	-	-	-	(312)	(330)	(277)	(335)	(314)	(329)	(367)	(254)	569	569	569	569	-	-	-	-		
11		29	-	-	-	-	-	-	-	-	(13)	(385)	(603)	(678)	(624)	(92)	(123)	-	569	569	569	569	-	-	-	-		
11		30	-	-	-	-	-	-	-	-	-	(38)	(111)	(354)	(1,250)	(617)	(131)	(16)	569	569	569	569	-	-	-	-		
12		1	-	-	-	-	-	-	-	-	(477)	(476)	(443)	(257)	(300)	(194)	(191)	(181)	569	569	569	569	-	-	-	-		
12		2	-	-	-	-	-	-	-	-	(255)	(305)	(311)	(345)	(366)	(292)	(305)	(338)	569	569	569	569	-	-	-	-		
12		3	-	-	-	-	-	-	-	-	-	(144)	(327)	(277)	(397)	(502)	(694)	(176)	569	569	569	569	-	-	-	-		
12		4	-	-	-	-	-	-	-	-	(235)	(283)	(408)	(545)	(335)	(349)	(361)	-	569	569	569	569	-	-	-	-		
12		5	-	-	-	-	-	-	-	-	-	(446)	(358)	(779)	(616)	(28)	(290)	-	569	569	569	569	-	-	-	-		
12		6	-	-	-	-	-	-	-	-	-	(165)	(390)	(847)	(549)	(376)	(189)	-	569	569	569	569	-	-	-	-		
12		7	-	-	-	-	-	-	-	-	(35)	(444)	(206)	(347)	(725)	(548)	(211)	-	569	569	569	569	-	-	-	-		
12		8	-	-	-	-	-	-	-	-	(43)	(442)	(645)	(618)	(516)	(252)	-	-	569	569	569	569	-	-	-	-		
12		9	-	-	-	-	-	-	-	-	(141)	(392)	(488)	(516)	(442)	(356)	(166)	(17)	569	569	569	569	-	-	-	-		
12		10	-	-	-	-	-	-	-	-	(421)	(505)	(360)	(241)	(310)	(332)	(206)	(143)	569	569	569	569	-	-	-	-		
12		11	-	-	-	-	-	-	-	-	-	-	86	(750)	(853)	(672)	(328)	-	569	569	569	569	-	-	-	-		
12		12	-	-	-	-	-	-	-	-	18	(305)	(468)	(570)	(646)	(452)	(95)	-	569	569	569	569	-	-	-	-		
12		13	-	-	-	-	-	-	-	-	(183)	(285)	(302)	(553)	(485)	(267)	(345)	(97)	569	569	569	569	-	-	-	-		
12		14	-	-	-	-	-	-	-	-	(128)	(401)	(585)	(719)	(403)	(281)	-	-	569	569	569	569	-	-	-	-		
12		15	-	-	-	-	-	-	-	-	(21)	(211)	(599)	(831)	(430)	(105)	(308)	(12)	569	569	569	569	-	-	-	-		
12		16	-	-	-	-	-	-	-	-	(324)	(192)	(304)	(345)	(329)	(426)	(392)	(206)	569	569	569	569	-	-	-	-		
12		17	-	-	-	-	-	-	-	-	(276)	(298)	(288)	(365)	(479)	(296)	(265)	(249)	569	569	569	569	-	-	-	-		
12		18	-	-	-	-	-	-	-	-	8	(422)	(669)	(756)	(539)	(140)	-	-	569	569	569	569	-	-	-	-		
12		19	-	-	-	-	-	-	-	-	-	(297)	(558)	(606)	(605)	(363)	(88)	-	569	569	569	569	-	-	-	-		
12		20	-	-	-	-	-	-	-	-	-	(260)	(518)	(630)	(594)	(418)	(97)	-	569	569	569	569	-	-	-	-		
12		21	-	-	-	-	-	-	-	-	(15)	(463)	(699)	(660)	(496)	(187)	3	-	569	569	569	569	-	-	-	-		
12		22	-	-	-	-	-	-	-	-	-	(317)	(476)	(734)	(506)	(348)	(136)	-	569	569	569	569	-	-	-	-		
12		23	-	-	-	-	-	-	-	-	-	(262)	(503)	(598)	(574)	(436)	(145)	-	569	569	569	569	-	-	-	-		
12		24	-	-	-	-	-	-	-	-	-	(54)	(546)	(649)	(628)	(462)	(179)	-	569	569	569	569	-	-	-	-		
12		25	-	-	-	-	-	-	-	-	(105)	(526)	(644)	(549)	(348)	(292)	(52)	-	569	569	569	569	-	-	-	-		
12		26	-	-	-	-	-	-	-	-	(230)	(318)	(335)	(435)	(435)	(361)	(214)	(189)	569	569	569	569	-	-	-	-		
12		27	-	-	-	-	-	-	-	-	(274)	(309)	(402)	(404)	(374)	(316)	(218)	(221)	569	569	569	569	-	-	-	-		
12		28	-	-	-	-	-	-	-	-	21	(405)	(655)	(705)	(407)	(254)	(111)	-	569	569	569	569	-	-	-	-		
12		29	-	-	-	-	-	-	-	-	(30)	(388)	(604)	(657)	(469)	(368)	-	-	569	569	569	569	-	-	-	-		
12		30	-	-	-	-	-	-	-	-	(267)	(294)	(273)	(256)	(281)	(258)	(266)	(622)	569	569	569	569	-	-	-	-		
12		31	-	-	-	-	-	-	-	-	(384)	(329)	(652)	(449)	(228)	(206)	(147)	(122)	569	569	569	569	-	-	-	-		

Combined Operation

		Hour									Charging hours								Discharge hours									
Month	Day		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	CPD Min
1		1	-	-	-	-	-	-	-	-	6	9	9	9	9	9	9	9	569	569	569	569	-	-	-	-	2,345	569
1		2	-	-	-	-	-	-	-	-	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	569	569	569	569	-	-	-	-	2,048	569
1		3	-	-	-	-	-	-	-	-	(181)	(181)	(181)	(181)	(181)	(181)	(181)	(181)	569	569	569	569	-	-	-	-	829	569
1		4	-	-	-	-	-	-	-	2	402	879	879	879	879	879	879	535	569	569	569	569	-	-	-	-	8,488	569
1		5	-	-	-	-	-	-	-	16	192	192	192	192	192	192	192	192	569	569	569	569	-	-	-	-	3,828	569
1		6	-	-	-	-	-	-	-	15	626	881	881	881	881	881	881	239	569	569	569	569	-	-	-	-	8,442	569
1		7	-	-	-	-	-	-	-	15	606	739	313	739	739	739	739	548	569	569	569	569	-	-	-	-	7,455	569
1		8	-	-	-	-	-	-	-	-	61	70	70	70	70	70	70	70	569	569	569	569	-	-	-	-	2,831	569
1		9	-	-	-	-	-	-	-	19	660	953	953	953	953	953	953	622	569	569	569	569	-	-	-	-	9,296	569
1		10	-	-	-	-	-	-	-	20	660	819	819	819	819	819	819	617	569	569	569	569	-	-	-	-	8,485	569
1		11	-	-	-	-	-	-	-	13	582	780	780	780	780	780	780	296	569	569	569	569	-	-	-	-	7,850	569
1		12	-	-	-	-	-	-	-	1	515	595	544	595	595	595	595	595	573	573	573	573	-	-	-	-	6,921	573
1		13	-	-	-	-	-	-	-	21	7	7	7	7	7	7	7	7	569	569	569	569	-	-	-	-	2,354	569
1		14	-	-	-	-	-	-	-	13	553	176	681	681	681	681	681	550	572	572	572	572	-	-	-	-	6,987	572
1		15	-	-	-	-	-	-	-	-	396	71	396	396	396	396	396	92	572	572	572	572	-	-	-	-	4,827	572
1		16	-	-	-	-	-	-	-	10	592	845	845	845	845	845	845	603	573	573	573	573	-	-	-	-	8,568	573
1		17	-	-	-	-	-	-	-	2	(116)	(116)	(116)	(116)	(116)	(116)	(116)	(116)	569	569	569	569	-	-	-	-	1,352	569
1		18	-	-	-	-	-	-	-	17	471	61	190	326	471	471	471	471	573	573	573	573	-	-	-	-	5,242	573
1		19	-	-	-	-	-	-	-	-	(234)	(234)	(234)	(234)	(234)	(234)	(234)	(234)	569	569	569	569	-	-	-	-	405	569
1		20	-	-	-	-	-	-	-	-	2	378	378	378	378	378	378	378	581	581	581	581	-	-	-	-	4,971	581
1		21	-	-	-	-	-	-	-	37	665	909	909	909	909	909	909	687	578	578	578	578	-	-	-	-	9,158	578
1		22	-	-	-	-	-	-	-	2	404	540	540	540	540	540	540	379	577	577	577	577	-	-	-	-	6,331	577
1		23	-	-	-	-	-	-	-	55	713	963	963	963	963	963	963	735	589	589	589	589	-	-	-	-	9,637	589
1		24	-	-	-	-	-	-	-	10	(120)	(120)	(120)	(120)	(120)	(120)	(120)	(120)	569	569	569	569	-	-	-	-	1,328	569
1		25	-	-	-	-	-	-	-	-	(286)	(286)	(286)	(286)	(286)	(286)	(286)	(286)	575	575	575	575	-	-	-	-	17	575
1		26	-	-	-	-	-	-	-	12	125	125	125	125	24	125	102	125	589	589	589	589	-	-	-	-	3,242	589
1		27	-	-	-	-	-	-	-	54	635	859	859	859	859	859	151	228	574	574	574	574	-	-	-	-	7,660	574
1		28	-	-	-	-	-	-	-	-	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	591	591	591	591	-	-	-	-	2,337	591
1		29	-	-	-	-	-	-	-	83	778	1,115	1,115	1,115	1,115	1,115	1,115	840	613	613	613	613	-	-	-	-	10,841	613
1		30	-	-	-	-	-	-	-	88	559	559	559	559	559	559	308	122	573	573	573	573	-	-	-	-	6,164	573
1		31	-	-	-	-	-	-	-	89	756	1,050	1,050	1,050	1,050	1,050	1,050	809	621	621	621	621	-	-	-	-	10,437	621
2		1	-	-	-	-	-	-	-	75	296	296	296	296	296	296	177	136	575	575	575	575	-	-	-	-	4,464	575
2		2	-	-	-	-	-	-	-	17	532	532	532	532	346	532	532	213	578	578	578	578	-	-	-	-	6,081	578
2		3	-	-	-	-	-	-	-	-	(163)	(163)	(163)	(163)	(163)	(163)	(163)	(163)	616	616	616	616	-	-	-	-	1,161	616
2		4	-	-	-	-	-	-	-	35	137	137	137	137	137	137	137	49	572	572	572	572	-	-	-	-	3,330	572
2		5	-	-	-	-	-	-	-	5	184	543	543	543	543	543	394	381	595	595	595	595	-	-	-	-	6,056	595
2		6	-	-	-	-	-	-	-	139	96	686	686	686	686	686	521	420	601	601	601	601	-	-	-	-	7,010	601
2		7	-	-	-	-	-	-	-	157	374	301	612	316	612	612	612	612	640	640	640	640	-	-	-	-	6,769	640
2		8	-	-	-	-	-	-	-	209	494	494	494	494	494	494	246	46	604	604	604	604	-	-	-	-	5,879	604
2		9	-	-	-	-	-	-	-	214	788	1,073	1,073	1,073	1,073	1,073	1,073	877	649	649	649	649	-	-	-	-	10,912	649
2		10	-	-	-	-	-	-	-	139	615	685	685	685	685	685	685	471	625	625	625	625	-	-	-	-	7,830	625
2		11	-	-	-	-	-	-	-	135	535	535	535	535	535	535	535	167	617	617	617	617	-	-	-	-	6,519	617
2		12	-	-	-	-	-	-	-	16	(102)	(102)	(102)	(102)	(102)	(102)	(102)	(102)	591	591	591	591	-	-	-	-	1,567	591
2		13	-	-	-	-	-	-	-	274	855	938	938	938	938	799	938	855	646	646	646	646	-	-	-	-	10,057	646
2		14	-	-	-	-	-	-	-	136	355	970	970	970	970	970	970	627	637	637	637	637	-	-	-	-	9,486	637
2		15	-	-	-	-	-	-	-	245	804	1,035	1,035	1,035	1,035	1,035	1,035	904	655	655	655	655	-	-	-	-	10,784	655
2		16	-	-	-	-	-	-	-	246	791	1,038	1,038	1,038	1,038	1,038	1,038	740	635	635	635	635	-	-	-	-	10,546	635
2		17	-	-	-	-	-	-	-	27	304	36	138	263	747	747	747	747	671	671	671	671	-	-	-	-	6,439	671
2		18	-	-	-	-	-	-	-	66	570	637	413	765	765	765	765	765	680	680	680	680	-	-	-	-	8,231	680
2		19	-	-	-	-	-	-	-	306	881	1,175	1,175	1,175	1,175	1,175	1,175	991	675	675	675	675	-	-	-	-	11,931	675
2		20	-	-	-	-	-	-	-	336	912	1,147	1,147	1,147	1,147	1,147	1,147	953	669	669	669	669	-	-	-	-	11,759	669
2		21	-	-	-	-	-	-	-	89	241	797	797	797	238	797	797	306	621	621	621	621	-	-	-	-	7,342	621
2		22	-	-	-	-	-	-	-	322	689	689	689	689	689	689	689	262	652	652	652	652	-	-	-	-	8,018	652
2		23	-	-	-	-	-	-	-	46	(164)	(164)	(164)	(164)	(164)	(164)	(164)	(164)	642	642	642	642	-	-	-	-	1,301	642
2		24	-	-	-	-	-	-	-	358	555	814	636	814	593	814	814	814	685	685	685	685	-	-	-	-	8,953	685
2		25	-	-	-	-	-	-	-	25	20	20	20	20	20	20	20	20	649	649	649	649	-	-	-	-	2,776	649
2		26	-	-	-	-	-	-	-	423	1,052	1,052	1,052	1,052	1,052	1,052	1,052	533	632	632	632	632	-	-	-	-	10,853	632
2		27	-	-	-	-	-	-	-	442	1,048	1,288	1,288	1,288	1,288	1,288	1,288	1,078	694	694	694	694	-	-	-	-	13,073	694
2		28	-	-	-	-	-	-	-	408	985	1,244	1,244	1,244	1,244	1,244	1,244	1,047	690	690	690	690	-	-	-	-	12,666	690
3		1	-	-	-	-	-	-	-	244	934	1,304	1,304	1,304	1,304	1,304	1,304	946	671	671	671	671	-	-	-	-	12,635	671
3		2	-	-	-	-	-	-	-	412	1,003	1,003	1,003	1,003	1,003	1,003	873	783	575	575	575	575	-	-	-	-	10,382	575
3		3	-	-	-	-	-	-	-	524	1,137	1,345	1,345	1,345	1,345	1,345	1,345	1,124	711	711	711	711	-	-	-	-	13,698	711
3		4	-	-	-	-	-	-	-	416	986	1,222	1,222	1,222	1,222	1,222	1,222	903	687	687	687	687	-	-	-	-	12,382	687
3		5	-	-	-	-	-	-	-	391	84	231	665	665	665	665	665	478	593	593	593	593	-	-	-	-	6,880	593
3		6	-	-	-	-	-	-	-	60	(126)	(126)	(126)	(126)	(126)	(126)	(126)	(126)	576	576	576	576	-	-	-	-	1,352	576
3		7	-	-	-	-	-	-	-	295	129	319	237	711	711	711	711	711	707	707	707	707	-	-	-	-	7,363	707
3		8	-	-	-	-	-	-	16	501	700	1,123	1,123	1,123	1,123	1,123	1,123	1,000	642	642	642	642	-	-	-	-	11,520	642
3		9	-	-	-	-	-	-	-	192	586	586	586	586	586	586	586	545	624	624	624	624	-	-	-	-	7,336	624
3		10	-	-	-	-	-	-	-	72	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	583	583	583	583	-	-	-	-	1,377	583
3		11	-	-	-	-	-	-	-	16	82	138	138	138	138	138	138	138	590	590	590	590	-	-	-	-	3,429	590
3		12	-	-	-	-	-	-	28	225	872	872	872	753	872	872	872	684	724	598	598	598	-	-	-	-	9,160	598
3		13	-	-	-	-	-	-	-	306	55	658	658	658	658	658	354	293	658	710	710	710	-	-	-	-	7,140	710
3		14	-	-	-	-	-	-	-	43	75	112	112	112	112	112	112	112	574	574	574	574	-	-	-	-	3,199	574
3		15	-	-	-	-	-	-	60	176	176	176	176	176	176	176	176	122	684	684	684	684	-	-	-	-	4,325	684
3		16	-	-	-	-	-	-	-	143	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	618	618	618	618	-	-	-	-	2,440	618
3		17	-	-	-	-	-	-	80	574	1,066	1,160	1,160	1,160	1,160	1,160	1,160	999	717	717	717	717	-	-	-	-	12,546	717
3		18	-	-	-	-	-	-	72	503	810	857	857	857	857	857	857	857	720	720	720	720	-	-	-	-	10,265	720
3		19	-	-	-	-	-	-	94	250	691	691	521	691	691	691	691	691	739	739	739	739	-	-	-	-	8,656	739
3		20	-	-	-	-	-	-	115	653	1,149	1,214	1,214	1,214	1,214	1,214	1,214	1,016	723	723	723	723	-	-	-	-	13,108	723
3		21	-	-	-	-	-	-	12	15	(54)	(54)	(54)	(54)	(54)	(54)	(54)	(54)	706	706	706	706	-	-	-	-	2,422	706
3		22	-	-	-	-	-	-	23	184	153	153	153	153	153	153	153	102	584	584	584	584	-	-	-	-	3,717	584
3		23	-	-	-	-	-	-	33	338	193	193	193	193	193	193	193	151	584	584	584	584	-	-	-	-	4,213	584
3		24	-	-	-	-	-	-	27	267	615	1,311	1,311	1,311	1,311	1,311	1,311	714	757	757	757	757	-	-	-	-	12,520	757
3		25	-	-	-	-	-	-	160	708	1,060	1,060	967	1,060	1,060	1,060	901	876	713	713	713	713	-	-	-	-	11,764	713
3		26	-	-	-	-	-	-	175	745	1,257	1,360	1,360	1,360	1,360	1,360	1,360	1,165	762	762	762	762	-	-	-	-	14,546	762
3		27	-	-	-	-	-	-	88	738	1,243	1,346	1,346	1,346	1,346	1,346	1,346	1,155	766	766	766	766	-	-	-	-	14,363	766
3		28	-	-	-	-	-	-	187	760	1,258	1,323	1,323	1,323	1,323	1,323	1,323	1,130	765	765	765	765	-	-	-	-	14,332	765
3		29	-	-	-	-	-	-	188	497	784	1,192	1,192	1,192	1,192	1,192	1,192	1,192	766	766	766	766	-	-	-	-	12,877	766
3		30	-	-	-	-	-	-	195	744	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,044	683	683	683	683	-	-	-	-	12,417	683
3		31	-	-	-	-	-	-	29	148	191	191	191	191	191	191	191	191	597	597	597	597	-	-	-	-	4,096	597
4		1	-	-	-	-	-	-	213	748	1,222	1,222	1,222	1,222	1,222	1,222	1,222	785	616	616	616	616	-	-	-	-	12,767	616
4		2	-	-	-	-	-	-	156	489	462	681	681	681	277	681	681	681	756	756	756	756	-	-	-	-	8,495	756
4		3	-	-	-	-	-	-	234	778	1,231	1,231	1,231	1,231	1,231	1,231	1,231	707	675	675	675	675	-	-	-	-	13,032	675
4		4	-	-	-	-	-	-	40	305	353	353	353	353	161	270	258	353	589	589	589	589	-	-	-	-	5,156	589
4		5	-	-	-	-	-	-	67	254	514	216	514	514	514	514	514	514	676	676	676	676	-	-	-	-	6,836	676
4		6	-	-	-	-	-	-	265	819	1,278	1,278	1,278	1,278	1,278	1,278	1,278	1,106	770	770	770	770	-	-	-	-	14,214	770
4		7	-	-	-	-	-	-	131	556	431	431	431	431	431	431	431	184	601	601	601	601	-	-	-	-	6,296	601
4		8	-	-	-	-	-	-	159	78	308	608	608	608	608	608	608	503	588	588	588	588	-	-	-	-	7,048	588
4		9	-	-	-	-	-	-	260	781	1,212	1,261	1,261	1,261	1,261	1,261	1,261	1,134	777	777	777	777	-	-	-	-	14,059	777
4		10	-	-	-	-	-	3	288	820	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,109	772	772	772	772	-	-	-	-	14,113	772
4		11	-	-	-	-	-	-	4	84	224	224	224	224	171	224	224	182	611	611	611	611	-	-	-	-	4,226	611
4		12	-	-	-	-	-	5	291	801	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,067	765	765	765	765	-	-	-	-	13,096	765
4		13	-	-	-	-	-	3	68	434	296	397	683	683	683	683	683	683	709	709	709	709	-	-	-	-	8,131	709
4		14	-	-	-	-	-	3	271	705	800	800	800	800	800	800	800	800	704	704	704	704	-	-	-	-	10,200	704
4		15	-	-	-	-	-	-	-	77	(89)	(89)	(89)	(89)	(89)	(89)	(89)	(89)	602	602	602	602	-	-	-	-	1,769	602
4		16	-	-	-	-	-	23	357	908	1,349	1,349	1,349	1,349	1,349	1,349	1,349	1,175	791	791	791	791	-	-	-	-	15,071	791
4		17	-	-	-	-	-	12	233	611	989	1,147	1,147	1,147	1,147	1,147	1,147	1,147	750	750	750	750	-	-	-	-	12,875	750
4		18	-	-	-	-	-	14	350	351	755	755	755	755	755	755	755	755	718	718	718	718	-	-	-	-	9,629	718
4		19	-	-	-	-	-	8	256	853	1,234	1,234	1,234	1,234	1,234	1,234	1,234	1,122	786	786	786	786	-	-	-	-	14,019	786
4		20	-	-	-	-	-	21	258	689	1,252	1,252	1,252	1,252	1,252	1,252	1,252	1,119	785	785	785	785	-	-	-	-	13,989	785
4		21	-	-	-	-	-	23	356	858	1,201	1,201	1,201	1,201	1,201	1,201	1,201	1,075	767	767	767	767	-	-	-	-	13,787	767
4		22	-	-	-	-	-	14	280	669	821	821	821	821	821	821	821	821	608	608	608	608	-	-	-	-	9,968	608
4		23	-	-	-	-	-	-	102	493	81	158	60	158	158	158	158	158	697	697	697	697	-	-	-	-	4,471	697
4		24	-	-	-	-	-	30	406	943	1,322	1,322	1,322	1,322	1,322	1,322	1,322	1,169	800	800	800	800	-	-	-	-	14,998	800
4		25	-	-	-	-	-	37	304	885	1,150	1,150	1,150	1,150	1,150	1,150	1,150	993	703	703	703	703	-	-	-	-	13,084	703
4		26	-	-	-	-	-	10	41	232	229	275	345	345	345	345	345	345	745	745	745	745	-	-	-	-	5,837	745
4		27	-	-	-	-	-	44	262	556	373	373	373	373	162	373	241	373	245	664	664	664	-	-	-	-	6,030	664
4		28	-	-	-	-	-	47	403	902	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,104	790	790	790	790	-	-	-	-	14,247	790
4		29	-	-	-	-	-	-	28	98	161	161	161	161	161	161	161	161	625	625	625	625	-	-	-	-	3,911	625
4		30	-	-	-	-	-	19	164	97	(57)	(57)	(57)	(57)	(57)	(57)	(57)	(57)	614	614	614	614	-	-	-	-	2,280	614
5		1	-	-	-	-	-	50	371	741	1,054	1,054	1,054	1,054	1,054	1,054	957	976	737

PV system nameplate capacity (kW AC)	2,000
BESS power capacity (kW)	1,200
BESS storage capacity (kWh)	2,400
Roundtrip loss rate	10%

PV Operation

		Hour									Charging hours								Discharge hours									
Month	Day		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	CPD Min
5		12	-	-	-	-	-	3	155	483	507	507	507	507	507	507	366	507	764	764	764	764	-	-	-	-	7,615	764
5		13	-	-	-	-	-	-	270	593	364	364	364	364	364	364	364	360	673	673	673	673	-	-	-	-	6,464	673
5		14	-	-	-	-	-	93	465	933	1,230	1,230	1,230	1,230	1,230	1,230	1,230	1,119	819	819	819	819	-	-	-	-	14,496	819
5		15	-	-	-	-	-	94	469	930	824	824	824	824	824	824	495	824	727	826	826	826	-	-	-	-	10,966	826
5		16	-	-	-	-	-	91	477	940	1,227	1,227	1,227	1,227	1,227	1,227	1,227	1,227	1,125	826	826	826	-	-	-	-	14,530	826
5		17	-	-	-	-	-	102	450	888	1,054	1,054	1,054	1,054	1,054	905	1,054	1,054	1,054	821	821	821	-	-	-	-	13,006	821
5		18	-	-	-	-	-	2	250	150	221	544	544	544	544	544	544	544	544	677	677	677	-	-	-	-	7,139	677
5		19	-	-	-	-	-	16	141	168	97	97	97	97	97	97	97	97	97	620	620	620	-	-	-	-	3,584	620
5		20	-	-	-	-	-	98	280	639	277	277	277	277	277	277	277	277	277	677	677	677	-	-	-	-	5,943	677
5		21	-	-	-	-	-	0	69	169	11	11	11	11	11	11	11	11	11	628	628	628	-	-	-	-	2,844	628
5		22	-	-	-	-	-	23	254	251	325	325	325	325	325	325	325	325	325	656	656	656	-	-	-	-	5,752	656
5		23	-	-	-	-	-	63	177	130	404	443	443	443	443	443	381	443	746	746	746	746	-	-	-	-	6,799	746
5		24	-	-	-	-	-	76	304	387	319	637	810	810	810	810	810	810	728	728	728	728	-	-	-	-	9,497	728
5		25	-	-	-	-	-	119	457	872	684	927	927	927	927	927	742	496	834	834	834	834	-	-	-	-	11,342	834
5		26	-	-	-	-	-	95	488	949	1,208	1,208	1,208	1,208	1,208	1,208	1,208	1,122	776	776	776	776	-	-	-	-	14,217	776
5		27	-	-	-	-	-	93	484	930	957	957	957	957	957	957	876	747	838	838	838	838	-	-	-	-	12,223	838
5		28	-	-	-	-	-	93	429	662	756	756	756	756	756	756	756	707	750	750	750	750	-	-	-	-	10,184	750
5		29	-	-	-	-	-	74	488	595	595	595	536	595	595	595	595	595	765	765	765	765	-	-	-	-	8,917	765
5		30	-	-	-	-	-	59	157	373	412	795	1,064	1,064	1,064	1,064	1,064	844	834	834	834	834	-	-	-	-	11,296	834
5		31	-	-	-	-	0	77	228	962	1,208	1,208	1,208	1,208	1,208	1,208	1,208	1,111	838	838	838	838	-	-	-	-	14,185	838
6		1	-	-	-	-	-	104	437	618	897	983	983	983	983	983	983	983	830	830	830	830	-	-	-	-	12,252	830
6		2	-	-	-	-	-	36	445	822	1,018	1,018	1,018	1,018	1,018	1,018	1,018	900	722	722	722	722	-	-	-	-	12,216	722
6		3	-	-	-	-	-	104	487	943	488	1,202	1,202	1,202	1,202	1,202	1,202	1,202	850	850	850	850	-	-	-	-	13,834	850
6		4	-	-	-	-	-	108	475	906	959	959	959	959	959	522	959	717	959	774	774	774	774	-	-	-	-	11,582	774
6		5	-	-	-	-	-	76	326	253	371	484	484	484	484	484	484	484	484	701	701	701	701	-	-	-	-	7,216	701
6		6	-	-	-	-	-	80	168	318	48	48	48	48	48	48	48	48	48	594	594	594	594	-	-	-	-	3,331	594
6		7	-	-	-	-	-	118	234	650	1,089	1,089	1,089	1,089	1,089	1,089	1,084	1,089	856	856	856	856	-	-	-	-	13,134	856
6		8	-	-	-	-	1	118	404	830	754	754	754	754	754	754	694	754	734	734	734	734	-	-	-	-	10,261	734
6		9	-	-	-	-	-	98	379	817	721	721	721	721	721	721	721	598	734	734	734	734	-	-	-	-	9,873	734
6		10	-	-	-	-	-	108	447	867	1,101	1,101	1,101	1,101	1,101	1,101	1,101	1,053	839	839	839	839	-	-	-	-	13,538	839
6		11	-	-	-	-	-	133	440	782	715	715	715	715	715	715	243	164	656	656	656	656	-	-	-	-	8,675	656
6		12	-	-	-	-	-	-	72	280	184	184	184	184	184	184	184	184	692	692	692	692	-	-	-	-	4,592	692
6		13	-	-	-	-	-	87	193	886	238	238	238	238	238	238	216	233	622	622	622	622	-	-	-	-	5,531	622
6		14	-	-	-	-	-	77	163	273	234	234	234	234	234	234	234	234	851	851	851	851	-	-	-	-	5,789	851
6		15	-	-	-	-	-	46	156	392	117	117	117	117	117	117	117	117	745	745	745	745	-	-	-	-	4,512	745
6		16	-	-	-	-	1	105	256	638	1,060	1,060	1,060	1,060	1,060	1,060	1,060	1,028	829	829	829	829	-	-	-	-	12,767	829
6		17	-	-	-	-	2	99	374	589	887	887	887	887	887	887	887	402	830	830	830	830	-	-	-	-	10,994	830
6		18	-	-	-	-	-	84	224	380	87	87	87	87	87	87	87	87	719	719	719	719	-	-	-	-	4,263	719
6		19	-	-	-	-	-	108	204	525	666	628	666	666	666	666	666	666	794	794	794	794	-	-	-	-	9,303	794
6		20	-	-	-	-	1	103	455	877	1,089	1,089	1,089	1,089	1,089	1,089	963	1,089	774	774	774	774	-	-	-	-	13,119	774
6		21	-	-	-	-	1	106	374	687	863	863	863	863	863	863	863	863	804	804	804	804	-	-	-	-	11,287	804
6		22	-	-	-	-	-	65	377	727	549	769	769	769	769	769	769	769	779	779	779	779	-	-	-	-	10,220	779
6		23	-	-	-	-	1	89	448	872	1,031	1,031	1,031	1,031	1,031	1,031	1,031	1,031	862	862	862	862	-	-	-	-	13,104	862
6		24	-	-	-	-	1	91	451	875	974	974	974	974	974	974	974	974	849	849	849	849	-	-	-	-	12,609	849
6		25	-	-	-	-	-	128	375	309	559	947	947	947	947	947	947	947	851	851	851	851	-	-	-	-	11,404	851
6		26	-	-	-	-	-	11	89	449	754	341	754	754	754	754	754	754	839	839	839	839	-	-	-	-	9,527	839
6		27	-	-	-	-	-	98	383	713	768	768	768	768	768	768	405	156	712	712	712	712	-	-	-	-	9,211	712
6		28	-	-	-	-	-	101	437	804	955	955	955	955	955	955	955	955	851	851	851	851	-	-	-	-	12,391	851
6		29	-	-	-	-	-	102	354	308	653	672	672	672	672	672	672	672	848	848	848	848	-	-	-	-	9,516	848
6		30	-	-	-	-	-	97	425	839	813	1,014	1,014	1,014	1,014	1,014	1,014	1,014	864	864	864	864	-	-	-	-	12,728	864
7		1	-	-	-	-	-	46	155	301	728	740	571	778	778	778	778	778	843	843	843	843	-	-	-	-	9,798	843
7		2	-	-	-	-	-	99	404	840	885	885	885	885	885	885	885	735	782	782	782	782	-	-	-	-	11,400	782
7		3	-	-	-	-	-	77	432	880	1,163	1,163	1,163	1,163	1,163	1,163	1,163	1,133	850	850	850	850	-	-	-	-	14,062	850
7		4	-	-	-	-	-	29	91	520	215	215	215	215	215	215	215	215	854	854	854	854	-	-	-	-	5,772	854
7		5	-	-	-	-	-	99	399	793	1,039	1,039	1,039	1,039	1,039	1,039	1,039	995	836	836	836	836	-	-	-	-	12,907	836
7		6	-	-	-	-	-	96	346	667	866	866	866	866	866	866	866	859	812	812	812	812	-	-	-	-	11,278	812
7		7	-	-	-	-	-	91	112	213	445	588	588	588	126	588	588	420	788	788	788	788	-	-	-	-	7,497	788
7		8	-	-	-	-	-	89	102	177	548	768	768	768	768	768	768	768	773	773	773	773	-	-	-	-	9,386	773
7		9	-	-	-	-	-	55	297	443	247	247	247	247	247	247	247	247	733	733	733	733	-	-	-	-	5,701	733
7		10	-	-	-	-	-	78	241	821	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	854	854	854	854	-	-	-	-	12,968	854
7		11	-	-	-	-	-	72	393	811	1,095	1,095	1,095	1,095	1,095	1,095	1,095	1,088	851	851	851	851	-	-	-	-	13,434	851
7		12	-	-	-	-	-	79	379	772	1,000	1,000	1,000	1,000	1,000	1,000	1,000	977	810	810	810	810	-	-	-	-	12,446	810
7		13	-	-	-	-	-	16	229	588	751	812	812	812	812	812	812	812	840	840	840	840	-	-	-	-	10,625	840
7		14	-	-	-	-	-	70	221	116	441	441	441	441	441	441	433	441	723	723	723	723	-	-	-	-	6,818	723
7		15	-	-	-	-	-	75	296	637	535	535	535	535	535	535	535	535	745	745	745	745	-	-	-	-	8,268	745
7		16	-	-	-	-	-	59	404	856	1,117	1,117	1,117	1,117	1,117	1,117	1,117	1,117	859	859	859	859	-	-	-	-	13,688	859
7		17	-	-	-	-	-	78	384	641	915	979	979	979	979	979	979	613	833	833	833	833	-	-	-	-	11,838	833
7		18	-	-	-	-	-	1	91	215	328	328	328	328	328	328	328	328	834	834	834	834	-	-	-	-	6,268	834
7		19	-	-	-	-	-	68	355	746	832	832	832	832	832	702	832	403	832	691	691	691	691	-	-	-	-	10,030	691
7		20	-	-	-	-	-	64	351	746	789	789	502	789	789	789	789	385	835	835	835	835	-	-	-	-	10,123	835
7		21	-	-	-	-	-	70	103	151	805	766	805	602	805	805	805	805	826	826	826	826	-	-	-	-	9,825	826
7		22	-	-	-	-	-	48	374	820	1,129	1,129	1,129	1,129	1,129	1,129	1,129	1,119	850	850	850	850	-	-	-	-	13,663	850
7		23	-	-	-	-	-	49	372	815	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,105	846	846	846	846	-	-	-	-	13,566	846
7		24	-	-	-	-	-	51	361	801	1,025	1,025	1,025	1,025	1,025	1,025	750	964	803	803	803	803	-	-	-	-	12,289	803
7		25	-	-	-	-	-	47	361	804	882	882	882	882	882	882	202	882	749	749	749	749	-	-	-	-	10,582	749
7		26	-	-	-	-	-	49	67	312	543	543	543	543	543	543	543	543	655	655	655	655	-	-	-	-	7,392	655
7		27	-	-	-	-	-	52	160	405	462	751	751	751	751	751	751	751	802	802	802	802	-	-	-	-	9,541	802
7		28	-	-	-	-	-	53	341	755	932	932	932	932	932	932	932	932	803	803	803	803	-	-	-	-	11,811	803
7		29	-	-	-	-	-	53	332	576	906	906	906	906	906	906	906	906	819	819	819	819	-	-	-	-	11,486	819
7		30	-	-	-	-	-	58	267	416	602	602	602	602	602	602	602	214	613	613	613	613	-	-	-	-	7,618	613
7		31	-	-	-	-	-	45	342	781	1,092	1,092	1,092	1,092	1,092	1,092	1,092	1,091	833	833	833	833	-	-	-	-	13,239	833
8		1	-	-	-	-	-	54	265	620	767	767	767	767	767	767	767	450	642	642	642	642	-	-	-	-	9,328	642
8		2	-	-	-	-	-	47	315	715	991	991	991	991	991	991	991	968	739	739	739	739	-	-	-	-	11,935	739
8		3	-	-	-	-	-	41	316	730	880	880	880	880	880	880	61	880	745	745	745	745	-	-	-	-	10,288	745
8		4	-	-	-	-	-	-	194	506	781	41	468	781	781	781	781	781	806	806	806	806	-	-	-	-	9,118	806
8		5	-	-	-	-	-	37	325	761	842	842	842	842	842	674	588	842	822	822	822	822	-	-	-	-	10,726	822
8		6	-	-	-	-	-	34	331	779	871	871	871	871	871	516	871	871	811	811	811	811	-	-	-	-	11,001	811
8		7	-	-	-	-	-	16	1	511	804	767	769	804	804	804	804	804	756	756	756	756	-	-	-	-	9,909	756
8		8	-	-	-	-	-	33	323	772	1,110	1,110	1,110	1,110	1,110	1,110	1,110	837	819	819	819	819	-	-	-	-	13,010	819
8		9	-	-	-	-	-	27	333	799	1,138	1,138	1,138	1,138	1,138	1,138	1,138	1,095	816	816	816	816	-	-	-	-	13,487	816
8		10	-	-	-	-	-	33	258	677	792	792	792	792	792	792	554	646	750	750	750	750	-	-	-	-	9,921	750
8		11	-	-	-	-	-	28	264	814	1,125	1,125	1,125	1,125	1,125	1,125	604	637	774	774	774	774	-	-	-	-	12,189	774
8		12	-	-	-	-	-	24	333	818	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,111	810	810	810	810	-	-	-	-	13,749	810
8		13	-	-	-	-	-	28	300	801	1,090	1,090	1,090	1,090	1,090	1,090	1,090	984	801	801	801	801	-	-	-	-	12,944	801
8		14	-	-	-	-	-	25	312	764	959	959	959	959	959	959	959	323	599	599	599	599	-	-	-	-	10,536	599
8		15	-	-	-	-	-	-	94	13	130	580	580	580	580	580	580	580	754	754	754	754	-	-	-	-	7,317	754
8		16	-	-	-	-	-	18	305	766	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	792	792	792	792	-	-	-	-	12,453	792
8		17	-	-	-	-	-	17	299	750	1,084	1,084	1,084	1,084	1,084	1,084	1,084	1,039	668	668	668	668	-	-	-	-	12,366	668
8		18	-	-	-	-	-	13	165	351	670	781	781	781	781	781	672	781	785	785	785	785	-	-	-	-	9,695	785
8		19	-	-	-	-	-	15	272	530	663	663	663	663	663	663	663	629	634	634	634	634	-	-	-	-	8,622	634
8		20	-	-	-	-	-	-	21	282	767	767	767	106	767	767	767	767	765	765	765	765	-	-	-	-	8,843	765
8		21	-	-	-	-	-	8	289	308	356	307	356	356	356	356	356	356	781	781	781	781	-	-	-	-	6,530	781
8		22	-	-	-	-	-	8	301	689	1,071	1,071	1,071	1,071	1,071	1,071	1,071	1,036	775	775	775	775	-	-	-	-	12,633	775
8		23	-	-	-	-	-	8	277	726	1,079	1,079	1,079	1,079	1,079	1,079	1,079	1,019	770	770	770	770	-	-	-	-	12,664	770
8		24	-	-	-	-	-	6	274	707	823	823	823	823	823	823	823	625	618	618	618	618	-	-	-	-	9,842	618
8		25	-	-	-	-	-	-	210	127	(117)	(117)	(117)	(117)	(117)	(117)	(117)	(117)	634	634	634	634	-	-	-	-	1,936	634
8		26	-	-	-	-	-	-	-	59	52	52	52	52	52	52	52	52	637	637	637	637	-	-	-	-	3,024	637
8		27	-	-	-	-	-	-	101	145	(109)	(109)	(109)	(109)	(109)	(109)	(109)	(109)	615	615	615	615	-	-	-	-	1,831	615
8		28	-	-	-	-	-	-	8	41	110	259	259	259	259	259	259	259	671	671	671	671	-	-	-	-	4,654	671
8		29	-	-	-	-	-	-	-	67	(78)	(78)	(78)	(78)	(78)	(78)	(78)	(78)	583	583	583	583	-	-	-	-	1,775	583
8		30	-	-	-	-	-	-	29	187	559	641	805	805	805	805	805	805	742	742	742	742	-	-	-	-	9,216	742
8		31	-	-	-	-	-	-	96	436	615	852	852	852	852	852	852	852	701	701	701	701	-	-	-	-	9,917	701
9		1	-	-	-	-	-	-	83	296	287	260	184	422	422	422	422	422	657	657	657	657	-	-	-	-	5,843	657
9		2	-	-	-	-	-	1	260	740	1,044	1,044	1,044	1,044	1,044	1,044	1,044	625	710	710	710	710	-	-	-	-	11,772	710
9		3	-	-	-	-	-	-	188	423	704	704	704	704	704	704	704	704	706	706	706	706	-	-	-	-	9,067	706
9		4	-	-	-	-	-	-	245	705	1,048	1,048	1,048	1,048	1,048	1,048	1,048	924	721	721	721	721	-	-	-	-	12,094	721
9		5	-	-	-	-	-	-	145	426	462	630	799	799	799	799	799	719	706	706	706	706	-	-	-	-	9,205	706
9		6	-	-	-	-	-	-	234	143	80	80	80	80	80	80	80	80	625	625	625	625	-	-	-	-	3,520	625
9		7	-	-	-	-	-	-	218	54	166	166	166	166	166	166	166	158	706	706	706	706	-	-	-	-	4,419	706
9		8	-	-	-	-	-	-	221	656	822	822	822	822	822	822	822	822	696	696	696	696	-	-	-	-	10,236	696
9		9	-	-	-	-	-	-	104	301	785	817	817	817	817	817	817	817	702	702	702	702	-	-	-	-	9,715	702
9		10	-	-	-	-	-	-	34	154	703	379	703	703	703	703	703	400	630	630	630	630	-	-	-	-	7,706	630
9		11	-	-	-	-	-	-	21	72	23	565	523	792	792	792	792	792	715	715	715	715	-	-	-	-	8,021	715
9		12	-	-	-	-	-	-	243	745	1,096	1,096	1,096	1,096	1,096	1,096	1,096	956	710	710	710	710	-	-	-	-	12,457	710
9		13	-	-	-	-	-	-	226	707	1,054	1,054	1,054	1,054	1,054	1,054	1,054	914	698	698	698	698	-	-	-	-	12,018	698
9		14	-	-	-	-	-	-	206	655	894	894	894	894	894	894	551	610	653	653	653	653	-	-	-	-	9,996	653
9		15	-	-	-	-	-	-	237	746	1,046	1,046	1,046	1,046	1,046	1,046	1,046	941	699	699	699	699	-	-	-	-	12,045	699
9		16	-	-	-	-	-	-	218	702	875	875	875	875	875	875	875	875	692	692	692	692	-	-	-	-	10,685	692
9		17	-	-	-	-	-	-	218	706	1,033	1,033	1,033	1,033	1,033	1,033	1,033	858	677	677	677	677	-	-	-	-	11,722	677
9		18	-	-	-	-	-	-	1	21	264	278	278	278	278	278	278	278	614	614	614	614	-	-	-	-	4,689	614
9		19	-	-	-	-	-	-	148	502	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	610	610	610	610	-	-	-	-	2,948	610
9		20	-	-	-	-	-	-	43	147	673	673	673	673	673	673	673	573	639	639	639	639	-	-	-	-	8,028	639
9		21	-	-	-	-	-	-	164	551	803	803	803	803	803	803	803	585	640	640	640	640	-	-	-	-	9,484	640
9		22	-	-	-	-	-	-	191	661	979	979	979	979	979	979	979	830	666	666	666	666	-	-	-	-	11,197	666
9		23	-	-	-	-	-	-	179	626	555	555	321	555	555	555	555	555	650	650	650	650	-	-	-	-	7,613	650
9		24	-	-	-	-	-	-	177	364	1,031	947	1,031	1,031	1,031	1,031	1,031	897	670	670	670	670	-	-	-	-	11,248	670
9		25	-	-	-	-	-	-	207	732	1,119	1,119	1,119	1,119	1,119	1,119	1,119	909	671	671	671	671	-	-	-	-	12,367	671
9		26	-	-	-	-	-	-	202	720	955	955	955	955	955	955	820	803	652	652	652	652	-	-	-	-	10,881	652
9		27	-	-	-	-	-	-	118	478	611	611	611	611	611	611	611	611	653	653	653	653	-	-	-	-	8,095	653
9		28	-	-	-	-	-	-	20	89	77	77	77	77	77	77	77	59	641	641	641	641	-	-	-	-	3,272	641
9		29	-	-	-	-	-	-	149	284	833	833	833	833	833	833	833	781	646	646	646	646	-	-	-	-	9,630	646
9		30	-	-	-	-	-	-	90	360	92	92	92	92	92	92	92	16	569	569	569	569	-	-	-	-	3,384	569
10		1	-	-	-	-	-	-	-	-	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	583	583	583	583	-	-	-	-	1,307	583
10		2	-	-	-	-	-	-	-	233	925	925	925	925	925	925	925	26	583	583	583	583	-	-	-	-	9,066	583
10		3	-	-	-	-	-	-	48	135	230	351	351	351	351	351	288	351	593	593	593	593	-	-	-	-	5,176	593
10		4	-	-	-	-	-	-	5	29	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	596	596	596	596	-	-	-	-	2,097	596
10		5	-	-	-	-	-	-	138	283	460	840	840	840	840	840	425	840	639	639	639	639	-	-	-	-	8,898	639
10		6	-	-	-	-	-	-	155	661	893	1,066	1,066	1,066	1,066	1,066	1,066	796	639	639	639	639	-	-	-	-	11,458	639
10		7	-	-	-	-	-	-	140	645	1,007	1,007	1,007	1,007	1,007	1,007	1,007	737	631	631	631	631	-	-	-	-	11,094	631
10		8	-	-	-	-	-	-	119	590	941	941	941	941	941	941	941	689	624	624	624	624	-	-	-	-	10,481	624
10		9	-	-	-	-	-	-	117	602	946	946	946	946	946	946	946	685	623	623	623	623	-	-	-	-	10,518	623
10		10	-	-	-	-	-	-	110	601	949	949	949	949	949	949	949	679	620	620	620	620	-

PV system nameplate capacity (kW AC)	2,000
BESS power capacity (kW)	1,200
BESS storage capacity (kWh)	2,400
Roundtrip loss rate	10%

PV Operation

		Hour	1	2	3	4	5	6	7	8	Charging hours 9	10	11	12	13	14	15	16	Discharge hours 17	18	19	20	21	22	23	24	Total	CPD Min
11		2	-	-	-	-	-	-	-	47	49	49	49	49	49	49	49	49	570	570	570	570	-	-	-	-	2,718	570
11		3	-	-	-	-	-	-	-	451	931	931	931	931	931	931	931	548	573	573	573	573	-	-	-	-	9,804	573
11		4	-	-	-	-	-	-	-	306	195	195	195	195	195	195	195	97	569	569	569	569	-	-	-	-	4,044	569
11		5	-	-	-	-	-	-	-	425	676	676	676	676	676	676	676	524	569	569	569	569	-	-	-	-	7,961	569
11		6	-	-	-	-	-	-	-	285	307	250	307	307	307	307	307	254	569	569	569	569	-	-	-	-	4,908	569
11		7	-	-	-	-	-	-	-	389	819	819	819	819	819	819	819	441	569	569	569	569	-	-	-	-	8,839	569
11		8	-	-	-	-	-	-	-	455	861	861	861	861	861	861	638	217	569	569	569	569	-	-	-	-	8,753	569
11		9	-	-	-	-	-	-	-	433	957	957	957	957	957	957	957	530	569	569	569	569	-	-	-	-	9,941	569
11		10	-	-	-	-	-	-	-	103	348	752	752	752	752	752	752	437	569	569	569	569	-	-	-	-	7,677	569
11		11	-	-	-	-	-	-	-	188	316	399	399	399	399	399	399	382	569	569	569	569	-	-	-	-	5,558	569
11		12	-	-	-	-	-	-	-	109	(193)	(193)	(193)	(193)	(193)	(193)	(193)	(193)	569	569	569	569	-	-	-	-	842	569
11		13	-	-	-	-	-	-	-	96	537	958	958	958	958	958	958	502	569	569	569	569	-	-	-	-	9,159	569
11		14	-	-	-	-	-	-	-	371	897	897	897	897	897	897	897	442	569	569	569	569	-	-	-	-	9,372	569
11		15	-	-	-	-	-	-	-	367	886	886	886	886	886	886	886	451	569	569	569	569	-	-	-	-	9,295	569
11		16	-	-	-	-	-	-	-	218	432	432	432	432	432	432	432	401	569	569	569	569	-	-	-	-	5,918	569
11		17	-	-	-	-	-	-	-	284	381	381	381	381	381	299	89	381	569	569	569	569	-	-	-	-	5,234	569
11		18	-	-	-	-	-	-	-	275	355	355	355	355	355	355	355	338	569	569	569	569	-	-	-	-	5,379	569
11		19	-	-	-	-	-	-	-	41	356	429	429	429	429	429	429	336	569	569	569	569	-	-	-	-	5,587	569
11		20	-	-	-	-	-	-	-	78	63	63	63	63	63	63	63	28	569	569	569	569	-	-	-	-	2,822	569
11		21	-	-	-	-	-	-	-	23	(176)	(176)	(176)	(176)	(176)	(176)	(176)	(176)	569	569	569	569	-	-	-	-	896	569
11		22	-	-	-	-	-	-	-	145	284	284	284	284	284	284	284	154	569	569	569	569	-	-	-	-	4,561	569
11		23	-	-	-	-	-	-	-	224	590	590	590	590	590	590	41	321	569	569	569	569	-	-	-	-	6,402	569
11		24	-	-	-	-	-	-	-	20	(212)	(212)	(212)	(212)	(212)	(212)	(212)	(212)	569	569	569	569	-	-	-	-	600	569
11		25	-	-	-	-	-	-	-	164	30	30	30	30	30	30	30	30	569	569	569	569	-	-	-	-	2,680	569
11		26	-	-	-	-	-	-	-	208	567	567	567	567	567	567	567	378	569	569	569	569	-	-	-	-	6,832	569
11		27	-	-	-	-	-	-	-	159	302	381	381	381	381	381	381	136	569	569	569	569	-	-	-	-	5,157	569
11		28	-	-	-	-	-	-	-	-	(244)	(244)	(244)	(244)	(244)	(244)	(244)	(244)	569	569	569	569	-	-	-	-	322	569
11		29	-	-	-	-	-	-	-	151	727	727	727	727	727	727	727	367	569	569	569	569	-	-	-	-	7,881	569
11		30	-	-	-	-	-	-	-	-	11	57	57	57	57	57	57	57	569	569	569	569	-	-	-	-	2,688	569
12		1	-	-	-	-	-	-	-	46	(175)	(175)	(175)	(175)	(175)	(175)	(175)	(175)	569	569	569	569	-	-	-	-	922	569
12		2	-	-	-	-	-	-	-	-	(220)	(220)	(220)	(220)	(220)	(220)	(220)	(220)	569	569	569	569	-	-	-	-	520	569
12		3	-	-	-	-	-	-	-	15	185	216	216	216	216	216	216	216	569	569	569	569	-	-	-	-	3,986	569
12		4	-	-	-	-	-	-	-	26	246	246	246	246	246	246	246	225	569	569	569	569	-	-	-	-	4,249	569
12		5	-	-	-	-	-	-	-	51	347	575	575	575	575	575	575	337	569	569	569	569	-	-	-	-	6,459	569
12		6	-	-	-	-	-	-	-	22	249	393	393	393	393	393	393	211	569	569	569	569	-	-	-	-	5,116	569
12		7	-	-	-	-	-	-	-	96	723	723	723	723	723	723	723	393	569	569	569	569	-	-	-	-	7,826	569
12		8	-	-	-	-	-	-	-	91	713	713	713	713	713	713	541	184	569	569	569	569	-	-	-	-	7,370	569
12		9	-	-	-	-	-	-	-	19	41	41	41	41	41	41	41	41	569	569	569	569	-	-	-	-	2,621	569
12		10	-	-	-	-	-	-	-	19	(110)	(110)	(110)	(110)	(110)	(110)	(110)	(110)	569	569	569	569	-	-	-	-	1,418	569
12		11	-	-	-	-	-	-	-	1	29	81	593	593	593	593	593	385	569	569	569	569	-	-	-	-	5,737	569
12		12	-	-	-	-	-	-	-	61	733	733	733	733	733	733	733	310	569	569	569	569	-	-	-	-	7,777	569
12		13	-	-	-	-	-	-	-	15	21	21	21	21	21	21	21	21	569	569	569	569	-	-	-	-	2,462	569
12		14	-	-	-	-	-	-	-	17	195	195	195	195	195	195	106	33	569	569	569	569	-	-	-	-	3,602	569
12		15	-	-	-	-	-	-	-	5	115	115	115	115	115	115	115	115	569	569	569	569	-	-	-	-	3,203	569
12		16	-	-	-	-	-	-	-	5	(114)	(114)	(114)	(114)	(114)	(114)	(114)	(114)	569	569	569	569	-	-	-	-	1,373	569
12		17	-	-	-	-	-	-	-	-	(242)	(242)	(242)	(242)	(242)	(242)	(242)	(242)	569	569	569	569	-	-	-	-	342	569
12		18	-	-	-	-	-	-	-	35	679	679	679	679	679	679	611	247	569	569	569	569	-	-	-	-	7,244	569
12		19	-	-	-	-	-	-	-	29	650	872	872	872	872	872	872	367	569	569	569	569	-	-	-	-	8,552	569
12		20	-	-	-	-	-	-	-	37	701	883	883	883	883	883	883	372	569	569	569	569	-	-	-	-	8,686	569
12		21	-	-	-	-	-	-	-	16	469	469	469	469	469	469	469	275	569	569	569	569	-	-	-	-	5,848	569
12		22	-	-	-	-	-	-	-	12	321	521	521	521	521	521	521	366	569	569	569	569	-	-	-	-	6,101	569
12		23	-	-	-	-	-	-	-	22	595	748	748	748	748	748	748	410	569	569	569	569	-	-	-	-	7,792	569
12		24	-	-	-	-	-	-	-	26	518	772	772	772	772	772	772	401	569	569	569	569	-	-	-	-	7,852	569
12		25	-	-	-	-	-	-	-	21	515	515	515	515	515	515	515	236	569	569	569	569	-	-	-	-	6,136	569
12		26	-	-	-	-	-	-	-	-	(184)	(184)	(184)	(184)	(184)	(184)	(184)	(184)	569	569	569	569	-	-	-	-	807	569
12		27	-	-	-	-	-	-	-	-	(207)	(207)	(207)	(207)	(207)	(207)	(207)	(207)	569	569	569	569	-	-	-	-	622	569
12		28	-	-	-	-	-	-	-	16	617	617	617	617	617	617	617	422	569	569	569	569	-	-	-	-	7,036	569
12		29	-	-	-	-	-	-	-	3	310	310	310	310	310	310	203	71	569	569	569	569	-	-	-	-	4,415	569
12		30	-	-	-	-	-	-	-	-	(224)	(224)	(224)	(224)	(224)	(224)	(224)	(224)	569	569	569	569	-	-	-	-	482	569
12		31	-	-	-	-	-	-	-	9	(115)	(115)	(115)	(115)	(115)	(115)	(115)	(115)	569	569	569	569	-	-	-	-	1,367	569

PV system nameplate capacity (kW AC)	2,000
BESS power capacity (kW)	1,200
BESS storage capacity (kWh)	2,400
Roundtrip loss rate	10%

PV Operation

		Hour									Charging hours								Discharge hours									
Month	Day		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	CPD Min
1		1	-	-	-	-	-	-	-	-	6	64	269	1,025	611	243	271	96	-	-	-	-	-	-	-	-	2,586	-
1		2	-	-	-	-	-	-	-	-	15	114	232	427	681	413	371	36	-	-	-	-	-	-	-	-	2,288	-
1		3	-	-	-	-	-	-	-	-	65	27	145	314	341	52	111	14	-	-	-	-	-	-	-	-	1,069	-
1		4	-	-	-	-	-	-	-	2	402	1,086	1,370	1,497	1,488	1,324	1,023	535	-	-	-	-	-	-	-	-	8,728	-
1		5	-	-	-	-	-	-	-	16	621	1,077	389	481	338	526	424	197	-	-	-	-	-	-	-	-	4,068	-
1		6	-	-	-	-	-	-	-	15	626	1,089	1,374	1,498	1,486	1,331	1,024	239	-	-	-	-	-	-	-	-	8,683	-
1		7	-	-	-	-	-	-	-	15	606	1,065	313	1,485	1,474	1,324	866	548	-	-	-	-	-	-	-	-	7,696	-
1		8	-	-	-	-	-	-	-	-	61	274	693	176	532	329	498	508	-	-	-	-	-	-	-	-	3,071	-
1		9	-	-	-	-	-	-	-	19	660	1,148	1,439	1,572	1,560	1,407	1,111	622	-	-	-	-	-	-	-	-	9,537	-
1		10	-	-	-	-	-	-	-	20	660	1,138	976	1,551	1,553	1,114	1,097	617	-	-	-	-	-	-	-	-	8,726	-
1		11	-	-	-	-	-	-	-	13	582	1,055	1,346	1,476	1,472	1,127	723	296	-	-	-	-	-	-	-	-	8,091	-
1		12	-	-	-	-	-	-	-	1	515	686	544	904	1,474	1,346	1,068	612	13	-	-	-	-	-	-	-	7,162	-
1		13	-	-	-	-	-	-	-	21	129	785	489	588	221	97	144	121	-	-	-	-	-	-	-	-	2,595	-
1		14	-	-	-	-	-	-	-	13	553	176	713	1,451	1,444	1,306	1,009	550	12	-	-	-	-	-	-	-	7,228	-
1		15	-	-	-	-	-	-	-	-	508	71	426	1,234	1,242	964	521	92	10	-	-	-	-	-	-	-	5,067	-
1		16	-	-	-	-	-	-	-	10	592	1,036	1,316	1,450	1,443	1,309	1,036	603	13	-	-	-	-	-	-	-	8,808	-
1		17	-	-	-	-	-	-	-	2	165	359	585	221	108	123	17	13	-	-	-	-	-	-	-	-	1,592	-
1		18	-	-	-	-	-	-	-	17	555	61	190	326	1,416	1,291	1,019	591	17	-	-	-	-	-	-	-	5,483	-
1		19	-	-	-	-	-	-	-	-	22	32	108	125	90	77	104	86	-	-	-	-	-	-	-	-	645	-
1		20	-	-	-	-	-	-	-	-	2	972	631	706	458	741	1,036	617	47	-	-	-	-	-	-	-	5,211	-
1		21	-	-	-	-	-	-	-	37	665	1,116	1,372	1,501	1,497	1,373	1,115	687	35	-	-	-	-	-	-	-	9,398	-
1		22	-	-	-	-	-	-	-	2	404	754	1,038	1,095	1,152	1,038	680	379	30	-	-	-	-	-	-	-	6,572	-
1		23	-	-	-	-	-	-	-	55	713	1,162	1,431	1,560	1,558	1,424	1,161	735	80	-	-	-	-	-	-	-	9,878	-
1		24	-	-	-	-	-	-	-	10	226	372	363	304	181	81	11	21	-	-	-	-	-	-	-	-	1,568	-
1		25	-	-	-	-	-	-	-	-	-	14	2	90	19	4	9	94	25	-	-	-	-	-	-	-	257	-
1		26	-	-	-	-	-	-	-	12	575	1,011	825	585	24	120	102	147	79	-	-	-	-	-	-	-	3,482	-
1		27	-	-	-	-	-	-	-	54	635	1,074	1,377	1,503	1,501	1,357	151	228	20	-	-	-	-	-	-	-	7,900	-
1		28	-	-	-	-	-	-	-	-	246	56	93	221	165	57	1,040	613	86	-	-	-	-	-	-	-	2,577	-
1		29	-	-	-	-	-	-	-	83	778	1,273	1,582	1,730	1,737	1,585	1,297	840	175	-	-	-	-	-	-	-	11,082	-
1		30	-	-	-	-	-	-	-	88	774	1,019	1,550	1,089	569	869	308	122	17	-	-	-	-	-	-	-	6,404	-
1		31	-	-	-	-	-	-	-	89	756	1,232	1,516	1,655	1,655	1,521	1,240	809	205	-	-	-	-	-	-	-	10,677	-
2		1	-	-	-	-	-	-	-	75	668	1,114	824	530	838	318	177	136	24	-	-	-	-	-	-	-	4,705	-
2		2	-	-	-	-	-	-	-	17	606	1,027	1,289	931	346	827	1,032	213	35	-	-	-	-	-	-	-	6,322	-
2		3	-	-	-	-	-	-	-	-	18	14	28	39	77	184	195	659	187	-	-	-	-	-	-	-	1,402	-
2		4	-	-	-	-	-	-	-	35	293	670	889	836	430	220	135	49	13	-	-	-	-	-	-	-	3,570	-
2		5	-	-	-	-	-	-	-	5	184	779	1,407	1,537	775	733	394	381	103	-	-	-	-	-	-	-	6,297	-
2		6	-	-	-	-	-	-	-	139	96	1,169	1,451	1,082	1,171	1,072	521	420	128	-	-	-	-	-	-	-	7,250	-
2		7	-	-	-	-	-	-	-	157	374	301	1,042	316	955	1,507	1,239	834	285	-	-	-	-	-	-	-	7,010	-
2		8	-	-	-	-	-	-	-	209	780	1,208	935	1,078	710	768	246	46	139	-	-	-	-	-	-	-	6,120	-
2		9	-	-	-	-	-	-	-	214	788	1,240	1,521	1,664	1,676	1,553	1,301	877	318	-	-	-	-	-	-	-	11,152	-
2		10	-	-	-	-	-	-	-	139	615	742	1,024	1,185	1,609	1,125	939	471	222	-	-	-	-	-	-	-	8,070	-
2		11	-	-	-	-	-	-	-	135	664	908	1,003	1,237	983	633	836	167	192	-	-	-	-	-	-	-	6,759	-
2		12	-	-	-	-	-	-	-	16	30	86	112	244	216	223	372	421	87	-	-	-	-	-	-	-	1,807	-
2		13	-	-	-	-	-	-	-	274	855	1,289	1,557	1,697	1,704	799	962	855	306	-	-	-	-	-	-	-	10,298	-
2		14	-	-	-	-	-	-	-	136	355	1,225	1,292	1,631	1,641	1,514	1,036	627	270	-	-	-	-	-	-	-	9,727	-
2		15	-	-	-	-	-	-	-	245	804	1,243	1,534	1,672	1,421	1,555	1,303	904	345	-	-	-	-	-	-	-	11,025	-
2		16	-	-	-	-	-	-	-	246	791	1,221	1,503	1,636	1,633	1,507	1,246	740	264	-	-	-	-	-	-	-	10,787	-
2		17	-	-	-	-	-	-	-	27	304	36	138	263	1,601	1,588	1,352	964	406	-	-	-	-	-	-	-	6,680	-
2		18	-	-	-	-	-	-	-	66	570	637	413	1,010	1,234	1,662	1,419	1,018	442	-	-	-	-	-	-	-	8,471	-
2		19	-	-	-	-	-	-	-	306	881	1,318	1,637	1,774	1,782	1,657	1,401	991	424	-	-	-	-	-	-	-	12,171	-
2		20	-	-	-	-	-	-	-	336	912	1,334	1,608	1,737	1,743	1,623	1,354	953	400	-	-	-	-	-	-	-	12,000	-
2		21	-	-	-	-	-	-	-	89	241	1,207	1,452	1,588	238	1,516	738	306	207	-	-	-	-	-	-	-	7,582	-
2		22	-	-	-	-	-	-	-	322	859	1,244	1,510	1,169	857	992	714	262	331	-	-	-	-	-	-	-	8,258	-
2		23	-	-	-	-	-	-	-	46	49	100	229	124	267	74	120	240	293	-	-	-	-	-	-	-	1,542	-
2		24	-	-	-	-	-	-	-	358	555	1,325	636	1,742	593	1,107	1,394	1,018	465	-	-	-	-	-	-	-	9,193	-
2		25	-	-	-	-	-	-	-	25	148	488	93	109	573	142	298	823	318	-	-	-	-	-	-	-	3,016	-
2		26	-	-	-	-	-	-	-	423	1,012	1,437	1,710	1,411	1,483	1,371	1,462	533	253	-	-	-	-	-	-	-	11,094	-
2		27	-	-	-	-	-	-	-	442	1,048	1,474	1,750	1,886	1,893	1,753	1,489	1,078	499	-	-	-	-	-	-	-	13,313	-
2		28	-	-	-	-	-	-	-	408	985	1,408	1,707	1,848	1,854	1,714	1,450	1,047	485	-	-	-	-	-	-	-	12,906	-
3		1	-	-	-	-	-	-	-	244	934	1,490	1,778	1,910	1,907	1,764	1,494	946	405	3	-	-	-	-	-	-	12,875	-
3		2	-	-	-	-	-	-	-	412	973	1,192	1,630	1,748	1,531	1,459	873	783	12	10	-	-	-	-	-	-	10,622	-
3		3	-	-	-	-	-	-	-	524	1,137	1,562	1,817	1,946	1,938	1,792	1,534	1,124	548	17	-	-	-	-	-	-	13,939	-
3		4	-	-	-	-	-	-	-	416	986	1,403	1,686	1,824	1,821	1,690	1,422	903	460	10	-	-	-	-	-	-	12,622	-
3		5	-	-	-	-	-	-	-	391	84	231	543	604	1,730	1,613	1,352	478	95	-	-	-	-	-	-	-	7,120	-
3		6	-	-	-	-	-	-	-	60	178	186	136	207	292	247	143	118	25	-	-	-	-	-	-	-	1,592	-
3		7	-	-	-	-	-	-	-	295	129	319	237	898	951	1,697	1,458	1,068	526	25	-	-	-	-	-	-	7,603	-
3		8	-	-	-	-	-	-	16	501	700	1,411	1,656	1,756	1,747	1,311	1,372	1,000	284	8	-	-	-	-	-	-	11,760	-
3		9	-	-	-	-	-	-	-	192	838	628	1,231	1,191	1,052	1,078	603	545	213	5	-	-	-	-	-	-	7,577	-
3		10	-	-	-	-	-	-	-	72	79	399	145	173	159	150	192	195	54	-	-	-	-	-	-	-	1,618	-
3		11	-	-	-	-	-	-	-	16	82	141	330	549	527	670	918	351	57	28	-	-	-	-	-	-	3,669	-
3		12	-	-	-	-	-	-	28	225	1,025	1,387	753	1,752	1,716	994	684	724	89	24	-	-	-	-	-	-	9,401	-
3		13	-	-	-	-	-	-	-	306	55	740	556	1,765	1,742	354	293	1,005	522	41	-	-	-	-	-	-	7,380	-
3		14	-	-	-	-	-	-	-	43	75	580	518	682	754	453	172	143	19	-	-	-	-	-	-	-	3,439	-
3		15	-	-	-	-	-	-	60	176	386	538	422	842	553	403	607	122	416	42	-	-	-	-	-	-	4,565	-
3		16	-	-	-	-	-	-	-	143	166	101	303	114	199	457	305	697	177	18	-	-	-	-	-	-	2,680	-
3		17	-	-	-	-	-	-	80	574	1,066	1,412	1,634	1,742	1,727	1,602	1,360	999	527	64	-	-	-	-	-	-	12,787	-
3		18	-	-	-	-	-	-	72	503	810	976	1,260	1,347	1,417	1,176	1,339	1,004	533	70	-	-	-	-	-	-	10,506	-
3		19	-	-	-	-	-	-	94	250	700	674	521	873	864	1,689	1,454	1,099	593	85	-	-	-	-	-	-	8,896	-
3		20	-	-	-	-	-	-	115	653	1,149	1,488	1,706	1,791	1,751	1,659	1,404	1,016	540	77	-	-	-	-	-	-	13,348	-
3		21	-	-	-	-	-	-	12	15	121	213	48	189	257	160	130	970	480	68	-	-	-	-	-	-	2,662	-
3		22	-	-	-	-	-	-	23	184	1,107	364	188	225	436	656	614	102	58	-	-	-	-	-	-	-	3,957	-
3		23	-	-	-	-	-	-	33	338	1,117	579	280	378	494	597	425	151	31	30	-	-	-	-	-	-	4,453	-
3		24	-	-	-	-	-	-	27	267	615	1,548	1,812	1,723	1,935	1,810	1,555	714	638	114	-	-	-	-	-	-	12,760	-
3		25	-	-	-	-	-	-	160	708	1,205	1,151	967	1,873	1,864	1,725	901	876	526	48	-	-	-	-	-	-	12,004	-
3		26	-	-	-	-	-	-	175	745	1,257	1,612	1,852	1,950	1,928	1,794	1,539	1,165	650	119	-	-	-	-	-	-	14,787	-
3		27	-	-	-	-	-	-	88	738	1,243	1,598	1,827	1,933	1,918	1,786	1,531	1,155	660	125	-	-	-	-	-	-	14,604	-
3		28	-	-	-	-	-	-	187	760	1,258	1,599	1,815	1,905	1,886	1,757	1,493	1,130	657	126	-	-	-	-	-	-	14,572	-
3		29	-	-	-	-	-	-	188	497	784	1,225	1,784	1,881	1,866	1,456	1,503	1,147	656	130	-	-	-	-	-	-	13,117	-
3		30	-	-	-	-	-	-	195	744	1,209	1,530	1,717	1,452	1,554	1,618	1,138	1,044	350	106	-	-	-	-	-	-	12,657	-
3		31	-	-	-	-	-	-	29	148	234	616	609	716	709	538	390	236	109	2	-	-	-	-	-	-	4,336	-
4		1	-	-	-	-	-	-	213	748	1,213	1,522	1,719	1,801	1,774	1,638	1,406	785	150	38	-	-	-	-	-	-	13,007	-
4		2	-	-	-	-	-	-	156	489	462	874	685	1,358	277	1,266	1,379	1,043	613	134	-	-	-	-	-	-	8,735	-
4		3	-	-	-	-	-	-	234	778	1,238	1,550	1,751	1,832	1,804	1,675	1,283	707	359	62	-	-	-	-	-	-	13,273	-
4		4	-	-	-	-	-	-	40	305	774	1,156	1,274	574	161	270	258	503	33	47	-	-	-	-	-	-	5,396	-
4		5	-	-	-	-	-	-	67	254	837	216	501	573	1,266	614	1,215	1,106	277	150	-	-	-	-	-	-	7,077	-
4		6	-	-	-	-	-	-	265	819	1,267	1,574	1,776	1,860	1,833	1,691	1,458	1,106	653	152	-	-	-	-	-	-	14,454	-
4		7	-	-	-	-	-	-	131	556	799	917	1,064	722	1,071	494	471	184	99	29	-	-	-	-	-	-	6,536	-
4		8	-	-	-	-	-	-	159	78	308	842	940	1,148	1,235	1,084	915	503	23	54	-	-	-	-	-	-	7,289	-
4		9	-	-	-	-	-	-	260	781	1,212	1,525	1,729	1,836	1,823	1,695	1,474	1,134	666	163	-	-	-	-	-	-	14,299	-
4		10	-	-	-	-	-	3	288	820	1,253	1,553	1,744	1,822	1,809	1,687	1,456	1,109	649	161	-	-	-	-	-	-	14,353	-
4		11	-	-	-	-	-	-	4	84	723	265	1,062	785	171	351	671	182	168	-	-	-	-	-	-	-	4,467	-
4		12	-	-	-	-	-	5	291	801	1,206	1,500	1,400	1,761	1,499	1,620	1,401	1,067	626	159	-	-	-	-	-	-	13,336	-
4		13	-	-	-	-	-	3	68	434	296	397	666	780	1,609	1,367	1,254	938	427	132	-	-	-	-	-	-	8,371	-
4		14	-	-	-	-	-	3	271	705	888	1,116	1,175	1,497	1,101	1,114	1,105	924	396	144	-	-	-	-	-	-	10,440	-
4		15	-	-	-	-	-	-	-	77	120	265	244	320	122	325	214	193	75	54	-	-	-	-	-	-	2,009	-
4		16	-	-	-	-	-	23	357	908	1,345	1,663	1,849	1,925	1,893	1,757	1,526	1,175	698	191	-	-	-	-	-	-	15,311	-
4		17	-	-	-	-	-	12	233	611	989	1,406	1,538	1,626	1,635	1,713	1,484	1,143	534	191	-	-	-	-	-	-	13,115	-
4		18	-	-	-	-	-	14	350	351	765	1,206	1,380	1,167	1,285	1,237	759	760	452	144	-	-	-	-	-	-	9,870	-
4		19	-	-	-	-	-	8	256	853	1,282	1,569	1,734	1,809	1,792	1,668	1,300	1,122	674	191	-	-	-	-	-	-	14,259	-
4		20	-	-	-	-	-	21	258	689	1,281	1,560	1,739	1,814	1,787	1,658	1,440	1,119	674	191	-	-	-	-	-	-	14,230	-
4		21	-	-	-	-	-	23	356	858	1,247	1,517	1,682	1,752	1,727	1,605	1,392	1,075	647	144	-	-	-	-	-	-	14,027	-
4		22	-	-	-	-	-	14	280	669	1,089	1,118	1,191	1,261	1,360	1,101	1,086	883	143	14	-	-	-	-	-	-	10,208	-
4		23	-	-	-	-	-	-	102	493	81	428	60	629	661	914	615	216	425	87	-	-	-	-	-	-	4,712	-
4		24	-	-	-	-	-	30	406	943	1,352	1,638	1,816	1,886	1,855	1,725	1,497	1,169	714	208	1	-	-	-	-	-	15,238	-
4		25	-	-	-	-	-	37	304	885	1,265	1,523	1,681	1,444	1,710	1,577	1,368	993	397	140	-	-	-	-	-	-	13,324	-
4		26	-	-	-	-	-	10	41	232	229	275	350	612	808	373	1,383	1,062	634	69	-	-	-	-	-	-	6,077	-
4		27	-	-	-	-	-	44	262	556	928	911	338	162	1,371	241	833	245	187	184	8	-	-	-	-	-	6,270	-
4		28	-	-	-	-	-	47	403	902	1,284	1,555	1,717	1,784	1,755	1,635	1,419	1,104	674	201	8	-	-	-	-	-	14,487	-
4		29	-	-	-	-	-	-	28	98	230	370	376	486	697	822	513	308	47	177	1	-	-	-	-	-	4,152	-
4		30	-	-	-	-	-	19	164	97	288	208	341	225	345	339	211	106	117	60	-	-	-	-	-	-	2,520	-
5		1	-	-	-	-	-	50	371	741	1,146	1,548	1,730	1,519	1,459	1,438	957	976	533	138	-	-	-	-	-	-	12,607	-
5		2	-	-	-	-	-	15	192	167	197	309	838	506	456	1,636	1,439	1,137	713	229	6	-	-	-	-	-	7,839	-
5		3	-	-	-	-	-	61	426	913	1,282	1,546	1,715	1,782	1,761	1,638	1,424	1,121	694	230	7	-	-	-	-	-	14,599	-
5		4	-	-	-	-	-	72	408	860	1,224	1,481	1,626	1,703	1,686	1,431	1,064	743	568	149	2	-	-	-	-	-	13,018	-
5		5	-	-	-	-	-	63	114	112	1,029	1,296	1,260	1,083	470	1,041	643	242	215	153	2	-	-	-	-	-	7,723	-
5		6	-	-	-	-	-	58	259	755	1,074	1,309	1,417	1,474	1,312	1,336	40	408	156	101	9	-	-	-	-	-	9,709	-
5		7	-	-	-	-	-	76	388	779	1,101	1,339	1,083	1,547	1,521	1,419	1,227	957	488	-	10	-	-	-	-	-	11,935	-
5		8	-	-	-	-	-	81	386	780	1,101	1,342	1,269	1,550	966	1,420	1,223	801	160	195	8	-	-	-	-	-	11,281	-
5		9	-	-	-	-	-	84	387	801	1,130	1,371	1,520	1,583	1,558	1,422	841	961	619	227	16	-	-	-	-	-	12,520	-
5		10	-	-	-	-	-	26	60	155	363	321	425	530	504	485	274	346	61	30	-	-	-	-	-	-	3,580	-
5		11	-	-	-	-	-	44	302	877	844	921	1,157	1,390	1,714	1,603	1,403	1,103	700	253	22	-	-	-	-	-	12,335	-
5		12	-	-	-	-	-	3	155	483	902	761	797	1,224	972	578	366	835	627	143	11	-	-	-	-	-	7,856	-
5		13	-	-	-	-	-	-	270	593	583	702	683	903	675	830	690	360	206	195	14	-	-	-	-	-	6,704	-
5		14	-	-	-	-	-	93	465	933	1,294	1,552	1,711	1,774	1,744	1,633	1,419	1,119	708	261	29	-	-	-	-	-	14,736	-
5		15	-	-	-	-	-	94	469	930	1,286	1,405	1,292	1,135	930	495	1,413	727	728	271	30	-	-	-	-	-	11,206	-
5		16	-	-	-	-	-	91	477	940	1,298	1,553	1,700	1,762	1,732	1,634	1,430	1,125	718	275	37	-	-	-	-	-	14,770	-
5		17	-	-	-	-	-	102	450	888	1,225	1,478	1,652	1,720	905	1,388	1,366	1,064	699	271	38	-	-	-	-	-	13,246	-
5		18	-	-	-	-	-	2	250	150	221	967	723	725	1,043	989	1,061	819	305	116	10	-	-	-	-	-	7,380	-
5		19	-	-	-	-	-	16	141	168	216	510	517	460	526	648	172	247	152	8	44	-	-	-	-	-	3,824	-
5		20	-	-	-	-	-	98	280	639	689	985	937	636	532	305	333	318	246	149	37	-	-	-	-	-	6,183	-
5		21	-	-	-	-	-	0	69	169	290	305	430	380	294	345	386	180	172	65	-	-	-	-	-	-	3,084	-
5		22	-	-	-	-	-	23	254	251	362	911	765	823	702	650	478	427	301	11	36	-	-	-	-	-	5,992	-
5		23	-	-	-	-	-	63	177	130	404	605	906	1,642	825	545	381	655	438	232	36	-	-	-	-	-	7,039	-
5		24	-	-	-	-	-	76	304	387	319	637	794	916	1,664	1,563	1,365	1,076	463	172	-	-	-	-	-	-	9,737	-
5		25	-	-	-	-	-	119	457	872	684	1,249	1,637	1,335	1,539	1,393	742	496	732	287	39	-	-	-	-	-	11,582	-
5		26	-	-	-	-	-	95	488	949	1,286	1,534	1,689	1,748	1,717	1,601	1,402	1,122	502	289	37	-	-	-	-	-	14,457	-
5		27	-	-	-	-	-	93	484	930	1,271	1,513	1,442	1,546	1,342	1,144	876	747	738	297	42	-	-	-	-	-	12,464	-
5		28	-	-	-	-	-	93	429	662	1,116	1,251	951	1,038	1,324	1,108	1,024	707	444	250	28	-	-	-	-	-	10,424	-
5		29	-	-	-	-	-	74	488	595	997	817	536	821	1,277	901	1,130	738	426	310	47	-	-	-	-	-	9,157	-
5		30	-	-	-	-	-	59	157	373	412	795	1,297	1,753	1,736	1,622	1,426	844	753	261	47	-	-	-	-	-	11,536	-
5		31	-	-	-	-	0	77	228	962	1,297	1,546	1,687	1,742	1,715	1,593	1,392	1,111	731	297	48	-	-	-	-	-	14,426	-
6		1	-	-	-	-	-	104	437	618	897	1,332	1,496	1,567	1,454	1,362	1,160	1,024	699	294	48	-	-	-	-	-	12,492	-
6		2	-	-	-	-	-	36	445	822	1,115	1,346	1,476	1,553	1,542	1,428	1,182	900	420	193	-	-	-	-	-	-	12,456	-
6		3	-	-	-	-	-	104	487	943	488	1,535	1,692	1,757	1,733	1,629	1,434	1,150	763	313	46	-	-	-	-	-	14,074	-
6		4	-	-	-	-	-	108	475	906	1,235	1,481	1,248	1,699	522	1,577	717	1,032	646	119	56	-	-	-	-	-	11,822	-
6		5	-	-	-	-	-	76	326	253	371	730	1,198	1,120	850	712	592	700	282	182	62	-	-	-	-	-	7,456	-
6		6	-	-	-	-	-	80	168	318	335	289	321	408	387	402	439	323	73	19	8	-	-	-	-	-	3,571	-
6		7	-	-	-	-	-	118	234	650	1,293	1,541	1,699	1,762	1,434	1,268	1,084	1,146	768	326	51	-	-	-	-	-	13,374	-
6		8	-	-	-	-	1	118	404	830	1,183	1,043	1,121	1,492	1,285	830	694	843	274

6	24	-	-	-	-	1	91	451	875	1,205	1,446	1,422	1,464	1,209	1,282	1,239	1,045	697	342	80	-	-	-	-	-	12,849	-
6	25	-	-	-	-	-	128	375	309	559	976	1,362	1,460	1,543	1,465	1,298	1,045	713	336	78	-	-	-	-	-	11,644	-
6	26	-	-	-	-	-	11	89	449	848	341	1,124	1,496	1,119	1,209	1,030	973	669	329	82	-	-	-	-	-	9,767	-
6	27	-	-	-	-	-	98	383	713	1,099	1,347	1,149	1,276	1,270	985	405	156	315	215	40	-	-	-	-	-	9,451	-
6	28	-	-	-	-	-	101	437	804	1,052	1,231	1,582	1,407	1,149	1,364	1,277	1,097	752	305	72	-	-	-	-	-	12,631	-
6	29	-	-	-	-	-	102	354	308	653	877	1,229	746	1,077	1,121	1,139	1,034	698	342	76	-	-	-	-	-	9,756	-
6	30	-	-	-	-	-	97	425	839	813	1,428	1,583	1,332	1,189	1,559	1,392	1,132	780	348	52	-	-	-	-	-	12,968	-
7	1	-	-	-	-	-	46	155	301	728	740	571	1,533	1,164	1,439	1,263	1,007	690	331	73	-	-	-	-	-	10,039	-
7	2	-	-	-	-	-	99	404	840	1,163	1,405	1,554	1,308	1,247	1,041	994	735	547	228	76	-	-	-	-	-	11,641	-
7	3	-	-	-	-	-	77	432	880	1,214	1,461	1,625	1,693	1,683	1,581	1,399	1,133	738	316	69	-	-	-	-	-	14,302	-
7	4	-	-	-	-	-	29	91	520	602	548	519	301	400	244	617	1,003	737	337	66	-	-	-	-	-	6,013	-
7	5	-	-	-	-	-	99	399	793	1,119	1,372	1,501	1,569	1,559	1,425	1,249	995	674	326	67	-	-	-	-	-	13,147	-
7	6	-	-	-	-	-	96	346	667	1,038	1,256	1,371	1,321	1,245	1,173	1,175	859	588	314	70	-	-	-	-	-	11,519	-
7	7	-	-	-	-	-	91	112	213	445	1,335	1,468	596	126	771	1,286	420	487	312	75	-	-	-	-	-	7,737	-
7	8	-	-	-	-	-	89	102	177	548	1,042	1,398	775	1,387	1,362	1,125	807	490	255	71	-	-	-	-	-	9,626	-
7	9	-	-	-	-	-	55	297	443	481	448	492	865	617	393	753	444	495	87	73	-	-	-	-	-	5,942	-
7	10	-	-	-	-	-	78	241	821	1,151	1,400	1,580	1,160	1,649	1,535	1,360	1,096	745	334	59	-	-	-	-	-	13,209	-
7	11	-	-	-	-	-	72	393	811	1,143	1,389	1,545	1,623	1,612	1,520	1,351	1,088	743	333	51	-	-	-	-	-	13,675	-
7	12	-	-	-	-	-	79	379	772	1,094	1,342	1,483	1,556	1,409	1,439	1,191	977	685	271	9	-	-	-	-	-	12,686	-
7	13	-	-	-	-	-	16	229	588	751	1,122	1,308	1,365	1,067	1,082	1,249	1,007	696	327	59	-	-	-	-	-	10,866	-
7	14	-	-	-	-	-	70	221	116	725	1,070	495	1,202	901	722	433	487	400	150	67	-	-	-	-	-	7,058	-
7	15	-	-	-	-	-	75	296	637	586	949	1,138	1,198	1,144	539	684	558	369	277	59	-	-	-	-	-	8,508	-
7	16	-	-	-	-	-	59	404	856	1,201	1,458	1,613	1,388	1,675	1,583	1,396	1,137	780	339	42	-	-	-	-	-	13,929	-
7	17	-	-	-	-	-	78	384	641	915	1,270	1,409	1,463	1,421	1,502	1,326	613	717	286	52	-	-	-	-	-	12,078	-
7	18	-	-	-	-	-	1	91	215	598	489	556	463	451	1,459	750	380	678	317	62	-	-	-	-	-	6,508	-
7	19	-	-	-	-	-	68	355	746	1,063	1,303	1,471	1,539	702	1,101	403	1,031	289	182	15	-	-	-	-	-	10,270	-
7	20	-	-	-	-	-	64	351	746	1,072	1,313	502	1,553	1,113	1,453	748	385	705	300	58	-	-	-	-	-	10,363	-
7	21	-	-	-	-	-	70	103	151	816	766	1,151	602	1,561	1,471	1,301	1,046	705	288	36	-	-	-	-	-	10,065	-
7	22	-	-	-	-	-	48	374	820	1,166	1,421	1,584	1,664	1,652	1,553	1,378	1,119	762	323	39	-	-	-	-	-	13,903	-
7	23	-	-	-	-	-	49	372	815	1,165	1,416	1,580	1,651	1,636	1,543	1,364	1,105	745	321	44	-	-	-	-	-	13,806	-
7	24	-	-	-	-	-	51	361	801	1,146	1,399	1,563	1,636	1,630	1,295	750	964	568	316	52	-	-	-	-	-	12,530	-
7	25	-	-	-	-	-	47	361	804	880	1,398	1,550	1,616	1,433	995	202	817	415	258	47	-	-	-	-	-	10,823	-
7	26	-	-	-	-	-	49	67	312	612	672	755	1,275	939	702	961	943	187	157	-	-	-	-	-	-	7,632	-
7	27	-	-	-	-	-	52	160	405	462	734	1,108	1,035	1,146	1,454	1,277	1,019	674	237	20	-	-	-	-	-	9,782	-
7	28	-	-	-	-	-	53	341	755	1,087	1,330	1,487	1,555	1,180	1,252	1,122	956	603	290	40	-	-	-	-	-	12,052	-
7	29	-	-	-	-	-	53	332	576	971	1,215	1,334	1,378	1,390	1,193	1,270	1,014	674	286	40	-	-	-	-	-	11,726	-
7	30	-	-	-	-	-	58	267	416	675	873	988	1,232	1,351	1,012	598	214	89	87	-	-	-	-	-	-	7,859	-
7	31	-	-	-	-	-	45	342	781	1,127	1,379	1,546	1,621	1,612	1,525	1,355	1,091	734	295	27	-	-	-	-	-	13,480	-
8	1	-	-	-	-	-	54	265	620	871	830	1,265	1,368	1,298	1,240	1,014	450	67	201	24	-	-	-	-	-	9,568	-
8	2	-	-	-	-	-	47	315	715	1,051	1,298	1,448	1,519	1,506	1,405	1,225	968	557	97	24	-	-	-	-	-	12,175	-
8	3	-	-	-	-	-	41	316	730	1,071	1,314	1,452	1,527	1,241	1,189	61	884	550	153	-	-	-	-	-	-	10,529	-
8	4	-	-	-	-	-	-	194	506	1,032	41	468	1,080	1,361	1,336	1,325	1,068	649	276	24	-	-	-	-	-	9,358	-
8	5	-	-	-	-	-	37	325	761	1,115	1,375	1,545	1,626	832	674	588	1,076	713	275	23	-	-	-	-	-	10,966	-
8	6	-	-	-	-	-	34	331	779	926	1,168	1,377	1,631	1,614	516	854	1,044	673	267	27	-	-	-	-	-	11,242	-
8	7	-	-	-	-	-	16	1	511	1,007	767	769	1,520	1,508	1,381	1,039	883	522	210	14	-	-	-	-	-	10,150	-
8	8	-	-	-	-	-	33	323	772	1,137	1,395	1,562	1,644	1,638	1,543	1,365	837	718	266	15	-	-	-	-	-	13,250	-
8	9	-	-	-	-	-	27	333	799	1,167	1,432	1,605	1,679	1,663	1,565	1,375	1,095	712	263	13	-	-	-	-	-	13,727	-
8	10	-	-	-	-	-	33	258	677	937	1,220	1,222	1,264	1,211	1,413	554	646	501	212	12	-	-	-	-	-	10,161	-
8	11	-	-	-	-	-	28	264	814	1,187	1,458	1,628	1,704	1,695	1,592	604	637	551	258	9	-	-	-	-	-	12,430	-
8	12	-	-	-	-	-	24	333	818	1,200	1,474	1,648	1,722	1,708	1,595	1,394	1,111	717	240	7	-	-	-	-	-	13,989	-
8	13	-	-	-	-	-	28	300	801	1,176	1,287	1,616	1,691	1,683	1,577	1,116	984	672	248	6	-	-	-	-	-	13,184	-
8	14	-	-	-	-	-	25	312	764	1,123	1,376	1,528	1,599	1,571	932	1,103	323	103	18	-	-	-	-	-	-	10,776	-
8	15	-	-	-	-	-	-	94	13	130	567	1,235	1,291	869	693	1,030	896	531	204	4	-	-	-	-	-	7,557	-
8	16	-	-	-	-	-	18	305	766	1,138	1,405	1,574	1,647	1,054	1,522	1,326	1,047	664	225	4	-	-	-	-	-	12,693	-
8	17	-	-	-	-	-	17	299	750	1,112	1,377	1,549	1,629	1,613	1,505	1,320	1,039	205	186	5	-	-	-	-	-	12,606	-
8	18	-	-	-	-	-	13	165	351	670	1,012	1,173	912	1,603	1,487	672	1,016	643	214	5	-	-	-	-	-	9,936	-
8	19	-	-	-	-	-	15	272	530	1,064	1,330	1,229	1,183	952	739	662	629	173	85	-	-	-	-	-	-	8,863	-
8	20	-	-	-	-	-	-	21	282	873	1,161	1,008	106	1,228	1,422	1,236	962	588	196	-	-	-	-	-	-	9,083	-
8	21	-	-	-	-	-	8	289	308	718	307	396	813	799	845	475	967	648	198	1	-	-	-	-	-	6,770	-
8	22	-	-	-	-	-	8	301	689	1,151	1,417	1,586	1,658	1,359	1,525	1,323	1,036	632	192	-	-	-	-	-	-	12,874	-
8	23	-	-	-	-	-	8	277	726	1,103	1,381	1,541	1,621	1,607	1,508	1,308	1,019	618	186	-	-	-	-	-	-	12,905	-
8	24	-	-	-	-	-	6	274	707	1,075	1,339	1,346	1,355	1,258	900	1,003	625	18	177	-	-	-	-	-	-	10,083	-
8	25	-	-	-	-	-	-	210	127	187	85	202	177	294	168	174	292	133	128	-	-	-	-	-	-	2,176	-
8	26	-	-	-	-	-	-	-	59	326	420	306	322	304	623	457	176	152	120	-	-	-	-	-	-	3,264	-
8	27	-	-	-	-	-	-	101	145	235	160	248	101	334	256	224	84	114	68	-	-	-	-	-	-	2,072	-
8	28	-	-	-	-	-	-	8	41	110	360	583	655	696	657	653	726	292	114	-	-	-	-	-	-	4,894	-
8	29	-	-	-	-	-	-	-	67	332	218	310	166	332	289	184	63	7	49	-	-	-	-	-	-	2,015	-
8	30	-	-	-	-	-	-	29	187	559	641	1,096	1,193	1,567	1,458	1,081	953	551	141	-	-	-	-	-	-	9,456	-
8	31	-	-	-	-	-	-	96	436	615	869	1,276	1,483	1,522	1,315	1,160	857	420	107	-	-	-	-	-	-	10,158	-
9	1	-	-	-	-	-	-	83	296	287	260	184	789	1,234	1,142	845	615	225	124	-	-	-	-	-	-	6,083	-
9	2	-	-	-	-	-	1	260	740	1,123	1,390	1,556	1,623	1,599	1,488	1,045	625	452	110	-	-	-	-	-	-	12,012	-
9	3	-	-	-	-	-	-	188	423	705	1,161	1,224	1,326	1,006	977	950	799	445	104	-	-	-	-	-	-	9,308	-
9	4	-	-	-	-	-	-	245	705	1,091	1,365	1,527	1,595	1,570	1,460	1,244	924	499	110	-	-	-	-	-	-	12,334	-
9	5	-	-	-	-	-	-	145	426	462	630	1,173	1,435	1,607	1,290	1,009	719	453	95	-	-	-	-	-	-	9,445	-
9	6	-	-	-	-	-	-	234	143	181	348	185	340	275	669	610	551	128	96	-	-	-	-	-	-	3,761	-
9	7	-	-	-	-	-	-	218	54	237	244	587	457	224	1,389	543	158	459	89	-	-	-	-	-	-	4,659	-
9	8	-	-	-	-	-	-	221	656	824	1,050	1,449	1,318	1,479	1,002	1,139	831	429	79	-	-	-	-	-	-	10,476	-
9	9	-	-	-	-	-	-	104	301	785	1,013	1,446	1,511	1,203	1,370	821	869	457	74	-	-	-	-	-	-	9,955	-
9	10	-	-	-	-	-	-	34	154	653	379	959	1,445	1,425	1,287	964	400	208	36	-	-	-	-	-	-	7,946	-
9	11	-	-	-	-	-	-	21	72	23	565	523	1,149	1,587	1,495	1,280	965	509	72	-	-	-	-	-	-	8,261	-
9	12	-	-	-	-	-	-	243	745	1,142	1,414	1,583	1,651	1,622	1,500	1,278	956	499	64	-	-	-	-	-	-	12,697	-
9	13	-	-	-	-	-	-	226	707	1,103	1,368	1,543	1,609	1,576	1,456	1,241	914	459	56	-	-	-	-	-	-	12,258	-
9	14	-	-	-	-	-	-	206	655	1,035	1,293	1,463	1,523	1,487	1,078	551	610	299	37	-	-	-	-	-	-	10,236	-
9	15	-	-	-	-	-	-	237	746	1,148	1,430	1,203	1,659	1,626	1,503	1,273	941	474	45	-	-	-	-	-	-	12,285	-
9	16	-	-	-	-	-	-	218	702	1,108	1,041	1,564	971	1,599	1,061	1,250	921	454	36	-	-	-	-	-	-	10,926	-
9	17	-	-	-	-	-	-	218	706	1,109	1,366	1,528	1,587	1,548	1,422	1,189	858	405	26	-	-	-	-	-	-	11,962	-
9	18	-	-	-	-	-	-	1	21	264	772	597	668	817	605	632	374	173	5	-	-	-	-	-	-	4,930	-
9	19	-	-	-	-	-	-	148	502	206	160	104	117	505	588	352	346	158	4	-	-	-	-	-	-	3,189	-
9	20	-	-	-	-	-	-	43	147	698	796	1,138	1,316	1,227	1,125	925	573	270	10	-	-	-	-	-	-	8,268	-
9	21	-	-	-	-	-	-	164	551	872	1,170	1,506	1,249	1,213	1,167	965	585	273	9	-	-	-	-	-	-	9,724	-
9	22	-	-	-	-	-	-	191	661	1,045	1,298	1,463	1,531	1,495	1,377	1,161	830	377	9	-	-	-	-	-	-	11,437	-
9	23	-	-	-	-	-	-	179	626	564	742	321	1,093	1,089	1,045	1,105	767	320	3	-	-	-	-	-	-	7,853	-
9	24	-	-	-	-	-	-	177	364	1,106	947	1,584	1,655	1,620	1,486	1,249	897	395	7	-	-	-	-	-	-	11,489	-
9	25	-	-	-	-	-	-	207	732	1,158	1,446	1,623	1,691	1,652	1,509	1,270	909	404	5	-	-	-	-	-	-	12,607	-
9	26	-	-	-	-	-	-	202	720	1,139	1,418	1,582	1,388	1,296	1,424	820	803	330	1	-	-	-	-	-	-	11,121	-
9	27	-	-	-	-	-	-	118	478	636	794	1,078	1,091	1,138	1,026	918	722	336	-	-	-	-	-	-	-	8,335	-
9	28	-	-	-	-	-	-	20	89	326	670	624	663	364	273	134	59	289	-	-	-	-	-	-	-	3,512	-
9	29	-	-	-	-	-	-	149	284	1,023	1,154	1,283	1,277	1,318	1,387	905	781	309	-	-	-	-	-	-	-	9,870	-
9	30	-	-	-	-	-	-	90	360	274	540	717	617	313	461	238	16	0	-	-	-	-	-	-	-	3,625	-
10	1	-	-	-	-	-	-	-	-	135	30	60	487	222	174	284	102	53	-	-	-	-	-	-	-	1,547	-
10	2	-	-	-	-	-	-	-	233	1,024	1,338	1,524	1,596	1,552	1,028	929	26	55	-	-	-	-	-	-	-	9,307	-
10	3	-	-	-	-	-	-	48	135	230	339	706	1,586	521	1,126	288	344	94	-	-	-	-	-	-	-	5,417	-
10	4	-	-	-	-	-	-	5	29	116	227	493	479	156	351	147	230	107	-	-	-	-	-	-	-	2,337	-
10	5	-	-	-	-	-	-	138	283	460	1,321	1,519	1,582	1,554	796	425	783	279	-	-	-	-	-	-	-	9,139	-
10	6	-	-	-	-	-	-	155	661	893	1,421	1,588	1,653	1,607	1,453	1,191	796	280	-	-	-	-	-	-	-	11,698	-
10	7	-	-	-	-	-	-	140	645	1,075	1,356	1,524	1,579	1,528	1,380	1,123	737	248	-	-	-	-	-	-	-	11,335	-
10	8	-	-	-	-	-	-	119	590	1,011	1,289	1,449	1,508	1,468	1,313	1,065	689	221	-	-	-	-	-	-	-	10,721	-
10	9	-	-	-	-	-	-	117	602	1,020	1,297	1,455	1,514	1,471	1,317	1,066	685	215	-	-	-	-	-	-	-	10,758	-
10	10	-	-	-	-	-	-	110	601	1,031	1,306	1,459	1,513	1,470	1,319	1,061	679	205	-	-	-	-	-	-	-	10,753	-
10	11	-	-	-	-	-	-	58	531	752	1,317	1,482	1,541	1,295	1,216	786	473	189	-	-	-	-	-	-	-	9,639	-
10	12	-	-	-	-	-	-	94	394	833	736	642	831	625	185	398	63	39	-	-	-	-	-	-	-	4,840	-
10	13	-	-	-	-	-	-	-	60	29	245	259	296	453	315	173	634	166	-	-	-	-	-	-	-	2,630	-
10	14	-	-	-	-	-	-	-	226	330	348	240	201	250	475	175	162	-	-	-	-	-	-	-	-	2,409	-
10	15	-	-	-	-	-	-	63	545	984	1,282	991	575	642	719	72	60	11	-	-	-	-	-	-	-	5,946	-
10	16	-	-	-	-	-	-	55	570	1,015	1,307	1,493	1,549	1,222	467	208	89	15	-	-	-	-	-	-	-	7,990	-
10	17	-	-	-	-	-	-	56	589	1,053	1,350	1,525	1,581	1,533	1,365	1,091	672	160	-	-	-	-	-	-	-	10,973	-
10	18	-	-	-	-	-	-	-	74	64	564	529	562	1,436	1,276	998	502	122	-	-	-	-	-	-	-	6,128	-
10	19	-	-	-	-	-	-	-	26	23	153	48	48	82	291	118	85	119	-	-	-	-	-	-	-	993	-
10	20	-	-	-	-	-	-	-	2	370	1,232	1,445	1,029	999	882	539	600	108	-	-	-	-	-	-	-	7,206	-
10	21	-	-	-	-	-	-	36	546	996	1,285	1,468	1,531	1,473	1,322	1,039	197	24	-	-	-	-	-	-	-	9,918	-
10	22	-	-	-	-	-	-	31	543	515	1,291	209	579	140	207	1,030	278	95	-	-	-	-	-	-	-	4,919	-
10	23	-	-	-	-	-	-	27	66	159	198	326	299	703	498	890	598	73	-	-	-	-	-	-	-	3,838	-
10	24	-	-	-	-	-	-	8	293	720	978	1,050	771	286	134	132	365	24	-	-	-	-	-	-	-	4,760	-
10	25	-	-	-	-	-	-	17	518	494	1,296	1,485	1,544	1,493	1,336	1,044	602	61	-	-	-	-	-	-	-	9,891	-
10	26	-	-	-	-	-	-	-	56	81	244	482	397	263	313	317	21	-	-	-	-	-	-	-	-	2,174	-
10	27	-	-	-	-	-	-	-	0	234	164	156	360	246	131	128	81	-	-	-	-	-	-	-	-	1,500	-
10	28	-	-	-	-	-	-	13	557	1,048	1,361	1,548	1,609	1,545	1,367	1,065	602	29	-	-	-	-	-	-	-	10,744	-
10	29	-	-	-	-	-	-	-	74	197	158	143	139	110	59	55	17	-	-	-	-	-	-	-	-	953	-
10	30	-	-	-	-	-	-	-	524	1,038	1,381	1,570	1,647	1,599	1,411	1,091	609	30	-	-	-	-	-	-	-	10,901	-
10	31	-	-	-	-	-	-	-	466	961	1,001	1,262	1,356	1,276	1,066	832	339	6	-	-	-	-	-	-	-	8,566	-
11	1	-	-	-	-	-	-	-	186	926	1,243	1,431	1,493	1,446	653	1,004	548	19	-	-	-	-	-	-	-	8,950	-
11	2	-	-	-	-	-	-	-	47	51	60	391	521	459	752	417	258	2	-	-	-	-	-	-	-	2,958	-
11	3	-	-	-	-	-	-	-	451	949	1,283	1,465	1,532	1,478	1,308	1,017	548	13	-	-	-	-	-	-	-	10,044	-
11	4	-	-	-	-	-	-	-	306	408	812	790	712	502	241	416	97	-	-	-	-	-	-	-	-	4,284	-
11	5	-	-	-	-	-	-	-	425	920	872	989	996	1,175	1,300	999	524	-	-	-	-	-	-	-	-	8,201	-
11	6	-	-	-	-	-	-	-	285	538	250	457	943	907	958	557	254	-	-	-	-	-	-	-	-	5,149	-
11	7	-	-	-	-	-	-	-	389	862	1,172	1,356	1,418	1,362	1,190	891	441	-	-	-	-	-	-	-	-	9,080	-
11	8	-	-	-	-	-	-	-	455	968	1,288	1,475	1,532	1,128	1,291	638	217	-	-	-	-	-	-	-	-	8,993	-
11	9	-	-	-	-	-	-	-	433	962	1,303	1,505	1,572	1,514	1,335	1,026	530	-	-	-	-	-	-	-	-	10,182	-
11	10	-	-	-	-	-	-	-	103	348	1,228	1,423	1,475	785	1,216	903	437	-	-	-	-	-	-	-	-	7,918	-
11	11	-	-	-	-	-	-	-	188	316	826	591	561	996	1,113	825	382	-	-	-	-	-	-	-	-	5,799	-
11	12	-	-	-	-	-	-	-	109	28	156	163	171	140	186	64	66	-	-	-	-	-	-	-	-	1,083	-
11	13	-	-	-	-	-	-	-	96	537	1,252	1,493	1,590	1,545	1,359	1,025	502	-	-	-	-	-	-	-	-	9,399	-
11	14	-	-	-	-	-	-	-	371	897	1,247	1,454	1,526	1,464	1,267	944	442	-	-	-	-	-	-	-	-	9,612	-
11	15	-	-	-	-	-	-	-	367	898	1,245	1,439	1,504	1,444	1,254	934	451	-	-	-	-	-	-	-	-	9,535	-
11	16	-	-	-	-	-	-	-	218	494	706	840	852	854	920	873	401	-	-	-	-	-	-	-	-	6,158	-
11	17	-	-	-	-	-	-	-	284	766	550	794	1,369	937	299	89	386	-	-	-	-	-	-	-	-	5,475	-
11	18	-	-	-	-	-	-	-	275	759	772	1,277	658	615	550	374	338	-	-	-	-	-	-	-	-	5,619	-
11	19	-	-	-	-	-	-	-	41	356	679	1,008	1,065	995	825	522	336	-	-	-	-	-	-	-	-	5,828	-
11	20	-	-	-	-	-	-	-	78	163	1,085	670	195	448	249	145	28	-	-	-	-	-	-	-	-	3,062	-
11	21	-	-	-	-	-	-	-	23	27	74	243	80	236	265	186	-	-	-	-	-	-	-	-	-	1,136	-
11	22	-	-	-	-	-	-	-	145	464	703	824	890	875	383	363	154	-	-	-	-	-	-	-	-	4,802	-
11	23	-	-	-	-	-	-	-	224	747	1,090	1,287	1,346	850	734	41	321	-	-	-	-	-	-	-	-	6,642	-
11	24	-	-	-	-	-	-	-	20	133	60	126	231	174	83	12	-	-	-	-	-	-	-	-	-	840	-
11	25	-	-	-	-	-	-	-	164	98	142	140	372	849	1,024	101	30	-	-	-	-	-	-	-	-	2,920	-
11	26	-	-	-	-	-	-	-	208	763	1,118	922	1,012	633	1,181	859	378	-	-	-	-	-	-	-	-	7,072	-
11	27	-	-	-	-	-	-	-	159	302	1,034	949	820	842	581	574	136	-	-	-	-	-	-	-	-	5,397	-
11	28	-	-	-	-	-	-	-	-	67	86	32	90	70	84	123	10	-	-	-	-	-	-	-	-	562	-
11	29	-	-	-	-	-	-	-	151	739	1,111	1,329	1,404	1,351	819	850	367	-	-	-	-	-	-	-	-	8,121	-
11	30	-	-	-	-	-	-	-	-	11	95	168	411	1,307	675	189	73	-	-	-	-	-	-	-	-	2,928	-
12	1	-	-	-	-	-	-	-	46	302	301	268	82	124	19	15	6	-	-	-	-	-	-	-	-	1,163	-
12	2	-	-	-	-	-	-	-	-	36	86	91	125	147	72	85	118	-	-	-	-	-	-	-	-	760

BESS Operation

Month	Day	Hour	Charging hours	Discharge hours																				
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	1	1	-	-	-	-	-	-	-	-	-	(55)	(260)	(1,016)	(602)	(234)	(262)	(87)	379	379	379	379	379	379	-	-
1	1	2	-	-	-	-	-	-	-	-	(44)	(142)	(260)	(260)	(709)	(441)	(400)	(66)	379	379	379	379	379	379	-	-
1	1	3	-	-	-	-	-	-	-	-	(246)	(208)	(326)	(326)	(622)	(223)	(292)	(195)	379	379	379	379	379	379	-	-
1	1	4	-	-	-	-	-	-	-	-	-	(208)	(485)	(485)	(455)	(464)	(232)	(143)	379	379	379	379	379	379	-	-
1	1	5	-	-	-	-	-	-	-	-	(429)	(685)	(197)	(197)	(616)	(605)	(334)	(450)	379	379	379	379	379	379	-	-
1	1	6	-	-	-	-	-	-	-	-	-	(208)	(493)	(493)	(617)	(605)	(450)	-	379	379	379	379	379	379	-	-
1	1	7	-	-	-	-	-	-	-	-	-	(326)	-	-	(745)	(735)	(585)	(126)	379	379	379	379	379	379	-	-
1	1	8	-	-	-	-	-	-	-	-	-	(203)	-	-	(623)	(461)	(258)	(428)	379	379	379	379	379	379	-	-
1	1	9	-	-	-	-	-	-	-	-	-	(195)	(485)	(485)	(106)	(607)	(454)	(158)	379	379	379	379	379	379	-	-
1	1	10	-	-	-	-	-	-	-	-	-	(319)	(157)	(157)	(619)	(734)	(296)	(279)	379	379	379	379	379	379	-	-
1	1	11	-	-	-	-	-	-	-	-	-	(723)	(966)	(966)	(732)	(674)	(454)	-	379	379	379	379	379	379	-	-
1	1	12	-	-	-	-	-	-	-	-	(122)	(91)	-	-	(482)	(214)	(80)	(473)	379	379	379	379	379	379	-	-
1	1	13	-	-	-	-	-	-	-	-	-	(778)	-	-	(769)	(763)	(625)	(327)	379	382	382	382	382	382	-	-
1	1	14	-	-	-	-	-	-	-	-	(111)	-	-	-	(32)	(845)	(568)	(125)	379	381	381	381	381	381	-	-
1	1	15	-	-	-	-	-	-	-	-	-	(190)	(471)	(471)	(30)	(598)	(463)	(191)	379	382	382	382	382	382	-	-
1	1	16	-	-	-	-	-	-	-	-	(281)	(474)	(700)	(700)	(838)	(223)	(239)	(133)	379	379	379	379	379	379	-	-
1	1	17	-	-	-	-	-	-	-	-	(84)	-	-	-	(337)	(824)	(310)	(129)	379	379	379	379	379	379	-	-
1	1	18	-	-	-	-	-	-	-	-	(266)	(595)	(342)	(342)	(253)	(644)	(311)	(548)	379	382	382	382	382	382	-	-
1	1	19	-	-	-	-	-	-	-	-	(266)	(206)	(463)	(463)	(498)	(364)	(659)	(240)	379	379	379	379	379	379	-	-
1	1	20	-	-	-	-	-	-	-	-	-	(214)	(468)	(468)	(482)	(498)	(140)	-	379	385	385	385	385	385	-	-
1	1	21	-	-	-	-	-	-	-	-	-	(199)	(482)	(482)	(488)	(461)	(198)	-	379	385	385	385	385	385	-	-
1	1	22	-	-	-	-	-	-	-	-	(346)	(491)	(268)	(268)	(554)	(424)	(200)	(131)	379	379	379	379	379	379	-	-
1	1	23	-	-	-	-	-	-	-	-	(286)	(300)	(701)	(701)	(518)	(376)	(365)	(294)	379	384	384	384	384	384	-	-
1	1	24	-	-	-	-	-	-	-	-	(451)	(689)	(518)	(518)	(644)	(642)	(498)	4	379	393	393	393	393	393	-	-
1	1	25	-	-	-	-	-	-	-	-	-	(215)	(467)	(467)	(224)	(168)	(61)	-	(1,043)	(617)	363	308	233	365	-	-
1	1	26	-	-	-	-	-	-	-	-	(250)	(59)	(96)	(96)	(530)	(623)	(471)	(182)	-	-	-	-	208	208	-	-
1	1	27	-	-	-	-	-	-	-	-	-	(159)	(467)	(467)	(991)	(11)	(310)	-	-	-	-	-	208	360	-	-
1	1	28	-	-	-	-	-	-	-	-	(215)	(460)	(991)	(991)	(466)	(605)	(471)	(190)	-	-	-	-	371	-	-	-
1	1	29	-	-	-	-	-	-	-	-	-	(182)	(526)	(526)	(234)	(604)	(542)	-	-	-	-	-	-	-	-	-
1	2	1	-	-	-	-	-	-	-	-	(372)	(494)	(755)	(755)	(526)	(209)	-	(94)	(500)	(358)	(821)	224	368	301	-	-
2	2	2	-	-	-	-	-	-	-	-	(73)	(177)	(191)	(191)	(533)	(202)	(240)	(34)	2	-	-	294	369	244	-	-
2	2	3	-	-	-	-	-	-	-	-	(181)	(157)	(752)	(752)	(865)	(644)	(642)	(84)	-	-	-	284	369	269	-	-
2	2	4	-	-	-	-	-	-	-	-	(157)	(236)	(533)	(533)	(865)	(994)	(642)	(190)	-	-	-	273	397	748	-	-
2	2	5	-	-	-	-	-	-	-	-	-	(483)	(766)	(766)	(766)	(397)	(168)	(386)	-	-	-	142	397	357	-	-
2	2	6	-	-	-	-	-	-	-	-	-	(236)	(430)	(430)	(442)	-	(623)	(343)	(627)	-	-	263	401	145	-	-
2	2	7	-	-	-	-	-	-	-	-	-	(714)	(442)	(442)	(446)	(844)	(217)	(895)	-	(222)	-	115	427	203	-	-
2	2	8	-	-	-	-	-	-	-	-	-	(167)	(446)	(446)	(540)	(591)	(275)	(493)	(236)	-	-	195	403	335	-	-
2	2	9	-	-	-	-	-	-	-	-	-	(58)	(540)	(540)	(658)	(591)	(440)	(464)	(224)	-	-	220	432	337	-	-
2	2	10	-	-	-	-	-	-	-	-	(372)	(488)	(701)	(701)	(213)	(577)	(448)	(88)	(821)	2	-	307	416	309	-	-
2	2	11	-	-	-	-	-	-	-	-	(131)	(468)	(213)	(213)	(618)	(242)	(317)	(325)	-	-	(523)	124	411	374	-	-
2	2	12	-	-	-	-	-	-	-	-	(188)	(351)	(321)	(321)	(499)	(72)	(346)	-	-	-	-	155	394	383	-	-
2	2	13	-	-	-	-	-	-	-	-	(255)	(208)	(637)	(637)	(464)	(185)	(661)	(760)	-	-	-	424	431	422	-	-
2	2	14	-	-	-	-	-	-	-	-	(208)	(183)	(598)	(598)	-	(412)	(670)	(544)	-	-	-	455	394	464	-	-
2	2	15	-	-	-	-	-	-	-	-	-	-	-	-	(244)	(613)	(386)	(520)	-	-	-	455	423	464	-	-
2	2	16	-	-	-	-	-	-	-	-	(142)	(187)	(462)	(462)	(599)	(604)	(469)	(637)	(217)	(253)	-	455	423	464	-	-
2	2	17	-	-	-	-	-	-	-	-	(410)	(554)	(655)	(655)	(590)	(791)	(607)	(696)	(654)	(225)	(207)	455	455	464	-	-
2	2	18	-	-	-	-	-	-	-	-	(554)	(264)	(393)	(393)	(479)	(269)	(482)	(476)	(720)	59	(24)	455	455	464	-	-
2	2	19	-	-	-	-	-	-	-	-	(121)	(496)	(74)	(74)	(657)	(462)	(358)	(598)	(302)	(238)	(265)	(404)	455	464	-	-
2	2	20	-	-	-	-	-	-	-	-	(496)	(384)	(462)	(462)	(463)	(474)	(604)	(606)	(553)	(430)	(318)	(123)	(293)	(804)	432	115
2	2	21	-	-	-	-	-	-	-	-	(384)	(186)	(627)	(627)	(474)	(627)	(604)	(606)	(410)	(206)	(201)	455	455	455	422	169
2	2	22	-	-	-	-	-	-	-	-	(186)	(164)	(492)	(492)	(591)	(617)	(440)	(596)	(206)	(190)	-	-	-	-	-	-
2	2	23	-	-	-	-	-	-	-	-	(189)	(418)	(497)	(497)	(418)	(122)	(352)	(689)	(460)	(456)	(460)	(190)	453	371	-	-
2	2	24	-	-	-	-	-	-	-	-	(217)	(425)	(262)	(262)	(533)	(644)	(273)	(192)	(440)	(464)	(467)	(180)	(200)	(948)	447	301	358
2	2	25	-	-	-	-	-	-	-	-	(181)	(425)	(246)	(246)	(325)	(474)	(402)	(880)	(1,084)	(642)	(377)	(227)	(478)	(442)	(200)	(373)	(986)	(492)	(278)	(652)	(122)	-	(341)	(60)	(430)	(327)	(200)	(269)	(748)	(249)	(17)	(324)	(213)	(700)	(244)	(1,024)	-	-	-	-	-	-	-	-	-	-	-	-

| | | |

12	21	-	-	-	-	-	-	-	-	(15)	(463)	(699)	(660)	(496)	(187)	3	-	379	379	379	379	379	379	-	-		
12	22	-	-	-	-	-	-	-	-	-	(317)	(476)	(734)	(506)	(348)	(136)	-	379	379	379	379	379	379	-	-		
12	23	-	-	-	-	-	-	-	-	-	(262)	(503)	(598)	(574)	(436)	(145)	-	379	379	379	379	379	379	-	-		
12	24	-	-	-	-	-	-	-	-	-	(54)	(546)	(649)	(628)	(462)	(179)	-	379	379	379	379	379	379	-	-		
12	25	-	-	-	-	-	-	-	-	(105)	(526)	(644)	(549)	(348)	(292)	(52)	-	379	379	379	379	379	379	-	-		
12	26	-	-	-	-	-	-	-	-	(230)	(318)	(335)	(435)	(435)	(361)	(214)	(189)	379	379	379	379	379	379	-	-		
12	27	-	-	-	-	-	-	-	-	(274)	(309)	(402)	(404)	(374)	(316)	(218)	(221)	379	379	379	379	379	379	-	-		
12	28	-	-	-	-	-	-	-	-	21	(405)	(655)	(705)	(407)	(254)	(111)	-	379	379	379	379	379	379	-	-		
12	29	-	-	-	-	-	-	-	-	(30)	(388)	(604)	(657)	(469)	(368)	-	-	379	379	379	379	379	379	-	-		
12	30	-	-	-	-	-	-	-	-	(267)	(294)	(273)	(256)	(281)	(258)	(266)	(622)	379	379	379	379	379	379	-	-		
12	31	-	-	-	-	-	-	-	-	(384)	(329)	(652)	(449)	(228)	(206)	(147)	(122)	379	379	379	379	379	379	-	-		

Combined Operation

		Hour	1	2	3	4	5	6	7	8	Charging hours 9	10	11	12	13	14	15	16	Discharge hours 17	18	19	20	21	22	23	24	Total	CPD Min
Month	Day																											
1	1	-	-	-	-	-	-	-	-	6	9	9	9	9	9	9	9	379	379	379	379	379	379	-	-	2,345	379
1	2	-	-	-	-	-	-	-	-	(29)	(29)	(29)	(29)	(29)	(29)	(29)	(29)	379	379	379	379	379	379	-	-	2,048	379
1	3	-	-	-	-	-	-	-	-	(181)	(181)	(181)	(181)	(181)	(181)	(181)	(181)	379	379	379	379	379	379	-	-	829	379
1	4	-	-	-	-	-	-	-	2	402	879	879	879	879	879	879	535	379	379	379	379	379	379	-	-	8,488	379
1	5	-	-	-	-	-	-	-	16	192	192	192	192	192	192	192	192	379	379	379	379	379	379	-	-	3,828	379
1	6	-	-	-	-	-	-	-	15	626	881	881	881	881	881	881	239	379	379	379	379	379	379	-	-	8,442	379
1	7	-	-	-	-	-	-	-	15	606	739	313	739	739	739	739	548	379	379	379	379	379	379	-	-	7,455	379
1	8	-	-	-	-	-	-	-	-	61	70	70	70	70	70	70	70	379	379	379	379	379	379	-	-	2,831	379
1	9	-	-	-	-	-	-	-	19	660	953	953	953	953	953	953	622	379	379	379	379	379	379	-	-	9,296	379
1	10	-	-	-	-	-	-	-	20	660	819	819	819	819	819	819	617	379	379	379	379	379	379	-	-	8,485	379
1	11	-	-	-	-	-	-	-	13	582	780	780	780	780	780	780	296	379	379	379	379	379	379	-	-	7,850	379
1	12	-	-	-	-	-	-	-	1	515	595	544	595	595	595	595	595	382	382	382	382	382	382	-	-	6,921	382
1	13	-	-	-	-	-	-	-	21	7	7	7	7	7	7	7	7	379	379	379	379	379	379	-	-	2,354	379
1	14	-	-	-	-	-	-	-	13	553	176	681	681	681	681	681	550	382	382	382	382	382	382	-	-	6,987	382
1	15	-	-	-	-	-	-	-	-	396	71	396	396	396	396	396	92	381	381	381	381	381	381	-	-	4,827	381
1	16	-	-	-	-	-	-	-	10	592	845	845	845	845	845	845	603	382	382	382	382	382	382	-	-	8,568	382
1	17	-	-	-	-	-	-	-	2	(116)	(116)	(116)	(116)	(116)	(116)	(116)	(116)	379	379	379	379	379	379	-	-	1,352	379
1	18	-	-	-	-	-	-	-	17	471	61	190	326	471	471	471	471	382	382	382	382	382	382	-	-	5,242	382
1	19	-	-	-	-	-	-	-	-	(234)	(234)	(234)	(234)	(234)	(234)	(234)	(234)	379	379	379	379	379	379	-	-	405	379
1	20	-	-	-	-	-	-	-	-	2	378	378	378	378	378	378	378	387	387	387	387	387	387	-	-	4,971	387
1	21	-	-	-	-	-	-	-	37	665	909	909	909	909	909	909	687	385	385	385	385	385	385	-	-	9,158	385
1	22	-	-	-	-	-	-	-	2	404	540	540	540	540	540	540	379	385	385	385	385	385	385	-	-	6,331	385
1	23	-	-	-	-	-	-	-	55	713	963	963	963	963	963	963	735	393	393	393	393	393	393	-	-	9,637	393
1	24	-	-	-	-	-	-	-	10	(120)	(120)	(120)	(120)	(120)	(120)	(120)	(120)	379	379	379	379	379	379	-	-	1,328	379
1	25	-	-	-	-	-	-	-	-	(286)	(286)	(286)	(286)	(286)	(286)	(286)	(286)	384	384	384	384	384	384	-	-	17	384
1	26	-	-	-	-	-	-	-	12	125	125	125	125	24	125	102	125	393	393	393	393	393	393	-	-	3,242	393
1	27	-	-	-	-	-	-	-	54	635	859	859	859	859	859	151	228	383	383	383	383	383	383	-	-	7,660	383
1	28	-	-	-	-	-	-	-	-	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	394	394	394	394	394	394	-	-	2,337	394
1	29	-	-	-	-	-	-	-	83	778	1,115	1,115	1,115	1,115	1,115	1,115	840	409	409	409	409	409	409	-	-	10,841	409
1	30	-	-	-	-	-	-	-	88	559	559	559	559	559	559	559	308	122	382	382	382	382	382	-	-	6,164	382
1	31	-	-	-	-	-	-	-	89	756	1,050	1,050	1,050	1,050	1,050	1,050	809	414	414	414	414	414	414	-	-	10,437	414
2	1	-	-	-	-	-	-	-	75	296	296	296	296	296	296	177	136	383	383	383	383	383	383	-	-	4,464	383
2	2	-	-	-	-	-	-	-	17	532	532	532	532	346	532	532	213	385	385	385	385	385	385	-	-	6,081	385
2	3	-	-	-	-	-	-	-	-	(163)	(163)	(163)	(163)	(163)	(163)	(163)	(163)	411	411	411	411	411	411	-	-	1,161	411
2	4	-	-	-	-	-	-	-	35	137	137	137	137	137	137	137	49	382	382	382	382	382	382	-	-	3,330	382
2	5	-	-	-	-	-	-	-	5	184	543	543	543	543	543	394	381	397	397	397	397	397	397	-	-	6,056	397
2	6	-	-	-	-	-	-	-	139	96	686	686	686	686	686	521	420	401	401	401	401	401	401	-	-	7,010	401
2	7	-	-	-	-	-	-	-	157	374	301	612	316	612	612	612	612	427	427	427	427	427	427	-	-	6,769	427
2	8	-	-	-	-	-	-	-	209	494	494	494	494	494	494	246	46	403	403	403	403	403	403	-	-	5,879	403
2	9	-	-	-	-	-	-	-	214	788	1,073	1,073	1,073	1,073	1,073	1,073	877	432	432	432	432	432	432	-	-	10,912	432
2	10	-	-	-	-	-	-	-	139	615	685	685	685	685	685	685	471	416	416	416	416	416	416	-	-	7,830	416
2	11	-	-	-	-	-	-	-	-	135	535	535	535	535	535	535	167	411	411	411	411	411	411	-	-	6,519	411
2	12	-	-	-	-	-	-	-	-	16	(102)	(102)	(102)	(102)	(102)	(102)	(102)	394	394	394	394	394	394	-	-	1,567	394
2	13	-	-	-	-	-	-	-	-	274	855	938	938	938	938	799	938	855	431	431	431	431	431	-	-	10,057	431
2	14	-	-	-	-	-	-	-	-	136	355	970	970	970	970	970	970	627	424	424	424	424	424	-	-	9,486	424
2	15	-	-	-	-	-	-	-	-	245	804	1,035	1,035	1,035	1,035	1,035	1,035	904	345	455	455	455	455	-	-	10,784	345
2	16	-	-	-	-	-	-	-	-	246	791	1,038	1,038	1,038	1,038	1,038	1,038	740	423	423	423	423	423	-	-	10,546	423
2	17	-	-	-	-	-	-	-	-	27	304	36	138	263	747	747	747	747	406	455	455	455	455	-	-	6,439	406
2	18	-	-	-	-	-	-	-	-	66	570	637	413	765	765	765	765	442	455	455	455	455	455	-	-	8,231	442
2	19	-	-	-	-	-	-	-	-	306	881	1,175	1,175	1,175	1,175	1,175	991	424	455	455	455	455	455	-	-	11,931	424
2	20	-	-	-	-	-	-	-	-	336	912	1,147	1,147	1,147	1,147	1,147	953	400	455	455	455	455	455	-	-	11,759	400
2	21	-	-	-	-	-	-	-	-	89	241	797	797	797	238	797	797	306	414	414	414	414	414	-	-	7,342	414
2	22	-	-	-	-	-	-	-	-	322	689	689	689	689	689	689	689	262	331	455	455	455	455	-	-	8,018	331
2	23	-	-	-	-	-	-	-	-	46	(164)	(164)	(164)	(164)	(164)	(164)	(164)	(164)	428	428	428	428	428	-	-	1,301	428
2	24	-	-	-	-	-	-	-	-	358	555	814	636	814	593	814	814	814	465	455	455	455	455	-	-	8,953	455
2	25	-	-	-	-	-	-	-	-	25	20	20	20	20	20	20	20	20	432	432	432	432	432	-	-	2,776	432
2	26	-	-	-	-	-	-	-	-	423	1,052	1,052	1,052	1,052	1,052	1,052	1,052	533	422	422	422	422	422	-	-	10,853	422
2	27	-	-	-	-	-	-	-	-	442	1,048	1,288	1,288	1,288	1,288	1,288	1,288	1,078	499	455	455	455	455	-	-	13,073	455
2	28	-	-	-	-	-	-	-	-	408	985	1,244	1,244	1,244	1,244	1,244	1,244	1,047	485	455	455	455	455	-	-	12,666	455
3	1	-	-	-	-	-	-	-	-	244	934	1,304	1,304	1,304	1,304	1,304	1,304	946	405	456	456	456	456	-	-	12,635	405
3	2	-	-	-	-	-	-	-	-	412	1,003	1,003	1,003	1,003	1,003	1,003	873	783	383	383	383	383	383	-	-	10,382	383
3	3	-	-	-	-	-	-	-	-	524	1,137	1,345	1,345	1,345	1,345	1,345	1,345	1,124	548	459	459	459	459	-	-	13,698	459
3	4	-	-	-	-	-	-	-	-	416	986	1,222	1,222	1,222	1,222	1,222	1,222	903	460	457	457	457	457	-	-	12,382	457
3	5	-	-	-	-	-	-	-	-	391	84	231	665	665	665	665	665	478	395	395	395	395	395	-	-	6,880	395
3	6	-	-	-	-	-	-	-	-	60	(126)	(126)	(126)	(126)	(126)	(126)	(126)	(126)	384	384	384	384	384	-	-	1,352	384
3	7	-	-	-	-	-	-	-	-	295	129	319	237	711	711	711	711	711	526	460	460	460	460	-	-	7,363	460
3	8	-	-	-	-	-	-	-	16	501	700	1,123	1,123	1,123	1,123	1,123	1,123	1,000	428	428	428	428	428	-	-	11,520	428
3	9	-	-	-	-	-	-	-	-	192	586	586	586	586	586	586	586	545	416	416	416	416	416	-	-	7,336	416
3	10	-	-	-	-	-	-	-	-	72	(128)	(128)	(128)	(128)	(128)	(128)	(128)	(128)	388	388	388	388	388	-	-	1,377	388
3	11	-	-	-	-	-	-	-	-	16	82	138	138	138	138	138	138	138	394	394	394	394	394	-	-	3,429	394
3	12	-	-	-	-	-	-	-	28	225	872	872	753	872	872	872	684	724	398	398	398	398	398	-	-	9,160	398
3	13	-	-	-	-	-	-	-	-	306	55	658	658	658	658	354	293	658	522	464	464	464	464	-	-	7,140	464
3	14	-	-	-	-	-	-	-	-	43	75	112	112	112	112	112	112	112	383	383	383	383	383	-	-	3,199	383
3	15	-	-	-	-	-	-	-	60	176	176	176	176	176	176	176	176	122	416	464	464	464	464	-	-	4,325	416
3	16	-	-	-	-	-	-	-	-	143	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	412	412	412	412	412	-	-	2,440	412
3	17	-	-	-	-	-	-	-	80	574	1,066	1,160	1,160	1,160	1,160	1,160	1,160	999	527	468	468	468	468	-	-	12,546	468
3	18	-	-	-	-	-	-	-	72	503	810	857	857	857	857	857	857	857	533	469	469	469	469	-	-	10,265	469
3	19	-	-	-	-	-	-	-	94	250	691	691	521	691	691	691	691	593	472	472	472	472	472	-	-	8,656	472
3	20	-	-	-	-	-	-	-	115	653	1,149	1,214	1,214	1,214	1,214	1,214	1,214	1,016	540	471	471	471	471	-	-	13,108	471
3	21	-	-	-	-	-	-	-	12	15	(54)	(54)	(54)	(54)	(54)	(54)	(54)	480	469	469	469	469	469	-	-	2,422	469
3	22	-	-	-	-	-	-	-	23	184	153	153	153	153	153	153	102	389	389	389	389	389	389	-	-	3,717	389
3	23	-	-	-	-	-	-	-	33	338	193	193	193	193	193	193	151	390	390	390	390	390	390	-	-	4,213	390
3	24	-	-	-	-	-	-	-	27	267	615	1,311	1,311	1,311	1,311	1,311	714	638	478	478	478	478	478	-	-	12,520	478
3	25	-	-	-	-	-	-	-	160	708	1,060	1,060	967	1,060	1,060	1,060	901	876	526	465	465	465	465	-	-	11,764	465
3	26	-	-	-	-	-	-	-	175	745	1,257	1,360	1,360	1,360	1,360	1,360	1,360	1,165	650	479	479	479	479	-	-	14,546	479
3	27	-	-	-	-	-	-	-	88	738	1,243	1,346	1,346	1,346	1,346	1,346	1,346	1,155	660	480	480	480	480	-	-	14,363	480
3	28	-	-	-	-	-	-	-	187	760	1,258	1,323	1,323	1,323	1,323	1,323	1,323	1,130	657	481	481	481	481	-	-	14,332	481
3	29	-	-	-	-	-	-	-	188	497	784	1,192	1,192	1,192	1,192	1,192	1,192	1,192	656	481	481	481	481	-	-	12,877	481
3	30	-	-	-	-	-	-	-	195	744	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,044	350	477	477	477	477	-	-	12,417	350
3	31	-	-	-	-	-	-	-	29	148	191	191	191	191	191	191	191	191	398	398	398	398	398	-	-	4,096	398
4	1	-	-	-	-	-	-	-	213	748	1,222	1,222	1,222	1,222	1,222	1,222	1,222	785	411	411	411	411	411	-	-	12,767	411
4	2	-	-	-	-	-	-	-	156	489	462	681	681	681	277	681	681	613	482	482	482	482	482	-	-	8,495	482
4	3	-	-	-	-	-	-	-	234	778	1,231	1,231	1,231	1,231	1,231	1,231	1,231	707	359	468	468	468	468	-	-	13,032	359
4	4	-	-	-	-	-	-	-	40	305	353	353	353	353	161	270	258	353	393	393	393	393	393	-	-	5,156	393
4	5	-	-	-	-	-	-	-	67	254	514	216	514	514	514	514	514	514	451	451	451	451	451	-	-	6,836	451
4	6	-	-	-	-	-	-	-	265	819	1,278	1,278	1,278	1,278	1,278	1,278	1,278	1,106	653	486	486	486	486	-	-	14,214	486
4	7	-	-	-	-	-	-	-	131	556	431	431	431	431	431	431	431	184	401	401	401	401	401	-	-	6,296	401
4	8	-	-	-	-	-	-	-	159	78	308	608	608	608	608	608	608	503	392	392	392	392	392	-	-	7,048	392
4	9	-	-	-	-	-	-	-	260	781	1,212	1,261	1,261	1,261	1,261	1,261	1,261	1,134	666	488	488	488	488	-	-	14,059	488
4	10	-	-	-	-	-	-	3	288	820	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,109	649	487	487	487	487	-	-	14,113	487
4	11	-	-	-	-	-	-	-	4	84	224	224	224	224	171	224	224	182	407	407	407	407	407	-	-	4,226	407
4	12	-	-	-	-	-	-	5	291	801	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,067	626	487	487	487	487	-	-	13,096	487
4	13	-	-	-	-	-	-	3	68	434	296	397	683	683	683	683	683	683	427	482	482	482	482	-	-	8,131	427
4	14	-	-	-	-	-	-	3	271	705	800	800	800	800	800	800	800	800	396	484	484	484	484	-	-	10,200	396
4	15	-	-	-	-	-	-	-	-	77	(89)	(89)	(89)	(89)	(89)	(89)	(89)	(89)	401	401	401	401	401	-	-	1,769	401
4	16	-	-	-	-	-	-	23	357	908	1,349	1,349	1,349	1,349	1,349	1,349	1,349	1,175	698	494	494	494	494	-	-	15,071	494
4	17	-	-	-	-	-	-	12	233	611	989	1,147	1,147	1,147	1,147	1,147	1,147	1,147	534	494	494	494	494	-	-	12,875	494
4	18	-	-	-	-	-	-	14	350	351	755	755	755	755	755	755	755	755	452	484	484	484	484	-	-	9,629	452
4	19	-	-	-	-	-	-	8	256	853	1,234	1,234	1,234	1,234	1,234	1,234	1,234	1,122	674	494	494	494	494	-	-	14,019	494
4	20	-	-	-	-	-	-	21	258	689	1,252	1,252	1,252	1,252	1,252	1,252	1,252	1,119	674	494	494	494	494	-	-	13,989	494
4	21	-	-	-	-	-	-	23	356	858	1,201	1,201	1,201	1,201	1,201	1,201	1,201	1,075	647	484	484	484	484	-	-	13,787	484
4	22	-	-	-	-	-	-	14	280	669	821	821	821	821	821	821	821	821	406	406	406	406	406	-	-	9,968	406
4	23	-	-	-	-	-	-	-	-	102	493	81	158	60	158	158	158	158	425	473	473	473	473	-	-	4,471	425
4	24	-	-	-	-	-	-	30	406	943	1,322	1,322	1,322	1,322	1,322	1,322	1,322	1,169	714	497	497	497	497	-	-	14,998	497
4	25	-	-	-	-	-	-	37	304	885	1,150	1,150	1,150	1,150	1,150	1,150	1,150	993	397	483	483	483	483	-	-	13,084	397
4	26	-	-	-	-	-	-	10	41	232	229	275	345	345	345	345	345	345	634	469	469	469	469	-	-	5,837	469
4	27	-	-	-	-	-	-	44	262	556	373	373	373	373	162	373	241	373	245	443	443	443	443	-	-	6,030	443
4	28	-	-	-	-	-	-	47	403	902	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,104	674	497	497	497	497	-	-	14,247	497
4	29	-	-	-	-	-	-	-	28	98	161	161	161	161	161	161	161	161	417	417	417	417	417	-	-	3,911	417
4	30	-	-	-	-	-	-	19	164	97	(57)	(57)	(57)	(57)	(57)	(57)	(57)	(57)	409	409	409	409	409	-	-	2,280	409
5	1	-	-	-	-	-	-	50	371	741	1,054	1,054	1,054	1,054	1,054	1,054	957	976	533	483	483	483	483	-	-	12,366	483
5	2	-	-	-	-	-	-	15	192	167	197	309	608	608	456	608	608	608	713	502	502	502	502	-	-	7,599	502
5	3	-	-	-	-	-	-	61	426	913	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,121	694	503	503	503	503	-	-	14,359	503
5	4	-	-	-	-	-	-	72	408	860	1,100	1,100	1,100	1,100	1,100	1,100	1,100	743	568	486	486	486	486	-	-	12,778	486
5	5	-	-	-	-	-	-	63	114	112	639	639	639	639	470	639	639	242	441	441	441	441	441	-	-	7,483	441
5	6	-	-	-	-	-	-	58	259	755	901	901	901	901	901	901	40	408	424	424	424	424	424	-	-	9,468	424
5	7	-	-	-	-	-	-	76	388	779	960	960	960	960	960	960	960	957	488	457	457	457	457	-	-	11,694	457
5	8	-	-	-	-	-	-	81	386	780	908	908	908	908	908	908	908	801	440	440	440	440	440	-	-	11,041	440
5	9	-	-	-	-	-	-	84	387	801	1,011	1,011	1,011	1,011	1,011	1,011	841	961	619	504	504	504	504	-	-	12,280	504
5	10	-	-	-	-	-	-	26	60	155	91	91	91	91	91	91	91	91	395	395	395	395	395	-	-	3,339	395
5	11	-	-	-	-	-	-	44	302	877	844	921	976	976	976	976	976	976	700	510	510	510	510	-	-	12,095	510
5	12	-	-	-	-	-	-	3	155	483	507	507	507	507	507	507	366	507	627	486	486	486	486	-	-	7,615	486
5	13	-	-	-	-	-	-	-	270	593	364	364	364	364	364	364	364	360	449	449	449	449	449	-	-	6,464	449
5	14	-	-	-	-	-	-	93	465	933	1,230	1,230	1,230	1,230	1,230	1,230	1,230	1,119	708	513	513	513	513	-	-	14,496	513
5	15	-	-	-	-	-	-	94	469	930	824	824	824	824	824	495	824	727	728	516	516	516	516	-	-	10,966	516
5	16	-	-	-	-	-	-	91	477	940	1,227	1,227	1,227	1,227	1,227	1,227	1,227	1,125	718	518	518	518	518	-	-	14,530	518
5	17	-	-	-	-	-	-	102	450	888	1,054	1,054	1,054	1,054	905	1,054	1,054	1,054	699	517	517	517	517	-	-	13,006	517
5	18	-	-	-	-	-	-	2	250	150	221	544	544	544	544	544	544	544	451	451	451	451	451	-	-	7,139	451
5	19	-	-	-	-	-	-	16	141	168	97	97	97	97	97	97	97	97	413	413	413	413	413	-	-	3,584	413
5	20	-	-	-	-	-	-	98	280	639	277	277	277	277	277	277	277	277	451	451	451	451	451	-	-	5,943	451
5	21	-	-	-	-	-	-	0	69	169	11	11	11	11	11	11	11	11	419	419	419	419	419	-	-	2,844	419
5	22	-	-	-	-	-	-	23	254	251	325	325	325	325	325	325	325	325	437	437	437	437	437	-	-	5,752	437
5	23	-	-	-	-	-	-	63	177	130	404	443	443	443	443	443	381	443	438	509	509	509	509	-	-	6,799	438
5	24	-	-

12	18	-	-	-	-	-	-	-	35	679	679	679	679	679	679	611	247	379	379	379	379	379	379	-	-	7,244	379
12	19	-	-	-	-	-	-	-	29	650	872	872	872	872	872	872	367	379	379	379	379	379	379	-	-	8,552	379
12	20	-	-	-	-	-	-	-	37	701	883	883	883	883	883	883	372	379	379	379	379	379	379	-	-	8,686	379
12	21	-	-	-	-	-	-	-	16	469	469	469	469	469	469	469	275	379	379	379	379	379	379	-	-	5,848	379
12	22	-	-	-	-	-	-	-	12	321	521	521	521	521	521	521	366	379	379	379	379	379	379	-	-	6,101	379
12	23	-	-	-	-	-	-	-	22	595	748	748	748	748	748	748	410	379	379	379	379	379	379	-	-	7,792	379
12	24	-	-	-	-	-	-	-	26	518	772	772	772	772	772	772	401	379	379	379	379	379	379	-	-	7,852	379
12	25	-	-	-	-	-	-	-	21	515	515	515	515	515	515	515	236	379	379	379	379	379	379	-	-	6,136	379
12	26	-	-	-	-	-	-	-	-	(184)	(184)	(184)	(184)	(184)	(184)	(184)	(184)	379	379	379	379	379	379	-	-	807	379
12	27	-	-	-	-	-	-	-	-	(207)	(207)	(207)	(207)	(207)	(207)	(207)	(207)	379	379	379	379	379	379	-	-	622	379
12	28	-	-	-	-	-	-	-	16	617	617	617	617	617	617	617	422	379	379	379	379	379	379	-	-	7,036	379
12	29	-	-	-	-	-	-	-	3	310	310	310	310	310	310	203	71	379	379	379	379	379	379	-	-	4,415	379
12	30	-	-	-	-	-	-	-	-	(224)	(224)	(224)	(224)	(224)	(224)	(224)	(224)	379	379	379	379	379	379	-	-	482	379
12	31	-	-	-	-	-	-	-	9	(115)	(115)	(115)	(115)	(115)	(115)	(115)	(115)	379	379	379	379	379	379	-	-	1,367	379
																									2,937,918	

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
1	1	0	1.1.1	0	0	-3	0.1	0.87	0	-3	0	0	0
1	1	1	1.1.2	0	0	-3	0.1	0.87	0	-3	0	0	0
1	1	2	1.1.3	0	0	-3	0.1	0.87	0	-3	0	0	0
1	1	3	1.1.4	0	0	-3	0.1	0.87	0	-3	0	0	0
1	1	4	1.1.5	0	0	-3	0.1	0.87	0	-3	0	0	0
1	1	5	1.1.6	0	0	-3	0.1	0.87	0	-3	0	0	0
1	1	6	1.1.7	0	0	-4	0.2	0.87	0	-4	0	0	0
1	1	7	1.1.8	0	0	-3	0.1	0.87	0	0	0	0	0
1	1	8	1.1.9	0	9	-2	0.1	0.87	8.468	-1.667	16376.991	6.284139	6.284139
1	1	9	1.1.10	0	39	0	0.1	0.87	36.785	1.455	75942.563	63.739066	63.739066
1	1	10	1.1.11	3	134	0	0.1	0.87	135.69	5.366	289025.771	269.271888	269.271888
1	1	11	1.1.12	464	142	1	0.1	0.87	508.737	21.211	1072902.693	1025.372935	1025.372935
1	1	12	1.1.13	137	182	2	0.1	0.87	302.614	13.992	643475.348	611.161907	611.161907
1	1	13	1.1.14	0	125	3	0.1	0.87	124.281	7.915	261430.498	242.654426	242.654426
1	1	14	1.1.15	33	111	2	0.1	0.87	137.039	7.427	291205.866	271.374734	271.374734
1	1	15	1.1.16	6	51	0	0.1	0.87	53.946	2.116	109226.857	95.843965	95.843965
1	1	16	1.1.17	0	0	0	0.1	0.87	0	0	0	0	0
1	1	17	1.1.18	0	0	0	0.1	0.87	0	0	0	0	0
1	1	18	1.1.19	0	0	0	0.1	0.87	0	0	0	0	0
1	1	19	1.1.20	0	0	-1	0.1	0.87	0	-1	0	0	0
1	1	20	1.1.21	0	0	-1	0.1	0.87	0	-1	0	0	0
1	1	21	1.1.22	0	0	-1	0.2	0.87	0	-1	0	0	0
1	1	22	1.1.23	0	0	-1	0.2	0.87	0	-1	0	0	0
1	1	23	1.1.24	0	0	-1	0.2	0.87	0	-1	0	0	0
1	2	0	1.2.1	0	0	-1	0.2	0.87	0	-1	0	0	0
1	2	1	1.2.2	0	0	-1	0.2	0.87	0	-1	0	0	0
1	2	2	1.2.3	0	0	-1	0.2	0.87	0	-1	0	0	0
1	2	3	1.2.4	0	0	-1	0.2	0.87	0	-1	0	0	0
1	2	4	1.2.5	0	0	-1	0.2	0.87	0	-1	0	0	0
1	2	5	1.2.6	0	0	-1	0.2	0.87	0	-1	0	0	0
1	2	6	1.2.7	0	0	-2	0.2	0.87	0	-2	0	0	0
1	2	7	1.2.8	0	1	-2	0.2	0.87	0.951	-1.969	0	0	0
1	2	8	1.2.9	0	14	-1	0.2	0.87	13.179	-0.498	25835.631	15.407622	15.407622
1	2	9	1.2.10	0	64	-1	0.3	0.87	60.719	1.254	127891.072	113.846833	113.846833
1	2	10	1.2.11	0	119	-1	0.3	0.87	117.168	3.347	250136.466	231.760586	231.760586
1	2	11	1.2.12	39	171	-1	0.3	0.87	210.341	6.808	452253.767	426.716068	426.716068
1	2	12	1.2.13	178	182	-1	0.4	0.87	331.614	10.966	715690.302	680.817999	680.817999
1	2	13	1.2.14	60	152	-2	0.4	0.87	201.644	5.27	437644.095	412.624074	412.624074
1	2	14	1.2.15	103	111	-3	0.4	0.87	180.428	3.513	394672.389	371.175027	371.175027
1	2	15	1.2.16	0	25	-4	0.4	0.87	23.566	-3.158	47321.478	36.13214	36.13214
1	2	16	1.2.17	0	0	-5	0.5	0.87	0	0	0	0	0
1	2	17	1.2.18	0	0	-6	0.5	0.87	0	-6	0	0	0
1	2	18	1.2.19	0	0	-6	0.5	0.87	0	-6	0	0	0
1	2	19	1.2.20	0	0	-7	0.5	0.87	0	-7	0	0	0
1	2	20	1.2.21	0	0	-8	0.5	0.87	0	-8	0	0	0
1	2	21	1.2.22	0	0	-8	0.5	0.87	0	-8	0	0	0
1	2	22	1.2.23	0	0	-9	0.5	0.87	0	-9	0	0	0
1	2	23	1.2.24	0	0	-9	0.6	0.87	0	-9	0	0	0
1	3	0	1.3.1	0	0	-9	0.6	0.87	0	-9	0	0	0
1	3	1	1.3.2	0	0	-9	0.6	0.87	0	-9	0	0	0
1	3	2	1.3.3	0	0	-9	0.6	0.87	0	-9	0	0	0
1	3	3	1.3.4	0	0	-9	0.6	0.87	0	-9	0	0	0
1	3	4	1.3.5	0	0	-9	0.6	0.87	0	-9	0	0	0
1	3	5	1.3.6	0	0	-9	0.6	0.87	0	-9	0	0	0
1	3	6	1.3.7	0	0	-10	0.5	0.87	0	-10	0	0	0
1	3	7	1.3.8	0	3	-10	0.5	0.87	2.854	-9.916	3445.939	0	0
1	3	8	1.3.9	0	39	-10	0.5	0.87	36.809	-8.719	77742.031	65.474771	65.474771
1	3	9	1.3.10	0	19	-10	0.5	0.87	17.898	-9.374	37567.642	26.723921	26.723921
1	3	10	1.3.11	0	77	-10	0.5	0.87	73.024	-7.449	159763.897	144.590277	144.590277
1	3	11	1.3.12	5	149	-9	0.5	0.87	152.041	-3.69	335276.046	313.883332	313.883332
1	3	12	1.3.13	13	155	-9	0.5	0.87	164.5	-3.253	363462.46	341.07099	341.07099
1	3	13	1.3.14	0	32	-8	0.5	0.87	30.176	-6.946	63880.511	52.104421	52.104421
1	3	14	1.3.15	0	61	-8	0.5	0.87	57.869	-5.977	125079.469	111.134856	111.134856
1	3	15	1.3.16	0	13	-8	0.5	0.87	12.236	-7.575	24422.729	14.044784	14.044784
1	3	16	1.3.17	0	0	-9	0.5	0.87	0	0	0	0	0
1	3	17	1.3.18	0	0	-9	0.5	0.87	0	-9	0	0	0
1	3	18	1.3.19	0	0	-8	0.5	0.87	0	-8	0	0	0
1	3	19	1.3.20	0	0	-8	0.5	0.87	0	-8	0	0	0
1	3	20	1.3.21	0	0	-8	0.5	0.87	0	-8	0	0	0
1	3	21	1.3.22	0	0	-7	0.4	0.87	0	-7	0	0	0
1	3	22	1.3.23	0	0	-7	0.4	0.87	0	-7	0	0	0
1	3	23	1.3.24	0	0	-7	0.4	0.87	0	-7	0	0	0
1	4	0	1.4.1	0	0	-7	0.4	0.87	0	-7	0	0	0
1	4	1	1.4.2	0	0	-7	0.4	0.87	0	-7	0	0	0
1	4	2	1.4.3	0	0	-7	0.4	0.87	0	-7	0	0	0
1	4	3	1.4.4	0	0	-7	0.3	0.87	0	-7	0	0	0
1	4	4	1.4.5	0	0	-7	0.3	0.87	0	-7	0	0	0
1	4	5	1.4.6	0	0	-8	0.3	0.87	0	-8	0	0	0
1	4	6	1.4.7	0	0	-8	0.3	0.87	0	-8	0	0	0
1	4	7	1.4.8	0	10	-7	0.3	0.87	9.513	-6.704	11903.406	1.969071	1.969071
1	4	8	1.4.9	315	56	-6	0.4	0.87	200.232	1.156	426961.859	402.320353	402.320353
1	4	9	1.4.10	787	65	-4	0.4	0.87	520.812	14.884	1135986.102	1086.221048	1086.221048
1	4	10	1.4.11	867	74	-3	0.4	0.87	672.044	21.355	1430225.173	1370.034058	1370.034058
1	4	11	1.4.12	895	79	-2	0.4	0.87	745.814	25.01	1561486.39	1496.644168	1496.644168
1	4	12	1.4.13	894	79	-2	0.4	0.87	741.074	24.84	1552918.988	1488.380344	1488.380344
1	4	13	1.4.14	852	75	-2	0.3	0.87	651.988	22.359	1382888.332	1324.37455	1324.37455
1	4	14	1.4.15	772	63	-2	0.3	0.87	493.901	16.459	1070185.468	1022.751992	1022.751992
1	4	15	1.4.16	594	41	-3	0.3	0.87	275.271	7.07	564789.098	535.263825	535.263825
1	4	16	1.4.17	0	0	-4	0.3	0.87	0	0	0	0	0
1	4	17	1.4.18	0	0	-5	0.3	0.87	0	-5	0	0	0
1	4	18	1.4.19	0	0	-6	0.3	0.87	0	-6	0	0	0
1	4	19	1.4.20	0	0	-6	0.3	0.87	0	-6	0	0	0
1	4	20	1.4.21	0	0	-7	0.3	0.87	0	-7	0	0	0
1	4	21	1.4.22	0	0	-7	0.3	0.87	0	-7	0	0	0
1	4	22	1.4.23	0	0	-8	0.3	0.87	0	-8	0	0	0
1	4	23	1.4.24	0	0	-8	0.3	0.87	0	-8	0	0	0
1	5	0	1.5.1	0	0	-9	0.3	0.87	0	-9	0	0	0
1	5	1	1.5.2	0	0	-9	0.3	0.87	0	-9	0	0	0
1	5	2	1.5.3	0	0	-9	0.3	0.87	0	-9	0	0	0
1	5	3	1.5.4	0	0	-10	0.3	0.87	0	-10	0	0	0
1	5	4	1.5.5	0	0	-10	0.3	0.87	0	-10	0	0	0
1	5	5	1.5.6	0	0	-10	0.3	0.87	0	-10	0	0	0
1	5	6	1.5.7	0	0	-10	0.3	0.87	0	-10	0	0	0
1	5	7	1.5.8	205	11	-8	0.3	0.87	23.392	-7.324	26573.136	16.118994	16.118994
1	5	8	1.5.9	633	43	-6	0.3	0.87	309.148	5.379	653996.189	621.309954	621.309954
1	5	9	1.5.10	788	61	-4	0.3	0.87	517.095	15.329	1126243.693	1076.823851	1076.823851
1	5	10	1.5.11	39	154	-3	0.3	0.87	190.066	4.06	412640.963	388.506903	388.506903
1	5	11	1.5.12	59	180	-2	0.3	0.87	235.277	6.736	508125.291	480.607841	480.607841
1	5	12	1.5.13	14	157	-2	0.3	0.87	167.274	4.205	359794.18	337.532691	337.532691
1	5	13	1.5.14	115	160	-2	0.3	0.87	255.516	7.504	555132.446	525.949346	525.949346
1	5	14	1.5.15	137	117	-2	0.3	0.87	206.075	5.672	449745.075	424.296268	424.296268
1	5	15	1.5.16	92	59	-3	0.2	0.87	103.191	0.915	214147.796	197.047138	197.047138
1	5	16	1.5.17	0	0	-4	0.2	0.87	0	0	0	0	0
1	5	17	1.5.18	0	0	-5	0.3	0.87	0	-5	0	0	0
1	5	18	1.5.19	0	0	-5	0.3	0.87	0	-5	0	0	0
1	5	19	1.5.20	0	0	-6	0.3	0.87	0	-6	0	0	0
1	5	20	1.5.21	0	0	-6	0.2	0.87	0	-6	0	0	0
1	5	21	1.5.22	0	0	-6	0.2	0.87	0	-6	0	0	0
1	5	22	1.5.23	0	0	-6	0.2	0.87	0	-6	0	0	0
1	5	23	1.5.24	0	0	-6	0.2	0.87	0	-6	0	0	0
1	6	0	1.6.1	0	0	-6	0.2	0.87	0	-6	0	0	0
1	6	1	1.6.2	0	0	-6	0.2	0.87	0	-6	0	0	0
1	6	2	1.6.3	0	0	-7	0.2	0.87	0	-7	0	0	0
1	6	3	1.6.4	0	0	-7	0.3	0.87	0	-7	0	0	0
1	6	4	1.6.5	0	0	-8	0.4	0.87	0	-8	0	0	0
1	6	5	1.6.6	0	0	-8	0.4	0.87	0	-8	0	0	0
1	6	6	1.6.7	0	0	-8	0.4	0.87	0	-8	0	0	0
1	6	7	1.6.8	191	11	-7	0.3	0.87	22.598	-6.345	25616.336	15.196097	15.196097
1	6	8	1.6.9	637	45	-5	0.3	0.87	312.514	6.504	658707.327	625.854158	625.854158
1	6	9	1.6.10	797	64	-3	0.3	0.87	525.546	16.644	1139208.328	1089.329097	1089.329097
1	6	10	1.6.11	871	75	-2	0.4	0.87	677.01	22.534	1434289.287	1373.954165	1373.954165
1	6	11	1.6.12	896	80	-1	0.4	0.87	749.774	26.152	1562652.078	1497.768552	1497.768552
1	6	12	1.6.13	891	80	-1	0.4	0.87	742.981	25.907	1550224.208	1485.781051	1485.781051
1	6	13	1.6.14	852	76	-1	0.4	0.87	656.54	22.793	1389950.716	1331.186686	1331.186686
1	6	14	1.6.15	768	63	-1	0.4	0.87	495.381	16.96	1071591.626	1024.108324	1024.108324
1	6	15	1.6.16	131	60	-2	0.4	0.87	124.255	2.432	257979.52	239.325729	239.325729
1	6	16	1.6.17	0	0	-3	0.3	0.87	0	0	0	0	0
1	6	17	1.6.18	0	0	-4	0.3	0.87	0	-4	0	0	0
1	6	18	1.6.19	0	0	-4	0.3	0.87	0	-4	0	0	0
1	6	19	1.6.20	0	0	-5	0.4	0.87	0	-5	0	0	0
1	6	20	1.6.21	0	0	-5	0.4	0.87	0	-5	0	0	0
1	6	21	1.6.22	0	0	-5	0.4	0.87	0	-5	0	0	0
1	6	22	1.6.23	0	0	-5	0.4	0.87	0	-5	0	0	0
1	6	23	1.6.24	0	0	-4	0.4	0.87	0	-4	0	0	0
1	7	0	1.7.1	0	0	-4	0.4	0.87	0	-4	0	0	0
1	7	1	1.7.2	0	0	-4	0.4	0.87	0	-4	0	0	0
1	7	2	1.7.3	0	0	-4	0.4	0.87	0	-4	0	0	0
1	7	3	1.7.4	0	0	-4	0.4	0.87	0	-4	0	0	0
1	7	4	1.7.5	0	0	-4	0.4	0.87	0	-4	0	0	0
1	7	5	1.7.6	0	0	-4	0.3	0.87	0	-4	0	0	0
1	7	6	1.7.7	0	0	-4	0.3	0.87	0	-4	0	0	0

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
1	7	7	1.7.8	189	11	-3	0.3	0.87	22.573	-2.346	25132.396	14.729305	14.729305
1	7	8	1.7.9	623	44	-2	0.3	0.87	305.966	9.263	638304.961	606.174729	606.174729
1	7	9	1.7.10	785	63	0	0.4	0.87	518.107	18.786	1114142.261	1065.151221	1065.151221
1	7	10	1.7.11	16	145	0	0.4	0.87	156.184	5.624	334299.02	312.940926	312.940926
1	7	11	1.7.12	892	78	0	0.4	0.87	745.742	27.006	1549218.477	1484.810957	1484.810957
1	7	12	1.7.13	892	78	1	0.4	0.87	742.921	27.905	1538376.444	1474.3531	1474.3531
1	7	13	1.7.14	857	73	1	0.4	0.87	658.202	24.854	1382827.694	1324.31606	1324.31606
1	7	14	1.7.15	612	65	0	0.3	0.87	418.812	15.648	907280.578	865.61947	865.61947
1	7	15	1.7.16	597	43	0	0.2	0.87	282.889	10.702	577493.902	547.518447	547.518447
1	7	16	1.7.17	0	0	-2	0.2	0.87	0	0	0	0	0
1	7	17	1.7.18	0	0	-3	0.2	0.87	0	-3	0	0	0
1	7	18	1.7.19	0	0	-4	0.2	0.87	0	-4	0	0	0
1	7	19	1.7.20	0	0	-4	0.2	0.87	0	-4	0	0	0
1	7	20	1.7.21	0	0	-5	0.3	0.87	0	-5	0	0	0
1	7	21	1.7.22	0	0	-5	0.3	0.87	0	-5	0	0	0
1	7	22	1.7.23	0	0	-6	0.3	0.87	0	-6	0	0	0
1	7	23	1.7.24	0	0	-5	0.3	0.87	0	-5	0	0	0
1	8	0	1.8.1	0	0	-5	0.2	0.87	0	-5	0	0	0
1	8	1	1.8.2	0	0	-5	0.3	0.87	0	-5	0	0	0
1	8	2	1.8.3	0	0	-5	0.4	0.87	0	-5	0	0	0
1	8	3	1.8.4	0	0	-5	0.3	0.87	0	-5	0	0	0
1	8	4	1.8.5	0	0	-5	0.3	0.87	0	-5	0	0	0
1	8	5	1.8.6	0	0	-5	0.3	0.87	0	-5	0	0	0
1	8	6	1.8.7	0	0	-4	0.2	0.87	0	-4	0	0	0
1	8	7	1.8.8	0	3	-3	0.2	0.87	2.854	-2.908	3327.334	0	0
1	8	8	1.8.9	0	38	-2	0.1	0.87	35.86	-0.588	73312.522	61.202218	61.202218
1	8	9	1.8.10	26	115	-1	0.1	0.87	136.666	4.412	293730.726	273.810128	273.810128
1	8	10	1.8.11	219	163	-1	0.1	0.87	338.028	12.413	728471.353	693.146166	693.146166
1	8	11	1.8.12	0	95	-1	0.2	0.87	90.845	2.475	192278.813	175.95306	175.95306
1	8	12	1.8.13	85	186	-1	0.2	0.87	260.889	8.999	561044.374	531.651791	531.651791
1	8	13	1.8.14	23	147	-1	0.3	0.87	163.113	5.056	350697.684	328.758521	328.758521
1	8	14	1.8.15	191	116	-1	0.3	0.87	241.59	8.001	526325.053	498.162713	498.162713
1	8	15	1.8.16	491	54	-2	0.3	0.87	259.163	7.514	536657.615	508.129152	508.129152
1	8	16	1.8.17	0	0	-3	0.3	0.87	0	0	0	0	0
1	8	17	1.8.18	0	0	-4	0.3	0.87	0	-4	0	0	0
1	8	18	1.8.19	0	0	-4	0.4	0.87	0	-4	0	0	0
1	8	19	1.8.20	0	0	-5	0.4	0.87	0	-5	0	0	0
1	8	20	1.8.21	0	0	-6	0.4	0.87	0	-6	0	0	0
1	8	21	1.8.22	0	0	-6	0.4	0.87	0	-6	0	0	0
1	8	22	1.8.23	0	0	-7	0.4	0.87	0	-7	0	0	0
1	8	23	1.8.24	0	0	-7	0.4	0.87	0	-7	0	0	0
1	9	0	1.9.1	0	0	-8	0.3	0.87	0	-8	0	0	0
1	9	1	1.9.2	0	0	-8	0.3	0.87	0	-8	0	0	0
1	9	2	1.9.3	0	0	-9	0.3	0.87	0	-9	0	0	0
1	9	3	1.9.4	0	0	-9	0.3	0.87	0	-9	0	0	0
1	9	4	1.9.5	0	0	-9	0.3	0.87	0	-9	0	0	0
1	9	5	1.9.6	0	0	-10	0.3	0.87	0	-10	0	0	0
1	9	6	1.9.7	0	0	-10	0.3	0.87	0	-10	0	0	0
1	9	7	1.9.8	236	11	-9	0.3	0.87	26.22	-8.249	29585.226	19.024354	19.024354
1	9	8	1.9.9	678	43	-7	0.4	0.87	326.605	4.664	693956.544	659.854354	659.854354
1	9	9	1.9.10	841	61	-6	0.4	0.87	547.549	13.856	1199781.954	1147.756359	1147.756359
1	9	10	1.9.11	914	71	-5	0.4	0.87	703.324	20.488	1501349.902	1438.638556	1438.638556
1	9	11	1.9.12	943	75	-4	0.4	0.87	781.497	24.301	1639623.342	1572.012418	1572.012418
1	9	12	1.9.13	941	75	-3	0.4	0.87	777.891	25.171	1626992.208	1559.828856	1559.828856
1	9	13	1.9.14	906	71	-3	0.4	0.87	691.884	22.075	1468708.834	1407.15409	1407.15409
1	9	14	1.9.15	835	59	-4	0.4	0.87	532.935	15.326	1161317.255	1110.654617	1110.654617
1	9	15	1.9.16	677	40	-5	0.3	0.87	313.563	6.51	654273.892	621.577817	621.577817
1	9	16	1.9.17	0	0	-7	0.3	0.87	0	0	0	0	0
1	9	17	1.9.18	0	0	-8	0.3	0.87	0	-8	0	0	0
1	9	18	1.9.19	0	0	-9	0.3	0.87	0	-9	0	0	0
1	9	19	1.9.20	0	0	-10	0.3	0.87	0	-10	0	0	0
1	9	20	1.9.21	0	0	-10	0.4	0.87	0	-10	0	0	0
1	9	21	1.9.22	0	0	-11	0.4	0.87	0	-11	0	0	0
1	9	22	1.9.23	0	0	-11	0.4	0.87	0	-11	0	0	0
1	9	23	1.9.24	0	0	-12	0.4	0.87	0	-12	0	0	0
1	10	0	1.10.1	0	0	-13	0.4	0.87	0	-13	0	0	0
1	10	1	1.10.2	0	0	-13	0.4	0.87	0	-13	0	0	0
1	10	2	1.10.3	0	0	-14	0.5	0.87	0	-14	0	0	0
1	10	3	1.10.4	0	0	-14	0.5	0.87	0	-14	0	0	0
1	10	4	1.10.5	0	0	-14	0.5	0.87	0	-14	0	0	0
1	10	5	1.10.6	0	0	-14	0.5	0.87	0	-14	0	0	0
1	10	6	1.10.7	0	0	-14	0.5	0.87	0	-14	0	0	0
1	10	7	1.10.8	230	11	-13	0.4	0.87	26.233	-12.271	30091.719	19.512899	19.512899
1	10	8	1.10.9	667	44	-10	0.3	0.87	323.387	1.907	694083.458	659.976771	659.976771
1	10	9	1.10.10	826	61	-8	0.3	0.87	539.784	12.178	1189728.735	1138.059365	1138.059365
1	10	10	1.10.11	458	129	-6	0.3	0.87	466.88	11.413	1021651.685	975.937953	975.937953
1	10	11	1.10.12	927	76	-4	0.3	0.87	772.582	24.839	1617432.761	1550.608137	1550.608137
1	10	12	1.10.13	927	76	-4	0.4	0.87	770.832	23.914	1619516.498	1552.618039	1552.618039
1	10	13	1.10.14	624	95	-4	0.3	0.87	538.924	16.118	1165062.887	1114.267526	1114.267526
1	10	14	1.10.15	817	61	-4	0.3	0.87	527.52	15.719	1147616.054	1097.438904	1097.438904
1	10	15	1.10.16	656	42	-6	0.3	0.87	309.363	5.364	649746.876	617.211211	617.211211
1	10	16	1.10.17	0	0	-8	0.3	0.87	0	0	0	0	0
1	10	17	1.10.18	0	0	-9	0.4	0.87	0	-9	0	0	0
1	10	18	1.10.19	0	0	-10	0.4	0.87	0	-10	0	0	0
1	10	19	1.10.20	0	0	-10	0.4	0.87	0	-10	0	0	0
1	10	20	1.10.21	0	0	-10	0.4	0.87	0	-10	0	0	0
1	10	21	1.10.22	0	0	-10	0.3	0.87	0	-10	0	0	0
1	10	22	1.10.23	0	0	-10	0.3	0.87	0	-10	0	0	0
1	10	23	1.10.24	0	0	-10	0.3	0.87	0	-10	0	0	0
1	11	0	1.11.1	0	0	-11	0.4	0.87	0	-11	0	0	0
1	11	1	1.11.2	0	0	-11	0.4	0.87	0	-11	0	0	0
1	11	2	1.11.3	0	0	-11	0.3	0.87	0	-11	0	0	0
1	11	3	1.11.4	0	0	-11	0.3	0.87	0	-11	0	0	0
1	11	4	1.11.5	0	0	-11	0.3	0.87	0	-11	0	0	0
1	11	5	1.11.6	0	0	-11	0.4	0.87	0	-11	0	0	0
1	11	6	1.11.7	0	0	-10	0.3	0.87	0	-10	0	0	0
1	11	7	1.11.8	122	12	-8	0.2	0.87	19.963	-7.394	23230.021	12.894339	12.894339
1	11	8	1.11.9	540	57	-5	0.2	0.87	290.248	6.033	613614.205	582.358863	582.358863
1	11	9	1.11.10	721	82	-3	0.3	0.87	508.874	16.013	1103662.07	1055.042385	1055.042385
1	11	10	1.11.11	815	93	-1	0.3	0.87	668.099	23.948	1405825.994	1346.49944	1346.49944
1	11	11	1.11.12	852	98	0	0.3	0.87	744.636	27.787	1540155.885	1476.069489	1476.069489
1	11	12	1.11.13	852	97	0	0.3	0.87	742.268	27.699	1535950.473	1472.01309	1472.01309
1	11	13	1.11.14	655	89	0	0.3	0.87	553.983	20.683	1178378.839	1127.111642	1127.111642
1	11	14	1.11.15	416	96	0	0.2	0.87	350.022	13.48	758954.341	722.549021	722.549021
1	11	15	1.11.16	177	67	-2	0.2	0.87	151.276	3.751	316904.656	296.162914	296.162914
1	11	16	1.11.17	0	0	-4	0.2	0.87	0	0	0	0	0
1	11	17	1.11.18	0	0	-5	0.2	0.87	0	-5	0	0	0
1	11	18	1.11.19	0	0	-5	0.2	0.87	0	-5	0	0	0
1	11	19	1.11.20	0	0	-5	0.2	0.87	0	-5	0	0	0
1	11	20	1.11.21	0	0	-4	0.2	0.87	0	-4	0	0	0
1	11	21	1.11.22	0	0	-4	0.2	0.87	0	-4	0	0	0
1	11	22	1.11.23	0	0	-4	0.2	0.87	0	-4	0	0	0
1	11	23	1.11.24	0	0	-4	0.2	0.87	0	-4	0	0	0
1	12	0	1.12.1	0	0	-5	0.2	0.87	0	-5	0	0	0
1	12	1	1.12.2	0	0	-5	0.2	0.87	0	-5	0	0	0
1	12	2	1.12.3	0	0	-5	0.2	0.87	0	-5	0	0	0
1	12	3	1.12.4	0	0	-5	0.2	0.87	0	-5	0	0	0
1	12	4	1.12.5	0	0	-5	0.2	0.87	0	-5	0	0	0
1	12	5	1.12.6	0	0	-5	0.2	0.87	0	-5	0	0	0
1	12	6	1.12.7	0	0	-5	0.2	0.87	0	-5	0	0	0
1	12	7	1.12.8	0	9	-4	0.2	0.87	8.562	-3.725	10520.503	0.63517	0.63517
1	12	8	1.12.9	430	68	-2	0.2	0.87	259.012	7.851	543520.787	514.749135	514.749135
1	12	9	1.12.10	353	107	-1	0.3	0.87	331.013	11.349	721312.648	686.241123	686.241123
1	12	10	1.12.11	112	170	0	0.4	0.87	266.225	9.603	573710.54	543.869144	543.869144
1	12	11	1.12.12	324	177	0	0.4	0.87	443.293	16.009	946834.447	903.771788	903.771788
1	12	12	1.12.13	834	102	0	0.4	0.87	741.013	26.821	1537625.529	1473.628793	1473.628793
1	12	13	1.12.14	832	86	0	0.5	0.87	665.997	23.427	1404815.845	1345.525084	1345.525084
1	12	14	1.12.15	781	67	0	0.5	0.87	518.625	18.257	1117176.473	1068.077918	1068.077918
1	12	15	1.12.16	639	45	-2	0.4	0.87	309.329	9.038	644325.845	611.982268	611.982268
1	12	16	1.12.17	182	11	-3	0.4	0.87	21.201	-2.405	23515.87	13.170059	13.170059
1	12	17	1.12.18	0	0	-4	0.5	0.87	0	-4	0	0	0
1	12	18	1.12.19	0	0	-5	0.5	0.87	0	-5	0	0	0
1	12	19	1.12.20	0	0	-6	0.4	0.87	0	-6	0	0	0
1	12	20	1.12.21	0	0	-7	0.4	0.87	0	-7	0	0	0
1	12	21	1.12.22	0	0	-8	0.4	0.87	0	-8	0	0	0
1	12	22	1.12.23	0	0	-9	0.4	0.87	0	-9	0	0	0
1	12	23	1.12.24	0	0	-10	0.4	0.87	0	-10	0	0	0
1	13	0	1.13.1	0	0	-10	0.4	0.87	0	-10	0	0	0
1	13	1	1.13.2	0	0	-10	0.4	0.87	0	-10	0	0	0
1	13	2	1.13.3	0	0	-10	0.4	0.87	0	-10	0	0	0
1	13	3	1.13.4	0	0	-9	0.4	0.87	0	-9	0	0	0
1	13	4	1.13.5	0	0	-9	0.4	0.87	0	-9	0	0	0
1	13	5	1.13.6	0	0	-10	0.4	0.87	0	-10	0	0	0
1	13	6	1.13.7	0	0	-10	0.4	0.87	0	-10	0	0	0
1	13	7	1.13.8	219	12	-9	0.4	0.87	27.734	-8.228	31440.353	20.813746	20.813746
1	13	8	1.13.9	7	64	-7	0.4	0.87	67.26	-4.588	143199.13	128.612466	128.612466
1	13	9	1.13.10	452	95	-5	0.4	0.87	372.271	8.481	823521.587	784.828393	784.828393
1	13	10	1.13.11	84	169	-3	0.4	0.87	237.335	5.557	516744.94	488.922062	488.922062
1	13	11	1.13.12	104	197	-1	0.4	0.87	287.759	9.369	619438.16	587.976453	587.976453
1	13	12	1.13.13	0	116	-1	0.4	0.87	112.374	3.04	238917.296	220.938956	220.938956
1	13	13	1.13.14	0	56	-1	0.3	0.87	52.873	0.961	110620.479	97.188205	97.188205

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
1	13	14	1.13.15	0	78	-1	0.2	0.87	75.117	1.877	159096.787	143.946806	143.946806
1	13	15	1.13.16	4	63	-2	0.2	0.87	65.085	0.482	135621.473	121.303315	121.303315
1	13	16	1.13.17	0	6	-3	0.2	0.87	5.708	-2.817	6861.492	0	0
1	13	17	1.13.18	0	0	-4	0.3	0.87	0	-4	0	0	0
1	13	18	1.13.19	0	0	-4	0.2	0.87	0	-4	0	0	0
1	13	19	1.13.20	0	0	-5	0.2	0.87	0	-5	0	0	0
1	13	20	1.13.21	0	0	-5	0.2	0.87	0	-5	0	0	0
1	13	21	1.13.22	0	0	-6	0.2	0.87	0	-6	0	0	0
1	13	22	1.13.23	0	0	-6	0.2	0.87	0	-6	0	0	0
1	13	23	1.13.24	0	0	-5	0.2	0.87	0	-5	0	0	0
1	14	0	1.14.1	0	0	-5	0.2	0.87	0	-5	0	0	0
1	14	1	1.14.2	0	0	-6	0.2	0.87	0	-6	0	0	0
1	14	2	1.14.3	0	0	-6	0.2	0.87	0	-6	0	0	0
1	14	3	1.14.4	0	0	-6	0.3	0.87	0	-6	0	0	0
1	14	4	1.14.5	0	0	-6	0.4	0.87	0	-6	0	0	0
1	14	5	1.14.6	0	0	-6	0.4	0.87	0	-6	0	0	0
1	14	6	1.14.7	0	0	-6	0.4	0.87	0	-6	0	0	0
1	14	7	1.14.8	84	14	-4	0.3	0.87	19.771	-3.409	23199.32	12.864726	12.864726
1	14	8	1.14.9	492	65	-1	0.1	0.87	279.433	9.979	583186.502	553.009336	553.009336
1	14	9	1.14.10	0	93	0	0	0.87	91.053	3.722	192814.518	176.469783	176.469783
1	14	10	1.14.11	230	167	1	0.1	0.87	350.843	14.92	749397.931	713.331233	713.331233
1	14	11	1.14.12	812	112	2	0.2	0.87	740.385	30.498	1513693.677	1450.544941	1450.544941
1	14	12	1.14.13	806	113	2	0.2	0.87	736.868	30.362	1507232.081	1444.312305	1444.312305
1	14	13	1.14.14	775	103	2	0.3	0.87	655.123	26.457	1364274.995	1306.420757	1306.420757
1	14	14	1.14.15	682	88	1	0.2	0.87	494.45	20.06	1055576.382	1008.660564	1008.660564
1	14	15	1.14.16	505	60	0	0.2	0.87	278.884	10.604	579833.619	549.775258	549.775258
1	14	16	1.14.17	100	13	-1	0.2	0.87	19.702	-0.397	22502.897	12.19298	12.19298
1	14	17	1.14.18	0	0	-1	0.2	0.87	0	-1	0	0	0
1	14	18	1.14.19	0	0	-2	0.2	0.87	0	-2	0	0	0
1	14	19	1.14.20	0	0	-2	0.2	0.87	0	-2	0	0	0
1	14	20	1.14.21	0	0	-2	0.2	0.87	0	-2	0	0	0
1	14	21	1.14.22	0	0	-3	0.2	0.87	0	-3	0	0	0
1	14	22	1.14.23	0	0	-2	0.3	0.87	0	-2	0	0	0
1	14	23	1.14.24	0	0	-2	0.3	0.87	0	-2	0	0	0
1	15	0	1.15.1	0	0	-2	0.3	0.87	0	-2	0	0	0
1	15	1	1.15.2	0	0	-1	0.3	0.87	0	-1	0	0	0
1	15	2	1.15.3	0	0	-1	0.3	0.87	0	-1	0	0	0
1	15	3	1.15.4	0	0	-2	0.3	0.87	0	-2	0	0	0
1	15	4	1.15.5	0	0	-2	0.2	0.87	0	-2	0	0	0
1	15	5	1.15.6	0	0	-2	0.2	0.87	0	-2	0	0	0
1	15	6	1.15.7	0	0	-2	0.2	0.87	0	-2	0	0	0
1	15	7	1.15.8	0	7	-1	0.3	0.87	6.659	-0.793	7981.603	0	0
1	15	8	1.15.9	415	71	0	0.2	0.87	256.842	9.774	536210.605	507.697981	507.697981
1	15	9	1.15.10	0	43	2	0.2	0.87	40.567	3.554	83366.49	70.899933	70.899933
1	15	10	1.15.11	53	166	3	0.3	0.87	212.637	10.898	451473.876	425.963812	425.963812
1	15	11	1.15.12	659	106	4	0.3	0.87	623.228	27.243	1288929.084	1233.744652	1233.744652
1	15	12	1.15.13	673	103	5	0.3	0.87	630.016	28.497	1297081.193	1241.607899	1241.607899
1	15	13	1.15.14	469	132	5	0.4	0.87	480.477	22.381	1009624.447	964.336889	964.336889
1	15	14	1.15.15	177	140	4	0.3	0.87	257.78	13.6	550197.423	521.189191	521.189191
1	15	15	1.15.16	0	53	2	0.3	0.87	51.619	3.909	105417.656	92.169739	92.169739
1	15	16	1.15.17	0	17	1	0.3	0.87	16.172	1.504	19939.098	9.720026	9.720026
1	15	17	1.15.18	0	0	0	0.3	0.87	0	0	0	0	0
1	15	18	1.15.19	0	0	0	0.3	0.87	0	0	0	0	0
1	15	19	1.15.20	0	0	0	0.2	0.1	0	0	0	0	0
1	15	20	1.15.21	0	0	-1	0.2	0.1	0	-1	0	0	0
1	15	21	1.15.22	0	0	-1	0.2	0.1	0	-1	0	0	0
1	15	22	1.15.23	0	0	-1	0.2	0.1	0	-1	0	0	0
1	15	23	1.15.24	0	0	-1	0.2	0.1	0	-1	0	0	0
1	16	0	1.16.1	0	0	-1	0.2	0.1	0	-1	0	0	0
1	16	1	1.16.2	0	0	-1	0.3	0.1	0	-1	0	0	0
1	16	2	1.16.3	0	0	-1	0.3	0.1	0	-1	0	0	0
1	16	3	1.16.4	0	0	-2	0.3	0.1	0	-2	0	0	0
1	16	4	1.16.5	0	0	-2	0.3	0.1	0	-2	0	0	0
1	16	5	1.16.6	0	0	-2	0.3	0.1	0	-2	0	0	0
1	16	6	1.16.7	0	0	-2	0.3	0.1	0	-2	0	0	0
1	16	7	1.16.8	0	17	-1	0.3	0.1	16.172	-0.496	20120.346	9.894852	9.894852
1	16	8	1.16.9	583	49	0	0.3	0.1	299.314	11.038	624036.113	592.411483	592.411483
1	16	9	1.16.10	759	64	2	0.3	0.1	507.253	20.969	1083759.15	1035.844704	1035.844704
1	16	10	1.16.11	842	71	3	0.4	0.1	658.621	26.876	1374711.452	1316.48741	1316.48741
1	16	11	1.16.12	878	73	4	0.4	0.1	737.512	30.717	1512656.403	1449.544422	1449.544422
1	16	12	1.16.13	882	72	5	0.3	0.1	739.582	32.619	1505836.967	1442.966626	1442.966626
1	16	13	1.16.14	849	69	5	0.3	0.1	661.948	29.737	1366733.565	1308.792211	1308.792211
1	16	14	1.16.15	772	61	4	0.2	0.1	512.556	23.779	1083938.702	1036.017894	1036.017894
1	16	15	1.16.16	614	45	1	0.2	0.1	305.905	12.644	635004.641	602.991352	602.991352
1	16	16	1.16.17	0	20	0	0.2	0.1	19.026	0.612	23717.274	13.364327	13.364327
1	16	17	1.16.18	0	0	0	0.2	0.1	0	0	0	0	0
1	16	18	1.16.19	0	0	0	0.2	0.1	0	0	0	0	0
1	16	19	1.16.20	0	0	0	0.2	0.1	0	0	0	0	0
1	16	20	1.16.21	0	0	-1	0.2	0.1	0	-1	0	0	0
1	16	21	1.16.22	0	0	-1	0.2	0.1	0	-1	0	0	0
1	16	22	1.16.23	0	0	-1	0.2	0.1	0	-1	0	0	0
1	16	23	1.16.24	0	0	-1	0.2	0.1	0	-1	0	0	0
1	17	0	1.17.1	0	0	-1	0.2	0.1	0	-1	0	0	0
1	17	1	1.17.2	0	0	-1	0.2	0.1	0	-1	0	0	0
1	17	2	1.17.3	0	0	-1	0.3	0.1	0	-1	0	0	0
1	17	3	1.17.4	0	0	-1	0.4	0.1	0	-1	0	0	0
1	17	4	1.17.5	0	0	-2	0.4	0.1	0	-2	0	0	0
1	17	5	1.17.6	0	0	-2	0.3	0.1	0	-2	0	0	0
1	17	6	1.17.7	0	0	-1	0.2	0.1	0	-1	0	0	0
1	17	7	1.17.8	0	10	0	0.2	0.1	9.513	0.306	11523.547	1.602671	1.602671
1	17	8	1.17.9	35	69	0	0.2	0.1	86.32	3.296	180743.676	164.826659	164.826659
1	17	9	1.17.10	74	129	1	0.2	0.1	176.871	7.796	381549.809	358.517432	358.517432
1	17	10	1.17.11	138	176	2	0.3	0.1	287.222	12.693	615847.435	584.512962	584.512962
1	17	11	1.17.12	0	119	2	0.2	0.1	113.271	6.337	239051.318	221.068229	221.068229
1	17	12	1.17.13	0	63	2	0.2	0.1	58.452	4.238	121414.262	107.599522	107.599522
1	17	13	1.17.14	0	71	2	0.2	0.1	65.892	4.525	137752.153	123.358496	123.358496
1	17	14	1.17.15	0	15	1	0.2	0.1	13.877	1.532	27683.036	17.189566	17.189566
1	17	15	1.17.16	0	13	1	0.2	0.1	12.018	1.459	23539.457	13.19281	13.19281
1	17	16	1.17.17	0	1	1	0.2	0.1	0.951	1.031	0	0	0
1	17	17	1.17.18	0	0	1	0.3	0.1	0	1	0	0	0
1	17	18	1.17.19	0	0	1	0.4	0.1	0	1	0	0	0
1	17	19	1.17.20	0	0	1	0.4	0.1	0	1	0	0	0
1	17	20	1.17.21	0	0	1	0.5	0.1	0	1	0	0	0
1	17	21	1.17.22	0	0	1	0.5	0.1	0	1	0	0	0
1	17	22	1.17.23	0	0	1	0.6	0.1	0	1	0	0	0
1	17	23	1.17.24	0	0	1	0.6	0.1	0	1	0	0	0
1	18	0	1.18.1	0	0	1	0.6	0.1	0	1	0	0	0
1	18	1	1.18.2	0	0	1	0.7	0.1	0	1	0	0	0
1	18	2	1.18.3	0	0	1	0.8	0.1	0	1	0	0	0
1	18	3	1.18.4	0	0	1	0.8	0.1	0	1	0	0	0
1	18	4	1.18.5	0	0	0	0.7	0.1	0	0	0	0	0
1	18	5	1.18.6	0	0	0	0.7	0.1	0	0	0	0	0
1	18	6	1.18.7	0	0	0	0.7	0.1	0	0	0	0	0
1	18	7	1.18.8	124	14	0	0.7	0.1	24.437	0.638	27511.911	17.024504	17.024504
1	18	8	1.18.9	523	51	0	0.7	0.1	278.466	9.147	584953.454	554.713678	554.713678
1	18	9	1.18.10	0	38	0	0.7	0.1	35.202	1.165	73075.977	60.974055	60.974055
1	18	10	1.18.11	0	103	1	0.6	0.1	97.596	4.317	207123.896	190.272123	190.272123
1	18	11	1.18.12	7	162	2	0.5	0.1	163.505	7.716	347649.578	325.818422	325.818422
1	18	12	1.18.13	826	79	2	0.5	0.1	710.952	27.001	1477917.484	1416.036441	1416.036441
1	18	13	1.18.14	814	71	3	0.4	0.1	645.118	26.383	1348289.714	1291.001898	1291.001898
1	18	14	1.18.15	730	66	2	0.3	0.1	498.771	20.651	1066440.573	1019.139793	1019.139793
1	18	15	1.18.16	566	50	1	0.2	0.1	298.145	12.363	622210.956	590.650997	590.650997
1	18	16	1.18.17	0	23	0	0.2	0.1	21.88	0.703	27425.83	16.941474	16.941474
1	18	17	1.18.18	0	0	0	0.3	0.1	0	0	0	0	0
1	18	18	1.18.19	0	0	-1	0.4	0.1	0	-1	0	0	0
1	18	19	1.18.20	0	0	0	0.5	0.1	0	0	0	0	0
1	18	20	1.18.21	0	0	0	0.6	0.1	0	0	0	0	0
1	18	21	1.18.22	0	0	0	0.6	0.1	0	0	0	0	0
1	18	22	1.18.23	0	0	0	0.5	0.1	0	0	0	0	0
1	18	23	1.18.24	0	0	0	0.5	0.1	0	0	0	0	0
1	19	0	1.19.1	0	0	0	0.5	0.1	0	0	0	0	0
1	19	1	1.19.2	0	0	0	0.6	0.1	0	0	0	0	0
1	19	2	1.19.3	0	0	0	0.5	0.1	0	0	0	0	0
1	19	3	1.19.4	0	0	0	0.5	0.1	0	0	0	0	0
1	19	4	1.19.5	0	0	0	0.5	0.1	0	0	0	0	0
1	19	5	1.19.6	0	0	0	0.5	0.1	0	0	0	0	0
1	19	6	1.19.7	0	0	0	0.4	0.1	0	0	0	0	0
1	19	7	1.19.8	0	8	0	0.2	0.1	7.61	0.245	9130.623	0	0
1	19	8	1.19.9	0	18	1	0.2	0.1	16.649	1.636	33038.654	22.355413	22.355413
1	19	9	1.19.10	0	23	1	0.2	0.1	21.288	1.817	43182.691	32.140006	32.140006
1	19	10	1.19.11	0	63	2	0.2	0.1	58.446	4.24	121745.974	107.91948	107.91948
1	19	11	1.19.12	0	72	2	0.2	0.1	66.829	4.559	139286.441	124.838418	124.838418
1	19	12	1.19.13	0	54	2	0.1	0.1	50.085	3.981	103476.273	90.297147	90.297147
1	19	13	1.19.14	0	47	2	0.1	0.1	43.571	3.724	89902.114	77.203974	77.203974
1	19	14	1.19.15	0	61	2	0.1	0.1	56.584	4.242	118154.322	104.455095	104.455095
1	19	15	1.19.16	0	51	1	0.1	0.1	48.073	2.899	99235.797	86.206928	86.206928
1	19	16	1.19.17	0	5	0	0.2	0.1	4.619	0.148	5415.724	0	0
1	19	17	1.19.18	0	0	0	0.3	0.1	0	0	0	0	0
1	19	18	1.19.19	0	0	0	0.4	0.1	0	0	0	0	0
1	19	19	1.19.20	0	0	0	0.4	0.1	0	0	0	0	0
1	19	20	1.19.21	0	0	0	0.5	0.1	0	0	0	0	0

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

											Reference Case	Adjusted Case
											3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
1	19	21	1.19.22	0	0	-1	0.5	0.1	0	-1	0	0	0
1	19	22	1.19.23	0	0	-1	0.5	0.1	0	-1	0	0	0
1	19	23	1.19.24	0	0	-2	0.5	0.1	0	-2	0	0	0
1	20	0	1.20.1	0	0	-2	0.6	0.1	0	-2	0	0	0
1	20	1	1.20.2	0	0	-2	0.5	0.1	0	-2	0	0	0
1	20	2	1.20.3	0	0	-2	0.4	0.1	0	-2	0	0	0
1	20	3	1.20.4	0	0	-2	0.3	0.1	0	-2	0	0	0
1	20	4	1.20.5	0	0	-2	0.3	0.1	0	-2	0	0	0
1	20	5	1.20.6	0	0	-3	0.3	0.1	0	-3	0	0	0
1	20	6	1.20.7	0	0	-3	0.3	0.1	0	-3	0	0	0
1	20	7	1.20.8	0	4	-2	0.3	0.1	3.805	-1.881	4471.534	0	0
1	20	8	1.20.9	0	7	0	0.3	0.1	6.468	0.24	12407.935	2.455723	2.455723
1	20	9	1.20.10	629	94	1	0.3	0.1	473.93	18.712	1017900.531	972.319718	972.319718
1	20	10	1.20.11	162	181	2	0.4	0.1	309.378	13.174	663548.657	630.523939	630.523939
1	20	11	1.20.12	149	215	2	0.4	0.1	348.045	14.556	741345.398	705.564033	705.564033
1	20	12	1.20.13	39	190	2	0.4	0.1	227.24	10.186	484378.222	457.702226	457.702226
1	20	13	1.20.14	233	178	2	0.3	0.1	364.21	15.567	778416.834	741.321881	741.321881
1	20	14	1.20.15	705	79	1	0.3	0.1	506.122	19.921	1084237.661	1036.30626	1036.30626
1	20	15	1.20.16	571	55	0	0.3	0.1	308.806	11.42	649962.291	617.418993	617.418993
1	20	16	1.20.17	217	18	0	0.3	0.1	51.162	1.498	59000.11	47.396951	47.396951
1	20	17	1.20.18	0	0	-1	0.3	0.1	0	-1	0	0	0
1	20	18	1.20.19	0	0	-2	0.3	0.1	0	-2	0	0	0
1	20	19	1.20.20	0	0	-2	0.3	0.1	0	-2	0	0	0
1	20	20	1.20.21	0	0	-3	0.3	0.1	0	-3	0	0	0
1	20	21	1.20.22	0	0	-3	0.3	0.1	0	-3	0	0	0
1	20	22	1.20.23	0	0	-3	0.3	0.1	0	-3	0	0	0
1	20	23	1.20.24	0	0	-4	0.3	0.1	0	-4	0	0	0
1	21	0	1.21.1	0	0	-4	0.3	0.1	0	-4	0	0	0
1	21	1	1.21.2	0	0	-4	0.3	0.1	0	-4	0	0	0
1	21	2	1.21.3	0	0	-5	0.3	0.1	0	-5	0	0	0
1	21	3	1.21.4	0	0	-5	0.3	0.1	0	-5	0	0	0
1	21	4	1.21.5	0	0	-5	0.3	0.1	0	-5	0	0	0
1	21	5	1.21.6	0	0	-6	0.4	0.1	0	-6	0	0	0
1	21	6	1.21.7	0	0	-6	0.5	0.1	0	-6	0	0	0
1	21	7	1.21.8	285	15	-4	0.5	0.1	43.474	-2.84	48118.765	36.901175	36.901175
1	21	8	1.21.9	685	43	-1	0.3	0.1	333.681	11.319	699360.307	665.066641	665.066641
1	21	9	1.21.10	834	56	0	0.2	0.1	545.551	21.054	1166730.212	1115.875772	1115.875772
1	21	10	1.21.11	892	65	1	0.2	0.1	688.211	27.536	1432602.405	1372.327056	1372.327056
1	21	11	1.21.12	918	69	2	0.2	0.1	766.402	31.527	1565853.082	1500.856131	1500.856131
1	21	12	1.21.13	917	69	3	0.2	0.1	767.454	32.566	1561541.659	1496.697479	1496.697479
1	21	13	1.21.14	887	67	3	0.3	0.1	692.29	28.867	1433274.919	1372.97574	1372.97574
1	21	14	1.21.15	822	59	2	0.2	0.1	549.852	23.219	1166197.412	1115.361851	1115.361851
1	21	15	1.21.16	685	45	1	0.4	0.1	344.13	13.349	721730.565	686.644231	686.644231
1	21	16	1.21.17	0	33	0	0.8	0.1	36.469	0.984	46606.332	35.442334	35.442334
1	21	17	1.21.18	0	0	0	0.9	0.1	0	0	0	0	0
1	21	18	1.21.19	0	0	0	0.8	0.1	0	0	0	0	0
1	21	19	1.21.20	0	0	0	0.7	0.1	0	0	0	0	0
1	21	20	1.21.21	0	0	0	0.6	0.1	0	0	0	0	0
1	21	21	1.21.22	0	0	-1	0.7	0.1	0	-1	0	0	0
1	21	22	1.21.23	0	0	-2	0.9	0.1	0	-2	0	0	0
1	21	23	1.21.24	0	0	-3	0.8	0.1	0	-3	0	0	0
1	22	0	1.22.1	0	0	-4	0.6	0.1	0	-4	0	0	0
1	22	1	1.22.2	0	0	-5	0.5	0.1	0	-5	0	0	0
1	22	2	1.22.3	0	0	-5	0.4	0.1	0	-5	0	0	0
1	22	3	1.22.4	0	0	-5	0.3	0.1	0	-5	0	0	0
1	22	4	1.22.5	0	0	-5	0.3	0.1	0	-5	0	0	0
1	22	5	1.22.6	0	0	-5	0.3	0.1	0	-5	0	0	0
1	22	6	1.22.7	0	0	-5	0.3	0.1	0	-5	0	0	0
1	22	7	1.22.8	0	10	-4	0.3	0.1	9.513	-3.704	11741.091	1.812507	1.812507
1	22	8	1.22.9	285	68	-2	0.3	0.1	201.753	5.459	429060.326	404.344463	404.344463
1	22	9	1.22.10	405	110	0	0.3	0.1	364.428	13.608	791804.35	754.235024	754.235024
1	22	10	1.22.11	510	132	1	0.4	0.1	509.394	19.439	1085575.208	1037.596412	1037.596412
1	22	11	1.22.12	461	165	2	0.5	0.1	542.701	21.05	1144971.998	1094.888538	1094.888538
1	22	12	1.22.13	517	153	2	0.5	0.1	571.952	22.082	1203711.821	1151.546976	1151.546976
1	22	13	1.22.14	499	137	2	0.5	0.1	510.952	19.955	1086174.727	1038.174687	1038.174687
1	22	14	1.22.15	322	125	1	0.4	0.1	329.514	12.93	714914.468	680.069656	680.069656
1	22	15	1.22.16	242	75	0	0.4	0.1	189.268	6.801	402541.366	378.765175	378.765175
1	22	16	1.22.17	72	20	0	0.3	0.1	34.367	1.037	41247.772	30.27365	30.27365
1	22	17	1.22.18	0	0	-1	0.3	0.1	0	-1	0	0	0
1	22	18	1.22.19	0	0	-2	0.3	0.1	0	-2	0	0	0
1	22	19	1.22.20	0	0	-3	0.3	0.1	0	-3	0	0	0
1	22	20	1.22.21	0	0	-3	0.3	0.1	0	-3	0	0	0
1	22	21	1.22.22	0	0	-4	0.3	0.1	0	-4	0	0	0
1	22	22	1.22.23	0	0	-4	0.4	0.1	0	-4	0	0	0
1	22	23	1.22.24	0	0	-5	0.4	0.1	0	-5	0	0	0
1	23	0	1.23.1	0	0	-6	0.4	0.1	0	-6	0	0	0
1	23	1	1.23.2	0	0	-6	0.4	0.1	0	-6	0	0	0
1	23	2	1.23.3	0	0	-7	0.4	0.1	0	-7	0	0	0
1	23	3	1.23.4	0	0	-8	0.4	0.1	0	-8	0	0	0
1	23	4	1.23.5	0	0	-8	0.5	0.1	0	-8	0	0	0
1	23	5	1.23.6	0	0	-9	0.5	0.1	0	-9	0	0	0
1	23	6	1.23.7	0	0	-9	0.6	0.1	0	-9	0	0	0
1	23	7	1.23.8	333	16	-7	0.5	0.1	58.339	-5.433	66678.362	54.803132	54.803132
1	23	8	1.23.9	729	43	-4	0.3	0.1	353.094	9.043	748659.742	712.6192	712.6192
1	23	9	1.23.10	873	55	-1	0.3	0.1	565.557	20.155	1214176.3	1161.640656	1161.640656
1	23	10	1.23.11	939	60	0	0.2	0.1	717.89	27.68	1493394.463	1430.96501	1430.96501
1	23	11	1.23.12	963	63	1	0.2	0.1	797.049	31.707	1626717.121	1559.563515	1559.563515
1	23	12	1.23.13	962	64	2	0.2	0.1	799.922	32.816	1625276.133	1558.173587	1558.173587
1	23	13	1.23.14	926	64	2	0.2	0.1	720.625	29.781	1486299.412	1424.121364	1424.121364
1	23	14	1.23.15	862	57	1	0.2	0.1	571.757	23.066	1213976.774	1161.4482	1161.4482
1	23	15	1.23.16	727	45	0	0.4	0.1	365.713	13.138	771490.365	734.640844	734.640844
1	23	16	1.23.17	377	19	0	0.7	0.1	81.243	2.079	92399.407	79.612778	79.612778
1	23	17	1.23.18	0	0	0	0.8	0.1	0	0	0	0	0
1	23	18	1.23.19	0	0	-1	0.9	0.1	0	-1	0	0	0
1	23	19	1.23.20	0	0	-1	0.9	0.1	0	-1	0	0	0
1	23	20	1.23.21	0	0	-2	0.9	0.1	0	-2	0	0	0
1	23	21	1.23.22	0	0	-3	1	0.1	0	-3	0	0	0
1	23	22	1.23.23	0	0	-4	0.9	0.1	0	-4	0	0	0
1	23	23	1.23.24	0	0	-5	0.8	0.1	0	-5	0	0	0
1	24	0	1.24.1	0	0	-6	0.6	0.1	0	-6	0	0	0
1	24	1	1.24.2	0	0	-6	0.6	0.1	0	-6	0	0	0
1	24	2	1.24.3	0	0	-6	0.7	0.1	0	-6	0	0	0
1	24	3	1.24.4	0	0	-6	0.8	0.1	0	-6	0	0	0
1	24	4	1.24.5	0	0	-6	0.7	0.1	0	-6	0	0	0
1	24	5	1.24.6	0	0	-6	0.8	0.1	0	-6	0	0	0
1	24	6	1.24.7	0	0	-6	0.7	0.1	0	-6	0	0	0
1	24	7	1.24.8	0	17	-4	0.4	0.1	16.157	-3.512	20357.722	10.123817	10.123817
1	24	8	1.24.9	73	77	-1	0.3	0.1	115.22	3.268	244475.288	226.300007	226.300007
1	24	9	1.24.10	70	137	1	0.3	0.1	183.072	7.816	395031.497	371.52141	371.52141
1	24	10	1.24.11	25	166	2	0.4	0.1	180.754	8.515	385807.578	362.624331	362.624331
1	24	11	1.24.12	1	158	3	0.4	0.1	154.001	8.542	325102.483	304.070259	304.070259
1	24	12	1.24.13	0	101	4	0.4	0.1	94.751	7.409	197530.077	181.018251	181.018251
1	24	13	1.24.14	0	49	3	0.3	0.1	45.432	4.687	93415.724	80.593083	80.593083
1	24	14	1.24.15	0	12	3	0.3	0.1	11.101	3.413	21738.335	11.455509	11.455509
1	24	15	1.24.16	0	17	2	0.3	0.1	15.723	2.583	31170.175	20.553142	20.553142
1	24	16	1.24.17	0	3	2	0.4	0.1	2.769	2.084	3139.199	0	0
1	24	17	1.24.18	0	0	2	0.4	0.1	0	2	0	0	0
1	24	18	1.24.19	0	0	3	0.4	0.1	0	3	0	0	0
1	24	19	1.24.20	0	0	3	0.4	0.11	0	3	0	0	0
1	24	20	1.24.21	0	0	3	0.3	0.11	0	3	0	0	0
1	24	21	1.24.22	0	0	4	0.3	0.11	0	4	0	0	0
1	24	22	1.24.23	0	0	4	0.3	0.11	0	4	0	0	0
1	24	23	1.24.24	0	0	4	0.3	0.11	0	4	0	0	0
1	25	0	1.25.1	0	0	4	0.3	0.11	0	4	0	0	0
1	25	1	1.25.2	0	0	5	0.4	0.11	0	5	0	0	0
1	25	2	1.25.3	0	0	5	0.4	0.11	0	5	0	0	0
1	25	3	1.25.4	0	0	5	0.5	0.11	0	5	0	0	0
1	25	4	1.25.5	0	0	6	0.5	0.11	0	6	0	0	0
1	25	5	1.25.6	0	0	6	0.6	0.11	0	6	0	0	0
1	25	6	1.25.7	0	0	7	0.6	0.11	0	7	0	0	0
1	25	7	1.25.8	0	4	8	0.8	0.11	3.694	8.1	4113.613	0	0
1	25	8	1.25.9	0	5	9	1	0.11	4.62	9.141	8380.491	0	0
1	25	9	1.25.10	0	14	10	1.1	0.11	12.955	10.386	24738.75	14.349607	14.349607
1	25	10	1.25.11	0	7	11	1.2	0.11	6.48	11.188	11874.066	1.940771	1.940771
1	25	11	1.25.12	0	56	12	1.2	0.11	51.96	13.508	103191.211	90.022186	90.022186
1	25	12	1.25.13	0	17	12	1.3	0.11	15.75	12.446	29805.721	19.237035	19.237035
1	25	13	1.25.14	0	8	13	1.3	0.11	7.406	13.21	13516.549	3.525054	3.525054
1	25	14	1.25.15	0	11	12	1.2	0.11	10.178	12.296	19038.247	8.851096	8.851096
1	25	15	1.25.16	0	57	11	0.9	0.11	53.778	12.684	107567.985	94.243874	94.243874
1	25	16	1.25.17	25	25	10	0.5	0.11	30.144	10.873	35635.549	24.86029	24.86029
1	25	17	1.25.18	0	0	8	0.3	0.11	0	8	0	0	0
1	25	18	1.25.19	0	0	7	0.3	0.11	0	7	0	0	0
1	25	19	1.25.20	0	0	7	0.3	0.11	0	7	0	0	0
1	25	20	1.25.21	0	0	7	0.3	0.11	0	7	0	0	0
1	25	21	1.25.22	0	0	7	0.3	0.11	0	7	0	0	0
1	25	22	1.25.23	0	0	6	0.3	0.11	0	6	0	0	0
1	25	23	1.25.24	0	0	5	0.4	0.11	0	5	0	0	0
1	26	0	1.26.1	0	0	4	0.3	0.11	0	4	0	0	0
1	26	1	1.26.2	0	0	2	0.3	0.11	0	2	0	0	0
1	26	2	1.26.3	0	0	1	0.3	0.11	0	1	0	0	0
1	26	3	1.26.4	0	0	1	0.3	0.11	0	1	0	0	0

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
1	26	4	1.26.5	0	0	1	0.2	0.11	0	1	0	0	0
1	26	5	1.26.6	0	0	1	0.2	0.11	0	1	0	0	0
1	26	6	1.26.7	0	0	1	0.3	0.11	0	1	0	0	0
1	26	7	1.26.8	0	19	1	0.3	0.11	18.249	1.568	22592.15	12.27907	12.27907
1	26	8	1.26.9	502	65	2	0.4	0.11	289.211	12.379	606448.505	575.447073	575.447073
1	26	9	1.26.10	668	89	4	0.5	0.11	497.494	21.513	1058274.295	1011.262879	1011.262879
1	26	10	1.26.11	297	178	5	0.6	0.11	408.914	18.945	865474.352	825.294605	825.294605
1	26	11	1.26.12	88	215	5	0.6	0.11	292.272	14.938	616791.013	585.423105	585.423105
1	26	12	1.26.13	0	19	5	0.6	0.11	17.605	5.598	34532.491	23.796317	23.796317
1	26	13	1.26.14	0	70	4	0.5	0.11	64.979	6.272	134526.89	120.247517	120.247517
1	26	14	1.26.15	0	60	3	0.4	0.11	55.665	5.007	115715.815	102.102993	102.102993
1	26	15	1.26.16	0	79	2	0.3	0.11	77.473	4.876	162375.019	147.108876	147.108876
1	26	16	1.26.17	248	25	1	0.3	0.11	78.349	3.304	91906.983	79.137803	79.137803
1	26	17	1.26.18	0	0	0	0.3	0.11	0	0	0	0	0
1	26	18	1.26.19	0	0	0	0.3	0.11	0	0	0	0	0
1	26	19	1.26.20	0	0	0	0.3	0.11	0	0	0	0	0
1	26	20	1.26.21	0	0	0	0.3	0.11	0	0	0	0	0
1	26	21	1.26.22	0	0	-1	0.3	0.11	0	-1	0	0	0
1	26	22	1.26.23	0	0	-1	0.3	0.11	0	-1	0	0	0
1	26	23	1.26.24	0	0	-2	0.3	0.11	0	-2	0	0	0
1	27	0	1.27.1	0	0	-2	0.3	0.11	0	-2	0	0	0
1	27	1	1.27.2	0	0	-2	0.3	0.11	0	-2	0	0	0
1	27	2	1.27.3	0	0	-2	0.3	0.11	0	-2	0	0	0
1	27	3	1.27.4	0	0	-2	0.3	0.11	0	-2	0	0	0
1	27	4	1.27.5	0	0	-2	0.3	0.11	0	-2	0	0	0
1	27	5	1.27.6	0	0	-2	0.3	0.11	0	-2	0	0	0
1	27	6	1.27.7	0	0	-1	0.3	0.11	0	-1	0	0	0
1	27	7	1.27.8	224	20	0	0.3	0.11	57.378	1.671	65876.128	54.029325	54.029325
1	27	8	1.27.9	587	57	0	0.4	0.11	316.662	11.366	668245.135	635.054002	635.054002
1	27	9	1.27.10	732	78	1	0.5	0.11	523.371	19.428	1123503.608	1074.180858	1074.180858
1	27	10	1.27.11	847	78	2	0.5	0.11	688.686	26.226	1437809.176	1377.34933	1377.34933
1	27	11	1.27.12	862	87	3	0.5	0.11	764.509	29.869	1568176.104	1503.09684	1503.09684
1	27	12	1.27.13	848	93	3	0.5	0.11	763.712	29.838	1566048.449	1501.044576	1501.044576
1	27	13	1.27.14	792	97	3	0.4	0.11	683.47	27.752	1416538.851	1356.832698	1356.832698
1	27	14	1.27.15	0	84	2	0.3	0.11	78.99	4.936	166404.7	150.99577	150.99577
1	27	15	1.27.16	56	88	1	0.2	0.11	115.862	5.438	245801.925	227.579635	227.579635
1	27	16	1.27.17	0	23	0	0.2	0.11	21.961	0.743	30809.901	20.205634	20.205634
1	27	17	1.27.18	0	0	0	0.2	0.11	0	0	0	0	0
1	27	18	1.27.19	0	0	-1	0.3	0.11	0	-1	0	0	0
1	27	19	1.27.20	0	0	-1	0.3	0.87	0	-1	0	0	0
1	27	20	1.27.21	0	0	-1	0.3	0.87	0	-1	0	0	0
1	27	21	1.27.22	0	0	-1	0.3	0.87	0	-1	0	0	0
1	27	22	1.27.23	0	0	-1	0.2	0.87	0	-1	0	0	0
1	27	23	1.27.24	0	0	-2	0.2	0.87	0	-2	0	0	0
1	28	0	1.28.1	0	0	-2	0.2	0.87	0	-2	0	0	0
1	28	1	1.28.2	0	0	-2	0.2	0.87	0	-2	0	0	0
1	28	2	1.28.3	0	0	-2	0.2	0.87	0	-2	0	0	0
1	28	3	1.28.4	0	0	-2	0.2	0.87	0	-2	0	0	0
1	28	4	1.28.5	0	0	-2	0.2	0.87	0	-2	0	0	0
1	28	5	1.28.6	0	0	-2	0.2	0.87	0	-2	0	0	0
1	28	6	1.28.7	0	0	-1	0.3	0.87	0	-1	0	0	0
1	28	7	1.28.8	0	7	0	0.3	0.87	6.586	0.204	7799.408	0	0
1	28	8	1.28.9	78	83	0	0.4	0.87	125.301	4.502	265215.364	246.305179	246.305179
1	28	9	1.28.10	0	35	0	0.5	0.87	33.007	1.154	67906.444	55.987699	55.987699
1	28	10	1.28.11	0	54	0	0.6	0.87	50.987	1.73	105898.683	92.633721	92.633721
1	28	11	1.28.12	0	118	1	0.6	0.87	113.588	4.849	239081.64	221.097477	221.097477
1	28	12	1.28.13	0	91	1	0.6	0.87	86.313	3.925	180525.708	164.616415	164.616415
1	28	13	1.28.14	0	36	1	0.5	0.87	33.967	2.185	69267.992	57.301002	57.301002
1	28	14	1.28.15	571	141	2	0.4	0.87	512.687	20.558	1088049.631	1039.983156	1039.983156
1	28	15	1.28.16	413	101	1	0.4	0.87	303.721	11.932	645647.312	613.256911	613.256911
1	28	16	1.28.17	117	34	0	0.6	0.87	66.65	2.017	99070.435	86.047425	86.047425
1	28	17	1.28.18	0	0	-1	0.9	0.87	0	-1	0	0	0
1	28	18	1.28.19	0	0	-3	1	0.87	0	-3	0	0	0
1	28	19	1.28.20	0	0	-5	0.9	0.87	0	-5	0	0	0
1	28	20	1.28.21	0	0	-5	0.9	0.87	0	-5	0	0	0
1	28	21	1.28.22	0	0	-6	0.9	0.87	0	-6	0	0	0
1	28	22	1.28.23	0	0	-6	1	0.87	0	-6	0	0	0
1	28	23	1.28.24	0	0	-7	1	0.87	0	-7	0	0	0
1	29	0	1.29.1	0	0	-8	0.9	0.87	0	-8	0	0	0
1	29	1	1.29.2	0	0	-8	0.9	0.87	0	-8	0	0	0
1	29	2	1.29.3	0	0	-8	0.9	0.87	0	-8	0	0	0
1	29	3	1.29.4	0	0	-9	0.9	0.87	0	-9	0	0	0
1	29	4	1.29.5	0	0	-9	0.9	0.87	0	-9	0	0	0
1	29	5	1.29.6	0	0	-10	0.9	0.87	0	-10	0	0	0
1	29	6	1.29.7	0	0	-11	0.8	0.87	0	-11	0	0	0
1	29	7	1.29.8	364	21	-11	0.8	0.87	81.285	-8.989	95527.823	82.630342	82.630342
1	29	8	1.29.9	728	54	-10	0.9	0.87	371.941	1.615	816125.673	777.694545	777.694545
1	29	9	1.29.10	863	74	-9	0.9	0.87	599.032	9.888	1329965.311	1273.326802	1273.326802
1	29	10	1.29.11	925	86	-8	1	0.87	762.194	15.392	1650154.117	1582.170046	1582.170046
1	29	11	1.29.12	946	94	-7	1	0.87	848.026	19.001	1803870.795	1730.43993	1730.43993
1	29	12	1.29.13	942	97	-7	1	0.87	852.115	19.124	1811055.44	1737.369995	1737.369995
1	29	13	1.29.14	889	102	-8	1	0.87	764.925	15.467	1653427.909	1585.327834	1585.327834
1	29	14	1.29.15	841	84	-8	1	0.87	612.744	10.825	1354548.719	1297.039122	1297.039122
1	29	15	1.29.16	725	61	-9	0.9	0.87	399.084	3.501	880843.945	840.119592	840.119592
1	29	16	1.29.17	424	27	-10	0.9	0.87	122.506	-6.588	191687.518	175.382717	175.382717
1	29	17	1.29.18	0	0	-10	0.9	0.87	0	-10	0	0	0
1	29	18	1.29.19	0	0	-10	0.9	0.87	0	-10	0	0	0
1	29	19	1.29.20	0	0	-10	0.8	0.87	0	-10	0	0	0
1	29	20	1.29.21	0	0	-11	0.8	0.87	0	-11	0	0	0
1	29	21	1.29.22	0	0	-11	0.8	0.87	0	-11	0	0	0
1	29	22	1.29.23	0	0	-11	0.8	0.87	0	-11	0	0	0
1	29	23	1.29.24	0	0	-12	0.7	0.87	0	-12	0	0	0
1	30	0	1.30.1	0	0	-12	0.7	0.87	0	-12	0	0	0
1	30	1	1.30.2	0	0	-13	0.7	0.87	0	-13	0	0	0
1	30	2	1.30.3	0	0	-13	0.6	0.87	0	-13	0	0	0
1	30	3	1.30.4	0	0	-14	0.6	0.87	0	-14	0	0	0
1	30	4	1.30.5	0	0	-15	0.6	0.87	0	-15	0	0	0
1	30	5	1.30.6	0	0	-15	0.5	0.87	0	-15	0	0	0
1	30	6	1.30.7	0	0	-15	0.5	0.87	0	-15	0	0	0
1	30	7	1.30.8	362	22	-14	0.5	0.87	84.757	-11.717	101015.953	87.924006	87.924006
1	30	8	1.30.9	699	57	-13	0.5	0.87	367.363	-0.189	812120.571	773.83136	773.83136
1	30	9	1.30.10	625	83	-11	0.5	0.87	474.886	5.705	1066143.316	1018.853069	1018.853069
1	30	10	1.30.11	903	89	-9	0.5	0.87	752.472	17.445	1616536.321	1549.743462	1549.743462
1	30	11	1.30.12	389	195	-7	0.5	0.87	524.967	11.392	1138709.071	1088.847531	1088.847531
1	30	12	1.30.13	60	216	-6	0.4	0.87	275.554	3.91	600074.201	569.298636	569.298636
1	30	13	1.30.14	269	194	-6	0.4	0.87	417.478	9.064	910658.685	868.877877	868.877877
1	30	14	1.30.15	19	139	-6	0.3	0.87	150.172	-0.424	328684.002	307.524871	307.524871
1	30	15	1.30.16	0	66	-6	0.2	0.87	63.747	-3.561	136610.425	122.257224	122.257224
1	30	16	1.30.17	0	17	-7	0.2	0.87	16.022	-6.42	27429.606	16.945116	16.945116
1	30	17	1.30.18	0	0	-8	0.3	0.87	0	-8	0	0	0
1	30	18	1.30.19	0	0	-8	0.3	0.87	0	-8	0	0	0
1	30	19	1.30.20	0	0	-9	0.3	0.87	0	-9	0	0	0
1	30	20	1.30.21	0	0	-10	0.3	0.87	0	-10	0	0	0
1	30	21	1.30.22	0	0	-11	0.4	0.87	0	-11	0	0	0
1	30	22	1.30.23	0	0	-11	0.4	0.87	0	-11	0	0	0
1	30	23	1.30.24	0	0	-11	0.4	0.87	0	-11	0	0	0
1	31	0	1.31.1	0	0	-10	0.4	0.87	0	-10	0	0	0
1	31	1	1.31.2	0	0	-10	0.4	0.87	0	-10	0	0	0
1	31	2	1.31.3	0	0	-10	0.4	0.87	0	-10	0	0	0
1	31	3	1.31.4	0	0	-10	0.4	0.87	0	-10	0	0	0
1	31	4	1.31.5	0	0	-11	0.4	0.87	0	-11	0	0	0
1	31	5	1.31.6	0	0	-12	0.4	0.87	0	-12	0	0	0
1	31	6	1.31.7	0	0	-12	0.4	0.87	0	-12	0	0	0
1	31	7	1.31.8	329	23	-11	0.4	0.87	85.493	-8.612	101856.144	88.734426	88.734426
1	31	8	1.31.9	677	61	-9	0.4	0.87	363.894	4.074	793453.85	755.826076	755.826076
1	31	9	1.31.10	814	84	-7	0.5	0.87	588.351	13.702	1287238.521	1232.113992	1232.113992
1	31	10	1.31.11	878	98	-5	0.5	0.87	747.084	21.251	1581831.999	1516.268852	1516.268852
1	31	11	1.31.12	905	105	-3	0.5	0.87	834.151	26.283	1725799.17	1655.134694	1655.134694
1	31	12	1.31.13	903	106	-2	0.5	0.87	837.662	27.404	1725220.215	1654.576253	1654.576253
1	31	13	1.31.14	878	99	-2	0.5	0.87	759.474	24.682	1586503.365	1520.774693	1520.774693
1	31	14	1.31.15	819	85	-2	0.4	0.87	605.837	19.952	1295157.319	1239.752196	1239.752196
1	31	15	1.31.16	697	63	-4	0.3	0.87	393.244	10.61	848440.243	808.864082	808.864082
1	31	16	1.31.17	405	29	-6	0.2	0.87	132.837	-1.319	222830.983	205.422645	205.422645
1	31	17	1.31.18	0	0	-7	0.2	0.87	0	-7	0	0	0
1	31	18	1.31.19	0	0	-7	0.3	0.87	0	-7	0	0	0
1	31	19	1.31.20	0	0	0	0.3	0.11	0	0	0	0	0
1	31	20	1.31.21	0	0	0	0.3	0.11	0	0	0	0	0
1	31	21	1.31.22	0	0	0	0.3	0.11	0	0	0	0	0
1	31	22	1.31.23	0	0	0	0.3	0.11	0	0	0	0	0
1	31	23	1.31.24	0	0	0	0.4	0.11	0	0	0	0	0
2	1	0	2.1.1	0	0	0	0.4	0.11	0	0	0	0	0
2	1	1	2.1.2	0	0	0	0.4	0.11	0	0	0	0	0
2	1	2	2.1.3	0	0	0	0.4	0.11	0	0	0	0	0
2	1	3	2.1.4	0	0	0	0.4	0.11	0	0	0	0	0
2	1	4	2.1.5	0	0	0	0.4	0.11	0	0	0	0	0
2	1	5	2.1.6	0	0	0	0.4	0.11	0	0	0	0	0
2	1	6	2.1.7	0	0	0	0.4	0.11	0	0	0	0	0
2	1	7	2.1.8	240	26	0	0.4	0.11	75.469	2.138	87823.91	75.199409	75.199409
2	1	8	2.1.9	596	63	1	0.5	0.11	332.039	12.591	702729.629	668.316574	668.316574
2	1	9	2.1.10	752	80	2	0.6	0.11	545.225	20.653	1164948.478	1114.157172	1114.157172
2	1	10	2.1.11	263	194	3	0.6	0.11	406.441	16.85	864539.4	824.392781	824.392781

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
2	1	11	2.1.12	52	216	4	0.5	0.11	265.021	13.264	559302.492	529.971631	529.971631
2	1	12	2.1.13	218	230	5	0.4	0.11	420.318	20.159	878755.245	838.104902	838.104902
2	1	13	2.1.14	5	162	4	0.4	0.11	161.031	9.796	339189.694	317.658305	317.658305
2	1	14	2.1.15	0	97	3	0.3	0.11	91.823	6.412	193201.34	176.842898	176.842898
2	1	15	2.1.16	0	75	2	0.2	0.11	71.894	4.756	150788.374	135.932792	135.932792
2	1	16	2.1.17	0	21	0	0.2	0.11	19.455	0.719	34694.726	23.952804	23.952804
2	1	17	2.1.18	0	0	0	0.2	0.11	0	0	0	0	0
2	1	18	2.1.19	0	0	0	0.2	0.11	0	0	0	0	0
2	1	19	2.1.20	0	0	0	0.2	0.11	0	0	0	0	0
2	1	20	2.1.21	0	0	0	0.3	0.11	0	0	0	0	0
2	1	21	2.1.22	0	0	0	0.4	0.11	0	0	0	0	0
2	1	22	2.1.23	0	0	0	0.4	0.11	0	0	0	0	0
2	1	23	2.1.24	0	0	-1	0.3	0.11	0	-1	0	0	0
2	2	0	2.2.1	0	0	-1	0.3	0.11	0	-1	0	0	0
2	2	1	2.2.2	0	0	0	0.4	0.11	0	0	0	0	0
2	2	2	2.2.3	0	0	0	0.4	0.11	0	0	0	0	0
2	2	3	2.2.4	0	0	0	0.3	0.11	0	0	0	0	0
2	2	4	2.2.5	0	0	0	0.2	0.11	0	0	0	0	0
2	2	5	2.2.6	0	0	-1	0.2	0.11	0	-1	0	0	0
2	2	6	2.2.7	0	0	0	0.2	0.11	0	0	0	0	0
2	2	7	2.2.8	0	22	1	0.3	0.11	20.872	1.662	26990.995	16.522047	16.522047
2	2	8	2.2.9	501	73	3	0.3	0.11	303.326	14.247	637815.607	605.702714	605.702714
2	2	9	2.2.10	649	99	4	0.4	0.11	507.278	22.386	1074426.857	1026.843092	1026.843092
2	2	10	2.2.11	712	117	5	0.4	0.11	653.03	28.637	1346038.296	1288.830257	1288.830257
2	2	11	2.2.12	281	222	6	0.4	0.11	469.841	22.952	975202.517	931.134664	931.134664
2	2	12	2.2.13	7	177	7	0.4	0.11	177.314	13.377	368277.716	345.715622	345.715622
2	2	13	2.2.14	258	202	7	0.4	0.11	415.878	22.015	866859.665	826.63083	826.63083
2	2	14	2.2.15	613	115	6	0.3	0.11	516.377	25.285	1080278.372	1032.487264	1032.487264
2	2	15	2.2.16	26	95	4	0.2	0.11	109.533	8.199	230352.744	212.677881	212.677881
2	2	16	2.2.17	0	27	3	0.2	0.11	25.491	3.948	46232.352	35.081606	35.081606
2	2	17	2.2.18	0	0	3	0.3	0.11	0	3	0	0	0
2	2	18	2.2.19	0	0	3	0.3	0.11	0	3	0	0	0
2	2	19	2.2.20	0	0	3	0.3	0.11	0	3	0	0	0
2	2	20	2.2.21	0	0	3	0.3	0.11	0	3	0	0	0
2	2	21	2.2.22	0	0	3	0.3	0.11	0	3	0	0	0
2	2	22	2.2.23	0	0	3	0.3	0.11	0	3	0	0	0
2	2	23	2.2.24	0	0	4	0.3	0.11	0	4	0	0	0
2	3	0	2.3.1	0	0	4	0.3	0.11	0	4	0	0	0
2	3	1	2.3.2	0	0	4	0.3	0.11	0	4	0	0	0
2	3	2	2.3.3	0	0	4	0.3	0.11	0	4	0	0	0
2	3	3	2.3.4	0	0	4	0.4	0.11	0	4	0	0	0
2	3	4	2.3.5	0	0	4	0.5	0.11	0	4	0	0	0
2	3	5	2.3.6	0	0	5	0.5	0.11	0	5	0	0	0
2	3	6	2.3.7	0	0	6	0.5	0.11	0	6	0	0	0
2	3	7	2.3.8	0	7	7	0.5	0.11	6.469	7.201	8460.036	0	0
2	3	8	2.3.9	0	16	8	0.6	0.11	14.801	8.503	28569.768	18.044877	18.044877
2	3	9	2.3.10	0	14	9	0.8	0.11	12.958	9.417	24828.839	14.436505	14.436505
2	3	10	2.3.11	0	22	10	0.9	0.11	20.383	10.638	39407.443	28.498531	28.498531
2	3	11	2.3.12	0	28	11	1	0.11	25.958	11.791	50272.268	38.978372	38.978372
2	3	12	2.3.13	0	49	11	0.9	0.11	45.463	12.422	89932.259	77.233051	77.233051
2	3	13	2.3.14	0	105	11	0.7	0.11	98.705	14.259	200566.943	183.947509	183.947509
2	3	14	2.3.15	0	109	12	0.6	0.11	103.928	15.534	211735.483	194.720303	194.720303
2	3	15	2.3.16	515	82	11	0.6	0.11	334.91	22.403	692685.18	658.62804	658.62804
2	3	16	2.3.17	278	36	10	0.6	0.11	118.955	13.83	203850.954	187.115154	187.115154
2	3	17	2.3.18	0	0	9	0.5	0.11	0	9	0	0	0
2	3	18	2.3.19	0	0	7	0.4	0.11	0	7	0	0	0
2	3	19	2.3.20	0	0	6	0.4	0.11	0	6	0	0	0
2	3	20	2.3.21	0	0	5	0.3	0.11	0	5	0	0	0
2	3	21	2.3.22	0	0	4	0.3	0.11	0	4	0	0	0
2	3	22	2.3.23	0	0	3	0.2	0.11	0	3	0	0	0
2	3	23	2.3.24	0	0	2	0.2	0.11	0	2	0	0	0
2	4	0	2.4.1	0	0	2	0.2	0.11	0	2	0	0	0
2	4	1	2.4.2	0	0	2	0.3	0.11	0	2	0	0	0
2	4	2	2.4.3	0	0	2	0.3	0.11	0	2	0	0	0
2	4	3	2.4.4	0	0	2	0.3	0.11	0	2	0	0	0
2	4	4	2.4.5	0	0	1	0.3	0.11	0	1	0	0	0
2	4	5	2.4.6	0	0	1	0.2	0.11	0	1	0	0	0
2	4	6	2.4.7	0	0	1	0.2	0.11	0	1	0	0	0
2	4	7	2.4.8	24	26	3	0.2	0.11	31.125	4.078	46168.215	35.019741	35.019741
2	4	8	2.4.9	114	93	6	0.3	0.11	150.061	11.57	313701.293	293.073058	293.073058
2	4	9	2.4.10	281	147	7	0.3	0.11	333.601	19.441	704430.373	669.957054	669.957054
2	4	10	2.4.11	327	190	8	0.4	0.11	448.915	24.217	931052.117	888.548689	888.548689
2	4	11	2.4.12	218	235	9	0.4	0.11	426.189	24.367	876441.968	835.873594	835.873594
2	4	12	2.4.13	25	205	9	0.4	0.11	220.842	16.944	455908.225	430.241034	430.241034
2	4	13	2.4.14	0	122	8	0.4	0.11	115.688	12.163	238375.863	220.416708	220.416708
2	4	14	2.4.15	0	78	7	0.3	0.11	72.627	9.698	149407.972	134.601304	134.601304
2	4	15	2.4.16	0	33	7	0.3	0.11	30.566	8.136	61163.573	49.483754	49.483754
2	4	16	2.4.17	0	14	6	0.5	0.11	12.951	6.443	23190.697	12.856408	12.856408
2	4	17	2.4.18	0	0	6	0.6	0.11	0	6	0	0	0
2	4	18	2.4.19	0	0	6	0.6	0.11	0	6	0	0	0
2	4	19	2.4.20	0	0	5	0.7	0.11	0	5	0	0	0
2	4	20	2.4.21	0	0	5	0.6	0.11	0	5	0	0	0
2	4	21	2.4.22	0	0	6	0.5	0.11	0	6	0	0	0
2	4	22	2.4.23	0	0	7	0.6	0.11	0	7	0	0	0
2	4	23	2.4.24	0	0	9	0.7	0.11	0	9	0	0	0
2	5	0	2.5.1	0	0	10	0.8	0.11	0	10	0	0	0
2	5	1	2.5.2	0	0	11	0.8	0.11	0	11	0	0	0
2	5	2	2.5.3	0	0	12	0.8	0.11	0	12	0	0	0
2	5	3	2.5.4	0	0	11	0.7	0.11	0	11	0	0	0
2	5	4	2.5.5	0	0	10	0.7	0.11	0	10	0	0	0
2	5	5	2.5.6	0	0	8	0.6	0.11	0	8	0	0	0
2	5	6	2.5.7	0	0	7	0.4	0.11	0	7	0	0	0
2	5	7	2.5.8	0	11	7	0.5	0.11	10.173	7.332	15377.982	5.320529	5.320529
2	5	8	2.5.9	20	90	7	0.6	0.11	96.938	10.295	200891.453	184.26052	184.26052
2	5	9	2.5.10	375	137	8	0.7	0.11	387.065	20.855	816990.106	778.528348	778.528348
2	5	10	2.5.11	859	81	8	0.7	0.11	720.84	31.95	1468843.822	1407.284295	1407.284295
2	5	11	2.5.12	867	91	8	0.8	0.11	795.36	33.693	1602925.254	1536.614689	1536.614689
2	5	12	2.5.13	159	244	8	0.8	0.11	391.471	20.597	813204.915	774.877281	774.877281
2	5	13	2.5.14	177	218	7	0.8	0.11	366.801	18.816	769340.749	732.567397	732.567397
2	5	14	2.5.15	45	164	6	0.7	0.11	197.641	12.542	417923.046	393.601821	393.601821
2	5	15	2.5.16	152	111	5	0.6	0.11	190.76	11.494	404880.871	381.021782	381.021782
2	5	16	2.5.17	72	39	4	0.6	0.11	62.752	6.066	116266.836	102.634489	102.634489
2	5	17	2.5.18	0	0	3	0.6	0.11	0	3	0	0	0
2	5	18	2.5.19	0	0	3	0.6	0.11	0	3	0	0	0
2	5	19	2.5.20	0	0	2	0.7	0.11	0	2	0	0	0
2	5	20	2.5.21	0	0	1	0.7	0.11	0	1	0	0	0
2	5	21	2.5.22	0	0	1	0.7	0.11	0	1	0	0	0
2	5	22	2.5.23	0	0	0	0.7	0.11	0	0	0	0	0
2	5	23	2.5.24	0	0	0	0.7	0.11	0	0	0	0	0
2	6	0	2.6.1	0	0	0	0.8	0.11	0	0	0	0	0
2	6	1	2.6.2	0	0	0	0.8	0.11	0	0	0	0	0
2	6	2	2.6.3	0	0	0	0.7	0.11	0	0	0	0	0
2	6	3	2.6.4	0	0	0	0.7	0.11	0	0	0	0	0
2	6	4	2.6.5	0	0	0	0.7	0.11	0	0	0	0	0
2	6	5	2.6.6	0	0	0	0.7	0.11	0	0	0	0	0
2	6	6	2.6.7	0	0	0	0.7	0.11	0	0	0	0	0
2	6	7	2.6.8	257	32	0	0.7	0.11	97.346	2.923	153755.216	138.794507	138.794507
2	6	8	2.6.9	0	56	0	0.8	0.11	52.207	1.68	109484.38	96.092363	96.092363
2	6	9	2.6.10	764	86	1	0.9	0.11	568.527	18.927	1221680.732	1168.879176	1168.879176
2	6	10	2.6.11	823	101	1	1	0.11	719.533	23.08	1514618.391	1451.436889	1451.436889
2	6	11	2.6.12	367	216	1	1	0.11	532.824	17.301	1131966.524	1082.3439	1082.3439
2	6	12	2.6.13	426	205	1	0.9	0.11	579.518	19.195	1224312.971	1171.418144	1171.418144
2	6	13	2.6.14	422	183	1	0.8	0.11	526.996	18.004	1121323.856	1072.078343	1072.078343
2	6	14	2.6.15	109	172	1	0.8	0.11	254.32	9.2	550128.724	521.122926	521.122926
2	6	15	2.6.16	176	114	0	0.7	0.11	205.413	6.802	445102.898	419.818582	419.818582
2	6	16	2.6.17	90	42	0	0.7	0.11	74.78	2.4	142475.066	127.914058	127.914058
2	6	17	2.6.18	0	0	0	0.7	0.11	0	0	0	0	0
2	6	18	2.6.19	0	0	0	0.8	0.11	0	0	0	0	0
2	6	19	2.6.20	0	0	0	0.7	0.11	0	0	0	0	0
2	6	20	2.6.21	0	0	0	0.7	0.11	0	0	0	0	0
2	6	21	2.6.22	0	0	0	0.7	0.11	0	0	0	0	0
2	6	22	2.6.23	0	0	0	0.7	0.11	0	0	0	0	0
2	6	23	2.6.24	0	0	0	0.7	0.11	0	0	0	0	0
2	7	0	2.7.1	0	0	0	0.7	0.11	0	0	0	0	0
2	7	1	2.7.2	0	0	0	0.7	0.11	0	0	0	0	0
2	7	2	2.7.3	0	0	0	0.6	0.11	0	0	0	0	0
2	7	3	2.7.4	0	0	-1	0.6	0.11	0	-1	0	0	0
2	7	4	2.7.5	0	0	-1	0.6	0.11	0	-1	0	0	0
2	7	5	2.7.6	0	0	-1	0.6	0.11	0	-1	0	0	0
2	7	6	2.7.7	0	0	-1	0.6	0.11	0	-1	0	0	0
2	7	7	2.7.8	280	33	0	0.6	0.11	106.229	3.316	173112.741	157.466119	157.466119
2	7	8	2.7.9	171	97	0	0.7	0.11	184.872	6.112	398021.014	374.404997	374.404997
2	7	9	2.7.10	16	143	0	0.7	0.11	149.22	4.937	321435.956	300.533652	300.533652
2	7	10	2.7.11	412	181	1	0.7	0.11	512.206	17.982	1090044.622	1041.907457	1041.907457
2	7	11	2.7.12	0	166	2	0.8	0.11	159.742	7.128	337923.971	316.437431	316.437431
2	7	12	2.7.13	252	241	2	0.8	0.11	472.904	17.226	999888.46	954.945886	954.945886
2	7	13	2.7.14	873	85	1	0.8	0.11	753.523	25.357	1571877.274	1506.666862	1506.666862
2	7	14	2.7.15	812	78	1	0.7	0.11	607.316	21.199	1293967.867	1238.604891	1238.604891
2	7	15	2.7.16	700	62	0	0.6	0.11	405.585	13.829	874223.576	833.733809	833.733809
2	7	16	2.7.17	445	35	0	0.5	0.11	165.94	5.547	305363.38	285.030591	285.030591
2	7	17	2.7.18	0	0	-1	0.5	0.11	0	-1	0	0	0

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
2	7	18	2.7.19	0	0	-1	0.6	0.11	0	-1	0	0	0
2	7	19	2.7.20	0	0	-2	0.6	0.11	0	-2	0	0	0
2	7	20	2.7.21	0	0	-2	0.5	0.11	0	-2	0	0	0
2	7	21	2.7.22	0	0	-3	0.5	0.11	0	-3	0	0	0
2	7	22	2.7.23	0	0	-3	0.5	0.11	0	-3	0	0	0
2	7	23	2.7.24	0	0	-3	0.4	0.11	0	-3	0	0	0
2	8	0	2.8.1	0	0	-4	0.4	0.11	0	-4	0	0	0
2	8	1	2.8.2	0	0	-4	0.4	0.11	0	-4	0	0	0
2	8	2	2.8.3	0	0	-4	0.4	0.11	0	-4	0	0	0
2	8	3	2.8.4	0	0	-4	0.4	0.11	0	-4	0	0	0
2	8	4	2.8.5	0	0	-4	0.4	0.11	0	-4	0	0	0
2	8	5	2.8.6	0	0	-4	0.3	0.11	0	-4	0	0	0
2	8	6	2.8.7	0	0	-4	0.3	0.11	0	-4	0	0	0
2	8	7	2.8.8	421	28	-3	0.4	0.11	136.563	1.521	226429.401	208.893557	208.893557
2	8	8	2.8.9	708	56	-2	0.5	0.11	380.449	11.312	818222.413	779.71699	779.71699
2	8	9	2.8.10	822	73	0	0.5	0.11	590.819	20.798	1261761.795	1207.540008	1207.540008
2	8	10	2.8.11	321	200	0	0.5	0.11	458.793	16.086	979715.152	935.487398	935.487398
2	8	11	2.8.12	356	222	0	0.6	0.11	532.762	18.136	1127262.234	1077.806301	1077.806301
2	8	12	2.8.13	112	249	0	0.6	0.11	349.516	11.873	746303.329	710.346284	710.346284
2	8	13	2.8.14	175	227	0	0.6	0.11	376.29	12.802	806471.153	768.382123	768.382123
2	8	14	2.8.15	0	129	0	0.5	0.11	124.004	4.338	265304.342	246.391004	246.391004
2	8	15	2.8.16	0	30	0	0.4	0.11	27.782	1.002	57131.455	45.59451	45.59451
2	8	16	2.8.17	101	44	-1	0.3	0.11	79.824	1.887	154475.535	139.489302	139.489302
2	8	17	2.8.18	0	0	-2	0.3	0.11	0	-2	0	0	0
2	8	18	2.8.19	0	0	-2	0.4	0.11	0	-2	0	0	0
2	8	19	2.8.20	0	0	-2	0.3	0.11	0	-2	0	0	0
2	8	20	2.8.21	0	0	-3	0.3	0.11	0	-3	0	0	0
2	8	21	2.8.22	0	0	-3	0.3	0.11	0	-3	0	0	0
2	8	22	2.8.23	0	0	-4	0.3	0.11	0	-4	0	0	0
2	8	23	2.8.24	0	0	-4	0.3	0.11	0	-4	0	0	0
2	9	0	2.9.1	0	0	-4	0.3	0.11	0	-4	0	0	0
2	9	1	2.9.2	0	0	-5	0.3	0.11	0	-5	0	0	0
2	9	2	2.9.3	0	0	-5	0.3	0.11	0	-5	0	0	0
2	9	3	2.9.4	0	0	-5	0.3	0.11	0	-5	0	0	0
2	9	4	2.9.5	0	0	-5	0.2	0.11	0	-5	0	0	0
2	9	5	2.9.6	0	0	-6	0.2	0.11	0	-6	0	0	0
2	9	6	2.9.7	0	0	-5	0.3	0.11	0	-5	0	0	0
2	9	7	2.9.8	400	30	-4	0.4	0.11	135.954	0.545	232212.029	214.471283	214.471283
2	9	8	2.9.9	708	57	-3	0.4	0.11	383.322	10.819	827032.276	788.214684	788.214684
2	9	9	2.9.10	844	70	-2	0.5	0.11	603.161	19.233	1295692.093	1240.268021	1240.268021
2	9	10	2.9.11	918	74	-1	0.5	0.11	760.953	25.748	1586334.833	1520.612132	1520.612132
2	9	11	2.9.12	950	76	0	0.5	0.11	849.011	29.814	1735090.631	1664.096922	1664.096922
2	9	12	2.9.13	954	75	0	0.5	0.11	855.875	30.053	1746937.817	1675.524314	1675.524314
2	9	13	2.9.14	934	71	0	0.5	0.11	783.045	27.519	1620144.082	1553.223385	1553.223385
2	9	14	2.9.15	878	66	0	0.5	0.11	640.364	22.538	1358149.009	1300.511839	1300.511839
2	9	15	2.9.16	757	56	0	0.4	0.11	427.73	15.467	919422.03	877.330702	877.330702
2	9	16	2.9.17	496	35	-1	0.2	0.11	181.853	5.685	339354.85	317.817609	317.817609
2	9	17	2.9.18	0	0	-2	0.2	0.11	0	-2	0	0	0
2	9	18	2.9.19	0	0	-3	0.3	0.11	0	-3	0	0	0
2	9	19	2.9.20	0	0	-3	0.4	0.11	0	-3	0	0	0
2	9	20	2.9.21	0	0	-3	0.5	0.11	0	-3	0	0	0
2	9	21	2.9.22	0	0	-3	0.5	0.11	0	-3	0	0	0
2	9	22	2.9.23	0	0	-3	0.6	0.11	0	-3	0	0	0
2	9	23	2.9.24	0	0	-4	0.6	0.11	0	-4	0	0	0
2	10	0	2.10.1	0	0	-5	0.5	0.11	0	-5	0	0	0
2	10	1	2.10.2	0	0	-6	0.4	0.11	0	-6	0	0	0
2	10	2	2.10.3	0	0	-7	0.3	0.11	0	-7	0	0	0
2	10	3	2.10.4	0	0	-7	0.2	0.11	0	-7	0	0	0
2	10	4	2.10.5	0	0	-8	0.2	0.11	0	-8	0	0	0
2	10	5	2.10.6	0	0	-8	0.2	0.11	0	-8	0	0	0
2	10	6	2.10.7	0	0	-7	0.2	0.11	0	-7	0	0	0
2	10	7	2.10.8	153	36	-6	0.4	0.11	84.221	-3.117	153850.931	138.886831	138.886831
2	10	8	2.10.9	456	76	-4	0.5	0.11	296.285	6.374	646979.053	614.541462	614.541462
2	10	9	2.10.10	287	159	-4	0.6	0.11	354.011	8.079	779375.833	742.246899	742.246899
2	10	10	2.10.11	381	193	-3	0.7	0.11	496.222	13.446	1071704.549	1024.217246	1024.217246
2	10	11	2.10.12	416	213	-2	0.7	0.11	582.889	17.299	1238396.033	1185.002187	1185.002187
2	10	12	2.10.13	798	132	-2	0.7	0.11	807.817	24.787	1678094.589	1609.120476	1609.120476
2	10	13	2.10.14	447	185	-1	0.6	0.11	552.753	17.838	1176238.957	1125.047584	1125.047584
2	10	14	2.10.15	453	141	-1	0.5	0.11	454.903	14.983	983090.023	938.742685	938.742685
2	10	15	2.10.16	219	111	-1	0.4	0.11	228.763	7.263	497911.593	470.756056	470.756056
2	10	16	2.10.17	206	56	-2	0.2	0.11	122.926	2.581	239702.63	221.696463	221.696463
2	10	17	2.10.18	0	0	-3	0.1	0.11	0	-3	0	0	0
2	10	18	2.10.19	0	0	-3	0.1	0.11	0	-3	0	0	0
2	10	19	2.10.20	0	0	-3	0.1	0.11	0	-3	0	0	0
2	10	20	2.10.21	0	0	-3	0.2	0.11	0	-3	0	0	0
2	10	21	2.10.22	0	0	-3	0.2	0.11	0	-3	0	0	0
2	10	22	2.10.23	0	0	-3	0.1	0.11	0	-3	0	0	0
2	10	23	2.10.24	0	0	-4	0.1	0.11	0	-4	0	0	0
2	11	0	2.11.1	0	0	-4	0.1	0.11	0	-4	0	0	0
2	11	1	2.11.2	0	0	-4	0.2	0.11	0	-4	0	0	0
2	11	2	2.11.3	0	0	-5	0.2	0.11	0	-5	0	0	0
2	11	3	2.11.4	0	0	-5	0.2	0.11	0	-5	0	0	0
2	11	4	2.11.5	0	0	-5	0.2	0.11	0	-5	0	0	0
2	11	5	2.11.6	0	0	-6	0.2	0.11	0	-6	0	0	0
2	11	6	2.11.7	0	0	-5	0.3	0.11	0	-5	0	0	0
2	11	7	2.11.8	111	44	-4	0.3	0.11	80.191	-1.14	149982.044	135.155034	135.155034
2	11	8	2.11.9	530	68	-3	0.3	0.11	321.991	8.973	698622.921	664.355383	664.355383
2	11	9	2.11.10	462	132	-1	0.3	0.11	440.474	15.437	951073.308	907.86045	907.86045
2	11	10	2.11.11	371	198	0	0.3	0.11	495.477	18.445	1050027.788	1003.308579	1003.308579
2	11	11	2.11.12	484	198	0	0.2	0.11	622.311	23.891	1292063.493	1236.767996	1236.767996
2	11	12	2.11.13	254	264	1	0.2	0.11	491.964	19.857	1028985.441	983.011845	983.011845
2	11	13	2.11.14	99	230	1	0.2	0.11	313.399	13.008	666059.11	632.945438	632.945438
2	11	14	2.11.15	358	160	0	0.3	0.11	407.693	15.199	877013.634	836.425004	836.425004
2	11	15	2.11.16	0	90	0	0.3	0.11	86.172	3.203	183475.209	167.461403	167.461403
2	11	16	2.11.17	161	53	0	0.3	0.11	106.898	3.873	208631.393	191.726203	191.726203
2	11	17	2.11.18	0	0	-1	0.3	0.11	0	-1	0	0	0
2	11	18	2.11.19	0	0	-1	0.4	0.11	0	-1	0	0	0
2	11	19	2.11.20	0	0	-1	0.5	0.87	0	-1	0	0	0
2	11	20	2.11.21	0	0	-2	0.5	0.87	0	-2	0	0	0
2	11	21	2.11.22	0	0	-2	0.6	0.87	0	-2	0	0	0
2	11	22	2.11.23	0	0	-3	0.6	0.87	0	-3	0	0	0
2	11	23	2.11.24	0	0	-3	0.7	0.87	0	-3	0	0	0
2	12	0	2.12.1	0	0	-4	0.7	0.87	0	-4	0	0	0
2	12	1	2.12.2	0	0	-4	0.8	0.87	0	-4	0	0	0
2	12	2	2.12.3	0	0	-4	0.8	0.87	0	-4	0	0	0
2	12	3	2.12.4	0	0	-4	0.9	0.87	0	-4	0	0	0
2	12	4	2.12.5	0	0	-4	0.9	0.87	0	-4	0	0	0
2	12	5	2.12.6	0	0	-4	1	0.87	0	-4	0	0	0
2	12	6	2.12.7	0	0	-4	1	0.87	0	-4	0	0	0
2	12	7	2.12.8	0	15	-4	1	0.87	14.126	-3.578	26593.123	16.138273	16.138273
2	12	8	2.12.9	0	21	-3	1	0.87	19.783	-2.396	40454.714	29.508692	29.508692
2	12	9	2.12.10	0	50	-3	1.1	0.87	47.197	-1.596	99267.742	86.237741	86.237741
2	12	10	2.12.11	0	63	-4	1.2	0.87	59.521	-2.276	125743.739	111.775588	111.775588
2	12	11	2.12.12	0	128	-4	1.1	0.87	122.95	-0.354	263312.132	244.469386	244.469386
2	12	12	2.12.13	0	114	-5	1.1	0.87	108.868	-1.772	233389.966	215.607481	215.607481
2	12	13	2.12.14	0	117	-5	1	0.87	112.138	-1.587	241278.671	223.216658	223.216658
2	12	14	2.12.15	26	165	-5	1	0.87	180.742	0.515	395278.861	371.76001	371.76001
2	12	15	2.12.16	147	120	-6	0.9	0.87	201.565	0.326	446483.384	421.150153	421.150153
2	12	16	2.12.17	9	47	-5	0.8	0.87	49.076	-3.44	100166.904	87.105042	87.105042
2	12	17	2.12.18	0	0	-5	0.8	0.87	0	-5	0	0	0
2	12	18	2.12.19	0	0	-5	0.7	0.87	0	-5	0	0	0
2	12	19	2.12.20	0	0	-5	0.7	0.87	0	-5	0	0	0
2	12	20	2.12.21	0	0	-5	0.7	0.87	0	-5	0	0	0
2	12	21	2.12.22	0	0	-5	0.7	0.87	0	-5	0	0	0
2	12	22	2.12.23	0	0	-5	0.7	0.87	0	-5	0	0	0
2	12	23	2.12.24	0	0	-6	0.7	0.87	0	-6	0	0	0
2	13	0	2.13.1	0	0	-6	0.7	0.87	0	-6	0	0	0
2	13	1	2.13.2	0	0	-6	0.6	0.87	0	-6	0	0	0
2	13	2	2.13.3	0	0	-7	0.6	0.87	0	-7	0	0	0
2	13	3	2.13.4	0	0	-9	0.5	0.87	0	-9	0	0	0
2	13	4	2.13.5	0	0	-10	0.5	0.87	0	-10	0	0	0
2	13	5	2.13.6	0	0	-11	0.7	0.87	0	-11	0	0	0
2	13	6	2.13.7	0	0	-10	0.7	0.87	0	-10	0	0	0
2	13	7	2.13.8	461	35	-8	0.6	0.87	159.975	-2.856	294112.926	274.178786	274.178786
2	13	8	2.13.9	721	68	-4	0.5	0.87	413.125	10.472	896039.856	854.777051	854.777051
2	13	9	2.13.10	816	96	-2	0.5	0.87	632.112	20.223	1346517.342	1289.292329	1289.292329
2	13	10	2.13.11	833	127	-1	0.6	0.87	784.01	25.733	1623575.751	1556.533457	1556.533457
2	13	11	2.13.12	841	145	0	0.7	0.87	868.42	28.766	1768909.826	1696.717768	1696.717768
2	13	12	2.13.13	836	149	0	0.7	0.87	873.273	28.923	1776858.947	1704.385219	1704.385219
2	13	13	2.13.14	174	238	0	0.6	0.87	394.012	13.384	838213.284	798.999505	798.999505
2	13	14	2.13.15	454	147	0	0.5	0.87	470.327	16.507	1006924.887	961.732985	961.732985
2	13	15	2.13.16	603	104	0	0.4	0.87	416.88	15.071	896130.976	854.864943	854.864943
2	13	16	2.13.17	349	57	0	0.4	0.87	168.835	5.91	327334.095	306.222796	306.222796
2	13	17	2.13.18	0	0	-1	0.4	0.87	0	-1	0	0	0
2	13	18	2.13.19	0	0	-2	0.4	0.87	0	-2	0	0	0
2	13	19	2.13.20	0	0	-2	0.4	0.87	0	-2	0	0	0
2	13	20	2.13.21	0	0	-2	0.4	0.87	0	-2	0	0	0
2	13	21	2.13.22	0	0	-2	0.4	0.87	0	-2	0	0	0
2	13	22	2.13.23	0	0	-2	0.5	0.87	0	-2	0	0	0
2	13	23	2.13.24	0	0	-2	0.5	0.87	0	-2	0	0	0
2	14	0	2.14.1	0	0	-2	0.5	0.87	0	-2	0	0	0

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

		Reference Case	Adjusted Case
		3,025,628	3,025,628

Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
2	14	1	2.14.2	0	0	-2	0.5	0.87	0	-2	0	0	0
2	14	2	2.14.3	0	0	-2	0.5	0.87	0	-2	0	0	0
2	14	3	2.14.4	0	0	-3	0.4	0.87	0	-3	0	0	0
2	14	4	2.14.5	0	0	-3	0.4	0.87	0	-3	0	0	0
2	14	5	2.14.6	0	0	-4	0.4	0.87	0	-4	0	0	0
2	14	6	2.14.7	0	0	-4	0.4	0.87	0	-4	0	0	0
2	14	7	2.14.8	129	40	-2	0.4	0.87	79.753	0.773	150386.431	135.545092	135.545092
2	14	8	2.14.9	119	112	0	0.4	0.87	176.042	6.344	378402.918	355.482048	355.482048
2	14	9	2.14.10	715	127	0	0.5	0.87	604.534	21.241	1280020.267	1225.151509	1225.151509
2	14	10	2.14.11	638	132	1	0.6	0.87	645.642	23.004	1348978.046	1291.66584	1291.66584
2	14	11	2.14.12	760	180	2	0.6	0.87	842.275	30.674	1700796.917	1631.01837	1631.01837
2	14	12	2.14.13	762	180	2	0.6	0.87	848.137	30.871	1710760.347	1640.628756	1640.628756
2	14	13	2.14.14	746	166	2	0.5	0.87	774.903	29.169	1579587.378	1514.103766	1514.103766
2	14	14	2.14.15	546	129	2	0.5	0.87	511.379	19.956	1083797.242	1035.881447	1035.881447
2	14	15	2.14.16	375	103	1	0.4	0.87	306.029	12.059	660288.172	627.378986	627.378986
2	14	16	2.14.17	244	66	0	0.4	0.87	147.026	5.172	289498.895	269.728248	269.728248
2	14	17	2.14.18	0	0	0	0.4	0.87	0	0	0	0	0
2	14	18	2.14.19	0	0	0	0.4	0.87	0	0	0	0	0
2	14	19	2.14.20	0	0	0	0.4	0.87	0	0	0	0	0
2	14	20	2.14.21	0	0	0	0.4	0.87	0	0	0	0	0
2	14	21	2.14.22	0	0	0	0.4	0.87	0	0	0	0	0
2	14	22	2.14.23	0	0	-1	0.4	0.87	0	-1	0	0	0
2	14	23	2.14.24	0	0	-1	0.4	0.87	0	-1	0	0	0
2	15	0	2.15.1	0	0	-1	0.4	0.87	0	-1	0	0	0
2	15	1	2.15.2	0	0	-1	0.4	0.87	0	-1	0	0	0
2	15	2	2.15.3	0	0	-1	0.4	0.87	0	-1	0	0	0
2	15	3	2.15.4	0	0	-1	0.3	0.87	0	-1	0	0	0
2	15	4	2.15.5	0	0	0	0.3	0.87	0	0	0	0	0
2	15	5	2.15.6	0	0	0	0.3	0.87	0	0	0	0	0
2	15	6	2.15.7	0	0	0	0.3	0.87	0	0	0	0	0
2	15	7	2.15.8	356	43	1	0.4	0.87	143.662	5.95	263393.182	244.547564	244.547564
2	15	8	2.15.9	638	84	2	0.5	0.87	396.331	15.889	843499.402	804.098315	804.098315
2	15	9	2.15.10	778	105	4	0.5	0.87	623.209	25.903	1298161.819	1242.650234	1242.650234
2	15	10	2.15.11	852	116	5	0.6	0.87	791.427	31.984	1599966.825	1533.761089	1533.761089
2	15	11	2.15.12	885	122	6	0.6	0.87	880.045	35.977	1743675.85	1672.377932	1672.377932
2	15	12	2.15.13	671	145	7	0.6	0.87	737.872	32.118	1482637.516	1420.589224	1420.589224
2	15	13	2.15.14	875	112	7	0.5	0.87	814.128	35.561	1621951.054	1554.966329	1554.966329
2	15	14	2.15.15	819	100	6	0.4	0.87	663.717	30.021	1360221.329	1302.510729	1302.510729
2	15	15	2.15.16	708	81	4	0.3	0.87	448.372	20.722	947548.836	904.460863	904.460863
2	15	16	2.15.17	449	50	2	0.3	0.87	191.149	8.893	367089.024	344.56905	344.56905
2	15	17	2.15.18	0	0	1	0.4	0.87	0	1	0	0	0
2	15	18	2.15.19	0	0	2	0.3	0.87	0	2	0	0	0
2	15	19	2.15.20	0	0	1	0.3	0.87	0	1	0	0	0
2	15	20	2.15.21	0	0	1	0.3	0.87	0	1	0	0	0
2	15	21	2.15.22	0	0	1	0.2	0.87	0	1	0	0	0
2	15	22	2.15.23	0	0	1	0.2	0.87	0	1	0	0	0
2	15	23	2.15.24	0	0	1	0.2	0.87	0	1	0	0	0
2	16	0	2.16.1	0	0	1	0.3	0.87	0	1	0	0	0
2	16	1	2.16.2	0	0	1	0.3	0.87	0	1	0	0	0
2	16	2	2.16.3	0	0	1	0.4	0.87	0	1	0	0	0
2	16	3	2.16.4	0	0	1	0.5	0.87	0	1	0	0	0
2	16	4	2.16.5	0	0	1	0.6	0.87	0	1	0	0	0
2	16	5	2.16.6	0	0	1	0.7	0.87	0	1	0	0	0
2	16	6	2.16.7	0	0	1	0.5	0.87	0	1	0	0	0
2	16	7	2.16.8	339	46	3	0.3	0.87	143.759	8.125	264437.646	245.555019	245.555019
2	16	8	2.16.9	627	86	5	0.3	0.87	395.272	19.71	830023.436	791.099856	791.099856
2	16	9	2.16.10	766	108	7	0.4	0.87	621.358	29.489	1276085.726	1221.356385	1221.356385
2	16	10	2.16.11	832	123	8	0.5	0.87	786.97	35.607	1567695.739	1502.633496	1502.633496
2	16	11	2.16.12	854	133	9	0.5	0.87	874.128	39.633	1705722.027	1635.768964	1635.768964
2	16	12	2.16.13	848	136	10	0.5	0.87	877.027	40.731	1703147.274	1633.285444	1633.285444
2	16	13	2.16.14	819	130	10	0.5	0.87	797.575	37.97	1572192.432	1506.970853	1506.970853
2	16	14	2.16.15	753	117	9	0.4	0.87	641.468	32.207	1301698.731	1246.061819	1246.061819
2	16	15	2.16.16	541	82	7	0.3	0.87	369.227	20.768	777156.52	740.106225	740.106225
2	16	16	2.16.17	248	61	5	0.3	0.87	146.056	10.305	283380.486	263.826639	263.826639
2	16	17	2.16.18	0	0	4	0.4	0.87	0	4	0	0	0
2	16	18	2.16.19	0	0	4	0.4	0.87	0	4	0	0	0
2	16	19	2.16.20	0	0	4	0.4	0.11	0	4	0	0	0
2	16	20	2.16.21	0	0	4	0.4	0.11	0	4	0	0	0
2	16	21	2.16.22	0	0	3	0.4	0.11	0	3	0	0	0
2	16	22	2.16.23	0	0	3	0.5	0.11	0	3	0	0	0
2	16	23	2.16.24	0	0	3	0.5	0.11	0	3	0	0	0
2	17	0	2.17.1	0	0	4	0.6	0.11	0	4	0	0	0
2	17	1	2.17.2	0	0	4	0.6	0.11	0	4	0	0	0
2	17	2	2.17.3	0	0	5	0.6	0.11	0	5	0	0	0
2	17	3	2.17.4	0	0	6	0.7	0.11	0	6	0	0	0
2	17	4	2.17.5	0	0	6	0.7	0.11	0	6	0	0	0
2	17	5	2.17.6	0	0	7	0.8	0.11	0	7	0	0	0
2	17	6	2.17.7	0	0	7	0.8	0.11	0	7	0	0	0
2	17	7	2.17.8	0	22	8	1	0.11	20.37	8.616	38322.996	27.45251	27.45251
2	17	8	2.17.9	75	118	9	1.2	0.11	155.133	13.516	324632.928	303.617342	303.617342
2	17	9	2.17.10	0	26	10	1.4	0.11	24.088	10.668	47022.761	35.844008	35.844008
2	17	10	2.17.11	0	82	11	1.3	0.11	76.174	13.157	153326.176	138.38067	138.38067
2	17	11	2.17.12	0	147	12	1.3	0.11	139.469	15.945	282831.107	263.296727	263.296727
2	17	12	2.17.13	825	119	10	1.5	0.11	829.419	32.539	1669826.814	1601.14566	1601.14566
2	17	13	2.17.14	897	88	6	1.6	0.11	802.683	27.357	1655791.302	1587.607482	1587.607482
2	17	14	2.17.15	867	77	4	1.5	0.11	666.294	22.158	1411411.372	1351.886906	1351.886906
2	17	15	2.17.16	779	64	1	1.4	0.11	463.58	13.924	1009768.978	964.476298	964.476298
2	17	16	2.17.17	575	42	0	1.3	0.11	221.023	6.09	430702.528	405.928475	405.928475
2	17	17	2.17.18	0	0	-1	1.2	0.11	0	-1	0	0	0
2	17	18	2.17.19	0	0	-1	1.1	0.11	0	-1	0	0	0
2	17	19	2.17.20	0	0	-2	0.9	0.11	0	-2	0	0	0
2	17	20	2.17.21	0	0	-2	0.9	0.11	0	-2	0	0	0
2	17	21	2.17.22	0	0	-3	0.8	0.11	0	-3	0	0	0
2	17	22	2.17.23	0	0	-3	0.7	0.11	0	-3	0	0	0
2	17	23	2.17.24	0	0	-3	0.7	0.11	0	-3	0	0	0
2	18	0	2.18.1	0	0	-2	0.6	0.11	0	-2	0	0	0
2	18	1	2.18.2	0	0	-2	0.5	0.11	0	-2	0	0	0
2	18	2	2.18.3	0	0	-2	0.5	0.11	0	-2	0	0	0
2	18	3	2.18.4	0	0	-2	0.5	0.11	0	-2	0	0	0
2	18	4	2.18.5	0	0	-2	0.5	0.11	0	-2	0	0	0
2	18	5	2.18.6	0	0	-2	0.6	0.11	0	-2	0	0	0
2	18	6	2.18.7	0	0	-1	0.6	0.11	0	-1	0	0	0
2	18	7	2.18.8	0	41	-1	0.7	0.11	39.176	0.283	78785.749	66.481507	66.481507
2	18	8	2.18.9	330	105	0	0.8	0.11	276.435	8.918	600983.786	570.175991	570.175991
2	18	9	2.18.10	168	189	0	0.9	0.11	308.853	9.699	669871.002	636.622259	636.622259
2	18	10	2.18.11	16	197	-1	1.1	0.11	203.451	5.049	437588.788	412.570727	412.570727
2	18	11	2.18.12	247	268	-2	1.2	0.11	492.582	12.313	1056757.796	1009.800116	1009.800116
2	18	12	2.18.13	407	237	-3	1.2	0.11	602.834	14.534	1289513.515	1234.308374	1234.308374
2	18	13	2.18.14	885	106	-4	1.3	0.11	816.206	19.247	1733151.066	1662.226082	1662.226082
2	18	14	2.18.15	859	91	-6	1.2	0.11	678.888	13.837	1481017.912	1419.027009	1419.027009
2	18	15	2.18.16	792	69	-7	1.1	0.11	477.344	7.298	1065577.9	1018.307689	1018.307689
2	18	16	2.18.17	615	43	-8	1	0.11	233.031	-1.086	467705.372	441.620161	441.620161
2	18	17	2.18.18	0	0	-9	1	0.11	0	-9	0	0	0
2	18	18	2.18.19	0	0	-9	0.9	0.11	0	-9	0	0	0
2	18	19	2.18.20	0	0	-10	0.9	0.11	0	-10	0	0	0
2	18	20	2.18.21	0	0	-10	0.9	0.11	0	-10	0	0	0
2	18	21	2.18.22	0	0	-10	0.9	0.11	0	-10	0	0	0
2	18	22	2.18.23	0	0	-10	0.9	0.11	0	-10	0	0	0
2	18	23	2.18.24	0	0	-10	0.9	0.11	0	-10	0	0	0
2	19	0	2.19.1	0	0	-10	0.8	0.11	0	-10	0	0	0
2	19	1	2.19.2	0	0	-11	0.6	0.11	0	-11	0	0	0
2	19	2	2.19.3	0	0	-11	0.5	0.11	0	-11	0	0	0
2	19	3	2.19.4	0	0	-11	0.4	0.11	0	-11	0	0	0
2	19	4	2.19.5	0	0	-11	0.4	0.11	0	-11	0	0	0
2	19	5	2.19.6	0	0	-11	0.3	0.11	0	-11	0	0	0
2	19	6	2.19.7	0	0	-10	0.3	0.11	0	-10	0	0	0
2	19	7	2.19.8	422	47	-8	0.5	0.11	168.131	-2.333	327155.238	306.050277	306.050277
2	19	8	2.19.9	681	80	-7	0.6	0.11	417.432	7.239	923264.37	881.036893	881.036893
2	19	9	2.19.10	797	99	-6	0.7	0.11	633.351	15.048	1375974.777	1317.705969	1317.705969
2	19	10	2.19.11	913	91	-5	0.7	0.11	810.93	21.91	1707084.328	1637.082993	1637.082993
2	19	11	2.19.12	947	91	-4	0.7	0.11	894.564	25.658	1848777.295	1773.755215	1773.755215
2	19	12	2.19.13	955	89	-3	0.7	0.11	903.516	26.953	1857628.008	1782.292312	1782.292312
2	19	13	2.19.14	934	86	-3	0.7	0.11	829.264	24.515	1727812.907	1657.077076	1657.077076
2	19	14	2.19.15	888	78	-3	0.6	0.11	686.235	20.45	1461990.008	1400.673339	1400.673339
2	19	15	2.19.16	792	65	-3	0.5	0.11	475.138	13.717	1037366.874	991.096291	991.096291
2	19	16	2.19.17	591	43	-4	0.4	0.11	227.419	3.97	449869.273	424.416066	424.416066
2	19	17	2.19.18	0	0	-5	0.3	0.11	0	-5	0	0	0
2	19	18	2.19.19	0	0	-6	0.2	0.11	0	-6	0	0	0
2	19	19	2.19.20	0	0	-7	0.2	0.11	0	-7	0	0	0
2	19	20	2.19.21	0	0	-7	0.2	0.11	0	-7	0	0	0
2	19	21	2.19.22	0	0	-8	0.2	0.11	0	-8	0	0	0
2	19	22	2.19.23	0	0	-8	0.3	0.11	0	-8	0	0	0
2	19	23	2.19.24	0	0	-8	0.2	0.11	0	-8	0	0	0
2	20	0	2.20.1	0	0	-9	0.2	0.11	0	-9	0	0	0
2	20	1	2.20.2	0	0	-9	0.2	0.11	0	-9	0	0	0
2	20	2	2.20.3	0	0	-9	0.2	0.11	0	-9	0	0	0
2	20	3	2.20.4	0	0	-9	0.2	0.11	0	-9	0	0	0
2	20	4	2.20.5	0	0	-9	0.3	0.11	0	-9	0	0	0
2	20	5	2.20.6	0	0	-9	0.3	0.11	0	-9	0	0	0
2	20	6	2.20.7	0	0	-8	0.3	0.11	0	-8	0	0	0
2	20	7	2.20.8	503	42	-6	0.4	0.11	186.005	0.451	358254.456	336.047526	336.047526

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
2	20	8	2.20.9	752	67	-4	0.5	0.11	437.158	11.352	954854.747	911.507896	911.507896
2	20	9	2.20.10	859	82	-2	0.5	0.11	654.676	21.026	1392642.133	1333.782735	1333.782735
2	20	10	2.20.11	916	89	-1	0.5	0.11	813.986	27.579	1677173.971	1608.232479	1608.232479
2	20	11	2.20.12	938	93	0	0.6	0.11	892.44	30.42	1810835.965	1737.158297	1737.158297
2	20	12	2.20.13	936	94	0	0.6	0.11	896.324	30.55	1817172.383	1743.270191	1743.270191
2	20	13	2.20.14	908	92	0	0.6	0.11	823.984	28.106	1692690.173	1623.19888	1623.19888
2	20	14	2.20.15	849	86	0	0.5	0.11	671.648	23.614	1413230.602	1353.641672	1353.641672
2	20	15	2.20.16	739	74	0	0.4	0.11	462.157	16.746	997502.878	952.644835	952.644835
2	20	16	2.20.17	521	48	-2	0.2	0.11	214.913	6.032	424839.473	400.273171	400.273171
2	20	17	2.20.18	0	0	-4	0.2	0.11	0	-4	0	0	0
2	20	18	2.20.19	0	0	-4	0.3	0.11	0	-4	0	0	0
2	20	19	2.20.20	0	0	-4	0.5	0.11	0	-4	0	0	0
2	20	20	2.20.21	0	0	-4	0.6	0.11	0	-4	0	0	0
2	20	21	2.20.22	0	0	-4	0.8	0.11	0	-4	0	0	0
2	20	22	2.20.23	0	0	-4	0.9	0.11	0	-4	0	0	0
2	20	23	2.20.24	0	0	-4	0.9	0.11	0	-4	0	0	0
2	21	0	2.21.1	0	0	-4	0.9	0.11	0	-4	0	0	0
2	21	1	2.21.2	0	0	-4	0.8	0.11	0	-4	0	0	0
2	21	2	2.21.3	0	0	-4	0.7	0.11	0	-4	0	0	0
2	21	3	2.21.4	0	0	-4	0.6	0.11	0	-4	0	0	0
2	21	4	2.21.5	0	0	-4	0.5	0.11	0	-4	0	0	0
2	21	5	2.21.6	0	0	-4	0.7	0.11	0	-4	0	0	0
2	21	6	2.21.7	0	0	-5	0.5	0.11	0	-5	0	0	0
2	21	7	2.21.8	5	50	-3	0.3	0.11	49.602	-1.173	101830.31	88.709507	88.709507
2	21	8	2.21.9	17	116	-1	0.3	0.11	120.494	3.48	259562.534	240.852651	240.852651
2	21	9	2.21.10	675	132	0	0.5	0.11	594.785	20.901	1261429.478	1207.219466	1207.219466
2	21	10	2.21.11	694	166	1	0.6	0.11	733.1	25.986	1514790.805	1451.603194	1451.603194
2	21	11	2.21.12	717	178	2	0.7	0.11	813.937	28.953	1656001.125	1587.80987	1587.80987
2	21	12	2.21.13	0	130	2	0.7	0.11	122.392	6.031	256383.623	237.786382	237.786382
2	21	13	2.21.14	753	150	2	0.6	0.11	772.547	28.331	1581977.351	1516.409054	1516.409054
2	21	14	2.21.15	218	203	1	0.5	0.11	361.726	13.677	775127.794	738.149384	738.149384
2	21	15	2.21.16	38	131	0	0.4	0.11	151.674	5.473	327272.1	306.162998	306.162998
2	21	16	2.21.17	122	69	0	0.3	0.11	110.383	4.047	224677.416	207.203652	207.203652
2	21	17	2.21.18	0	0	-1	0.3	0.11	0	0	0	0	0
2	21	18	2.21.19	0	0	-1	0.3	0.11	0	-1	0	0	0
2	21	19	2.21.20	0	0	-1	0.3	0.11	0	-1	0	0	0
2	21	20	2.21.21	0	0	-2	0.4	0.11	0	-2	0	0	0
2	21	21	2.21.22	0	0	-2	0.3	0.11	0	-2	0	0	0
2	21	22	2.21.23	0	0	-2	0.2	0.11	0	-2	0	0	0
2	21	23	2.21.24	0	0	-3	0.2	0.11	0	-3	0	0	0
2	22	0	2.22.1	0	0	-3	0.2	0.11	0	-3	0	0	0
2	22	1	2.22.2	0	0	-4	0.2	0.11	0	-4	0	0	0
2	22	2	2.22.3	0	0	-5	0.2	0.11	0	-5	0	0	0
2	22	3	2.22.4	0	0	-5	0.2	0.11	0	-5	0	0	0
2	22	4	2.22.5	0	0	-5	0.2	0.11	0	-5	0	0	0
2	22	5	2.22.6	0	0	-6	0.2	0.11	0	-6	0	0	0
2	22	6	2.22.7	0	0	-4	0.2	0.11	0	-4	0	0	0
2	22	7	2.22.8	439	49	-1	0.2	0.11	178.523	5.624	343175.776	321.503144	321.503144
2	22	8	2.22.9	661	84	0	0.3	0.11	418.454	15.605	900222.849	858.811824	858.811824
2	22	9	2.22.10	736	114	1	0.4	0.11	617.8	23.364	1299423.438	1243.867149	1243.867149
2	22	10	2.22.11	799	125	2	0.4	0.11	772.824	29.928	1575108.731	1509.783816	1509.783816
2	22	11	2.22.12	365	256	2	0.4	0.11	591.194	23.299	1221633.197	1168.833326	1168.833326
2	22	12	2.22.13	144	288	3	0.4	0.11	431.119	18.504	897829.721	856.503494	856.503494
2	22	13	2.22.14	282	249	3	0.4	0.11	498.077	20.95	1037901.547	991.612018	991.612018
2	22	14	2.22.15	199	207	3	0.3	0.11	353.719	16.158	749949.471	713.863229	713.863229
2	22	15	2.22.16	18	127	2	0.2	0.11	132.122	7.07	281696.534	262.202355	262.202355
2	22	16	2.22.17	295	74	0	0.2	0.11	175.064	6.595	352856.917	330.841244	330.841244
2	22	17	2.22.18	0	0	0	0.2	0.11	0	0	0	0	0
2	22	18	2.22.19	0	0	0	0.2	0.11	0	0	0	0	0
2	22	19	2.22.20	0	0	0	0.2	0.11	0	0	0	0	0
2	22	20	2.22.21	0	0	-1	0.3	0.11	0	-1	0	0	0
2	22	21	2.22.22	0	0	-1	0.2	0.11	0	-1	0	0	0
2	22	22	2.22.23	0	0	-1	0.2	0.11	0	-1	0	0	0
2	22	23	2.22.24	0	0	-1	0.2	0.11	0	-1	0	0	0
2	23	0	2.23.1	0	0	-1	0.2	0.11	0	-1	0	0	0
2	23	1	2.23.2	0	0	0	0.2	0.11	0	0	0	0	0
2	23	2	2.23.3	0	0	0	0.3	0.11	0	0	0	0	0
2	23	3	2.23.4	0	0	0	0.3	0.11	0	0	0	0	0
2	23	4	2.23.5	0	0	0	0.3	0.11	0	0	0	0	0
2	23	5	2.23.6	0	0	0	0.2	0.11	0	0	0	0	0
2	23	6	2.23.7	0	0	0	0.2	0.11	0	0	0	0	0
2	23	7	2.23.8	0	31	1	0.2	0.11	28.726	2.094	57449.575	45.901358	45.901358
2	23	8	2.23.9	0	32	2	0.3	0.11	29.641	3.102	60610.964	48.950727	48.950727
2	23	9	2.23.10	0	59	3	0.4	0.11	54.746	4.971	113047.856	99.529571	99.529571
2	23	10	2.23.11	0	126	4	0.4	0.11	118.652	8.262	247015.507	228.750215	228.750215
2	23	11	2.23.12	0	73	4	0.4	0.11	67.823	6.434	138799.276	124.368516	124.368516
2	23	12	2.23.13	0	146	4	0.4	0.11	138.084	8.955	286976.918	267.295635	267.295635
2	23	13	2.23.14	0	46	4	0.3	0.11	42.688	5.581	86364.846	73.792046	73.792046
2	23	14	2.23.15	0	70	3	0.2	0.11	64.985	5.487	134633.771	120.350611	120.350611
2	23	15	2.23.16	6	123	2	0.2	0.11	121.666	6.667	258776.72	240.094682	240.094682
2	23	16	2.23.17	198	84	1	0.2	0.11	154.026	6.825	313219.728	292.608558	292.608558
2	23	17	2.23.18	0	0	0	0.2	0.11	0	0	0	0	0
2	23	18	2.23.19	0	0	0	0.2	0.11	0	0	0	0	0
2	23	19	2.23.20	0	0	0	0.3	0.11	0	0	0	0	0
2	23	20	2.23.21	0	0	0	0.2	0.11	0	0	0	0	0
2	23	21	2.23.22	0	0	0	0.3	0.11	0	0	0	0	0
2	23	22	2.23.23	0	0	0	0.4	0.11	0	0	0	0	0
2	23	23	2.23.24	0	0	0	0.3	0.11	0	0	0	0	0
2	24	0	2.24.1	0	0	0	0.2	0.11	0	0	0	0	0
2	24	1	2.24.2	0	0	0	0.3	0.11	0	0	0	0	0
2	24	2	2.24.3	0	0	0	0.3	0.11	0	0	0	0	0
2	24	3	2.24.4	0	0	0	0.5	0.11	0	0	0	0	0
2	24	4	2.24.5	0	0	0	0.7	0.11	0	0	0	0	0
2	24	5	2.24.6	0	0	0	0.8	0.11	0	0	0	0	0
2	24	6	2.24.7	0	0	-1	0.8	0.11	0	-1	0	0	0
2	24	7	2.24.8	495	49	0	1	0.11	196.748	5.829	381281.742	358.258864	358.258864
2	24	8	2.24.9	270	125	0	1.1	0.11	267.995	8.009	585625.976	555.362369	555.362369
2	24	9	2.24.10	793	103	0	1.1	0.11	648.093	19.397	1383541.274	1325.004356	1325.004356
2	24	10	2.24.11	71	250	0	1.2	0.11	312.057	9.056	669160.122	635.936568	635.936568
2	24	11	2.24.12	857	126	0	1.3	0.11	878.872	24.994	1815619.892	1741.772711	1741.772711
2	24	12	2.24.13	36	256	0	1.4	0.11	292.404	8.081	624509.996	592.868574	592.868574
2	24	13	2.24.14	349	241	0	1.3	0.11	543.293	15.429	1157518.973	1106.990924	1106.990924
2	24	14	2.24.15	838	95	0	1.2	0.11	683.21	19.952	1454843.295	1393.779863	1393.779863
2	24	15	2.24.16	786	71	0	1.1	0.11	488.213	14.635	1065167.748	1017.91207	1017.91207
2	24	16	2.24.17	610	47	-2	1	0.11	245.29	5.325	492087.166	465.138011	465.138011
2	24	17	2.24.18	0	0	-3	0.9	0.11	0	0	0	0	0
2	24	18	2.24.19	0	0	-4	0.9	0.11	0	-4	0	0	0
2	24	19	2.24.20	0	0	-4	0.8	0.11	0	-4	0	0	0
2	24	20	2.24.21	0	0	-5	0.7	0.11	0	-5	0	0	0
2	24	21	2.24.22	0	0	-5	0.6	0.11	0	-5	0	0	0
2	24	22	2.24.23	0	0	-6	0.5	0.11	0	-6	0	0	0
2	24	23	2.24.24	0	0	-6	0.4	0.11	0	-6	0	0	0
2	25	0	2.25.1	0	0	-7	0.3	0.11	0	-7	0	0	0
2	25	1	2.25.2	0	0	-7	0.2	0.11	0	-7	0	0	0
2	25	2	2.25.3	0	0	-7	0.2	0.11	0	-7	0	0	0
2	25	3	2.25.4	0	0	-7	0.2	0.11	0	-7	0	0	0
2	25	4	2.25.5	0	0	-6	0.2	0.11	0	-6	0	0	0
2	25	5	2.25.6	0	0	-6	0.1	0.11	0	-6	0	0	0
2	25	6	2.25.7	0	0	-5	0	0.11	0	-5	0	0	0
2	25	7	2.25.8	0	19	-4	0.2	0.11	17.58	-3.329	35417.96	24.65041	24.65041
2	25	8	2.25.9	0	81	-3	0.3	0.11	75.978	-0.176	163163.71	147.869621	147.869621
2	25	9	2.25.10	56	197	-3	0.4	0.11	237.338	5.551	515398.615	487.623443	487.623443
2	25	10	2.25.11	0	55	-2	0.5	0.11	51.056	-0.22	106491.984	93.205999	93.205999
2	25	11	2.25.12	0	64	0	0.6	0.11	59.449	2.012	123122.83	109.247549	109.247549
2	25	12	2.25.13	31	253	0	0.6	0.11	284.595	9.641	603588.355	572.68827	572.68827
2	25	13	2.25.14	0	81	0	0.5	0.11	75.26	2.624	157351.592	142.26345	142.26345
2	25	14	2.25.15	0	156	0	0.4	0.11	149.392	5.375	318597.103	297.795391	297.795391
2	25	15	2.25.16	478	135	0	0.3	0.11	399.105	14.898	863200.969	823.101776	823.101776
2	25	16	2.25.17	221	88	0	0.2	0.11	165.664	6.269	339139.032	317.609438	317.609438
2	25	17	2.25.18	0	0	0	0.2	0.11	0	0	0	0	0
2	25	18	2.25.19	0	0	0	0.4	0.11	0	0	0	0	0
2	25	19	2.25.20	0	0	0	0.6	0.11	0	0	0	0	0
2	25	20	2.25.21	0	0	0	0.8	0.11	0	0	0	0	0
2	25	21	2.25.22	0	0	-2	1	0.11	0	-2	0	0	0
2	25	22	2.25.23	0	0	-4	1.1	0.11	0	-4	0	0	0
2	25	23	2.25.24	0	0	-5	1	0.11	0	-5	0	0	0
2	26	0	2.26.1	0	0	-6	0.9	0.11	0	-6	0	0	0
2	26	1	2.26.2	0	0	-7	0.8	0.11	0	-7	0	0	0
2	26	2	2.26.3	0	0	-7	0.8	0.11	0	-7	0	0	0
2	26	3	2.26.4	0	0	-8	0.7	0.11	0	-8	0	0	0
2	26	4	2.26.5	0	0	-9	0.6	0.11	0	-9	0	0	0
2	26	5	2.26.6	0	0	-9	0.6	0.11	0	-9	0	0	0
2	26	6	2.26.7	0	0	-9	0.6	0.11	0	-9	0	0	0
2	26	7	2.26.8	597	45	-8	0.7	0.11	224.647	-0.791	448849.499	423.432427	423.432427
2	26	8	2.26.9	806	67	-6	0.8	0.11	478.437	9.476	1058870.054	1011.837528	1011.837528
2	26	9	2.26.10	899	81	-5	0.8	0.11	697.275	17.547	1499453.886	1436.809723	1436.809723
2	26	10	2.26.11	940	91	-5	0.9	0.11	848.146	21.663	1782192.71	1709.529986	1709.529986
2	26	11	2.26.12	517	218	-5	0.9	0.11	694.198	16.765	1472321.614	1410.638856	1410.638856
2	26	12	2.26.13	589	194	-5	0.9	0.11	731.789	17.951	1546996.179	1482.667404	1482.667404
2	26	13	2.26.14	580	177	-5	0.9	0.11	669.78	16.025	1430912.534	1370.697063	1370.697063
2	26	14	2.26.15	867	95	-6	0.9	0.11	707.39	16.269	1525747.613	1462.171759	1462.171759

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
2	26	15	2.26.16	189	147	-6	0.9	0.11	251.896	1.921	562297.507	532.86052	532.86052
2	26	16	2.26.17	164	71	-7	0.8	0.11	128.99	-2.897	272029.392	252.877759	252.877759
2	26	17	2.26.18	0	0	-8	0.8	0.11	0	0	0	0	0
2	26	18	2.26.19	0	0	-8	0.7	0.11	0	-8	0	0	0
2	26	19	2.26.20	0	0	-9	0.7	0.11	0	-9	0	0	0
2	26	20	2.26.21	0	0	-9	0.7	0.11	0	-9	0	0	0
2	26	21	2.26.22	0	0	-10	0.7	0.11	0	-10	0	0	0
2	26	22	2.26.23	0	0	-10	0.7	0.11	0	-10	0	0	0
2	26	23	2.26.24	0	0	-10	0.8	0.11	0	-10	0	0	0
2	27	0	2.27.1	0	0	-10	0.8	0.11	0	-10	0	0	0
2	27	1	2.27.2	0	0	-10	0.7	0.11	0	-10	0	0	0
2	27	2	2.27.3	0	0	-10	0.7	0.11	0	-10	0	0	0
2	27	3	2.27.4	0	0	-10	0.7	0.11	0	-10	0	0	0
2	27	4	2.27.5	0	0	-11	0.7	0.11	0	-11	0	0	0
2	27	5	2.27.6	0	0	-11	0.7	0.11	0	-11	0	0	0
2	27	6	2.27.7	0	0	-11	0.7	0.11	0	0	0	0	0
2	27	7	2.27.8	621	45	-10	0.8	0.11	231.915	-2.75	468431.728	442.320779	442.320779
2	27	8	2.27.9	831	64	-9	0.8	0.11	490.308	6.864	1096522.027	1048.155342	1048.155342
2	27	9	2.27.10	927	75	-8	0.8	0.11	708.344	14.905	1537870.895	1473.865464	1473.865464
2	27	10	2.27.11	973	82	-6	0.9	0.11	867.236	21.263	1824474.664	1750.313722	1750.313722
2	27	11	2.27.12	994	84	-5	0.9	0.11	951.605	24.887	1965566.21	1886.405834	1886.405834
2	27	12	2.27.13	993	85	-5	0.9	0.11	955.582	25.01	1972270.794	1892.872848	1892.872848
2	27	13	2.27.14	960	87	-5	0.9	0.11	873.091	22.441	1827252.072	1752.992716	1752.992716
2	27	14	2.27.15	911	81	-5	0.9	0.11	724.364	17.805	1554073.133	1489.493592	1489.493592
2	27	15	2.27.16	822	69	-5	0.8	0.11	510.18	11.524	1127057.275	1077.608604	1077.608604
2	27	16	2.27.17	628	50	-6	0.7	0.11	257.557	2.345	527269.403	499.073601	499.073601
2	27	17	2.27.18	0	0	-6	0.6	0.11	0	0	0	0	0
2	27	18	2.27.19	0	0	-7	0.5	0.11	0	-7	0	0	0
2	27	19	2.27.20	0	0	-8	0.4	0.11	0	-8	0	0	0
2	27	20	2.27.21	0	0	-9	0.3	0.11	0	-9	0	0	0
2	27	21	2.27.22	0	0	-10	0.2	0.11	0	-10	0	0	0
2	27	22	2.27.23	0	0	-11	0.2	0.11	0	-11	0	0	0
2	27	23	2.27.24	0	0	-10	0.2	0.11	0	-10	0	0	0
2	28	0	2.28.1	0	0	-10	0.2	0.11	0	-10	0	0	0
2	28	1	2.28.2	0	0	-10	0.2	0.11	0	-10	0	0	0
2	28	2	2.28.3	0	0	-9	0.2	0.11	0	-9	0	0	0
2	28	3	2.28.4	0	0	-9	0.3	0.11	0	-9	0	0	0
2	28	4	2.28.5	0	0	-10	0.3	0.11	0	-10	0	0	0
2	28	5	2.28.6	0	0	-10	0.2	0.11	0	-10	0	0	0
2	28	6	2.28.7	0	0	-9	0.3	0.11	0	0	0	0	0
2	28	7	2.28.8	509	56	-7	0.5	0.11	214.053	0.305	432642.956	407.800146	407.800146
2	28	8	2.28.9	737	83	-5	0.6	0.11	468.224	11.003	1030903.382	984.861826	984.861826
2	28	9	2.28.10	848	98	-4	0.7	0.11	687.637	18.837	1469668.202	1408.079464	1408.079464
2	28	10	2.28.11	935	94	-4	0.8	0.11	853.795	23.552	1780020.225	1707.434481	1707.434481
2	28	11	2.28.12	965	94	-3	0.8	0.11	941.182	27.344	1925339.229	1847.604255	1847.604255
2	28	12	2.28.13	967	93	-3	0.8	0.11	945.202	27.472	1932180.092	1854.202719	1854.202719
2	28	13	2.28.14	941	91	-2	0.8	0.11	864.982	25.909	1786466.115	1713.651968	1713.651968
2	28	14	2.28.15	883	87	-2	0.8	0.11	714.075	21.078	1512942.919	1449.820786	1449.820786
2	28	15	2.28.16	785	76	-3	0.7	0.11	500.198	13.643	1095713.56	1047.375522	1047.375522
2	28	16	2.28.17	598	53	-3	0.6	0.11	252.407	5.418	512778.876	485.096531	485.096531
2	28	17	2.28.18	0	0	-4	0.6	0.11	0	0	0	0	0
2	28	18	2.28.19	0	0	-4	0.6	0.11	0	-4	0	0	0
2	28	19	2.28.20	0	0	2	0.6	0.87	0	2	0	0	0
2	28	20	2.28.21	0	0	2	0.6	0.87	0	2	0	0	0
2	28	21	2.28.22	0	0	1	0.7	0.87	0	1	0	0	0
2	28	22	2.28.23	0	0	1	0.7	0.87	0	1	0	0	0
2	28	23	2.28.24	0	0	0	0.7	0.87	0	0	0	0	0
3	1	0	3.1.1	0	0	0	0.7	0.87	0	0	0	0	0
3	1	1	3.1.2	0	0	0	0.7	0.87	0	0	0	0	0
3	1	2	3.1.3	0	0	-1	0.7	0.87	0	-1	0	0	0
3	1	3	3.1.4	0	0	-2	0.6	0.87	0	-2	0	0	0
3	1	4	3.1.5	0	0	-3	0.5	0.87	0	-3	0	0	0
3	1	5	3.1.6	0	0	-4	0.5	0.87	0	-4	0	0	0
3	1	6	3.1.7	0	0	-3	0.5	0.87	0	0	0	0	0
3	1	7	3.1.8	188	66	-2	0.6	0.87	128.613	2.305	262470.613	243.657685	243.657685
3	1	8	3.1.9	735	60	-1	0.7	0.87	449.309	13.934	978154.702	933.982241	933.982241
3	1	9	3.1.10	907	102	0	0.8	0.87	744.58	24.043	1554962.312	1490.351265	1490.351265
3	1	10	3.1.11	958	113	0	0.8	0.87	913.723	29.45	1853193.929	1778.01535	1778.01535
3	1	11	3.1.12	974	120	0	0.7	0.87	1000.322	33.093	1990295.546	1910.258912	1910.258912
3	1	12	3.1.13	972	121	1	0.7	0.87	1002.832	34.174	1986467.516	1906.566524	1906.566524
3	1	13	3.1.14	953	115	2	0.6	0.87	920.943	33.354	1838799.999	1764.131454	1764.131454
3	1	14	3.1.15	906	104	1	0.4	0.87	759.802	28.465	1558998.45	1494.244386	1494.244386
3	1	15	3.1.16	713	67	0	0.3	0.87	459.946	17.178	990690.387	946.073737	946.073737
3	1	16	3.1.17	457	55	0	0.3	0.87	212.692	7.768	429855.986	405.111929	405.111929
3	1	17	3.1.18	0	11	-1	0.6	0.87	10.464	-0.702	12789.207	2.823485	2.823485
3	1	18	3.1.19	0	0	-2	0.8	0.87	0	-2	0	0	0
3	1	19	3.1.20	0	0	-2	0.9	0.87	0	-2	0	0	0
3	1	20	3.1.21	0	0	-3	0.8	0.87	0	-3	0	0	0
3	1	21	3.1.22	0	0	-4	0.6	0.87	0	-4	0	0	0
3	1	22	3.1.23	0	0	-4	0.4	0.87	0	-4	0	0	0
3	1	23	3.1.24	0	0	-3	0.3	0.87	0	-3	0	0	0
3	2	0	3.2.1	0	0	-3	0.3	0.87	0	-3	0	0	0
3	2	1	3.2.2	0	0	-2	0.4	0.87	0	-2	0	0	0
3	2	2	3.2.3	0	0	-2	0.4	0.87	0	-2	0	0	0
3	2	3	3.2.4	0	0	-2	0.5	0.87	0	-2	0	0	0
3	2	4	3.2.5	0	0	-1	0.5	0.87	0	-1	0	0	0
3	2	5	3.2.6	0	0	-1	0.5	0.87	0	-1	0	0	0
3	2	6	3.2.7	0	0	0	0.6	0.87	0	0	0	0	0
3	2	7	3.2.8	465	68	1	0.8	0.87	218.623	7.894	436798.308	411.808257	411.808257
3	2	8	3.2.9	676	107	2	0.9	0.87	473.674	16.915	1018410.423	972.811542	972.811542
3	2	9	3.2.10	657	118	4	0.8	0.87	596.126	23.236	1245519.946	1191.873672	1191.873672
3	2	10	3.2.11	807	159	5	0.8	0.87	848.54	32.33	1699622.866	1629.88592	1629.88592
3	2	11	3.2.12	815	176	6	0.7	0.87	929.894	36.741	1821841.474	1747.773837	1747.773837
3	2	12	3.2.13	674	172	6	0.6	0.87	803.866	33.318	1597116.632	1531.01189	1531.01189
3	2	13	3.2.14	716	138	6	0.6	0.87	758.107	31.794	1522256.375	1458.804229	1458.804229
3	2	14	3.2.15	283	216	5	0.7	0.87	437.433	19.466	915030.559	873.094838	873.094838
3	2	15	3.2.16	462	118	3	0.8	0.87	381.844	15.338	821243.593	782.631117	782.631117
3	2	16	3.2.17	0	12	1	0.9	0.87	11.295	1.353	22052.111	11.758167	11.758167
3	2	17	3.2.18	112	13	0	0.9	0.87	21.455	0.481	20732.096	10.484925	10.484925
3	2	18	3.2.19	0	0	-1	0.9	0.87	0	-1	0	0	0
3	2	19	3.2.20	0	0	-2	0.9	0.87	0	-2	0	0	0
3	2	20	3.2.21	0	0	-3	0.9	0.87	0	-3	0	0	0
3	2	21	3.2.22	0	0	-4	0.9	0.87	0	-4	0	0	0
3	2	22	3.2.23	0	0	-6	0.9	0.87	0	-6	0	0	0
3	2	23	3.2.24	0	0	-7	0.8	0.87	0	-7	0	0	0
3	3	0	3.3.1	0	0	-8	0.7	0.87	0	-8	0	0	0
3	3	1	3.3.2	0	0	-9	0.6	0.87	0	-9	0	0	0
3	3	2	3.3.3	0	0	-10	0.5	0.87	0	-10	0	0	0
3	3	3	3.3.4	0	0	-10	0.5	0.87	0	-10	0	0	0
3	3	4	3.3.5	0	0	-10	0.5	0.87	0	-10	0	0	0
3	3	5	3.3.6	0	0	-11	0.5	0.87	0	-11	0	0	0
3	3	6	3.3.7	0	0	-10	0.5	0.87	0	0	0	0	0
3	3	7	3.3.8	696	49	-9	0.6	0.87	270.03	-0.029	552896.117	523.792259	523.792259
3	3	8	3.3.9	872	72	-7	0.7	0.87	538.443	10.902	1188579.596	1136.950945	1136.950945
3	3	9	3.3.10	953	88	-6	0.7	0.87	767.465	19.462	1629572.498	1562.317716	1562.317716
3	3	10	3.3.11	991	100	-4	0.6	0.87	927.163	27.569	1893139.625	1816.545611	1816.545611
3	3	11	3.3.12	1006	106	-3	0.6	0.87	1012.689	31.447	2026921.151	1945.586726	1945.586726
3	3	12	3.3.13	1002	107	-2	0.6	0.87	1013.029	32.457	2019384.266	1938.316903	1938.316903
3	3	13	3.3.14	980	103	-1	0.5	0.87	929.424	31.561	1868076.571	1792.37064	1792.37064
3	3	14	3.3.15	937	92	-1	0.5	0.87	773.002	26.129	1599765.68	1533.567071	1533.567071
3	3	15	3.3.16	852	77	-1	0.4	0.87	547.974	18.852	1174855.238	1123.712896	1123.712896
3	3	16	3.3.17	686	53	-3	0.2	0.87	284.711	7.721	578280.153	548.276838	548.276838
3	3	17	3.3.18	212	13	-6	0.3	0.87	31.507	-5.25	27814.165	17.316049	17.316049
3	3	18	3.3.19	0	0	-7	0.4	0.87	0	-7	0	0	0
3	3	19	3.3.20	0	0	-7	0.6	0.87	0	-7	0	0	0
3	3	20	3.3.21	0	0	-7	0.7	0.87	0	-7	0	0	0
3	3	21	3.3.22	0	0	-8	0.7	0.87	0	-8	0	0	0
3	3	22	3.3.23	0	0	-8	0.6	0.87	0	-8	0	0	0
3	3	23	3.3.24	0	0	-9	0.4	0.87	0	-9	0	0	0
3	4	0	3.4.1	0	0	-9	0.3	0.87	0	-9	0	0	0
3	4	1	3.4.2	0	0	-9	0.2	0.87	0	-9	0	0	0
3	4	2	3.4.3	0	0	-9	0.2	0.87	0	-9	0	0	0
3	4	3	3.4.4	0	0	-9	0.2	0.87	0	-9	0	0	0
3	4	4	3.4.5	0	0	-8	0.2	0.87	0	-8	0	0	0
3	4	5	3.4.6	0	0	-8	0.2	0.87	0	-8	0	0	0
3	4	6	3.4.7	0	0	-7	0.2	0.87	0	0	0	0	0
3	4	7	3.4.8	391	83	-5	0.2	0.87	214.185	3.077	441487.482	416.331275	416.331275
3	4	8	3.4.9	646	121	-2	0.4	0.87	477.005	15.267	1031611.879	985.545218	985.545218
3	4	9	3.4.10	766	145	0	0.5	0.87	705.306	24.737	1464415.376	1403.012767	1403.012767
3	4	10	3.4.11	831	158	0	0.5	0.87	872.566	30.55	1758181.987	1686.370059	1686.370059
3	4	11	3.4.12	857	164	1	0.6	0.87	959.187	33.604	1901077.552	1824.202266	1824.202266
3	4	12	3.4.13	855	166	2	0.6	0.87	961.835	34.692	1897845.627	1821.08486	1821.08486
3	4	13	3.4.14	844	152	3	0.6	0.87	883.116	33.044	1761903.751	1689.959946	1689.959946
3	4	14	3.4.15	781	140	2	0.6	0.87	719.992	26.537	1484172.141	1422.069471	1422.069471
3	4	15	3.4.16	617	90	1	0.5	0.87	439.673	16.456	946436.508	903.387949	903.387949
3	4	16	3.4.17	439	84	0	0.4	0.87	238.04	8.462	487021.751	460.252084	460.252084
3	4	17	3.4.18	48	15	0	0.4	0.87	18.849	0.528	20462.538	10.224919	10.224919
3	4	18	3.4.19	0	0	-1	0.4	0.87	0	-1	0	0	0
3	4	19	3.4.20	0	0	-2	0.4	0.87	0	-2	0	0	0
3	4	20	3.4.21	0	0	-1	0.4	0.87	0	-1	0	0	0
3	4	21	3.4.22	0	0	-1	0.3	0.87	0	-1	0	0	0

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

	Reference Case	Adjusted Case
	3,025,628	3,025,628

Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
3	4	22	3.4.23	0	0	-1	0.3	0.87	0	-1	0	0	0
3	4	23	3.4.24	0	0	0	0.3	0.87	0	0	0	0	0
3	5	0	3.5.1	0	0	0	0.3	0.87	0	0	0	0	0
3	5	1	3.5.2	0	0	0	0.3	0.87	0	0	0	0	0
3	5	2	3.5.3	0	0	0	0.3	0.87	0	0	0	0	0
3	5	3	3.5.4	0	0	0	0.4	0.87	0	0	0	0	0
3	5	4	3.5.5	0	0	1	0.4	0.87	0	1	0	0	0
3	5	5	3.5.6	0	0	1	0.4	0.87	0	1	0	0	0
3	5	6	3.5.7	0	4	2	0.5	0.87	3.805	2.112	4381.882	0	0
3	5	7	3.5.8	343	88	3	0.6	0.87	205.666	9.893	415634.519	391.394385	391.394385
3	5	8	3.5.9	0	50	4	0.6	0.87	47.193	5.602	96559.309	83.625279	83.625279
3	5	9	3.5.10	0	126	6	0.6	0.87	120.762	10.09	249119.815	230.77996	230.77996
3	5	10	3.5.11	32	246	8	0.7	0.87	278.994	17.18	572455.009	542.658102	542.658102
3	5	11	3.5.12	36	273	10	0.8	0.87	313.676	20.036	636318.799	604.258944	604.258944
3	5	12	3.5.13	808	177	11	0.9	0.87	934.428	40.273	1803024.042	1729.623181	1729.623181
3	5	13	3.5.14	792	165	10	0.9	0.87	856.273	36.849	1682168.222	1613.049764	1613.049764
3	5	14	3.5.15	735	149	9	0.8	0.87	698.652	31.531	1411749.774	1352.213316	1352.213316
3	5	15	3.5.16	128	163	8	0.7	0.87	240.887	15.973	505511.36	478.086533	478.086533
3	5	16	3.5.17	0	56	6	0.7	0.87	53.235	7.756	108089.26	94.746678	94.746678
3	5	17	3.5.18	0	5	6	0.7	0.87	4.756	6.132	5422.461	0	0
3	5	18	3.5.19	0	0	6	0.7	0.87	0	6	0	0	0
3	5	19	3.5.20	0	0	6	0.7	0.1	0	6	0	0	0
3	5	20	3.5.21	0	0	6	0.7	0.1	0	6	0	0	0
3	5	21	3.5.22	0	0	6	0.7	0.1	0	6	0	0	0
3	5	22	3.5.23	0	0	6	0.7	0.1	0	6	0	0	0
3	5	23	3.5.24	0	0	6	0.7	0.1	0	6	0	0	0
3	6	0	3.6.1	0	0	6	0.7	0.1	0	6	0	0	0
3	6	1	3.6.2	0	0	7	0.7	0.1	0	7	0	0	0
3	6	2	3.6.3	0	0	7	0.7	0.1	0	7	0	0	0
3	6	3	3.6.4	0	0	7	0.7	0.1	0	7	0	0	0
3	6	4	3.6.5	0	0	7	0.7	0.1	0	7	0	0	0
3	6	5	3.6.6	0	0	7	0.7	0.1	0	7	0	0	0
3	6	6	3.6.7	0	0	7	0.7	0.1	0	0	0	0	0
3	6	7	3.6.8	0	39	8	0.7	0.1	36.138	9.194	72111.918	60.044156	60.044156
3	6	8	3.6.9	0	100	8	0.7	0.1	94.051	11.11	194353.056	177.953804	177.953804
3	6	9	3.6.10	0	106	9	0.7	0.1	99.089	12.269	202304.328	185.623331	185.623331
3	6	10	3.6.11	0	81	10	0.8	0.1	75.261	12.412	150844.027	135.986474	135.986474
3	6	11	3.6.12	0	119	10	0.7	0.1	111.351	13.663	224562.684	207.092985	207.092985
3	6	12	3.6.13	0	163	10	0.7	0.1	154.217	15.072	312832.715	292.235258	292.235258
3	6	13	3.6.14	0	139	10	0.7	0.1	130.844	14.308	265618.571	246.694099	246.694099
3	6	14	3.6.15	0	84	9	0.6	0.1	78.02	11.646	158149.294	143.032886	143.032886
3	6	15	3.6.16	0	70	9	0.5	0.1	64.96	11.273	132173.639	117.977651	117.977651
3	6	16	3.6.17	0	20	8	0.4	0.1	18.502	8.666	36021.715	25.232772	25.232772
3	6	17	3.6.18	0	1	8	0.3	0.1	0.923	8.029	0	0	0
3	6	18	3.6.19	0	0	8	0.3	0.1	0	8	0	0	0
3	6	19	3.6.20	0	0	8	0.3	0.1	0	8	0	0	0
3	6	20	3.6.21	0	0	7	0.3	0.1	0	7	0	0	0
3	6	21	3.6.22	0	0	7	0.4	0.1	0	7	0	0	0
3	6	22	3.6.23	0	0	8	0.5	0.1	0	8	0	0	0
3	6	23	3.6.24	0	0	8	0.6	0.1	0	8	0	0	0
3	7	0	3.7.1	0	0	9	0.6	0.1	0	9	0	0	0
3	7	1	3.7.2	0	0	9	0.6	0.1	0	9	0	0	0
3	7	2	3.7.3	0	0	8	0.5	0.1	0	8	0	0	0
3	7	3	3.7.4	0	0	7	0.4	0.1	0	7	0	0	0
3	7	4	3.7.5	0	0	6	0.2	0.1	0	6	0	0	0
3	7	5	3.7.6	0	0	5	0.2	0.1	0	5	0	0	0
3	7	6	3.7.7	0	2	4	0.4	0.1	1.903	4.057	2097.165	0	0
3	7	7	3.7.8	223	78	2	0.6	0.1	154.015	7.18	315677.218	294.978969	294.978969
3	7	8	3.7.9	0	73	0	0.7	0.1	67.754	2.24	143231.406	128.643597	128.643597
3	7	9	3.7.10	2	166	0	0.8	0.1	159.631	5.125	340489.52	318.912073	318.912073
3	7	10	3.7.11	0	129	0	0.9	0.1	121.084	3.779	255369.648	236.808336	236.808336
3	7	11	3.7.12	120	321	0	0.9	0.1	446.746	13.953	941085.67	898.226713	898.226713
3	7	12	3.7.13	139	329	0	1	0.1	472.681	14.39	995392.226	950.608972	950.608972
3	7	13	3.7.14	905	97	1	1.1	0.1	861.532	26.715	1769157.51	1696.956675	1696.956675
3	7	14	3.7.15	874	86	0	1	0.1	722.981	22.166	1521921.211	1458.480941	1458.480941
3	7	15	3.7.16	791	75	0	0.9	0.1	515.177	16.243	1116646.814	1067.567028	1067.567028
3	7	16	3.7.17	620	57	0	0.8	0.1	271.836	8.621	555588.48	526.389221	526.389221
3	7	17	3.7.18	183	18	-1	0.7	0.1	37.406	-0.134	36056.394	25.266222	25.266222
3	7	18	3.7.19	0	0	-2	0.7	0.1	0	-2	0	0	0
3	7	19	3.7.20	0	0	-2	0.6	0.1	0	-2	0	0	0
3	7	20	3.7.21	0	0	-3	0.5	0.1	0	-3	0	0	0
3	7	21	3.7.22	0	0	-3	0.4	0.1	0	-3	0	0	0
3	7	22	3.7.23	0	0	-4	0.4	0.1	0	-4	0	0	0
3	7	23	3.7.24	0	0	-5	0.4	0.1	0	-5	0	0	0
3	8	0	3.8.1	0	0	-5	0.5	0.1	0	-5	0	0	0
3	8	1	3.8.2	0	0	-5	0.5	0.1	0	-5	0	0	0
3	8	2	3.8.3	0	0	-5	0.4	0.1	0	-5	0	0	0
3	8	3	3.8.4	0	0	-6	0.4	0.1	0	-6	0	0	0
3	8	4	3.8.5	0	0	-5	0.4	0.1	0	-5	0	0	0
3	8	5	3.8.6	0	0	-5	0.4	0.1	0	-5	0	0	0
3	8	6	3.8.7	104	16	-4	0.4	0.1	25.636	-3.322	26275.441	15.831848	15.831848
3	8	7	3.8.8	598	58	-1	0.4	0.1	260.11	8.222	528808.726	500.55838	500.55838
3	8	8	3.8.9	352	142	0	0.4	0.1	338.792	12.257	735228.247	699.663637	699.663637
3	8	9	3.8.10	860	91	2	0.4	0.1	714.466	27.838	1472253.406	1410.573065	1410.573065
3	8	10	3.8.11	900	101	3	0.4	0.1	865.733	34.251	1726655.073	1655.960269	1655.960269
3	8	11	3.8.12	907	110	4	0.4	0.1	934.169	37.691	1830192.877	1755.829316	1755.829316
3	8	12	3.8.13	903	111	5	0.4	0.1	933.025	38.649	1820867.272	1746.834154	1746.834154
3	8	13	3.8.14	528	212	6	0.4	0.1	679.899	30.504	1369505.207	1311.465642	1311.465642
3	8	14	3.8.15	817	105	5	0.3	0.1	705.008	31.275	1432303.494	1372.038736	1372.038736
3	8	15	3.8.16	717	92	4	0.2	0.1	496.281	23.126	1046633.428	1000.034494	1000.034494
3	8	16	3.8.17	158	88	1	0.2	0.1	145.957	6.557	303828.491	283.550089	283.550089
3	8	17	3.8.18	0	16	0	0.2	0.1	14.825	0.476	18280.521	8.120219	8.120219
3	8	18	3.8.19	0	0	0	0.2	0.1	0	0	0	0	0
3	8	19	3.8.20	0	0	0	0.2	0.1	0	0	0	0	0
3	8	20	3.8.21	0	0	0	0.2	0.1	0	0	0	0	0
3	8	21	3.8.22	0	0	-1	0.2	0.1	0	-1	0	0	0
3	8	22	3.8.23	0	0	-1	0.2	0.1	0	-1	0	0	0
3	8	23	3.8.24	0	0	-2	0.3	0.1	0	-2	0	0	0
3	9	0	3.9.1	0	0	-2	0.2	0.1	0	-2	0	0	0
3	9	1	3.9.2	0	0	-3	0.2	0.1	0	-3	0	0	0
3	9	2	3.9.3	0	0	-2	0.3	0.1	0	-2	0	0	0
3	9	3	3.9.4	0	0	-2	0.3	0.1	0	-2	0	0	0
3	9	4	3.9.5	0	0	-2	0.3	0.1	0	-2	0	0	0
3	9	5	3.9.6	0	0	-2	0.4	0.1	0	-2	0	0	0
3	9	6	3.9.7	0	7	-1	0.4	0.1	6.469	-0.805	7738.687	0	0
3	9	7	3.9.8	49	85	0	0.5	0.1	99.492	3.469	209367.164	192.435903	192.435903
3	9	8	3.9.9	522	114	2	0.6	0.1	407.726	15.93	878751.251	838.10105	838.10105
3	9	9	3.9.10	102	238	3	0.6	0.1	312.418	13.612	661031.009	628.095502	628.095502
3	9	10	3.9.11	418	251	4	0.5	0.1	629.226	26.003	1285851.649	1230.776262	1230.776262
3	9	11	3.9.12	308	308	4	0.5	0.1	611.57	25.35	1244983.891	1191.356612	1191.356612
3	9	12	3.9.13	216	325	4	0.5	0.1	536.988	22.734	1100182.028	1051.685654	1051.685654
3	9	13	3.9.14	286	285	4	0.5	0.1	548.061	23.148	1127373.783	1077.913897	1077.913897
3	9	14	3.9.15	85	238	3	0.5	0.1	300.713	13.508	635211.114	603.190509	603.190509
3	9	15	3.9.16	169	170	2	0.5	0.1	267.173	11.369	574938.111	545.053217	545.053217
3	9	16	3.9.17	64	90	1	0.5	0.1	109.967	4.834	230975.229	213.278308	213.278308
3	9	17	3.9.18	0	13	0	0.5	0.1	12.033	0.353	14711.971	4.678117	4.678117
3	9	18	3.9.19	0	0	0	0.5	0.1	0	0	0	0	0
3	9	19	3.9.20	0	0	0	0.5	0.1	0	0	0	0	0
3	9	20	3.9.21	0	0	0	0.5	0.1	0	0	0	0	0
3	9	21	3.9.22	0	0	0	0.5	0.1	0	0	0	0	0
3	9	22	3.9.23	0	0	0	0.5	0.1	0	0	0	0	0
3	9	23	3.9.24	0	0	0	0.5	0.1	0	0	0	0	0
3	10	0	3.10.1	0	0	0	0.5	0.1	0	0	0	0	0
3	10	1	3.10.2	0	0	0	0.5	0.1	0	0	0	0	0
3	10	2	3.10.3	0	0	0	0.5	0.1	0	0	0	0	0
3	10	3	3.10.4	0	0	1	0.5	0.1	0	1	0	0	0
3	10	4	3.10.5	0	0	1	0.5	0.1	0	1	0	0	0
3	10	5	3.10.6	0	0	1	0.5	0.1	0	1	0	0	0
3	10	6	3.10.7	0	1	1	0.6	0.1	0.923	1.026	0	0	0
3	10	7	3.10.8	0	44	2	0.6	0.1	40.782	3.386	84064.717	71.57342	71.57342
3	10	8	3.10.9	0	48	2	0.6	0.1	44.499	3.513	92023.567	79.250256	79.250256
3	10	9	3.10.10	16	197	3	0.6	0.1	200.479	9.8	423118.707	398.613379	398.613379
3	10	10	3.10.11	0	84	4	0.6	0.1	78.065	6.642	160137.745	144.950878	144.950878
3	10	11	3.10.12	0	99	4	0.6	0.1	92.171	7.116	189197.491	172.980921	172.980921
3	10	12	3.10.13	0	92	5	0.6	0.1	85.551	7.892	174582.23	158.883538	158.883538
3	10	13	3.10.14	0	87	5	0.7	0.1	80.862	7.661	165390.333	150.017346	150.017346
3	10	14	3.10.15	0	108	5	0.7	0.1	100.909	8.327	209008.585	192.09003	192.09003
3	10	15	3.10.16	0	108	5	0.7	0.1	101.589	8.358	212506.679	195.464172	195.464172
3	10	16	3.10.17	0	35	4	0.7	0.1	32.417	5.072	65788.603	53.944901	53.944901
3	10	17	3.10.18	0	4	4	0.7	0.1	3.693	4.102	4200.091	0	0
3	10	18	3.10.19	0	0	4	0.7	0.1	0	4	0	0	0
3	10	19	3.10.20	0	0	4	0.7	0.1	0	4	0	0	0
3	10	20	3.10.21	0	0	5	0.7	0.1	0	5	0	0	0
3	10	21	3.10.22	0	0	5	0.7	0.1	0	5	0	0	0
3	10	22	3.10.23	0	0	5	0.8	0.1	0	5	0	0	0
3	10	23	3.10.24	0	0	6	0.8	0.1	0	6	0	0	0
3	11	0	3.11.1	0	0	6	0.8	0.1	0	6	0	0	0
3	11	1	3.11.2	0	0	7	0.8	0.1	0	7	0	0	0
3	11	2	3.11.3	0	0	8	0.9	0.1	0	8	0	0	0
3	11	3	3.11.4	0	0	8	0.9	0.1	0	8	0	0	0
3	11	4	3.11.5	0	0	9	0.8	0.1	0	9	0	0	0

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

													Reference Case	Adjusted Case
													3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
3	11	5	3.11.6	0	0	9	0.8	0.1	0	9	0	0	0
3	11	6	3.11.7	0	2	9	0.7	0.1	1.846	9.051	1973.754	0	0
3	11	7	3.11.8	0	15	9	0.6	0.1	13.872	9.472	26611.51	16.156008	16.156008
3	11	8	3.11.9	0	51	9	0.5	0.1	47.287	10.654	95135.983	82.252387	82.252387
3	11	9	3.11.10	0	83	9	0.4	0.1	77.095	11.77	155900.938	140.864198	140.864198
3	11	10	3.11.11	2	180	9	0.4	0.1	172.621	15.191	352094.309	330.105657	330.105657
3	11	11	3.11.12	26	270	9	0.4	0.1	284.62	19.204	579249.873	549.212197	549.212197
3	11	12	3.11.13	22	263	10	0.5	0.1	273.859	19.532	555907.069	526.696521	526.696521
3	11	13	3.11.14	65	288	10	0.5	0.1	346.472	22.078	704558.145	670.080298	670.080298
3	11	14	3.11.15	309	232	10	0.5	0.1	471.004	26.488	961897.426	918.301026	918.301026
3	11	15	3.11.16	31	164	9	0.4	0.1	179.764	15.48	373808.117	351.050059	351.050059
3	11	16	3.11.17	0	37	8	0.3	0.1	34.274	9.273	68509.71	56.569588	56.569588
3	11	17	3.11.18	111	24	6	0.3	0.1	36.862	7.043	38715.148	27.830766	27.830766
3	11	18	3.11.19	0	0	6	0.3	0.1	0	6	0	0	0
3	11	19	3.11.20	0	0	5	0.3	0.1	0	5	0	0	0
3	11	20	3.11.21	0	0	5	0.3	0.1	0	5	0	0	0
3	11	21	3.11.22	0	0	4	0.3	0.1	0	4	0	0	0
3	11	22	3.11.23	0	0	3	0.4	0.1	0	3	0	0	0
3	11	23	3.11.24	0	0	2	0.4	0.1	0	2	0	0	0
3	12	0	3.12.1	0	0	1	0.3	0.1	0	1	0	0	0
3	12	1	3.12.2	0	0	0	0.3	0.1	0	0	0	0	0
3	12	2	3.12.3	0	0	0	0.3	0.1	0	0	0	0	0
3	12	3	3.12.4	0	0	0	0.3	0.1	0	0	0	0	0
3	12	4	3.12.5	0	0	0	0.3	0.1	0	0	0	0	0
3	12	5	3.12.6	0	0	0	0.3	0.1	0	0	0	0	0
3	12	6	3.12.7	135	22	0	0.4	0.1	37.131	0.993	38548.547	27.670069	27.670069
3	12	7	3.12.8	70	94	2	0.5	0.1	115.812	6.038	242730.284	224.616835	224.616835
3	12	8	3.12.9	726	93	4	0.6	0.1	505.514	21.278	1072954.443	1025.422851	1025.422851
3	12	9	3.12.10	798	114	5	0.7	0.1	706.136	28.417	1448308.196	1387.476328	1387.476328
3	12	10	3.12.11	90	302	6	0.7	0.1	382.486	18.604	790432.466	752.911751	752.911751
3	12	11	3.12.12	868	127	7	0.7	0.1	934.811	37.92	1826174.463	1751.953291	1751.953291
3	12	12	3.12.13	837	140	8	0.6	0.1	921.103	39.322	1788978.66	1716.075484	1716.075484
3	12	13	3.12.14	229	304	8	0.6	0.1	511.57	25.356	1040178.034	993.80784	993.80784
3	12	14	3.12.15	120	251	8	0.5	0.1	347.601	20.148	718714.559	683.735095	683.735095
3	12	15	3.12.16	360	154	7	0.4	0.1	360.771	20.047	760268.909	723.817008	723.817008
3	12	16	3.12.17	0	54	6	0.3	0.1	50.092	7.861	102347.42	89.208294	89.208294
3	12	17	3.12.18	66	24	4	0.2	0.1	31.343	4.946	34820.697	24.074311	24.074311
3	12	18	3.12.19	0	0	4	0.2	0.1	0	4	0	0	0
3	12	19	3.12.20	0	0	4	0.3	0.1	0	4	0	0	0
3	12	20	3.12.21	0	0	3	0.3	0.1	0	3	0	0	0
3	12	21	3.12.22	0	0	3	0.3	0.1	0	3	0	0	0
3	12	22	3.12.23	0	0	3	0.3	0.1	0	3	0	0	0
3	12	23	3.12.24	0	0	3	0.3	0.1	0	3	0	0	0
3	13	0	3.13.1	0	0	3	0.2	0.1	0	3	0	0	0
3	13	1	3.13.2	0	0	2	0.2	0.1	0	2	0	0	0
3	13	2	3.13.3	0	0	2	0.3	0.1	0	2	0	0	0
3	13	3	3.13.4	0	0	2	0.3	0.1	0	2	0	0	0
3	13	4	3.13.5	0	0	2	0.2	0.1	0	2	0	0	0
3	13	5	3.13.6	0	0	2	0.3	0.1	0	2	0	0	0
3	13	6	3.13.7	0	3	3	0.3	0.1	2.769	3.087	3159.309	0	0
3	13	7	3.13.8	171	95	4	0.4	0.1	157.844	9.655	326729.479	305.639604	305.639604
3	13	8	3.13.9	0	36	5	0.5	0.1	33.358	6.167	67371.838	55.472036	55.472036
3	13	9	3.13.10	152	253	6	0.6	0.1	372.741	18.662	776920.199	739.878277	739.878277
3	13	10	3.13.11	29	259	7	0.6	0.1	284.557	16.633	586535.109	556.239288	556.239288
3	13	11	3.13.12	878	124	7	0.7	0.1	943.027	38.19	1839654.796	1764.955963	1764.955963
3	13	12	3.13.13	843	141	7	0.7	0.1	929.688	37.744	1816201.076	1742.3333	1742.3333
3	13	13	3.13.14	4	189	7	0.6	0.1	183.074	13.194	376830.884	353.965718	353.965718
3	13	14	3.13.15	0	160	7	0.6	0.1	151.608	12.139	313483.339	292.862827	292.862827
3	13	15	3.13.16	689	105	6	0.5	0.1	500.565	23.601	1051914.286	1005.128231	1005.128231
3	13	16	3.13.17	577	67	5	0.4	0.1	272.894	14.721	551337.692	522.289055	522.289055
3	13	17	3.13.18	222	24	3	0.4	0.1	50.032	4.35	52512.63	41.139349	41.139349
3	13	18	3.13.19	0	0	2	0.4	0.1	0	2	0	0	0
3	13	19	3.13.20	0	0	1	0.4	0.1	0	1	0	0	0
3	13	20	3.13.21	0	0	0	0.3	0.1	0	0	0	0	0
3	13	21	3.13.22	0	0	0	0.3	0.1	0	0	0	0	0
3	13	22	3.13.23	0	0	0	0.2	0.1	0	0	0	0	0
3	13	23	3.13.24	0	0	0	0.2	0.1	0	0	0	0	0
3	14	0	3.14.1	0	0	0	0.2	0.1	0	0	0	0	0
3	14	1	3.14.2	0	0	-1	0.2	0.1	0	-1	0	0	0
3	14	2	3.14.3	0	0	-1	0.2	0.1	0	-1	0	0	0
3	14	3	3.14.4	0	0	-1	0.2	0.1	0	-1	0	0	0
3	14	4	3.14.5	0	0	-1	0.2	0.1	0	-1	0	0	0
3	14	5	3.14.6	0	0	0	0.2	0.1	0	0	0	0	0
3	14	6	3.14.7	0	4	0	0.3	0.1	3.693	0.124	5046.762	0	0
3	14	7	3.14.8	0	29	2	0.3	0.1	26.847	2.998	54618.06	43.170175	43.170175
3	14	8	3.14.9	0	46	3	0.3	0.1	42.644	4.583	87534.905	74.920645	74.920645
3	14	9	3.14.10	66	243	4	0.3	0.1	291.698	14.814	611113.755	579.947015	579.947015
3	14	10	3.14.11	24	253	5	0.3	0.1	264.265	14.772	547167.757	518.266877	518.266877
3	14	11	3.14.12	45	304	5	0.3	0.1	348.643	17.885	716565.813	681.662487	681.662487
3	14	12	3.14.13	66	321	5	0.3	0.1	386.129	19.274	791929.78	754.356009	754.356009
3	14	13	3.14.14	14	229	5	0.3	0.1	231.454	13.557	479377.394	452.878596	452.878596
3	14	14	3.14.15	0	98	5	0.3	0.1	91.248	8.379	188031.046	171.855809	171.855809
3	14	15	3.14.16	0	82	4	0.2	0.1	76.227	6.92	158520.402	143.390844	143.390844
3	14	16	3.14.17	0	16	3	0.3	0.1	14.798	3.55	29289.901	18.739493	18.739493
3	14	17	3.14.18	0	3	1	0.5	0.1	2.769	1.087	3710.322	0	0
3	14	18	3.14.19	0	0	1	0.5	0.1	0	1	0	0	0
3	14	19	3.14.20	0	0	0	0.4	0.1	0	0	0	0	0
3	14	20	3.14.21	0	0	0	0.4	0.1	0	0	0	0	0
3	14	21	3.14.22	0	0	0	0.3	0.1	0	0	0	0	0
3	14	22	3.14.23	0	0	0	0.3	0.1	0	0	0	0	0
3	14	23	3.14.24	0	0	0	0.3	0.1	0	0	0	0	0
3	15	0	3.15.1	0	0	0	0.3	0.1	0	0	0	0	0
3	15	1	3.15.2	0	0	0	0.4	0.1	0	0	0	0	0
3	15	2	3.15.3	0	0	0	0.5	0.1	0	0	0	0	0
3	15	3	3.15.4	0	0	0	0.4	0.1	0	0	0	0	0
3	15	4	3.15.5	0	0	0	0.4	0.1	0	0	0	0	0
3	15	5	3.15.6	0	0	0	0.3	0.1	0	0	0	0	0
3	15	6	3.15.7	207	28	0	0.2	0.1	53.85	1.754	71598.697	59.54912	59.54912
3	15	7	3.15.8	9	93	2	0.2	0.1	91.372	5.502	192666.568	176.327075	176.327075
3	15	8	3.15.9	40	173	4	0.2	0.1	193.598	11.422	409608.024	385.581433	385.581433
3	15	9	3.15.10	48	237	5	0.3	0.1	272.07	15.083	567652.194	538.02547	538.02547
3	15	10	3.15.11	9	219	6	0.3	0.1	217.083	14.024	447626.645	422.252903	422.252903
3	15	11	3.15.12	98	337	6	0.4	0.1	432.558	21.516	882405.19	841.625516	841.625516
3	15	12	3.15.13	23	272	6	0.4	0.1	283.478	16.159	582721.914	552.561209	552.561209
3	15	13	3.15.14	8	210	6	0.4	0.1	207.21	13.43	427649.742	402.983861	402.983861
3	15	14	3.15.15	77	249	5	0.4	0.1	305.798	15.998	638673.61	606.530314	606.530314
3	15	15	3.15.16	0	71	4	0.3	0.1	65.893	6.446	136501.935	122.152578	122.152578
3	15	16	3.15.17	360	83	3	0.2	0.1	214.31	11.144	440672.911	415.545568	415.545568
3	15	17	3.15.18	82	28	1	0.2	0.1	37.677	2.271	53294.685	41.893692	41.893692
3	15	18	3.15.19	0	0	1	0.2	0.1	0	1	0	0	0
3	15	19	3.15.20	0	0	0	0.3	0.1	0	0	0	0	0
3	15	20	3.15.21	0	0	0	0.3	0.1	0	0	0	0	0
3	15	21	3.15.22	0	0	0	0.3	0.1	0	0	0	0	0
3	15	22	3.15.23	0	0	0	0.3	0.1	0	0	0	0	0
3	15	23	3.15.24	0	0	0	0.2	0.1	0	0	0	0	0
3	16	0	3.16.1	0	0	0	0.2	0.1	0	0	0	0	0
3	16	1	3.16.2	0	0	0	0.2	0.1	0	0	0	0	0
3	16	2	3.16.3	0	0	0	0.2	0.1	0	0	0	0	0
3	16	3	3.16.4	0	0	0	0.2	0.1	0	0	0	0	0
3	16	4	3.16.5	0	0	0	0.1	0.1	0	0	0	0	0
3	16	5	3.16.6	0	0	0	0.1	0.1	0	0	0	0	0
3	16	6	3.16.7	0	3	1	0.2	0.1	2.769	1.101	4323.348	0	0
3	16	7	3.16.8	0	80	2	0.2	0.1	75.219	4.884	158211.814	143.093191	143.093191
3	16	8	3.16.9	0	93	2	0.3	0.1	86.748	5.22	182344.29	166.370557	166.370557
3	16	9	3.16.10	0	60	2	0.3	0.1	55.696	4.062	114523.349	100.952782	100.952782
3	16	10	3.16.11	0	165	3	0.3	0.1	155.857	8.759	324140.716	303.142571	303.142571
3	16	11	3.16.12	0	68	4	0.3	0.1	63.207	6.333	128070.495	114.019898	114.019898
3	16	12	3.16.13	0	113	4	0.3	0.1	105.528	7.896	216584.772	199.397762	199.397762
3	16	13	3.16.14	14	231	5	0.4	0.1	233.264	13.365	483288.389	456.651009	456.651009
3	16	14	3.16.15	0	166	6	0.4	0.1	157.308	11.65	325978.577	304.91531	304.91531
3	16	15	3.16.16	303	170	6	0.3	0.1	347.564	18.948	732921.774	697.438892	697.438892
3	16	16	3.16.17	10	94	5	0.2	0.1	92.582	8.548	192963.267	176.613261	176.613261
3	16	17	3.16.18	0	19	3	0.2	0.1	17.596	3.634	28409.056	17.88986	17.88986
3	16	18	3.16.19	0	0	2	0.2	0.1	0	2	0	0	0
3	16	19	3.16.20	0	0	2	0.3	0.1	0	2	0	0	0
3	16	20	3.16.21	0	0	2	0.3	0.1	0	2	0	0	0
3	16	21	3.16.22	0	0	2	0.4	0.1	0	2	0	0	0
3	16	22	3.16.23	0	0	2	0.3	0.1	0	2	0	0	0
3	16	23	3.16.24	0	0	2	0.3	0.1	0	2	0	0	0
3	17	0	3.17.1	0	0	1	0.2	0.1	0	1	0	0	0
3	17	1	3.17.2	0	0	1	0.2	0.1	0	1	0	0	0
3	17	2	3.17.3	0	0	1	0.2	0.1	0	1	0	0	0
3	17	3	3.17.4	0	0	0	0.2	0.1	0	0	0	0	0
3	17	4	3.17.5	0	0	0	0.2	0.1	0	0	0	0	0
3	17	5	3.17.6	0	0	0	0.2	0.1	0	0	0	0	0
3	17	6	3.17.7	237	32	2	0.3	0.1	63.387	4.095	93177.722	80.363515	80.363515
3	17	7	3.17.8	612	70	4	0.3	0.1	296.168	14.902	604434.741	573.504664	573.504664
3	17	8	3.17.9	768	89	7	0.4	0.1	535.884	26.407	1114987.999	1065.966991	1065.966991
3	17	9	3.17.10	844	102	9	0.4	0.1	740.16	35.74	1473719.978	1411.987669	1411.987669
3	17	10	3.17.11	891	107	11	0.5	0.1	883.805	41.951	1704183.866	1634.285305	1634.285305
3	17	11	3.17.12	909	111	12	0.5	0.1	959.94	45.589	1816159.668	1742.29336	1742.29336

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

													Reference Case	Adjusted Case
													3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
3	17	12	3.17.13	912	109	13	0.4	0.1	959.456	47.578	1800678.41	1727.360664	1727.360664
3	17	13	3.17.14	892	105	14	0.4	0.1	879.449	45.722	1670430.269	1601.727733	1601.727733
3	17	14	3.17.15	831	104	14	0.3	0.1	728.172	41.12	1419333.136	1359.527969	1359.527969
3	17	15	3.17.16	726	96	13	0.2	0.1	515.724	32.864	1045732.803	999.165782	999.165782
3	17	16	3.17.17	583	69	10	0.2	0.1	279.948	20.62	555842.022	526.633779	526.633779
3	17	17	3.17.18	215	29	7	0.2	0.1	55.549	8.857	75982.528	63.777615	63.777615
3	17	18	3.17.19	0	0	6	0.3	0.1	0	6	0	0	0
3	17	19	3.17.20	0	0	6	0.3	0.1	0	6	0	0	0
3	17	20	3.17.21	0	0	6	0.3	0.1	0	6	0	0	0
3	17	21	3.17.22	0	0	5	0.3	0.1	0	5	0	0	0
3	17	22	3.17.23	0	0	5	0.3	0.1	0	5	0	0	0
3	17	23	3.17.24	0	0	5	0.3	0.1	0	5	0	0	0
3	18	0	3.18.1	0	0	5	0.4	0.1	0	5	0	0	0
3	18	1	3.18.2	0	0	5	0.4	0.1	0	5	0	0	0
3	18	2	3.18.3	0	0	5	0.4	0.1	0	5	0	0	0
3	18	3	3.18.4	0	0	5	0.4	0.1	0	5	0	0	0
3	18	4	3.18.5	0	0	6	0.4	0.1	0	6	0	0	0
3	18	5	3.18.6	0	0	6	0.4	0.1	0	6	0	0	0
3	18	6	3.18.7	135	35	6	0.5	0.1	52.84	7.711	84154.742	71.660255	71.660255
3	18	7	3.18.8	458	90	8	0.5	0.1	261.497	17.084	531361.01	503.020227	503.020227
3	18	8	3.18.9	425	155	11	0.5	0.1	410.883	25.424	849621.114	810.00311	810.00311
3	18	9	3.18.10	336	244	13	0.6	0.1	508.047	30.273	1021426.791	975.721029	975.721029
3	18	10	3.18.11	430	274	14	0.6	0.1	673.528	36.867	1315645.605	1259.5145	1259.5145
3	18	11	3.18.12	435	296	15	0.6	0.1	730.799	39.79	1406538.972	1347.187154	1347.187154
3	18	12	3.18.13	528	257	16	0.6	0.1	774.427	42.285	1478548.128	1416.644739	1416.644739
3	18	13	3.18.14	379	286	16	0.6	0.1	631.257	37.428	1229083.983	1176.0201	1176.0201
3	18	14	3.18.15	780	121	15	0.6	0.1	712.708	39.288	1397907.652	1338.861676	1338.861676
3	18	15	3.18.16	713	100	13	0.6	0.1	513.715	30.55	1050590.954	1003.851789	1003.851789
3	18	16	3.18.17	587	70	11	0.5	0.1	283.057	20.805	562359.148	532.919978	532.919978
3	18	17	3.18.18	225	31	9	0.4	0.1	58.916	10.876	82617.148	70.177144	70.177144
3	18	18	3.18.19	0	0	7	0.4	0.1	0	7	0	0	0
3	18	19	3.18.20	0	0	6	0.3	0.1	0	6	0	0	0
3	18	20	3.18.21	0	0	5	0.2	0.1	0	5	0	0	0
3	18	21	3.18.22	0	0	4	0.2	0.1	0	4	0	0	0
3	18	22	3.18.23	0	0	4	0.2	0.1	0	4	0	0	0
3	18	23	3.18.24	0	0	4	0.2	0.1	0	4	0	0	0
3	19	0	3.19.1	0	0	4	0.2	0.1	0	4	0	0	0
3	19	1	3.19.2	0	0	4	0.2	0.1	0	4	0	0	0
3	19	2	3.19.3	0	0	3	0.2	0.1	0	3	0	0	0
3	19	3	3.19.4	0	0	3	0.2	0.1	0	3	0	0	0
3	19	4	3.19.5	0	0	2	0.3	0.1	0	2	0	0	0
3	19	5	3.19.6	0	0	2	0.3	0.1	0	2	0	0	0
3	19	6	3.19.7	224	37	3	0.4	0.1	68.128	5.25	107798.164	94.465896	94.465896
3	19	7	3.19.8	61	109	4	0.5	0.1	128.282	8.482	269324.86	250.269059	250.269059
3	19	8	3.19.9	260	189	5	0.6	0.1	347.128	16.827	735748.678	700.165627	700.165627
3	19	9	3.19.10	100	266	6	0.6	0.1	340.892	17.566	709022.396	674.386363	674.386363
3	19	10	3.19.11	22	258	7	0.6	0.1	267.104	16.036	549514.748	520.530706	520.530706
3	19	11	3.19.12	102	350	7	0.6	0.1	449.886	22.222	914818.6	872.89039	872.89039
3	19	12	3.19.13	101	349	8	0.5	0.1	447.692	23.588	905614.525	864.012452	864.012452
3	19	13	3.19.14	927	98	8	0.5	0.1	905.307	39.703	1760817.978	1688.912646	1688.912646
3	19	14	3.19.15	890	90	7	0.5	0.1	754.94	33.484	1516924.824	1453.661597	1453.661597
3	19	15	3.19.16	821	78	6	0.4	0.1	550.712	25.947	1148722.097	1098.505755	1098.505755
3	19	16	3.19.17	693	58	4	0.3	0.1	307.944	15.317	624534.769	592.892469	592.892469
3	19	17	3.19.18	350	28	2	0.2	0.1	71.271	4.359	98172.382	85.181194	85.181194
3	19	18	3.19.19	0	0	0	0.2	0.1	0	0	0	0	0
3	19	19	3.19.20	0	0	0	0.2	0.1	0	0	0	0	0
3	19	20	3.19.21	0	0	0	0.2	0.1	0	0	0	0	0
3	19	21	3.19.22	0	0	-1	0.2	0.1	0	-1	0	0	0
3	19	22	3.19.23	0	0	-1	0.2	0.1	0	-1	0	0	0
3	19	23	3.19.24	0	0	-2	0.2	0.1	0	-2	0	0	0
3	20	0	3.20.1	0	0	-2	0.2	0.1	0	-2	0	0	0
3	20	1	3.20.2	0	0	-2	0.2	0.1	0	-2	0	0	0
3	20	2	3.20.3	0	0	-2	0.2	0.1	0	-2	0	0	0
3	20	3	3.20.4	0	0	-2	0.2	0.1	0	-2	0	0	0
3	20	4	3.20.5	0	0	-3	0.2	0.1	0	-3	0	0	0
3	20	5	3.20.6	0	0	-2	0.2	0.1	0	-2	0	0	0
3	20	6	3.20.7	355	34	-1	0.3	0.1	83.929	1.804	129296.635	115.202591	115.202591
3	20	7	3.20.8	714	63	1	0.3	0.1	332.027	13.236	686517.344	652.678755	652.678755
3	20	8	3.20.9	829	85	3	0.2	0.1	574.49	25.126	1201148.836	1149.074807	1149.074807
3	20	9	3.20.10	892	100	5	0.1	0.1	781.663	36.018	1553032.631	1488.48996	1488.48996
3	20	10	3.20.11	933	106	6	0.1	0.1	926.641	42.711	1778791.118	1706.248926	1706.248926
3	20	11	3.20.12	903	132	7	0.1	0.1	990.997	46.22	1866151.177	1790.513471	1790.513471
3	20	12	3.20.13	857	154	8	0.1	0.1	969.947	46.38	1824918.805	1750.742126	1750.742126
3	20	13	3.20.14	883	126	8	0.1	0.1	905.395	43.864	1729522.269	1658.725868	1658.725868
3	20	14	3.20.15	805	129	8	0.1	0.1	742.131	37.443	1465297.322	1403.863462	1403.863462
3	20	15	3.20.16	658	129	7	0.1	0.1	514.548	27.457	1062829.385	1015.656564	1015.656564
3	20	16	3.20.17	517	91	5	0.3	0.1	279.149	15.282	569475.642	539.784305	539.784305
3	20	17	3.20.18	135	39	3	0.6	0.1	55.318	4.745	90037.323	77.334393	77.334393
3	20	18	3.20.19	0	0	2	0.5	0.1	0	2	0	0	0
3	20	19	3.20.20	0	0	0	0.4	0.1	0	0	0	0	0
3	20	20	3.20.21	0	0	0	0.3	0.1	0	0	0	0	0
3	20	21	3.20.22	0	0	0	0.3	0.1	0	0	0	0	0
3	20	22	3.20.23	0	0	0	0.2	0.1	0	0	0	0	0
3	20	23	3.20.24	0	0	0	0.2	0.1	0	0	0	0	0
3	21	0	3.21.1	0	0	0	0.2	0.1	0	0	0	0	0
3	21	1	3.21.2	0	0	0	0.2	0.1	0	0	0	0	0
3	21	2	3.21.3	0	0	0	0.2	0.1	0	0	0	0	0
3	21	3	3.21.4	0	0	0	0.2	0.1	0	0	0	0	0
3	21	4	3.21.5	0	0	0	0.3	0.1	0	0	0	0	0
3	21	5	3.21.6	0	0	0	0.3	0.1	0	0	0	0	0
3	21	6	3.21.7	0	13	1	0.3	0.1	12.02	1.439	22394.178	12.088113	12.088113
3	21	7	3.21.8	0	14	1	0.3	0.1	12.949	1.481	25761.46	15.336079	15.336079
3	21	8	3.21.9	0	70	2	0.5	0.1	64.968	4.27	135369.502	121.060272	121.060272
3	21	9	3.21.10	0	118	2	0.6	0.1	110.32	5.736	230616.751	212.932532	212.932532
3	21	10	3.21.11	0	32	2	0.6	0.1	29.709	3.004	59324.776	47.710113	47.710113
3	21	11	3.21.12	0	107	3	0.6	0.1	99.807	6.371	205332.617	188.544316	188.544316
3	21	12	3.21.13	0	143	4	0.5	0.1	134.286	8.668	276679.924	257.363504	257.363504
3	21	13	3.21.14	0	92	4	0.5	0.1	85.55	6.976	175233.868	159.512085	159.512085
3	21	14	3.21.15	0	76	4	0.4	0.1	70.592	6.534	144834.411	130.189802	130.189802
3	21	15	3.21.16	565	149	3	0.3	0.1	480.73	20.925	1015286.654	969.798461	969.798461
3	21	16	3.21.17	347	119	3	0.2	0.1	244.719	12.323	507378.307	479.887326	479.887326
3	21	17	3.21.18	65	39	3	0.2	0.1	45.956	4.676	79978.699	67.632186	67.632186
3	21	18	3.21.19	0	0	2	0.1	0.1	0	2	0	0	0
3	21	19	3.21.20	0	0	2	0.1	0.1	0	2	0	0	0
3	21	20	3.21.21	0	0	2	0.1	0.1	0	2	0	0	0
3	21	21	3.21.22	0	0	2	0.2	0.1	0	2	0	0	0
3	21	22	3.21.23	0	0	2	0.2	0.1	0	2	0	0	0
3	21	23	3.21.24	0	0	2	0.2	0.1	0	2	0	0	0
3	22	0	3.22.1	0	0	2	0.2	0.1	0	2	0	0	0
3	22	1	3.22.2	0	0	2	0.3	0.1	0	2	0	0	0
3	22	2	3.22.3	0	0	2	0.3	0.1	0	2	0	0	0
3	22	3	3.22.4	0	0	2	0.3	0.1	0	2	0	0	0
3	22	4	3.22.5	0	0	2	0.3	0.1	0	2	0	0	0
3	22	5	3.22.6	0	0	2	0.3	0.1	0	2	0	0	0
3	22	6	3.22.7	0	19	2	0.3	0.1	17.583	2.644	33393.42	22.697608	22.697608
3	22	7	3.22.8	0	101	3	0.4	0.1	95.273	6.436	201083.337	184.445605	184.445605
3	22	8	3.22.9	741	107	5	0.5	0.1	553.26	24.44	1157047.683	1106.536333	1106.536333
3	22	9	3.22.10	6	192	6	0.5	0.1	186.969	12.517	387576.401	364.330478	364.330478
3	22	10	3.22.11	0	108	7	0.5	0.1	100.717	10.503	204519	187.759529	187.759529
3	22	11	3.22.12	0	128	7	0.5	0.1	119.858	11.166	243502.705	225.361886	225.361886
3	22	12	3.22.13	10	228	8	0.5	0.1	226.685	15.881	462262.992	436.370626	436.370626
3	22	13	3.22.14	46	296	7	0.5	0.1	336.584	18.72	689827.332	655.871457	655.871457
3	22	14	3.22.15	69	261	6	0.4	0.1	311.408	17.192	646064.059	613.65889	613.65889
3	22	15	3.22.16	0	61	5	0.3	0.1	56.593	7.1	116023.474	102.39975	102.39975
3	22	16	3.22.17	0	37	4	0.2	0.1	34.273	5.314	69837.575	57.850402	57.850402
3	22	17	3.22.18	0	3	3	0.2	0.1	2.769	3.104	4691.335	0	0
3	22	18	3.22.19	0	0	2	0.2	0.1	0	2	0	0	0
3	22	19	3.22.20	0	0	2	0.2	0.87	0	2	0	0	0
3	22	20	3.22.21	0	0	1	0.2	0.87	0	1	0	0	0
3	22	21	3.22.22	0	0	1	0.2	0.87	0	1	0	0	0
3	22	22	3.22.23	0	0	0	0.2	0.87	0	0	0	0	0
3	22	23	3.22.24	0	0	0	0.2	0.87	0	0	0	0	0
3	23	0	3.23.1	0	0	0	0.2	0.87	0	0	0	0	0
3	23	1	3.23.2	0	0	-1	0.2	0.87	0	-1	0	0	0
3	23	2	3.23.3	0	0	0	0.2	0.87	0	0	0	0	0
3	23	3	3.23.4	0	0	0	0.1	0.87	0	0	0	0	0
3	23	4	3.23.5	0	0	0	0.1	0.87	0	0	0	0	0
3	23	5	3.23.6	0	0	0	0.1	0.87	0	0	0	0	0
3	23	6	3.23.7	0	24	0	0.2	0.87	22.628	0.855	43796.398	32.731967	32.731967
3	23	7	3.23.8	126	121	1	0.2	0.87	170.676	7.523	360768.963	338.472934	338.472934
3	23	8	3.23.9	663	152	2	0.1	0.87	561.742	24.298	1168293.321	1117.383493	1117.383493
3	23	9	3.23.10	47	255	3	0.1	0.87	293.875	14.581	610328.108	579.189206	579.189206
3	23	10	3.23.11	0	153	4	0.1	0.87	146.483	9.756	300410.242	280.252963	280.252963
3	23	11	3.23.12	6	198	5	0.1	0.87	196.707	12.725	401703.966	377.957447	377.957447
3	23	12	3.23.13	13	250	5	0.1	0.87	255.634	15.041	521780.02	493.778729	493.778729
3	23	13	3.23.14	29	277	4	0.1	0.87	306.491	16.054	629034.462	597.23272	597.23272
3	23	14	3.23.15	14	212	3	0.1	0.87	216.324	11.521	450057.474	424.597599	424.597599
3	23	15	3.23.16	0	85	3	0.1	0.87	80.419	6.175	166684.011	151.265184	151.265184
3	23	16	3.23.17	0	22	2	0.1	0.87	20.728	2.82	41566.555	30.581137	30.581137
3	23	17	3.23.18	0	23	0	0.1	0.87	21.689	0.841	40807.561	29.849037	29.849037
3	23	18	3.23.19	0	0	0	0.2	0.87	0	0	0	0	0

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
3	23	19	3.23.20	0	0	0	0.2	0.87	0	0	0	0	0
3	23	20	3.23.21	0	0	0	0.2	0.87	0	0	0	0	0
3	23	21	3.23.22	0	0	0	0.2	0.87	0	0	0	0	0
3	23	22	3.23.23	0	0	0	0.2	0.87	0	0	0	0	0
3	23	23	3.23.24	0	0	0	0.2	0.87	0	0	0	0	0
3	24	0	3.24.1	0	0	0	0.2	0.87	0	0	0	0	0
3	24	1	3.24.2	0	0	0	0.3	0.87	0	0	0	0	0
3	24	2	3.24.3	0	0	0	0.3	0.87	0	0	0	0	0
3	24	3	3.24.4	0	0	-1	0.3	0.87	0	-1	0	0	0
3	24	4	3.24.5	0	0	-1	0.3	0.87	0	-1	0	0	0
3	24	5	3.24.6	0	0	-1	0.3	0.87	0	-1	0	0	0
3	24	6	3.24.7	0	21	0	0.3	0.87	19.789	0.726	38318.295	27.447975	27.447975
3	24	7	3.24.8	45	119	0	0.4	0.87	134.605	4.842	286608.106	266.939891	266.939891
3	24	8	3.24.9	149	209	1	0.4	0.87	304.195	11.955	647954.551	615.482395	615.482395
3	24	9	3.24.10	804	162	2	0.4	0.87	802.837	30.941	1614769.137	1548.038896	1548.038896
3	24	10	3.24.11	908	144	3	0.4	0.87	972.294	38.003	1888884.405	1812.44117	1812.44117
3	24	11	3.24.12	755	178	4	0.4	0.87	925.542	37.278	1796627.736	1723.453522	1723.453522
3	24	12	3.24.13	943	145	4	0.4	0.87	1059.518	42.116	2016165.924	1935.212599	1935.212599
3	24	13	3.24.14	930	137	4	0.4	0.87	974.757	39.098	1886739.328	1810.372101	1810.372101
3	24	14	3.24.15	887	127	4	0.4	0.87	811.71	33.279	1621514.003	1554.544765	1554.544765
3	24	15	3.24.16	268	190	3	0.3	0.87	354.722	16.187	750267.379	714.169873	714.169873
3	24	16	3.24.17	663	81	2	0.2	0.87	327.992	14.455	671596.106	638.286236	638.286236
3	24	17	3.24.18	348	38	0	0.2	0.87	82.887	2.865	127951.275	113.904903	113.904903
3	24	18	3.24.19	0	0	0	0.2	0.87	0	0	0	0	0
3	24	19	3.24.20	0	0	0	0.2	0.1	0	0	0	0	0
3	24	20	3.24.21	0	0	0	0.2	0.1	0	0	0	0	0
3	24	21	3.24.22	0	0	-1	0.2	0.1	0	-1	0	0	0
3	24	22	3.24.23	0	0	-1	0.2	0.1	0	-1	0	0	0
3	24	23	3.24.24	0	0	-1	0.2	0.1	0	-1	0	0	0
3	25	0	3.25.1	0	0	-2	0.2	0.1	0	-2	0	0	0
3	25	1	3.25.2	0	0	-2	0.2	0.1	0	-2	0	0	0
3	25	2	3.25.3	0	0	-2	0.2	0.1	0	-2	0	0	0
3	25	3	3.25.4	0	0	-3	0.2	0.1	0	-3	0	0	0
3	25	4	3.25.5	0	0	-3	0.2	0.1	0	-3	0	0	0
3	25	5	3.25.6	0	0	-2	0.2	0.1	0	-2	0	0	0
3	25	6	3.25.7	431	40	-1	0.3	0.1	107.387	2.661	175242.585	159.520494	159.520494
3	25	7	3.25.8	736	66	0	0.3	0.1	355.984	13.153	744263.278	708.378521	708.378521
3	25	8	3.25.9	848	85	1	0.3	0.1	599.276	23.359	1259545.55	1205.402294	1205.402294
3	25	9	3.25.10	421	241	2	0.3	0.1	583.165	23.657	1202996.561	1150.857059	1150.857059
3	25	10	3.25.11	154	345	3	0.3	0.1	493.744	21.267	1012013.436	966.641227	966.641227
3	25	11	3.25.12	944	115	3	0.3	0.1	1014.761	40.675	1952047.743	1873.36638	1873.36638
3	25	12	3.25.13	929	121	3	0.4	0.1	1003.655	39.147	1942844.526	1864.489269	1864.489269
3	25	13	3.25.14	875	133	3	0.4	0.1	913.529	35.924	1798298.562	1725.065144	1725.065144
3	25	14	3.25.15	226	276	2	0.4	0.1	451.215	18.238	943662.35	900.712091	900.712091
3	25	15	3.25.16	462	156	2	0.3	0.1	431.666	18.085	917755.659	875.723377	875.723377
3	25	16	3.25.17	505	79	1	0.3	0.1	267.386	10.856	555411.546	526.218556	526.218556
3	25	17	3.25.18	0	33	0	0.3	0.1	30.669	1.122	59611.089	47.986281	47.986281
3	25	18	3.25.19	0	0	0	0.3	0.1	0	0	0	0	0
3	25	19	3.25.20	0	0	-1	0.3	0.1	0	-1	0	0	0
3	25	20	3.25.21	0	0	-2	0.3	0.1	0	-2	0	0	0
3	25	21	3.25.22	0	0	-3	0.3	0.1	0	-3	0	0	0
3	25	22	3.25.23	0	0	-3	0.3	0.1	0	-3	0	0	0
3	25	23	3.25.24	0	0	-4	0.3	0.1	0	-4	0	0	0
3	26	0	3.26.1	0	0	-4	0.3	0.1	0	-4	0	0	0
3	26	1	3.26.2	0	0	-4	0.3	0.1	0	-4	0	0	0
3	26	2	3.26.3	0	0	-4	0.3	0.1	0	-4	0	0	0
3	26	3	3.26.4	0	0	-4	0.3	0.1	0	-4	0	0	0
3	26	4	3.26.5	0	0	-5	0.3	0.1	0	-5	0	0	0
3	26	5	3.26.6	0	0	-4	0.3	0.1	0	-4	0	0	0
3	26	6	3.26.7	481	40	-3	0.4	0.1	116.618	0.853	191685.8	175.38106	175.38106
3	26	7	3.26.8	770	65	-2	0.4	0.1	370.641	11.289	781892.734	744.674616	744.674616
3	26	8	3.26.9	887	81	0	0.5	0.1	620.907	21.82	1312647.577	1256.622704	1256.622704
3	26	9	3.26.10	947	90	0	0.5	0.1	824.577	28.907	1680823.402	1611.752595	1611.752595
3	26	10	3.26.11	988	91	0	0.5	0.1	973.871	34.086	1930282.736	1852.372594	1852.372594
3	26	11	3.26.12	994	96	1	0.5	0.1	1043.356	37.489	2031949.625	1950.437021	1950.437021
3	26	12	3.26.13	986	98	2	0.5	0.1	1034.05	38.164	2009108.953	1928.405685	1928.405685
3	26	13	3.26.14	961	98	2	0.5	0.1	946.353	35.125	1869690.612	1793.927489	1793.927489
3	26	14	3.26.15	917	94	2	0.5	0.1	788.775	29.657	1605006.108	1538.62181	1538.62181
3	26	15	3.26.16	839	85	1	0.4	0.1	575.836	21.846	1217865.914	1165.199533	1165.199533
3	26	16	3.26.17	719	65	0	0.4	0.1	330.093	11.79	683786.683	650.044852	650.044852
3	26	17	3.26.18	412	35	0	0.3	0.1	87.982	2.925	133487.912	119.245354	119.245354
3	26	18	3.26.19	0	0	-1	0.3	0.1	0	-1	0	0	0
3	26	19	3.26.20	0	0	-2	0.3	0.1	0	-2	0	0	0
3	26	20	3.26.21	0	0	-2	0.3	0.1	0	-2	0	0	0
3	26	21	3.26.22	0	0	-3	0.3	0.1	0	-3	0	0	0
3	26	22	3.26.23	0	0	-3	0.3	0.1	0	-3	0	0	0
3	26	23	3.26.24	0	0	-4	0.2	0.1	0	-4	0	0	0
3	27	0	3.27.1	0	0	-4	0.2	0.1	0	-4	0	0	0
3	27	1	3.27.2	0	0	-5	0.2	0.1	0	-5	0	0	0
3	27	2	3.27.3	0	0	-5	0.2	0.1	0	-5	0	0	0
3	27	3	3.27.4	0	0	-5	0.2	0.1	0	-5	0	0	0
3	27	4	3.27.5	0	0	-5	0.2	0.1	0	-5	0	0	0
3	27	5	3.27.6	0	0	-4	0.2	0.1	0	-4	0	0	0
3	27	6	3.27.7	36	48	-3	0.2	0.1	51.113	-1.076	101434.93	88.328137	88.328137
3	27	7	3.27.8	738	71	-2	0.3	0.1	366.855	11.567	774577.485	737.618575	737.618575
3	27	8	3.27.9	865	86	0	0.4	0.1	615.854	22.286	1298862.615	1243.326198	1243.326198
3	27	9	3.27.10	938	93	1	0.4	0.1	823.61	30.733	1666477.441	1597.91497	1597.91497
3	27	10	3.27.11	977	96	2	0.4	0.1	972.086	37.037	1903924.148	1826.947996	1826.947996
3	27	11	3.27.12	983	103	3	0.5	0.1	1042.769	39.464	2014161.232	1933.278941	1933.278941
3	27	12	3.27.13	976	104	3	0.5	0.1	1033.016	39.124	1998733.479	1918.397855	1918.397855
3	27	13	3.27.14	965	97	4	0.5	0.1	950.287	37.261	1861322.811	1785.856193	1785.856193
3	27	14	3.27.15	909	98	3	0.5	0.1	788.306	30.637	1597414.484	1531.299188	1531.299188
3	27	15	3.27.16	822	91	2	0.4	0.1	573.347	22.753	1207799.243	1155.489563	1155.489563
3	27	16	3.27.17	743	62	1	0.4	0.1	336.486	13.018	694255.514	660.14273	660.14273
3	27	17	3.27.18	443	35	0	0.4	0.1	92.264	2.97	139626.701	125.166622	125.166622
3	27	18	3.27.19	0	0	0	0.4	0.1	0	0	0	0	0
3	27	19	3.27.20	0	0	-1	0.4	0.1	0	-1	0	0	0
3	27	20	3.27.21	0	0	-2	0.4	0.1	0	-2	0	0	0
3	27	21	3.27.22	0	0	-2	0.4	0.1	0	-2	0	0	0
3	27	22	3.27.23	0	0	-3	0.4	0.1	0	-3	0	0	0
3	27	23	3.27.24	0	0	-3	0.4	0.1	0	-3	0	0	0
3	28	0	3.28.1	0	0	-4	0.3	0.1	0	-4	0	0	0
3	28	1	3.28.2	0	0	-4	0.3	0.1	0	-4	0	0	0
3	28	2	3.28.3	0	0	-5	0.3	0.1	0	-5	0	0	0
3	28	3	3.28.4	0	0	-5	0.3	0.1	0	-5	0	0	0
3	28	4	3.28.5	0	0	-5	0.3	0.1	0	-5	0	0	0
3	28	5	3.28.6	0	0	-4	0.3	0.1	0	-4	0	0	0
3	28	6	3.28.7	459	44	-3	0.4	0.1	120.308	1.017	203666.705	186.937433	186.937433
3	28	7	3.28.8	782	63	-1	0.4	0.1	378.533	12.583	797429.749	759.661092	759.661092
3	28	8	3.28.9	883	79	0	0.5	0.1	621.914	21.851	1313791.108	1257.725715	1257.725715
3	28	9	3.28.10	936	90	1	0.5	0.1	821.493	29.793	1667813.605	1599.203788	1599.203788
3	28	10	3.28.11	967	95	3	0.5	0.1	964.573	36.754	1891054.546	1814.534414	1814.534414
3	28	11	3.28.12	968	102	4	0.5	0.1	1029.63	40.002	1984588.574	1904.754161	1904.754161
3	28	12	3.28.13	955	106	4	0.5	0.1	1017.211	39.568	1964691.059	1885.561693	1885.561693
3	28	13	3.28.14	948	97	5	0.5	0.1	936.945	37.792	1831269.717	1756.867999	1756.867999
3	28	14	3.28.15	894	96	5	0.4	0.1	776.156	33.024	1558167.611	1493.442988	1493.442988
3	28	15	3.28.16	805	91	4	0.4	0.1	564.533	24.432	1181247.076	1129.878245	1129.878245
3	28	16	3.28.17	768	54	3	0.3	0.1	338.082	15.446	691068.054	657.068215	657.068215
3	28	17	3.28.18	482	32	1	0.3	0.1	94.938	4.13	140881.416	126.376878	126.376878
3	28	18	3.28.19	0	0	0	0.3	0.1	0	0	0	0	0
3	28	19	3.28.20	0	0	0	0.3	0.1	0	0	0	0	0
3	28	20	3.28.21	0	0	0	0.3	0.1	0	0	0	0	0
3	28	21	3.28.22	0	0	-1	0.3	0.1	0	-1	0	0	0
3	28	22	3.28.23	0	0	-1	0.3	0.1	0	-1	0	0	0
3	28	23	3.28.24	0	0	-2	0.2	0.1	0	-2	0	0	0
3	29	0	3.29.1	0	0	-2	0.2	0.1	0	-2	0	0	0
3	29	1	3.29.2	0	0	-2	0.2	0.1	0	-2	0	0	0
3	29	2	3.29.3	0	0	-2	0.2	0.1	0	-2	0	0	0
3	29	3	3.29.4	0	0	-2	0.2	0.1	0	-2	0	0	0
3	29	4	3.29.5	0	0	-3	0.2	0.1	0	-3	0	0	0
3	29	5	3.29.6	0	0	-2	0.2	0.1	0	-2	0	0	0
3	29	6	3.29.7	435	46	-1	0.2	0.1	119.868	3.282	204368.071	187.613947	187.613947
3	29	7	3.29.8	310	121	0	0.3	0.1	246.344	9.132	524690.695	496.586267	496.586267
3	29	8	3.29.9	284	208	2	0.4	0.1	387.426	15.978	822748.002	784.082219	784.082219
3	29	9	3.29.10	488	227	3	0.4	0.1	624.647	25.503	1280172.785	1225.298623	1225.298623
3	29	10	3.29.11	959	90	4	0.4	0.1	954.405	38.396	1859096.078	1783.708362	1783.708362
3	29	11	3.29.12	959	99	4	0.4	0.1	1019.895	40.727	1960176.327	1881.206936	1881.206936
3	29	12	3.29.13	947	105	4	0.4	0.1	1010.289	40.381	1944855.022	1866.428525	1866.428525
3	29	13	3.29.14	573	235	4	0.4	0.1	761.522	31.404	1519800.652	1456.435522	1456.435522
3	29	14	3.29.15	901	92	4	0.4	0.1	778.276	32.1	1567837.785	1502.770509	1502.770509
3	29	15	3.29.16	836	81	3	0.3	0.1	572.755	24.371	1199212.158	1147.206753	1147.206753
3	29	16	3.29.17	753	57	2	0.2	0.1	336.567	14.789	690379.384	656.403947	656.403947
3	29	17	3.29.18	494	32	1	0.2	0.1	96.973	4.301	144202.197	129.57999	129.57999
3	29	18	3.29.19	0	0	0	0.2	0.1	0	0	0	0	0
3	29	19	3.29.20	0	0	0	0.2	0.11	0	0	0	0	0
3	29	20	3.29.21	0	0	0	0.2	0.11	0	0	0	0	0
3	29	21	3.29.22	0	0	-1	0.2	0.11	0	-1	0	0	0
3	29	22	3.29.23	0	0	-1	0.2	0.11	0	-1	0	0	0
3	29	23	3.29.24	0	0	-1	0.1	0.11	0	-1	0	0	0
3	30	0	3.30.1	0	0	-1	0.1	0.11	0	-1	0	0	0
3	30	1	3.30.2	0	0	-1	0.1	0.11	0	-1	0	0	0

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
3	30	2	3.30.3	0	0	-1	0.1	0.11	0	-1	0	0	0
3	30	3	3.30.4	0	0	-1	0.1	0.11	0	-1	0	0	0
3	30	4	3.30.5	0	0	-1	0.1	0.11	0	-1	0	0	0
3	30	5	3.30.6	0	0	-1	0.1	0.11	0	-1	0	0	0
3	30	6	3.30.7	480	43	1	0.2	0.11	126.043	5.49	211810.946	194.793092	194.793092
3	30	7	3.30.8	769	61	3	0.2	0.11	376.501	17.381	781293.806	744.09691	744.09691
3	30	8	3.30.9	867	78	6	0.2	0.11	616.589	29.728	1263306.561	1209.030036	1209.030036
3	30	9	3.30.10	918	90	7	0.2	0.11	812.804	38.203	1596035.629	1529.969191	1529.969191
3	30	10	3.30.11	896	122	8	0.2	0.11	941.024	44.058	1789701.514	1716.772724	1716.772724
3	30	11	3.30.12	481	299	9	0.2	0.11	787.38	39.089	1515554.8	1452.340118	1452.340118
3	30	12	3.30.13	602	255	10	0.2	0.11	852.636	42.606	1621319.533	1554.357186	1554.357186
3	30	13	3.30.14	791	168	10	0.2	0.11	887.207	43.987	1687520.082	1618.211986	1618.211986
3	30	14	3.30.15	468	228	10	0.1	0.11	598.843	33.705	1189421.497	1137.763014	1137.763014
3	30	15	3.30.16	686	125	9	0.2	0.11	534.003	29.543	1092351.768	1044.132851	1044.132851
3	30	16	3.30.17	155	125	7	0.4	0.11	179.756	13.46	372299.46	349.59486	349.59486
3	30	17	3.30.18	184	46	4	0.7	0.11	69.654	6.177	120006.024	106.241183	106.241183
3	30	18	3.30.19	0	0	2	0.7	0.11	0	2	0	0	0
3	30	19	3.30.20	0	0	1	0.5	0.11	0	1	0	0	0
3	30	20	3.30.21	0	0	1	0.4	0.11	0	1	0	0	0
3	30	21	3.30.22	0	0	1	0.2	0.11	0	1	0	0	0
3	30	22	3.30.23	0	0	0	0.1	0.11	0	0	0	0	0
3	30	23	3.30.24	0	0	0	0.2	0.11	0	0	0	0	0
3	31	0	3.31.1	0	0	0	0.3	0.11	0	0	0	0	0
3	31	1	3.31.2	0	0	0	0.4	0.11	0	0	0	0	0
3	31	2	3.31.3	0	0	0	0.3	0.11	0	0	0	0	0
3	31	3	3.31.4	0	0	0	0.2	0.11	0	0	0	0	0
3	31	4	3.31.5	0	0	1	0.1	0.11	0	1	0	0	0
3	31	5	3.31.6	0	0	1	0.1	0.11	0	1	0	0	0
3	31	6	3.31.7	0	22	2	0.1	0.11	20.363	2.802	40219.157	29.281483	29.281483
3	31	7	3.31.8	0	84	4	0.1	0.11	78.291	7.101	163497.861	148.191931	148.191931
3	31	8	3.31.9	0	130	6	0.2	0.11	121.903	10.662	252439.957	233.982456	233.982456
3	31	9	3.31.10	52	278	7	0.2	0.11	316.14	19.07	648266.756	615.783537	615.783537
3	31	10	3.31.11	28	293	8	0.2	0.11	316.448	20.057	641585.336	609.338866	609.338866
3	31	11	3.31.12	40	334	8	0.3	0.11	372.731	21.755	751902.886	715.747427	715.747427
3	31	12	3.31.13	39	331	7	0.2	0.11	368.358	21.027	745120.736	709.205595	709.205595
3	31	13	3.31.14	21	270	6	0.2	0.11	276.971	16.554	567462.807	537.842794	537.842794
3	31	14	3.31.15	9	204	6	0.2	0.11	200.335	13.646	413723.82	389.55139	389.55139
3	31	15	3.31.16	0	130	5	0.2	0.11	121.977	9.667	254078.633	235.563066	235.563066
3	31	16	3.31.17	0	64	4	0.2	0.11	59.392	6.278	123228.802	109.349765	109.349765
3	31	17	3.31.18	0	7	3	0.2	0.11	6.468	3.246	11920.565	1.985622	1.985622
3	31	18	3.31.19	0	0	2	0.2	0.11	0	2	0	0	0
3	31	19	3.31.20	0	0	2	0.3	0.1	0	2	0	0	0
3	31	20	3.31.21	0	0	1	0.3	0.1	0	1	0	0	0
3	31	21	3.31.22	0	0	1	0.3	0.1	0	1	0	0	0
3	31	22	3.31.23	0	0	0	0.3	0.1	0	0	0	0	0
3	31	23	3.31.24	0	0	0	0.3	0.1	0	0	0	0	0
4	1	0	4.1.1	0	0	0	0.3	0.1	0	0	0	0	0
4	1	1	4.1.2	0	0	0	0.2	0.1	0	0	0	0	0
4	1	2	4.1.3	0	0	0	0.2	0.1	0	0	0	0	0
4	1	3	4.1.4	0	0	0	0.2	0.1	0	0	0	0	0
4	1	4	4.1.5	0	0	-1	0.2	0.1	0	-1	0	0	0
4	1	5	4.1.6	0	0	0	0.2	0.1	0	0	0	0	0
4	1	6	4.1.7	481	48	1	0.2	0.1	134.359	5.823	230962.399	213.265932	213.265932
4	1	7	4.1.8	734	71	3	0.2	0.1	377.474	17.431	785640.832	748.289904	748.289904
4	1	8	4.1.9	847	85	5	0.2	0.1	616.841	28.732	1267422.134	1212.999779	1212.999779
4	1	9	4.1.10	906	94	8	0.2	0.1	812.459	39.184	1588001.564	1522.219805	1522.219805
4	1	10	4.1.11	936	100	10	0.2	0.1	951.293	46.455	1791909.555	1718.902525	1718.902525
4	1	11	4.1.12	938	107	11	0.2	0.1	1014.193	49.836	1876524.823	1800.519538	1800.519538
4	1	12	4.1.13	923	113	12	0.2	0.1	1000.821	50.325	1848615.294	1773.598954	1773.598954
4	1	13	4.1.14	904	109	13	0.1	0.1	916.485	49.281	1707992.906	1637.959376	1637.959376
4	1	14	4.1.15	845	110	13	0.1	0.1	762.438	43.231	1467431.453	1405.921972	1405.921972
4	1	15	4.1.16	371	186	13	0.1	0.1	406.063	29.109	823563.376	784.868701	784.868701
4	1	16	4.1.17	0	87	11	0.3	0.1	81.196	14.018	165242.267	149.874527	149.874527
4	1	17	4.1.18	0	28	8	0.6	0.1	25.937	8.874	49672.146	38.399514	38.399514
4	1	18	4.1.19	0	0	5	0.3	0.1	0	5	0	0	0
4	1	19	4.1.20	0	0	4	0.1	0.1	0	4	0	0	0
4	1	20	4.1.21	0	0	3	0.1	0.1	0	3	0	0	0
4	1	21	4.1.22	0	0	2	0.1	0.1	0	2	0	0	0
4	1	22	4.1.23	0	0	1	0.1	0.1	0	1	0	0	0
4	1	23	4.1.24	0	0	1	0.1	0.1	0	1	0	0	0
4	2	0	4.2.1	0	0	1	0.1	0.1	0	1	0	0	0
4	2	1	4.2.2	0	0	1	0.1	0.1	0	1	0	0	0
4	2	2	4.2.3	0	0	1	0.1	0.1	0	1	0	0	0
4	2	3	4.2.4	0	0	1	0.1	0.1	0	1	0	0	0
4	2	4	4.2.5	0	0	1	0.1	0.1	0	1	0	0	0
4	2	5	4.2.6	0	0	1	0.1	0.1	0	1	0	0	0
4	2	6	4.2.7	184	60	2	0.1	0.1	91.742	5.509	171474.893	155.886305	155.886305
4	2	7	4.2.8	260	137	4	0.2	0.1	245.422	13.397	516393.217	488.582802	488.582802
4	2	8	4.2.9	43	212	5	0.2	0.1	233.772	13.946	489241.129	462.39282	462.39282
4	2	9	4.2.10	172	309	7	0.2	0.1	450.319	24.212	915650.144	873.692469	873.692469
4	2	10	4.2.11	43	320	9	0.2	0.1	357.747	22.631	720438.764	685.398204	685.398204
4	2	11	4.2.12	376	353	10	0.2	0.1	735.574	38.085	1417395.974	1357.659449	1357.659449
4	2	12	4.2.13	1	157	11	0.2	0.1	148.53	16.651	296767.551	276.739347	276.739347
4	2	13	4.2.14	401	312	12	0.2	0.1	683.218	38.118	1322041.217	1265.68349	1265.68349
4	2	14	4.2.15	769	144	13	0.2	0.1	743.872	41.543	1439223.23	1378.713279	1378.713279
4	2	15	4.2.16	700	123	12	0.1	0.1	541.854	33.528	1090927.619	1042.759166	1042.759166
4	2	16	4.2.17	651	77	10	0.2	0.1	322.524	22.274	645861.363	613.463376	613.463376
4	2	17	4.2.18	372	44	7	0.5	0.1	93.901	10.022	149024.039	134.230975	134.230975
4	2	18	4.2.19	0	0	5	0.6	0.1	0	5	0	0	0
4	2	19	4.2.20	0	0	3	0.6	0.1	0	3	0	0	0
4	2	20	4.2.21	0	0	2	0.5	0.1	0	2	0	0	0
4	2	21	4.2.22	0	0	2	0.4	0.1	0	2	0	0	0
4	2	22	4.2.23	0	0	1	0.2	0.1	0	1	0	0	0
4	2	23	4.2.24	0	0	1	0.2	0.1	0	1	0	0	0
4	3	0	4.3.1	0	0	1	0.2	0.1	0	1	0	0	0
4	3	1	4.3.2	0	0	0	0.2	0.1	0	0	0	0	0
4	3	2	4.3.3	0	0	0	0.2	0.1	0	0	0	0	0
4	3	3	4.3.4	0	0	0	0.1	0.1	0	0	0	0	0
4	3	4	4.3.5	0	0	0	0.1	0.1	0	0	0	0	0
4	3	5	4.3.6	0	0	0	0.1	0.1	0	0	0	0	0
4	3	6	4.3.7	504	51	1	0.2	0.1	144.721	6.218	252237.828	233.787488	233.787488
4	3	7	4.3.8	751	75	4	0.2	0.1	393.242	19.043	816073.448	777.644171	777.644171
4	3	8	4.3.9	864	89	7	0.2	0.1	636.471	31.482	1293146.607	1237.812731	1237.812731
4	3	9	4.3.10	922	98	9	0.2	0.1	833.895	41.001	1616684.059	1549.885964	1549.885964
4	3	10	4.3.11	953	102	10	0.2	0.1	972.859	47.276	1824722.723	1750.552992	1750.552992
4	3	11	4.3.12	961	104	11	0.2	0.1	1036.467	50.686	1909459.975	1832.287666	1832.287666
4	3	12	4.3.13	949	107	12	0.2	0.1	1021.976	51.133	1880131.135	1803.998063	1803.998063
4	3	13	4.3.14	921	107	12	0.2	0.1	931.662	47.704	1746702.886	1675.297708	1675.297708
4	3	14	4.3.15	662	164	12	0.2	0.1	684.504	38.254	1339939.446	1282.947514	1282.947514
4	3	15	4.3.16	256	209	11	0.1	0.1	363.172	25.393	742870.843	707.035425	707.035425
4	3	16	4.3.17	156	131	9	0.2	0.1	186.018	16.112	382150.702	359.097033	359.097033
4	3	17	4.3.18	0	41	7	0.6	0.1	38.002	8.282	74477.543	62.325957	62.325957
4	3	18	4.3.19	0	0	5	0.6	0.1	0	5	0	0	0
4	3	19	4.3.20	0	0	4	0.3	0.1	0	4	0	0	0
4	3	20	4.3.21	0	0	4	0.1	0.1	0	4	0	0	0
4	3	21	4.3.22	0	0	3	0.1	0.1	0	3	0	0	0
4	3	22	4.3.23	0	0	3	0.1	0.1	0	3	0	0	0
4	3	23	4.3.24	0	0	3	0.1	0.1	0	3	0	0	0
4	4	0	4.4.1	0	0	2	0.1	0.1	0	2	0	0	0
4	4	1	4.4.2	0	0	2	0.1	0.1	0	2	0	0	0
4	4	2	4.4.3	0	0	1	0.1	0.1	0	1	0	0	0
4	4	3	4.4.4	0	0	1	0.1	0.1	0	1	0	0	0
4	4	4	4.4.5	0	0	1	0.1	0.1	0	1	0	0	0
4	4	5	4.4.6	0	0	1	0.1	0.1	0	0	0	0	0
4	4	6	4.4.7	0	28	3	0.1	0.1	25.924	4.023	51812.175	40.463714	40.463714
4	4	7	4.4.8	42	143	5	0.2	0.1	155.078	10.944	326194.204	305.123296	305.123296
4	4	8	4.4.9	249	229	6	0.2	0.1	390.876	20.986	811972.491	773.688527	773.688527
4	4	9	4.4.10	407	269	7	0.2	0.1	602.414	30.06	1208458.749	1156.125701	1156.125701
4	4	10	4.4.11	357	336	8	0.2	0.1	677.95	33.899	1330554.286	1273.894907	1273.894907
4	4	11	4.4.12	20	293	9	0.3	0.1	299.915	20.061	604694.266	573.754993	573.754993
4	4	12	4.4.13	0	95	8	0.3	0.1	88.489	11.262	177151.73	161.36199	161.36199
4	4	13	4.4.14	0	152	7	0.2	0.1	142.683	12.433	290277.238	270.479011	270.479011
4	4	14	4.4.15	0	144	6	0.2	0.1	135.008	11.15	277423.105	258.080351	258.080351
4	4	15	4.4.16	76	214	5	0.2	0.1	253.038	14.692	530990.526	502.66287	502.66287
4	4	16	4.4.17	0	24	4	0.2	0.1	22.216	4.852	44547.633	33.456583	33.456583
4	4	17	4.4.18	0	32	4	0.2	0.1	29.652	5.129	58406.561	46.824434	46.824434
4	4	18	4.4.19	0	0	3	0.3	0.1	0	3	0	0	0
4	4	19	4.4.20	0	0	3	0.3	0.1	0	3	0	0	0
4	4	20	4.4.21	0	0	3	0.3	0.1	0	3	0	0	0
4	4	21	4.4.22	0	0	3	0.2	0.1	0	3	0	0	0
4	4	22	4.4.23	0	0	3	0.1	0.1	0	3	0	0	0
4	4	23	4.4.24	0	0	3	0.1	0.1	0	3	0	0	0
4	5	0	4.5.1	0	0	3	0.1	0.1	0	3	0	0	0
4	5	1	4.5.2	0	0	2	0.1	0.1	0	2	0	0	0
4	5	2	4.5.3	0	0	2	0.1	0.1	0	2	0	0	0
4	5	3	4.5.4	0	0	2	0.1	0.1	0	2	0	0	0
4	5	4	4.5.5	0	0	1	0.1	0.1	0	1	0	0	0
4	5	5	4.5.6	0	0	1	0.1	0.1	0	0	0	0	0
4	5	6	4.5.7	0	42	2	0.1	0.1	38.937	3.538	79392.599	67.066853	67.066853
4	5	7	4.5.8	11	133	4	0.1	0.1	129.691	9.135	273227.571	254.033482	254.033482
4	5	8	4.5.9	310	223	6	0.2	0.1	423.362	22.238	877677.082	837.064944	837.064944

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
4	5	9	4.5.10	0	123	8	0.3	0.1	114.903	12.246	233282.161	215.503496	215.503496
4	5	10	4.5.11	15	260	9	0.3	0.1	261.505	18.651	529341.152	501.07194	501.07194
4	5	11	4.5.12	20	294	10	0.3	0.1	300.828	21.094	604029.753	573.114027	573.114027
4	5	12	4.5.13	288	382	10	0.3	0.1	680.42	35.16	1322865.649	1266.47871	1266.47871
4	5	13	4.5.14	29	297	9	0.3	0.1	319.89	20.811	646707.021	614.27907	614.27907
4	5	14	4.5.15	541	209	9	0.3	0.1	636.447	32.64	1269996.16	1215.482596	1215.482596
4	5	15	4.5.16	756	111	8	0.3	0.1	563.899	29.022	1156027.082	1105.551896	1105.551896
4	5	16	4.5.17	48	130	6	0.3	0.1	142.247	11.281	297275.765	277.229552	277.229552
4	5	17	4.5.18	373	50	5	0.3	0.1	100.726	8.471	165039.538	149.678981	149.678981
4	5	18	4.5.19	0	0	3	0.3	0.1	0	3	0	0	0
4	5	19	4.5.20	0	0	2	0.3	0.1	0	2	0	0	0
4	5	20	4.5.21	0	0	1	0.2	0.1	0	1	0	0	0
4	5	21	4.5.22	0	0	0	0.2	0.1	0	0	0	0	0
4	5	22	4.5.23	0	0	0	0.2	0.1	0	0	0	0	0
4	5	23	4.5.24	0	0	0	0.2	0.1	0	0	0	0	0
4	6	0	4.6.1	0	0	0	0.2	0.1	0	0	0	0	0
4	6	1	4.6.2	0	0	0	0.2	0.1	0	0	0	0	0
4	6	2	4.6.3	0	0	-1	0.2	0.1	0	-1	0	0	0
4	6	3	4.6.4	0	0	-1	0.1	0.1	0	-1	0	0	0
4	6	4	4.6.5	0	0	-1	0.1	0.1	0	-1	0	0	0
4	6	5	4.6.6	0	0	-1	0.1	0.1	0	0	0	0	0
4	6	6	4.6.7	542	54	0	0.2	0.1	159.969	5.797	284501.951	264.908366	264.908366
4	6	7	4.6.8	782	72	2	0.2	0.1	410.319	17.709	858973.949	819.024537	819.024537
4	6	8	4.6.9	876	86	5	0.2	0.1	648.011	29.92	1323531.769	1267.121226	1267.121226
4	6	9	4.6.10	925	97	7	0.2	0.1	841.916	39.301	1641871.669	1574.181077	1574.181077
4	6	10	4.6.11	972	92	9	0.2	0.1	985.324	46.749	1850884.905	1775.788144	1775.788144
4	6	11	4.6.12	981	95	10	0.2	0.1	1051.058	50.24	1938589.584	1860.385097	1860.385097
4	6	12	4.6.13	972	97	11	0.2	0.1	1037.312	50.716	1910459.322	1833.251602	1833.251602
4	6	13	4.6.14	931	106	12	0.2	0.1	942.703	48.122	1763039.275	1691.055234	1691.055234
4	6	14	4.6.15	883	103	12	0.2	0.1	788.094	42.247	1521504.509	1458.079005	1458.079005
4	6	15	4.6.16	810	93	12	0.1	0.1	576.606	34.915	1156295.052	1105.81037	1105.81037
4	6	16	4.6.17	733	66	10	0.1	0.1	344.157	23.528	686985.676	653.130492	653.130492
4	6	17	4.6.18	471	42	6	0.4	0.1	106.89	9.513	166938.769	151.510915	151.510915
4	6	18	4.6.19	0	0	4	0.6	0.1	0	4	0	0	0
4	6	19	4.6.20	0	0	4	0.6	0.1	0	4	0	0	0
4	6	20	4.6.21	0	0	4	0.7	0.1	0	4	0	0	0
4	6	21	4.6.22	0	0	4	0.8	0.1	0	4	0	0	0
4	6	22	4.6.23	0	0	3	0.9	0.1	0	3	0	0	0
4	6	23	4.6.24	0	0	3	0.9	0.1	0	3	0	0	0
4	7	0	4.7.1	0	0	3	0.9	0.1	0	3	0	0	0
4	7	1	4.7.2	0	0	3	0.7	0.1	0	3	0	0	0
4	7	2	4.7.3	0	0	3	0.4	0.1	0	3	0	0	0
4	7	3	4.7.4	0	0	2	0.5	0.1	0	2	0	0	0
4	7	4	4.7.5	0	0	1	0.8	0.1	0	1	0	0	0
4	7	5	4.7.6	0	0	2	0.5	0.1	0	0	0	0	0
4	7	6	4.7.7	26	71	4	0.1	0.1	71.777	6.823	145643.843	130.970552	130.970552
4	7	7	4.7.8	334	139	7	0.1	0.1	282.294	18.17	586625.144	556.326132	556.326132
4	7	8	4.7.9	269	234	9	0.1	0.1	409.958	25.232	838158.096	798.946273	798.946273
4	7	9	4.7.10	194	320	10	0.2	0.1	479.865	28.336	960398.672	916.855379	916.855379
4	7	10	4.7.11	199	376	11	0.2	0.1	567.549	32.652	1112610.464	1063.673702	1063.673702
4	7	11	4.7.12	39	345	11	0.2	0.1	381.892	25.534	758348.163	721.964322	721.964322
4	7	12	4.7.13	163	402	10	0.2	0.1	571.196	31.77	1119788.043	1070.59695	1070.59695
4	7	13	4.7.14	15	257	9	0.2	0.1	258.086	18.829	522177.778	494.162394	494.162394
4	7	14	4.7.15	20	240	8	0.2	0.1	243.49	17.291	498287.382	471.118529	471.118529
4	7	15	4.7.16	0	105	7	0.2	0.1	97.848	10.742	201027.046	184.391308	184.391308
4	7	16	4.7.17	0	59	6	0.2	0.1	54.722	8.099	112291.691	98.8002	98.8002
4	7	17	4.7.18	0	22	5	0.2	0.1	20.359	5.776	39554.406	28.640286	28.640286
4	7	18	4.7.19	0	0	5	0.2	0.1	0	5	0	0	0
4	7	19	4.7.20	0	0	5	0.2	0.1	0	5	0	0	0
4	7	20	4.7.21	0	0	5	0.2	0.1	0	5	0	0	0
4	7	21	4.7.22	0	0	6	0.2	0.1	0	6	0	0	0
4	7	22	4.7.23	0	0	6	0.3	0.1	0	6	0	0	0
4	7	23	4.7.24	0	0	6	0.3	0.1	0	6	0	0	0
4	8	0	4.8.1	0	0	7	0.2	0.1	0	7	0	0	0
4	8	1	4.8.2	0	0	7	0.1	0.1	0	7	0	0	0
4	8	2	4.8.3	0	0	7	0.1	0.1	0	7	0	0	0
4	8	3	4.8.4	0	0	7	0.1	0.1	0	7	0	0	0
4	8	4	4.8.5	0	0	7	0.2	0.1	0	7	0	0	0
4	8	5	4.8.6	0	0	7	0.1	0.1	0	0	0	0	0
4	8	6	4.8.7	89	76	9	0.1	0.1	90.196	12.518	175134.024	159.415779	159.415779
4	8	7	4.8.8	0	49	11	0.1	0.1	45.426	12.798	90517.325	77.797386	77.797386
4	8	8	4.8.9	3	171	13	0.2	0.1	162.973	19.229	328746.495	307.585149	307.585149
4	8	9	4.8.10	145	326	14	0.2	0.1	447.115	31.076	882545.206	841.76057	841.76057
4	8	10	4.8.11	126	380	14	0.2	0.1	505.233	33.26	984019.696	939.639416	939.639416
4	8	11	4.8.12	212	408	14	0.2	0.1	626.304	37.876	1200468.519	1148.418596	1148.418596
4	8	12	4.8.13	271	394	14	0.2	0.1	676.849	39.816	1290220.616	1234.990419	1234.990419
4	8	13	4.8.14	238	365	14	0.2	0.1	585.405	36.345	1133573.958	1083.894375	1083.894375
4	8	14	4.8.15	235	303	14	0.2	0.1	485.637	32.572	958958.412	915.466152	915.466152
4	8	15	4.8.16	79	222	14	0.2	0.1	262.321	24.045	530964.064	502.637346	502.637346
4	8	16	4.8.17	0	19	13	0.2	0.1	17.584	13.674	33528.775	22.828167	22.828167
4	8	17	4.8.18	0	37	12	0.2	0.1	34.298	13.308	66033.533	54.181152	54.181152
4	8	18	4.8.19	0	0	10	0.2	0.1	0	10	0	0	0
4	8	19	4.8.20	0	0	8	0.2	0.1	0	8	0	0	0
4	8	20	4.8.21	0	0	6	0.2	0.1	0	6	0	0	0
4	8	21	4.8.22	0	0	5	0.2	0.1	0	5	0	0	0
4	8	22	4.8.23	0	0	4	0.2	0.1	0	4	0	0	0
4	8	23	4.8.24	0	0	4	0.2	0.1	0	4	0	0	0
4	9	0	4.9.1	0	0	3	0.1	0.1	0	3	0	0	0
4	9	1	4.9.2	0	0	3	0.1	0.1	0	3	0	0	0
4	9	2	4.9.3	0	0	2	0.1	0.1	0	2	0	0	0
4	9	3	4.9.4	0	0	1	0.1	0.1	0	1	0	0	0
4	9	4	4.9.5	0	0	1	0.1	0.1	0	1	0	0	0
4	9	5	4.9.6	0	0	2	0.1	0.1	0	0	0	0	0
4	9	6	4.9.7	419	69	5	0.1	0.1	153.344	10.825	279481.437	260.065748	260.065748
4	9	7	4.9.8	709	85	8	0.2	0.1	398.916	23.284	819581.579	781.027995	781.027995
4	9	8	4.9.9	815	101	10	0.2	0.1	631.693	34.282	1266178.245	1211.799965	1211.799965
4	9	9	4.9.10	875	112	11	0.2	0.1	828.301	42.766	1590789.913	1524.909351	1524.909351
4	9	10	4.9.11	934	105	12	0.2	0.1	970.007	49.151	1802600.798	1729.214935	1729.214935
4	9	11	4.9.12	954	104	12	0.3	0.1	1039.169	50.548	1912985.552	1835.688318	1835.688318
4	9	12	4.9.13	952	105	12	0.3	0.1	1030.393	50.225	1900333.663	1823.484736	1823.484736
4	9	13	4.9.14	920	111	12	0.3	0.1	941.109	46.941	1767384.143	1695.246145	1695.246145
4	9	14	4.9.15	879	107	11	0.3	0.1	791.616	40.438	1538260.96	1474.241708	1474.241708
4	9	15	4.9.16	818	94	10	0.3	0.1	584.353	31.786	1185655.225	1134.130196	1134.130196
4	9	16	4.9.17	717	73	8	0.2	0.1	347.031	21.214	700456.18	666.123682	666.123682
4	9	17	4.9.18	477	46	6	0.2	0.1	112.878	9.971	179364.239	163.496101	163.496101
4	9	18	4.9.19	0	0	4	0.2	0.1	0	4	0	0	0
4	9	19	4.9.20	0	0	3	0.1	0.1	0	3	0	0	0
4	9	20	4.9.21	0	0	2	0.1	0.1	0	2	0	0	0
4	9	21	4.9.22	0	0	1	0.1	0.1	0	1	0	0	0
4	9	22	4.9.23	0	0	0	0.1	0.1	0	0	0	0	0
4	9	23	4.9.24	0	0	0	0.1	0.1	0	0	0	0	0
4	10	0	4.10.1	0	0	0	0.1	0.1	0	0	0	0	0
4	10	1	4.10.2	0	0	-1	0.1	0.1	0	-1	0	0	0
4	10	2	4.10.3	0	0	-1	0.3	0.1	0	-1	0	0	0
4	10	3	4.10.4	0	0	-1	0.5	0.1	0	-1	0	0	0
4	10	4	4.10.5	0	0	-1	0.3	0.1	0	-1	0	0	0
4	10	5	4.10.6	105	11	0	0.1	0.1	10.464	0.347	12726.736	2.763227	2.763227
4	10	6	4.10.7	583	52	3	0.1	0.1	173.383	9.519	308905.687	288.44738	288.44738
4	10	7	4.10.8	769	75	6	0.1	0.1	416.885	22.501	860386.142	820.38669	820.38669
4	10	8	4.10.9	863	89	9	0.2	0.1	651.92	34.061	1308432.937	1252.557406	1252.557406
4	10	9	4.10.10	912	99	10	0.2	0.1	841.845	42.288	1620266.355	1553.341326	1553.341326
4	10	10	4.10.11	937	106	11	0.2	0.1	975.477	48.358	1818134.565	1744.198279	1744.198279
4	10	11	4.10.12	941	112	12	0.2	0.1	1036.414	51.665	1898318.559	1821.541035	1821.541035
4	10	12	4.10.13	929	116	12	0.3	0.1	1021.008	49.872	1885216.241	1808.902984	1808.902984
4	10	13	4.10.14	913	111	12	0.3	0.1	935.762	46.74	1758571.983	1686.746235	1686.746235
4	10	14	4.10.15	870	106	12	0.3	0.1	784.405	41.169	1519534.369	1456.178675	1456.178675
4	10	15	4.10.16	792	99	11	0.2	0.1	574.839	33.11	1159553.105	1108.952978	1108.952978
4	10	16	4.10.17	680	78	9	0.2	0.1	338.757	21.903	682326.173	648.636094	648.636094
4	10	17	4.10.18	452	47	8	0.2	0.1	110.707	11.911	176373.908	160.611729	160.611729
4	10	18	4.10.19	0	0	6	0.2	0.1	0	6	0	0	0
4	10	19	4.10.20	0	0	5	0.2	0.1	0	5	0	0	0
4	10	20	4.10.21	0	0	5	0.2	0.1	0	5	0	0	0
4	10	21	4.10.22	0	0	5	0.2	0.1	0	5	0	0	0
4	10	22	4.10.23	0	0	5	0.2	0.1	0	5	0	0	0
4	10	23	4.10.24	0	0	5	0.2	0.1	0	5	0	0	0
4	11	0	4.11.1	0	0	6	0.2	0.1	0	6	0	0	0
4	11	1	4.11.2	0	0	6	0.2	0.1	0	6	0	0	0
4	11	2	4.11.3	0	0	6	0.1	0.1	0	6	0	0	0
4	11	3	4.11.4	0	0	6	0.1	0.1	0	6	0	0	0
4	11	4	4.11.5	0	0	5	0.1	0.1	0	5	0	0	0
4	11	5	4.11.6	0	2	6	0.1	0.1	1.903	6.063	2074.032	0	0
4	11	6	4.11.7	0	8	7	0.1	0.1	7.393	7.292	13883.081	3.878598	3.878598
4	11	7	4.11.8	0	52	9	0.1	0.1	48.216	10.909	97012.161	84.062084	84.062084
4	11	8	4.11.9	190	253	11	0.1	0.1	374.571	25.816	759866.968	723.42931	723.42931
4	11	9	4.11.10	0	153	14	0.1	0.1	143.475	19.647	284559.905	264.964266	264.964266
4	11	10	4.11.11	201	385	15	0.1	0.1	578.965	37.807	1111126.193	1062.242024	1062.242024
4	11	11	4.11.12	54	374	16	0.1	0.1	426.001	32.745	823950.968	785.242559	785.242559
4	11	12	4.11.13	0	104	17	0.1	0.1	97.025	20.811	187158.686	171.014359	171.014359
4	11	13	4.11.14	6	196	16	0.1	0.1	190.263	23.481	373849.452	351.089929	351.089929
4	11	14	4.11.15	81	301	16	0.1	0.1	358.261	30.128	705859.842	671.335872	671.335872
4	11	15	4.11.16	0	107	15	0.1	0.1	99.698	18.937	198075.315	181.544169	181.544169

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
4	11	16	4.11.17	0	98	14	0.1	0.1	91.34	17.618	183840.851	167.814088	167.814088
4	11	17	4.11.18	0	3	13	0.1	0.1	2.77	13.109	4751.223	0	0
4	11	18	4.11.19	0	0	11	0.1	0.1	0	11	0	0	0
4	11	19	4.11.20	0	0	10	0.2	0.1	0	10	0	0	0
4	11	20	4.11.21	0	0	9	0.1	0.1	0	9	0	0	0
4	11	21	4.11.22	0	0	9	0.1	0.1	0	9	0	0	0
4	11	22	4.11.23	0	0	8	0.1	0.1	0	8	0	0	0
4	11	23	4.11.24	0	0	8	0.1	0.1	0	8	0	0	0
4	12	0	4.12.1	0	0	7	0.1	0.1	0	7	0	0	0
4	12	1	4.12.2	0	0	7	0.1	0.1	0	7	0	0	0
4	12	2	4.12.3	0	0	6	0.1	0.1	0	6	0	0	0
4	12	3	4.12.4	0	0	4	0.1	0.1	0	4	0	0	0
4	12	4	4.12.5	0	0	3	0.1	0.1	0	3	0	0	0
4	12	5	4.12.6	69	13	4	0.1	0.1	12.367	4.411	14866.214	4.826895	4.826895
4	12	6	4.12.7	514	63	7	0.1	0.1	172.943	13.558	311431.435	290.883631	290.883631
4	12	7	4.12.8	720	88	10	0.1	0.1	412.692	26.341	840318.309	801.02994	801.02994
4	12	8	4.12.9	804	110	13	0.1	0.1	639.79	38.393	1260120.913	1205.957268	1205.957268
4	12	9	4.12.10	867	118	15	0.1	0.1	833.572	48.01	1565246.92	1500.271448	1500.271448
4	12	10	4.12.11	510	290	16	0.1	0.1	783.619	46.931	1461130.969	1399.84474	1399.84474
4	12	11	4.12.12	924	118	17	0.1	0.1	1028.743	57.659	1835927.031	1761.360287	1761.360287
4	12	12	4.12.13	562	289	18	0.1	0.1	857.719	51.845	1564104.858	1499.169854	1499.169854
4	12	13	4.12.14	904	112	18	0.1	0.1	930.427	54.809	1689744.943	1620.358011	1620.358011
4	12	14	4.12.15	863	105	18	0.1	0.1	779.334	48.882	1462126.106	1400.804614	1400.804614
4	12	15	4.12.16	780	98	17	0.1	0.1	567.94	39.56	1115910.05	1066.85637	1066.85637
4	12	16	4.12.17	665	79	15	0.1	0.1	335.168	28.189	659170.787	626.301195	626.301195
4	12	17	4.12.18	417	50	13	0.4	0.1	109.322	16.658	174305.539	158.616651	158.616651
4	12	18	4.12.19	0	0	11	0.7	0.1	0	11	0	0	0
4	12	19	4.12.20	0	0	10	0.6	0.1	0	10	0	0	0
4	12	20	4.12.21	0	0	9	0.5	0.1	0	9	0	0	0
4	12	21	4.12.22	0	0	8	0.4	0.1	0	8	0	0	0
4	12	22	4.12.23	0	0	7	0.2	0.1	0	7	0	0	0
4	12	23	4.12.24	0	0	6	0.1	0.1	0	6	0	0	0
4	13	0	4.13.1	0	0	6	0.1	0.1	0	6	0	0	0
4	13	1	4.13.2	0	0	6	0.1	0.1	0	6	0	0	0
4	13	2	4.13.3	0	0	6	0.1	0.1	0	6	0	0	0
4	13	3	4.13.4	0	0	6	0.1	0.1	0	6	0	0	0
4	13	4	4.13.5	0	0	6	0.1	0.1	0	6	0	0	0
4	13	5	4.13.6	25	12	6	0.1	0.1	10.73	6.356	12685.997	2.723931	2.723931
4	13	6	4.13.7	0	43	8	0.1	0.1	39.853	9.577	79915.756	67.571473	67.571473
4	13	7	4.13.8	124	172	10	0.1	0.1	223.143	18.833	460240.511	434.41981	434.41981
4	13	8	4.13.9	1	167	13	0.1	0.1	157.563	19.217	316885.899	296.144821	296.144821
4	13	9	4.13.10	9	217	15	0.2	0.1	212.469	23.098	421407.63	396.962932	396.962932
4	13	10	4.13.11	36	330	17	0.2	0.1	359.884	30.701	700052.789	665.734585	665.734585
4	13	11	4.13.12	54	374	18	0.2	0.1	425.598	34.195	818070.317	779.570283	779.570283
4	13	12	4.13.13	707	219	19	0.2	0.1	929.138	54.52	1677937.091	1608.968558	1608.968558
4	13	13	4.13.14	535	272	20	0.2	0.1	772.702	49.542	1427508.196	1367.413355	1367.413355
4	13	14	4.13.15	613	204	19	0.2	0.1	691.749	45.506	1310141.458	1254.205387	1254.205387
4	13	15	4.13.16	530	177	18	0.2	0.1	498.328	37.139	982184.533	937.86928	937.86928
4	13	16	4.13.17	231	141	16	0.2	0.1	226.852	24.671	452828.73	427.270658	427.270658
4	13	17	4.13.18	103	70	15	0.2	0.1	80.2	18.003	146992.546	132.271466	132.271466
4	13	18	4.13.19	0	0	13	0.2	0.1	0	13	0	0	0
4	13	19	4.13.20	0	0	13	0.2	0.1	0	13	0	0	0
4	13	20	4.13.21	0	0	13	0.2	0.1	0	13	0	0	0
4	13	21	4.13.22	0	0	12	0.2	0.1	0	12	0	0	0
4	13	22	4.13.23	0	0	12	0.2	0.1	0	12	0	0	0
4	13	23	4.13.24	0	0	12	0.2	0.1	0	12	0	0	0
4	14	0	4.14.1	0	0	12	0.2	0.1	0	12	0	0	0
4	14	1	4.14.2	0	0	12	0.2	0.1	0	12	0	0	0
4	14	2	4.14.3	0	0	12	0.2	0.1	0	12	0	0	0
4	14	3	4.14.4	0	0	12	0.2	0.1	0	12	0	0	0
4	14	4	4.14.5	0	0	12	0.2	0.1	0	12	0	0	0
4	14	5	4.14.6	0	12	12	0.2	0.1	11.107	12.357	12772.872	2.807728	2.807728
4	14	6	4.14.7	322	89	13	0.2	0.1	157.263	18.866	290973.75	271.150843	271.150843
4	14	7	4.14.8	512	136	15	0.2	0.1	368.663	29.135	741259.904	705.481568	705.481568
4	14	8	4.14.9	366	230	17	0.2	0.1	472.078	35.097	930850.358	888.354078	888.354078
4	14	9	4.14.10	367	302	18	0.2	0.1	610.698	41.352	1166810.305	1115.953027	1115.953027
4	14	10	4.14.11	275	380	18	0.2	0.1	651.831	42.869	1228226.156	1175.19267	1175.19267
4	14	11	4.14.12	521	317	18	0.2	0.1	853.256	50.581	1561664.193	1496.815671	1496.815671
4	14	12	4.14.13	190	415	18	0.2	0.1	609.749	41.235	1151025.238	1100.727287	1100.727287
4	14	13	4.14.14	254	371	18	0.2	0.1	614.619	41.454	1165275.014	1114.472137	1114.472137
4	14	14	4.14.15	414	269	18	0.2	0.1	602.015	41.041	1155465.848	1105.010549	1105.010549
4	14	15	4.14.16	543	159	17	0.2	0.1	488.25	35.755	967951.538	924.140616	924.140616
4	14	16	4.14.17	178	147	16	0.2	0.1	209.949	24.029	420005.404	395.610393	395.610393
4	14	17	4.14.18	106	76	14	0.2	0.1	86.112	17.228	159460.439	144.297572	144.297572
4	14	18	4.14.19	0	0	13	0.2	0.1	0	0	0	0	0
4	14	19	4.14.20	0	0	13	0.2	0.1	0	13	0	0	0
4	14	20	4.14.21	0	0	13	0.2	0.1	0	13	0	0	0
4	14	21	4.14.22	0	0	13	0.2	0.1	0	13	0	0	0
4	14	22	4.14.23	0	0	13	0.2	0.1	0	13	0	0	0
4	14	23	4.14.24	0	0	13	0.2	0.1	0	13	0	0	0
4	15	0	4.15.1	0	0	13	0.2	0.1	0	13	0	0	0
4	15	1	4.15.2	0	0	13	0.2	0.1	0	13	0	0	0
4	15	2	4.15.3	0	0	13	0.2	0.1	0	13	0	0	0
4	15	3	4.15.4	0	0	13	0.2	0.1	0	13	0	0	0
4	15	4	4.15.5	0	0	12	0.2	0.1	0	12	0	0	0
4	15	5	4.15.6	0	0	12	0.2	0.1	0	0	0	0	0
4	15	6	4.15.7	0	4	13	0.2	0.1	3.696	13.142	6532.574	0	0
4	15	7	4.15.8	0	49	14	0.2	0.1	45.431	15.741	89213.265	76.539534	76.539534
4	15	8	4.15.9	0	74	15	0.2	0.1	68.727	17.625	134641.486	120.358052	120.358052
4	15	9	4.15.10	0	154	15	0.2	0.1	144.353	20.499	285072.889	265.459073	265.459073
4	15	10	4.15.11	0	143	15	0.3	0.1	133.972	19.939	262959.143	244.128905	244.128905
4	15	11	4.15.12	5	180	16	0.3	0.1	174.382	22.426	341493.011	319.880006	319.880006
4	15	12	4.15.13	0	76	16	0.3	0.1	70.745	18.607	135860.039	121.533427	121.533427
4	15	13	4.15.14	5	182	15	0.3	0.1	175.753	21.483	346892.961	325.088614	325.088614
4	15	14	4.15.15	0	126	15	0.2	0.1	117.655	19.485	232110.432	214.373287	214.373287
4	15	15	4.15.16	0	113	15	0.2	0.1	105.334	19.027	209454.676	192.520314	192.520314
4	15	16	4.15.17	0	48	14	0.2	0.1	44.494	15.706	87576.645	74.960906	74.960906
4	15	17	4.15.18	0	37	13	0.1	0.1	34.288	14.353	66243.201	54.383391	54.383391
4	15	18	4.15.19	0	0	10	0.1	0.1	0	0	0	0	0
4	15	19	4.15.20	0	0	7	0.2	0.1	0	7	0	0	0
4	15	20	4.15.21	0	0	3	0.2	0.1	0	3	0	0	0
4	15	21	4.15.22	0	0	1	0.2	0.1	0	1	0	0	0
4	15	22	4.15.23	0	0	0	0.2	0.1	0	0	0	0	0
4	15	23	4.15.24	0	0	0	0.2	0.1	0	0	0	0	0
4	16	0	4.16.1	0	0	0	0.2	0.1	0	0	0	0	0
4	16	1	4.16.2	0	0	0	0.2	0.1	0	0	0	0	0
4	16	2	4.16.3	0	0	-1	0.2	0.1	0	-1	0	0	0
4	16	3	4.16.4	0	0	-1	0.2	0.1	0	-1	0	0	0
4	16	4	4.16.5	0	0	-1	0.2	0.1	0	-1	0	0	0
4	16	5	4.16.6	0	31	-2	0.2	0.1	26.329	-1.154	33500.587	22.800978	22.800978
4	16	6	4.16.7	614	64	-2	0.2	0.1	202.462	5.448	380314.858	357.32624	357.32624
4	16	7	4.16.8	775	91	-1	0.2	0.1	448.067	16.188	951614.428	908.382395	908.382395
4	16	8	4.16.9	850	113	0	0.2	0.1	680.139	26.128	1403791.079	1344.53663	1344.53663
4	16	9	4.16.10	894	128	0	0.2	0.1	872.46	33.44	1734144.286	1663.184109	1663.184109
4	16	10	4.16.11	934	128	1	0.1	0.1	1004.469	40.714	1926840.997	1849.05281	1849.05281
4	16	11	4.16.12	939	133	2	0.1	0.1	1063.398	44.017	2005903.531	1925.313844	1925.313844
4	16	12	4.16.13	929	135	3	0.1	0.1	1046.27	44.344	1972372.48	1892.970931	1892.970931
4	16	13	4.16.14	910	130	4	0.1	0.1	957.264	41.859	1831568.777	1757.156463	1757.156463
4	16	14	4.16.15	876	119	4	0.1	0.1	806.386	35.945	1592220.363	1526.289115	1526.289115
4	16	15	4.16.16	815	104	4	0.1	0.1	597.04	27.711	1228472.695	1175.430473	1175.430473
4	16	16	4.16.17	699	85	3	0.1	0.1	356.241	17.024	733511.941	698.008146	698.008146
4	16	17	4.16.18	469	55	1	0.1	0.1	123.433	5.547	207920.5	191.040499	191.040499
4	16	18	4.16.19	0	0	0	0.2	0.1	0	0	0	0	0
4	16	19	4.16.20	0	0	-1	0.1	0.1	0	-1	0	0	0
4	16	20	4.16.21	0	0	-1	0.1	0.1	0	-1	0	0	0
4	16	21	4.16.22	0	0	-2	0.1	0.1	0	-2	0	0	0
4	16	22	4.16.23	0	0	-3	0.1	0.1	0	-3	0	0	0
4	16	23	4.16.24	0	0	-3	0.2	0.1	0	-3	0	0	0
4	17	0	4.17.1	0	0	-4	0.3	0.1	0	-4	0	0	0
4	17	1	4.17.2	0	0	-4	0.3	0.1	0	-4	0	0	0
4	17	2	4.17.3	0	0	-4	0.3	0.1	0	-4	0	0	0
4	17	3	4.17.4	0	0	-4	0.3	0.1	0	-4	0	0	0
4	17	4	4.17.5	0	0	-4	0.3	0.1	0	-4	0	0	0
4	17	5	4.17.6	0	19	-2	0.2	0.1	17.491	-1.438	21908.533	11.619676	11.619676
4	17	6	4.17.7	161	92	0	0.1	0.1	124.68	4.86	251679.866	233.249297	233.249297
4	17	7	4.17.8	308	163	1	0.1	0.1	302.115	12.965	643350.851	611.041823	611.041823
4	17	8	4.17.9	405	225	3	0.1	0.1	500.341	22.811	1035538.637	989.332836	989.332836
4	17	9	4.17.10	628	207	4	0.1	0.1	739.849	33.258	1467556.481	1406.04257	1406.04257
4	17	10	4.17.11	580	272	6	0.1	0.1	832.971	38.881	1604513.535	1538.14669	1538.14669
4	17	11	4.17.12	589	292	7	0.1	0.1	895.28	42.317	1695749.095	1626.149412	1626.149412
4	17	12	4.17.13	626	270	8	0.1	0.1	904.077	43.675	1704758.336	1634.83942	1634.83942
4	17	13	4.17.14	898	130	8	0.1	0.1	947.124	45.456	1785876.409	1713.083157	1713.083157
4	17	14	4.17.15	853	125	8	0.1	0.1	795.42	39.506	1548016.004	1483.651092	1483.651092
4	17	15	4.17.16	779	114	7	0.1	0.1	587.031	30.308	1194808.346	1142.958985	1142.958985
4	17	16	4.17.17	385	125	6	0.1	0.1	273.494	16.786	563771.048	534.281848	534.281848
4	17	17	4.17.18	415	62	3	0.1	0.1	121.201	7.505	207726.778	190.853642	190.853642
4	17	18	4.17.19	0	0	1	0.1	0.1	0	0	0	0	0
4	17	19	4.17.20	0	0	0	0.1	0.1	0	0	0	0	0
4	17	20	4.17.21	0	0	0	0.1	0.1	0	0	0	0	0
4	17	21	4.17.22	0	0	-1	0.1	0.1	0	-1	0	0	0
4	17	22	4.17.23	0	0	-2	0.1	0.1	0	-2	0	0	0

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

	Reference Case	Adjusted Case
	3,025,628	3,025,628

Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
4	17	23	4.17.24	0	0	-2	0.2	0.1	0	-2	0	0	0
4	18	0	4.18.1	0	0	-2	0.2	0.1	0	-2	0	0	0
4	18	1	4.18.2	0	0	-3	0.1	0.1	0	-3	0	0	0
4	18	2	4.18.3	0	0	-3	0.1	0.1	0	-3	0	0	0
4	18	3	4.18.4	0	0	-2	0.1	0.1	0	-2	0	0	0
4	18	4	4.18.5	0	0	-2	0.1	0.1	0	-2	0	0	0
4	18	5	4.18.6	0	21	-1	0.1	0.1	19.226	-0.362	24062.502	13.697322	13.697322
4	18	6	4.18.7	523	76	1	0.1	0.1	196.349	8.513	372487.165	349.775913	349.775913
4	18	7	4.18.8	36	168	3	0.1	0.1	176.661	9.991	373780.727	351.02364	351.02364
4	18	8	4.18.9	186	268	5	0.1	0.1	388.513	20.358	803468.127	765.485507	765.485507
4	18	9	4.18.10	396	299	6	0.1	0.1	633.071	31.001	1260230.098	1206.062585	1206.062585
4	18	10	4.18.11	410	341	8	0.1	0.1	745.624	37.402	1440108.348	1379.567033	1379.567033
4	18	11	4.18.12	198	425	9	0	0.1	629.764	34.606	1219953.548	1167.213193	1167.213193
4	18	12	4.18.13	282	405	9	0	0.1	698.233	37.411	1341792.126	1284.734546	1284.734546
4	18	13	4.18.14	328	357	9	0	0.1	666.044	36.136	1292235.605	1236.934009	1236.934009
4	18	14	4.18.15	107	318	8	0	0.1	394.345	24.067	796911.902	759.161595	759.161595
4	18	15	4.18.16	258	232	7	0	0.1	387.095	22.836	797656.208	759.879527	759.879527
4	18	16	4.18.17	223	148	6	0	0.1	230.815	15.418	478433.494	451.968143	451.968143
4	18	17	4.18.18	81	75	5	0	0.1	81.703	8.285	159365.085	144.205596	144.205596
4	18	18	4.18.19	0	0	3	0	0.1	0	0	0	0	0
4	18	19	4.18.20	0	0	3	0	0.1	0	3	0	0	0
4	18	20	4.18.21	0	0	2	0	0.1	0	2	0	0	0
4	18	21	4.18.22	0	0	2	0	0.1	0	2	0	0	0
4	18	22	4.18.23	0	0	2	0	0.1	0	2	0	0	0
4	18	23	4.18.24	0	0	1	0	0.1	0	1	0	0	0
4	19	0	4.19.1	0	0	1	0	0.1	0	1	0	0	0
4	19	1	4.19.2	0	0	1	0	0.1	0	1	0	0	0
4	19	2	4.19.3	0	0	1	0	0.1	0	1	0	0	0
4	19	3	4.19.4	0	0	1	0	0.1	0	1	0	0	0
4	19	4	4.19.5	0	0	2	0	0.1	0	2	0	0	0
4	19	5	4.19.6	0	15	2	0	0.1	13.884	2.496	18488.622	8.320946	8.320946
4	19	6	4.19.7	218	93	4	0	0.1	139.718	9.611	275244.897	255.979326	255.979326
4	19	7	4.19.8	690	110	7	0.1	0.1	433.423	24.178	893792.401	852.609232	852.609232
4	19	8	4.19.9	837	110	9	0.1	0.1	673.678	35.725	1338853.021	1281.899585	1281.899585
4	19	9	4.19.10	887	120	11	0.1	0.1	862.81	45.153	1636245.85	1568.754604	1568.754604
4	19	10	4.19.11	914	126	13	0.1	0.1	987.488	52.036	1807825.847	1734.254839	1734.254839
4	19	11	4.19.12	926	128	14	0.1	0.1	1048.367	55.418	1885654.115	1809.325342	1809.325342
4	19	12	4.19.13	927	124	14	0.1	0.1	1035.256	54.906	1867624.797	1791.934875	1791.934875
4	19	13	4.19.14	914	118	15	0.1	0.1	950.395	52.586	1739616.564	1668.462482	1668.462482
4	19	14	4.19.15	658	182	14	0.1	0.1	706.269	41.951	1357135.764	1299.534498	1299.534498
4	19	15	4.19.16	812	100	14	0.1	0.1	592.852	37.541	1173219.758	1122.135367	1122.135367
4	19	16	4.19.17	708	82	13	0	0.1	358.364	27.58	709134.474	674.49447	674.49447
4	19	17	4.19.18	498	54	10	0	0.1	128.279	14.879	208087.011	191.201111	191.201111
4	19	18	4.19.19	0	0	7	0	0.1	0	0	0	0	0
4	19	19	4.19.20	0	0	6	0	0.1	0	6	0	0	0
4	19	20	4.19.21	0	0	5	0	0.1	0	5	0	0	0
4	19	21	4.19.22	0	0	4	0	0.1	0	4	0	0	0
4	19	22	4.19.23	0	0	2	0	0.1	0	2	0	0	0
4	19	23	4.19.24	0	0	2	0	0.1	0	2	0	0	0
4	20	0	4.20.1	0	0	1	0	0.1	0	1	0	0	0
4	20	1	4.20.2	0	0	0	0	0.1	0	0	0	0	0
4	20	2	4.20.3	0	0	0	0	0.1	0	0	0	0	0
4	20	3	4.20.4	0	0	0	0	0.1	0	0	0	0	0
4	20	4	4.20.5	0	0	0	0	0.1	0	0	0	0	0
4	20	5	4.20.6	25	24	1	0	0.1	20.768	1.774	31287.77	20.666569	20.666569
4	20	6	4.20.7	209	95	4	0	0.1	139.993	9.629	276933.637	257.608227	257.608227
4	20	7	4.20.8	434	146	7	0	0.1	349.401	21.304	724579.27	689.391995	689.391995
4	20	8	4.20.9	852	101	9	0	0.1	675.998	36.711	1338380.467	1281.443776	1281.443776
4	20	9	4.20.10	902	110	11	0	0.1	861.716	46.248	1627217.438	1560.046105	1560.046105
4	20	10	4.20.11	932	113	12	0	0.1	991.975	52.522	1812499.341	1738.762733	1738.762733
4	20	11	4.20.12	945	114	13	0	0.1	1053.436	56.008	1890179.141	1813.690029	1813.690029
4	20	12	4.20.13	943	112	14	0	0.1	1039.066	56.427	1862481.345	1786.973676	1786.973676
4	20	13	4.20.14	920	111	15	0	0.1	949.144	53.787	1728581.687	1657.818615	1657.818615
4	20	14	4.20.15	880	106	14	0	0.1	794.396	46.516	1502957.286	1440.188983	1440.188983
4	20	15	4.20.16	812	97	13	0	0.1	590.338	37.222	1169598.235	1118.642169	1118.642169
4	20	16	4.20.17	712	78	12	0	0.1	356.486	26.504	708350.72	673.738488	673.738488
4	20	17	4.20.18	495	53	9	0	0.1	127.368	13.846	207585.318	190.717195	190.717195
4	20	18	4.20.19	0	0	6	0	0.1	0	0	0	0	0
4	20	19	4.20.20	0	0	4	0	0.1	0	4	0	0	0
4	20	20	4.20.21	0	0	3	0	0.1	0	3	0	0	0
4	20	21	4.20.22	0	0	2	0	0.1	0	2	0	0	0
4	20	22	4.20.23	0	0	1	0	0.1	0	1	0	0	0
4	20	23	4.20.24	0	0	1	0	0.1	0	1	0	0	0
4	21	0	4.21.1	0	0	1	0.2	0.1	0	1	0	0	0
4	21	1	4.21.2	0	0	1	0.3	0.1	0	1	0	0	0
4	21	2	4.21.3	0	0	1	0.4	0.1	0	1	0	0	0
4	21	3	4.21.4	0	0	1	0.5	0.1	0	1	0	0	0
4	21	4	4.21.5	0	0	1	0.4	0.1	0	1	0	0	0
4	21	5	4.21.6	199	27	2	0.2	0.1	21.668	2.766	33659.386	22.95415	22.95415
4	21	6	4.21.7	553	70	4	0	0.1	201.907	11.987	379087.072	356.14196	356.14196
4	21	7	4.21.8	736	89	7	0	0.1	436.917	24.9	899829.077	858.432005	858.432005
4	21	8	4.21.9	817	106	10	0	0.1	659.439	37.028	1303123.133	1247.435749	1247.435749
4	21	9	4.21.10	861	119	13	0	0.1	842.99	47.475	1582996.34	1517.391936	1517.391936
4	21	10	4.21.11	902	116	15	0	0.1	968.159	54.545	1753989.968	1682.32658	1682.32658
4	21	11	4.21.12	913	117	16	0	0.1	1025.901	57.88	1826422.752	1752.192782	1752.192782
4	21	12	4.21.13	912	115	17	0	0.1	1012.681	58.346	1800570.8	1727.256867	1727.256867
4	21	13	4.21.14	883	117	17	0	0.1	922.546	54.696	1673598.304	1604.783512	1604.783512
4	21	14	4.21.15	847	108	17	0	0.1	775.126	48.723	1452589.01	1391.605456	1391.605456
4	21	15	4.21.16	781	98	16	0	0.1	573.354	39.522	1124758.503	1075.391287	1075.391287
4	21	16	4.21.17	670	82	14	0	0.1	344.776	28.031	681005.448	647.362167	647.362167
4	21	17	4.21.18	110	73	11	0	0.1	84.611	14.388	158823.68	143.683375	143.683375
4	21	18	4.21.19	0	0	9	0	0.1	0	0	0	0	0
4	21	19	4.21.20	0	0	8	0	0.1	0	8	0	0	0
4	21	20	4.21.21	0	0	7	0	0.1	0	7	0	0	0
4	21	21	4.21.22	0	0	6	0	0.1	0	6	0	0	0
4	21	22	4.21.23	0	0	6	0	0.1	0	6	0	0	0
4	21	23	4.21.24	0	0	6	0	0.1	0	6	0	0	0
4	22	0	4.22.1	0	0	6	0	0.1	0	6	0	0	0
4	22	1	4.22.2	0	0	6	0	0.1	0	6	0	0	0
4	22	2	4.22.3	0	0	6	0	0.1	0	6	0	0	0
4	22	3	4.22.4	0	0	5	0	0.1	0	5	0	0	0
4	22	4	4.22.5	0	0	5	0	0.1	0	5	0	0	0
4	22	5	4.22.6	0	16	7	0	0.1	14.808	7.575	24095.95	13.729584	13.729584
4	22	6	4.22.7	276	94	9	0	0.1	156.254	15.265	300531.611	280.370031	280.370031
4	22	7	4.22.8	393	159	11	0	0.1	344.577	25.107	703912.503	669.457534	669.457534
4	22	8	4.22.9	590	173	13	0	0.1	578.06	36.667	1138426.854	1088.575314	1088.575314
4	22	9	4.22.10	325	330	14	0	0.1	607.6	38.776	1169401.245	1118.452159	1118.452159
4	22	10	4.22.11	261	399	15	0	0.1	658.762	41.809	1244162.909	1190.56472	1190.56472
4	22	11	4.22.12	269	423	16	0	0.1	707.414	44.772	1317492.504	1261.295956	1261.295956
4	22	12	4.22.13	385	379	17	0	0.1	771.063	48.391	1419553.432	1359.74046	1359.74046
4	22	13	4.22.14	241	387	17	0	0.1	609.161	41.798	1151222.363	1100.917428	1100.917428
4	22	14	4.22.15	384	290	17	0	0.1	593.489	41.228	1135531.557	1085.782609	1085.782609
4	22	15	4.22.16	436	201	16	0	0.1	467.777	35.155	924902.247	882.616733	882.616733
4	22	16	4.22.17	0	85	14	0	0.1	78.957	17.23	158001.991	142.890802	142.890802
4	22	17	4.22.18	0	14	13	0	0.1	12.944	13.529	24142.244	13.774238	13.774238
4	22	18	4.22.19	0	0	11	0	0.1	0	0	0	0	0
4	22	19	4.22.20	0	0	11	0	0.11	0	11	0	0	0
4	22	20	4.22.21	0	0	11	0	0.11	0	11	0	0	0
4	22	21	4.22.22	0	0	10	0	0.11	0	10	0	0	0
4	22	22	4.22.23	0	0	9	0	0.11	0	9	0	0	0
4	22	23	4.22.24	0	0	9	0	0.11	0	9	0	0	0
4	23	0	4.23.1	0	0	8	0	0.11	0	8	0	0	0
4	23	1	4.23.2	0	0	7	0	0.11	0	7	0	0	0
4	23	2	4.23.3	0	0	7	0	0.11	0	7	0	0	0
4	23	3	4.23.4	0	0	7	0	0.11	0	7	0	0	0
4	23	4	4.23.5	0	0	7	0	0.11	0	7	0	0	0
4	23	5	4.23.6	0	6	7	0	0.11	5.543	7.218	8934.79	0	0
4	23	6	4.23.7	0	61	7	0	0.11	56.583	9.316	115655.645	102.044956	102.044956
4	23	7	4.23.8	133	194	7	0	0.11	250.416	17.242	521201.359	493.220572	493.220572
4	23	8	4.23.9	0	51	9	0	0.11	47.352	10.929	93745.436	80.911112	80.911112
4	23	9	4.23.10	11	229	10	0	0.11	225.377	19.162	453800.479	428.207973	428.207973
4	23	10	4.23.11	0	40	10	0	0.11	37.209	11.51	71710.494	59.656956	59.656956
4	23	11	4.23.12	23	325	10	0	0.11	333.121	23.517	662028.722	629.057862	629.057862
4	23	12	4.23.13	25	332	11	0	0.11	351.63	25.27	695337.495	661.186373	661.186373
4	23	13	4.23.14	112	390	11	0.1	0.11	486.884	30.159	957303.71	913.870083	913.870083
4	23	14	4.23.15	45	296	11	0	0.11	323.317	24.16	647831.027	615.363248	615.363248
4	23	15	4.23.16	0	124	11	0	0.11	115.662	15.717	233527.938	215.740565	215.740565
4	23	16	4.23.17	172	160	10	0	0.11	220.398	18.998	450858.942	425.370667	425.370667
4	23	17	4.23.18	0	54	9	0	0.11	49.941	11.04	100064.267	87.006042	87.006042
4	23	18	4.23.19	0	3	7	0	0.11	2.854	7.098	3156.926	0	0
4	23	19	4.23.20	0	0	6	0	0.11	0	6	0	0	0
4	23	20	4.23.21	0	0	5	0	0.11	0	5	0	0	0
4	23	21	4.23.22	0	0	5	0	0.11	0	5	0	0	0
4	23	22	4.23.23	0	0	4	0	0.11	0	4	0	0	0
4	23	23	4.23.24	0	0	4	0	0.11	0	4	0	0	0
4	24	0	4.24.1	0	0	4	0	0.11	0	4	0	0	0
4	24	1	4.24.2	0	0	4	0	0.11	0	4	0	0	0
4	24	2	4.24.3	0	0	3	0	0.11	0	3	0	0	0
4	24	3	4.24.4	0	0	2	0	0.11	0	2	0	0	0
4	24	4	4.24.5	0	0	2	0	0.11	0	2	0	0	0
4	24	5	4.24.6	344	28	2	0	0.11	26.628	2.997	40832.173	29.872777	29.872777

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

													Reference Case	Adjusted Case
													3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
4	24	6	4.24.7	685	60	3	0	0.11	229.862	12.077	430675.361	405.902271	405.902271
4	24	7	4.24.8	832	78	5	0.1	0.11	476.067	23.883	987115.129	942.625165	942.625165
4	24	8	4.24.9	906	91	6	0.1	0.11	705.725	33.994	1411706.149	1352.171237	1352.171237
4	24	9	4.24.10	948	100	8	0.1	0.11	894.834	43.418	1707927.372	1637.896165	1637.896165
4	24	10	4.24.11	972	103	9	0.1	0.11	1023.354	49.452	1892195.997	1815.63542	1815.63542
4	24	11	4.24.12	978	106	10	0.1	0.11	1081.042	52.707	1965213.572	1886.065692	1886.065692
4	24	12	4.24.13	973	105	11	0.1	0.11	1063.718	53.028	1932753.546	1854.755853	1854.755853
4	24	13	4.24.14	955	103	12	0.1	0.11	974.732	50.545	1798237.629	1725.00637	1725.00637
4	24	14	4.24.15	922	96	12	0.1	0.11	818.844	44.433	1561770.887	1496.918585	1496.918585
4	24	15	4.24.16	865	87	11	0	0.11	614.103	36.195	1221740.033	1168.936376	1168.936376
4	24	16	4.24.17	767	72	10	0	0.11	374.84	25.253	749707.733	713.630057	713.630057
4	24	17	4.24.18	568	51	9	0	0.11	139.193	14.279	225250.582	207.756508	207.756508
4	24	18	4.24.19	87	10	7	0	0.11	9.513	7.326	11140.988	1.233669	1.233669
4	24	19	4.24.20	0	0	6	0	0.11	0	6	0	0	0
4	24	20	4.24.21	0	0	5	0	0.11	0	5	0	0	0
4	24	21	4.24.22	0	0	4	0	0.11	0	4	0	0	0
4	24	22	4.24.23	0	0	2	0	0.11	0	2	0	0	0
4	24	23	4.24.24	0	0	2	0	0.11	0	2	0	0	0
4	25	0	4.25.1	0	0	1	0	0.11	0	1	0	0	0
4	25	1	4.25.2	0	0	1	0	0.11	0	1	0	0	0
4	25	2	4.25.3	0	0	1	0	0.11	0	1	0	0	0
4	25	3	4.25.4	0	0	0	0	0.11	0	0	0	0	0
4	25	4	4.25.5	0	0	0	0	0.11	0	0	0	0	0
4	25	5	4.25.6	263	32	2	0	0.11	30.088	3.147	48715.831	37.477085	37.477085
4	25	6	4.25.7	298	96	6	0	0.11	166.782	12.692	325512.225	304.465482	304.465482
4	25	7	4.25.8	761	88	9	0	0.11	454.092	27.611	927461.327	885.085134	885.085134
4	25	8	4.25.9	828	107	11	0	0.11	673.503	38.597	1321381.612	1265.047258	1265.047258
4	25	9	4.25.10	862	122	14	0	0.11	851.651	48.821	1588768.98	1522.960028	1522.960028
4	25	10	4.25.11	882	131	15	0	0.11	968.61	54.551	1752781.889	1681.161308	1681.161308
4	25	11	4.25.12	444	358	16	0	0.11	821.934	49.464	1506487.006	1443.593631	1443.593631
4	25	12	4.25.13	833	166	16	0	0.11	997.662	56.707	1783077.074	1710.383014	1710.383014
4	25	13	4.25.14	789	172	16	0	0.11	901.531	52.811	1645005.015	1577.203397	1577.203397
4	25	14	4.25.15	749	159	15	0	0.11	755.174	45.884	1428210.755	1368.09102	1368.09102
4	25	15	4.25.16	612	147	14	0	0.11	523.539	35.457	1038934.162	992.608044	992.608044
4	25	16	4.25.17	128	164	12	0	0.11	207.054	20.457	420976.046	396.546641	396.546641
4	25	17	4.25.18	53	77	10	0	0.11	79.218	13.206	154787.827	139.790528	139.790528
4	25	18	4.25.19	0	5	8	0	0.11	4.756	8.163	5365.607	0	0
4	25	19	4.25.20	0	0	7	0	0.11	0	7	0	0	0
4	25	20	4.25.21	0	0	6	0	0.11	0	6	0	0	0
4	25	21	4.25.22	0	0	6	0	0.11	0	6	0	0	0
4	25	22	4.25.23	0	0	5	0	0.11	0	5	0	0	0
4	25	23	4.25.24	0	0	5	0	0.11	0	5	0	0	0
4	26	0	4.26.1	0	0	5	0	0.11	0	5	0	0	0
4	26	1	4.26.2	0	0	4	0	0.11	0	4	0	0	0
4	26	2	4.26.3	0	0	4	0	0.11	0	4	0	0	0
4	26	3	4.26.4	0	0	4	0	0.11	0	4	0	0	0
4	26	4	4.26.5	0	0	4	0.1	0.11	0	4	0	0	0
4	26	5	4.26.6	0	12	5	0	0.11	11.097	5.444	19739.369	9.527374	9.527374
4	26	6	4.26.7	0	28	5	0	0.11	25.927	6.061	52051.685	40.694736	40.694736
4	26	7	4.26.8	0	129	5	0	0.11	120.269	9.914	250567.459	232.176307	232.176307
4	26	8	4.26.9	0	129	6	0	0.11	120.38	10.903	246913.809	228.652121	228.652121
4	26	9	4.26.10	1	155	8	0	0.11	146.003	13.933	295402.763	275.422918	275.422918
4	26	10	4.26.11	6	191	9	0	0.11	185.399	16.524	372593.948	349.878913	349.878913
4	26	11	4.26.12	21	318	10	0	0.11	324.033	23.146	644099.135	611.763591	611.763591
4	26	12	4.26.13	50	387	11	0	0.11	431.888	28.531	847528.089	807.984249	807.984249
4	26	13	4.26.14	7	205	12	0	0.11	199.449	20.098	396828.764	373.254993	373.254993
4	26	14	4.26.15	734	173	13	0	0.11	758.042	43.996	1443880.133	1383.205169	1383.205169
4	26	15	4.26.16	654	156	12	0	0.11	557.961	34.867	1110506.541	1061.644329	1061.644329
4	26	16	4.26.17	514	131	11	0	0.11	331.869	24.523	667204.626	634.050363	634.050363
4	26	17	4.26.18	0	44	10	0.2	0.11	40.797	11.562	81014.606	68.631386	68.631386
4	26	18	4.26.19	0	2	8	0.3	0.11	1.903	8.059	2050.979	0	0
4	26	19	4.26.20	0	0	7	0.2	0.11	0	7	0	0	0
4	26	20	4.26.21	0	0	6	0.1	0.11	0	6	0	0	0
4	26	21	4.26.22	0	0	6	0	0.11	0	6	0	0	0
4	26	22	4.26.23	0	0	5	0	0.11	0	5	0	0	0
4	26	23	4.26.24	0	0	5	0	0.11	0	5	0	0	0
4	27	0	4.27.1	0	0	4	0	0.11	0	4	0	0	0
4	27	1	4.27.2	0	0	4	0	0.11	0	4	0	0	0
4	27	2	4.27.3	0	0	4	0	0.11	0	4	0	0	0
4	27	3	4.27.4	0	0	4	0	0.11	0	4	0	0	0
4	27	4	4.27.5	0	0	4	0	0.11	0	4	0	0	0
4	27	5	4.27.6	242	36	4	0	0.11	33.873	5.299	55431.05	43.954357	43.954357
4	27	6	4.27.7	119	116	6	0	0.11	138.838	11.633	281316.184	261.835483	261.835483
4	27	7	4.27.8	178	205	8	0	0.11	283.087	19.58	586152	555.869754	555.869754
4	27	8	4.27.9	319	266	9	0	0.11	483.102	28.739	972147.708	928.188099	928.188099
4	27	9	4.27.10	143	363	10	0	0.11	482.789	29.652	954790.785	911.446201	911.446201
4	27	10	4.27.11	6	186	11	0	0.11	180.594	18.329	360012.702	337.743471	337.743471
4	27	11	4.27.12	0	97	12	0	0.11	90.53	15.671	177325.637	161.529734	161.529734
4	27	12	4.27.13	349	404	12	0	0.11	761.517	42.987	1431055.149	1370.834625	1370.834625
4	27	13	4.27.14	0	140	12	0	0.11	131.019	17.318	259520.475	240.812082	240.812082
4	27	14	4.27.15	138	336	12	0	0.11	441.866	30	873797.598	833.322924	833.322924
4	27	15	4.27.16	0	140	11	0	0.11	130.729	16.33	264269.153	245.392496	245.392496
4	27	16	4.27.17	0	107	10	0	0.11	99.484	14.069	203333.178	186.615725	186.615725
4	27	17	4.27.18	280	72	9	0	0.11	112.515	13.418	200942.836	184.310082	184.310082
4	27	18	4.27.19	0	16	7	0	0.11	15.221	7.522	18200.797	8.04332	8.04332
4	27	19	4.27.20	0	0	5	0	0.11	0	5	0	0	0
4	27	20	4.27.21	0	0	5	0	0.11	0	5	0	0	0
4	27	21	4.27.22	0	0	4	0	0.11	0	4	0	0	0
4	27	22	4.27.23	0	0	4	0	0.11	0	4	0	0	0
4	27	23	4.27.24	0	0	3	0	0.11	0	3	0	0	0
4	28	0	4.28.1	0	0	3	0	0.11	0	3	0	0	0
4	28	1	4.28.2	0	0	3	0	0.11	0	3	0	0	0
4	28	2	4.28.3	0	0	2	0	0.11	0	2	0	0	0
4	28	3	4.28.4	0	0	2	0	0.11	0	2	0	0	0
4	28	4	4.28.5	0	0	2	0	0.11	0	2	0	0	0
4	28	5	4.28.6	286	36	4	0	0.11	36.364	5.382	58202.673	46.627771	46.627771
4	28	6	4.28.7	610	71	6	0	0.11	226.549	14.998	427537.324	402.875427	402.875427
4	28	7	4.28.8	768	89	9	0	0.11	462.718	27.969	944893.428	901.899547	901.899547
4	28	8	4.28.9	849	101	11	0	0.11	685.274	39.077	1341447.779	1284.402401	1284.402401
4	28	9	4.28.10	896	108	12	0	0.11	864.217	47.335	1622085.254	1555.095774	1555.095774
4	28	10	4.28.11	919	114	14	0	0.11	988.337	54.358	1789475.547	1716.554764	1716.554764
4	28	11	4.28.12	927	117	15	0	0.11	1044.526	57.628	1859077.692	1783.690628	1783.690628
4	28	12	4.28.13	923	116	16	0	0.11	1028.233	57.969	1828863.865	1754.547397	1754.547397
4	28	13	4.28.14	902	114	16	0	0.11	939.888	54.395	1705271.029	1635.333946	1635.333946
4	28	14	4.28.15	868	107	16	0	0.11	790.039	48.325	1481450.121	1419.443903	1419.443903
4	28	15	4.28.16	806	97	16	0	0.11	590.927	40.236	1154820.235	1104.387812	1104.387812
4	28	16	4.28.17	694	84	15	0	0.11	360.013	29.658	708559.201	673.939581	673.939581
4	28	17	4.28.18	522	51	12	0	0.11	134.151	17.118	217864.2	200.631855	200.631855
4	28	18	4.28.19	0	16	10	0	0.11	15.221	10.522	17942.638	7.794309	7.794309
4	28	19	4.28.20	0	0	9	0	0.11	0	9	0	0	0
4	28	20	4.28.21	0	0	8	0	0.11	0	8	0	0	0
4	28	21	4.28.22	0	0	8	0	0.11	0	8	0	0	0
4	28	22	4.28.23	0	0	7	0	0.11	0	7	0	0	0
4	28	23	4.28.24	0	0	6	0	0.11	0	6	0	0	0
4	29	0	4.29.1	0	0	6	0	0.11	0	6	0	0	0
4	29	1	4.29.2	0	0	7	0	0.11	0	7	0	0	0
4	29	2	4.29.3	0	0	6	0	0.11	0	6	0	0	0
4	29	3	4.29.4	0	0	6	0	0.11	0	6	0	0	0
4	29	4	4.29.5	0	0	5	0	0.11	0	5	0	0	0
4	29	5	4.29.6	0	4	5	0	0.11	3.694	5.149	6424.844	0	0
4	29	6	4.29.7	0	21	6	0	0.11	19.437	6.796	38429.159	27.554911	27.554911
4	29	7	4.29.8	0	59	7	0	0.11	54.75	9.236	110946.31	97.502491	97.502491
4	29	8	4.29.9	0	131	8	0	0.11	122.24	12.978	248648.127	230.324986	230.324986
4	29	9	4.29.10	6	201	8	0	0.11	194.062	15.886	393324.421	369.874823	369.874823
4	29	10	4.29.11	7	204	9	0	0.11	198.768	17.066	399346.885	375.683887	375.683887
4	29	11	4.29.12	12	259	10	0	0.11	257.342	20.438	513322.68	485.621066	485.621066
4	29	12	4.29.13	29	347	10	0	0.11	369.855	25.007	732497.302	697.02946	697.02946
4	29	13	4.29.14	73	378	11	0	0.11	438.038	28.799	862262.581	822.19664	822.19664
4	29	14	4.29.15	22	266	10	0	0.11	268.739	20.932	541440.453	512.742514	512.742514
4	29	15	4.29.16	2	171	9	0	0.11	161.281	15.575	329350.701	308.167946	308.167946
4	29	16	4.29.17	0	32	8	0	0.11	29.651	9.213	58857.581	47.259473	47.259473
4	29	17	4.29.18	167	81	7	0	0.11	102.187	11.075	193212.208	176.853381	176.853381
4	29	18	4.29.19	0	10	6	0	0.11	9.255	6.317	10868.535	0.97087	0.97087
4	29	19	4.29.20	0	0	5	0	0.11	0	5	0	0	0
4	29	20	4.29.21	0	0	5	0	0.11	0	5	0	0	0
4	29	21	4.29.22	0	0	4	0	0.11	0	4	0	0	0
4	29	22	4.29.23	0	0	4	0	0.11	0	4	0	0	0
4	29	23	4.29.24	0	0	4	0	0.11	0	4	0	0	0
4	30	0	4.30.1	0	0	4	0	0.11	0	4	0	0	0
4	30	1	4.30.2	0	0	4	0	0.11	0	4	0	0	0
4	30	2	4.30.3	0	0	4	0	0.11	0	4	0	0	0
4	30	3	4.30.4	0	0	4	0	0.11	0	4	0	0	0
4	30	4	4.30.5	0	0	4	0	0.11	0	4	0	0	0
4	30	5	4.30.6	0	17	4	0	0.11	15.731	4.635	29462.119	18.905609	18.905609
4	30	6	4.30.7	0	93	4	0	0.11	86.014	7.521	180083.406	164.189785	164.189785
4	30	7	4.30.8	0	58	4	0	0.11	53.821	6.198	110331.197	96.909174	96.909174
4	30	8	4.30.9	0	160	5	0	0.11	149.69	11.095	308818.323	288.363112	288.363112
4	30	9	4.30.10	0	119	6	0	0.11	111.036	10.511	225317.13	207.820698	207.820698
4	30	10	4.30.11	5	185	6	0	0.11	178.659	13.249	362949.683	340.576383	340.576383
4	30	11	4.30.12	0	129	7	0	0.11	120.771	11.896	242692.862	224.580739	224.580739
4	30	12	4.30.13	6	187	7	0	0.11	181.845	14.376	367485.519	344.951496	344.951496

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
4	30	13	4.30.14	5	185	7	0	0.11	178.38	14.241	361571.817	339.24734	339.24734
4	30	14	4.30.15	0	121	7	0	0.11	112.863	11.589	228866.8	211.244589	211.244589
4	30	15	4.30.16	0	64	7	0	0.11	59.432	9.423	119824.853	106.066432	106.066432
4	30	16	4.30.17	0	69	7	0	0.11	64.045	9.619	130979.112	116.825451	116.825451
4	30	17	4.30.18	0	39	7	0	0.11	36.143	8.478	72490.156	60.408991	60.408991
4	30	18	4.30.19	0	4	7	0	0.11	3.694	7.127	4135.029	0	0
4	30	19	4.30.20	0	0	6	0	0.12	0	6	0	0	0
4	30	20	4.30.21	0	0	6	0	0.12	0	6	0	0	0
4	30	21	4.30.22	0	0	5	0	0.12	0	5	0	0	0
4	30	22	4.30.23	0	0	4	0	0.12	0	4	0	0	0
4	30	23	4.30.24	0	0	2	0	0.12	0	2	0	0	0
5	1	0	5.1.1	0	0	1	0	0.12	0	1	0	0	0
5	1	1	5.1.2	0	0	1	0	0.12	0	1	0	0	0
5	1	2	5.1.3	0	0	1	0	0.12	0	1	0	0	0
5	1	3	5.1.4	0	0	2	0	0.12	0	2	0	0	0
5	1	4	5.1.5	0	0	2	0	0.12	0	2	0	0	0
5	1	5	5.1.6	210	38	4	0	0.12	37.217	5.433	61865.328	50.160643	50.160643
5	1	6	5.1.7	466	84	6	0	0.12	204.786	14.184	394536.486	371.043939	371.043939
5	1	7	5.1.8	440	163	8	0	0.12	377.162	23.447	778129.54	741.044767	741.044767
5	1	8	5.1.9	625	171	11	0	0.12	607.357	35.855	1198477.04	1146.497683	1146.497683
5	1	9	5.1.10	827	155	12	0	0.12	861.47	47.202	1614417.077	1547.699311	1547.699311
5	1	10	5.1.11	875	152	13	0	0.12	994.211	53.579	1802981.888	1729.582521	1729.582521
5	1	11	5.1.12	490	354	14	0	0.12	863.826	49.169	1584537.129	1518.878128	1518.878128
5	1	12	5.1.13	455	356	14	0	0.12	824.418	47.564	1522798.374	1459.327023	1459.327023
5	1	13	5.1.14	545	294	14	0	0.12	806.119	46.865	1501087.655	1438.385601	1438.385601
5	1	14	5.1.15	228	337	13	0	0.12	512.439	33.887	1002377.14	957.346382	957.346382
5	1	15	5.1.16	552	172	12	0	0.12	510.951	32.927	1021339.317	975.636654	975.636654
5	1	16	5.1.17	329	152	11	0	0.12	277.713	22.328	562635.476	533.186514	533.186514
5	1	17	5.1.18	9	81	10	0	0.12	75.769	13.093	152718.501	137.794527	137.794527
5	1	18	5.1.19	0	8	9	0	0.12	7.399	9.254	8472.659	0	0
5	1	19	5.1.20	0	0	8	0	0.12	0	8	0	0	0
5	1	20	5.1.21	0	0	8	0	0.12	0	8	0	0	0
5	1	21	5.1.22	0	0	8	0	0.12	0	8	0	0	0
5	1	22	5.1.23	0	0	9	0	0.12	0	9	0	0	0
5	1	23	5.1.24	0	0	9	0	0.12	0	9	0	0	0
5	2	0	5.2.1	0	0	9	0	0.12	0	9	0	0	0
5	2	1	5.2.2	0	0	9	0	0.12	0	9	0	0	0
5	2	2	5.2.3	0	0	9	0	0.12	0	9	0	0	0
5	2	3	5.2.4	0	0	9	0	0.12	0	9	0	0	0
5	2	4	5.2.5	0	0	9	0	0.12	0	9	0	0	0
5	2	5	5.2.6	0	15	10	0	0.12	13.879	10.561	25376.028	14.964305	14.964305
5	2	6	5.2.7	11	108	11	0	0.12	102.656	15.198	208969.302	192.052139	192.052139
5	2	7	5.2.8	0	98	13	0	0.12	91.129	16.722	182565.171	166.583611	166.583611
5	2	8	5.2.9	0	116	14	0	0.12	108.101	18.401	213996.911	196.901599	196.901599
5	2	9	5.2.10	4	175	15	0	0.12	167.521	21.806	329792.632	308.594218	308.594218
5	2	10	5.2.11	69	398	16	0	0.12	457.565	34.581	878921.95	838.265701	838.265701
5	2	11	5.2.12	14	275	16	0	0.12	274.809	27.145	534673.567	506.215407	506.215407
5	2	12	5.2.13	12	250	17	0	0.12	248.364	27.074	482115.033	455.51923	455.51923
5	2	13	5.2.14	894	126	17	0	0.12	946.338	55.649	1706117.503	1636.150426	1636.150426
5	2	14	5.2.15	876	112	16	0	0.12	803.094	48.852	1501377.545	1438.665219	1438.665219
5	2	15	5.2.16	830	97	15	0	0.12	607.559	39.914	1188376.877	1136.755409	1136.755409
5	2	16	5.2.17	748	79	14	0	0.12	379.6	29.458	749032.116	712.97838	712.97838
5	2	17	5.2.18	571	57	12	0	0.12	150.555	17.764	247403.432	229.124395	229.124395
5	2	18	5.2.19	157	18	9	0	0.12	13.965	9.479	16460.086	6.36429	6.36429
5	2	19	5.2.20	0	0	8	0	0.12	0	8	0	0	0
5	2	20	5.2.21	0	0	7	0	0.12	0	7	0	0	0
5	2	21	5.2.22	0	0	6	0	0.12	0	6	0	0	0
5	2	22	5.2.23	0	0	5	0	0.12	0	5	0	0	0
5	2	23	5.2.24	0	0	4	0	0.12	0	4	0	0	0
5	3	0	5.3.1	0	0	4	0	0.12	0	4	0	0	0
5	3	1	5.3.2	0	0	3	0.2	0.12	0	3	0	0	0
5	3	2	5.3.3	0	0	3	0.4	0.12	0	3	0	0	0
5	3	3	5.3.4	0	0	3	0.6	0.12	0	3	0	0	0
5	3	4	5.3.5	0	0	3	0.5	0.12	0	3	0	0	0
5	3	5	5.3.6	322	42	5	0.2	0.12	46.496	6.644	73349.204	61.237599	61.237599
5	3	6	5.3.7	615	77	9	0	0.12	239.655	18.551	451929.097	426.402903	426.402903
5	3	7	5.3.8	764	96	12	0	0.12	473.983	31.435	956048.582	912.65943	912.65943
5	3	8	5.3.9	848	108	15	0	0.12	697.176	43.555	1338552.184	1281.609408	1281.609408
5	3	9	5.3.10	897	115	16	0	0.12	876.561	51.83	1612744.161	1546.085673	1546.085673
5	3	10	5.3.11	932	114	17	0	0.12	1003.915	57.986	1787806.867	1714.945211	1714.945211
5	3	11	5.3.12	945	114	18	0	0.12	1061.754	61.325	1857813.491	1782.471222	1782.471222
5	3	12	5.3.13	939	115	18	0	0.12	1044.838	60.64	1835201.137	1760.660114	1760.660114
5	3	13	5.3.14	908	119	18	0	0.12	952.269	56.892	1707642.066	1637.620968	1637.620968
5	3	14	5.3.15	875	111	18	0	0.12	801.692	50.794	1486436.56	1424.253653	1424.253653
5	3	15	5.3.16	818	100	17	0	0.12	603.81	41.758	1171783.154	1120.749668	1120.749668
5	3	16	5.3.17	709	87	16	0	0.12	371.9	31.148	729132.471	693.783858	693.783858
5	3	17	5.3.18	509	65	13	0	0.12	148.122	18.716	248053.23	229.751168	229.751168
5	3	18	5.3.19	110	19	11	0	0.12	14.537	11.498	16999.174	6.884276	6.884276
5	3	19	5.3.20	0	0	9	0	0.12	0	9	0	0	0
5	3	20	5.3.21	0	0	7	0	0.12	0	7	0	0	0
5	3	21	5.3.22	0	0	6	0	0.12	0	6	0	0	0
5	3	22	5.3.23	0	0	6	0	0.12	0	6	0	0	0
5	3	23	5.3.24	0	0	6	0	0.12	0	6	0	0	0
5	4	0	5.4.1	0	0	6	0	0.12	0	6	0	0	0
5	4	1	5.4.2	0	0	6	0	0.12	0	6	0	0	0
5	4	2	5.4.3	0	0	7	0	0.12	0	7	0	0	0
5	4	3	5.4.4	0	0	7	0	0.12	0	7	0	0	0
5	4	4	5.4.5	0	0	7	0	0.12	0	7	0	0	0
5	4	5	5.4.6	200	51	8	0	0.12	49.356	9.924	84583.913	72.074219	72.074219
5	4	6	5.4.7	471	104	10	0	0.12	225.916	19.055	432787.832	407.939888	407.939888
5	4	7	5.4.8	635	133	13	0	0.12	447.811	31.354	901229.684	859.782983	859.782983
5	4	8	5.4.9	732	152	15	0	0.12	663.783	42.171	1278672.117	1223.85113	1223.85113
5	4	9	5.4.10	788	164	17	0	0.12	839.547	51.298	1545633.481	1481.352992	1481.352992
5	4	10	5.4.11	760	209	18	0	0.12	949.007	56.71	1695516.497	1625.925056	1625.925056
5	4	11	5.4.12	779	209	18	0	0.12	1006.485	59.034	1775411.158	1702.988731	1702.988731
5	4	12	5.4.13	780	206	18	0	0.12	993.803	58.524	1758298.894	1686.482823	1686.482823
5	4	13	5.4.14	563	289	18	0	0.12	817.427	51.326	1493843.173	1431.39782	1431.39782
5	4	14	5.4.15	338	315	17	0	0.12	582.515	40.759	1112789.662	1063.846549	1063.846549
5	4	15	5.4.16	237	257	16	0	0.12	394.27	32.112	780603.831	743.431383	743.431383
5	4	16	5.4.17	398	143	14	0	0.12	299.846	26.228	598993.865	568.25658	568.25658
5	4	17	5.4.18	27	86	13	0	0.12	83.293	16.391	164639.412	149.293033	149.293033
5	4	18	5.4.19	0	11	11	0	0.12	10.18	11.349	11714.356	1.78672	1.78672
5	4	19	5.4.20	0	0	11	0	0.12	0	11	0	0	0
5	4	20	5.4.21	0	0	10	0	0.12	0	10	0	0	0
5	4	21	5.4.22	0	0	10	0	0.12	0	10	0	0	0
5	4	22	5.4.23	0	0	10	0	0.12	0	10	0	0	0
5	4	23	5.4.24	0	0	10	0	0.12	0	10	0	0	0
5	5	0	5.5.1	0	0	10	0	0.12	0	10	0	0	0
5	5	1	5.5.2	0	0	10	0	0.12	0	10	0	0	0
5	5	2	5.5.3	0	0	11	0	0.12	0	11	0	0	0
5	5	3	5.5.4	0	0	11	0	0.12	0	11	0	0	0
5	5	4	5.5.5	0	0	11	0	0.12	0	11	0	0	0
5	5	5	5.5.6	14	44	12	0	0.12	39.913	13.613	75321.626	63.140131	63.140131
5	5	6	5.5.7	0	69	14	0	0.12	64.015	16.62	127625.102	113.590287	113.590287
5	5	7	5.5.8	0	70	18	0	0.12	65.006	20.654	126230.782	112.245373	112.245373
5	5	8	5.5.9	490	224	21	0	0.12	566.553	44.163	1076294.55	1028.644605	1028.644605
5	5	9	5.5.10	567	258	24	0	0.12	748.284	54.535	1353673.72	1296.195128	1296.195128
5	5	10	5.5.11	352	391	25	0	0.12	735.866	54.948	1315982.076	1259.839049	1259.839049
5	5	11	5.5.12	168	453	25	0	0.12	626.229	50.436	1132730.327	1083.080638	1083.080638
5	5	12	5.5.13	13	266	25	0	0.12	264.728	35.737	496767.942	469.652928	469.652928
5	5	13	5.5.14	207	407	25	0	0.12	596.673	49.27	1089547.711	1041.428153	1041.428153
5	5	14	5.5.15	61	321	25	0	0.12	359.007	39.608	676833.376	643.337929	643.337929
5	5	15	5.5.16	0	146	24	0	0.12	136.285	29.554	260863.934	242.107938	242.107938
5	5	16	5.5.17	0	129	23	0	0.12	119.884	27.902	232722.513	214.963678	214.963678
5	5	17	5.5.18	42	89	21	0	0.12	88.57	24.599	168252.076	152.777685	152.777685
5	5	18	5.5.19	0	12	19	0	0.12	11.108	19.381	12323.478	2.374258	2.374258
5	5	19	5.5.20	0	0	18	0	0.12	0	18	0	0	0
5	5	20	5.5.21	0	0	18	0	0.12	0	18	0	0	0
5	5	21	5.5.22	0	0	17	0	0.12	0	17	0	0	0
5	5	22	5.5.23	0	0	16	0	0.12	0	16	0	0	0
5	5	23	5.5.24	0	0	16	0	0.12	0	16	0	0	0
5	6	0	5.6.1	0	0	15	0	0.12	0	15	0	0	0
5	6	1	5.6.2	0	0	15	0	0.12	0	15	0	0	0
5	6	2	5.6.3	0	0	14	0	0.12	0	14	0	0	0
5	6	3	5.6.4	0	0	14	0	0.12	0	14	0	0	0
5	6	4	5.6.5	0	0	15	0	0.12	0	15	0	0	0
5	6	5	5.6.6	0	41	17	0	0.12	37.434	18.518	69863.608	57.875513	57.875513
5	6	6	5.6.7	96	126	19	0	0.12	143.478	24.837	278779.254	259.388447	259.388447
5	6	7	5.6.8	431	193	20	0	0.12	404.033	36.545	792188.137	754.605212	754.605212
5	6	8	5.6.9	513	238	22	0	0.12	596.409	46.382	1122945.539	1073.642564	1073.642564
5	6	9	5.6.10	561	272	24	0	0.12	757.445	54.905	1367376.182	1309.412057	1309.412057
5	6	10	5.6.11	482	366	25	0	0.12	841.094	59.252	1479266.759	1417.337906	1417.337906
5	6	11	5.6.12	468	396	25	0	0.12	883.546	60.956	1538063.102	1474.050861	1474.050861
5	6	12	5.6.13	367	402	26	0	0.12	775.897	57.566	1370159.319	1312.096577	1312.096577
5	6	13	5.6.14	438	375	26	0	0.12	788.735	58.126	1395272.866	1336.320251	1336.320251
5	6	14	5.6.15	0	31	26	0	0.12	28.804	27.171	51391.533	40.057977	40.057977
5	6	15	5.6.16	26	224	25	0	0.12	226.087	34.218	433176.957	408.315225	408.315225
5	6	16	5.6.17	0	96	24	0	0.12	89.179	27.646	171143.751	155.566897	155.566897
5	6	17	5.6.18	0	65	22	0.1	0.12	60.021	24.376	115064.99	101.475229	101.475229
5	6	18	5.6.19	30	19	19	0.1	0.12	16.611	19.551	18793.242	8.614772	8.614772
5	6	19	5.6.20	0	0	17	0	0.12	0	17	0	0	0

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

	Reference Case	Adjusted Case
	3,025,628	3,025,628

Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
5	6	20	5.6.21	0	0	16	0	0.12	0	16	0	0	0
5	6	21	5.6.22	0	0	16	0	0.12	0	16	0	0	0
5	6	22	5.6.23	0	0	15	0	0.12	0	15	0	0	0
5	6	23	5.6.24	0	0	14	0	0.12	0	14	0	0	0
5	7	0	5.7.1	0	0	14	0	0.12	0	14	0	0	0
5	7	1	5.7.2	0	0	13	0	0.12	0	13	0	0	0
5	7	2	5.7.3	0	0	13	0.1	0.12	0	13	0	0	0
5	7	3	5.7.4	0	0	13	0	0.12	0	13	0	0	0
5	7	4	5.7.5	0	0	13	0	0.12	0	13	0	0	0
5	7	5	5.7.6	185	53	15	0	0.12	52.756	17.064	88972.748	76.30754	76.30754
5	7	6	5.7.7	406	113	17	0	0.12	218.642	25.79	411722.991	387.621458	387.621458
5	7	7	5.7.8	513	165	21	0	0.12	418.397	38.141	817024.095	778.561132	778.561132
5	7	8	5.7.9	594	200	24	0	0.12	617.645	49.262	1151274.22	1100.967447	1100.967447
5	7	9	5.7.10	643	226	26	0	0.12	783.516	57.983	1397920.659	1338.874222	1338.874222
5	7	10	5.7.11	210	428	27	0	0.12	629.92	52.609	1132465.187	1082.824892	1082.824892
5	7	11	5.7.12	668	259	28	0	0.12	947.03	66.588	1613517.611	1546.831717	1546.831717
5	7	12	5.7.13	666	256	29	0	0.12	932.639	67.007	1587083.745	1521.334507	1521.334507
5	7	13	5.7.14	642	248	28	0	0.12	850.5	62.686	1480977.426	1418.987958	1418.987958
5	7	14	5.7.15	612	223	28	0	0.12	714.432	57.182	1282087.702	1227.145687	1227.145687
5	7	15	5.7.16	574	182	27	0	0.12	535.669	48.933	1002359.177	957.329056	957.329056
5	7	16	5.7.17	269	168	26	0	0.12	269.881	37.014	515716.661	487.930219	487.930219
5	7	17	5.7.18	0	6	24	0	0.12	5.548	24.227	9445.329	0	0
5	7	18	5.7.19	53	22	23	0	0.12	18	23.617	20031.139	9.808806	9.808806
5	7	19	5.7.20	0	0	22	0	0.13	0	22	0	0	0
5	7	20	5.7.21	0	0	21	0	0.13	0	21	0	0	0
5	7	21	5.7.22	0	0	20	0	0.13	0	20	0	0	0
5	7	22	5.7.23	0	0	19	0	0.13	0	19	0	0	0
5	7	23	5.7.24	0	0	18	0	0.13	0	18	0	0	0
5	8	0	5.8.1	0	0	17	0	0.13	0	17	0	0	0
5	8	1	5.8.2	0	0	17	0	0.13	0	17	0	0	0
5	8	2	5.8.3	0	0	16	0	0.13	0	16	0	0	0
5	8	3	5.8.4	0	0	16	0	0.13	0	16	0	0	0
5	8	4	5.8.5	0	0	16	0	0.13	0	16	0	0	0
5	8	5	5.8.6	163	57	18	0	0.13	55.396	20.181	94187.054	81.337082	81.337082
5	8	6	5.8.7	387	119	20	0	0.13	219.537	28.836	409979.164	385.939422	385.939422
5	8	7	5.8.8	528	161	23	0	0.13	422.609	40.315	818291.392	779.783525	779.783525
5	8	8	5.8.9	614	191	26	0	0.13	623.295	51.494	1151179.973	1100.876539	1100.876539
5	8	9	5.8.10	662	215	27	0	0.13	789.122	59.214	1400647.832	1341.504761	1341.504761
5	8	10	5.8.11	381	381	28	0	0.13	753.064	58.65	1325634.512	1269.14946	1269.14946
5	8	11	5.8.12	675	254	28	0	0.13	949.187	66.676	1616501.811	1549.710175	1549.710175
5	8	12	5.8.13	117	445	29	0	0.13	564.486	51.919	1011749.094	966.386251	966.386251
5	8	13	5.8.14	659	237	29	0	0.13	855.317	63.885	1481660.87	1419.647184	1419.647184
5	8	14	5.8.15	600	230	28	0	0.13	712.033	57.08	1277740.955	1222.952963	1222.952963
5	8	15	5.8.16	335	244	27	0	0.13	445.755	45.225	839946.53	800.671335	800.671335
5	8	16	5.8.17	0	99	25	0	0.13	91.98	28.76	175825.599	160.082849	160.082849
5	8	17	5.8.18	219	89	23	0	0.13	120.198	27.786	212220.669	195.188297	195.188297
5	8	18	5.8.19	0	17	21	0	0.13	15.755	21.545	17950.732	7.802116	7.802116
5	8	19	5.8.20	0	0	19	0	0.13	0	19	0	0	0
5	8	20	5.8.21	0	0	18	0	0.13	0	18	0	0	0
5	8	21	5.8.22	0	0	18	0	0.13	0	18	0	0	0
5	8	22	5.8.23	0	0	17	0	0.13	0	17	0	0	0
5	8	23	5.8.24	0	0	17	0	0.13	0	17	0	0	0
5	9	0	5.9.1	0	0	16	0	0.13	0	16	0	0	0
5	9	1	5.9.2	0	0	16	0	0.13	0	16	0	0	0
5	9	2	5.9.3	0	0	16	0	0.13	0	16	0	0	0
5	9	3	5.9.4	0	0	16	0	0.13	0	16	0	0	0
5	9	4	5.9.5	0	0	16	0	0.13	0	16	0	0	0
5	9	5	5.9.6	144	59	18	0	0.13	56.478	20.233	97444.256	84.478869	84.478869
5	9	6	5.9.7	386	120	21	0	0.13	220.701	29.886	410879.692	386.808041	386.808041
5	9	7	5.9.8	594	138	24	0	0.13	435.996	41.869	840426.462	801.134261	801.134261
5	9	8	5.9.9	702	149	27	0	0.13	643.17	53.32	1181052.675	1129.690732	1129.690732
5	9	9	5.9.10	758	159	28	0	0.13	811.586	61.149	1430983.893	1370.765894	1370.765894
5	9	10	5.9.11	780	172	29	0	0.13	927.379	66.832	1585322.334	1519.635511	1519.635511
5	9	11	5.9.12	783	181	29	0	0.13	977.591	68.858	1651355.916	1583.32926	1583.32926
5	9	12	5.9.13	766	189	29	0	0.13	958.263	68.073	1625359.153	1558.253665	1558.253665
5	9	13	5.9.14	661	237	29	0	0.13	857.173	63.96	1484230.731	1422.125985	1422.125985
5	9	14	5.9.15	167	352	28	0	0.13	478.732	47.496	881704.237	840.9494	840.9494
5	9	15	5.9.16	574	184	27	0	0.13	538.265	49.037	1006415.527	961.241673	961.241673
5	9	16	5.9.17	538	128	26	0	0.13	343.888	40.02	651233.158	618.644827	618.644827
5	9	17	5.9.18	370	86	24	0	0.13	144.941	29.699	245435.732	227.226418	227.226418
5	9	18	5.9.19	80	26	22	0	0.13	21.104	22.761	26527.789	16.075254	16.075254
5	9	19	5.9.20	0	0	21	0.1	0.13	0	21	0	0	0
5	9	20	5.9.21	0	0	21	0.1	0.13	0	21	0	0	0
5	9	21	5.9.22	0	0	20	0.1	0.13	0	20	0	0	0
5	9	22	5.9.23	0	0	19	0.1	0.13	0	19	0	0	0
5	9	23	5.9.24	0	0	18	0	0.13	0	18	0	0	0
5	10	0	5.10.1	0	0	17	0	0.13	0	17	0	0	0
5	10	1	5.10.2	0	0	16	0	0.13	0	16	0	0	0
5	10	2	5.10.3	0	0	15	0	0.13	0	15	0	0	0
5	10	3	5.10.4	0	0	13	0	0.13	0	13	0	0	0
5	10	4	5.10.5	0	0	12	0	0.13	0	12	0	0	0
5	10	5	5.10.6	0	21	11	0	0.13	19.446	11.79	36584.708	25.775816	25.775816
5	10	6	5.10.7	0	39	11	0	0.13	36.157	12.48	71595.218	59.545765	59.545765
5	10	7	5.10.8	0	91	11	0	0.13	84.598	14.453	170270.567	154.724654	154.724654
5	10	8	5.10.9	7	200	12	0	0.13	192.357	19.83	386178.943	362.982538	362.982538
5	10	9	5.10.10	4	180	12	0	0.13	172.215	18.994	342775.812	321.117352	321.117352
5	10	10	5.10.11	8	233	12	0	0.13	227.437	21.225	450747.857	425.263518	425.263518
5	10	11	5.10.12	15	284	13	0	0.13	284.281	24.526	558921.687	529.604319	529.604319
5	10	12	5.10.13	14	270	12	0	0.13	269.459	22.927	532596.565	504.212001	504.212001
5	10	13	5.10.14	13	261	12	0	0.13	258.482	22.491	512730.131	485.049514	485.049514
5	10	14	5.10.15	1	156	11	0	0.13	146.72	16.963	293552.538	273.638254	273.638254
5	10	15	5.10.16	7	190	11	0	0.13	182.081	18.42	368570.875	345.998393	345.998393
5	10	16	5.10.17	0	40	10	0	0.13	37.1	11.517	73468.68	61.352843	61.352843
5	10	17	5.10.18	0	23	10	0	0.13	21.298	10.871	41434.266	30.453535	30.453535
5	10	18	5.10.19	0	2	9	0	0.13	1.847	9.068	2363.245	0	0
5	10	19	5.10.20	0	0	9	0	0.13	0	9	0	0	0
5	10	20	5.10.21	0	0	9	0	0.13	0	9	0	0	0
5	10	21	5.10.22	0	0	9	0	0.13	0	9	0	0	0
5	10	22	5.10.23	0	0	9	0	0.13	0	9	0	0	0
5	10	23	5.10.24	0	0	8	0	0.13	0	8	0	0	0
5	11	0	5.11.1	0	0	8	0	0.13	0	8	0	0	0
5	11	1	5.11.2	0	0	8	0	0.13	0	8	0	0	0
5	11	2	5.11.3	0	0	8	0	0.13	0	8	0	0	0
5	11	3	5.11.4	0	0	8	0	0.13	0	8	0	0	0
5	11	4	5.11.5	0	0	8	0	0.13	0	8	0	0	0
5	11	5	5.11.6	0	31	9	0	0.13	28.74	10.169	55494.552	44.015609	44.015609
5	11	6	5.11.7	136	133	11	0	0.13	161.619	17.566	323174.196	302.210299	302.210299
5	11	7	5.11.8	645	132	13	0	0.13	456.821	31.727	918964.802	876.889675	876.889675
5	11	8	5.11.9	221	305	15	0	0.13	451.165	33.406	885333.141	844.449717	844.449717
5	11	9	5.11.10	144	383	16	0	0.13	502.196	36.429	965119.924	921.409337	921.409337
5	11	10	5.11.11	225	431	17	0	0.13	646.658	43.288	1209121.359	1156.764832	1156.764832
5	11	11	5.11.12	376	406	17	0	0.13	793.844	49.288	1451036.833	1390.108279	1390.108279
5	11	12	5.11.13	869	150	18	0	0.13	1012.901	59.315	1787312.808	1714.468659	1714.468659
5	11	13	5.11.14	867	136	19	0	0.13	934.06	57.133	1671258.965	1602.527065	1602.527065
5	11	14	5.11.15	837	126	19	0	0.13	793.538	51.445	1464786.261	1403.37051	1403.37051
5	11	15	5.11.16	781	115	19	0	0.13	600.233	43.598	1153687.687	1103.295395	1103.295395
5	11	16	5.11.17	682	99	18	0	0.13	377.62	33.391	735792.67	700.20806	700.20806
5	11	17	5.11.18	496	75	16	0	0.13	160.017	22.231	272160.907	253.004614	253.004614
5	11	18	5.11.19	147	29	13	0	0.13	22.181	13.838	32887.695	22.209803	22.209803
5	11	19	5.11.20	0	0	11	0	0.13	0	11	0	0	0
5	11	20	5.11.21	0	0	11	0.1	0.13	0	11	0	0	0
5	11	21	5.11.22	0	0	10	0.3	0.13	0	10	0	0	0
5	11	22	5.11.23	0	0	10	0.3	0.13	0	10	0	0	0
5	11	23	5.11.24	0	0	10	0.3	0.13	0	10	0	0	0
5	12	0	5.12.1	0	0	10	0.3	0.13	0	10	0	0	0
5	12	1	5.12.2	0	0	10	0.4	0.13	0	10	0	0	0
5	12	2	5.12.3	0	0	10	0.4	0.13	0	10	0	0	0
5	12	3	5.12.4	0	0	10	0.4	0.13	0	10	0	0	0
5	12	4	5.12.5	0	0	10	0.4	0.13	0	10	0	0	0
5	12	5	5.12.6	0	8	11	0.2	0.13	7.397	11.282	13370.338	3.384023	3.384023
5	12	6	5.12.7	0	91	12	0	0.13	84.227	15.447	170554.469	154.998496	154.998496
5	12	7	5.12.8	88	219	12	0	0.13	250.826	22.249	510183.552	482.593171	482.593171
5	12	8	5.12.9	267	298	14	0	0.13	481.126	33.634	945313.26	902.304502	902.304502
5	12	9	5.12.10	70	361	15	0	0.13	410.375	31.681	798628.968	760.817819	760.817819
5	12	10	5.12.11	53	392	16	0	0.13	434.676	33.642	835657.142	796.533936	796.533936
5	12	11	5.12.12	231	455	17	0	0.13	689.696	45.022	1278323.837	1223.51519	1223.51519
5	12	12	5.12.13	102	444	17	0	0.13	538.429	38.855	1017688.055	972.114771	972.114771
5	12	13	5.12.14	22	309	16	0	0.13	313.045	28.706	609280.771	578.178981	578.178981
5	12	14	5.12.15	7	205	16	0	0.13	197.95	24.046	389097.616	365.79779	365.79779
5	12	15	5.12.16	317	252	15	0	0.13	442.79	33.098	875782.594	835.237584	835.237584
5	12	16	5.12.17	395	178	15	0	0.13	331.694	28.533	659405.579	626.527667	626.527667
5	12	17	5.12.18	0	86	14	0	0.13	78.864	17.227	157936.518	142.82765	142.82765
5	12	18	5.12.19	0	15	13	0	0.13	13.89	13.532	20995.735	10.739222	10.739222
5	12	19	5.12.20	0	0	11	0	0.13	0	11	0	0	0
5	12	20	5.12.21	0	0	11	0	0.13	0	11	0	0	0
5	12	21	5.12.22	0	0	11	0	0.13	0	11	0	0	0
5	12	22	5.12.23	0	0	11	0	0.13	0	11	0	0	0
5	12	23	5.12.24	0	0	11	0	0.13	0	11	0	0	0
5	13	0	5.13.1	0	0	11	0	0.13	0	11	0	0	0
5	13	1	5.13.2	0	0	11	0	0.13	0	11	0	0	0
5	13	2	5.13.3	0	0	11	0	0.13	0	11	0	0	0

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
5	13	3	5.13.4	0	0	11	0	0.13	0	11	0	0	0
5	13	4	5.13.5	0	0	11	0	0.13	0	11	0	0	0
5	13	5	5.13.6	0	2	11	0	0.13	1.848	11.075	3124.448	0	0
5	13	6	5.13.7	75	134	13	0	0.13	144.82	18.901	290134.058	270.340905	270.340905
5	13	7	5.13.8	194	222	14	0	0.13	309.528	26.658	624293.384	592.659637	592.659637
5	13	8	5.13.9	54	286	16	0	0.13	311.755	28.697	614348.181	583.066832	583.066832
5	13	9	5.13.10	52	347	17	0	0.13	380.998	32.483	737229.842	701.594307	701.594307
5	13	10	5.13.11	31	353	18	0	0.13	374.286	33.186	717748.615	682.803378	682.803378
5	13	11	5.13.12	69	440	19	0	0.13	502.923	39.403	945637.248	902.61701	902.61701
5	13	12	5.13.13	27	353	19	0	0.13	372.087	34.09	709650.859	674.992557	674.992557
5	13	13	5.13.14	77	397	19	0	0.13	458.607	37.626	870747.942	830.38133	830.38133
5	13	14	5.13.15	68	334	19	0	0.13	376.45	34.314	725556.28	690.334387	690.334387
5	13	15	5.13.16	11	201	18	0	0.13	194.87	25.941	383554.562	360.451149	360.451149
5	13	16	5.13.17	0	121	17	0	0.13	112.371	21.593	223122.455	205.703789	205.703789
5	13	17	5.13.18	110	100	16	0	0.13	111.211	20.489	211700.401	194.686464	194.686464
5	13	18	5.13.19	14	17	15	0	0.13	15.917	15.616	24734.131	14.345152	14.345152
5	13	19	5.13.20	0	0	14	0	0.13	0	14	0	0	0
5	13	20	5.13.21	0	0	14	0	0.13	0	14	0	0	0
5	13	21	5.13.22	0	0	14	0	0.13	0	14	0	0	0
5	13	22	5.13.23	0	0	14	0	0.13	0	14	0	0	0
5	13	23	5.13.24	0	0	14	0	0.13	0	14	0	0	0
5	14	0	5.14.1	0	0	13	0	0.13	0	13	0	0	0
5	14	1	5.14.2	0	0	13	0	0.13	0	13	0	0	0
5	14	2	5.14.3	0	0	12	0	0.13	0	12	0	0	0
5	14	3	5.14.4	0	0	12	0	0.13	0	12	0	0	0
5	14	4	5.14.5	0	0	11	0	0.13	0	11	0	0	0
5	14	5	5.14.6	308	59	11	0	0.13	66.04	13.527	106761.566	93.466029	93.466029
5	14	6	5.14.7	581	97	12	0	0.13	258.652	22.37	491561.333	464.630811	464.630811
5	14	7	5.14.8	729	120	14	0	0.13	488.952	34.05	976708.967	932.587735	932.587735
5	14	8	5.14.9	811	136	15	0	0.13	706.902	43.931	1351407.171	1294.008891	1294.008891
5	14	9	5.14.10	865	143	17	0	0.13	887.555	53.256	1619137.146	1552.252129	1552.252129
5	14	10	5.14.11	910	136	18	0	0.13	1008.805	59.166	1784034.689	1711.306697	1711.306697
5	14	11	5.14.12	925	133	19	0	0.13	1063.516	62.378	1849324.355	1774.28289	1774.28289
5	14	12	5.14.13	923	129	20	0	0.13	1045.484	62.649	1817474.914	1743.562001	1743.562001
5	14	13	5.14.14	912	121	20	0	0.13	960.758	59.225	1703155.268	1633.293155	1633.293155
5	14	14	5.14.15	870	117	20	0	0.13	807.947	53.035	1481427.899	1419.422468	1419.422468
5	14	15	5.14.16	800	111	19	0	0.13	609.469	43.975	1169546.448	1118.592218	1118.592218
5	14	16	5.14.17	683	101	18	0	0.13	381.843	33.566	744269.916	708.384923	708.384923
5	14	17	5.14.18	498	77	16	0	0.13	164.107	22.403	280904.516	261.438402	261.438402
5	14	18	5.14.19	159	32	13	0	0.13	24.411	13.953	39995.57	29.065817	29.065817
5	14	19	5.14.20	0	0	12	0	0.13	0	12	0	0	0
5	14	20	5.14.21	0	0	11	0	0.13	0	11	0	0	0
5	14	21	5.14.22	0	0	10	0	0.13	0	10	0	0	0
5	14	22	5.14.23	0	0	9	0	0.13	0	9	0	0	0
5	14	23	5.14.24	0	0	8	0	0.13	0	8	0	0	0
5	15	0	5.15.1	0	0	7	0	0.13	0	7	0	0	0
5	15	1	5.15.2	0	0	6	0	0.13	0	6	0	0	0
5	15	2	5.15.3	0	0	6	0	0.13	0	6	0	0	0
5	15	3	5.15.4	0	0	6	0	0.13	0	6	0	0	0
5	15	4	5.15.5	0	0	6	0	0.13	0	6	0	0	0
5	15	5	5.15.6	327	58	8	0	0.13	66.737	10.541	107774.545	94.443114	94.443114
5	15	6	5.15.7	572	99	10	0	0.13	258.552	20.371	496060.492	468.970546	468.970546
5	15	7	5.15.8	711	123	12	0	0.13	483.314	31.817	973678.077	929.664241	929.664241
5	15	8	5.15.9	785	142	13	0	0.13	696.078	41.485	1343394.572	1286.280211	1286.280211
5	15	9	5.15.10	616	247	14	0	0.13	782.383	45.922	1466835.14	1405.346789	1405.346789
5	15	10	5.15.11	319	411	15	0	0.13	723.507	44.429	1349787.531	1292.446642	1292.446642
5	15	11	5.15.12	167	463	16	0	0.13	633.316	41.716	1186736.941	1135.173583	1135.173583
5	15	12	5.15.13	84	436	16	0	0.13	511.985	36.777	974264.85	930.230223	930.230223
5	15	13	5.15.14	14	270	16	0	0.13	267.887	26.871	522543.86	494.515503	494.515503
5	15	14	5.15.15	790	158	16	0	0.13	789.681	48.274	1474973.75	1413.197016	1413.197016
5	15	15	5.15.16	193	275	15	0	0.13	384.87	30.714	763282.914	726.724215	726.724215
5	15	16	5.15.17	692	101	14	0	0.13	386.198	29.745	764694.376	728.085663	728.085663
5	15	17	5.15.18	527	75	13	0	0.13	168.316	19.557	290315.644	270.516057	270.516057
5	15	18	5.15.19	191	32	10	0	0.13	24.338	10.956	41253.914	30.279574	30.279574
5	15	19	5.15.20	0	0	9	0	0.13	0	9	0	0	0
5	15	20	5.15.21	0	0	8	0	0.13	0	8	0	0	0
5	15	21	5.15.22	0	0	7	0	0.13	0	7	0	0	0
5	15	22	5.15.23	0	0	6	0	0.13	0	6	0	0	0
5	15	23	5.15.24	0	0	5	0	0.13	0	5	0	0	0
5	16	0	5.16.1	0	0	5	0	0.13	0	5	0	0	0
5	16	1	5.16.2	0	0	4	0.1	0.13	0	4	0	0	0
5	16	2	5.16.3	0	0	4	0	0.13	0	4	0	0	0
5	16	3	5.16.4	0	0	4	0	0.13	0	4	0	0	0
5	16	4	5.16.5	0	0	5	0	0.13	0	0	0	0	0
5	16	5	5.16.6	387	53	7	0	0.13	67.474	9.528	104638.212	91.417914	91.417914
5	16	6	5.16.7	633	86	10	0	0.13	264.333	20.585	504154.871	476.778109	476.778109
5	16	7	5.16.8	746	112	13	0	0.13	490.686	33.123	984283.061	939.893448	939.893448
5	16	8	5.16.9	817	130	14	0	0.13	705.835	42.887	1355093.457	1297.564558	1297.564558
5	16	9	5.16.10	850	147	15	0	0.13	879.198	50.911	1619466.269	1552.56959	1552.56959
5	16	10	5.16.11	849	170	16	0	0.13	991.657	56.451	1772767.445	1700.438696	1700.438696
5	16	11	5.16.12	856	175	17	0	0.13	1044.588	59.589	1836946.851	1762.343971	1762.343971
5	16	12	5.16.13	850	175	18	0	0.13	1027.241	59.887	1805509.097	1732.020181	1732.020181
5	16	13	5.16.14	884	137	18	0	0.13	951.493	56.84	1703460.777	1633.587839	1633.587839
5	16	14	5.16.15	846	131	18	0	0.13	807.292	51.001	1491882.375	1429.506501	1429.506501
5	16	15	5.16.16	772	126	17	0	0.13	608.315	41.921	1176081.996	1124.896184	1124.896184
5	16	16	5.16.17	651	115	16	0	0.13	383.355	31.632	753790.638	717.568289	717.568289
5	16	17	5.16.18	444	91	14	0.1	0.13	166.665	20.339	294499.442	274.551605	274.551605
5	16	18	5.16.19	127	35	12	0.4	0.13	28.021	12.974	48153.037	36.934233	36.934233
5	16	19	5.16.20	0	0	11	0.4	0.13	0	11	0	0	0
5	16	20	5.16.21	0	0	10	0.3	0.13	0	10	0	0	0
5	16	21	5.16.22	0	0	10	0.1	0.13	0	10	0	0	0
5	16	22	5.16.23	0	0	9	0	0.13	0	9	0	0	0
5	16	23	5.16.24	0	0	9	0	0.13	0	9	0	0	0
5	17	0	5.17.1	0	0	9	0	0.13	0	9	0	0	0
5	17	1	5.17.2	0	0	9	0	0.13	0	9	0	0	0
5	17	2	5.17.3	0	0	8	0	0.13	0	8	0	0	0
5	17	3	5.17.4	0	0	8	0	0.13	0	8	0	0	0
5	17	4	5.17.5	0	0	8	0	0.13	0	0	0	0	0
5	17	5	5.17.6	256	64	10	0	0.13	68.445	12.654	115600.465	101.991731	101.991731
5	17	6	5.17.7	503	110	12	0	0.13	248.453	21.987	476535.675	450.137571	450.137571
5	17	7	5.17.8	646	139	15	0	0.13	466.776	34.134	930360.324	887.881409	887.881409
5	17	8	5.17.9	729	160	18	0	0.13	675.514	45.635	1280221.472	1225.345585	1225.345585
5	17	9	5.17.10	782	173	19	0	0.13	847.34	53.6	1541974.452	1477.823616	1477.823616
5	17	10	5.17.11	864	148	20	0	0.13	977.068	59.863	1722453.358	1651.907437	1651.907437
5	17	11	5.17.12	870	154	20	0	0.13	1029.441	61.978	1792958.117	1719.913932	1719.913932
5	17	12	5.17.13	81	436	21	0	0.13	508.685	41.641	948613.21	905.487522	905.487522
5	17	13	5.17.14	509	320	20	0	0.13	798.71	52.54	1448583.909	1387.742272	1387.742272
5	17	14	5.17.15	731	184	19	0	0.13	771.66	50.526	1426033.197	1365.990621	1365.990621
5	17	15	5.17.16	641	176	18	0	0.13	576.667	41.608	1112789.585	1063.846476	1063.846476
5	17	16	5.17.17	607	124	17	0	0.13	374.31	32.265	734167.096	698.640086	698.640086
5	17	17	5.17.18	430	92	16	0	0.13	165.465	22.511	290995.655	271.171972	271.171972
5	17	18	5.17.19	147	36	14	0	0.13	28.786	15.141	49717.787	38.443538	38.443538
5	17	19	5.17.20	0	0	12	0	0.13	0	12	0	0	0
5	17	20	5.17.21	0	0	11	0	0.13	0	11	0	0	0
5	17	21	5.17.22	0	0	11	0	0.13	0	11	0	0	0
5	17	22	5.17.23	0	0	10	0	0.13	0	10	0	0	0
5	17	23	5.17.24	0	0	10	0	0.13	0	10	0	0	0
5	18	0	5.18.1	0	0	10	0	0.13	0	10	0	0	0
5	18	1	5.18.2	0	0	10	0	0.13	0	10	0	0	0
5	18	2	5.18.3	0	0	10	0	0.13	0	10	0	0	0
5	18	3	5.18.4	0	0	11	0	0.13	0	11	0	0	0
5	18	4	5.18.5	0	0	11	0	0.13	0	0	0	0	0
5	18	5	5.18.6	0	7	12	0	0.13	6.472	12.264	11637.21	1.712307	1.712307
5	18	6	5.18.7	40	133	14	0	0.13	134.099	19.475	269222.067	250.169909	250.169909
5	18	7	5.18.8	0	90	15	0	0.13	83.667	18.414	165366.469	149.994328	149.994328
5	18	8	5.18.9	0	131	17	0	0.13	122.168	21.97	238813.403	220.838745	220.838745
5	18	9	5.18.10	175	389	18	0	0.13	533.364	39.698	1012667.988	967.272585	967.272585
5	18	10	5.18.11	38	373	20	0	0.13	400.369	36.244	759407.784	722.986396	722.986396
5	18	11	5.18.12	33	378	21	0.1	0.13	403.286	36.825	761571.218	725.073172	725.073172
5	18	12	5.18.13	133	456	21	0.1	0.13	589.167	44.147	1091434.435	1043.248024	1043.248024
5	18	13	5.18.14	146	422	21	0.1	0.13	553.87	42.782	1034751.373	988.573467	988.573467
5	18	14	5.18.15	325	334	21	0.1	0.13	590.58	44.297	1109493.082	1060.66678	1060.66678
5	18	15	5.18.16	306	260	21	0.1	0.13	444.259	38.567	858485.925	818.553806	818.553806
5	18	16	5.18.17	24	168	20	0	0.13	165.78	26.773	326496.298	305.414686	305.414686
5	18	17	5.18.18	0	72	19	0	0.13	66.473	21.721	129777.176	115.666105	115.666105
5	18	18	5.18.19	0	13	18	0	0.13	12.03	18.479	19845.072	9.629332	9.629332
5	18	19	5.18.20	0	0	17	0	0.13	0	17	0	0	0
5	18	20	5.18.21	0	0	17	0	0.13	0	17	0	0	0
5	18	21	5.18.22	0	0	16	0	0.13	0	16	0	0	0
5	18	22	5.18.23	0	0	15	0	0.13	0	15	0	0	0
5	18	23	5.18.24	0	0	14	0	0.13	0	14	0	0	0
5	19	0	5.19.1	0	0	13	0	0.13	0	13	0	0	0
5	19	1	5.19.2	0	0	13	0	0.13	0	13	0	0	0
5	19	2	5.19.3	0	0	12	0	0.13	0	12	0	0	0
5	19	3	5.19.4	0	0	11	0	0.13	0	11	0	0	0
5	19	4	5.19.5	0	0	11	0	0.13	0	0	0	0	0
5	19	5	5.19.6	0	15	11	0	0.13	13.88	11.566	25987.996	15.554588	15.554588
5	19	6	5.19.7	0	83	11	0	0.13	76.924	14.148	155962.419	140.9235	140.9235
5	19	7	5.19.8	0	98	10	0	0.13	91.118	13.718	184212.206	168.172285	168.172285
5	19	8	5.19.9	0	125	10	0	0.13	116.528	14.741	234154.998	216.345405	216.345405
5	19	9	5.19.10	16	272	11	0	0.13	270.14	21.971	538863.759	510.257123	510.257123

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
5	19	10	5.19.11	14	277	11	0	0.13	275.234	22.163	546299.588	517.429471	517.429471
5	19	11	5.19.12	12	247	11	0	0.13	245.302	20.944	486651.307	459.894766	459.894766
5	19	12	5.19.13	14	280	10	0	0.13	278.821	21.304	554683.656	525.516458	525.516458
5	19	13	5.19.14	26	329	10	0	0.13	343.125	23.925	681751.046	648.081346	648.081346
5	19	14	5.19.15	0	101	9	0	0.13	94.09	12.823	188083.112	171.906029	171.906029
5	19	15	5.19.16	0	140	8	0	0.13	130.51	13.316	265979.743	247.042473	247.042473
5	19	16	5.19.17	0	88	8	0	0.13	81.758	11.341	167078.6	151.645791	151.645791
5	19	17	5.19.18	0	10	7	0	0.13	9.253	7.379	17638.77	7.501208	7.501208
5	19	18	5.19.19	103	38	7	0	0.13	30.311	8.209	55268.697	43.797757	43.797757
5	19	19	5.19.20	0	0	6	0	0.13	0	6	0	0	0
5	19	20	5.19.21	0	0	5	0	0.13	0	5	0	0	0
5	19	21	5.19.22	0	0	5	0	0.13	0	5	0	0	0
5	19	22	5.19.23	0	0	5	0	0.13	0	5	0	0	0
5	19	23	5.19.24	0	0	4	0	0.13	0	4	0	0	0
5	20	0	5.20.1	0	0	4	0	0.13	0	4	0	0	0
5	20	1	5.20.2	0	0	4	0	0.13	0	4	0	0	0
5	20	2	5.20.3	0	0	4	0	0.13	0	4	0	0	0
5	20	3	5.20.4	0	0	4	0	0.13	0	4	0	0	0
5	20	4	5.20.5	0	0	4	0	0.13	0	0	0	0	0
5	20	5	5.20.6	202	59	5	0	0.13	63.06	7.463	110977.442	97.53252	97.53252
5	20	6	5.20.7	62	139	7	0	0.13	145.898	12.95	300309.596	280.155882	280.155882
5	20	7	5.20.8	223	225	9	0	0.13	327.304	22.386	672326.652	638.990895	638.990895
5	20	8	5.20.9	92	309	10	0	0.13	360.034	24.666	723906.825	688.743377	688.743377
5	20	9	5.20.10	170	390	12	0	0.13	529.776	33.55	1030560.787	984.531371	984.531371
5	20	10	5.20.11	94	428	13	0	0.13	508.807	33.656	981693.2	937.395357	937.395357
5	20	11	5.20.12	22	337	13	0	0.13	342.301	26.877	669698.513	636.455882	636.455882
5	20	12	5.20.13	15	286	13	0	0.13	285.57	24.578	561238.144	531.838695	531.838695
5	20	13	5.20.14	4	172	13	0	0.13	164.948	19.691	325598.73	304.548922	304.548922
5	20	14	5.20.15	5	186	12	0	0.13	178.184	19.24	355408.256	333.302178	333.302178
5	20	15	5.20.16	3	179	12	0	0.13	169.02	18.885	340033.642	318.472348	318.472348
5	20	16	5.20.17	0	140	11	0	0.13	129.899	16.308	264695.962	245.804181	245.804181
5	20	17	5.20.18	0	88	11	0	0.13	80.774	14.306	164055.104	148.729429	148.729429
5	20	18	5.20.19	0	29	10	0	0.13	26.571	11.062	47959.649	36.747697	36.747697
5	20	19	5.20.20	0	0	10	0	0.13	0	10	0	0	0
5	20	20	5.20.21	0	0	10	0	0.13	0	10	0	0	0
5	20	21	5.20.22	0	0	9	0	0.13	0	9	0	0	0
5	20	22	5.20.23	0	0	9	0	0.13	0	9	0	0	0
5	20	23	5.20.24	0	0	9	0	0.13	0	9	0	0	0
5	21	0	5.21.1	0	0	9	0	0.13	0	9	0	0	0
5	21	1	5.21.2	0	0	9	0	0.13	0	9	0	0	0
5	21	2	5.21.3	0	0	8	0.1	0.13	0	8	0	0	0
5	21	3	5.21.4	0	0	8	0.1	0.13	0	8	0	0	0
5	21	4	5.21.5	0	0	8	0.1	0.13	0	0	0	0	0
5	21	5	5.21.6	0	6	9	0	0.13	5.547	9.226	10073.259	0.203773	0.203773
5	21	6	5.21.7	0	44	9	0	0.13	40.806	10.67	81787.509	69.376902	69.376902
5	21	7	5.21.8	0	98	9	0	0.13	91.117	12.718	184911.463	168.846765	168.846765
5	21	8	5.21.9	1	164	10	0	0.13	153.908	16.261	310436.798	289.924238	289.924238
5	21	9	5.21.10	4	171	11	0	0.13	163.553	17.64	326363.984	305.28706	305.28706
5	21	10	5.21.11	10	234	12	0	0.13	230.054	21.33	455576.741	429.921296	429.921296
5	21	11	5.21.12	9	208	13	0	0.13	204.896	21.305	403547.371	379.735533	379.735533
5	21	12	5.21.13	4	166	13	0	0.13	159.777	19.476	314338.474	293.687662	293.687662
5	21	13	5.21.14	7	192	14	0	0.13	186.69	21.574	367394.704	344.863899	344.863899
5	21	14	5.21.15	8	214	14	0	0.13	207.13	22.417	410035.985	385.99423	385.99423
5	21	15	5.21.16	0	106	13	0	0.13	98.654	17.018	195985.783	179.528677	179.528677
5	21	16	5.21.17	0	101	13	0	0.13	93.804	16.833	188390.035	172.202077	172.202077
5	21	17	5.21.18	0	42	12	0	0.13	38.944	13.594	76981.316	64.741012	64.741012
5	21	18	5.21.19	0	5	11	0	0.13	4.62	11.185	7731.344	0	0
5	21	19	5.21.20	0	0	11	0	0.13	0	11	0	0	0
5	21	20	5.21.21	0	0	10	0	0.13	0	10	0	0	0
5	21	21	5.21.22	0	0	10	0	0.13	0	10	0	0	0
5	21	22	5.21.23	0	0	9	0	0.13	0	9	0	0	0
5	21	23	5.21.24	0	0	9	0	0.13	0	9	0	0	0
5	22	0	5.22.1	0	0	9	0	0.13	0	9	0	0	0
5	22	1	5.22.2	0	0	9	0.2	0.13	0	9	0	0	0
5	22	2	5.22.3	0	0	9	0.3	0.13	0	9	0	0	0
5	22	3	5.22.4	0	0	9	0.2	0.13	0	9	0	0	0
5	22	4	5.22.5	0	0	9	0.1	0.13	0	0	0	0	0
5	22	5	5.22.6	0	19	9	0	0.13	17.588	9.717	33641.042	22.936456	22.936456
5	22	6	5.22.7	34	135	11	0	0.13	134.178	16.48	273010.217	253.82383	253.82383
5	22	7	5.22.8	0	144	12	0	0.13	133.974	17.466	270549.016	251.449838	251.449838
5	22	8	5.22.9	7	201	13	0	0.13	193.03	20.854	385431.852	362.261919	362.261919
5	22	9	5.22.10	127	390	14	0	0.13	492.879	34.041	954425.118	911.093491	911.093491
5	22	10	5.22.11	43	384	15	0	0.13	415.64	31.863	803014.332	765.047792	765.047792
5	22	11	5.22.12	47	410	15	0	0.13	449.03	33.209	862641.932	822.562548	822.562548
5	22	12	5.22.13	28	362	15	0	0.13	381.066	30.451	737391.193	701.749941	701.749941
5	22	13	5.22.14	27	335	14	0	0.13	349.719	28.192	683498.262	649.766651	649.766651
5	22	14	5.22.15	16	258	14	0	0.13	255.394	24.379	505132.048	477.720661	477.720661
5	22	15	5.22.16	21	227	13	0	0.13	225.454	22.186	452346.567	426.80558	426.80558
5	22	16	5.22.17	16	164	13	0	0.13	158.762	19.486	321490.292	300.586062	300.586062
5	22	17	5.22.18	0	12	12	0	0.13	11.105	12.455	20845.732	10.594535	10.594535
5	22	18	5.22.19	0	28	11	0.1	0.13	25.855	12.004	47012.094	35.833719	35.833719
5	22	19	5.22.20	0	0	11	0.2	0.13	0	11	0	0	0
5	22	20	5.22.21	0	0	10	0.2	0.13	0	10	0	0	0
5	22	21	5.22.22	0	0	10	0.2	0.13	0	10	0	0	0
5	22	22	5.22.23	0	0	10	0.2	0.13	0	10	0	0	0
5	22	23	5.22.24	0	0	9	0.2	0.13	0	9	0	0	0
5	23	0	5.23.1	0	0	9	0.2	0.13	0	9	0	0	0
5	23	1	5.23.2	0	0	9	0.2	0.13	0	9	0	0	0
5	23	2	5.23.3	0	0	8	0.2	0.13	0	8	0	0	0
5	23	3	5.23.4	0	0	8	0.3	0.13	0	8	0	0	0
5	23	4	5.23.5	0	0	8	0.2	0.13	0	0	0	0	0
5	23	5	5.23.6	0	41	10	0	0.13	38.037	11.551	74689.351	62.53026	62.53026
5	23	6	5.23.7	0	103	12	0	0.13	95.168	15.894	193120.36	176.764788	176.764788
5	23	7	5.23.8	0	79	14	0	0.13	73.416	16.995	145109.698	130.455334	130.455334
5	23	8	5.23.9	12	222	15	0	0.13	216.39	23.805	428727.758	404.023679	404.023679
5	23	9	5.23.10	28	314	16	0	0.13	326.767	29.272	636758.765	604.68332	604.68332
5	23	10	5.23.11	86	427	17	0	0.13	499.695	37.283	949451.789	906.296387	906.296387
5	23	11	5.23.12	636	309	17	0	0.13	962.575	56.195	1712594.377	1642.397799	1642.397799
5	23	12	5.23.13	51	412	17	0	0.13	453.912	35.41	865066.572	824.901274	824.901274
5	23	13	5.23.14	18	296	17	0	0.13	296.33	29.024	574454.815	544.587047	544.587047
5	23	14	5.23.15	8	213	16	0	0.13	206.148	24.376	404757.581	380.902861	380.902861
5	23	15	5.23.16	120	283	15	0	0.13	347.283	29.165	688842.915	654.921922	654.921922
5	23	16	5.23.17	112	196	15	0	0.13	231.34	24.447	464360.903	438.3942	438.3942
5	23	17	5.23.18	173	108	14	0	0.13	131.993	19.307	250747.721	232.350182	232.350182
5	23	18	5.23.19	0	28	13	0	0.13	25.902	14.041	46908.143	35.73345	35.73345
5	23	19	5.23.20	0	0	12	0	0.13	0	12	0	0	0
5	23	20	5.23.21	0	0	11	0	0.13	0	11	0	0	0
5	23	21	5.23.22	0	0	11	0	0.13	0	11	0	0	0
5	23	22	5.23.23	0	0	11	0	0.13	0	11	0	0	0
5	23	23	5.23.24	0	0	11	0	0.13	0	11	0	0	0
5	24	0	5.24.1	0	0	11	0	0.13	0	11	0	0	0
5	24	1	5.24.2	0	0	11	0	0.13	0	11	0	0	0
5	24	2	5.24.3	0	0	11	0	0.13	0	11	0	0	0
5	24	3	5.24.4	0	0	11	0	0.13	0	11	0	0	0
5	24	4	5.24.5	0	0	12	0	0.13	0	0	0	0	0
5	24	5	5.24.6	0	49	12	0	0.13	45.023	13.836	88218.041	75.579575	75.579575
5	24	6	5.24.7	98	145	13	0	0.13	162.379	19.612	324930.133	303.904016	303.904016
5	24	7	5.24.8	28	202	14	0	0.13	204.034	22.328	410633.101	386.570188	386.570188
5	24	8	5.24.9	4	182	16	0	0.13	172.944	23.036	340894.086	319.302303	319.302303
5	24	9	5.24.10	34	330	18	0	0.13	347.546	32.116	670763.427	637.483061	637.483061
5	24	10	5.24.11	53	400	20	0	0.13	440.953	37.892	832716.345	793.697344	793.697344
5	24	11	5.24.12	79	447	22	0	0.13	518.162	43.019	960012.727	916.483109	916.483109
5	24	12	5.24.13	846	157	23	0	0.13	1005.09	63.982	1735279.337	1664.278941	1664.278941
5	24	13	5.24.14	826	154	22	0	0.13	922.453	59.64	1629895.274	1562.629054	1562.629054
5	24	14	5.24.15	783	149	21	0	0.13	778.052	52.792	1424931.187	1364.927659	1364.927659
5	24	15	5.24.16	727	133	21	0	0.13	591.287	45.214	1125784.374	1076.380808	1076.380808
5	24	16	5.24.17	153	198	21	0	0.13	250.559	31.231	490337.253	463.450104	463.450104
5	24	17	5.24.18	15	102	19	0.1	0.13	96.213	22.804	188553.58	172.359827	172.359827
5	24	18	5.24.19	0	1	17	0.5	0.13	0.924	17.032	0	0	0
5	24	19	5.24.20	0	0	16	0.6	0.13	0	16	0	0	0
5	24	20	5.24.21	0	0	14	0.4	0.13	0	14	0	0	0
5	24	21	5.24.22	0	0	14	0.2	0.13	0	14	0	0	0
5	24	22	5.24.23	0	0	13	0.2	0.13	0	13	0	0	0
5	24	23	5.24.24	0	0	13	0.1	0.13	0	13	0	0	0
5	25	0	5.25.1	0	0	13	0	0.13	0	13	0	0	0
5	25	1	5.25.2	0	0	13	0	0.13	0	13	0	0	0
5	25	2	5.25.3	0	0	13	0	0.13	0	13	0	0	0
5	25	3	5.25.4	0	0	13	0	0.13	0	13	0	0	0
5	25	4	5.25.5	0	0	13	0	0.13	0	0	0	0	0
5	25	5	5.25.6	247	73	14	0	0.13	78.4	17.062	133707.238	119.456909	119.456909
5	25	6	5.25.7	506	114	16	0	0.13	255.317	26.273	483484.279	456.839958	456.839958
5	25	7	5.25.8	636	142	19	0	0.13	466.086	38.105	913937.335	872.040351	872.040351
5	25	8	5.25.9	101	316	20	0	0.13	372.643	35.179	719070.476	684.0784	684.0784
5	25	9	5.25.10	461	311	21	0	0.13	710.747	49.968	1305211.685	1249.450296	1249.450296
5	25	10	5.25.11	850	151	21	0	0.13	972.731	60.678	1707507.893	1637.491549	1637.491549
5	25	11	5.25.12	324	441	21	0	0.13	774.545	52.481	1393466.088	1334.577494	1334.577494
5	25	12	5.25.13	548	353	21	0	0.13	910.141	58.046	1605376.907	1538.97947	1538.97947
5	25	13	5.25.14	499	334	20	0	0.13	803.049	52.708	1453972.56	1392.939981	1392.939981
5	25	14	5.25.15	84	354	20	0	0.13	407.739	36.583	779519.579	742.385551	742.385551
5	25	15	5.25.16	42	256	20	0	0.13	269.065	30.965	524349.954	496.2576	496.2576
5	25	16	5.25.17	716	93	19	0	0.13	395.432	35.132	768500.103	731.756539	731.756539

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
5	25	17	5.25.18	560	73	18	0	0.13	179.957	25.03	307019.177	286.627717	286.627717
5	25	18	5.25.19	267	37	15	0	0.13	27.697	16.116	50242.924	38.950067	38.950067
5	25	19	5.25.20	0	0	14	0	0.13	0	14	0	0	0
5	25	20	5.25.21	0	0	13	0	0.13	0	13	0	0	0
5	25	21	5.25.22	0	0	12	0	0.13	0	12	0	0	0
5	25	22	5.25.23	0	0	12	0	0.13	0	12	0	0	0
5	25	23	5.25.24	0	0	11	0	0.13	0	11	0	0	0
5	26	0	5.26.1	0	0	11	0	0.13	0	11	0	0	0
5	26	1	5.26.2	0	0	11	0	0.13	0	11	0	0	0
5	26	2	5.26.3	0	0	11	0	0.13	0	11	0	0	0
5	26	3	5.26.4	0	0	10	0	0.13	0	10	0	0	0
5	26	4	5.26.5	0	0	10	0	0.13	0	0	0	0	0
5	26	5	5.26.6	466	51	11	0	0.13	74.344	13.729	107909.088	94.57289	94.57289
5	26	6	5.26.7	683	75	12	0	0.13	272.506	22.911	515286.361	487.515166	487.515166
5	26	7	5.26.8	792	92	14	0	0.13	497.588	34.411	994158.414	949.418879	949.418879
5	26	8	5.26.9	854	104	16	0	0.13	704.922	44.851	1342653.024	1285.564939	1285.564939
5	26	9	5.26.10	890	113	17	0	0.13	874.827	52.736	1599727.424	1533.530171	1533.530171
5	26	10	5.26.11	917	114	18	0	0.13	993.219	58.526	1761384.64	1689.459229	1689.459229
5	26	11	5.26.12	920	119	19	0	0.13	1044.198	61.584	1821995.166	1747.922083	1747.922083
5	26	12	5.26.13	912	120	20	0	0.13	1026.226	61.856	1789822.591	1716.88951	1716.88951
5	26	13	5.26.14	894	118	21	0	0.13	943.646	59.517	1669589	1600.916274	1600.916274
5	26	14	5.26.15	863	111	21	0	0.13	801.054	53.744	1462891.33	1401.542724	1401.542724
5	26	15	5.26.16	811	103	20	0	0.13	615.08	45.197	1173081.009	1122.001535	1122.001535
5	26	16	5.26.17	201	196	19	0	0.13	269.322	29.996	530693.178	502.376058	502.376058
5	26	17	5.26.18	568	72	18	0	0.13	181.39	25.086	309389.99	288.914523	288.914523
5	26	18	5.26.19	327	35	15	0	0.13	26.39	16.064	47942.238	36.730904	36.730904
5	26	19	5.26.20	0	0	13	0	0.13	0	13	0	0	0
5	26	20	5.26.21	0	0	12	0	0.13	0	12	0	0	0
5	26	21	5.26.22	0	0	11	0	0.13	0	11	0	0	0
5	26	22	5.26.23	0	0	10	0	0.13	0	10	0	0	0
5	26	23	5.26.24	0	0	10	0	0.13	0	10	0	0	0
5	27	0	5.27.1	0	0	9	0	0.13	0	9	0	0	0
5	27	1	5.27.2	0	0	9	0	0.13	0	9	0	0	0
5	27	2	5.27.3	0	0	9	0	0.13	0	9	0	0	0
5	27	3	5.27.4	0	0	8	0	0.13	0	8	0	0	0
5	27	4	5.27.5	0	0	9	0	0.13	0	0	0	0	0
5	27	5	5.27.6	473	50	11	0	0.13	74.158	13.713	106773.711	93.477744	93.477744
5	27	6	5.27.7	683	75	14	0	0.13	272.697	24.92	511688.865	484.045144	484.045144
5	27	7	5.27.8	746	110	16	0	0.13	491.265	36.147	973613.183	929.601646	929.601646
5	27	8	5.27.9	811	127	17	0	0.13	699.713	45.63	1327080.858	1270.544556	1270.544556
5	27	9	5.27.10	849	140	19	0	0.13	871.002	54.57	1578827.339	1513.370659	1513.370659
5	27	10	5.27.11	496	352	20	0	0.13	837.666	54.101	1504719.139	1441.888407	1441.888407
5	27	11	5.27.12	528	367	20	0	0.13	911.237	57.08	1612462.673	1545.814159	1545.814159
5	27	12	5.27.13	342	429	20	0	0.13	775.088	51.511	1401381.338	1342.212275	1342.212275
5	27	13	5.27.14	242	421	20	0	0.13	646.976	46.306	1195506.828	1143.632717	1143.632717
5	27	14	5.27.15	155	368	20	0	0.13	483.383	39.672	917722.426	875.691321	875.691321
5	27	15	5.27.16	206	285	19	0	0.13	403.09	35.452	784137.257	746.839606	746.839606
5	27	16	5.27.17	702	101	19	0	0.13	398.647	35.266	774961.53	737.989011	737.989011
5	27	17	5.27.18	566	75	17	0	0.13	184.511	24.217	317402.027	296.642661	296.642661
5	27	18	5.27.19	299	38	15	0	0.13	29.09	16.174	53220.582	41.822215	41.822215
5	27	19	5.27.20	0	0	13	0	0.13	0	13	0	0	0
5	27	20	5.27.21	0	0	13	0	0.13	0	13	0	0	0
5	27	21	5.27.22	0	0	13	0	0.13	0	13	0	0	0
5	27	22	5.27.23	0	0	12	0	0.13	0	12	0	0	0
5	27	23	5.27.24	0	0	11	0	0.13	0	11	0	0	0
5	28	0	5.28.1	0	0	10	0	0.13	0	10	0	0	0
5	28	1	5.28.2	0	0	10	0	0.13	0	10	0	0	0
5	28	2	5.28.3	0	0	9	0	0.13	0	9	0	0	0
5	28	3	5.28.4	0	0	9	0	0.13	0	9	0	0	0
5	28	4	5.28.5	0	0	9	0	0.13	0	0	0	0	0
5	28	5	5.28.6	488	49	11	0	0.13	74.515	13.713	106058.326	92.787708	92.787708
5	28	6	5.28.7	470	106	14	0	0.13	237.739	23.567	454313.531	428.702846	428.702846
5	28	7	5.28.8	261	225	16	0	0.13	348.837	30.268	696044.327	661.868159	661.868159
5	28	8	5.28.9	563	213	17	0	0.13	608.914	41.885	1166811.686	1115.954359	1115.954359
5	28	9	5.28.10	446	316	18	0	0.13	702.236	46.618	1307146.49	1251.316543	1251.316543
5	28	10	5.28.11	106	439	19	0	0.13	530.071	40.519	995340.493	950.559071	950.559071
5	28	11	5.28.12	117	466	19	0	0.13	583.704	42.685	1085894.334	1037.90423	1037.90423
5	28	12	5.28.13	324	435	20	0	0.13	763.204	51.023	1382091.179	1323.605644	1323.605644
5	28	13	5.28.14	218	426	19	0	0.13	622.605	44.31	1158930.304	1108.352245	1108.352245
5	28	14	5.28.15	265	356	18	0	0.13	564.601	40.997	1071857.767	1024.365035	1024.365035
5	28	15	5.28.16	160	289	17	0	0.13	378.131	32.427	742371.774	706.55404	706.55404
5	28	16	5.28.17	112	200	16	0	0.13	235.399	25.613	470501.342	444.317059	444.317059
5	28	17	5.28.18	213	110	15	0	0.13	143.151	20.744	269191.507	250.140432	250.140432
5	28	18	5.28.19	0	23	14	0	0.13	21.311	14.861	38782.024	27.895272	27.895272
5	28	19	5.28.20	0	0	13	0	0.13	0	13	0	0	0
5	28	20	5.28.21	0	0	13	0	0.13	0	13	0	0	0
5	28	21	5.28.22	0	0	12	0	0.13	0	12	0	0	0
5	28	22	5.28.23	0	0	12	0	0.13	0	12	0	0	0
5	28	23	5.28.24	0	0	12	0	0.13	0	12	0	0	0
5	29	0	5.29.1	0	0	11	0	0.13	0	11	0	0	0
5	29	1	5.29.2	0	0	11	0	0.13	0	11	0	0	0
5	29	2	5.29.3	0	0	11	0	0.13	0	11	0	0	0
5	29	3	5.29.4	0	0	10	0	0.13	0	10	0	0	0
5	29	4	5.29.5	0	0	10	0	0.13	0	0	0	0	0
5	29	5	5.29.6	0	48	12	0	0.13	44.26	13.806	86849.878	74.259892	74.259892
5	29	6	5.29.7	682	76	13	0	0.13	273.617	23.959	515741.79	487.954458	487.954458
5	29	7	5.29.8	174	235	14	0	0.13	311.431	26.729	626825.913	595.102429	595.102429
5	29	8	5.29.9	367	285	15	0	0.13	536.812	36.911	1043455.979	996.969635	996.969635
5	29	9	5.29.10	88	382	16	0	0.13	444.283	34.056	857198.036	817.311552	817.311552
5	29	10	5.29.11	16	293	17	0	0.13	292.222	28.85	565535.749	535.984018	535.984018
5	29	11	5.29.12	48	415	18	0	0.13	454.206	36.417	861300.439	821.26859	821.26859
5	29	12	5.29.13	272	450	18	0	0.13	726.782	47.532	1333722.496	1276.950855	1276.950855
5	29	13	5.29.14	98	419	18	0	0.13	497.95	38.221	944006.455	901.044003	901.044003
5	29	14	5.29.15	377	325	17	0	0.13	623.314	42.408	1180937.447	1129.579588	1129.579588
5	29	15	5.29.16	186	288	16	0	0.13	393.56	32.06	775058.44	738.082488	738.082488
5	29	16	5.29.17	95	199	16	0	0.13	225.779	25.22	451432.09	425.923506	425.923506
5	29	17	5.29.18	555	81	15	0	0.13	189.276	22.425	331219.43	309.970459	309.970459
5	29	18	5.29.19	289	42	13	0	0.13	31.438	14.27	58511.624	46.925775	46.925775
5	29	19	5.29.20	0	0	11	0	0.13	0	11	0	0	0
5	29	20	5.29.21	0	0	9	0	0.13	0	9	0	0	0
5	29	21	5.29.22	0	0	8	0.1	0.13	0	8	0	0	0
5	29	22	5.29.23	0	0	7	0.2	0.13	0	7	0	0	0
5	29	23	5.29.24	0	0	7	0.3	0.13	0	7	0	0	0
5	30	0	5.30.1	0	0	7	0.3	0.13	0	7	0	0	0
5	30	1	5.30.2	0	0	6	0.3	0.13	0	6	0	0	0
5	30	2	5.30.3	0	0	6	0.3	0.13	0	6	0	0	0
5	30	3	5.30.4	0	0	6	0.2	0.13	0	6	0	0	0
5	30	4	5.30.5	0	0	7	0.1	0.13	0	0	0	0	0
5	30	5	5.30.6	0	39	9	0	0.13	36.17	10.476	71407.217	59.364425	59.364425
5	30	6	5.30.7	0	92	11	0	0.13	85.154	14.484	172982.241	157.340243	157.340243
5	30	7	5.30.8	22	199	13	0	0.13	196.287	21.01	396297.877	372.742918	372.742918
5	30	8	5.30.9	12	227	15	0	0.13	220.948	23.989	437507.07	412.491905	412.491905
5	30	9	5.30.10	79	377	16	0	0.13	431.563	33.537	833595.304	794.545158	794.545158
5	30	10	5.30.11	336	412	18	0	0.13	737.412	47.99	1354878.163	1297.356893	1297.356893
5	30	11	5.30.12	918	126	19	0	0.13	1048.75	61.766	1827702.248	1753.426941	1753.426941
5	30	12	5.30.13	916	125	19	0	0.13	1035.254	61.221	1809795.952	1736.155136	1736.155136
5	30	13	5.30.14	900	122	20	0	0.13	953.96	58.934	1691349.732	1621.905937	1621.905937
5	30	14	5.30.15	861	120	19	0	0.13	809.999	52.105	1488675.809	1426.413556	1426.413556
5	30	15	5.30.16	309	269	19	0	0.13	456.397	37.641	884403.925	843.553427	843.553427
5	30	16	5.30.17	716	99	18	0	0.13	404.866	34.523	790261.636	752.746974	752.746974
5	30	17	5.30.18	269	106	16	0	0.13	151.906	22.071	280884.692	261.41928	261.41928
5	30	18	5.30.19	308	41	14	0	0.13	31.519	15.274	58537.603	46.950833	46.950833
5	30	19	5.30.20	0	0	12	0	0.13	0	12	0	0	0
5	30	20	5.30.21	0	0	10	0	0.13	0	10	0	0	0
5	30	21	5.30.22	0	0	8	0	0.13	0	8	0	0	0
5	30	22	5.30.23	0	0	8	0.1	0.13	0	8	0	0	0
5	30	23	5.30.24	0	0	7	0.3	0.13	0	7	0	0	0
5	31	0	5.31.1	0	0	7	0.4	0.13	0	7	0	0	0
5	31	1	5.31.2	0	0	7	0.5	0.13	0	7	0	0	0
5	31	2	5.31.3	0	0	7	0.4	0.13	0	7	0	0	0
5	31	3	5.31.4	0	0	7	0.4	0.13	0	7	0	0	0
5	31	4	5.31.5	36	9	7	0.2	0.13	8.562	7.275	9979.849	0.113673	0.113673
5	31	5	5.31.6	0	49	9	0	0.13	45.153	10.843	89860.3	77.163642	77.163642
5	31	6	5.31.7	9	128	11	0	0.13	120.407	15.924	245817.066	227.59424	227.59424
5	31	7	5.31.8	789	99	13	0	0.13	502.864	33.625	1007430.659	962.220835	962.220835
5	31	8	5.31.9	860	108	16	0	0.13	712.5	45.158	1354871.646	1297.350607	1297.350607
5	31	9	5.31.10	900	114	17	0	0.13	883.447	53.086	1612578.737	1545.926111	1545.926111
5	31	10	5.31.11	916	120	19	0	0.13	997.388	59.693	1759059.826	1687.216792	1687.216792
5	31	11	5.31.12	921	120	20	0	0.13	1045.655	62.641	1815554.438	1741.709576	1741.709576
5	31	12	5.31.13	911	120	20	0	0.13	1025.36	61.818	1788211.693	1715.335692	1715.335692
5	31	13	5.31.14	890	115	21	0	0.13	938.02	59.284	1661060.879	1592.690337	1592.690337
5	31	14	5.31.15	855	109	21	0	0.13	794.776	53.484	1452554.316	1391.571991	1391.571991
5	31	15	5.31.16	799	101	20	0	0.13	608.549	44.926	1161248.017	1110.587832	1110.587832
5	31	16	5.31.17	708	91	19	0	0.13	394.44	35.098	767846.022	731.125634	731.125634
5	31	17	5.31.18	551	75	18	0	0.13	184.284	25.225	317980.51	297.200646	297.200646
5	31	18	5.31.19	256	43	15	0	0.13	32.113	16.299	59531.91	47.909907	47.909907
5	31	19	5.31.20	0	0	14	0	0.13	0	14	0	0	0
5	31	20	5.31.21	0	0	13	0	0.13	0	13	0	0	0
5	31	21	5.31.22	0	0	12	0	0.13	0	12	0	0	0
5	31	22	5.31.23	0	0	12	0	0.13	0	12	0	0	0
5	31	23	5.31.24	0	0	12	0	0.13	0	12	0	0	0

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
6	1	0	6.1.1	0	0	12	0	0.13	0	12	0	0	0
6	1	1	6.1.2	0	0	12	0	0.13	0	12	0	0	0
6	1	2	6.1.3	0	0	12	0	0.13	0	12	0	0	0
6	1	3	6.1.4	0	0	12	0	0.13	0	12	0	0	0
6	1	4	6.1.5	0	3	12	0	0.13	2.854	12.098	3071.338	0	0
6	1	5	6.1.6	20	67	14	0	0.13	60.888	16.475	118050.675	104.35512	104.35512
6	1	6	6.1.7	334	153	16	0	0.13	239.571	25.69	462479.626	436.579584	436.579584
6	1	7	6.1.8	214	233	19	0	0.13	329.689	32.479	650089.803	617.541987	617.541987
6	1	8	6.1.9	276	309	22	0	0.13	495.948	42.229	939878.604	897.062418	897.062418
6	1	9	6.1.10	586	265	23	0	0.13	770.334	54.416	1391181.098	1332.373471	1332.373471
6	1	10	6.1.11	644	262	24	0	0.13	889.902	60.258	1560443.246	1495.637987	1495.637987
6	1	11	6.1.12	672	259	25	0	0.13	948.1	63.614	1634492.096	1567.062992	1567.062992
6	1	12	6.1.13	483	378	25	0	0.13	869.807	60.389	1516825.265	1453.565565	1453.565565
6	1	13	6.1.14	504	333	26	0	0.13	806.707	58.854	1421825.515	1361.932034	1361.932034
6	1	14	6.1.15	485	280	27	0	0.13	671.317	54.382	1212803.308	1160.316315	1160.316315
6	1	15	6.1.16	630	175	26	0	0.13	575.105	49.533	1071816.55	1024.325278	1024.325278
6	1	16	6.1.17	634	115	25	0	0.13	386.308	40.768	734677.959	699.132848	699.132848
6	1	17	6.1.18	501	85	23	0	0.13	183.691	30.235	314980.526	294.306964	294.306964
6	1	18	6.1.19	242	44	20	0	0.13	32.851	21.33	59691.668	48.064004	48.064004
6	1	19	6.1.20	0	0	19	0	0.13	0	19	0	0	0
6	1	20	6.1.21	0	0	18	0	0.13	0	18	0	0	0
6	1	21	6.1.22	0	0	17	0	0.13	0	17	0	0	0
6	1	22	6.1.23	0	0	17	0	0.13	0	17	0	0	0
6	1	23	6.1.24	0	0	16	0	0.13	0	16	0	0	0
6	2	0	6.2.1	0	0	16	0	0.13	0	16	0	0	0
6	2	1	6.2.2	0	0	16	0	0.13	0	16	0	0	0
6	2	2	6.2.3	0	0	15	0	0.13	0	15	0	0	0
6	2	3	6.2.4	0	0	14	0	0.13	0	14	0	0	0
6	2	4	6.2.5	0	1	15	0	0.13	0.951	15.033	0	0	0
6	2	5	6.2.6	0	27	17	0	0.13	25.012	18.021	47002.19	35.824166	35.824166
6	2	6	6.2.7	478	119	20	0	0.13	252.001	30.148	471043.187	444.839704	444.839704
6	2	7	6.2.8	541	173	22	0	0.13	444.656	40.215	861628.606	821.585128	821.585128
6	2	8	6.2.9	585	218	24	0	0.13	628.183	49.671	1165499.149	1114.68833	1114.68833
6	2	9	6.2.10	621	250	25	0	0.13	786.868	57.095	1405457.319	1346.143828	1346.143828
6	2	10	6.2.11	606	296	26	0	0.13	886.318	62.102	1540006.61	1475.925502	1475.925502
6	2	11	6.2.12	652	280	27	0	0.13	948.584	65.628	1619630.3	1552.727808	1552.727808
6	2	12	6.2.13	662	269	27	0	0.13	939.854	65.279	1608511.906	1542.003384	1542.003384
6	2	13	6.2.14	627	270	28	0	0.13	859.188	63.015	1489927.137	1427.620545	1427.620545
6	2	14	6.2.15	517	271	28	0	0.13	688.283	56.078	1235184.729	1181.904673	1181.904673
6	2	15	6.2.16	419	243	27	0	0.13	505.213	47.648	943027.591	900.099824	900.099824
6	2	16	6.2.17	100	203	26	0	0.13	231.933	35.471	444935.665	419.657275	419.657275
6	2	17	6.2.18	35	113	24	0	0.13	110.019	28.486	210104.81	193.147411	193.147411
6	2	18	6.2.19	0	1	23	0	0.13	0.924	23.037	0	0	0
6	2	19	6.2.20	0	0	22	0	0.13	0	22	0	0	0
6	2	20	6.2.21	0	0	21	0	0.13	0	21	0	0	0
6	2	21	6.2.22	0	0	20	0	0.13	0	20	0	0	0
6	2	22	6.2.23	0	0	18	0	0.13	0	18	0	0	0
6	2	23	6.2.24	0	0	17	0	0.13	0	17	0	0	0
6	3	0	6.3.1	0	0	15	0	0.13	0	15	0	0	0
6	3	1	6.3.2	0	0	14	0	0.13	0	14	0	0	0
6	3	2	6.3.3	0	0	13	0	0.13	0	13	0	0	0
6	3	3	6.3.4	0	0	13	0	0.13	0	13	0	0	0
6	3	4	6.3.5	0	7	13	0	0.13	6.659	13.228	7439.007	0	0
6	3	5	6.3.6	244	64	14	0	0.13	70.257	16.727	117231.456	103.564929	103.564929
6	3	6	6.3.7	680	78	15	0	0.13	274.926	26.013	514408.762	486.668665	486.668665
6	3	7	6.3.8	793	93	16	0	0.13	498.586	36.449	987578.504	943.07212	943.07212
6	3	8	6.3.9	25	262	17	0	0.13	263.062	27.704	516280.144	488.473735	488.473735
6	3	9	6.3.10	908	105	18	0	0.13	880.509	53.968	1601494.099	1535.234246	1535.234246
6	3	10	6.3.11	935	106	19	0	0.13	1000.803	59.835	1764364.922	1692.333908	1692.333908
6	3	11	6.3.12	947	106	20	0	0.13	1057.241	63.117	1831861.729	1757.439035	1757.439035
6	3	12	6.3.13	947	103	21	0	0.13	1043.99	63.582	1806475.875	1732.952703	1732.952703
6	3	13	6.3.14	934	100	21	0	0.13	964.126	60.354	1699207.132	1629.484917	1629.484917
6	3	14	6.3.15	906	95	21	0	0.13	822.817	54.634	1496715.509	1434.168377	1434.168377
6	3	15	6.3.16	858	89	21	0	0.13	634.7	47	1201650.941	1149.55912	1149.55912
6	3	16	6.3.17	745	91	20	0	0.13	413.555	36.882	800675.271	762.791613	762.791613
6	3	17	6.3.18	610	71	19	0.1	0.13	195.282	26.398	334379.535	313.018588	313.018588
6	3	18	6.3.19	346	41	17	0.5	0.13	30.955	18.073	57113.714	45.577398	45.577398
6	3	19	6.3.20	0	0	16	0.8	0.13	0	16	0	0	0
6	3	20	6.3.21	0	0	15	0.8	0.13	0	15	0	0	0
6	3	21	6.3.22	0	0	14	0.8	0.13	0	14	0	0	0
6	3	22	6.3.23	0	0	13	0.8	0.13	0	13	0	0	0
6	3	23	6.3.24	0	0	13	0.8	0.13	0	13	0	0	0
6	4	0	6.4.1	0	0	13	0.7	0.13	0	13	0	0	0
6	4	1	6.4.2	0	0	12	0.7	0.13	0	12	0	0	0
6	4	2	6.4.3	0	0	11	0.8	0.13	0	11	0	0	0
6	4	3	6.4.4	0	0	11	0.7	0.13	0	11	0	0	0
6	4	4	6.4.5	37	9	11	0.4	0.13	8.562	11.259	9782.959	0	0
6	4	5	6.4.6	411	60	13	0.1	0.13	79.788	15.902	122331.247	108.484015	108.484015
6	4	6	6.4.7	615	91	16	0	0.13	267.797	26.745	502012.915	474.712051	474.712051
6	4	7	6.4.8	727	114	19	0	0.13	484.593	38.869	948925.179	905.788437	905.788437
6	4	8	6.4.9	791	131	20	0	0.13	688.112	48.151	1290649.446	1235.404055	1235.404055
6	4	9	6.4.10	835	141	21	0	0.13	858.172	56.042	1545350.145	1481.079695	1481.079695
6	4	10	6.4.11	303	424	21	0	0.13	716.896	50.147	1303926.536	1248.210684	1248.210684
6	4	11	6.4.12	879	143	22	0	0.13	1025.882	63.826	1771199.991	1698.926783	1698.926783
6	4	12	6.4.13	15	292	22	0	0.13	290.992	33.795	550890.999	521.858191	521.858191
6	4	13	6.4.14	821	163	21	0	0.13	928.686	58.885	1644801.77	1577.007353	1577.007353
6	4	14	6.4.15	71	351	20	0	0.13	394.02	36.019	753444.267	717.234191	717.234191
6	4	15	6.4.16	610	173	19	0	0.13	561.885	41.989	1079993.386	1032.212376	1032.212376
6	4	16	6.4.17	440	161	18	0	0.13	345.562	32.109	679717.038	646.119411	646.119411
6	4	17	6.4.18	0	73	17	0	0.13	67.548	19.765	133171.874	118.940515	118.940515
6	4	18	6.4.19	0	40	15	0	0.13	36.251	16.469	67963.635	56.042863	56.042863
6	4	19	6.4.20	0	0	13	0	0.13	0	13	0	0	0
6	4	20	6.4.21	0	0	13	0	0.13	0	13	0	0	0
6	4	21	6.4.22	0	0	12	0	0.13	0	12	0	0	0
6	4	22	6.4.23	0	0	12	0	0.13	0	12	0	0	0
6	4	23	6.4.24	0	0	12	0	0.13	0	12	0	0	0
6	5	0	6.5.1	0	0	12	0.1	0.13	0	12	0	0	0
6	5	1	6.5.2	0	0	11	0.2	0.13	0	11	0	0	0
6	5	2	6.5.3	0	0	11	0.2	0.13	0	11	0	0	0
6	5	3	6.5.4	0	0	11	0.1	0.13	0	11	0	0	0
6	5	4	6.5.5	0	3	11	0	0.13	2.854	11.098	3088.478	0	0
6	5	5	6.5.6	0	49	12	0	0.13	45.203	13.845	88910.931	76.247913	76.247913
6	5	6	6.5.7	122	151	13	0	0.13	174.514	20.1	348283.084	326.42948	326.42948
6	5	7	6.5.8	0	147	15	0	0.13	136.641	20.574	272412.94	253.247717	253.247717
6	5	8	6.5.9	8	208	16	0	0.13	200.084	24.139	394478.247	370.987764	370.987764
6	5	9	6.5.10	58	363	18	0	0.13	399.275	34.22	767043.704	730.351746	730.351746
6	5	10	6.5.11	248	439	19	0	0.13	679.333	46.609	1251964	1198.089388	1198.089388
6	5	11	6.5.12	161	473	19	0	0.13	633.477	44.713	1170927.644	1119.924472	1119.924472
6	5	12	6.5.13	59	426	20	0	0.13	474.608	39.248	890971.518	849.888305	849.888305
6	5	13	6.5.14	39	368	19	0	0.13	392.494	34.926	748479.115	712.444974	712.444974
6	5	14	6.5.15	32	309	18	0	0.13	321.794	31.077	623496.439	591.890931	591.890931
6	5	15	6.5.16	149	294	18	0	0.13	376.437	33.353	735342.881	699.774209	699.774209
6	5	16	6.5.17	7	161	17	0	0.13	152.22	23.216	302732.37	282.492809	282.492809
6	5	17	6.5.18	7	107	16	0	0.13	99.363	20.064	198127.901	181.594891	181.594891
6	5	18	6.5.19	5	44	14	0	0.13	39.45	15.599	74618.707	62.46212	62.46212
6	5	19	6.5.20	0	0	13	0	0.13	0	13	0	0	0
6	5	20	6.5.21	0	0	12	0	0.13	0	12	0	0	0
6	5	21	6.5.22	0	0	12	0	0.13	0	12	0	0	0
6	5	22	6.5.23	0	0	11	0	0.13	0	11	0	0	0
6	5	23	6.5.24	0	0	11	0	0.13	0	11	0	0	0
6	6	0	6.6.1	0	0	10	0	0.13	0	10	0	0	0
6	6	1	6.6.2	0	0	10	0	0.13	0	10	0	0	0
6	6	2	6.6.3	0	0	10	0	0.13	0	10	0	0	0
6	6	3	6.6.4	0	0	10	0	0.13	0	10	0	0	0
6	6	4	6.6.5	0	2	11	0	0.13	1.903	11.065	2016.208	0	0
6	6	5	6.6.6	0	51	11	0	0.13	46.936	12.916	92847.872	80.045353	80.045353
6	6	6	6.6.7	0	98	12	0	0.13	90.604	15.707	183531.963	167.516146	167.516146
6	6	7	6.6.8	7	177	12	0	0.13	168.058	18.856	340032.91	318.471642	318.471642
6	6	8	6.6.9	5	188	13	0	0.13	179.13	20.286	357244.463	335.073321	335.073321
6	6	9	6.6.10	3	165	14	0	0.13	156.913	20.369	308996.159	288.534646	288.534646
6	6	10	6.6.11	6	180	14	0	0.13	174.596	21.079	342684.215	321.029001	321.029001
6	6	11	6.6.12	10	224	14	0	0.13	221.01	22.957	433192.763	408.330471	408.330471
6	6	12	6.6.13	10	212	14	0.1	0.13	209.391	22.213	411120.031	387.039863	387.039863
6	6	13	6.6.14	10	221	14	0.1	0.13	216.93	22.515	427066.933	402.421704	402.421704
6	6	14	6.6.15	12	240	14	0.1	0.13	234.846	23.233	464753.222	438.772618	438.772618
6	6	15	6.6.16	4	182	13	0.1	0.13	172.321	19.789	345038.977	323.300324	323.300324
6	6	16	6.6.17	0	47	13	0	0.13	43.617	14.781	85434.577	72.89474	72.89474
6	6	17	6.6.18	0	17	12	0	0.13	15.74	12.644	30013.517	19.437468	19.437468
6	6	18	6.6.19	0	11	11	0.1	0.13	10.174	11.399	18461.069	8.294369	8.294369
6	6	19	6.6.20	0	0	10	0.1	0.13	0	10	0	0	0
6	6	20	6.6.21	0	0	9	0.1	0.13	0	9	0	0	0
6	6	21	6.6.22	0	0	8	0.1	0.13	0	8	0	0	0
6	6	22	6.6.23	0	0	6	0.1	0.13	0	6	0	0	0
6	6	23	6.6.24	0	0	5	0.1	0.13	0	5	0	0	0
6	7	0	6.7.1	0	0	4	0	0.13	0	4	0	0	0
6	7	1	6.7.2	0	0	3	0	0.13	0	3	0	0	0
6	7	2	6.7.3	0	0	3	0	0.13	0	3	0	0	0
6	7	3	6.7.4	0	0	4	0	0.13	0	4	0	0	0
6	7	4	6.7.5	0	2	5	0	0.13	1.903	5.065	2085.545	0	0
6	7	5	6.7.6	114	71	6	0	0.13	69.644	8.783	131911.294	117.724602	117.724602
6	7	6	6.7.7	10	130	8	0	0.13	122.44	13.006	252936.598	234.461499	234.461499

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
6	7	7	6.7.8	228	233	11	0	0.13	336.112	24.742	683762.805	650.02182	650.02182
6	7	8	6.7.9	823	119	13	0.1	0.13	697.611	40.623	1350247.302	1292.890122	1292.890122
6	7	9	6.7.10	869	126	15	0.1	0.13	866.976	49.266	1607521.272	1541.047852	1541.047852
6	7	10	6.7.11	891	132	16	0.1	0.13	983.811	54.839	1771417.899	1699.13697	1699.13697
6	7	11	6.7.12	896	137	17	0.1	0.13	1036.584	57.901	1836774.904	1762.178116	1762.178116
6	7	12	6.7.13	424	390	17	0	0.13	822.756	50.463	1496106.291	1433.580747	1433.580747
6	7	13	6.7.14	344	398	18	0	0.13	717.421	47.187	1324125.498	1267.693916	1267.693916
6	7	14	6.7.15	318	348	18	0	0.13	599.662	42.43	1133223.895	1083.556716	1083.556716
6	7	15	6.7.16	798	114	18	0	0.13	625.026	43.594	1198252.169	1146.28078	1146.28078
6	7	16	6.7.17	725	97	18	0	0.13	412.624	34.848	806278.677	768.196468	768.196468
6	7	17	6.7.18	590	77	17	0	0.13	199.425	24.835	347921.694	326.080895	326.080895
6	7	18	6.7.19	334	44	14	0	0.13	33.314	15.351	62736.74	51.001178	51.001178
6	7	19	6.7.20	0	0	12	0	0.13	0	12	0	0	0
6	7	20	6.7.21	0	0	12	0	0.13	0	12	0	0	0
6	7	21	6.7.22	0	0	11	0	0.13	0	11	0	0	0
6	7	22	6.7.23	0	0	10	0	0.13	0	10	0	0	0
6	7	23	6.7.24	0	0	10	0	0.13	0	10	0	0	0
6	8	0	6.8.1	0	0	9	0	0.13	0	9	0	0	0
6	8	1	6.8.2	0	0	9	0.2	0.13	0	9	0	0	0
6	8	2	6.8.3	0	0	9	0.4	0.13	0	9	0	0	0
6	8	3	6.8.4	0	0	9	0.5	0.13	0	9	0	0	0
6	8	4	6.8.5	30	10	11	0.3	0.13	9.513	11.296	10923.774	1.024151	1.024151
6	8	5	6.8.6	326	70	13	0	0.13	81.014	16.115	132448.79	118.243053	118.243053
6	8	6	6.8.7	352	128	15	0	0.13	222.239	23.973	428208.457	403.522778	403.522778
6	8	7	6.8.8	587	142	17	0	0.13	439.253	34.998	870096.76	829.753222	829.753222
6	8	8	6.8.9	680	176	19	0	0.13	654.291	45.751	1236617.561	1183.286734	1183.286734
6	8	9	6.8.10	238	389	20	0	0.13	583.213	43.731	1091191.311	1043.013514	1043.013514
6	8	10	6.8.11	204	447	21	0	0.13	637.501	46.9	1171534.864	1120.510176	1120.510176
6	8	11	6.8.12	485	385	22	0	0.13	883.769	57.95	1556524.961	1491.858543	1491.858543
6	8	12	6.8.13	297	446	22	0	0.13	746.34	52.328	1342562.687	1285.477803	1285.477803
6	8	13	6.8.14	73	410	22	0	0.13	465.403	40.892	870364.284	830.011266	830.011266
6	8	14	6.8.15	63	348	22	0	0.13	384.63	37.635	729793.719	694.421675	694.421675
6	8	15	6.8.16	301	277	21	0	0.13	460.654	39.809	883954.978	843.120388	843.120388
6	8	16	6.8.17	5	159	20	0	0.13	149.522	26.106	293569.078	273.654208	273.654208
6	8	17	6.8.18	310	130	19	0	0.13	185.005	26.412	341249.721	319.645336	319.645336
6	8	18	6.8.19	14	47	18	0	0.13	40.935	19.661	76412.846	64.192685	64.192685
6	8	19	6.8.20	0	0	17	0	0.13	0	17	0	0	0
6	8	20	6.8.21	0	0	16	0	0.13	0	16	0	0	0
6	8	21	6.8.22	0	0	16	0	0.13	0	16	0	0	0
6	8	22	6.8.23	0	0	16	0	0.13	0	16	0	0	0
6	8	23	6.8.24	0	0	16	0	0.13	0	16	0	0	0
6	9	0	6.9.1	0	0	15	0	0.13	0	15	0	0	0
6	9	1	6.9.2	0	0	15	0	0.13	0	15	0	0	0
6	9	2	6.9.3	0	0	15	0	0.13	0	15	0	0	0
6	9	3	6.9.4	0	0	14	0	0.13	0	14	0	0	0
6	9	4	6.9.5	0	9	14	0	0.13	8.562	14.294	9632.578	0	0
6	9	5	6.9.6	346	58	16	0	0.13	72.272	18.738	111469.234	98.006886	98.006886
6	9	6	6.9.7	282	139	19	0	0.13	210.889	27.533	402901.109	379.112171	379.112171
6	9	7	6.9.8	589	142	21	0	0.13	439.967	39.027	857337.685	817.446252	817.446252
6	9	8	6.9.9	545	220	24	0	0.13	600.3	48.528	1117974.182	1068.847361	1068.847361
6	9	9	6.9.10	485	304	25	0	0.13	720.637	54.371	1298770.892	1243.237725	1243.237725
6	9	10	6.9.11	295	428	26	0	0.13	712.279	54.957	1268718.35	1214.250065	1214.250065
6	9	11	6.9.12	167	475	25	0	0.13	640.999	51.019	1154049.744	1103.644623	1103.644623
6	9	12	6.9.13	70	439	25	0	0.13	498.298	45.21	913678.837	871.791013	871.791013
6	9	13	6.9.14	282	417	25	0	0.13	679.201	52.619	1222859.526	1170.0162	1170.0162
6	9	14	6.9.15	173	375	26	0	0.13	504.636	46.535	931454.471	888.936786	888.936786
6	9	15	6.9.16	91	290	26	0	0.13	332.589	39.556	629811.397	597.982125	597.982125
6	9	16	6.9.17	18	176	25	0	0.13	170.874	31.977	328958.849	307.789979	307.789979
6	9	17	6.9.18	381	99	24	0	0.13	173.587	30.903	305737.797	285.391741	285.391741
6	9	18	6.9.19	116	55	22	0	0.13	43.041	23.747	79118.256	66.802231	66.802231
6	9	19	6.9.20	0	0	20	0	0.13	0	20	0	0	0
6	9	20	6.9.21	0	0	20	0	0.13	0	20	0	0	0
6	9	21	6.9.22	0	0	19	0.1	0.13	0	19	0	0	0
6	9	22	6.9.23	0	0	19	0.3	0.13	0	19	0	0	0
6	9	23	6.9.24	0	0	19	0.5	0.13	0	19	0	0	0
6	10	0	6.10.1	0	0	18	0.5	0.13	0	18	0	0	0
6	10	1	6.10.2	0	0	18	0.5	0.13	0	18	0	0	0
6	10	2	6.10.3	0	0	17	0.5	0.13	0	17	0	0	0
6	10	3	6.10.4	0	0	17	0.5	0.13	0	17	0	0	0
6	10	4	6.10.5	16	8	18	0.3	0.13	7.61	18.237	8336.913	0	0
6	10	5	6.10.6	155	70	20	0	0.13	70.136	22.78	121841.432	108.011556	108.011556
6	10	6	6.10.7	498	118	22	0	0.13	255.759	32.292	472932.773	446.662334	446.662334
6	10	7	6.10.8	703	117	24	0	0.13	473.479	43.409	908869.536	867.152124	867.152124
6	10	8	6.10.9	782	129	26	0	0.13	677.796	53.728	1241355.05	1187.856355	1187.856355
6	10	9	6.10.10	826	138	27	0	0.13	845.516	61.525	1486514.655	1424.32898	1424.32898
6	10	10	6.10.11	855	140	28	0	0.13	956.65	67.021	1632564.015	1565.203231	1565.203231
6	10	11	6.10.12	853	150	29	0	0.13	1005.939	70.008	1688683.72	1619.334391	1619.334391
6	10	12	6.10.13	837	159	29	0	0.13	998.286	69.696	1678345.697	1609.362686	1609.362686
6	10	13	6.10.14	799	168	29	0	0.13	914.629	66.307	1566818.074	1501.78693	1501.78693
6	10	14	6.10.15	759	162	29	0	0.13	777.81	60.768	1373705.856	1315.517446	1315.517446
6	10	15	6.10.16	696	151	28	0	0.13	598.152	52.48	1101946.645	1053.387744	1053.387744
6	10	16	6.10.17	581	139	27	0	0.13	391.331	42.982	739025.847	703.326672	703.326672
6	10	17	6.10.18	428	108	26	0	0.13	192.497	33.653	336111.694	314.68937	314.68937
6	10	18	6.10.19	206	54	24	0	0.13	40.345	25.638	73355.818	61.24398	61.24398
6	10	19	6.10.20	0	0	22	0	0.13	0	22	0	0	0
6	10	20	6.10.21	0	0	21	0	0.13	0	21	0	0	0
6	10	21	6.10.22	0	0	20	0	0.13	0	20	0	0	0
6	10	22	6.10.23	0	0	20	0	0.13	0	20	0	0	0
6	10	23	6.10.24	0	0	19	0	0.13	0	19	0	0	0
6	11	0	6.11.1	0	0	18	0	0.13	0	18	0	0	0
6	11	1	6.11.2	0	0	18	0	0.13	0	18	0	0	0
6	11	2	6.11.3	0	0	18	0	0.13	0	18	0	0	0
6	11	3	6.11.4	0	0	17	0	0.13	0	17	0	0	0
6	11	4	6.11.5	3	6	17	0	0.13	5.708	17.196	6193.643	0	0
6	11	5	6.11.6	193	85	19	0	0.13	84.674	22.353	148100.497	133.340157	133.340157
6	11	6	6.11.7	423	135	21	0	0.13	248.861	31.037	465742.319	439.726666	439.726666
6	11	7	6.11.8	526	162	23	0	0.13	424.456	40.385	820716.79	782.122981	782.122981
6	11	8	6.11.9	546	219	26	0	0.13	599.394	50.491	1107036.578	1058.297321	1058.297321
6	11	9	6.11.10	536	288	27	0	0.13	747.669	57.481	1330784.202	1274.116676	1274.116676
6	11	10	6.11.11	710	223	28	0	0.13	911.58	65.153	1565335.857	1500.357234	1500.357234
6	11	11	6.11.12	733	217	29	0	0.13	965.398	68.33	1630474.63	1563.187881	1563.187881
6	11	12	6.11.13	22	344	29	0	0.13	348.001	43.106	637021.226	604.936481	604.936481
6	11	13	6.11.14	72	410	29	0	0.13	464.412	47.851	843314.513	803.919977	803.919977
6	11	14	6.11.15	1	150	28	0	0.13	140.915	33.722	261789.595	243.000799	243.000799
6	11	15	6.11.16	0	103	26	0	0.13	95.852	29.902	179676.439	163.797238	163.797238
6	11	16	6.11.17	0	68	25	0	0.13	63.158	27.579	118804.059	105.081809	105.081809
6	11	17	6.11.18	97	125	23	0	0.13	134.532	28.459	254475.134	235.945518	235.945518
6	11	18	6.11.19	0	11	23	0	0.13	10.174	23.413	17468.979	7.337433	7.337433
6	11	19	6.11.20	0	0	22	0	0.13	0	22	0	0	0
6	11	20	6.11.21	0	0	21	0	0.13	0	21	0	0	0
6	11	21	6.11.22	0	0	20	0	0.13	0	20	0	0	0
6	11	22	6.11.23	0	0	19	0.1	0.13	0	19	0	0	0
6	11	23	6.11.24	0	0	18	0.1	0.13	0	18	0	0	0
6	12	0	6.12.1	0	0	16	0	0.13	0	16	0	0	0
6	12	1	6.12.2	0	0	15	0	0.13	0	15	0	0	0
6	12	2	6.12.3	0	0	14	0	0.13	0	14	0	0	0
6	12	3	6.12.4	0	0	13	0	0.13	0	13	0	0	0
6	12	4	6.12.5	0	1	12	0	0.13	0.951	12.033	0	0	0
6	12	5	6.12.6	0	4	12	0	0.13	3.698	12.151	6523.744	0	0
6	12	6	6.12.7	0	46	13	0	0.13	42.667	14.746	84121.35	71.628046	71.628046
6	12	7	6.12.8	1	160	13	0	0.13	149.166	19.084	300130.633	279.983261	279.983261
6	12	8	6.12.9	0	155	14	0	0.13	144.59	19.88	286503.839	266.839319	266.839319
6	12	9	6.12.10	30	323	15	0	0.13	335.808	28.637	656103.215	623.34232	623.34232
6	12	10	6.12.11	11	241	16	0	0.13	237.342	25.623	462176.08	436.286793	436.286793
6	12	11	6.12.12	26	362	17	0	0.13	378.22	32.33	725284.101	690.071852	690.071852
6	12	12	6.12.13	9	207	18	0	0.13	203.62	26.252	392872.845	369.439248	369.439248
6	12	13	6.12.14	11	245	17	0	0.13	240.712	26.763	467314.346	441.242991	441.242991
6	12	14	6.12.15	26	298	16	0	0.13	306.188	28.44	598346.148	567.631814	567.631814
6	12	15	6.12.16	73	285	16	0	0.13	316.464	28.895	624541.784	592.899235	592.899235
6	12	16	6.12.17	35	190	15	0	0.13	192.185	22.847	385731.75	362.55119	362.55119
6	12	17	6.12.18	0	50	14	0	0.13	46.384	15.899	91490.399	78.735981	78.735981
6	12	18	6.12.19	0	36	13	0	0.13	33.268	14.351	63208.759	51.456471	51.456471
6	12	19	6.12.20	0	0	13	0	0.13	0	13	0	0	0
6	12	20	6.12.21	0	0	12	0	0.13	0	12	0	0	0
6	12	21	6.12.22	0	0	12	0	0.13	0	12	0	0	0
6	12	22	6.12.23	0	0	11	0	0.13	0	11	0	0	0
6	12	23	6.12.24	0	0	11	0	0.13	0	11	0	0	0
6	13	0	6.13.1	0	0	10	0	0.13	0	10	0	0	0
6	13	1	6.13.2	0	0	10	0	0.13	0	10	0	0	0
6	13	2	6.13.3	0	0	10	0	0.13	0	10	0	0	0
6	13	3	6.13.4	0	0	10	0	0.13	0	10	0	0	0
6	13	4	6.13.5	0	2	10	0	0.13	1.903	10.065	2027.783	0	0
6	13	5	6.13.6	0	55	11	0	0.13	50.372	13.057	99920.742	86.867602	86.867602
6	13	6	6.13.7	0	112	12	0	0.13	103.248	16.224	209745.529	192.800861	192.800861
6	13	7	6.13.8	670	126	14	0	0.13	464.264	33.027	928509.537	886.096202	886.096202
6	13	8	6.13.9	106	319	16	0	0.13	377.096	31.359	738821.743	703.129801	703.129801
6	13	9	6.13.10	33	330	17	0	0.13	345.144	31.016	668523.593	635.322594	635.322594
6	13	10	6.13.11	42	387	18	0	0.13	415.627	34.859	792779.811	755.17592	755.17592
6	13	11	6.13.12	20	334	19	0	0.13	336.61	32.642	642632.396	610.348825	610.348825
6	13	12	6.13.13	43	404	19	0	0.13	436.385	36.693	825708.948	786.938246	786.938246
6	13	13	6.13.14	12	252	18	0	0.13	248.316	28.072	480019.993	453.498426	453.498426

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

													Reference Case	Adjusted Case
													3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
6	13	14	6.13.15	0	129	17	0	0.13	120.368	21.888	233602.567	215.812549	215.812549
6	13	15	6.13.16	0	137	16	0	0.13	127.619	21.194	251115.227	232.704666	232.704666
6	13	16	6.13.17	0	106	15	0	0.13	98.437	19.019	195767.52	179.318148	179.318148
6	13	17	6.13.18	0	22	14	0	0.13	20.376	14.834	38920.192	28.028545	28.028545
6	13	18	6.13.19	0	9	13	0	0.13	8.322	13.338	14904.248	4.863581	4.863581
6	13	19	6.13.20	0	0	12	0	0.13	0	12	0	0	0
6	13	20	6.13.21	0	0	12	0	0.13	0	12	0	0	0
6	13	21	6.13.22	0	0	11	0	0.13	0	11	0	0	0
6	13	22	6.13.23	0	0	11	0	0.13	0	11	0	0	0
6	13	23	6.13.24	0	0	11	0	0.13	0	11	0	0	0
6	14	0	6.14.1	0	0	11	0	0.13	0	11	0	0	0
6	14	1	6.14.2	0	0	10	0	0.13	0	10	0	0	0
6	14	2	6.14.3	0	0	10	0	0.13	0	10	0	0	0
6	14	3	6.14.4	0	0	10	0	0.13	0	10	0	0	0
6	14	4	6.14.5	3	5	10	0	0.13	4.756	10.163	5309.55	0	0
6	14	5	6.14.6	0	49	11	0	0.13	45.223	12.846	89378.85	76.699252	76.699252
6	14	6	6.14.7	0	95	11	0	0.13	87.857	14.595	178559.776	162.720143	162.720143
6	14	7	6.14.8	0	156	12	0	0.13	144.936	17.912	292677.03	272.793769	272.793769
6	14	8	6.14.9	9	214	13	0	0.13	206.305	21.392	411651.338	387.552344	387.552344
6	14	9	6.14.10	107	390	14	0	0.13	466.529	32.962	905189.37	863.602361	863.602361
6	14	10	6.14.11	22	328	15	0	0.13	331.217	28.432	644216.822	611.877108	611.877108
6	14	11	6.14.12	19	327	16	0	0.13	328.834	29.327	635794.79	603.753502	603.753502
6	14	12	6.14.13	13	271	16	0	0.13	268.742	26.892	521804.243	493.802094	493.802094
6	14	13	6.14.14	12	256	17	0	0.13	252.137	27.226	489278.859	462.429214	462.429214
6	14	14	6.14.15	6	197	17	0	0.13	189.273	24.687	369465.727	346.861537	346.861537
6	14	15	6.14.16	88	291	16	0	0.13	331.891	29.526	654464.337	621.761513	621.761513
6	14	16	6.14.17	505	162	16	0	0.13	379.557	31.503	751235.125	715.103327	715.103327
6	14	17	6.14.18	357	122	15	0	0.13	190.78	22.627	355160.045	333.062763	333.062763
6	14	18	6.14.19	144	60	14	0	0.13	47.697	15.931	90352.974	77.638859	77.638859
6	14	19	6.14.20	0	0	13	0	0.13	0	13	0	0	0
6	14	20	6.14.21	0	0	13	0	0.13	0	13	0	0	0
6	14	21	6.14.22	0	0	12	0	0.13	0	12	0	0	0
6	14	22	6.14.23	0	0	12	0	0.13	0	12	0	0	0
6	14	23	6.14.24	0	0	11	0	0.13	0	11	0	0	0
6	15	0	6.15.1	0	0	11	0	0.13	0	11	0	0	0
6	15	1	6.15.2	0	0	11	0	0.13	0	11	0	0	0
6	15	2	6.15.3	0	0	11	0	0.13	0	11	0	0	0
6	15	3	6.15.4	0	0	11	0	0.13	0	11	0	0	0
6	15	4	6.15.5	3	5	11	0	0.13	4.756	11.163	5281.493	0	0
6	15	5	6.15.6	0	32	13	0	0.13	29.657	14.211	57204.961	45.665412	45.665412
6	15	6	6.15.7	0	93	15	0	0.13	86.037	18.52	171906.084	156.302218	156.302218
6	15	7	6.15.8	30	208	17	0	0.13	209.66	25.556	416535.637	392.263573	392.263573
6	15	8	6.15.9	0	121	18	0	0.13	112.722	22.584	218820.824	201.554582	201.554582
6	15	9	6.15.10	3	161	20	0	0.13	153.097	26.214	294076.016	274.143183	274.143183
6	15	10	6.15.11	12	247	21	0	0.13	243.99	30.893	465503.141	439.495964	439.495964
6	15	11	6.15.12	15	294	21	0	0.13	293.019	32.875	556590.486	527.355722	527.355722
6	15	12	6.15.13	17	310	22	0	0.13	310.193	34.572	586342.224	556.053238	556.053238
6	15	13	6.15.14	28	343	23	0	0.13	357.416	37.499	672304.536	638.969564	638.969564
6	15	14	6.15.15	18	275	24	0	0.13	272.965	35.088	517135.351	489.298639	489.298639
6	15	15	6.15.16	6	191	23	0	0.13	182.048	30.411	349548.302	327.649866	327.649866
6	15	16	6.15.17	13	172	22	0	0.13	165.089	28.74	321633.418	300.724117	300.724117
6	15	17	6.15.18	294	134	21	0	0.13	187.371	28.522	345273.116	323.526166	323.526166
6	15	18	6.15.19	90	60	20	0	0.13	49.43	22.003	91680.022	78.918884	78.918884
6	15	19	6.15.20	0	0	19	0	0.13	0	19	0	0	0
6	15	20	6.15.21	0	0	18	0	0.13	0	18	0	0	0
6	15	21	6.15.22	0	0	18	0	0.13	0	18	0	0	0
6	15	22	6.15.23	0	0	18	0	0.13	0	18	0	0	0
6	15	23	6.15.24	0	0	17	0	0.13	0	17	0	0	0
6	16	0	6.16.1	0	0	17	0	0.13	0	17	0	0	0
6	16	1	6.16.2	0	0	17	0	0.13	0	17	0	0	0
6	16	2	6.16.3	0	0	17	0	0.13	0	17	0	0	0
6	16	3	6.16.4	0	0	16	0	0.13	0	16	0	0	0
6	16	4	6.16.5	22	10	17	0	0.13	9.513	17.326	10592.681	0.70479	0.70479
6	16	5	6.16.6	334	65	19	0	0.13	76.036	21.909	119139.742	105.405597	105.405597
6	16	6	6.16.7	38	142	21	0	0.13	140.978	26.755	275183.782	255.920376	255.920376
6	16	7	6.16.8	261	227	24	0	0.13	347.729	38.218	670925.583	637.639472	637.639472
6	16	8	6.16.9	754	125	26	0	0.13	651.842	52.666	1199002.462	1147.004487	1147.004487
6	16	9	6.16.10	787	141	27	0	0.13	813.289	60.207	1438126.055	1377.654981	1377.654981
6	16	10	6.16.11	801	154	28	0	0.13	923.909	65.678	1585875.971	1520.16953	1520.16953
6	16	11	6.16.12	798	167	28	0	0.13	974.876	67.733	1653168.111	1585.077242	1585.077242
6	16	12	6.16.13	776	180	28	0	0.13	959.278	67.096	1631656.509	1564.327881	1564.327881
6	16	13	6.16.14	735	190	28	0	0.13	882.106	63.97	1525968.056	1462.38439	1462.38439
6	16	14	6.16.15	685	189	27	0	0.13	749.18	57.587	1339838.278	1282.84993	1282.84993
6	16	15	6.16.16	625	174	26	0	0.13	577.885	49.64	1075451.341	1027.831273	1027.831273
6	16	16	6.16.17	531	150	25	0	0.13	380.854	40.558	726818.716	691.552089	691.552089
6	16	17	6.16.18	231	121	24	0	0.13	161.952	30.515	296378.201	276.363792	276.363792
6	16	18	6.16.19	165	58	23	0	0.13	46.832	24.892	84522.726	72.015199	72.015199
6	16	19	6.16.20	0	0	21	0	0.13	0	21	0	0	0
6	16	20	6.16.21	0	0	21	0	0.13	0	21	0	0	0
6	16	21	6.16.22	0	0	21	0	0.13	0	21	0	0	0
6	16	22	6.16.23	0	0	20	0	0.13	0	20	0	0	0
6	16	23	6.16.24	0	0	20	0	0.13	0	20	0	0	0
6	17	0	6.17.1	0	0	20	0	0.13	0	20	0	0	0
6	17	1	6.17.2	0	0	20	0	0.13	0	20	0	0	0
6	17	2	6.17.3	0	0	19	0	0.13	0	19	0	0	0
6	17	3	6.17.4	0	0	19	0	0.13	0	19	0	0	0
6	17	4	6.17.5	0	11	19	0	0.13	10.464	19.359	11586.057	1.662967	1.662967
6	17	5	6.17.6	361	61	21	0	0.13	74.281	23.817	112500.22	99.00134	99.00134
6	17	6	6.17.7	308	134	23	0	0.13	212.452	31.585	397324.17	373.732845	373.732845
6	17	7	6.17.8	201	235	25	0	0.13	322.727	38.19	620508.937	589.009288	589.009288
6	17	8	6.17.9	328	297	27	0	0.13	517.159	48.101	958051.411	914.59129	914.59129
6	17	9	6.17.10	408	334	28	0	0.13	682.404	55.8	1219882.332	1167.144501	1167.144501
6	17	10	6.17.11	774	170	29	0	0.13	914.033	66.27	1564125.666	1499.189924	1499.189924
6	17	11	6.17.12	776	180	29	0	0.13	965.796	68.358	1632672.131	1565.307516	1565.307516
6	17	12	6.17.13	758	189	29	0	0.13	950.427	67.732	1611635.635	1545.016426	1545.016426
6	17	13	6.17.14	235	430	29	0	0.13	642.163	55.103	1141712.847	1091.744871	1091.744871
6	17	14	6.17.15	219	374	28	0	0.13	541.332	50.035	986578.147	942.10721	942.10721
6	17	15	6.17.16	17	230	27	0	0.13	225.757	36.192	426606.551	401.977635	401.977635
6	17	16	6.17.17	436	183	26	0	0.13	369.59	41.097	703076.4	668.651058	668.651058
6	17	17	6.17.18	285	136	24	0	0.13	187.668	31.54	342487.908	320.839649	320.839649
6	17	18	6.17.19	0	39	22	0	0.13	35.869	23.458	65809.028	53.964602	53.964602
6	17	19	6.17.20	0	0	20	0	0.13	0	20	0	0	0
6	17	20	6.17.21	0	0	19	0	0.13	0	19	0	0	0
6	17	21	6.17.22	0	0	18	0	0.13	0	18	0	0	0
6	17	22	6.17.23	0	0	17	0	0.13	0	17	0	0	0
6	17	23	6.17.24	0	0	16	0	0.13	0	16	0	0	0
6	18	0	6.18.1	0	0	15	0	0.13	0	15	0	0	0
6	18	1	6.18.2	0	0	15	0	0.13	0	15	0	0	0
6	18	2	6.18.3	0	0	15	0	0.13	0	15	0	0	0
6	18	3	6.18.4	0	0	15	0	0.13	0	15	0	0	0
6	18	4	6.18.5	0	6	15	0	0.13	5.708	15.196	6260.803	0	0
6	18	5	6.18.6	0	55	17	0	0.13	50.338	19.055	97270.24	84.311019	84.311019
6	18	6	6.18.7	11	130	19	0	0.13	122.563	24.011	242049.957	223.960614	223.960614
6	18	7	6.18.8	28	205	20	0	0.13	205.743	28.396	403778.515	379.958487	379.958487
6	18	8	6.18.9	77	309	21	0	0.13	346.972	35.128	667475.616	634.311751	634.311751
6	18	9	6.18.10	3	165	22	0	0.13	156.859	28.367	298888.956	278.785582	278.785582
6	18	10	6.18.11	13	259	21	0	0.13	256.381	31.396	488933.77	462.096352	462.096352
6	18	11	6.18.12	6	173	21	0	0.13	168.429	27.825	320505.562	299.636225	299.636225
6	18	12	6.18.13	5	166	22	0	0.13	160.717	28.513	304474.981	284.173672	284.173672
6	18	13	6.18.14	28	344	21	0	0.13	358.412	35.54	679632.98	646.038331	646.038331
6	18	14	6.18.15	2	157	21	0	0.13	148.315	27.023	284055.727	264.477953	264.477953
6	18	15	6.18.16	7	198	20	0	0.13	189.274	27.705	368013.849	345.461105	345.461105
6	18	16	6.18.17	0	136	20	0	0.13	126.156	25.15	246877.881	228.617466	228.617466
6	18	17	6.18.18	319	111	19	0.1	0.13	173.708	25.726	319199.838	298.376769	298.376769
6	18	18	6.18.19	9	51	18	0.1	0.13	45.597	19.793	85902.763	73.346337	73.346337
6	18	19	6.18.20	0	0	17	0	0.13	0	17	0	0	0
6	18	20	6.18.21	0	0	17	0	0.13	0	17	0	0	0
6	18	21	6.18.22	0	0	17	0	0.13	0	17	0	0	0
6	18	22	6.18.23	0	0	16	0	0.13	0	16	0	0	0
6	18	23	6.18.24	0	0	16	0	0.13	0	16	0	0	0
6	19	0	6.19.1	0	0	16	0	0.13	0	16	0	0	0
6	19	1	6.19.2	0	0	16	0	0.13	0	16	0	0	0
6	19	2	6.19.3	0	0	15	0	0.13	0	15	0	0	0
6	19	3	6.19.4	0	0	15	0	0.13	0	15	0	0	0
6	19	4	6.19.5	9	7	15	0	0.13	6.659	15.228	7361.172	0	0
6	19	5	6.19.6	37	69	15	0	0.13	63.416	17.571	121380.963	107.567403	107.567403
6	19	6	6.19.7	0	120	16	0	0.13	110.404	20.517	220954.673	203.61282	203.61282
6	19	7	6.19.8	115	236	18	0	0.13	280.155	29.442	554645.277	525.479439	525.479439
6	19	8	6.19.9	198	320	20	0	0.13	444.996	38.14	853971.851	814.199683	814.199683
6	19	9	6.19.10	34	331	21	0	0.13	346.728	35.081	660773.974	627.847575	627.847575
6	19	10	6.19.11	149	448	21	0	0.13	585.066	44.758	1082049.258	1034.195401	1034.195401
6	19	11	6.19.12	162	474	22	0	0.13	634.32	47.746	1157581.155	1107.050902	1107.050902
6	19	12	6.19.13	159	470	22	0	0.13	625.644	47.395	1143538.494	1093.505828	1093.505828
6	19	13	6.19.14	371	387	22	0	0.13	732.415	51.8	1326328.07	1269.818443	1269.818443
6	19	14	6.19.15	213	375	22	0	0.13	537.713	43.886	1005392.082	960.254493	960.254493
6	19	15	6.19.16	369	264	22	0	0.13	494.439	42.194	941699.086	898.818393	898.818393
6	19	16	6.19.17	286	199	21	0	0.13	316.141	33.913	616813.02	585.444332	585.444332
6	19	17	6.19.18	389	102	20	0	0.13	182.171	27.26	328675.277	307.516455	307.516455
6	19	18	6.19.19	0	11	18	0.1	0.13	10.174	18.4	17996.827	7.846578	7.846578
6	19	19	6.19.20	0	0	16	0.1	0.13	0	16	0	0	0
6	19	20	6.19.21	0	0	15	0.1	0.13	0	15	0	0	0

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
6	19	21	6.19.22	0	0	14	0	0.13	0	14	0	0	0
6	19	22	6.19.23	0	0	14	0	0.13	0	14	0	0	0
6	19	23	6.19.24	0	0	13	0	0.13	0	13	0	0	0
6	20	0	6.20.1	0	0	13	0	0.13	0	13	0	0	0
6	20	1	6.20.2	0	0	13	0	0.13	0	13	0	0	0
6	20	2	6.20.3	0	0	12	0	0.13	0	12	0	0	0
6	20	3	6.20.4	0	0	12	0	0.13	0	12	0	0	0
6	20	4	6.20.5	38	10	13	0	0.13	9.513	13.326	10812.465	0.916787	0.916787
6	20	5	6.20.6	407	60	15	0	0.13	76.436	17.876	116429.857	102.791734	102.791734
6	20	6	6.20.7	622	87	18	0	0.13	260.757	28.441	481734.162	455.151855	455.151855
6	20	7	6.20.8	704	119	20	0	0.13	471.273	39.312	918868.841	876.797114	876.797114
6	20	8	6.20.9	790	130	21	0	0.13	679.704	48.807	1271368.455	1216.806266	1216.806266
6	20	9	6.20.10	846	133	22	0	0.13	853.446	56.852	1531864.48	1468.071881	1468.071881
6	20	10	6.20.11	920	109	23	0	0.13	985.03	63.189	1711066.267	1640.923836	1640.923836
6	20	11	6.20.12	934	107	24	0	0.13	1043.391	66.548	1780227.784	1707.634686	1707.634686
6	20	12	6.20.13	925	110	25	0	0.13	1030.597	67.029	1755317.215	1683.606797	1683.606797
6	20	13	6.20.14	441	343	25	0	0.13	760.341	55.951	1355040.472	1297.51345	1297.51345
6	20	14	6.20.15	232	368	25	0	0.13	546.362	47.242	1008143.462	962.90838	962.90838
6	20	15	6.20.16	811	106	25	0	0.13	633.116	50.922	1176763.575	1125.553613	1125.553613
6	20	16	6.20.17	74	208	25	0	0.13	226.559	34.251	436382.804	411.407476	411.407476
6	20	17	6.20.18	580	81	24	0.2	0.13	208.764	31.724	360444.601	338.160066	338.160066
6	20	18	6.20.19	60	54	22	0.6	0.13	45.663	23.538	83736.773	71.257096	71.257096
6	20	19	6.20.20	0	0	20	0.8	0.13	0	20	0	0	0
6	20	20	6.20.21	0	0	18	0.8	0.13	0	18	0	0	0
6	20	21	6.20.22	0	0	16	0.6	0.13	0	16	0	0	0
6	20	22	6.20.23	0	0	16	0.3	0.13	0	16	0	0	0
6	20	23	6.20.24	0	0	15	0.1	0.13	0	15	0	0	0
6	21	0	6.21.1	0	0	15	0	0.13	0	15	0	0	0
6	21	1	6.21.2	0	0	15	0	0.13	0	15	0	0	0
6	21	2	6.21.3	0	0	15	0	0.13	0	15	0	0	0
6	21	3	6.21.4	0	0	15	0	0.13	0	15	0	0	0
6	21	4	6.21.5	34	10	15	0	0.13	9.513	15.326	10702.648	0.81086	0.81086
6	21	5	6.21.6	154	69	17	0	0.13	67.921	19.694	119626.073	105.874696	105.874696
6	21	6	6.21.7	300	134	19	0	0.13	209.099	27.448	397422.627	373.827813	373.827813
6	21	7	6.21.8	340	211	22	0	0.13	371.214	37.185	721645.695	686.562368	686.562368
6	21	8	6.21.9	523	225	23	0	0.13	585.769	46.932	1097691.066	1049.282957	1049.282957
6	21	9	6.21.10	520	291	24	0	0.13	734.209	53.931	1326826.66	1270.299366	1270.299366
6	21	10	6.21.11	92	434	24	0	0.13	509.494	44.678	938972.434	896.188357	896.188357
6	21	11	6.21.12	254	463	25	0	0.13	723.065	54.369	1287165.182	1232.043252	1232.043252
6	21	12	6.21.13	397	402	25	0.1	0.13	801.212	56.529	1418726.839	1358.943157	1358.943157
6	21	13	6.21.14	423	362	24	0.1	0.13	762.328	54.026	1369062.191	1311.038324	1311.038324
6	21	14	6.21.15	616	233	24	0.1	0.13	738.081	53.148	1343178.38	1286.07168	1286.07168
6	21	15	6.21.16	545	215	23	0	0.13	565.685	46.128	1065905.165	1018.623357	1018.623357
6	21	16	6.21.17	199	212	22	0	0.13	287.994	33.762	560579.269	531.203166	531.203166
6	21	17	6.21.18	408	110	21	0	0.13	194.43	28.754	350291.295	328.366531	328.366531
6	21	18	6.21.19	152	61	20	0	0.13	49.934	22.013	90868.391	78.136012	78.136012
6	21	19	6.21.20	0	0	19	0	0.13	0	19	0	0	0
6	21	20	6.21.21	0	0	19	0	0.13	0	19	0	0	0
6	21	21	6.21.22	0	0	19	0	0.13	0	19	0	0	0
6	21	22	6.21.23	0	0	19	0	0.13	0	19	0	0	0
6	21	23	6.21.24	0	0	19	0	0.13	0	19	0	0	0
6	22	0	6.22.1	0	0	19	0	0.13	0	19	0	0	0
6	22	1	6.22.2	0	0	19	0	0.13	0	19	0	0	0
6	22	2	6.22.3	0	0	19	0	0.13	0	19	0	0	0
6	22	3	6.22.4	0	0	19	0	0.13	0	19	0	0	0
6	22	4	6.22.5	0	9	19	0	0.13	8.562	19.294	9384.157	0	0
6	22	5	6.22.6	0	44	19	0	0.13	40.825	20.666	77551.517	65.291008	65.291008
6	22	6	6.22.7	318	132	20	0	0.13	212.188	28.568	400698.977	376.988069	376.988069
6	22	7	6.22.8	407	195	21	0	0.13	391.779	37.032	764068.613	727.482074	727.482074
6	22	8	6.22.9	44	287	23	0	0.13	302.869	35.328	579216.411	549.179921	549.179921
6	22	9	6.22.10	182	396	25	0	0.13	540.798	46.996	995584.42	950.794356	950.794356
6	22	10	6.22.11	368	399	26	0	0.13	750.693	56.535	1330710.141	1274.04524	1274.04524
6	22	11	6.22.12	387	411	26	0	0.13	803.573	58.671	1408892.984	1349.457754	1349.457754
6	22	12	6.22.13	411	397	26	0	0.13	816.893	59.219	1429814.32	1369.637764	1369.637764
6	22	13	6.22.14	182	439	26	0	0.13	602.459	50.477	1090169.672	1042.028076	1042.028076
6	22	14	6.22.15	307	357	26	0	0.13	601.946	50.517	1098735.389	1050.290276	1050.290276
6	22	15	6.22.16	332	276	25	0	0.13	482.806	44.714	908583.9	866.87661	866.87661
6	22	16	6.22.17	146	215	24	0	0.13	267.053	34.906	516032.169	488.234547	488.234547
6	22	17	6.22.18	206	125	23	0	0.13	160.98	29.49	298171.111	278.093173	278.093173
6	22	18	6.22.19	13	51	22	0	0.13	45.793	23.86	84703.444	72.189514	72.189514
6	22	19	6.22.20	0	0	20	0	0.13	0	20	0	0	0
6	22	20	6.22.21	0	0	19	0	0.13	0	19	0	0	0
6	22	21	6.22.22	0	0	19	0	0.13	0	19	0	0	0
6	22	22	6.22.23	0	0	18	0	0.13	0	18	0	0	0
6	22	23	6.22.24	0	0	18	0	0.13	0	18	0	0	0
6	23	0	6.23.1	0	0	18	0	0.13	0	18	0	0	0
6	23	1	6.23.2	0	0	17	0	0.13	0	17	0	0	0
6	23	2	6.23.3	0	0	17	0	0.13	0	17	0	0	0
6	23	3	6.23.4	0	0	16	0	0.13	0	16	0	0	0
6	23	4	6.23.5	47	10	16	0	0.13	9.513	16.326	10647.683	0.757843	0.757843
6	23	5	6.23.6	443	53	18	0	0.13	71.147	20.633	102132.108	89.000611	89.000611
6	23	6	6.23.7	660	76	19	0	0.13	259.712	29.379	474742.43	448.407868	448.407868
6	23	7	6.23.8	725	109	21	0	0.13	470.421	40.278	913629.301	871.743232	871.743232
6	23	8	6.23.9	786	127	22	0	0.13	672.451	49.511	1254230.942	1200.276003	1200.276003
6	23	9	6.23.10	271	381	23	0	0.13	606.619	47.69	1117913.633	1068.788958	1068.788958
6	23	10	6.23.11	224	443	24	0	0.13	650.86	50.447	1179227.505	1127.930236	1127.930236
6	23	11	6.23.12	842	162	25	0	0.13	1013.251	66.301	1728916.461	1658.141527	1658.141527
6	23	12	6.23.13	841	161	25	0	0.13	1005.415	65.984	1718680.597	1648.26836	1648.26836
6	23	13	6.23.14	834	152	25	0	0.13	934.494	63.12	1623997.43	1556.940194	1556.940194
6	23	14	6.23.15	815	138	25	0	0.13	804.774	57.874	1440176.96	1379.633214	1379.633214
6	23	15	6.23.16	784	118	24	0	0.13	629.094	49.753	1174322.88	1123.199401	1123.199401
6	23	16	6.23.17	723	98	23	0	0.13	422.862	40.283	811383.766	773.120663	773.120663
6	23	17	6.23.18	605	76	22	0	0.13	211.389	30.341	366254.875	343.764459	343.764459
6	23	18	6.23.19	372	46	20	0	0.13	39.665	21.561	65982.878	54.132292	54.132292
6	23	19	6.23.20	0	0	18	0	0.13	0	18	0	0	0
6	23	20	6.23.21	0	0	17	0	0.13	0	17	0	0	0
6	23	21	6.23.22	0	0	17	0	0.13	0	17	0	0	0
6	23	22	6.23.23	0	0	16	0	0.13	0	16	0	0	0
6	23	23	6.23.24	0	0	15	0	0.13	0	15	0	0	0
6	24	0	6.24.1	0	0	15	0	0.13	0	15	0	0	0
6	24	1	6.24.2	0	0	14	0	0.13	0	14	0	0	0
6	24	2	6.24.3	0	0	14	0	0.13	0	14	0	0	0
6	24	3	6.24.4	0	0	13	0	0.13	0	13	0	0	0
6	24	4	6.24.5	54	10	14	0	0.13	9.513	14.326	10757.576	0.863842	0.863842
6	24	5	6.24.6	452	54	17	0	0.13	72.191	19.672	104209.205	91.004108	91.004108
6	24	6	6.24.7	653	80	19	0	0.13	260.845	29.427	477188.063	450.766843	450.766843
6	24	7	6.24.8	736	108	22	0	0.13	474.337	41.438	916939.211	874.935859	874.935859
6	24	8	6.24.9	803	122	23	0	0.13	678.695	50.769	1259566.587	1205.422585	1205.422585
6	24	9	6.24.10	839	134	24	0	0.13	846.926	58.586	1508867.584	1445.889856	1445.889856
6	24	10	6.24.11	519	344	25	0	0.13	845.619	59.426	1484394.327	1422.283784	1422.283784
6	24	11	6.24.12	486	384	26	0	0.13	882.43	61.895	1527369.677	1463.736346	1463.736346
6	24	12	6.24.13	247	460	26	0	0.13	710.952	54.878	1262890.513	1208.628731	1208.628731
6	24	13	6.24.14	409	367	26	0	0.13	754.746	56.715	1339330.522	1282.360166	1282.360166
6	24	14	6.24.15	551	265	25	0	0.13	715.738	54.196	1294773.971	1239.382431	1239.382431
6	24	15	6.24.16	639	169	25	0	0.13	585.647	48.958	1093252.282	1045.001457	1045.001457
6	24	16	6.24.17	549	137	24	0	0.13	381.97	39.609	732888.077	697.406388	697.406388
6	24	17	6.24.18	383	124	23	0	0.13	202.01	31.08	364633.808	342.200832	342.200832
6	24	18	6.24.19	171	62	21	0	0.13	51.371	23.066	92354.178	79.569152	79.569152
6	24	19	6.24.20	0	0	19	0	0.13	0	19	0	0	0
6	24	20	6.24.21	0	0	19	0	0.13	0	19	0	0	0
6	24	21	6.24.22	0	0	18	0	0.13	0	18	0	0	0
6	24	22	6.24.23	0	0	18	0	0.13	0	18	0	0	0
6	24	23	6.24.24	0	0	18	0	0.13	0	18	0	0	0
6	25	0	6.25.1	0	0	18	0	0.13	0	18	0	0	0
6	25	1	6.25.2	0	0	18	0	0.13	0	18	0	0	0
6	25	2	6.25.3	0	0	18	0	0.13	0	18	0	0	0
6	25	3	6.25.4	0	0	18	0	0.13	0	18	0	0	0
6	25	4	6.25.5	0	4	18	0	0.13	3.805	18.131	4019.725	0	0
6	25	5	6.25.6	144	84	20	0	0.13	79.535	23.176	142199.171	127.647939	127.647939
6	25	6	6.25.7	341	127	22	0	0.13	213.613	30.615	398447.278	374.816156	374.816156
6	25	7	6.25.8	8	180	24	0	0.13	171.106	30.981	329770.465	308.572836	308.572836
6	25	8	6.25.9	47	293	25	0	0.13	310.594	37.643	588881.42	558.50246	558.50246
6	25	9	6.25.10	209	391	26	0	0.13	558.314	48.714	1021802.758	976.083674	976.083674
6	25	10	6.25.11	470	358	27	0	0.13	812.829	60.083	1421721.548	1361.831751	1361.831751
6	25	11	6.25.12	494	383	28	0	0.13	889.427	64.181	1523941.631	1460.42977	1460.42977
6	25	12	6.25.13	660	277	28	0	0.13	946.542	66.546	1609678.972	1543.129096	1543.129096
6	25	13	6.25.14	677	245	28	0	0.13	885.408	64.087	1528217.441	1464.554071	1464.554071
6	25	14	6.25.15	657	220	27	0	0.13	760.142	58.024	1355278.094	1297.742652	1297.742652
6	25	15	6.25.16	604	196	26	0	0.13	589.192	50.095	1093397.172	1045.141213	1045.141213
6	25	16	6.25.17	521	163	25	0	0.13	392.307	41.031	748642.304	712.60238	712.60238
6	25	17	6.25.18	381	121	24	0	0.13	199.149	31.965	357753.977	335.564781	335.564781
6	25	18	6.25.19	168	61	23	0	0.13	50.732	25.039	90217.269	77.507962	77.507962
6	25	19	6.25.20	0	0	22	0	0.13	0	22	0	0	0
6	25	20	6.25.21	0	0	21	0	0.13	0	21	0	0	0
6	25	21	6.25.22	0	0	21	0	0.13	0	21	0	0	0
6	25	22	6.25.23	0	0	20	0	0.13	0	20	0	0	0
6	25	23	6.25.24	0	0	20	0	0.13	0	20	0	0	0
6	26	0	6.26.1	0	0	20	0	0.13	0	20	0	0	0
6	26	1	6.26.2	0	0	20	0	0.13	0	20	0	0	0
6	26	2	6.26.3	0	0	19	0	0.13	0	19	0	0	0
6	26	3	6.26.4	0	0	19	0	0.13	0	19	0	0	0

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
6	26	4	6.26.5	0	1	19	0	0.13	0.951	19.033	0	0	0
6	26	5	6.26.6	0	13	21	0	0.13	12.027	21.491	21431.367	11.159419	11.159419
6	26	6	6.26.7	0	58	23	0	0.13	53.829	25.203	102430.847	89.288765	89.288765
6	26	7	6.26.8	70	226	24	0	0.13	245.851	34.038	475077.81	448.731364	448.731364
6	26	8	6.26.9	251	311	26	0	0.13	475.702	45.401	888521.701	847.525295	847.525295
6	26	9	6.26.10	7	201	27	0	0.13	194.225	34.885	363160.102	340.779346	340.779346
6	26	10	6.26.11	234	440	27	0	0.13	657.191	53.707	1174692.712	1123.556129	1123.556129
6	26	11	6.26.12	592	308	28	0	0.13	913.285	65.177	1561224.204	1496.391273	1496.391273
6	26	12	6.26.13	194	469	28	0	0.13	659.664	54.784	1170071.264	1119.098436	1119.098436
6	26	13	6.26.14	324	408	27	0	0.13	710.793	55.91	1262893.406	1208.631521	1208.631521
6	26	14	6.26.15	289	361	27	0	0.13	592.051	51.11	1077191.862	1029.510121	1029.510121
6	26	15	6.26.16	446	264	27	0	0.13	549.82	49.463	1018413.172	972.814194	972.814194
6	26	16	6.26.17	390	204	26	0	0.13	369.5	41.096	703428.036	668.990234	668.990234
6	26	17	6.26.18	271	142	25	0	0.13	191.853	32.723	350996.389	329.046642	329.046642
6	26	18	6.26.19	109	62	24	0	0.13	52.527	26.12	94519.065	81.657328	81.657328
6	26	19	6.26.20	0	0	23	0	0.13	0	23	0	0	0
6	26	20	6.26.21	0	0	22	0	0.13	0	22	0	0	0
6	26	21	6.26.22	0	0	22	0	0.13	0	22	0	0	0
6	26	22	6.26.23	0	0	22	0	0.13	0	22	0	0	0
6	26	23	6.26.24	0	0	22	0	0.13	0	22	0	0	0
6	27	0	6.27.1	0	0	22	0	0.13	0	22	0	0	0
6	27	1	6.27.2	0	0	22	0	0.13	0	22	0	0	0
6	27	2	6.27.3	0	0	21	0	0.13	0	21	0	0	0
6	27	3	6.27.4	0	0	21	0	0.13	0	21	0	0	0
6	27	4	6.27.5	9	6	21	0	0.13	5.708	21.196	6059.068	0	0
6	27	5	6.27.6	177	66	22	0	0.13	65.737	24.595	111440.92	97.979575	97.979575
6	27	6	6.27.7	416	114	24	0	0.13	222.317	32.941	407101.32	383.163551	383.163551
6	27	7	6.27.8	415	191	25	0	0.13	390.272	40.969	748659.42	712.61889	712.61889
6	27	8	6.27.9	631	187	26	0	0.13	623.2	51.478	1148976.558	1098.7512	1098.7512
6	27	9	6.27.10	718	181	27	0	0.13	793.021	59.368	1405863.737	1346.535845	1346.535845
6	27	10	6.27.11	250	437	28	0	0.13	676.544	55.496	1200648.99	1148.592672	1148.592672
6	27	11	6.27.12	310	447	28	0	0.13	762.942	59.002	1333176.728	1276.424426	1276.424426
6	27	12	6.27.13	306	445	27	0	0.13	754.695	57.668	1326690.208	1270.167749	1270.167749
6	27	13	6.27.14	145	438	26	0	0.13	567.665	49.056	1031470.021	985.408387	985.408387
6	27	14	6.27.15	11	233	25	0	0.13	227.501	34.24	429665.462	404.928156	404.928156
6	27	15	6.27.16	0	98	24	0	0.13	91.192	27.711	172102.341	156.49152	156.49152
6	27	16	6.27.17	17	179	23	0	0.13	173.55	30.085	336745.593	315.300807	315.300807
6	27	17	6.27.18	37	123	22	0	0.13	120.573	26.918	233051.367	215.28088	215.28088
6	27	18	6.27.19	0	30	21	0	0.13	27.809	22.131	50831.382	39.517674	39.517674
6	27	19	6.27.20	0	0	20	0	0.13	0	20	0	0	0
6	27	20	6.27.21	0	0	19	0	0.13	0	19	0	0	0
6	27	21	6.27.22	0	0	18	0	0.13	0	18	0	0	0
6	27	22	6.27.23	0	0	17	0	0.13	0	17	0	0	0
6	27	23	6.27.24	0	0	17	0	0.13	0	17	0	0	0
6	28	0	6.28.1	0	0	16	0	0.13	0	16	0	0	0
6	28	1	6.28.2	0	0	16	0	0.13	0	16	0	0	0
6	28	2	6.28.3	0	0	16	0	0.13	0	16	0	0	0
6	28	3	6.28.4	0	0	15	0	0.13	0	15	0	0	0
6	28	4	6.28.5	0	7	15	0	0.13	6.659	15.228	7361.172	0	0
6	28	5	6.28.6	65	67	17	0	0.13	61.403	19.476	114109.15	100.553259	100.553259
6	28	6	6.28.7	621	84	19	0	0.13	253.045	29.115	462949.756	437.033055	437.033055
6	28	7	6.28.8	619	128	21	0	0.13	433.238	38.745	843787.908	804.376597	804.376597
6	28	8	6.28.9	540	217	23	0	0.13	587.22	46.996	1100919.476	1052.396972	1052.396972
6	28	9	6.28.10	480	301	24	0	0.13	708.64	52.884	1285597.424	1230.531046	1230.531046
6	28	10	6.28.11	858	138	25	0	0.13	953.128	63.879	1650181.74	1582.19669	1582.19669
6	28	11	6.28.12	439	391	26	0	0.13	842.471	60.263	1468160.184	1406.624881	1406.624881
6	28	12	6.28.13	209	467	26	0	0.13	672.703	53.317	1201514.169	1149.427194	1149.427194
6	28	13	6.28.14	492	343	26	0	0.13	809.23	58.948	1424292.332	1364.311442	1364.311442
6	28	14	6.28.15	609	242	26	0	0.13	743.388	56.333	1333942.53	1277.163092	1277.163092
6	28	15	6.28.16	741	131	25	0	0.13	616.384	50.228	1147235.734	1097.072061	1097.072061
6	28	16	6.28.17	668	111	24	0	0.13	412.7	40.87	790002.778	752.497288	752.497288
6	28	17	6.28.18	341	110	23	0	0.13	180.587	30.226	326171.145	305.101054	305.101054
6	28	18	6.28.19	125	56	21	0.3	0.13	46.706	22.707	84032.337	71.542187	71.542187
6	28	19	6.28.20	0	0	20	0.5	0.13	0	20	0	0	0
6	28	20	6.28.21	0	0	19	0.4	0.13	0	19	0	0	0
6	28	21	6.28.22	0	0	19	0.3	0.13	0	19	0	0	0
6	28	22	6.28.23	0	0	18	0.3	0.13	0	18	0	0	0
6	28	23	6.28.24	0	0	18	0.4	0.13	0	18	0	0	0
6	29	0	6.29.1	0	0	17	0.3	0.13	0	17	0	0	0
6	29	1	6.29.2	0	0	16	0.1	0.13	0	16	0	0	0
6	29	2	6.29.3	0	0	16	0	0.13	0	16	0	0	0
6	29	3	6.29.4	0	0	16	0	0.13	0	16	0	0	0
6	29	4	6.29.5	0	0	16	0	0.13	0	0	0	0	0
6	29	5	6.29.6	87	67	16	0	0.13	62.532	18.511	115185.102	101.591086	101.591086
6	29	6	6.29.7	250	137	16	0	0.13	195.38	23.902	377147.092	354.270721	354.270721
6	29	7	6.29.8	8	175	18	0	0.13	166.443	24.791	328896.132	307.729484	307.729484
6	29	8	6.29.9	87	310	19	0	0.13	354.203	33.426	687086.483	653.227727	653.227727
6	29	9	6.29.10	126	391	21	0	0.13	488.451	40.858	919560.473	877.46424	877.46424
6	29	10	6.29.11	296	425	22	0	0.13	708.031	50.786	1284132.844	1229.118362	1229.118362
6	29	11	6.29.12	36	394	23	0	0.13	420.04	40.027	782870.536	745.617771	745.617771
6	29	12	6.29.13	151	470	23	0	0.13	618.302	48.096	1126409.841	1076.984111	1076.984111
6	29	13	6.29.14	228	433	22	0	0.13	639.987	48.012	1172498.673	1121.439833	1121.439833
6	29	14	6.29.15	391	329	22	0	0.13	644.154	48.251	1190326.213	1138.635672	1138.635672
6	29	15	6.29.16	537	225	22	0	0.13	572.896	45.419	1082342.124	1034.477889	1034.477889
6	29	16	6.29.17	408	203	21	0	0.13	377.515	36.425	733368.886	697.87016	697.87016
6	29	17	6.29.18	248	150	20	0	0.13	193.871	27.818	364452.766	342.026205	342.026205
6	29	18	6.29.19	15	54	19	0	0.13	47.205	20.917	88524.197	75.874882	75.874882
6	29	19	6.29.20	0	0	18	0	0.13	0	18	0	0	0
6	29	20	6.29.21	0	0	17	0	0.13	0	17	0	0	0
6	29	21	6.29.22	0	0	17	0	0.13	0	17	0	0	0
6	29	22	6.29.23	0	0	16	0	0.13	0	16	0	0	0
6	29	23	6.29.24	0	0	16	0	0.13	0	16	0	0	0
6	30	0	6.30.1	0	0	16	0	0.13	0	16	0	0	0
6	30	1	6.30.2	0	0	15	0	0.13	0	15	0	0	0
6	30	2	6.30.3	0	0	15	0	0.13	0	15	0	0	0
6	30	3	6.30.4	0	0	15	0	0.13	0	15	0	0	0
6	30	4	6.30.5	0	0	15	0	0.13	0	0	0	0	0
6	30	5	6.30.6	12	63	17	0	0.13	57.371	19.335	110137.287	96.722135	96.722135
6	30	6	6.30.7	494	113	18	0	0.13	241.874	27.707	450586.268	425.107655	425.107655
6	30	7	6.30.8	645	134	20	0	0.13	450.721	38.46	879307.348	838.637442	838.637442
6	30	8	6.30.9	208	315	21	0	0.13	445.577	39.168	852228.637	812.518238	812.518238
6	30	9	6.30.10	801	148	22	0	0.13	826.736	55.758	1490838.482	1428.499597	1428.499597
6	30	10	6.30.11	817	162	23	0	0.13	943.99	61.498	1650676.014	1582.67345	1582.67345
6	30	11	6.30.12	372	406	24	0	0.13	783.728	55.863	1390966.89	1332.166852	1332.166852
6	30	12	6.30.13	231	464	24	0	0.13	691.715	52.094	1242972.887	1189.416866	1189.416866
6	30	13	6.30.14	828	152	24	0	0.13	930.975	61.977	1626181.284	1559.046665	1559.046665
6	30	14	6.30.15	818	133	23	0	0.13	804.988	55.884	1453239.127	1392.232537	1392.232537
6	30	15	6.30.16	790	113	23	0	0.13	631.188	48.84	1182983.964	1131.553588	1131.553588
6	30	16	6.30.17	724	95	22	0	0.13	424.387	39.35	818446.247	779.932892	779.932892
6	30	17	6.30.18	606	74	21	0	0.13	212.251	29.381	370206.171	347.575744	347.575744
6	30	18	6.30.19	388	44	18	0	0.13	39.437	19.534	63751.391	51.979876	51.979876
6	30	19	6.30.20	0	0	20	0	0.12	0	20	0	0	0
6	30	20	6.30.21	0	0	19	0	0.12	0	19	0	0	0
6	30	21	6.30.22	0	0	19	0	0.12	0	19	0	0	0
6	30	22	6.30.23	0	0	19	0	0.12	0	19	0	0	0
6	30	23	6.30.24	0	0	19	0	0.12	0	19	0	0	0
7	1	0	7.1.1	0	0	19	0	0.12	0	19	0	0	0
7	1	1	7.1.2	0	0	19	0	0.12	0	19	0	0	0
7	1	2	7.1.3	0	0	19	0	0.12	0	19	0	0	0
7	1	3	7.1.4	0	0	19	0	0.12	0	19	0	0	0
7	1	4	7.1.5	0	0	19	0	0.12	0	0	0	0	0
7	1	5	7.1.6	0	33	19	0	0.12	30.582	20.247	57293.052	45.750382	45.750382
7	1	6	7.1.7	0	94	20	0	0.12	86.85	23.554	170054.318	154.516067	154.516067
7	1	7	7.1.8	7	173	20	0	0.12	164.048	26.694	321519.657	300.614388	300.614388
7	1	8	7.1.9	135	318	21	0	0.12	398.409	37.234	764545.086	727.941664	727.941664
7	1	9	7.1.10	68	368	22	0	0.12	411.288	38.712	776973.927	739.930101	739.930101
7	1	10	7.1.11	20	316	22	0	0.12	317.61	34.881	601332.855	570.512691	570.512691
7	1	11	7.1.12	567	336	23	0	0.12	915.804	60.273	1599102.203	1532.927104	1532.927104
7	1	12	7.1.13	211	468	24	0	0.12	675.872	51.447	1217103.364	1164.464003	1164.464003
7	1	13	7.1.14	585	301	25	0	0.12	854.867	59.825	1501373.606	1438.661419	1438.661419
7	1	14	7.1.15	560	271	25	0	0.12	730.884	54.814	1318756.195	1262.51487	1262.51487
7	1	15	7.1.16	504	238	25	0	0.12	564.303	48.064	1053435.837	1006.595867	1006.595867
7	1	16	7.1.17	430	190	24	0	0.12	377.771	39.438	725148.604	689.941155	689.941155
7	1	17	7.1.18	331	127	23	0	0.12	193.798	30.774	353175.486	331.148524	331.148524
7	1	18	7.1.19	163	57	21	0	0.12	48.188	22.933	85630.685	73.083899	73.083899
7	1	19	7.1.20	0	0	21	0	0.12	0	21	0	0	0
7	1	20	7.1.21	0	0	20	0	0.12	0	20	0	0	0
7	1	21	7.1.22	0	0	19	0	0.12	0	19	0	0	0
7	1	22	7.1.23	0	0	19	0	0.12	0	19	0	0	0
7	1	23	7.1.24	0	0	18	0	0.12	0	18	0	0	0
7	2	0	7.2.1	0	0	17	0	0.12	0	17	0	0	0
7	2	1	7.2.2	0	0	16	0	0.12	0	16	0	0	0
7	2	2	7.2.3	0	0	16	0	0.12	0	16	0	0	0
7	2	3	7.2.4	0	0	16	0	0.12	0	16	0	0	0
7	2	4	7.2.5	0	0	16	0	0.12	0	0	0	0	0
7	2	5	7.2.6	114	66	18	0	0.12	62.701	20.507	112663.713	99.15904	99.15904
7	2	6	7.2.7	546	89	20	0	0.12	234.324	29.373	428250.602	403.56343	403.56343
7	2	7	7.2.8	691	114	21	0	0.12	452.923	39.553	880355.485	839.64844	839.64844
7	2	8	7.2.9	758	131	23	0	0.12	652.436	49.694	1216050.85	1163.448783	1163.448783
7	2	9	7.2.10	795	146	24	0	0.12	818.892	57.44	1466285.042	1404.816183	1404.816183
7	2	10	7.2.11	806	162	25	0	0.12	933.112	63.055	1620759.112	1553.816623	1553.816623

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

													Reference Case	Adjusted Case
													3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
7	2	11	7.2.12	326	440	25	0	0.12	772.015	56.376	1365417.699	1307.522971	1307.522971
7	2	12	7.2.13	274	454	25	0	0.12	732.491	54.76	1303065.138	1247.379809	1247.379809
7	2	13	7.2.14	178	438	25	0	0.12	598.824	49.33	1088812.199	1040.718704	1040.718704
7	2	14	7.2.15	243	371	25	0	0.12	565.513	48.022	1040710.279	994.321226	994.321226
7	2	15	7.2.16	179	302	24	0	0.12	406.549	40.581	772335.913	735.456431	735.456431
7	2	16	7.2.17	219	211	23	0	0.12	297.767	35.164	577330.133	547.360481	547.360481
7	2	17	7.2.18	56	126	22	0	0.12	127.844	27.208	246057.25	227.825913	227.825913
7	2	18	7.2.19	33	54	20	0.2	0.12	47.474	21.804	88169.448	75.532704	75.532704
7	2	19	7.2.20	0	0	18	0.3	0.12	0	18	0	0	0
7	2	20	7.2.21	0	0	18	0.1	0.12	0	18	0	0	0
7	2	21	7.2.22	0	0	17	0	0.12	0	17	0	0	0
7	2	22	7.2.23	0	0	16	0	0.12	0	16	0	0	0
7	2	23	7.2.24	0	0	16	0	0.12	0	16	0	0	0
7	3	0	7.3.1	0	0	15	0	0.12	0	15	0	0	0
7	3	1	7.3.2	0	0	14	0	0.12	0	14	0	0	0
7	3	2	7.3.3	0	0	14	0	0.12	0	14	0	0	0
7	3	3	7.3.4	0	0	14	0	0.12	0	14	0	0	0
7	3	4	7.3.5	0	0	14	0	0.12	0	0	0	0	0
7	3	5	7.3.6	446	49	16	0	0.12	62.737	18.312	89486.511	76.803098	76.803098
7	3	6	7.3.7	665	73	18	0	0.12	251.61	28.029	457858.545	432.122246	432.122246
7	3	7	7.3.8	782	89	20	0	0.12	473.402	39.398	922444.212	880.245796	880.245796
7	3	8	7.3.9	845	101	22	0	0.12	679.93	49.831	1268736.581	1214.267649	1214.267649
7	3	9	7.3.10	880	112	23	0	0.12	851.985	57.804	1524873.347	1461.328472	1461.328472
7	3	10	7.3.11	914	111	24	0	0.12	978.187	63.913	1694380.732	1624.829536	1624.829536
7	3	11	7.3.12	923	113	25	0	0.12	1037.767	67.32	1764783.12	1692.737287	1692.737287
7	3	12	7.3.13	920	113	25	0	0.12	1030.343	67.019	1755096.923	1683.39431	1683.39431
7	3	13	7.3.14	887	122	25	0	0.12	951.053	63.808	1649180.314	1581.230749	1581.230749
7	3	14	7.3.15	851	121	25	0	0.12	817.264	58.392	1460248.557	1398.993595	1398.993595
7	3	15	7.3.16	799	113	25	0	0.12	637.996	51.12	1184502.804	1133.01861	1133.01861
7	3	16	7.3.17	655	107	24	0	0.12	404.445	40.536	775473.931	738.483256	738.483256
7	3	17	7.3.18	399	102	23	0.2	0.12	188.017	30.029	337039.1	315.583914	315.583914
7	3	18	7.3.19	133	54	21	0.5	0.12	45.516	22.564	81289.95	68.896974	68.896974
7	3	19	7.3.20	0	0	19	0.6	0.12	0	19	0	0	0
7	3	20	7.3.21	0	0	18	0.5	0.12	0	18	0	0	0
7	3	21	7.3.22	0	0	17	0.4	0.12	0	17	0	0	0
7	3	22	7.3.23	0	0	16	0.3	0.12	0	16	0	0	0
7	3	23	7.3.24	0	0	16	0.1	0.12	0	16	0	0	0
7	4	0	7.4.1	0	0	16	0	0.12	0	16	0	0	0
7	4	1	7.4.2	0	0	16	0	0.12	0	16	0	0	0
7	4	2	7.4.3	0	0	16	0	0.12	0	16	0	0	0
7	4	3	7.4.4	0	0	15	0	0.12	0	15	0	0	0
7	4	4	7.4.5	0	0	16	0	0.12	0	0	0	0	0
7	4	5	7.4.6	0	23	18	0	0.12	21.294	18.868	39418.385	28.509085	28.509085
7	4	6	7.4.7	0	58	20	0	0.12	53.816	22.202	103835.785	90.643921	90.643921
7	4	7	7.4.8	130	230	21	0	0.12	280.358	32.453	548700.138	519.74496	519.74496
7	4	8	7.4.9	68	299	22	0	0.12	330.467	35.458	634386.064	602.394694	602.394694
7	4	9	7.4.10	24	302	23	0	0.12	304.579	35.37	577781.577	547.795929	547.795929
7	4	10	7.4.11	16	291	23	0	0.12	289.828	34.754	547505.19	518.592354	518.592354
7	4	11	7.4.12	6	176	24	0	0.12	171.243	30.939	321927.564	301.00784	301.00784
7	4	12	7.4.13	11	228	24	0	0.12	225.654	33.146	424760.603	400.197096	400.197096
7	4	13	7.4.14	2	147	23	0	0.12	139.416	28.653	263135.95	244.299447	244.299447
7	4	14	7.4.15	38	325	23	0	0.12	342.864	36.931	649496.511	616.969718	616.969718
7	4	15	7.4.16	540	204	23	0	0.12	556.012	45.734	1049474.325	1002.774727	1002.774727
7	4	16	7.4.17	605	128	23	0	0.12	401.949	39.432	773886.149	736.951735	736.951735
7	4	17	7.4.18	457	101	22	0.1	0.12	201.089	29.749	359333.651	337.088481	337.088481
7	4	18	7.4.19	231	54	20	0.3	0.12	45.02	21.626	77959.122	65.684171	65.684171
7	4	19	7.4.20	0	0	19	0.5	0.12	0	19	0	0	0
7	4	20	7.4.21	0	0	18	0.5	0.12	0	18	0	0	0
7	4	21	7.4.22	0	0	17	0.6	0.12	0	17	0	0	0
7	4	22	7.4.23	0	0	16	0.5	0.12	0	16	0	0	0
7	4	23	7.4.24	0	0	15	0.2	0.12	0	15	0	0	0
7	5	0	7.5.1	0	0	15	0	0.12	0	15	0	0	0
7	5	1	7.5.2	0	0	15	0	0.12	0	15	0	0	0
7	5	2	7.5.3	0	0	15	0	0.12	0	15	0	0	0
7	5	3	7.5.4	0	0	15	0	0.12	0	15	0	0	0
7	5	4	7.5.5	0	0	15	0	0.12	0	0	0	0	0
7	5	5	7.5.6	229	66	17	0	0.12	66.22	19.596	112244.181	98.754374	98.754374
7	5	6	7.5.7	432	119	19	0	0.12	227.626	28.144	423822.128	399.291875	399.291875
7	5	7	7.5.8	571	153	22	0	0.12	429.712	39.592	832366.237	793.359642	793.359642
7	5	8	7.5.9	662	175	24	0	0.12	629.319	49.736	1170330.704	1119.348684	1119.348684
7	5	9	7.5.10	723	188	25	0	0.12	801.627	57.722	1431752.07	1371.506852	1371.506852
7	5	10	7.5.11	686	241	26	0	0.12	902.091	62.765	1565694.852	1500.703508	1500.703508
7	5	11	7.5.12	693	252	27	0	0.12	959.553	66.084	1636194.069	1568.704658	1568.704658
7	5	12	7.5.13	686	255	27	0	0.12	952.212	65.786	1626114.192	1558.98195	1558.98195
7	5	13	7.5.14	582	302	27	0	0.12	854.073	61.792	1487013.674	1424.810317	1424.810317
7	5	14	7.5.15	545	281	27	0	0.12	729.53	56.756	1304845.479	1249.097065	1249.097065
7	5	15	7.5.16	485	248	27	0	0.12	562.449	49.985	1040946.381	994.548961	994.548961
7	5	16	7.5.17	398	201	26	0	0.12	372.212	41.211	709017.949	674.382074	674.382074
7	5	17	7.5.18	278	136	24	0.2	0.12	189.447	31.142	348228.08	326.376425	326.376425
7	5	18	7.5.19	121	53	22	0.6	0.12	44.566	23.489	79401.902	67.075827	67.075827
7	5	19	7.5.20	0	0	20	0.7	0.12	0	20	0	0	0
7	5	20	7.5.21	0	0	19	0.7	0.12	0	19	0	0	0
7	5	21	7.5.22	0	0	18	0.6	0.12	0	18	0	0	0
7	5	22	7.5.23	0	0	18	0.6	0.12	0	18	0	0	0
7	5	23	7.5.24	0	0	18	0.6	0.12	0	18	0	0	0
7	6	0	7.6.1	0	0	17	0.6	0.12	0	17	0	0	0
7	6	1	7.6.2	0	0	17	0.7	0.12	0	17	0	0	0
7	6	2	7.6.3	0	0	18	0.7	0.12	0	18	0	0	0
7	6	3	7.6.4	0	0	18	0.6	0.12	0	18	0	0	0
7	6	4	7.6.5	0	0	18	0.4	0.12	0	0	0	0	0
7	6	5	7.6.6	131	67	20	0.1	0.12	61.857	22.387	109181.186	95.799912	95.799912
7	6	6	7.6.7	299	127	22	0	0.12	197.826	29.978	368881.194	346.297716	346.297716
7	6	7	7.6.8	354	200	24	0	0.12	363.353	38.862	700892.506	666.544547	666.544547
7	6	8	7.6.9	555	208	26	0	0.12	585.876	49.947	1085814.583	1037.827305	1037.827305
7	6	9	7.6.10	540	278	27	0	0.12	734.798	56.964	1312047.874	1256.044251	1256.044251
7	6	10	7.6.11	493	347	28	0	0.12	822.962	61.503	1431627.441	1371.386639	1371.386639
7	6	11	7.6.12	371	415	28	0	0.12	792.113	60.205	1379457.232	1321.065028	1321.065028
7	6	12	7.6.13	294	446	29	0	0.12	744.961	59.272	1300284.272	1244.69748	1244.69748
7	6	13	7.6.14	298	414	29	0	0.12	694.35	57.237	1225866.228	1172.916363	1172.916363
7	6	14	7.6.15	484	286	28	0	0.12	684.98	55.932	1228220.628	1175.187338	1175.187338
7	6	15	7.6.16	328	275	27	0	0.12	482.185	46.689	899922.05	858.521684	858.521684
7	6	16	7.6.17	206	246	26	0	0.12	324.46	39.254	619933.635	588.454371	588.454371
7	6	17	7.6.18	193	149	25	0	0.12	180.412	32.295	335211.644	313.821213	313.821213
7	6	18	7.6.19	86	53	23	0	0.12	45.889	24.852	82395.594	69.96344	69.96344
7	6	19	7.6.20	0	0	21	0	0.12	0	21	0	0	0
7	6	20	7.6.21	0	0	20	0	0.12	0	20	0	0	0
7	6	21	7.6.22	0	0	19	0	0.12	0	19	0	0	0
7	6	22	7.6.23	0	0	19	0	0.12	0	19	0	0	0
7	6	23	7.6.24	0	0	18	0	0.12	0	18	0	0	0
7	7	0	7.7.1	0	0	18	0	0.12	0	18	0	0	0
7	7	1	7.7.2	0	0	18	0	0.12	0	18	0	0	0
7	7	2	7.7.3	0	0	19	0	0.12	0	19	0	0	0
7	7	3	7.7.4	0	0	19	0	0.12	0	19	0	0	0
7	7	4	7.7.5	0	0	20	0	0.12	0	0	0	0	0
7	7	5	7.7.6	240	65	22	0	0.12	63.65	24.488	104484.239	91.269397	91.269397
7	7	6	7.7.7	0	71	24	0	0.12	65.902	26.697	125803.373	111.833109	111.833109
7	7	7	7.7.8	0	130	25	0	0.12	120.761	29.928	230731.268	213.042992	213.042992
7	7	8	7.7.9	22	250	26	0	0.12	248.968	36.133	471592.93	445.369968	445.369968
7	7	9	7.7.10	736	162	27	0	0.12	783.88	59.006	1393530.057	1334.639197	1334.639197
7	7	10	7.7.11	686	222	27	0	0.12	883.1	62.996	1532176.806	1468.37314	1468.37314
7	7	11	7.7.12	21	338	28	0	0.12	341.533	41.843	628166.492	596.395506	596.395506
7	7	12	7.7.13	0	83	28	0	0.12	77.479	31.139	140643.131	126.147036	126.147036
7	7	13	7.7.14	59	399	28	0	0.12	442.557	45.961	808827.151	770.654639	770.654639
7	7	14	7.7.15	673	194	27	0	0.12	751.398	57.675	1342986.555	1285.886652	1285.886652
7	7	15	7.7.16	20	238	27	0	0.12	235.601	36.593	445162.012	419.875602	419.875602
7	7	16	7.7.17	146	215	26	0	0.12	268.649	36.973	515150.482	487.384102	487.384102
7	7	17	7.7.18	405	100	25	0	0.12	187.973	32.497	333039.034	311.725587	311.725587
7	7	18	7.7.19	62	57	24	0	0.12	48.381	25.957	87394.377	74.785096	74.785096
7	7	19	7.7.20	0	0	23	0	0.12	0	23	0	0	0
7	7	20	7.7.21	0	0	22	0	0.12	0	22	0	0	0
7	7	21	7.7.22	0	0	22	0	0.12	0	22	0	0	0
7	7	22	7.7.23	0	0	22	0	0.12	0	22	0	0	0
7	7	23	7.7.24	0	0	22	0	0.12	0	22	0	0	0
7	8	0	7.8.1	0	0	21	0	0.12	0	21	0	0	0
7	8	1	7.8.2	0	0	21	0	0.12	0	21	0	0	0
7	8	2	7.8.3	0	0	21	0	0.12	0	21	0	0	0
7	8	3	7.8.4	0	0	21	0	0.12	0	21	0	0	0
7	8	4	7.8.5	0	0	22	0	0.12	0	0	0	0	0
7	8	5	7.8.6	112	62	22	0	0.12	58.227	24.328	102556.01	89.409492	89.409492
7	8	6	7.8.7	0	65	23	0	0.12	60.334	25.469	115352.93	101.752967	101.752967
7	8	7	7.8.8	0	109	24	0	0.12	101.278	28.133	193604.623	177.231891	177.231891
7	8	8	7.8.9	49	284	24	0	0.12	303.154	36.344	578125.061	548.127241	548.127241
7	8	9	7.8.10	270	374	26	0	0.12	597.659	50.331	1089835.67	1041.705908	1041.705908
7	8	10	7.8.11	523	332	27	0	0.12	836.492	61.061	1458988.011	1397.777715	1397.777715
7	8	11	7.8.12	46	410	28	0	0.12	446.441	46.102	812890.569	774.574074	774.574074
7	8	12	7.8.13	445	385	29	0	0.12	841.1	63.213	1447607.149	1386.800122	1386.800122
7	8	13	7.8.14	492	352	29	0	0.12	820.248	62.397	1421847.08	1361.952835	1361.952835
7	8	14	7.8.15	412	317	29	0	0.12	656.753	55.769	1176176.117	1124.986971	1124.986971
7	8	15	7.8.16	263	290	28	0	0.12	454.47	46.548	846269.791	806.770538	806.770538
7	8	16	7.8.17	151	215	27	0	0.12	271.009	38.07	517482.835	489.63381	489.63381
7	8	17	7.8.18	129	128	26	0	0.12	147.069	31.96	273766.348	254.553168	254.553168

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
7	8	18	7.8.19	26	52	24	0	0.12	45.724	25.854	83247.25	70.784919	70.784919
7	8	19	7.8.20	0	0	22	0	0.12	0	22	0	0	0
7	8	20	7.8.21	0	0	21	0	0.12	0	21	0	0	0
7	8	21	7.8.22	0	0	21	0	0.12	0	21	0	0	0
7	8	22	7.8.23	0	0	20	0	0.12	0	20	0	0	0
7	8	23	7.8.24	0	0	19	0	0.12	0	19	0	0	0
7	9	0	7.9.1	0	0	18	0	0.12	0	18	0	0	0
7	9	1	7.9.2	0	0	18	0	0.12	0	18	0	0	0
7	9	2	7.9.3	0	0	17	0	0.12	0	17	0	0	0
7	9	3	7.9.4	0	0	17	0	0.12	0	17	0	0	0
7	9	4	7.9.5	0	0	17	0	0.12	0	0	0	0	0
7	9	5	7.9.6	0	38	18	0	0.12	35.239	19.436	66434.775	54.568177	54.568177
7	9	6	7.9.7	143	139	20	0	0.12	165.433	26.714	317919.405	297.141707	297.141707
7	9	7	7.9.8	72	219	21	0	0.12	239.607	30.785	469262.208	443.121832	443.121832
7	9	8	7.9.9	28	259	23	0	0.12	264.934	33.785	508053.143	480.53825	480.53825
7	9	9	7.9.10	13	255	24	0	0.12	250.543	34.174	474605.084	448.275388	448.275388
7	9	10	7.9.11	15	279	25	0	0.12	277.433	36.252	520238.499	492.291831	492.291831
7	9	11	7.9.12	68	438	26	0	0.12	496.599	46.141	906877.923	865.231082	865.231082
7	9	12	7.9.13	23	345	26	0	0.12	350.235	40.198	649333.183	616.812177	616.812177
7	9	13	7.9.14	10	228	27	0	0.12	223.746	36.075	416966.036	392.678721	392.678721
7	9	14	7.9.15	89	366	26	0	0.12	425.024	43.281	790143.031	752.632571	752.632571
7	9	15	7.9.16	25	246	25	0	0.12	246.474	35.036	469660.365	443.505881	443.505881
7	9	16	7.9.17	154	214	25	0	0.12	271.527	36.092	522874.889	494.834803	494.834803
7	9	17	7.9.18	0	57	24	0	0.12	52.886	26.165	100267.158	87.201744	87.201744
7	9	18	7.9.19	28	53	22	0	0.12	46.437	23.883	85299.643	72.764588	72.764588
7	9	19	7.9.20	0	0	20	0	0.12	0	20	0	0	0
7	9	20	7.9.21	0	0	20	0	0.12	0	20	0	0	0
7	9	21	7.9.22	0	0	19	0	0.12	0	19	0	0	0
7	9	22	7.9.23	0	0	19	0	0.12	0	19	0	0	0
7	9	23	7.9.24	0	0	19	0	0.12	0	19	0	0	0
7	10	0	7.10.1	0	0	19	0	0.12	0	19	0	0	0
7	10	1	7.10.2	0	0	19	0	0.12	0	19	0	0	0
7	10	2	7.10.3	0	0	19	0	0.12	0	19	0	0	0
7	10	3	7.10.4	0	0	18	0	0.12	0	18	0	0	0
7	10	4	7.10.5	0	0	18	0	0.12	0	0	0	0	0
7	10	5	7.10.6	0	53	19	0	0.12	48.032	20.957	91153.476	78.410996	78.410996
7	10	6	7.10.7	43	132	19	0	0.12	132.179	24.393	259352.737	240.650289	240.650289
7	10	7	7.10.8	682	113	21	0	0.12	442.789	39.133	860883.335	820.866266	820.866266
7	10	8	7.10.9	746	135	23	0	0.12	644.376	49.367	1203067.996	1150.925963	1150.925963
7	10	9	7.10.10	790	149	24	0	0.12	815.236	57.293	1461183.748	1399.895648	1399.895648
7	10	10	7.10.11	872	124	25	0	0.12	950.413	63.778	1647728.628	1579.830501	1579.830501
7	10	11	7.10.12	215	465	26	0	0.12	679.152	53.582	1212200.565	1159.734929	1159.734929
7	10	12	7.10.13	890	121	26	0	0.12	1009.605	67.173	1719095.929	1648.668975	1648.668975
7	10	13	7.10.14	844	137	27	0	0.12	927.46	64.842	1600813.633	1534.577891	1534.577891
7	10	14	7.10.15	808	133	27	0	0.12	799.585	59.666	1420224.687	1360.387929	1360.387929
7	10	15	7.10.16	745	127	26	0	0.12	618.13	51.303	1145822.685	1095.709081	1095.709081
7	10	16	7.10.17	646	116	25	0	0.12	410.035	41.766	782738.015	745.489945	745.489945
7	10	17	7.10.18	494	93	24	0	0.12	202.908	32.061	356534.334	334.388355	334.388355
7	10	18	7.10.19	254	50	21	0	0.12	41.89	22.662	71298.667	59.259722	59.259722
7	10	19	7.10.20	0	0	20	0	0.12	0	20	0	0	0
7	10	20	7.10.21	0	0	19	0	0.12	0	19	0	0	0
7	10	21	7.10.22	0	0	19	0	0.12	0	19	0	0	0
7	10	22	7.10.23	0	0	18	0	0.12	0	18	0	0	0
7	10	23	7.10.24	0	0	18	0	0.12	0	18	0	0	0
7	11	0	7.11.1	0	0	17	0	0.12	0	17	0	0	0
7	11	1	7.11.2	0	0	17	0	0.12	0	17	0	0	0
7	11	2	7.11.3	0	0	16	0	0.12	0	16	0	0	0
7	11	3	7.11.4	0	0	16	0	0.12	0	16	0	0	0
7	11	4	7.11.5	0	0	17	0	0.12	0	0	0	0	0
7	11	5	7.11.6	357	51	19	0	0.12	56.194	21.131	85003.932	72.479355	72.479355
7	11	6	7.11.7	579	83	21	0	0.12	232.115	30.254	417815.65	393.49823	393.49823
7	11	7	7.11.8	704	103	24	0	0.12	443.127	42.148	851114.098	811.443192	811.443192
7	11	8	7.11.9	778	117	26	0	0.12	647.842	52.515	1194485.572	1142.647649	1142.647649
7	11	9	7.11.10	822	127	27	0	0.12	819.551	60.477	1449664.417	1388.784492	1388.784492
7	11	10	7.11.11	855	130	28	0	0.12	940.213	66.36	1611181.73	1544.578605	1544.578605
7	11	11	7.11.12	868	132	28	0	0.12	1001.988	68.857	1692581.271	1623.093837	1623.093837
7	11	12	7.11.13	869	131	29	0	0.12	998.822	69.73	1680837.614	1611.766304	1611.766304
7	11	13	7.11.14	845	135	29	0	0.12	926.616	66.808	1585347.633	1519.659913	1519.659913
7	11	14	7.11.15	816	128	29	0	0.12	801.27	61.736	1410515.919	1351.023182	1351.023182
7	11	15	7.11.16	766	117	29	0	0.12	622.144	54.471	1138278.744	1088.432452	1088.432452
7	11	16	7.11.17	682	103	28	0	0.12	413.993	44.929	780256.613	743.096469	743.096469
7	11	17	7.11.18	543	82	26	0.1	0.12	205.457	33.876	354932.541	332.84332	332.84332
7	11	18	7.11.19	305	45	23	0.3	0.12	38.473	24.376	63155.694	51.405287	51.405287
7	11	19	7.11.20	0	0	21	0.4	0.12	0	21	0	0	0
7	11	20	7.11.21	0	0	20	0.2	0.12	0	20	0	0	0
7	11	21	7.11.22	0	0	19	0.1	0.12	0	19	0	0	0
7	11	22	7.11.23	0	0	19	0	0.12	0	19	0	0	0
7	11	23	7.11.24	0	0	18	0	0.12	0	18	0	0	0
7	12	0	7.12.1	0	0	18	0	0.12	0	18	0	0	0
7	12	1	7.12.2	0	0	18	0	0.12	0	18	0	0	0
7	12	2	7.12.3	0	0	17	0	0.12	0	17	0	0	0
7	12	3	7.12.4	0	0	17	0	0.12	0	17	0	0	0
7	12	4	7.12.5	0	0	18	0	0.12	0	0	0	0	0
7	12	5	7.12.6	257	58	20	0	0.12	56.724	22.207	92124.34	79.347458	79.347458
7	12	6	7.12.7	461	107	22	0	0.12	221.082	30.855	402513.371	378.738172	378.738172
7	12	7	7.12.8	592	139	25	0	0.12	423.177	42.324	810060.836	771.84461	771.84461
7	12	8	7.12.9	678	159	27	0	0.12	621.794	52.436	1144296.314	1094.236796	1094.236796
7	12	9	7.12.10	735	171	28	0	0.12	792.894	60.374	1401071.493	1341.91341	1341.91341
7	12	10	7.12.11	726	204	29	0	0.12	902.442	65.794	1547262.417	1482.924207	1482.924207
7	12	11	7.12.12	742	208	30	0	0.12	964.693	69.31	1623187.202	1556.158676	1556.158676
7	12	12	7.12.13	475	379	31	0	0.12	865.81	66.225	1470771.276	1409.143452	1409.143452
7	12	13	7.12.14	690	223	31	0	0.12	879.988	66.875	1501287.429	1438.578296	1438.578296
7	12	14	7.12.15	523	273	31	0	0.12	705.413	59.774	1245121.065	1191.488925	1191.488925
7	12	15	7.12.16	548	199	30	0	0.12	557.871	52.813	1022356.167	976.617473	976.617473
7	12	16	7.12.17	495	162	29	0	0.12	382.867	44.651	720193.391	685.161526	685.161526
7	12	17	7.12.18	199	123	27	0.1	0.12	159.273	33.219	291020.621	271.196053	271.196053
7	12	18	7.12.19	0	12	25	0.3	0.12	11.097	25.409	18965.71	8.78113	8.78113
7	12	19	7.12.20	0	0	23	0.3	0.12	0	23	0	0	0
7	12	20	7.12.21	0	0	22	0.3	0.12	0	22	0	0	0
7	12	21	7.12.22	0	0	22	0.4	0.12	0	22	0	0	0
7	12	22	7.12.23	0	0	21	0.4	0.12	0	21	0	0	0
7	12	23	7.12.24	0	0	21	0.4	0.12	0	21	0	0	0
7	13	0	7.13.1	0	0	21	0.4	0.12	0	21	0	0	0
7	13	1	7.13.2	0	0	21	0.4	0.12	0	21	0	0	0
7	13	2	7.13.3	0	0	20	0.3	0.12	0	20	0	0	0
7	13	3	7.13.4	0	0	20	0.2	0.12	0	20	0	0	0
7	13	4	7.13.5	0	0	20	0.1	0.12	0	0	0	0	0
7	13	5	7.13.6	0	16	21	0	0.12	14.803	21.603	26421.892	15.973109	15.973109
7	13	6	7.13.7	39	129	23	0	0.12	128.301	28.236	247598.903	229.31294	229.31294
7	13	7	7.13.8	238	216	24	0	0.12	320.601	37.106	619508.733	588.044526	588.044526
7	13	8	7.13.9	177	309	25	0	0.12	417.734	42.033	788665.423	751.207321	751.207321
7	13	9	7.13.10	364	344	26	0	0.12	646.285	52.33	1172619.283	1121.556169	1121.556169
7	13	10	7.13.11	428	361	27	0	0.12	775.633	58.569	1365897.51	1307.985781	1307.985781
7	13	11	7.13.12	416	392	28	0	0.12	821.926	61.429	1425332.719	1365.314964	1365.314964
7	13	12	7.13.13	161	466	28	0	0.12	626.05	53.416	1115971.944	1066.916071	1066.916071
7	13	13	7.13.14	221	430	28	0	0.12	632.702	53.718	1131491.779	1081.885977	1081.885977
7	13	14	7.13.15	569	258	27	0	0.12	728.404	56.719	1304414.584	1248.681439	1248.681439
7	13	15	7.13.16	544	213	27	0	0.12	568.889	50.261	1053915.201	1007.058245	1007.058245
7	13	16	7.13.17	500	161	26	0	0.12	384.219	41.707	731887.872	696.441625	696.441625
7	13	17	7.13.18	406	108	24	0	0.12	195.205	31.792	348398.336	326.540647	326.540647
7	13	18	7.13.19	221	50	22	0	0.12	41.063	23.637	70654.84	58.638708	58.638708
7	13	19	7.13.20	0	0	20	0	0.12	0	20	0	0	0
7	13	20	7.13.21	0	0	19	0	0.12	0	19	0	0	0
7	13	21	7.13.22	0	0	18	0	0.12	0	18	0	0	0
7	13	22	7.13.23	0	0	18	0	0.12	0	18	0	0	0
7	13	23	7.13.24	0	0	18	0	0.12	0	18	0	0	0
7	14	0	7.14.1	0	0	18	0	0.12	0	18	0	0	0
7	14	1	7.14.2	0	0	18	0	0.12	0	18	0	0	0
7	14	2	7.14.3	0	0	19	0	0.12	0	19	0	0	0
7	14	3	7.14.4	0	0	19	0	0.12	0	19	0	0	0
7	14	4	7.14.5	0	0	19	0	0.12	0	0	0	0	0
7	14	5	7.14.6	0	48	20	0	0.12	43.709	21.779	82050.468	69.630544	69.630544
7	14	6	7.14.7	29	126	22	0	0.12	122.97	27.022	238735.502	220.763604	220.763604
7	14	7	7.14.8	0	74	23	0	0.12	68.736	25.805	130616.777	116.475955	116.475955
7	14	8	7.14.9	154	310	25	0	0.12	403.178	41.437	761955.651	725.443982	725.443982
7	14	9	7.14.10	303	363	26	0	0.12	614.32	51.018	1118726.176	1069.57271	1069.57271
7	14	10	7.14.11	15	283	27	0	0.12	281.375	38.412	523233.03	495.180253	495.180253
7	14	11	7.14.12	243	459	27	0	0.12	710.056	55.844	1256412.145	1202.379917	1202.379917
7	14	12	7.14.13	82	445	26	0	0.12	517.781	47.005	943679.437	900.728572	900.728572
7	14	13	7.14.14	43	377	24	0	0.12	406.482	40.495	758366.785	721.982284	721.982284
7	14	14	7.14.15	13	246	24	0	0.12	241.763	33.821	458635.679	432.871843	432.871843
7	14	15	7.14.16	35	259	24	0	0.12	268.797	34.948	514244.004	486.509745	486.509745
7	14	16	7.14.17	63	203	23	0	0.12	218.272	31.915	424351.892	399.802867	399.802867
7	14	17	7.14.18	0	93	23	0	0.12	85.663	26.507	165710.688	150.326349	150.326349
7	14	18	7.14.19	74	51	22	0	0.12	43.642	23.762	78819.228	66.5138	66.5138
7	14	19	7.14.20	0	0	22	0	0.12	0	22	0	0	0
7	14	20	7.14.21	0	0	22	0	0.12	0	22	0	0	0
7	14	21	7.14.22	0	0	21	0	0.12	0	21	0	0	0
7	14	22	7.14.23	0	0	21	0	0.12	0	21	0	0	0
7	14	23	7.14.24	0	0	21	0.1	0.12	0	21	0	0	0
7	15	0	7.15.1	0	0	21	0.2	0.12	0	21	0	0	0

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
7	15	1	7.15.2	0	0	21	0.3	0.12	0	21	0	0	0
7	15	2	7.15.3	0	0	21	0.4	0.12	0	21	0	0	0
7	15	3	7.15.4	0	0	21	0.5	0.12	0	21	0	0	0
7	15	4	7.15.5	0	0	21	0.3	0.12	0	0	0	0	0
7	15	5	7.15.6	184	55	23	0.1	0.12	52.18	24.992	87129.742	74.529839	74.529839
7	15	6	7.15.7	188	132	25	0.1	0.12	170.033	31.66	317126.651	296.377043	296.377043
7	15	7	7.15.8	346	196	28	0	0.12	353.258	42.448	670519.624	637.247897	637.247897
7	15	8	7.15.9	74	295	29	0	0.12	330.784	42.475	617448.286	586.057088	586.057088
7	15	9	7.15.10	210	381	29	0	0.12	548.785	51.334	994208.52	949.467209	949.467209
7	15	10	7.15.11	257	428	30	0	0.12	675.081	57.445	1189161.937	1137.512651	1137.512651
7	15	11	7.15.12	248	458	29	0	0.12	714.222	58.015	1252111.637	1198.231793	1198.231793
7	15	12	7.15.13	214	462	28	0	0.12	675.004	55.416	1195638.872	1143.760083	1143.760083
7	15	13	7.15.14	19	305	27	0	0.12	306.108	39.418	568697.326	539.033568	539.033568
7	15	14	7.15.15	61	348	26	0	0.12	385.137	41.655	718606.013	683.630394	683.630394
7	15	15	7.15.16	64	281	25	0	0.12	308.954	37.588	587935.834	557.59038	557.59038
7	15	16	7.15.17	43	195	23	0	0.12	201.758	31.24	392204.689	368.794768	368.794768
7	15	17	7.15.18	213	120	22	0	0.12	159.809	28.44	296847.913	276.816861	276.816861
7	15	18	7.15.19	131	48	21	0	0.12	40.15	22.614	71394.415	59.352077	59.352077
7	15	19	7.15.20	0	0	20	0	0.12	0	20	0	0	0
7	15	20	7.15.21	0	0	18	0	0.12	0	18	0	0	0
7	15	21	7.15.22	0	0	17	0	0.12	0	17	0	0	0
7	15	22	7.15.23	0	0	17	0	0.12	0	17	0	0	0
7	15	23	7.15.24	0	0	16	0	0.12	0	16	0	0	0
7	16	0	7.16.1	0	0	16	0	0.12	0	16	0	0	0
7	16	1	7.16.2	0	0	15	0	0.12	0	15	0	0	0
7	16	2	7.16.3	0	0	14	0	0.12	0	14	0	0	0
7	16	3	7.16.4	0	0	14	0	0.12	0	14	0	0	0
7	16	4	7.16.5	0	0	14	0	0.12	0	14	0	0	0
7	16	5	7.16.6	439	43	15	0	0.12	49.267	16.824	70787.099	58.76628	58.76628
7	16	6	7.16.7	659	70	17	0	0.12	237.523	26.429	428354.49	403.663638	403.663638
7	16	7	7.16.8	772	88	19	0	0.12	458.694	37.786	897548.921	856.232644	856.232644
7	16	8	7.16.9	839	100	21	0	0.12	667.94	48.348	1255446.079	1201.448083	1201.448083
7	16	9	7.16.10	881	108	22	0	0.12	844.401	56.503	1521357.31	1457.937021	1457.937021
7	16	10	7.16.11	888	123	23	0	0.12	963.75	62.327	1682036.668	1612.922871	1612.922871
7	16	11	7.16.12	417	389	24	0	0.12	820.479	57.372	1448749.497	1387.901992	1387.901992
7	16	12	7.16.13	904	120	25	0	0.12	1023.22	66.732	1745892.942	1674.516464	1674.516464
7	16	13	7.16.14	889	118	25	0	0.12	951.456	63.83	1650593.297	1582.593664	1582.593664
7	16	14	7.16.15	863	110	26	0	0.12	818.64	59.455	1457101.251	1395.95781	1395.95781
7	16	15	7.16.16	820	99	25	0	0.12	639.622	51.195	1188570.283	1136.941962	1136.941962
7	16	16	7.16.17	749	85	24	0	0.12	427.411	41.48	818214.586	779.70944	779.70944
7	16	17	7.16.18	625	66	22	0.1	0.12	209.032	29.97	360915.868	338.614633	338.614633
7	16	18	7.16.19	387	38	20	0.4	0.12	32.673	21.126	52939.578	41.551168	41.551168
7	16	19	7.16.20	0	0	18	0.6	0.12	0	18	0	0	0
7	16	20	7.16.21	0	0	18	0.6	0.12	0	18	0	0	0
7	16	21	7.16.22	0	0	17	0.6	0.12	0	17	0	0	0
7	16	22	7.16.23	0	0	17	0.5	0.12	0	17	0	0	0
7	16	23	7.16.24	0	0	16	0.5	0.12	0	16	0	0	0
7	17	0	7.17.1	0	0	16	0.6	0.12	0	16	0	0	0
7	17	1	7.17.2	0	0	15	0.6	0.12	0	15	0	0	0
7	17	2	7.17.3	0	0	14	0.6	0.12	0	14	0	0	0
7	17	3	7.17.4	0	0	14	0.5	0.12	0	14	0	0	0
7	17	4	7.17.5	0	0	14	0.2	0.12	0	14	0	0	0
7	17	5	7.17.6	87	55	16	0	0.12	49.871	18.001	90883.515	78.150601	78.150601
7	17	6	7.17.7	629	70	20	0	0.12	228.986	29.091	408182.767	384.206679	384.206679
7	17	7	7.17.8	338	195	23	0	0.12	348.005	37.232	674741.156	641.319844	641.319844
7	17	8	7.17.9	361	271	24	0	0.12	508.722	44.775	958461.361	914.986714	914.986714
7	17	9	7.17.10	559	264	25	0	0.12	735.454	55.001	1326092.284	1269.591011	1269.591011
7	17	10	7.17.11	560	299	26	0	0.12	838.831	60.171	1471042.317	1409.404889	1409.404889
7	17	11	7.17.12	494	372	26	0	0.12	880.59	61.831	1526254.769	1462.660944	1462.660944
7	17	12	7.17.13	467	376	27	0	0.12	855.97	61.826	1483426.97	1421.350704	1421.350704
7	17	13	7.17.14	754	187	26	0	0.12	900.446	62.725	1567280.976	1502.23343	1502.23343
7	17	14	7.17.15	707	183	25	0	0.12	769.999	56.443	1384997.806	1326.409277	1326.409277
7	17	15	7.17.16	96	291	25	0	0.12	339.637	38.844	645647.341	613.256939	613.256939
7	17	16	7.17.17	556	143	24	0	0.12	392.491	40.047	753560.173	717.34599	717.34599
7	17	17	7.17.18	273	113	23	0	0.12	167.56	29.727	305933.775	285.580775	285.580775
7	17	18	7.17.19	0	38	21	0	0.12	34.786	22.411	63577.513	51.812159	51.812159
7	17	19	7.17.20	0	0	19	0	0.12	0	19	0	0	0
7	17	20	7.17.21	0	0	19	0	0.12	0	19	0	0	0
7	17	21	7.17.22	0	0	18	0	0.12	0	18	0	0	0
7	17	22	7.17.23	0	0	18	0	0.12	0	18	0	0	0
7	17	23	7.17.24	0	0	18	0	0.12	0	18	0	0	0
7	18	0	7.18.1	0	0	18	0	0.12	0	18	0	0	0
7	18	1	7.18.2	0	0	18	0	0.12	0	18	0	0	0
7	18	2	7.18.3	0	0	18	0	0.12	0	18	0	0	0
7	18	3	7.18.4	0	0	18	0	0.12	0	18	0	0	0
7	18	4	7.18.5	0	0	19	0	0.12	0	19	0	0	0
7	18	5	7.18.6	0	7	19	0	0.12	6.47	19.263	11151.895	1.244188	1.244188
7	18	6	7.18.7	0	58	20	0	0.12	53.817	22.203	103920.34	90.725479	90.725479
7	18	7	7.18.8	0	129	22	0	0.12	119.87	26.893	232262.395	214.519865	214.519865
7	18	8	7.18.9	75	292	23	0	0.12	328.666	36.39	629469.609	597.652448	597.652448
7	18	9	7.18.10	18	274	24	0	0.12	273.038	35.091	517189.633	489.350998	489.350998
7	18	10	7.18.11	22	309	25	0	0.12	313.133	37.703	586344.537	556.055468	556.055468
7	18	11	7.18.12	13	264	26	0	0.12	262.419	36.637	489491.261	462.634089	462.634089
7	18	12	7.18.13	13	257	26	0	0.12	255.629	36.363	477041.166	450.625151	450.625151
7	18	13	7.18.14	689	218	27	0	0.12	875.156	62.682	1522185.494	1458.735859	1458.735859
7	18	14	7.18.15	96	359	27	0	0.12	424.858	44.278	787194.638	749.788652	749.788652
7	18	15	7.18.16	13	218	26	0	0.12	212.434	34.65	403344.854	379.540192	379.540192
7	18	16	7.18.17	441	179	26	0	0.12	373.9	41.284	712779.314	678.010159	678.010159
7	18	17	7.18.18	271	134	25	0	0.12	185.535	32.464	338652.094	317.139754	317.139754
7	18	18	7.18.19	11	46	24	0	0.12	41.228	25.671	74569.039	62.414211	62.414211
7	18	19	7.18.20	0	0	23	0	0.12	0	23	0	0	0
7	18	20	7.18.21	0	0	22	0	0.12	0	22	0	0	0
7	18	21	7.18.22	0	0	22	0	0.12	0	22	0	0	0
7	18	22	7.18.23	0	0	22	0	0.12	0	22	0	0	0
7	18	23	7.18.24	0	0	22	0.1	0.12	0	22	0	0	0
7	19	0	7.19.1	0	0	22	0.2	0.12	0	22	0	0	0
7	19	1	7.19.2	0	0	21	0.3	0.12	0	21	0	0	0
7	19	2	7.19.3	0	0	21	0.3	0.12	0	21	0	0	0
7	19	3	7.19.4	0	0	21	0.4	0.12	0	21	0	0	0
7	19	4	7.19.5	0	0	21	0.3	0.12	0	21	0	0	0
7	19	5	7.19.6	162	52	23	0	0.12	47.822	24.894	80709.931	68.337508	68.337508
7	19	6	7.19.7	472	98	25	0	0.12	212.1	33.472	377888.82	354.986166	354.986166
7	19	7	7.19.8	606	126	28	0	0.12	414.054	44.949	783297.277	746.02939	746.02939
7	19	8	7.19.9	681	148	30	0	0.12	610.475	54.98	1112128.848	1063.209151	1063.209151
7	19	9	7.19.10	727	164	31	0	0.12	777.801	62.763	1360772.042	1303.041929	1303.041929
7	19	10	7.19.11	812	137	32	0	0.12	905.877	68.961	1534841.076	1470.943004	1470.943004
7	19	11	7.19.12	820	143	33	0	0.12	965.318	72.362	1605266.005	1538.872498	1538.872498
7	19	12	7.19.13	36	385	33	0	0.12	412.277	49.718	737887.768	702.228921	702.228921
7	19	13	7.19.14	291	383	33	0	0.12	659.521	59.828	1151719.133	1101.396594	1101.396594
7	19	14	7.19.15	12	239	33	0	0.12	234.4	42.523	428123.711	403.441035	403.441035
7	19	15	7.19.16	703	131	32	0	0.12	595.129	56.363	1079074.932	1031.326467	1031.326467
7	19	16	7.19.17	14	171	31	0	0.12	165.12	37.743	309827.254	289.336293	289.336293
7	19	17	7.19.18	17	111	29	0	0.12	105.694	33.319	198891.4	182.331337	182.331337
7	19	18	7.19.19	0	16	27	0	0.12	14.805	27.6	25214.97	14.808954	14.808954
7	19	19	7.19.20	0	0	25	0	0.13	0	25	0	0	0
7	19	20	7.19.21	0	0	24	0	0.13	0	24	0	0	0
7	19	21	7.19.22	0	0	24	0	0.13	0	24	0	0	0
7	19	22	7.19.23	0	0	23	0	0.13	0	23	0	0	0
7	19	23	7.19.24	0	0	23	0	0.13	0	23	0	0	0
7	20	0	7.20.1	0	0	23	0	0.13	0	23	0	0	0
7	20	1	7.20.2	0	0	22	0	0.13	0	22	0	0	0
7	20	2	7.20.3	0	0	22	0	0.13	0	22	0	0	0
7	20	3	7.20.4	0	0	22	0	0.13	0	22	0	0	0
7	20	4	7.20.5	0	0	22	0	0.13	0	22	0	0	0
7	20	5	7.20.6	255	51	24	0	0.13	47.668	25.858	76007.304	63.801513	63.801513
7	20	6	7.20.7	493	91	26	0	0.13	211.801	34.448	373955.144	351.191876	351.191876
7	20	7	7.20.8	631	116	29	0	0.13	415.883	46.025	783411.042	746.139124	746.139124
7	20	8	7.20.9	710	134	30	0	0.13	615.755	55.201	1121557.774	1072.303972	1072.303972
7	20	9	7.20.10	754	150	31	0	0.13	784.108	63.026	1371010.495	1312.917592	1312.917592
7	20	10	7.20.11	17	291	32	0	0.13	291.196	43.812	529977.94	501.686165	501.686165
7	20	11	7.20.12	822	146	32	0	0.13	970.462	71.571	1619571.674	1552.67126	1552.67126
7	20	12	7.20.13	234	428	33	0	0.13	670.253	60.231	1163506.234	1112.766032	1112.766032
7	20	13	7.20.14	780	160	33	0	0.13	898.312	69.647	1516590.473	1453.339093	1453.339093
7	20	14	7.20.15	99	365	32	0	0.13	433.566	49.633	785622.421	748.272145	748.272145
7	20	15	7.20.16	16	225	32	0	0.13	221.114	41.004	409275.357	385.260553	385.260553
7	20	16	7.20.17	616	118	31	0	0.13	397.28	47.244	740345.281	704.599354	704.599354
7	20	17	7.20.18	384	103	29	0	0.13	184.224	36.349	321095.658	300.205412	300.205412
7	20	18	7.20.19	48	47	27	0	0.13	39.66	28.604	70030.513	58.036504	58.036504
7	20	19	7.20.20	0	0	25	0	0.13	0	25	0	0	0
7	20	20	7.20.21	0	0	24	0	0.13	0	24	0	0	0
7	20	21	7.20.22	0	0	23	0	0.13	0	23	0	0	0
7	20	22	7.20.23	0	0	23	0	0.13	0	23	0	0	0
7	20	23	7.20.24	0	0	23	0.1	0.13	0	23	0	0	0
7	21	0	7.21.1	0	0	23	0.3	0.13	0	23	0	0	0
7	21	1	7.21.2	0	0	22	0.4	0.13	0	22	0	0	0
7	21	2	7.21.3	0	0	22	0.5	0.13	0	22	0	0	0
7	21	3	7.21.4	0	0	22	0.5	0.13	0	22	0	0	0
7	21	4	7.21.5	0	0	22	0.3	0.13	0	22	0	0	0
7	21	5	7.21.6	64	52	23	0	0.13	46.074	24.855	82069.882	69.64927	69.64927
7	21	6	7.21.7	0	66	25	0	0.13	61.283	27.508	116257.808	102.625781	102.625781
7	21	7	7.21.8	0	95	27	0	0.13	88.301	30.605	166252.996	150.849441	150.849441

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

													Reference Case	Adjusted Case
													3,025,628	3,025,628
Month	Day		Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
7	21	8	7.21.9	261	292	29	0	0.13	461.862	47.85	855482.407	815.656714	815.656714
7	21	9	7.21.10	98	371	30	0	0.13	440.374	47.907	803696.333	765.705627	765.705627
7	21	10	7.21.11	278	419	31	0	0.13	686.867	58.931	1203291.281	1151.141337	1151.141337
7	21	11	7.21.12	26	333	32	0	0.13	350.666	46.218	634130.54	602.148223	602.148223
7	21	12	7.21.13	842	134	32	0	0.13	976.139	71.808	1627947.127	1560.749937	1560.749937
7	21	13	7.21.14	821	135	32	0	0.13	905.445	68.948	1534968.495	1471.065908	1471.065908
7	21	14	7.21.15	780	134	32	0	0.13	778.712	63.817	1358448.785	1300.800993	1300.800993
7	21	15	7.21.16	719	127	31	0	0.13	601.373	55.621	1094488.982	1046.194335	1046.194335
7	21	16	7.21.17	619	115	30	0	0.13	395.464	46.17	740265.045	704.521961	704.521961
7	21	17	7.21.18	354	101	27	0	0.13	175.161	33.993	308610.033	288.162202	288.162202
7	21	18	7.21.19	0	29	25	0	0.13	26.889	26.089	47418.114	36.225352	36.225352
7	21	19	7.21.20	0	0	23	0	0.13	0	23	0	0	0
7	21	20	7.21.21	0	0	21	0	0.13	0	21	0	0	0
7	21	21	7.21.22	0	0	21	0	0.13	0	21	0	0	0
7	21	22	7.21.23	0	0	20	0	0.13	0	20	0	0	0
7	21	23	7.21.24	0	0	19	0	0.13	0	19	0	0	0
7	22	0	7.22.1	0	0	18	0	0.13	0	18	0	0	0
7	22	1	7.22.2	0	0	17	0	0.13	0	17	0	0	0
7	22	2	7.22.3	0	0	17	0	0.13	0	17	0	0	0
7	22	3	7.22.4	0	0	16	0	0.13	0	16	0	0	0
7	22	4	7.22.5	0	0	16	0	0.13	0	16	0	0	0
7	22	5	7.22.6	407	39	18	0	0.13	41.056	19.538	59606.246	47.981609	47.981609
7	22	6	7.22.7	649	64	20	0	0.13	224.912	28.904	397198.789	373.611906	373.611906
7	22	7	7.22.8	775	78	23	0	0.13	446.434	41.281	860211.345	820.218087	820.218087
7	22	8	7.22.9	846	88	25	0	0.13	657.892	51.944	1219011.988	1166.304996	1166.304996
7	22	9	7.22.10	887	96	26	0	0.13	835.686	60.154	1483083.635	1421.019535	1421.019535
7	22	10	7.22.11	911	101	27	0	0.13	962.686	66.293	1652121.16	1584.067388	1584.067388
7	22	11	7.22.12	921	103	27	0	0.13	1026.013	68.853	1734770.794	1663.788418	1663.788418
7	22	12	7.22.13	920	103	28	0	0.13	1022.423	69.707	1722222.321	1651.684587	1651.684587
7	22	13	7.22.14	885	115	28	0	0.13	945.075	66.574	1620117.819	1553.198053	1553.198053
7	22	14	7.22.15	859	109	28	0	0.13	814.176	61.277	1438139.634	1377.668078	1377.668078
7	22	15	7.22.16	815	98	27	0	0.13	634.4	52.984	1170385.118	1119.40117	1119.40117
7	22	16	7.22.17	740	85	26	0	0.13	421.414	43.233	800272.645	762.403253	762.403253
7	22	17	7.22.18	607	67	25	0	0.13	203.187	32.998	345036.105	323.297554	323.297554
7	22	18	7.22.19	348	37	22	0	0.13	29.318	23.171	50047.17	38.761249	38.761249
7	22	19	7.22.20	0	0	20	0	0.13	0	20	0	0	0
7	22	20	7.22.21	0	0	19	0	0.13	0	19	0	0	0
7	22	21	7.22.22	0	0	18	0	0.13	0	18	0	0	0
7	22	22	7.22.23	0	0	18	0	0.13	0	18	0	0	0
7	22	23	7.22.24	0	0	17	0	0.13	0	17	0	0	0
7	23	0	7.23.1	0	0	17	0	0.13	0	17	0	0	0
7	23	1	7.23.2	0	0	16	0	0.13	0	16	0	0	0
7	23	2	7.23.3	0	0	16	0	0.13	0	16	0	0	0
7	23	3	7.23.4	0	0	15	0	0.13	0	15	0	0	0
7	23	4	7.23.5	0	0	16	0	0.13	0	16	0	0	0
7	23	5	7.23.6	392	40	18	0	0.13	41.021	19.549	60855.592	49.186687	49.186687
7	23	6	7.23.7	631	68	20	0	0.13	223.417	28.85	395325.399	371.804898	371.804898
7	23	7	7.23.8	754	86	23	0	0.13	443.806	41.172	855118.653	815.305849	815.305849
7	23	8	7.23.9	824	98	24	0	0.13	654.388	50.798	1217969.119	1165.29908	1165.29908
7	23	9	7.23.10	866	106	25	0	0.13	828.131	58.843	1477869.157	1415.989826	1415.989826
7	23	10	7.23.11	894	109	26	0	0.13	954.717	64.966	1648207.255	1580.292169	1580.292169
7	23	11	7.23.12	901	113	27	0	0.13	1016.226	68.451	1721320.387	1650.814611	1650.814611
7	23	12	7.23.13	895	116	28	0	0.13	1010.778	69.229	1706199.213	1636.229241	1636.229241
7	23	13	7.23.14	874	118	28	0	0.13	937.798	66.276	1609911.889	1543.35376	1543.35376
7	23	14	7.23.15	839	116	28	0	0.13	804.706	60.888	1423664.452	1363.70581	1363.70581
7	23	15	7.23.16	782	111	27	0	0.13	625.663	52.623	1155351.696	1104.900442	1104.900442
7	23	16	7.23.17	690	99	26	0	0.13	411.326	42.819	781799.152	744.584349	744.584349
7	23	17	7.23.18	549	77	24	0	0.13	198.624	31.844	342163.429	320.526668	320.526668
7	23	18	7.23.19	299	40	21	0	0.13	31.576	22.268	55406.487	43.930664	43.930664
7	23	19	7.23.20	0	0	19	0	0.13	0	19	0	0	0
7	23	20	7.23.21	0	0	18	0	0.13	0	18	0	0	0
7	23	21	7.23.22	0	0	17	0	0.13	0	17	0	0	0
7	23	22	7.23.23	0	0	17	0	0.13	0	17	0	0	0
7	23	23	7.23.24	0	0	16	0	0.13	0	16	0	0	0
7	24	0	7.24.1	0	0	16	0	0.13	0	16	0	0	0
7	24	1	7.24.2	0	0	15	0	0.13	0	15	0	0	0
7	24	2	7.24.3	0	0	15	0	0.13	0	15	0	0	0
7	24	3	7.24.4	0	0	15	0	0.13	0	15	0	0	0
7	24	4	7.24.5	0	0	15	0	0.13	0	15	0	0	0
7	24	5	7.24.6	361	41	17	0	0.13	40.678	18.551	62356.348	50.634264	50.634264
7	24	6	7.24.7	608	69	21	0	0.13	217.894	29.633	384273.058	361.144185	361.144185
7	24	7	7.24.8	738	86	23	0	0.13	435.673	40.838	840166.564	800.883572	800.883572
7	24	8	7.24.9	814	96	25	0	0.13	645.261	51.425	1197838.299	1145.881575	1145.881575
7	24	9	7.24.10	861	103	26	0	0.13	820.713	59.542	1460441.418	1399.179622	1399.179622
7	24	10	7.24.11	891	104	27	0	0.13	946.71	65.642	1629907.946	1562.641277	1562.641277
7	24	11	7.24.12	900	108	28	0	0.13	1010.132	69.204	1705588.464	1635.640133	1635.640133
7	24	12	7.24.13	894	112	28	0	0.13	1005.725	69.025	1699676.254	1629.937416	1629.937416
7	24	13	7.24.14	440	346	28	0	0.13	769.31	59.324	1352160.752	1294.735771	1294.735771
7	24	14	7.24.15	96	360	28	0	0.13	426.639	45.352	787311.218	749.901101	749.901101
7	24	15	7.24.16	515	205	27	0	0.13	542.07	49.169	1009053.897	963.786555	963.786555
7	24	16	7.24.17	291	189	26	0	0.13	312.314	38.764	598282.412	567.570338	567.570338
7	24	17	7.24.18	530	79	24	0	0.13	195.6	31.729	337609.711	316.134306	316.134306
7	24	18	7.24.19	41	42	22	0.3	0.13	35.333	23.296	63451.874	51.690971	51.690971
7	24	19	7.24.20	0	0	20	0.5	0.13	0	20	0	0	0
7	24	20	7.24.21	0	0	20	0.4	0.13	0	20	0	0	0
7	24	21	7.24.22	0	0	19	0.3	0.13	0	19	0	0	0
7	24	22	7.24.23	0	0	18	0.2	0.13	0	18	0	0	0
7	24	23	7.24.24	0	0	17	0.1	0.13	0	17	0	0	0
7	25	0	7.25.1	0	0	17	0	0.13	0	17	0	0	0
7	25	1	7.25.2	0	0	16	0	0.13	0	16	0	0	0
7	25	2	7.25.3	0	0	16	0	0.13	0	16	0	0	0
7	25	3	7.25.4	0	0	15	0	0.13	0	15	0	0	0
7	25	4	7.25.5	0	0	16	0	0.13	0	16	0	0	0
7	25	5	7.25.6	377	39	18	0	0.13	38.686	19.47	58306.617	46.728032	46.728032
7	25	6	7.25.7	625	65	20	0	0.13	217.715	28.615	383933.115	360.816288	360.816288
7	25	7	7.25.8	753	81	23	0	0.13	437.206	40.901	843003.347	803.619836	803.619836
7	25	8	7.25.9	333	272	25	0	0.13	490.418	45.028	922645.323	880.439781	880.439781
7	25	9	7.25.10	870	99	27	0	0.13	823.85	60.672	1459050.791	1397.838271	1397.838271
7	25	10	7.25.11	872	118	28	0	0.13	942.92	66.483	1616775.183	1549.97386	1549.97386
7	25	11	7.25.12	872	127	29	0	0.13	1001.406	69.843	1685393.593	1616.160846	1616.160846
7	25	12	7.25.13	493	365	29	0	0.13	872.606	64.512	1495427.648	1432.926151	1432.926151
7	25	13	7.25.14	167	426	29	0	0.13	580.753	52.601	1041708.251	995.283836	995.283836
7	25	14	7.25.15	0	127	28	0	0.13	118.552	32.815	219680.413	202.383713	202.383713
7	25	15	7.25.16	289	274	27	0	0.13	457.491	45.683	857070.897	817.188917	817.188917
7	25	16	7.25.17	90	201	26	0	0.13	228.872	35.35	439819.93	414.722811	414.722811
7	25	17	7.25.18	222	111	25	0	0.13	152.463	31.131	277264.368	257.927239	257.927239
7	25	18	7.25.19	0	36	23	0	0.13	32.713	24.322	58197.609	46.622887	46.622887
7	25	19	7.25.20	0	0	21	0	0.13	0	21	0	0	0
7	25	20	7.25.21	0	0	20	0	0.13	0	20	0	0	0
7	25	21	7.25.22	0	0	19	0	0.13	0	19	0	0	0
7	25	22	7.25.23	0	0	18	0	0.13	0	18	0	0	0
7	25	23	7.25.24	0	0	18	0	0.13	0	18	0	0	0
7	26	0	7.26.1	0	0	18	0	0.13	0	18	0	0	0
7	26	1	7.26.2	0	0	18	0	0.13	0	18	0	0	0
7	26	2	7.26.3	0	0	18	0	0.13	0	18	0	0	0
7	26	3	7.26.4	0	0	18	0	0.13	0	18	0	0	0
7	26	4	7.26.5	0	0	18	0	0.13	0	18	0	0	0
7	26	5	7.26.6	0	36	19	0	0.13	33.132	20.344	60916.566	49.2455	49.2455
7	26	6	7.26.7	0	45	21	0	0.13	41.733	22.708	79498.54	67.169041	67.169041
7	26	7	7.26.8	17	176	23	0	0.13	171.725	30.013	333558.937	312.227067	312.227067
7	26	8	7.26.9	91	291	25	0	0.13	338.905	38.813	644160.984	611.823249	611.823249
7	26	9	7.26.10	57	342	26	0	0.13	378.226	41.375	706264.475	671.726166	671.726166
7	26	10	7.26.11	55	388	27	0	0.13	430.916	44.491	792419.874	754.828737	754.828737
7	26	11	7.26.12	318	429	27	0	0.13	757.034	57.776	1332185.736	1275.468548	1275.468548
7	26	12	7.26.13	103	447	27	0	0.13	542.678	49.025	982855.551	938.516521	938.516521
7	26	13	7.26.14	43	369	27	0	0.13	400.046	43.237	738139.449	702.471684	702.471684
7	26	14	7.26.15	239	360	27	0	0.13	549.419	49.376	1006327.299	961.156571	961.156571
7	26	15	7.26.16	390	283	27	0	0.13	531.746	48.727	987919.069	943.400618	943.400618
7	26	16	7.26.17	0	115	26	0	0.13	106.883	30.366	203533.015	186.808481	186.808481
7	26	17	7.26.18	0	98	25	0	0.13	90.098	28.688	173008.851	157.36591	157.36591
7	26	18	7.26.19	0	5	24	0	0.13	4.621	24.186	7406.468	0	0
7	26	19	7.26.20	0	0	23	0	0.13	0	23	0	0	0
7	26	20	7.26.21	0	0	22	0	0.13	0	22	0	0	0
7	26	21	7.26.22	0	0	22	0	0.13	0	22	0	0	0
7	26	22	7.26.23	0	0	21	0	0.13	0	21	0	0	0
7	26	23	7.26.24	0	0	21	0	0.13	0	21	0	0	0
7	27	0	7.27.1	0	0	21	0	0.13	0	21	0	0	0
7	27	1	7.27.2	0	0	21	0	0.13	0	21	0	0	0
7	27	2	7.27.3	0	0	21	0	0.13	0	21	0	0	0
7	27	3	7.27.4	0	0	21	0	0.13	0	21	0	0	0
7	27	4	7.27.5	0	0	21	0	0.13	0	21	0	0	0
7	27	5	7.27.6	0	38	21	0	0.13	34.743	22.408	63300.245	51.544716	51.544716
7	27	6	7.27.7	0	98	22	0	0.13	90.323	25.697	175734.377	159.99486	159.99486
7	27	7	7.27.8	64	202	22	0	0.13	219.764	30.978	429437.382	404.708158	404.708158
7	27	8	7.27.9	28	248	24	0	0.13	255.278	34.397	488684.427	461.855845	461.855845
7	27	9	7.27.10	80	357	25	0	0.13	412.264	41.763	771008.714	734.17626	734.17626
7	27	10	7.27.11	236	421	26	0	0.13	642.509	52.124	1158299.978	1107.744255	1107.744255
7	27	11	7.27.12	144	456	27	0	0.13	602.564	51.464	1082951.989	1035.066144	1035.066144
7	27	12	7.27.13	233	438	27	0	0.13	671.98	54.305	1197783.314	1145.828539	1145.828539
7	27	13	7.27.14	678	224	27	0	0.13	871.684	62.544	1517674.216	1454.384434	1454.384434
7	27	14	7.27.15	645	209	27	0	0.13	745.09	57.423	1334015.276	1277.233261	1277.233261

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
7	27	15	7.27.16	598	181	27	0	0.13	574.28	50.499	1065846.985	1018.567238	1018.567238
7	27	16	7.27.17	484	158	26	0	0.13	371.5	41.185	708303.993	673.693416	673.693416
7	27	17	7.27.18	152	114	25	0	0.13	138.705	30.603	255937.126	237.355706	237.355706
7	27	18	7.27.19	0	19	24	0	0.13	17.596	24.709	30092.864	19.514004	19.514004
7	27	19	7.27.20	0	0	22	0	0.12	0	22	0	0	0
7	27	20	7.27.21	0	0	22	0	0.12	0	22	0	0	0
7	27	21	7.27.22	0	0	22	0	0.12	0	22	0	0	0
7	27	22	7.27.23	0	0	22	0	0.12	0	22	0	0	0
7	27	23	7.27.24	0	0	21	0	0.12	0	21	0	0	0
7	28	0	7.28.1	0	0	21	0.1	0.12	0	21	0	0	0
7	28	1	7.28.2	0	0	20	0.1	0.12	0	20	0	0	0
7	28	2	7.28.3	0	0	20	0.1	0.12	0	20	0	0	0
7	28	3	7.28.4	0	0	19	0.1	0.12	0	19	0	0	0
7	28	4	7.28.5	0	0	20	0	0.12	0	20	0	0	0
7	28	5	7.28.6	239	45	21	0	0.12	39.225	22.542	64621.579	52.81923	52.81923
7	28	6	7.28.7	506	85	23	0	0.12	205.227	31.16	363136.452	340.756533	340.756533
7	28	7	7.28.8	659	106	26	0	0.12	415.477	43.007	792412.209	754.821343	754.821343
7	28	8	7.28.9	742	121	29	0	0.12	620.838	54.42	1136617.712	1086.830277	1086.830277
7	28	9	7.28.10	789	133	31	0	0.12	794.38	63.458	1388242.726	1329.539216	1329.539216
7	28	10	7.28.11	829	133	32	0	0.12	917.136	69.429	1551691.739	1487.196581	1487.196581
7	28	11	7.28.12	835	140	33	0	0.12	977.306	72.859	1622339.775	1555.341276	1555.341276
7	28	12	7.28.13	298	407	33	0	0.12	714.013	62.029	1233084.998	1179.879344	1179.879344
7	28	13	7.28.14	427	348	33	0	0.12	759.511	63.926	1308000.444	1252.140238	1252.140238
7	28	14	7.28.15	450	289	32	0	0.12	662.9	59.039	1173300.881	1122.213615	1122.213615
7	28	15	7.28.16	545	191	31	0	0.12	546.888	53.375	1001244.537	956.253912	956.253912
7	28	16	7.28.17	393	166	30	0	0.12	337.913	43.811	635347.699	603.322254	603.322254
7	28	17	7.28.18	434	91	29	0.1	0.12	181.46	35.967	310696.969	290.17519	290.17519
7	28	18	7.28.19	0	33	27	0.4	0.12	30.086	28.067	51793.77	40.445961	40.445961
7	28	19	7.28.20	0	0	25	0.6	0.12	0	25	0	0	0
7	28	20	7.28.21	0	0	24	0.6	0.12	0	24	0	0	0
7	28	21	7.28.22	0	0	24	0.6	0.12	0	24	0	0	0
7	28	22	7.28.23	0	0	23	0.6	0.12	0	23	0	0	0
7	28	23	7.28.24	0	0	22	0.5	0.12	0	22	0	0	0
7	29	0	7.29.1	0	0	21	0.4	0.12	0	21	0	0	0
7	29	1	7.29.2	0	0	21	0.2	0.12	0	21	0	0	0
7	29	2	7.29.3	0	0	20	0.1	0.12	0	20	0	0	0
7	29	3	7.29.4	0	0	20	0	0.12	0	20	0	0	0
7	29	4	7.29.5	0	0	21	0	0.12	0	21	0	0	0
7	29	5	7.29.6	95	44	23	0	0.12	37.439	24.5	64967.283	53.152684	53.152684
7	29	6	7.29.7	543	75	26	0	0.12	204.369	34.104	353832.324	331.782088	331.782088
7	29	7	7.29.8	293	192	30	0	0.12	321.779	43.158	606959.325	575.939793	575.939793
7	29	8	7.29.9	537	199	32	0	0.12	559.376	54.879	1016662.889	971.125931	971.125931
7	29	9	7.29.10	561	255	33	0	0.12	727.612	62.692	1269846.679	1215.338412	1215.338412
7	29	10	7.29.11	511	326	34	0	0.12	820.725	67.431	1392892.177	1334.023919	1334.023919
7	29	11	7.29.12	472	367	34	0	0.12	855.804	68.828	1438162.675	1377.690304	1377.690304
7	29	12	7.29.13	492	362	35	0	0.12	869.076	70.373	1450620.949	1389.707132	1389.707132
7	29	13	7.29.14	389	354	34	0	0.12	722.92	63.432	1246933.113	1193.236765	1193.236765
7	29	14	7.29.15	731	160	34	0	0.12	765.316	65.268	1326080.52	1269.579665	1269.579665
7	29	15	7.29.16	670	147	33	0	0.12	586.831	57.026	1061166.433	1014.052537	1014.052537
7	29	16	7.29.17	573	126	32	0	0.12	381.747	47.605	708847.699	674.217857	674.217857
7	29	17	7.29.18	419	93	30	0	0.12	179.359	37.12	306043.3	285.686419	285.686419
7	29	18	7.29.19	166	40	27	0.1	0.12	30.188	28.175	51681.409	40.337581	40.337581
7	29	19	7.29.20	0	0	25	0.1	0.12	0	25	0	0	0
7	29	20	7.29.21	0	0	24	0	0.12	0	24	0	0	0
7	29	21	7.29.22	0	0	24	0	0.12	0	24	0	0	0
7	29	22	7.29.23	0	0	23	0	0.12	0	23	0	0	0
7	29	23	7.29.24	0	0	23	0	0.12	0	23	0	0	0
7	30	0	7.30.1	0	0	23	0	0.12	0	23	0	0	0
7	30	1	7.30.2	0	0	22	0	0.12	0	22	0	0	0
7	30	2	7.30.3	0	0	22	0	0.12	0	22	0	0	0
7	30	3	7.30.4	0	0	22	0	0.12	0	22	0	0	0
7	30	4	7.30.5	0	0	22	0	0.12	0	22	0	0	0
7	30	5	7.30.6	83	46	24	0	0.12	40.024	25.607	69848.51	57.860949	57.860949
7	30	6	7.30.7	201	116	26	0	0.12	156.312	32.307	286542.597	266.876703	266.876703
7	30	7	7.30.8	85	203	27	0	0.12	230.51	36.419	441383.031	416.230525	416.230525
7	30	8	7.30.9	139	294	28	0	0.12	378.392	43.433	709152.557	674.511912	674.511912
7	30	9	7.30.10	163	371	29	0	0.12	501.599	49.414	914945.504	873.012797	873.012797
7	30	10	7.30.11	161	427	30	0	0.12	578.716	53.518	1033855.218	987.709067	987.709067
7	30	11	7.30.12	289	435	29	0	0.12	735.051	58.88	1286748.738	1231.641564	1231.641564
7	30	12	7.30.13	476	322	29	0	0.12	813.25	62.106	1410666.96	1351.168871	1351.168871
7	30	13	7.30.14	198	406	29	0	0.12	590.102	52.992	1058726.715	1011.699268	1011.699268
7	30	14	7.30.15	41	316	28	0	0.12	338.88	41.777	630165.132	598.323325	598.323325
7	30	15	7.30.16	0	132	27	0	0.12	123.065	32.012	231438.859	213.72551	213.72551
7	30	16	7.30.17	0	59	26	0	0.12	54.761	28.237	102236.385	89.101193	89.101193
7	30	17	7.30.18	0	57	25	0	0.12	52.891	27.165	99819.838	86.770274	86.770274
7	30	18	7.30.19	0	3	24	0	0.12	2.771	24.111	4237.012	0	0
7	30	19	7.30.20	0	0	24	0	0.12	0	24	0	0	0
7	30	20	7.30.21	0	0	23	0	0.12	0	23	0	0	0
7	30	21	7.30.22	0	0	23	0	0.12	0	23	0	0	0
7	30	22	7.30.23	0	0	22	0	0.12	0	22	0	0	0
7	30	23	7.30.24	0	0	21	0	0.12	0	21	0	0	0
7	31	0	7.31.1	0	0	20	0	0.12	0	20	0	0	0
7	31	1	7.31.2	0	0	20	0	0.12	0	20	0	0	0
7	31	2	7.31.3	0	0	19	0	0.12	0	19	0	0	0
7	31	3	7.31.4	0	0	19	0	0.12	0	19	0	0	0
7	31	4	7.31.5	0	0	19	0	0.12	0	19	0	0	0
7	31	5	7.31.6	305	39	20	0	0.12	34.739	21.358	56275.391	44.76878	44.76878
7	31	6	7.31.7	571	73	22	0	0.12	208.209	30.243	364740.315	342.303566	342.303566
7	31	7	7.31.8	716	91	24	0	0.12	426.442	41.456	819243.024	780.701437	780.701437
7	31	8	7.31.9	801	101	27	0	0.12	638.912	53.17	1177959.999	1126.707642	1126.707642
7	31	9	7.31.10	850	108	28	0	0.12	814.84	61.307	1439606.599	1379.083063	1379.083063
7	31	10	7.31.11	886	107	29	0	0.12	944.003	67.537	1612288.335	1545.645999	1545.645999
7	31	11	7.31.12	902	106	30	0	0.12	1009.363	71.181	1689939.835	1620.545997	1620.545997
7	31	12	7.31.13	906	104	31	0	0.12	1008.57	72.15	1681331.727	1612.242908	1612.242908
7	31	13	7.31.14	892	104	31	0	0.12	938.681	69.325	1590962.015	1525.075355	1525.075355
7	31	14	7.31.15	866	98	30	0	0.12	805.643	62.94	1414485.614	1354.852215	1354.852215
7	31	15	7.31.16	822	90	30	0	0.12	624.666	55.597	1141147.483	1091.19954	1091.19954
7	31	16	7.31.17	746	78	29	0	0.12	411.042	45.802	770562.749	733.746096	733.746096
7	31	17	7.31.18	610	60	26	0	0.12	190.538	33.457	316212.201	295.494995	295.494995
7	31	18	7.31.19	325	30	23	0.1	0.12	22.418	23.869	38108.513	27.245627	27.245627
7	31	19	7.31.20	0	0	23	0	0.12	0	23	0	0	0
7	31	20	7.31.21	0	0	22	0	0.12	0	22	0	0	0
7	31	21	7.31.22	0	0	22	0	0.12	0	22	0	0	0
7	31	22	7.31.23	0	0	22	0	0.12	0	22	0	0	0
7	31	23	7.31.24	0	0	22	0	0.12	0	22	0	0	0
8	1	0	8.1.1	0	0	22	0	0.12	0	22	0	0	0
8	1	1	8.1.2	0	0	22	0	0.12	0	22	0	0	0
8	1	2	8.1.3	0	0	22	0	0.12	0	22	0	0	0
8	1	3	8.1.4	0	0	22	0	0.12	0	22	0	0	0
8	1	4	8.1.5	0	0	22	0	0.12	0	22	0	0	0
8	1	5	8.1.6	23	42	24	0	0.12	37.108	25.496	65606.04	53.768807	53.768807
8	1	6	8.1.7	207	114	26	0	0.12	155.63	32.275	284563.88	264.9681	264.9681
8	1	7	8.1.8	375	174	29	0	0.12	345.157	43.118	653091.572	620.43739	620.43739
8	1	8	8.1.9	360	259	30	0	0.12	495.374	50.241	913346.736	871.47068	871.47068
8	1	9	8.1.10	140	368	31	0	0.12	479.993	50.532	870144.171	829.798953	829.798953
8	1	10	8.1.11	425	350	32	0	0.12	764.327	63.122	1321031.138	1264.709202	1264.709202
8	1	11	8.1.12	455	367	32	0	0.12	839.39	66.16	1428044.799	1367.930944	1367.930944
8	1	12	8.1.13	395	387	32	0	0.12	790.381	64.156	1355712.556	1298.161719	1298.161719
8	1	13	8.1.14	407	354	32	0	0.12	747.137	62.422	1295324.377	1239.913334	1239.913334
8	1	14	8.1.15	315	337	32	0	0.12	594.739	56.24	1061591.986	1014.463011	1014.463011
8	1	15	8.1.16	34	245	31	0	0.12	255.864	41.427	476542.208	450.143873	450.143873
8	1	16	8.1.17	0	47	30	0	0.12	43.601	31.781	79224.991	66.905184	66.905184
8	1	17	8.1.18	86	109	29	0	0.12	118.779	33.819	218174.122	200.930795	200.930795
8	1	18	8.1.19	0	23	28	0	0.12	21.315	28.852	34966.869	24.215303	24.215303
8	1	19	8.1.20	0	0	27	0	0.12	0	27	0	0	0
8	1	20	8.1.21	0	0	27	0	0.12	0	27	0	0	0
8	1	21	8.1.22	0	0	26	0	0.12	0	26	0	0	0
8	1	22	8.1.23	0	0	26	0	0.12	0	26	0	0	0
8	1	23	8.1.24	0	0	26	0	0.12	0	26	0	0	0
8	2	0	8.2.1	0	0	26	0	0.12	0	26	0	0	0
8	2	1	8.2.2	0	0	25	0	0.12	0	25	0	0	0
8	2	2	8.2.3	0	0	25	0	0.12	0	25	0	0	0
8	2	3	8.2.4	0	0	25	0	0.12	0	25	0	0	0
8	2	4	8.2.5	0	0	25	0	0.12	0	25	0	0	0
8	2	5	8.2.6	183	43	26	0	0.12	35.148	27.398	58565.264	46.977514	46.977514
8	2	6	8.2.7	446	92	28	0	0.12	193.523	35.705	336609.479	315.169517	315.169517
8	2	7	8.2.8	601	120	30	0	0.12	400.073	46.372	750954.457	714.832604	714.832604
8	2	8	8.2.9	693	138	31	0	0.12	604.541	55.751	1099809.367	1051.326198	1051.326198
8	2	9	8.2.10	749	149	32	0	0.12	776.727	63.736	1355576.381	1298.03037	1298.03037
8	2	10	8.2.11	760	168	33	0	0.12	893.709	69.464	1510890.207	1447.84081	1447.84081
8	2	11	8.2.12	755	185	33	0	0.12	950.647	71.759	1585025.508	1519.349202	1519.349202
8	2	12	8.2.13	736	197	34	0	0.12	946.4	72.582	1571425.954	1506.231535	1506.231535
8	2	13	8.2.14	674	220	33	0	0.12	863.248	68.207	1466078.079	1404.616553	1404.616553
8	2	14	8.2.15	627	212	33	0	0.12	731.902	62.889	1279670.238	1224.813883	1224.813883
8	2	15	8.2.16	567	188	32	0	0.12	556.214	54.763	1013528.057	968.102178	968.102178
8	2	16	8.2.17	336	171	31	0	0.12	313.02	43.792	586930.413	556.620585	556.620585
8	2	17	8.2.18	0	64	29	0	0.12	59.313	31.428	110343.688	96.921223	96.921223
8	2	18	8.2.19	0	23	27	0	0.12	21.317	27.849	34772.304	24.027633	24.027633
8	2	19	8.2.20	0	0	27	0	0.12	0	27	0	0	0
8	2	20	8.2.21	0	0	27	0	0.12	0	27	0	0	0
8	2	21	8.2.22	0	0	26	0	0.12	0	26	0	0	0

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
8	2	22	8.2.23	0	0	26	0	0.12	0	26	0	0	0
8	2	23	8.2.24	0	0	25	0	0.12	0	25	0	0	0
8	3	0	8.3.1	0	0	25	0	0.12	0	25	0	0	0
8	3	1	8.3.2	0	0	25	0	0.12	0	25	0	0	0
8	3	2	8.3.3	0	0	24	0	0.12	0	24	0	0	0
8	3	3	8.3.4	0	0	24	0	0.12	0	24	0	0	0
8	3	4	8.3.5	0	0	24	0	0.12	0	24	0	0	0
8	3	5	8.3.6	221	39	25	0	0.12	31.94	26.266	52644.327	41.266379	41.266379
8	3	6	8.3.7	505	78	27	0	0.12	195.478	34.752	336996.617	315.542937	315.542937
8	3	7	8.3.8	657	101	29	0	0.12	407.066	45.661	767074.928	730.381863	730.381863
8	3	8	8.3.9	739	117	30	0	0.12	613.016	55.106	1119839.716	1070.646792	1070.646792
8	3	9	8.3.10	773	136	31	0	0.12	783.24	63.007	1372233.924	1314.09767	1314.09767
8	3	10	8.3.11	751	175	32	0	0.12	892.237	68.403	1515631.151	1452.413763	1452.413763
8	3	11	8.3.12	741	194	31	0	0.12	945.67	69.555	1592732.904	1526.783494	1526.783494
8	3	12	8.3.13	361	377	31	0	0.12	746.729	61.378	1296512.244	1241.059111	1241.059111
8	3	13	8.3.14	338	384	30	0	0.12	706.368	58.751	1242772.849	1189.223915	1189.223915
8	3	14	8.3.15	0	44	30	0	0.12	40.906	31.662	72591.176	60.506432	60.506432
8	3	15	8.3.16	406	236	29	0	0.12	499.173	49.41	926123.873	883.795072	883.795072
8	3	16	8.3.17	313	174	28	0	0.12	305.395	40.48	580270.125	550.196297	550.196297
8	3	17	8.3.18	7	95	27	0	0.12	88.803	30.631	168268.278	152.793313	152.793313
8	3	18	8.3.19	0	4	26	0.1	0.12	3.695	26.142	5453.697	0	0
8	3	19	8.3.20	0	0	26	0.2	0.12	0	26	0	0	0
8	3	20	8.3.21	0	0	25	0.2	0.12	0	25	0	0	0
8	3	21	8.3.22	0	0	25	0.2	0.12	0	25	0	0	0
8	3	22	8.3.23	0	0	24	0.2	0.12	0	24	0	0	0
8	3	23	8.3.24	0	0	24	0.2	0.12	0	24	0	0	0
8	4	0	8.4.1	0	0	24	0.2	0.12	0	24	0	0	0
8	4	1	8.4.2	0	0	23	0.1	0.12	0	23	0	0	0
8	4	2	8.4.3	0	0	23	0	0.12	0	23	0	0	0
8	4	3	8.4.4	0	0	23	0	0.12	0	23	0	0	0
8	4	4	8.4.5	0	0	23	0	0.12	0	23	0	0	0
8	4	5	8.4.6	0	2	23	0	0.12	1.847	23.074	2805.835	0	0
8	4	6	8.4.7	38	110	24	0	0.12	110.329	28.499	210789.341	193.807686	193.807686
8	4	7	8.4.8	190	199	26	0	0.12	277.75	37.355	534059.537	505.623134	505.623134
8	4	8	8.4.9	616	167	27	0	0.12	581.973	50.819	1079727.232	1031.955653	1031.955653
8	4	9	8.4.10	0	32	28	0	0.12	29.744	29.208	52524.196	41.150505	41.150505
8	4	10	8.4.11	14	269	29	0	0.12	267.657	39.861	494725.958	467.6833	467.6833
8	4	11	8.4.12	182	450	29	0	0.12	635.901	54.832	1129317.4	1079.788645	1079.788645
8	4	12	8.4.13	438	367	29	0	0.12	821.238	62.423	1421211.291	1361.339574	1361.339574
8	4	13	8.4.14	497	319	28	0	0.12	795.831	60.425	1395262.851	1336.31059	1336.31059
8	4	14	8.4.15	793	123	27	0	0.12	773.503	58.621	1383627.127	1325.087167	1325.087167
8	4	15	8.4.16	763	103	26	0	0.12	598.414	50.52	1116770.92	1067.686736	1067.686736
8	4	16	8.4.17	532	126	26	0	0.12	357.705	40.617	682214.203	648.528092	648.528092
8	4	17	8.4.18	555	63	25	0.1	0.12	177.574	31.724	295846.947	275.851363	275.851363
8	4	18	8.4.19	252	28	23	0.3	0.12	21.287	23.763	34369.33	23.638938	23.638938
8	4	19	8.4.20	0	0	22	0.3	0.12	0	22	0	0	0
8	4	20	8.4.21	0	0	22	0.2	0.12	0	22	0	0	0
8	4	21	8.4.22	0	0	21	0	0.12	0	21	0	0	0
8	4	22	8.4.23	0	0	21	0	0.12	0	21	0	0	0
8	4	23	8.4.24	0	0	20	0	0.12	0	20	0	0	0
8	5	0	8.5.1	0	0	20	0	0.12	0	20	0	0	0
8	5	1	8.5.2	0	0	19	0	0.12	0	19	0	0	0
8	5	2	8.5.3	0	0	19	0	0.12	0	19	0	0	0
8	5	3	8.5.4	0	0	19	0	0.12	0	19	0	0	0
8	5	4	8.5.5	0	0	19	0	0.12	0	19	0	0	0
8	5	5	8.5.6	251	36	21	0	0.12	29.026	22.15	48516.386	37.284707	37.284707
8	5	6	8.5.7	535	75	23	0	0.12	198.849	30.87	346541.506	324.749613	324.749613
8	5	7	8.5.8	683	98	24	0	0.12	415.293	40.997	798427.436	760.623428	760.623428
8	5	8	8.5.9	769	113	26	0	0.12	628.235	51.733	1165421.242	1114.613184	1114.613184
8	5	9	8.5.10	821	122	27	0	0.12	808.068	60.03	1435721.718	1375.335839	1375.335839
8	5	10	8.5.11	871	116	28	0	0.12	938.329	66.308	1612060.152	1545.425902	1545.425902
8	5	11	8.5.12	885	116	28	0	0.12	1001.889	68.878	1695860.779	1626.257139	1626.257139
8	5	12	8.5.13	77	411	29	0	0.12	481.799	48.555	872677.575	832.242588	832.242588
8	5	13	8.5.14	41	356	29	0	0.12	386.409	44.688	708773.857	674.146632	674.146632
8	5	14	8.5.15	42	308	28	0	0.12	332.397	41.517	619041.998	587.594328	587.594328
8	5	15	8.5.16	780	101	27	0	0.12	606.394	51.849	1125784.398	1076.38083	1076.38083
8	5	16	8.5.17	710	82	26	0	0.12	394.213	42.107	748701.41	712.659392	712.659392
8	5	17	8.5.18	563	62	24	0	0.12	177.285	30.928	295158.023	275.186851	275.186851
8	5	18	8.5.19	257	28	22	0	0.12	21.489	22.843	34122.106	23.400474	23.400474
8	5	19	8.5.20	0	0	20	0	0.12	0	20	0	0	0
8	5	20	8.5.21	0	0	20	0	0.12	0	20	0	0	0
8	5	21	8.5.22	0	0	19	0	0.12	0	19	0	0	0
8	5	22	8.5.23	0	0	19	0	0.12	0	19	0	0	0
8	5	23	8.5.24	0	0	18	0	0.12	0	18	0	0	0
8	6	0	8.6.1	0	0	18	0	0.12	0	18	0	0	0
8	6	1	8.6.2	0	0	17	0	0.12	0	17	0	0	0
8	6	2	8.6.3	0	0	16	0	0.12	0	16	0	0	0
8	6	3	8.6.4	0	0	16	0	0.12	0	16	0	0	0
8	6	4	8.6.5	0	0	16	0	0.12	0	16	0	0	0
8	6	5	8.6.6	296	33	17	0	0.12	26.845	18.062	45323.734	34.205184	34.205184
8	6	6	8.6.7	578	67	19	0	0.12	200.94	26.93	352747.905	330.736094	330.736094
8	6	7	8.6.8	719	88	22	0	0.12	422.002	39.273	817553.72	779.071991	779.071991
8	6	8	8.6.9	403	241	23	0	0.12	510.952	43.887	969996.688	926.113299	926.113299
8	6	9	8.6.10	448	287	24	0	0.12	666.511	51.189	1221152.133	1168.369308	1168.369308
8	6	10	8.6.11	512	315	25	0	0.12	811.541	58.066	1437688.101	1377.232546	1377.232546
8	6	11	8.6.12	866	127	26	0	0.12	994.024	66.554	1700326.295	1630.564424	1630.564424
8	6	12	8.6.13	859	130	27	0	0.12	987.023	67.269	1683155.415	1614.001976	1614.001976
8	6	13	8.6.14	18	291	27	0	0.12	292.607	38.877	545176.272	516.345959	516.345959
8	6	14	8.6.15	167	353	27	0	0.12	484.797	46.741	895623.179	854.375139	854.375139
8	6	15	8.6.16	696	133	26	0	0.12	584.628	49.948	1092207.889	1043.994071	1043.994071
8	6	16	8.6.17	564	124	25	0	0.12	370.173	40.124	707678.161	673.08976	673.08976
8	6	17	8.6.18	386	90	23	0	0.12	164.213	29.503	286264.99	266.608933	266.608933
8	6	18	8.6.19	78	30	21	0	0.12	24.217	21.942	37767.709	26.916899	26.916899
8	6	19	8.6.20	0	0	20	0	0.12	0	20	0	0	0
8	6	20	8.6.21	0	0	20	0	0.12	0	20	0	0	0
8	6	21	8.6.22	0	0	20	0	0.12	0	20	0	0	0
8	6	22	8.6.23	0	0	20	0	0.12	0	20	0	0	0
8	6	23	8.6.24	0	0	20	0	0.12	0	20	0	0	0
8	7	0	8.7.1	0	0	21	0	0.12	0	21	0	0	0
8	7	1	8.7.2	0	0	21	0	0.12	0	21	0	0	0
8	7	2	8.7.3	0	0	21	0	0.12	0	21	0	0	0
8	7	3	8.7.4	0	0	21	0	0.12	0	21	0	0	0
8	7	4	8.7.5	0	0	21	0	0.12	0	21	0	0	0
8	7	5	8.7.6	0	17	22	0	0.12	15.737	22.631	26466.309	16.015952	16.015952
8	7	6	8.7.7	0	7	22	0	0.12	6.474	22.265	11259.772	1.348243	1.348243
8	7	7	8.7.8	197	195	23	0	0.12	277.107	34.33	539705.64	511.069174	511.069174
8	7	8	8.7.9	507	221	24	0	0.12	560.046	46.908	1053524.365	1006.681258	1006.681258
8	7	9	8.7.10	105	355	26	0	0.12	432.41	43.594	805328.255	767.279723	767.279723
8	7	10	8.7.11	63	386	27	0	0.12	438.333	44.8	806666.101	768.570163	768.570163
8	7	11	8.7.12	650	259	28	0	0.12	926.597	65.759	1585542.072	1519.847463	1519.847463
8	7	12	8.7.13	655	253	29	0	0.12	922.904	66.611	1573674.298	1508.40021	1508.40021
8	7	13	8.7.14	569	287	29	0	0.12	829.876	62.83	1441927.605	1381.321827	1381.321827
8	7	14	8.7.15	338	322	28	0	0.12	597.925	52.381	1087146.638	1039.11216	1039.11216
8	7	15	8.7.16	412	228	27	0	0.12	493.869	47.199	925739.621	883.424435	883.424435
8	7	16	8.7.17	273	175	26	0	0.12	287.472	37.746	551308.679	522.26107	522.26107
8	7	17	8.7.18	76	116	25	0	0.12	121.582	29.936	227940.974	210.351569	210.351569
8	7	18	8.7.19	0	18	24	0	0.12	16.675	24.64	24241.966	13.870426	13.870426
8	7	19	8.7.20	0	0	24	0	0.12	0	24	0	0	0
8	7	20	8.7.21	0	0	24	0	0.12	0	24	0	0	0
8	7	21	8.7.22	0	0	23	0	0.12	0	23	0	0	0
8	7	22	8.7.23	0	0	23	0	0.12	0	23	0	0	0
8	7	23	8.7.24	0	0	23	0	0.12	0	23	0	0	0
8	8	0	8.8.1	0	0	22	0	0.12	0	22	0	0	0
8	8	1	8.8.2	0	0	21	0	0.12	0	21	0	0	0
8	8	2	8.8.3	0	0	20	0	0.12	0	20	0	0	0
8	8	3	8.8.4	0	0	20	0	0.12	0	20	0	0	0
8	8	4	8.8.5	0	0	20	0	0.12	0	20	0	0	0
8	8	5	8.8.6	247	34	20	0	0.12	26.28	21.045	44503.912	33.414412	33.414412
8	8	6	8.8.7	551	72	22	0	0.12	198.332	29.835	344978.379	323.241874	323.241874
8	8	7	8.8.8	720	88	24	0	0.12	421.55	41.254	809885.38	771.675371	771.675371
8	8	8	8.8.9	807	99	25	0	0.12	638.157	51.148	1188260.755	1136.643402	1136.643402
8	8	9	8.8.10	857	106	26	0	0.12	816.652	59.39	1456548.279	1395.424432	1395.424432
8	8	10	8.8.11	885	110	27	0	0.12	944.68	65.573	1629077.169	1561.839938	1561.839938
8	8	11	8.8.12	899	110	27	0	0.12	1008.895	68.169	1713896.946	1643.654212	1643.654212
8	8	12	8.8.13	901	107	27	0	0.12	1004.29	67.984	1708047.159	1638.011707	1638.011707
8	8	13	8.8.14	885	106	27	0	0.12	930.471	64.999	1609972.558	1543.412279	1543.412279
8	8	14	8.8.15	856	101	26	0	0.12	795.102	58.518	1425104.319	1365.094657	1365.094657
8	8	15	8.8.16	347	244	25	0	0.12	463.107	43.934	877934.883	837.31361	837.31361
8	8	16	8.8.17	728	78	24	0	0.12	394.534	40.115	754633.077	718.380876	718.380876
8	8	17	8.8.18	579	58	23	0	0.12	173.399	29.747	286030.998	266.383232	266.383232
8	8	18	8.8.19	257	24	21	0	0.12	18.315	21.691	25785.099	15.35888	15.35888
8	8	19	8.8.20	0	0	19	0	0.12	0	19	0	0	0
8	8	20	8.8.21	0	0	18	0	0.12	0	18	0	0	0
8	8	21	8.8.22	0	0	18	0	0.12	0	18	0	0	0
8	8	22	8.8.23	0	0	17	0	0.12	0	17	0	0	0
8	8	23	8.8.24	0	0	17	0	0.12	0	17	0	0	0
8	9	0	8.9.1	0	0	16	0	0.12	0	16	0	0	0
8	9	1	8.9.2	0	0	16	0	0.12	0	16	0	0	0
8	9	2	8.9.3	0	0	15	0	0.12	0	15	0	0	0
8	9	3	8.9.4	0	0	15	0	0.12	0	15	0	0	0
8	9	4	8.9.5	0	0	15	0	0.12	0	15	0	0	0

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
8	9	5	8.9.6	333	29	16	0	0.12	22.106	16.879	37806.679	26.954488	26.954488
8	9	6	8.9.7	633	59	19	0	0.12	204.574	27.042	354662.885	332.583219	332.583219
8	9	7	8.9.8	775	75	22	0	0.12	433.31	39.736	838390.667	799.170602	799.170602
8	9	8	8.9.9	849	86	23	0	0.12	650.264	49.65	1219718.579	1166.98655	1166.98655
8	9	9	8.9.10	892	94	24	0	0.12	832.8	58.056	1494777.884	1432.29941	1432.29941
8	9	10	8.9.11	925	94	25	0	0.12	965.259	64.42	1673759.904	1604.939386	1604.939386
8	9	11	8.9.12	935	96	26	0	0.12	1029.75	68.027	1750727.733	1679.179939	1679.179939
8	9	12	8.9.13	932	96	27	0	0.12	1023.019	68.754	1733998.495	1663.043484	1663.043484
8	9	13	8.9.14	910	99	27	0	0.12	945.647	65.622	1631923.119	1564.585044	1564.585044
8	9	14	8.9.15	879	94	27	0	0.12	805.463	59.946	1435223.659	1374.855428	1374.855428
8	9	15	8.9.16	828	87	27	0	0.12	616.841	52.288	1145013.805	1094.928864	1094.928864
8	9	16	8.9.17	729	79	26	0	0.12	394.671	42.118	748272.636	712.245811	712.245811
8	9	17	8.9.18	569	59	23	0.2	0.12	171.095	29.236	282465.252	262.943834	262.943834
8	9	18	8.9.19	232	23	21	0.5	0.12	17.573	21.551	22977.814	12.651069	12.651069
8	9	19	8.9.20	0	0	19	0.5	0.12	0	19	0	0	0
8	9	20	8.9.21	0	0	18	0.3	0.12	0	18	0	0	0
8	9	21	8.9.22	0	0	18	0.1	0.12	0	18	0	0	0
8	9	22	8.9.23	0	0	17	0	0.12	0	17	0	0	0
8	9	23	8.9.24	0	0	17	0	0.12	0	17	0	0	0
8	10	0	8.10.1	0	0	17	0	0.12	0	17	0	0	0
8	10	1	8.10.2	0	0	16	0	0.12	0	16	0	0	0
8	10	2	8.10.3	0	0	16	0	0.12	0	16	0	0	0
8	10	3	8.10.4	0	0	16	0	0.12	0	16	0	0	0
8	10	4	8.10.5	0	0	16	0	0.12	0	16	0	0	0
8	10	5	8.10.6	82	32	18	0	0.12	25.799	19.026	44002.789	32.931045	32.931045
8	10	6	8.10.7	246	100	20	0	0.12	150.613	26.044	277663.193	258.311932	258.311932
8	10	7	8.10.8	498	138	22	0	0.12	365.637	36.96	711701.927	676.970948	676.970948
8	10	8	8.10.9	438	228	25	0	0.12	521.322	46.32	981431.365	937.142799	937.142799
8	10	9	8.10.10	538	251	26	0	0.12	704.746	54.768	1275033.405	1220.341352	1220.341352
8	10	10	8.10.11	352	377	27	0	0.12	717.253	56.2	1277152.679	1222.385531	1222.385531
8	10	11	8.10.12	321	414	27	0	0.12	747.584	57.407	1319927.162	1263.644345	1263.644345
8	10	12	8.10.13	276	425	27	0	0.12	712.963	55.991	1265194.226	1210.850814	1210.850814
8	10	13	8.10.14	610	265	28	0	0.12	846.645	62.525	1474714.384	1412.94684	1412.94684
8	10	14	8.10.15	33	294	27	0	0.12	311.757	39.679	584256.366	554.04129	554.04129
8	10	15	8.10.16	148	270	26	0	0.12	357.651	40.601	679832.013	646.230312	646.230312
8	10	16	8.10.17	250	173	25	0	0.12	274.591	36.219	529073.193	500.813476	500.813476
8	10	17	8.10.18	117	109	23	0	0.12	123.453	27.988	229458.342	211.815171	211.815171
8	10	18	8.10.19	0	21	21	0	0.12	19.305	21.677	22815.346	12.494357	12.494357
8	10	19	8.10.20	0	0	20	0	0.12	0	20	0	0	0
8	10	20	8.10.21	0	0	19	0	0.12	0	19	0	0	0
8	10	21	8.10.22	0	0	19	0	0.12	0	19	0	0	0
8	10	22	8.10.23	0	0	18	0	0.12	0	18	0	0	0
8	10	23	8.10.24	0	0	18	0	0.12	0	18	0	0	0
8	11	0	8.11.1	0	0	17	0	0.12	0	17	0	0	0
8	11	1	8.11.2	0	0	16	0	0.12	0	16	0	0	0
8	11	2	8.11.3	0	0	16	0	0.12	0	16	0	0	0
8	11	3	8.11.4	0	0	15	0	0.12	0	15	0	0	0
8	11	4	8.11.5	0	0	15	0	0.12	0	15	0	0	0
8	11	5	8.11.6	165	30	15	0	0.12	22.603	15.895	38378.753	27.506291	27.506291
8	11	6	8.11.7	262	98	17	0	0.12	152.305	23.104	283079.891	263.536695	263.536695
8	11	7	8.11.8	785	74	19	0	0.12	435.89	36.841	853420.199	813.667578	813.667578
8	11	8	8.11.9	861	85	21	0	0.12	656.353	47.902	1240782.212	1187.303814	1187.303814
8	11	9	8.11.10	906	92	22	0	0.12	841.605	56.419	1521813.604	1458.377148	1458.377148
8	11	10	8.11.11	928	98	23	0	0.12	971.631	62.682	1698011.26	1628.331419	1628.331419
8	11	11	8.11.12	941	98	24	0	0.12	1037.037	66.326	1776884.421	1704.409791	1704.409791
8	11	12	8.11.13	937	99	24	0	0.12	1030.021	66.042	1767626.282	1695.479705	1695.479705
8	11	13	8.11.14	915	100	24	0	0.12	949.805	62.795	1660355.488	1592.009941	1592.009941
8	11	14	8.11.15	46	307	24	0	0.12	335.27	37.639	635577.705	603.54411	603.54411
8	11	15	8.11.16	136	268	23	0	0.12	348.071	37.21	670419.054	637.150892	637.150892
8	11	16	8.11.17	343	157	22	0	0.12	298.373	34.188	580763.646	550.67233	550.67233
8	11	17	8.11.18	563	59	20	0	0.12	167.383	26.499	277780.126	258.424722	258.424722
8	11	18	8.11.19	218	22	18	0	0.12	17.036	18.584	19389.693	9.190089	9.190089
8	11	19	8.11.20	0	0	16	0	0.12	0	16	0	0	0
8	11	20	8.11.21	0	0	15	0	0.12	0	15	0	0	0
8	11	21	8.11.22	0	0	15	0	0.12	0	15	0	0	0
8	11	22	8.11.23	0	0	14	0	0.12	0	14	0	0	0
8	11	23	8.11.24	0	0	14	0	0.12	0	14	0	0	0
8	12	0	8.12.1	0	0	13	0	0.12	0	13	0	0	0
8	12	1	8.12.2	0	0	12	0	0.12	0	12	0	0	0
8	12	2	8.12.3	0	0	12	0	0.12	0	12	0	0	0
8	12	3	8.12.4	0	0	11	0	0.12	0	11	0	0	0
8	12	4	8.12.5	0	0	11	0	0.12	0	11	0	0	0
8	12	5	8.12.6	325	27	13	0	0.12	20.405	13.804	34282.115	23.554813	23.554813
8	12	6	8.12.7	643	57	16	0	0.12	203.289	23.977	354771.75	332.688226	332.688226
8	12	7	8.12.8	796	72	19	0	0.12	438.388	36.943	858022.709	818.107002	818.107002
8	12	8	8.12.9	872	83	20	0	0.12	661.127	47.1	1254392.074	1200.431425	1200.431425
8	12	9	8.12.10	916	90	21	0	0.12	847.398	55.658	1537598.945	1473.603151	1473.603151
8	12	10	8.12.11	942	94	22	0	0.12	980.196	62.034	1718106.752	1647.714849	1647.714849
8	12	11	8.12.12	950	97	23	0	0.12	1044.481	65.632	1795284.537	1722.157918	1722.157918
8	12	12	8.12.13	939	101	23	0	0.12	1033.492	65.184	1780479.29	1707.87728	1707.87728
8	12	13	8.12.14	898	113	23	0	0.12	946.786	61.669	1663067.522	1594.625878	1594.625878
8	12	14	8.12.15	860	108	23	0	0.12	801.598	55.788	1454604.658	1393.549682	1393.549682
8	12	15	8.12.16	811	95	22	0	0.12	612.289	47.103	1162009.434	1111.32227	1111.32227
8	12	16	8.12.17	726	79	21	0	0.12	389.272	36.891	752768.784	716.582643	716.582643
8	12	17	8.12.18	484	62	19	0	0.12	153.549	24.983	258296.139	239.63113	239.63113
8	12	18	8.12.19	173	20	17	0	0.12	15.341	17.526	17461.149	7.329881	7.329881
8	12	19	8.12.20	0	0	15	0	0.12	0	15	0	0	0
8	12	20	8.12.21	0	0	15	0	0.12	0	15	0	0	0
8	12	21	8.12.22	0	0	14	0	0.12	0	14	0	0	0
8	12	22	8.12.23	0	0	14	0	0.12	0	14	0	0	0
8	12	23	8.12.24	0	0	13	0	0.12	0	13	0	0	0
8	13	0	8.13.1	0	0	12	0	0.12	0	12	0	0	0
8	13	1	8.13.2	0	0	12	0	0.12	0	12	0	0	0
8	13	2	8.13.3	0	0	11	0	0.12	0	11	0	0	0
8	13	3	8.13.4	0	0	11	0	0.12	0	11	0	0	0
8	13	4	8.13.5	0	0	11	0	0.12	0	11	0	0	0
8	13	5	8.13.6	73	29	13	0	0.12	23.479	13.92	38933.072	28.040968	28.040968
8	13	6	8.13.7	500	68	16	0	0.12	180.55	23.126	320801.493	299.921671	299.921671
8	13	7	8.13.8	761	79	19	0	0.12	429.036	36.559	840494.051	801.199455	801.199455
8	13	8	8.13.9	842	91	21	0	0.12	649.227	47.61	1228787.587	1175.734207	1175.734207
8	13	9	8.13.10	601	225	22	0	0.12	732.78	51.926	1344316.927	1287.169884	1287.169884
8	13	10	8.13.11	911	105	23	0	0.12	962.398	62.305	1684985.226	1615.76695	1615.76695
8	13	11	8.13.12	922	107	24	0	0.12	1026.781	65.907	1762959.752	1690.978528	1690.978528
8	13	12	8.13.13	923	104	24	0	0.12	1020.262	65.645	1754522.565	1682.840304	1682.840304
8	13	13	8.13.14	911	99	25	0	0.12	943.431	63.538	1644417.81	1576.636999	1576.636999
8	13	14	8.13.15	421	285	24	0	0.12	632.403	49.808	1166816.36	1115.958867	1115.958867
8	13	15	8.13.16	600	156	23	0	0.12	540.739	45.15	1029731.023	983.731008	983.731008
8	13	16	8.13.17	671	81	22	0	0.12	366.191	36.947	706624.443	672.073379	672.073379
8	13	17	8.13.18	560	57	20	0	0.12	162.252	26.282	266871.904	247.903022	247.903022
8	13	18	8.13.19	200	19	18	0.1	0.12	14.596	18.484	16492.113	6.395181	6.395181
8	13	19	8.13.20	0	0	17	0.4	0.12	0	17	0	0	0
8	13	20	8.13.21	0	0	17	0.5	0.12	0	17	0	0	0
8	13	21	8.13.22	0	0	17	0.4	0.12	0	17	0	0	0
8	13	22	8.13.23	0	0	16	0.3	0.12	0	16	0	0	0
8	13	23	8.13.24	0	0	16	0.2	0.12	0	16	0	0	0
8	14	0	8.14.1	0	0	15	0.2	0.12	0	15	0	0	0
8	14	1	8.14.2	0	0	14	0.1	0.12	0	14	0	0	0
8	14	2	8.14.3	0	0	14	0	0.12	0	14	0	0	0
8	14	3	8.14.4	0	0	14	0	0.12	0	14	0	0	0
8	14	4	8.14.5	0	0	14	0.1	0.12	0	14	0	0	0
8	14	5	8.14.6	85	28	16	0	0.12	22.702	16.883	36196.505	25.401369	25.401369
8	14	6	8.14.7	598	58	19	0	0.12	192.894	26.573	332975.839	311.664631	311.664631
8	14	7	8.14.8	720	83	22	0	0.12	413.974	38.942	802395.711	764.45109	764.45109
8	14	8	8.14.9	789	101	24	0	0.12	626.46	49.674	1174575.42	1123.442992	1123.442992
8	14	9	8.14.10	821	119	26	0	0.12	803.017	58.834	1436096.501	1375.697342	1375.697342
8	14	10	8.14.11	814	146	27	0	0.12	920.097	64.563	1593526.384	1527.548858	1527.548858
8	14	11	8.14.12	803	165	27	0	0.12	975.957	66.813	1667332.577	1598.739804	1598.739804
8	14	12	8.14.13	775	181	28	0	0.12	960.604	67.184	1638234.841	1570.673117	1570.673117
8	14	13	8.14.14	144	401	28	0	0.12	537.21	49.843	975902.904	931.810234	931.810234
8	14	14	8.14.15	436	277	28	0	0.12	636.043	53.961	1153585.906	1103.197221	1103.197221
8	14	15	8.14.16	8	188	27	0	0.12	181.449	34.397	344378.764	322.663505	322.663505
8	14	16	8.14.17	0	67	26	0	0.12	62.198	28.543	117031.193	103.371763	103.371763
8	14	17	8.14.18	0	17	25	0	0.12	15.731	25.643	28073.219	17.565923	17.565923
8	14	18	8.14.19	0	1	23	0	0.12	0.923	23.032	0	0	0
8	14	19	8.14.20	0	0	22	0	0.12	0	22	0	0	0
8	14	20	8.14.21	0	0	21	0	0.12	0	21	0	0	0
8	14	21	8.14.22	0	0	21	0	0.12	0	21	0	0	0
8	14	22	8.14.23	0	0	21	0	0.12	0	21	0	0	0
8	14	23	8.14.24	0	0	21	0	0.12	0	21	0	0	0
8	15	0	8.15.1	0	0	21	0	0.12	0	21	0	0	0
8	15	1	8.15.2	0	0	21	0	0.12	0	21	0	0	0
8	15	2	8.15.3	0	0	21	0	0.12	0	21	0	0	0
8	15	3	8.15.4	0	0	21	0	0.12	0	21	0	0	0
8	15	4	8.15.5	0	0	21	0	0.12	0	21	0	0	0
8	15	5	8.15.6	0	0	21	0	0.12	0	0	0	0	0
8	15	6	8.15.7	0	60	21	0	0.12	55.651	23.277	107030.586	93.725517	93.725517
8	15	7	8.15.8	0	14	22	0	0.12	12.968	22.53	23210.947	12.875941	12.875941
8	15	8	8.15.9	0	82	22	0	0.12	76.223	25.105	144942.946	130.294491	130.294491
8	15	9	8.15.10	32	294	22	0	0.12	312.525	34.709	597783.088	567.088706	567.088706
8	15	10	8.15.11	345	373	22	0	0.12	707.421	50.804	1289822.687	1234.606591	1234.606591
8	15	11	8.15.12	339	402	24	0	0.12	753.722	54.666	1348233.598	1290.947771	1290.947771

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

													Reference Case	Adjusted Case
													3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
8	15	12	8.15.13	84	415	25	0	0.12	494.631	45.084	911050.89	869.256184	869.256184
8	15	13	8.15.14	47	354	26	0	0.12	391.397	41.899	727998.948	692.690501	692.690501
8	15	14	8.15.15	344	309	27	0	0.12	588.061	50.99	1077299.918	1029.614349	1029.614349
8	15	15	8.15.16	465	202	26	0	0.12	497.452	46.363	938923.261	896.140927	896.140927
8	15	16	8.15.17	352	149	25	0	0.12	291.912	36.92	560710.808	531.330044	531.330044
8	15	17	8.15.18	316	75	23	0.1	0.12	129.615	27.943	221763.064	204.392566	204.392566
8	15	18	8.15.19	164	17	21	0.3	0.12	13.099	21.408	14500.996	4.474618	4.474618
8	15	19	8.15.20	0	0	19	0.4	0.12	0	19	0	0	0
8	15	20	8.15.21	0	0	18	0.4	0.12	0	18	0	0	0
8	15	21	8.15.22	0	0	18	0.3	0.12	0	18	0	0	0
8	15	22	8.15.23	0	0	17	0.2	0.12	0	17	0	0	0
8	15	23	8.15.24	0	0	17	0.1	0.12	0	17	0	0	0
8	16	0	8.16.1	0	0	17	0	0.12	0	17	0	0	0
8	16	1	8.16.2	0	0	17	0	0.12	0	17	0	0	0
8	16	2	8.16.3	0	0	16	0	0.12	0	16	0	0	0
8	16	3	8.16.4	0	0	16	0	0.12	0	16	0	0	0
8	16	4	8.16.5	0	0	16	0	0.12	0	16	0	0	0
8	16	5	8.16.6	243	25	18	0	0.12	19.176	18.729	28099.485	17.591258	17.591258
8	16	6	8.16.7	583	59	20	0	0.12	189.49	27.438	325591.575	304.542021	304.542021
8	16	7	8.16.8	745	75	23	0	0.12	416.404	40.042	803553.196	765.567561	765.567561
8	16	8	8.16.9	829	86	24	0	0.12	634.454	50.009	1189324.255	1137.669218	1137.669218
8	16	9	8.16.10	877	93	25	0	0.12	817.237	58.428	1466001.29	1404.542485	1404.542485
8	16	10	8.16.11	903	98	26	0	0.12	946.575	64.664	1641180.283	1573.51419	1573.51419
8	16	11	8.16.12	914	100	27	0	0.12	1010.154	68.235	1717599.759	1647.22582	1647.22582
8	16	12	8.16.13	431	179	28	0	0.12	614.816	52.988	1102148.97	1053.5829	1053.5829
8	16	13	8.16.14	876	109	28	0	0.12	918.981	65.541	1588151.429	1522.36436	1522.36436
8	16	14	8.16.15	836	106	28	0	0.12	775.941	59.745	1385059.616	1326.468897	1326.468897
8	16	15	8.16.16	771	100	27	0	0.12	587.01	51.07	1095650.584	1047.314778	1047.314778
8	16	16	8.16.17	687	81	26	0	0.12	368.554	41.036	697980.938	663.736148	663.736148
8	16	17	8.16.18	514	58	23	0	0.12	150.495	28.82	243329.078	225.194411	225.194411
8	16	18	8.16.19	139	16	21	0	0.12	12.345	21.423	13623.241	3.627965	3.627965
8	16	19	8.16.20	0	0	20	0	0.12	0	20	0	0	0
8	16	20	8.16.21	0	0	19	0	0.12	0	19	0	0	0
8	16	21	8.16.22	0	0	18	0	0.12	0	18	0	0	0
8	16	22	8.16.23	0	0	18	0	0.12	0	18	0	0	0
8	16	23	8.16.24	0	0	17	0	0.12	0	17	0	0	0
8	17	0	8.17.1	0	0	17	0	0.12	0	17	0	0	0
8	17	1	8.17.2	0	0	17	0	0.12	0	17	0	0	0
8	17	2	8.17.3	0	0	17	0	0.12	0	17	0	0	0
8	17	3	8.17.4	0	0	16	0	0.12	0	16	0	0	0
8	17	4	8.17.5	0	0	16	0	0.12	0	16	0	0	0
8	17	5	8.17.6	185	26	18	0	0.12	19.78	18.739	27659.14	17.166516	17.166516
8	17	6	8.17.7	527	67	20	0	0.12	184.119	27.25	319466.147	298.633641	298.633641
8	17	7	8.17.8	699	88	23	0	0.12	407.961	39.695	787823.599	750.395327	750.395327
8	17	8	8.17.9	784	104	26	0	0.12	625.294	51.629	1163095.087	1112.369454	1112.369454
8	17	9	8.17.10	830	117	27	0	0.12	807.469	60.021	1437274.539	1376.833637	1376.833637
8	17	10	8.17.11	882	110	28	0	0.12	939.127	66.358	1615668.196	1548.906098	1548.906098
8	17	11	8.17.12	893	113	28	0	0.12	1002.466	68.918	1699037.741	1629.321528	1629.321528
8	17	12	8.17.13	892	112	29	0	0.12	995.416	69.633	1682173.499	1613.054853	1613.054853
8	17	13	8.17.14	854	122	29	0	0.12	911.286	66.224	1569762.086	1504.626624	1504.626624
8	17	14	8.17.15	821	115	29	0	0.12	775.967	60.744	1378686.365	1320.321476	1320.321476
8	17	15	8.17.16	763	104	28	0	0.12	584.692	51.976	1087109.743	1039.076573	1039.076573
8	17	16	8.17.17	0	125	27	0	0.12	116.497	31.764	222350.846	204.959522	204.959522
8	17	17	8.17.18	246	78	25	0.2	0.12	117.456	29.359	202264.633	185.585042	185.585042
8	17	18	8.17.19	0	14	22	0.4	0.12	13.318	22.402	14697.664	4.664317	4.664317
8	17	19	8.17.20	0	0	21	0.4	0.12	0	21	0	0	0
8	17	20	8.17.21	0	0	20	0.3	0.12	0	20	0	0	0
8	17	21	8.17.22	0	0	19	0.2	0.12	0	19	0	0	0
8	17	22	8.17.23	0	0	18	0.1	0.12	0	18	0	0	0
8	17	23	8.17.24	0	0	18	0	0.12	0	18	0	0	0
8	18	0	8.18.1	0	0	18	0	0.12	0	18	0	0	0
8	18	1	8.18.2	0	0	18	0	0.12	0	18	0	0	0
8	18	2	8.18.3	0	0	18	0	0.12	0	18	0	0	0
8	18	3	8.18.4	0	0	18	0	0.12	0	18	0	0	0
8	18	4	8.18.5	0	0	18	0	0.12	0	18	0	0	0
8	18	5	8.18.6	0	19	19	0	0.12	17.61	19.642	22888.788	12.565197	12.565197
8	18	6	8.18.7	29	94	20	0	0.12	93.745	23.822	181338.876	165.400768	165.400768
8	18	7	8.18.8	52	175	21	0	0.12	189.698	28.755	373263.274	350.524522	350.524522
8	18	8	8.18.9	151	271	23	0	0.12	366.08	37.946	704062.388	669.602109	669.602109
8	18	9	8.18.10	288	330	25	0	0.12	573.249	48.371	1059222.852	1012.177824	1012.177824
8	18	10	8.18.11	325	365	26	0	0.12	681.017	53.73	1226216.078	1173.253817	1173.253817
8	18	11	8.18.12	106	422	27	0	0.12	524.739	48.313	955400.564	912.034374	912.034374
8	18	12	8.18.13	865	126	28	0	0.12	982.682	68.111	1672190.668	1603.425754	1603.425754
8	18	13	8.18.14	794	154	28	0	0.12	894.56	64.53	1551488.484	1487.000529	1487.000529
8	18	14	8.18.15	81	321	27	0	0.12	377.87	42.384	706668.721	672.116088	672.116088
8	18	15	8.18.16	691	130	26	0	0.12	565.841	49.195	1062973.657	1015.795724	1015.795724
8	18	16	8.18.17	626	96	25	0	0.12	355.393	39.496	676247.671	642.772977	642.772977
8	18	17	8.18.18	442	65	23	0	0.12	141.554	28.5	231831.225	214.103973	214.103973
8	18	18	8.18.19	80	14	21	0	0.12	13.318	21.457	14769.858	4.733953	4.733953
8	18	19	8.18.20	0	0	19	0	0.12	0	19	0	0	0
8	18	20	8.18.21	0	0	19	0	0.12	0	19	0	0	0
8	18	21	8.18.22	0	0	18	0	0.12	0	18	0	0	0
8	18	22	8.18.23	0	0	17	0	0.12	0	17	0	0	0
8	18	23	8.18.24	0	0	17	0	0.12	0	17	0	0	0
8	19	0	8.19.1	0	0	16	0	0.12	0	16	0	0	0
8	19	1	8.19.2	0	0	16	0	0.12	0	16	0	0	0
8	19	2	8.19.3	0	0	16	0	0.12	0	16	0	0	0
8	19	3	8.19.4	0	0	16	0	0.12	0	16	0	0	0
8	19	4	8.19.5	0	0	16	0	0.12	0	16	0	0	0
8	19	5	8.19.6	109	26	17	0	0.12	21.084	17.741	25676.868	15.254484	15.254484
8	19	6	8.19.7	445	69	20	0	0.12	166.981	26.593	291920.084	272.063644	272.063644
8	19	7	8.19.8	257	173	22	0	0.12	285.957	33.696	559676.245	530.33214	530.33214
8	19	8	8.19.9	664	147	24	0	0.12	590.988	48.21	1112633.046	1063.695483	1063.695483
8	19	9	8.19.10	724	162	25	0	0.12	769.197	56.443	1388763.507	1330.041544	1330.041544
8	19	10	8.19.11	377	356	27	0	0.12	720.127	56.333	1284069.326	1229.057095	1229.057095
8	19	11	8.19.12	289	394	28	0	0.12	696.625	56.34	1236328.861	1183.008264	1183.008264
8	19	12	8.19.13	122	423	28	0	0.12	551.232	50.395	996440.003	951.619621	951.619621
8	19	13	8.19.14	66	366	28	0	0.12	421.663	45.136	776290.872	739.27125	739.27125
8	19	14	8.19.15	77	318	27	0	0.12	371.762	42.136	695727.004	661.56208	661.56208
8	19	15	8.19.16	159	253	26	0	0.12	346.86	40.172	661865.049	628.899988	628.899988
8	19	16	8.19.17	0	106	25	0	0.12	98.686	29.036	189361.348	173.138973	173.138973
8	19	17	8.19.18	0	56	24	0	0.12	51.846	26.119	97602.476	84.631482	84.631482
8	19	18	8.19.19	0	4	22	0	0.12	3.805	22.131	3928.717	0	0
8	19	19	8.19.20	0	0	21	0	0.12	0	21	0	0	0
8	19	20	8.19.21	0	0	20	0	0.12	0	20	0	0	0
8	19	21	8.19.22	0	0	20	0	0.12	0	20	0	0	0
8	19	22	8.19.23	0	0	20	0	0.12	0	20	0	0	0
8	19	23	8.19.24	0	0	20	0	0.12	0	20	0	0	0
8	20	0	8.20.1	0	0	20	0	0.12	0	20	0	0	0
8	20	1	8.20.2	0	0	21	0	0.12	0	21	0	0	0
8	20	2	8.20.3	0	0	21	0	0.12	0	21	0	0	0
8	20	3	8.20.4	0	0	21	0	0.12	0	21	0	0	0
8	20	4	8.20.5	0	0	21	0	0.12	0	21	0	0	0
8	20	5	8.20.6	0	8	22	0	0.12	7.397	22.254	7909.637	0	0
8	20	6	8.20.7	0	19	22	0	0.12	17.585	22.719	32066.275	21.417489	21.417489
8	20	7	8.20.8	18	157	23	0	0.12	155.031	29.338	302037.451	281.822513	281.822513
8	20	8	8.20.9	380	233	25	0	0.12	482.883	44.751	914550.554	872.631842	872.631842
8	20	9	8.20.10	475	264	26	0	0.12	666.365	53.204	1213801.862	1161.279486	1161.279486
8	20	10	8.20.11	188	400	27	0	0.12	581.02	50.635	1054842.541	1007.952726	1007.952726
8	20	11	8.20.12	0	71	28	0	0.12	66.136	30.682	119883.716	106.123209	106.123209
8	20	12	8.20.13	344	375	29	0	0.12	728.512	58.652	1282488.684	1227.53246	1227.53246
8	20	13	8.20.14	682	212	29	0	0.12	854.343	63.871	1483997.321	1421.900845	1421.900845
8	20	14	8.20.15	649	192	28	0	0.12	717.971	57.351	1291347.391	1236.077269	1236.077269
8	20	15	8.20.16	596	162	27	0	0.12	536.762	48.995	1007092.87	961.895015	961.895015
8	20	16	8.20.17	491	127	26	0	0.12	326.044	39.3	619688.129	588.217565	588.217565
8	20	17	8.20.18	327	75	24	0	0.12	127.313	28.994	213387.395	196.313681	196.313681
8	20	18	8.20.19	37	9	22	0	0.12	8.562	22.294	9234.715	0	0
8	20	19	8.20.20	0	0	21	0	0.12	0	21	0	0	0
8	20	20	8.20.21	0	0	21	0	0.12	0	21	0	0	0
8	20	21	8.20.22	0	0	20	0	0.12	0	20	0	0	0
8	20	22	8.20.23	0	0	20	0	0.12	0	20	0	0	0
8	20	23	8.20.24	0	0	19	0	0.12	0	19	0	0	0
8	21	0	8.21.1	0	0	18	0	0.12	0	18	0	0	0
8	21	1	8.21.2	0	0	18	0	0.12	0	18	0	0	0
8	21	2	8.21.3	0	0	17	0	0.12	0	17	0	0	0
8	21	3	8.21.4	0	0	17	0	0.12	0	17	0	0	0
8	21	4	8.21.5	0	0	17	0	0.12	0	17	0	0	0
8	21	5	8.21.6	210	21	17	0	0.12	16.185	17.555	18468.326	8.301369	8.301369
8	21	6	8.21.7	576	54	19	0	0.12	180.857	26.078	308988.839	288.527586	288.527586
8	21	7	8.21.8	28	162	20	0	0.12	166.619	26.812	329029.641	307.858262	307.858262
8	21	8	8.21.9	197	265	22	0	0.12	390.474	37.951	753764.283	717.542867	717.542867
8	21	9	8.21.10	4	179	23	0	0.12	171.498	29.973	327661.499	306.538599	306.538599
8	21	10	8.21.11	9	226	24	0	0.12	222.062	33.016	420637.023	396.219631	396.219631
8	21	11	8.21.12	67	397	25	0	0.12	460.996	43.719	852837.323	813.105355	813.105355
8	21	12	8.21.13	64	392	25	0	0.12	452.333	43.368	837862.256	798.660914	798.660914
8	21	13	8.21.14	110	383	26	0	0.12	479.476	45.497	885707.684	844.81099	844.81099
8	21	14	8.21.15	23	260	25	0	0.12	264.68	35.77	502632.672	475.309848	475.309848
8	21	15	8.21.16	637	135	25	0	0.12	533.829	46.884	1012090.28	966.715348	966.715348
8	21	16	8.21.17	708	70	24	0	0.12	358.195	38.596	681768.664	648.098339	648.098339
8	21	17	8.21.18	540	48	22	0	0.12	138.288	27.274	215292.526	198.151306	198.151306
8	21	18	8.21.19	120	10	20	0	0.12	9.513	20.326	10427.454	0.545418	0.545418

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
8	21	19	8.21.20	0	0	18	0	0.12	0	18	0	0	0
8	21	20	8.21.21	0	0	18	0	0.12	0	18	0	0	0
8	21	21	8.21.22	0	0	17	0	0.12	0	17	0	0	0
8	21	22	8.21.23	0	0	17	0	0.12	0	17	0	0	0
8	21	23	8.21.24	0	0	17	0	0.12	0	17	0	0	0
8	22	0	8.22.1	0	0	16	0	0.12	0	16	0	0	0
8	22	1	8.22.2	0	0	16	0	0.12	0	16	0	0	0
8	22	2	8.22.3	0	0	15	0	0.12	0	15	0	0	0
8	22	3	8.22.4	0	0	14	0	0.12	0	14	0	0	0
8	22	4	8.22.5	0	0	14	0	0.12	0	14	0	0	0
8	22	5	8.22.6	239	20	15	0	0.12	15.389	15.528	17693.185	7.553695	7.553695
8	22	6	8.22.7	602	56	18	0	0.12	188.086	25.357	322218.575	301.28854	301.28854
8	22	7	8.22.8	579	106	21	0	0.12	370.388	36.155	723697.544	688.541513	688.541513
8	22	8	8.22.9	838	87	23	0	0.12	638.903	49.199	1203125.107	1150.981051	1150.981051
8	22	9	8.22.10	880	96	24	0	0.12	820.406	57.566	1478482.411	1416.58135	1416.58135
8	22	10	8.22.11	909	98	25	0	0.12	949.295	63.785	1653780.497	1585.667929	1585.667929
8	22	11	8.22.12	919	100	26	0	0.12	1011.285	67.291	1728393.443	1657.637041	1657.637041
8	22	12	8.22.13	483	311	27	0	0.12	807.281	59.891	1418500.563	1358.724898	1358.724898
8	22	13	8.22.14	895	99	28	0	0.12	919.155	65.562	1590491.831	1524.621831	1524.621831
8	22	14	8.22.15	855	96	28	0	0.12	772.268	59.609	1381651.995	1323.182021	1323.182021
8	22	15	8.22.16	791	89	27	0	0.12	578.545	50.736	1083485.517	1035.580767	1035.580767
8	22	16	8.22.17	678	78	26	0	0.12	352.09	40.345	664667.355	631.602998	631.602998
8	22	17	8.22.18	480	54	23	0.1	0.12	132.444	27.915	208532.465	191.630781	191.630781
8	22	18	8.22.19	59	8	21	0.3	0.12	7.61	21.237	8203.62	0	0
8	22	19	8.22.20	0	0	19	0.3	0.12	0	19	0	0	0
8	22	20	8.22.21	0	0	19	0.1	0.12	0	19	0	0	0
8	22	21	8.22.22	0	0	19	0	0.12	0	19	0	0	0
8	22	22	8.22.23	0	0	18	0	0.12	0	18	0	0	0
8	22	23	8.22.24	0	0	18	0	0.12	0	18	0	0	0
8	23	0	8.23.1	0	0	18	0	0.12	0	18	0	0	0
8	23	1	8.23.2	0	0	18	0	0.12	0	18	0	0	0
8	23	2	8.23.3	0	0	17	0	0.12	0	17	0	0	0
8	23	3	8.23.4	0	0	17	0	0.12	0	17	0	0	0
8	23	4	8.23.5	0	0	17	0	0.12	0	17	0	0	0
8	23	5	8.23.6	108	21	18	0	0.12	16.094	18.552	18268.601	8.108722	8.108722
8	23	6	8.23.7	457	72	21	0	0.12	171.283	27.756	297341.843	277.293289	277.293289
8	23	7	8.23.8	660	94	23	0	0.12	394.369	39.137	762403.751	725.876205	725.876205
8	23	8	8.23.9	770	106	25	0	0.12	616.209	50.263	1153825.112	1103.42795	1103.42795
8	23	9	8.23.10	835	113	26	0	0.12	805.314	58.943	1441828.064	1381.225813	1381.225813
8	23	10	8.23.11	841	133	27	0	0.12	928.461	64.922	1607961.646	1541.472622	1541.472622
8	23	11	8.23.12	865	131	27	0	0.12	989.892	67.409	1690294.975	1620.888554	1620.888554
8	23	12	8.23.13	870	127	28	0	0.12	984.382	68.189	1675749.526	1606.858508	1606.858508
8	23	13	8.23.14	832	134	27	0	0.12	903.168	63.898	1573204.938	1507.947482	1507.947482
8	23	14	8.23.15	798	124	27	0	0.12	759.206	58.067	1366246.403	1308.322311	1308.322311
8	23	15	8.23.16	742	107	26	0	0.12	566.13	49.223	1066079.722	1018.791729	1018.791729
8	23	16	8.23.17	634	88	25	0	0.12	342.917	38.971	650475.109	617.913639	617.913639
8	23	17	8.23.18	433	58	22	0	0.12	127.149	26.895	203116.304	186.406535	186.406535
8	23	18	8.23.19	0	0	20	0.1	0.12	0	0	0	0	0
8	23	19	8.23.20	0	0	19	0	0.12	0	19	0	0	0
8	23	20	8.23.21	0	0	18	0	0.12	0	18	0	0	0
8	23	21	8.23.22	0	0	17	0.1	0.12	0	17	0	0	0
8	23	22	8.23.23	0	0	16	0.1	0.12	0	16	0	0	0
8	23	23	8.23.24	0	0	16	0	0.12	0	16	0	0	0
8	24	0	8.24.1	0	0	16	0	0.12	0	16	0	0	0
8	24	1	8.24.2	0	0	16	0	0.12	0	16	0	0	0
8	24	2	8.24.3	0	0	16	0	0.12	0	16	0	0	0
8	24	3	8.24.4	0	0	16	0	0.12	0	16	0	0	0
8	24	4	8.24.5	0	0	16	0	0.12	0	16	0	0	0
8	24	5	8.24.6	123	19	16	0	0.12	14.527	16.498	16574.445	6.474596	6.474596
8	24	6	8.24.7	444	71	18	0	0.12	167.202	24.595	293793.953	273.871115	273.871115
8	24	7	8.24.8	593	109	20	0	0.12	379.065	35.509	742940.274	707.102396	707.102396
8	24	8	8.24.9	672	141	21	0	0.12	589.041	45.138	1124593.635	1075.232262	1075.232262
8	24	9	8.24.10	703	174	22	0	0.12	763.369	53.207	1398070.459	1339.018713	1339.018713
8	24	10	8.24.11	490	300	22	0	0.12	776.279	53.65	1405147.587	1345.845072	1345.845072
8	24	11	8.24.12	421	350	23	0	0.12	789.776	55.164	1414487.592	1354.854123	1354.854123
8	24	12	8.24.13	329	388	23	0	0.12	727.152	52.598	1314313.231	1258.229337	1258.229337
8	24	13	8.24.14	130	381	23	0	0.12	505.025	43.543	942656.561	899.741941	899.741941
8	24	14	8.24.15	329	296	23	0	0.12	559.989	45.857	1049764.82	1003.054928	1003.054928
8	24	15	8.24.16	167	243	24	0	0.12	340.921	37.936	657540.245	624.728429	624.728429
8	24	16	8.24.17	0	17	23	0.1	0.12	15.742	23.623	28419.675	17.900103	17.900103
8	24	17	8.24.18	188	85	22	0.1	0.12	109.613	26.216	192985.976	176.635165	176.635165
8	24	18	8.24.19	0	0	20	0.3	0.12	0	0	0	0	0
8	24	19	8.24.20	0	0	19	0.5	0.12	0	19	0	0	0
8	24	20	8.24.21	0	0	18	0.3	0.12	0	18	0	0	0
8	24	21	8.24.22	0	0	18	0.1	0.12	0	18	0	0	0
8	24	22	8.24.23	0	0	17	0	0.12	0	17	0	0	0
8	24	23	8.24.24	0	0	17	0	0.12	0	17	0	0	0
8	25	0	8.25.1	0	0	17	0	0.12	0	17	0	0	0
8	25	1	8.25.2	0	0	17	0	0.12	0	17	0	0	0
8	25	2	8.25.3	0	0	17	0	0.12	0	17	0	0	0
8	25	3	8.25.4	0	0	17	0	0.12	0	17	0	0	0
8	25	4	8.25.5	0	0	17	0	0.12	0	17	0	0	0
8	25	5	8.25.6	0	1	17	0	0.12	0.923	17.032	0	0	0
8	25	6	8.25.7	177	88	18	0	0.12	122.439	22.915	227235.054	209.670663	209.670663
8	25	7	8.25.8	0	78	19	0	0.12	72.446	21.962	141286.647	126.767749	126.767749
8	25	8	8.25.9	0	113	20	0	0.12	105.361	24.295	204206.966	187.458551	187.458551
8	25	9	8.25.10	0	56	20	0	0.12	52.058	22.117	97895.086	84.913724	84.913724
8	25	10	8.25.11	0	123	21	0	0.12	115.003	25.669	219067.863	201.792868	201.792868
8	25	11	8.25.12	0	109	21	0	0.12	101.833	25.131	192966.27	176.616157	176.616157
8	25	12	8.25.13	4	171	21	0	0.12	164.773	27.686	315128.666	294.449855	294.449855
8	25	13	8.25.14	0	104	21	0	0.12	96.987	24.938	184241.01	168.200069	168.200069
8	25	14	8.25.15	0	106	20	0	0.12	98.767	24.018	189757.411	173.521001	173.521001
8	25	15	8.25.16	3	168	20	0	0.12	159.643	26.513	312558.37	291.970634	291.970634
8	25	16	8.25.17	0	81	19	0	0.12	75.288	22.081	147379.4	132.644612	132.644612
8	25	17	8.25.18	78	70	18	0	0.12	77.53	21.116	142940.939	128.363423	128.363423
8	25	18	8.25.19	0	0	17	0	0.12	0	0	0	0	0
8	25	19	8.25.20	0	0	17	0	0.12	0	17	0	0	0
8	25	20	8.25.21	0	0	17	0	0.12	0	17	0	0	0
8	25	21	8.25.22	0	0	16	0	0.12	0	16	0	0	0
8	25	22	8.25.23	0	0	16	0	0.12	0	16	0	0	0
8	25	23	8.25.24	0	0	16	0	0.12	0	16	0	0	0
8	26	0	8.26.1	0	0	16	0	0.12	0	16	0	0	0
8	26	1	8.26.2	0	0	16	0	0.12	0	16	0	0	0
8	26	2	8.26.3	0	0	16	0	0.12	0	16	0	0	0
8	26	3	8.26.4	0	0	16	0	0.12	0	16	0	0	0
8	26	4	8.26.5	0	0	16	0	0.12	0	16	0	0	0
8	26	5	8.26.6	0	9	16	0	0.12	8.327	16.286	9249.996	0	0
8	26	6	8.26.7	0	3	16	0	0.12	2.773	16.113	4749.013	0	0
8	26	7	8.26.8	0	40	17	0	0.12	37.088	18.517	71309.934	59.270589	59.270589
8	26	8	8.26.9	6	184	19	0	0.12	177.143	26.222	347717.261	325.883705	325.883705
8	26	9	8.26.10	12	233	21	0	0.12	230.441	30.373	444833.773	419.558993	419.558993
8	26	10	8.26.11	4	178	22	0	0.12	171.234	28.953	326979.096	305.880376	305.880376
8	26	11	8.26.12	6	186	23	0	0.12	181.21	30.353	343953.861	322.253658	322.253658
8	26	12	8.26.13	5	176	22	0	0.12	170.553	28.922	325029.495	303.999857	303.999857
8	26	13	8.26.14	34	318	22	0	0.12	344.391	35.996	655369.443	622.634547	622.634547
8	26	14	8.26.15	20	248	22	0	0.12	250.872	32.211	483214.991	456.580213	456.580213
8	26	15	8.26.16	0	107	21	0	0.12	99.706	25.068	192798.749	176.454573	176.454573
8	26	16	8.26.17	0	92	20	0	0.12	85.64	23.504	167566.852	152.116742	152.116742
8	26	17	8.26.18	45	70	19	0	0.12	71.695	21.898	133887.23	119.630523	119.630523
8	26	18	8.26.19	0	0	18	0	0.12	0	0	0	0	0
8	26	19	8.26.20	0	0	17	0	0.12	0	17	0	0	0
8	26	20	8.26.21	0	0	16	0	0.12	0	16	0	0	0
8	26	21	8.26.22	0	0	16	0	0.12	0	16	0	0	0
8	26	22	8.26.23	0	0	15	0	0.12	0	15	0	0	0
8	26	23	8.26.24	0	0	15	0	0.12	0	15	0	0	0
8	27	0	8.27.1	0	0	15	0	0.12	0	15	0	0	0
8	27	1	8.27.2	0	0	15	0	0.12	0	15	0	0	0
8	27	2	8.27.3	0	0	15	0	0.12	0	15	0	0	0
8	27	3	8.27.4	0	0	15	0	0.12	0	15	0	0	0
8	27	4	8.27.5	0	0	15	0	0.12	0	15	0	0	0
8	27	5	8.27.6	0	1	15	0	0.12	0.923	15.032	0	0	0
8	27	6	8.27.7	0	63	16	0	0.12	58.432	18.389	114692	101.115457	101.115457
8	27	7	8.27.8	0	87	17	0	0.12	80.912	20.309	159714.96	144.543074	144.543074
8	27	8	8.27.9	0	138	18	0	0.12	129.15	23.265	253533.865	235.037602	235.037602
8	27	9	8.27.10	0	98	18	0	0.12	91.238	21.71	176151.114	160.39683	160.39683
8	27	10	8.27.11	0	147	18	0	0.12	137.856	23.597	266872.665	247.903755	247.903755
8	27	11	8.27.12	0	65	17	0	0.12	60.522	19.455	114994.735	101.407464	101.407464
8	27	12	8.27.13	6	188	17	0	0.12	183.084	24.431	356439.632	334.297008	334.297008
8	27	13	8.27.14	0	151	17	0	0.12	141.644	22.753	275783.435	256.498781	256.498781
8	27	14	8.27.15	0	132	16	0	0.12	123.428	21.022	242397.69	224.296026	224.296026
8	27	15	8.27.16	0	54	16	0	0.12	50.128	18.045	97053.605	84.10206	84.10206
8	27	16	8.27.17	0	70	16	0	0.12	64.991	18.659	128354.796	114.294125	114.294125
8	27	17	8.27.18	0	45	16	0	0.12	41.702	17.7	80025.95	67.677762	67.677762
8	27	18	8.27.19	0	0	17	0	0.12	0	0	0	0	0
8	27	19	8.27.20	0	0	17	0	0.12	0	17	0	0	0
8	27	20	8.27.21	0	0	18	0	0.12	0	18	0	0	0
8	27	21	8.27.22	0	0	18	0	0.12	0	18	0	0	0
8	27	22	8.27.23	0	0	19	0	0.12	0	19	0	0	0
8	27	23	8.27.24	0	0	19	0	0.12	0	19	0	0	0
8	28	0	8.28.1	0	0	19	0	0.12	0	19	0	0	0
8	28	1	8.28.2	0	0	19	0	0.12	0	19	0	0	0

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
8	28	2	8.28.3	0	0	19	0	0.12	0	19	0	0	0
8	28	3	8.28.4	0	0	20	0	0.12	0	20	0	0	0
8	28	4	8.28.5	0	0	20	0	0.12	0	20	0	0	0
8	28	5	8.28.6	0	4	20	0	0.12	3.695	20.127	3849.718	0	0
8	28	6	8.28.7	0	11	20	0	0.12	10.174	20.416	18207.472	8.049758	8.049758
8	28	7	8.28.8	0	30	21	0	0.12	27.803	22.137	51896.431	40.544984	40.544984
8	28	8	8.28.9	0	70	21	0	0.12	65.031	23.651	123903.016	110.00009	110.00009
8	28	9	8.28.10	7	205	22	0	0.12	199.268	30.105	383180.44	360.090284	360.090284
8	28	10	8.28.11	27	303	23	0	0.12	323.882	36.158	614201.906	582.92574	582.92574
8	28	11	8.28.12	32	338	24	0	0.12	366.858	38.895	688586.996	654.675071	654.675071
8	28	12	8.28.13	41	354	25	0	0.12	391.792	40.911	731061.439	695.644476	695.644476
8	28	13	8.28.14	45	331	25	0	0.12	367.969	39.958	690743.237	656.754908	656.754908
8	28	14	8.28.15	82	303	24	0	0.12	361.031	38.71	686689.623	652.844929	652.844929
8	28	15	8.28.16	292	218	23	0	0.12	394.082	39.131	763008.161	726.459198	726.459198
8	28	16	8.28.17	62	143	22	0	0.12	159.785	28.531	312518.097	291.931788	291.931788
8	28	17	8.28.18	77	64	21	0	0.12	71.172	23.853	128018.419	113.969667	113.969667
8	28	18	8.28.19	0	0	20	0.1	0.12	0	20	0	0	0
8	28	19	8.28.20	0	0	19	0	0.12	0	19	0	0	0
8	28	20	8.28.21	0	0	19	0	0.12	0	19	0	0	0
8	28	21	8.28.22	0	0	18	0	0.12	0	18	0	0	0
8	28	22	8.28.23	0	0	18	0	0.12	0	18	0	0	0
8	28	23	8.28.24	0	0	18	0	0.12	0	18	0	0	0
8	29	0	8.29.1	0	0	17	0	0.12	0	17	0	0	0
8	29	1	8.29.2	0	0	17	0	0.12	0	17	0	0	0
8	29	2	8.29.3	0	0	16	0	0.12	0	16	0	0	0
8	29	3	8.29.4	0	0	16	0	0.12	0	16	0	0	0
8	29	4	8.29.5	0	0	16	0	0.12	0	16	0	0	0
8	29	5	8.29.6	0	6	16	0	0.12	5.708	16.196	6227.234	0	0
8	29	6	8.29.7	0	5	16	0	0.12	4.622	16.189	8116.499	0	0
8	29	7	8.29.8	0	44	16	0	0.12	40.803	17.669	79129.351	66.812933	66.812933
8	29	8	8.29.9	7	185	17	0	0.12	178.934	24.296	354388.585	332.318638	332.318638
8	29	9	8.29.10	0	129	17	0	0.12	120.608	21.905	235364.655	217.512199	217.512199
8	29	10	8.29.11	4	177	18	0	0.12	170.33	24.917	330845.748	309.610018	309.610018
8	29	11	8.29.12	0	102	19	0	0.12	95.199	22.863	181772.446	165.818975	165.818975
8	29	12	8.29.13	6	188	19	0	0.12	183.113	26.433	353736.15	331.689322	331.689322
8	29	13	8.29.14	3	167	19	0	0.12	159.685	25.487	309089.461	288.624643	288.624643
8	29	14	8.29.15	0	111	19	0	0.12	103.504	23.212	200145.282	183.540789	183.540789
8	29	15	8.29.16	0	43	19	0	0.12	39.899	20.628	75646.592	63.453583	63.453583
8	29	16	8.29.17	0	10	18	0	0.12	9.255	18.379	16715.321	6.610481	6.610481
8	29	17	8.29.18	0	35	18	0	0.12	32.447	19.322	60917.864	49.246752	49.246752
8	29	18	8.29.19	0	0	17	0	0.12	0	17	0	0	0
8	29	19	8.29.20	0	0	17	0	0.12	0	17	0	0	0
8	29	20	8.29.21	0	0	17	0	0.12	0	17	0	0	0
8	29	21	8.29.22	0	0	16	0	0.12	0	16	0	0	0
8	29	22	8.29.23	0	0	16	0	0.12	0	16	0	0	0
8	29	23	8.29.24	0	0	16	0	0.12	0	16	0	0	0
8	30	0	8.30.1	0	0	16	0	0.12	0	16	0	0	0
8	30	1	8.30.2	0	0	16	0	0.12	0	16	0	0	0
8	30	2	8.30.3	0	0	16	0	0.12	0	16	0	0	0
8	30	3	8.30.4	0	0	15	0	0.12	0	15	0	0	0
8	30	4	8.30.5	0	0	15	0	0.12	0	15	0	0	0
8	30	5	8.30.6	0	1	15	0	0.12	0.951	15.033	0	0	0
8	30	6	8.30.7	0	23	16	0	0.12	21.293	16.87	40158.23	29.222714	29.222714
8	30	7	8.30.8	0	110	18	0	0.12	102.717	22.201	203218.287	186.504905	186.504905
8	30	8	8.30.9	90	249	20	0	0.12	300.899	32.286	589387.525	558.990632	558.990632
8	30	9	8.30.10	61	307	22	0	0.12	352.065	36.333	673912.111	640.520175	640.520175
8	30	10	8.30.11	249	375	23	0	0.12	622.807	48.36	1146578.39	1096.438009	1096.438009
8	30	11	8.30.12	278	396	24	0	0.12	688.779	52.032	1247075.244	1193.37386	1193.37386
8	30	12	8.30.13	803	145	25	0	0.12	938.287	63.311	1634652.163	1567.217387	1567.217387
8	30	13	8.30.14	778	145	25	0	0.12	857.071	60.024	1520933.679	1457.528401	1457.528401
8	30	14	8.30.15	462	241	25	0	0.12	609.883	49.926	1130467.476	1080.897969	1080.897969
8	30	15	8.30.16	661	122	24	0	0.12	521.406	45.394	997670.773	952.806781	952.806781
8	30	16	8.30.17	545	96	23	0	0.12	304.916	35.402	581617.862	551.496278	551.496278
8	30	17	8.30.18	337	54	21	0.1	0.12	99.216	24.679	156078.365	141.035338	141.035338
8	30	18	8.30.19	0	0	20	0	0.12	0	20	0	0	0
8	30	19	8.30.20	0	0	19	0	0.12	0	19	0	0	0
8	30	20	8.30.21	0	0	18	0	0.12	0	18	0	0	0
8	30	21	8.30.22	0	0	17	0	0.12	0	17	0	0	0
8	30	22	8.30.23	0	0	16	0	0.12	0	16	0	0	0
8	30	23	8.30.24	0	0	15	0	0.12	0	15	0	0	0
8	31	0	8.31.1	0	0	14	0	0.12	0	14	0	0	0
8	31	1	8.31.2	0	0	13	0	0.12	0	13	0	0	0
8	31	2	8.31.3	0	0	13	0	0.12	0	13	0	0	0
8	31	3	8.31.4	0	0	12	0	0.12	0	12	0	0	0
8	31	4	8.31.5	0	0	12	0	0.12	0	12	0	0	0
8	31	5	8.31.6	0	9	12	0	0.12	8.562	12.294	9731.712	0	0
8	31	6	8.31.7	0	60	14	0	0.12	55.687	16.276	109885.915	96.47967	96.47967
8	31	7	8.31.8	150	167	16	0	0.12	229.731	25.397	462132.619	436.244873	436.244873
8	31	8	8.31.9	118	251	17	0	0.12	326.793	30.348	647424.387	614.971017	614.971017
8	31	9	8.31.10	177	327	19	0	0.12	474.527	38.343	910940.156	869.149374	869.149374
8	31	10	8.31.11	405	326	20	0	0.12	723.692	49.501	1332432.408	1275.70648	1275.70648
8	31	11	8.31.12	564	289	21	0	0.12	864.673	56.255	1547097.232	1482.764876	1482.764876
8	31	12	8.31.13	634	252	21	0	0.12	890.404	57.322	1588200.793	1522.411974	1522.411974
8	31	13	8.31.14	523	265	22	0	0.12	753.207	52.739	1373579.241	1315.395317	1315.395317
8	31	14	8.31.15	571	198	22	0	0.12	648.017	48.504	1212299.394	1159.830257	1159.830257
8	31	15	8.31.16	487	168	21	0	0.12	461.406	39.916	898562.735	857.210534	857.210534
8	31	16	8.31.17	267	130	20	0	0.12	228.262	29.303	445764.752	420.456985	420.456985
8	31	17	8.31.18	91	59	18	0.3	0.12	67.764	20.452	120899.489	107.10299	107.10299
8	31	18	8.31.19	0	0	16	0.3	0.12	0	16	0	0	0
8	31	19	8.31.20	0	0	22	0.1	0.11	0	22	0	0	0
8	31	20	8.31.21	0	0	22	0	0.11	0	22	0	0	0
8	31	21	8.31.22	0	0	21	0	0.11	0	21	0	0	0
8	31	22	8.31.23	0	0	21	0	0.11	0	21	0	0	0
8	31	23	8.31.24	0	0	21	0	0.11	0	21	0	0	0
9	1	0	9.1.1	0	0	21	0	0.11	0	21	0	0	0
9	1	1	9.1.2	0	0	21	0	0.11	0	21	0	0	0
9	1	2	9.1.3	0	0	20	0	0.11	0	20	0	0	0
9	1	3	9.1.4	0	0	20	0.1	0.11	0	20	0	0	0
9	1	4	9.1.5	0	0	20	0.1	0.11	0	20	0	0	0
9	1	5	9.1.6	0	3	20	0	0.11	2.854	20.098	2933.839	0	0
9	1	6	9.1.7	0	54	21	0	0.11	50.102	23.048	95494.793	82.598482	82.598482
9	1	7	9.1.8	35	153	23	0.1	0.11	162.062	29.415	316820.741	296.081973	296.081973
9	1	8	9.1.9	2	169	25	0	0.11	160.366	31.54	307038.952	286.646791	286.646791
9	1	9	9.1.10	0	158	26	0	0.11	148.347	32.034	279855.132	260.426201	260.426201
9	1	10	9.1.11	0	115	26	0	0.11	107.395	30.361	200195.19	183.588928	183.588928
9	1	11	9.1.12	69	380	26	0	0.11	447.389	44.177	827398.545	788.567975	788.567975
9	1	12	9.1.13	352	365	27	0	0.11	723.72	56.478	1289417.353	1234.21562	1234.21562
9	1	13	9.1.14	353	331	27	0	0.11	660.625	53.935	1193833.975	1142.019141	1142.019141
9	1	14	9.1.15	226	298	26	0	0.11	472.584	45.288	885439.428	844.552238	844.552238
9	1	15	9.1.16	202	221	26	0	0.11	337.222	39.8	647872.477	615.403229	615.403229
9	1	16	9.1.17	21	126	25	0	0.11	125.871	30.149	242925.973	224.80559	224.80559
9	1	17	9.1.18	258	55	23	0	0.11	87.307	26.372	138875.855	124.442381	124.442381
9	1	18	9.1.19	0	0	21	0.1	0.11	0	21	0	0	0
9	1	19	9.1.20	0	0	21	0	0.11	0	21	0	0	0
9	1	20	9.1.21	0	0	20	0	0.11	0	20	0	0	0
9	1	21	9.1.22	0	0	19	0	0.11	0	19	0	0	0
9	1	22	9.1.23	0	0	18	0	0.11	0	18	0	0	0
9	1	23	9.1.24	0	0	18	0	0.11	0	18	0	0	0
9	2	0	9.2.1	0	0	17	0	0.11	0	17	0	0	0
9	2	1	9.2.2	0	0	16	0	0.11	0	16	0	0	0
9	2	2	9.2.3	0	0	16	0	0.11	0	16	0	0	0
9	2	3	9.2.4	0	0	15	0	0.11	0	15	0	0	0
9	2	4	9.2.5	0	0	15	0	0.11	0	15	0	0	0
9	2	5	9.2.6	129	10	16	0	0.11	9.513	16.326	10647.683	0.757843	0.757843
9	2	6	9.2.7	565	47	18	0	0.11	166.837	24.482	279758.732	260.333218	260.333218
9	2	7	9.2.8	746	65	21	0	0.11	399.032	37.325	776900.645	739.859416	739.859416
9	2	8	9.2.9	835	76	23	0	0.11	619.962	48.44	1174039.242	1122.925814	1122.925814
9	2	9	9.2.10	884	84	25	0	0.11	804.581	57.94	1451226.028	1390.29077	1390.29077
9	2	10	9.2.11	908	89	26	0	0.11	930.642	64.045	1623304.433	1556.271753	1556.271753
9	2	11	9.2.12	915	92	27	0	0.11	988.159	67.371	1692514.046	1623.028994	1623.028994
9	2	12	9.2.13	909	94	28	0	0.11	974.987	67.837	1667410.906	1598.815357	1598.815357
9	2	13	9.2.14	886	95	28	0	0.11	889.695	64.383	1552126.038	1487.615491	1487.615491
9	2	14	9.2.15	446	242	28	0	0.11	595.873	52.358	1093485.115	1045.22604	1045.22604
9	2	15	9.2.16	224	215	27	0	0.11	343.496	41.061	657522.144	624.71097	624.71097
9	2	16	9.2.17	376	113	26	0	0.11	252.943	36.292	478540.8	452.071647	452.071647
9	2	17	9.2.18	256	48	23	0.1	0.11	79.625	25.957	123987.958	110.082021	110.082021
9	2	18	9.2.19	0	0	20	0.1	0.11	0	20	0	0	0
9	2	19	9.2.20	0	0	19	0.1	0.11	0	19	0	0	0
9	2	20	9.2.21	0	0	18	0	0.11	0	18	0	0	0
9	2	21	9.2.22	0	0	17	0	0.11	0	17	0	0	0
9	2	22	9.2.23	0	0	17	0.1	0.11	0	17	0	0	0
9	2	23	9.2.24	0	0	16	0.2	0.11	0	16	0	0	0
9	3	0	9.3.1	0	0	16	0.1	0.11	0	16	0	0	0
9	3	1	9.3.2	0	0	15	0.1	0.11	0	15	0	0	0
9	3	2	9.3.3	0	0	15	0	0.11	0	15	0	0	0
9	3	3	9.3.4	0	0	15	0	0.11	0	15	0	0	0
9	3	4	9.3.5	0	0	15	0	0.11	0	15	0	0	0
9	3	5	9.3.6	0	8	15	0	0.11	7.61	15.261	8468.883	0	0
9	3	6	9.3.7	164	79	17	0	0.11	110.931	21.444	204773.362	188.004877	188.004877
9	3	7	9.3.8	151	162	19	0	0.11	225.413	28.221	448157.058	422.764521	422.764521
9	3	8	9.3.9	214	243	21	0	0.11	380.636	36.564	741233.243	705.455852	705.455852

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

													Reference Case	Adjusted Case
													3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
9	3	9	9.3.10	493	239	23	0	0.11	654.343	49.738	1213565.434	1161.051436	1161.051436
9	3	10	9.3.11	389	330	24	0	0.11	703.915	52.698	1278988.246	1224.156058	1224.156058
9	3	11	9.3.12	422	334	24	0	0.11	772.241	55.468	1384177.519	1325.618056	1325.618056
9	3	12	9.3.13	173	396	25	0	0.11	574.135	48.357	1052626.379	1005.815091	1005.815091
9	3	13	9.3.14	210	357	24	0	0.11	551.24	46.455	1023171.19	977.403617	977.403617
9	3	14	9.3.15	326	273	24	0	0.11	528.959	45.608	994959.923	950.191987	950.191987
9	3	15	9.3.16	439	172	24	0	0.11	433.934	41.791	837698.382	798.502848	798.502848
9	3	16	9.3.17	343	119	23	0	0.11	245.746	33.001	471141.836	444.934858	444.934858
9	3	17	9.3.18	172	52	20	0.2	0.11	71.173	22.6	117409.181	103.736357	103.736357
9	3	18	9.3.19	0	0	18	0.3	0.11	0	18	0	0	0
9	3	19	9.3.20	0	0	17	0.3	0.11	0	17	0	0	0
9	3	20	9.3.21	0	0	16	0.3	0.11	0	16	0	0	0
9	3	21	9.3.22	0	0	15	0.3	0.11	0	15	0	0	0
9	3	22	9.3.23	0	0	15	0.2	0.11	0	15	0	0	0
9	3	23	9.3.24	0	0	15	0	0.11	0	15	0	0	0
9	4	0	9.4.1	0	0	14	0	0.11	0	14	0	0	0
9	4	1	9.4.2	0	0	14	0	0.11	0	14	0	0	0
9	4	2	9.4.3	0	0	14	0	0.11	0	14	0	0	0
9	4	3	9.4.4	0	0	14	0	0.11	0	14	0	0	0
9	4	4	9.4.5	0	0	13	0	0.11	0	13	0	0	0
9	4	5	9.4.6	39	8	14	0	0.11	7.61	14.261	8513.169	0	0
9	4	6	9.4.7	430	61	16	0	0.11	151.715	21.948	263399.892	244.554036	244.554036
9	4	7	9.4.8	645	87	19	0	0.11	376.577	34.405	740789.347	705.027685	705.027685
9	4	8	9.4.9	760	100	22	0	0.11	598.528	46.555	1141067.748	1091.122631	1091.122631
9	4	9	9.4.10	823	108	24	0	0.11	784.067	56.094	1424801.975	1364.803026	1364.803026
9	4	10	9.4.11	852	115	25	0	0.11	905.266	62.003	1593246.167	1527.27857	1527.27857
9	4	11	9.4.12	860	120	26	0	0.11	962.451	65.315	1663799.554	1595.33197	1595.33197
9	4	12	9.4.13	852	123	27	0	0.11	948.324	65.742	1637184.458	1569.659954	1569.659954
9	4	13	9.4.14	821	125	27	0	0.11	866.221	62.417	1523824.647	1460.316931	1460.316931
9	4	14	9.4.15	760	125	26	0	0.11	710.697	55.106	1299364.334	1243.810139	1243.810139
9	4	15	9.4.16	650	122	25	0	0.11	505.98	45.769	967681.843	923.880478	923.880478
9	4	16	9.4.17	480	103	24	0	0.11	278.047	35.295	526676.899	498.502092	498.502092
9	4	17	9.4.18	222	52	21	0	0.11	77.447	23.99	123604.258	109.711918	109.711918
9	4	18	9.4.19	0	0	19	0	0.11	0	19	0	0	0
9	4	19	9.4.20	0	0	18	0	0.11	0	18	0	0	0
9	4	20	9.4.21	0	0	17	0	0.11	0	17	0	0	0
9	4	21	9.4.22	0	0	16	0	0.11	0	16	0	0	0
9	4	22	9.4.23	0	0	15	0	0.11	0	15	0	0	0
9	4	23	9.4.24	0	0	15	0	0.11	0	15	0	0	0
9	5	0	9.5.1	0	0	15	0	0.11	0	15	0	0	0
9	5	1	9.5.2	0	0	15	0	0.11	0	15	0	0	0
9	5	2	9.5.3	0	0	14	0	0.11	0	14	0	0	0
9	5	3	9.5.4	0	0	14	0	0.11	0	14	0	0	0
9	5	4	9.5.5	0	0	14	0	0.11	0	14	0	0	0
9	5	5	9.5.6	0	0	14	0	0.11	0	0	0	0	0
9	5	6	9.5.7	55	77	16	0	0.11	83.938	19.4	160694.553	145.487956	145.487956
9	5	7	9.5.8	162	158	18	0	0.11	226.386	27.261	451958.753	426.431507	426.431507
9	5	8	9.5.9	47	224	20	0	0.11	248.827	30.158	488588.042	461.762875	461.762875
9	5	9	9.5.10	64	299	23	0	0.11	347.377	37.149	663503.228	630.48012	630.48012
9	5	10	9.5.11	347	339	25	0	0.11	674.853	52.509	1226249.053	1173.285623	1173.285623
9	5	11	9.5.12	566	278	26	0	0.11	852.299	60.762	1497198.922	1434.634662	1434.634662
9	5	12	9.5.13	898	103	26	0	0.11	969.448	65.615	1675531.162	1606.647881	1606.647881
9	5	13	9.5.14	546	247	26	0	0.11	750.074	56.627	1347702.843	1290.435822	1290.435822
9	5	14	9.5.15	403	249	26	0	0.11	567.857	49.213	1055590.3	1008.673989	1008.673989
9	5	15	9.5.16	352	187	25	0	0.11	391.637	41.052	755764.622	719.472326	719.472326
9	5	16	9.5.17	427	98	24	0	0.11	252.793	34.268	479167.015	452.675672	452.675672
9	5	17	9.5.18	264	42	23	0	0.11	72.303	25.74	108213.678	94.866687	94.866687
9	5	18	9.5.19	0	0	22	0	0.11	0	22	0	0	0
9	5	19	9.5.20	0	0	21	0	0.11	0	21	0	0	0
9	5	20	9.5.21	0	0	21	0	0.11	0	21	0	0	0
9	5	21	9.5.22	0	0	20	0	0.11	0	20	0	0	0
9	5	22	9.5.23	0	0	19	0	0.11	0	19	0	0	0
9	5	23	9.5.24	0	0	19	0	0.11	0	19	0	0	0
9	6	0	9.6.1	0	0	18	0	0.11	0	18	0	0	0
9	6	1	9.6.2	0	0	17	0	0.11	0	17	0	0	0
9	6	2	9.6.3	0	0	17	0	0.11	0	17	0	0	0
9	6	3	9.6.4	0	0	17	0	0.11	0	17	0	0	0
9	6	4	9.6.5	0	0	17	0	0.11	0	17	0	0	0
9	6	5	9.6.6	0	0	17	0	0.11	0	0	0	0	0
9	6	6	9.6.7	431	57	18	0	0.11	147.559	23.772	252237.162	233.786846	233.786846
9	6	7	9.6.8	0	87	20	0	0.11	81.007	23.314	158156.92	143.040242	143.040242
9	6	8	9.6.9	0	110	22	0	0.11	102.614	26.186	197611.475	181.096765	181.096765
9	6	9	9.6.10	7	199	24	0	0.11	193.852	31.889	370368.66	347.732476	347.732476
9	6	10	9.6.11	0	115	25	0	0.11	107.398	29.363	201283.479	184.638655	184.638655
9	6	11	9.6.12	6	198	26	0	0.11	192.994	33.836	362627.168	340.265295	340.265295
9	6	12	9.6.13	3	165	27	0	0.11	158.127	33.421	295451.307	275.469742	275.469742
9	6	13	9.6.14	60	326	27	0	0.11	377.321	42.352	703926.74	669.471267	669.471267
9	6	14	9.6.15	82	281	26	0	0.11	338.765	39.814	642222.361	609.953319	609.953319
9	6	15	9.6.16	158	211	25	0	0.11	300.27	37.289	581281.745	551.172071	551.172071
9	6	16	9.6.17	0	80	24	0	0.11	74.515	27.05	142949.27	128.371459	128.371459
9	6	17	9.6.18	228	46	23	0	0.11	70.989	25.714	108897.98	95.526741	95.526741
9	6	18	9.6.19	0	0	21	0	0.11	0	21	0	0	0
9	6	19	9.6.20	0	0	21	0	0.11	0	21	0	0	0
9	6	20	9.6.21	0	0	20	0	0.11	0	20	0	0	0
9	6	21	9.6.22	0	0	20	0	0.11	0	20	0	0	0
9	6	22	9.6.23	0	0	20	0	0.11	0	20	0	0	0
9	6	23	9.6.24	0	0	19	0	0.11	0	19	0	0	0
9	7	0	9.7.1	0	0	19	0	0.11	0	19	0	0	0
9	7	1	9.7.2	0	0	19	0	0.11	0	19	0	0	0
9	7	2	9.7.3	0	0	19	0	0.11	0	19	0	0	0
9	7	3	9.7.4	0	0	19	0	0.11	0	19	0	0	0
9	7	4	9.7.5	0	0	19	0	0.11	0	19	0	0	0
9	7	5	9.7.6	0	0	19	0	0.11	0	0	0	0	0
9	7	6	9.7.7	353	64	20	0	0.11	136.845	25.382	235714.057	217.84922	217.84922
9	7	7	9.7.8	0	38	22	0	0.11	35.217	23.441	66198.273	54.340055	54.340055
9	7	8	9.7.9	0	142	24	0	0.11	133.294	29.437	255932.399	237.351146	237.351146
9	7	9	9.7.10	0	149	27	0	0.11	139.845	32.69	262793.791	243.969412	243.969412
9	7	10	9.7.11	32	305	28	0	0.11	332.288	41.508	618122.982	586.707877	586.707877
9	7	11	9.7.12	14	259	29	0	0.11	260.541	39.582	483236.389	456.600852	456.600852
9	7	12	9.7.13	0	140	29	0	0.11	131.286	34.331	242421.472	224.318965	224.318965
9	7	13	9.7.14	757	144	29	0	0.11	824.942	62.728	1449545.9	1388.670176	1388.670176
9	7	14	9.7.15	55	267	28	0	0.11	304.257	40.403	573051.272	543.233237	543.233237
9	7	15	9.7.16	0	99	28	0	0.11	92.241	31.767	173398.6	157.741848	157.741848
9	7	16	9.7.17	472	93	27	0	0.11	260.723	37.576	485526.565	458.809878	458.809878
9	7	17	9.7.18	194	46	24	0	0.11	66.383	26.551	102608.216	89.459849	89.459849
9	7	18	9.7.19	0	0	22	0	0.11	0	22	0	0	0
9	7	19	9.7.20	0	0	22	0	0.11	0	22	0	0	0
9	7	20	9.7.21	0	0	21	0	0.11	0	21	0	0	0
9	7	21	9.7.22	0	0	20	0	0.11	0	20	0	0	0
9	7	22	9.7.23	0	0	20	0	0.11	0	20	0	0	0
9	7	23	9.7.24	0	0	19	0	0.11	0	19	0	0	0
9	8	0	9.8.1	0	0	18	0	0.11	0	18	0	0	0
9	8	1	9.8.2	0	0	18	0	0.11	0	18	0	0	0
9	8	2	9.8.3	0	0	18	0	0.11	0	18	0	0	0
9	8	3	9.8.4	0	0	18	0	0.11	0	18	0	0	0
9	8	4	9.8.5	0	0	18	0	0.11	0	18	0	0	0
9	8	5	9.8.6	0	0	19	0	0.11	0	0	0	0	0
9	8	6	9.8.7	398	58	21	0	0.11	141.277	26.532	239095.969	221.111298	221.111298
9	8	7	9.8.8	598	90	24	0	0.11	357.724	38.632	690425.068	656.448013	656.448013
9	8	8	9.8.9	379	206	26	0	0.11	454.137	44.599	863657.487	823.542119	823.542119
9	8	9	9.8.10	397	270	28	0	0.11	600.182	52.518	1098090.803	1049.66853	1049.66853
9	8	10	9.8.11	807	121	30	0	0.11	873.146	65.693	1512488.167	1449.382148	1449.382148
9	8	11	9.8.12	480	302	31	0	0.11	792.972	63.334	1376230.871	1317.952989	1317.952989
9	8	12	9.8.13	794	135	32	0	0.11	907.106	69.06	1543607.58	1479.398876	1479.398876
9	8	13	9.8.14	264	337	32	0	0.11	586.013	55.891	1048419.628	1001.757402	1001.757402
9	8	14	9.8.15	668	147	31	0	0.11	659.98	58.028	1190763.139	1139.057117	1139.057117
9	8	15	9.8.16	568	132	30	0	0.11	462.456	48.983	871195.423	830.812955	830.812955
9	8	16	9.8.17	400	104	29	0	0.11	245.316	38.957	454212.928	428.605808	428.605808
9	8	17	9.8.18	147	45	27	0	0.11	58.977	29.283	91477.52	78.723557	78.723557
9	8	18	9.8.19	0	0	25	0	0.11	0	25	0	0	0
9	8	19	9.8.20	0	0	24	0	0.11	0	24	0	0	0
9	8	20	9.8.21	0	0	23	0	0.11	0	23	0	0	0
9	8	21	9.8.22	0	0	22	0	0.11	0	22	0	0	0
9	8	22	9.8.23	0	0	22	0	0.11	0	22	0	0	0
9	8	23	9.8.24	0	0	22	0	0.11	0	22	0	0	0
9	9	0	9.9.1	0	0	22	0	0.11	0	22	0	0	0
9	9	1	9.9.2	0	0	22	0	0.11	0	22	0	0	0
9	9	2	9.9.3	0	0	22	0	0.11	0	22	0	0	0
9	9	3	9.9.4	0	0	22	0	0.11	0	22	0	0	0
9	9	4	9.9.5	0	0	22	0	0.11	0	22	0	0	0
9	9	5	9.9.6	0	0	22	0	0.11	0	0	0	0	0
9	9	6	9.9.7	5	66	23	0	0.11	62.563	25.551	118044.214	104.348888	104.348888
9	9	7	9.9.8	53	148	25	0	0.11	165.914	31.788	321711.853	300.799773	300.799773
9	9	8	9.9.9	333	215	27	0	0.11	434.105	44.774	823415.351	784.725921	784.725921
9	9	9	9.9.10	368	276	30	0	0.11	583.223	53.822	1060235.781	1013.154862	1013.154862
9	9	10	9.9.11	847	95	31	0	0.11	874.478	66.76	1509301.857	1446.308741	1446.308741
9	9	11	9.9.12	856	99	32	0	0.11	929.893	70.002	1576666.215	1511.286112	1511.286112
9	9	12	9.9.13	408	306	33	0	0.11	721.642	62.423	1256913.642	1202.863644	1202.863644
9	9	13	9.9.14	826	98	33	0	0.11	826.997	66.834	1429695.935	1369.523573	1369.523573
9	9	14	9.9.15	248	275	32	0	0.11	469.888	51.195	861190.585	821.162628	821.162628
9	9	15	9.9.16	703	84	31	0	0.11	485.694	50.956	911295.521	869.492147	869.492147

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
9	16	9.9.17	570	66	30	0	0.11	265.94	40.758	484105.971	457.439621	457.439621
9	17	9.9.18	296	33	27	0	0.11	64.143	29.359	86670.956	74.087309	74.087309
9	18	9.9.19	0	0	26	0	0.11	0	26	0	0	0
9	19	9.9.20	0	0	25	0	0.11	0	25	0	0	0
9	20	9.9.21	0	0	25	0	0.11	0	25	0	0	0
9	21	9.9.22	0	0	24	0	0.11	0	24	0	0	0
9	22	9.9.23	0	0	23	0	0.11	0	23	0	0	0
9	23	9.9.24	0	0	23	0.1	0.11	0	23	0	0	0
9	0	9.10.1	0	0	23	0.2	0.11	0	23	0	0	0
9	1	9.10.2	0	0	22	0.2	0.11	0	22	0	0	0
9	2	9.10.3	0	0	22	0.2	0.11	0	22	0	0	0
9	3	9.10.4	0	0	22	0.1	0.11	0	22	0	0	0
9	4	9.10.5	0	0	22	0	0.11	0	22	0	0	0
9	5	9.10.6	0	0	22	0	0.11	0	0	0	0	0
9	6	9.10.7	0	27	23	0	0.11	25.001	24.02	45626.463	34.497186	34.497186
9	7	9.10.8	0	95	25	0	0.11	88.718	28.63	170030.6	154.49319	154.49319
9	8	9.10.9	196	234	27	0	0.11	360.573	41.749	687150.624	653.289595	653.289595
9	9	9.10.10	11	217	29	0	0.11	214.964	37.751	402635.78	378.856244	378.856244
9	10	9.10.11	205	360	31	0	0.11	557.821	53.722	1003706.357	958.6285	958.6285
9	11	9.10.12	693	192	32	0	0.11	883.783	68.086	1507709.217	1444.772535	1444.772535
9	12	9.10.13	690	190	32	0	0.11	868.995	67.488	1487633.881	1425.408548	1425.408548
9	13	9.10.14	618	207	32	0	0.11	768.765	63.415	1344323.323	1287.176052	1287.176052
9	14	9.10.15	404	238	31	0	0.11	552.753	53.606	1009757.902	964.465615	964.465615
9	15	9.10.16	64	193	30	0	0.11	223.837	39.155	424781.991	400.217726	400.217726
9	16	9.10.17	33	113	29	0	0.11	119.588	33.888	225922.152	208.404281	208.404281
9	17	9.10.18	0	30	28	0	0.11	27.806	29.117	47071.075	35.89061	35.89061
9	18	9.10.19	0	0	26	0	0.11	0	26	0	0	0
9	19	9.10.20	0	0	24	0	0.11	0	24	0	0	0
9	20	9.10.21	0	0	23	0	0.11	0	23	0	0	0
9	21	9.10.22	0	0	23	0	0.11	0	23	0	0	0
9	22	9.10.23	0	0	22	0	0.11	0	22	0	0	0
9	23	9.10.24	0	0	22	0	0.11	0	22	0	0	0
9	0	9.11.1	0	0	22	0	0.11	0	22	0	0	0
9	1	9.11.2	0	0	22	0	0.11	0	22	0	0	0
9	2	9.11.3	0	0	22	0	0.11	0	22	0	0	0
9	3	9.11.4	0	0	22	0	0.11	0	22	0	0	0
9	4	9.11.5	0	0	22	0	0.11	0	22	0	0	0
9	5	9.11.6	0	0	22	0	0.11	0	0	0	0	0
9	6	9.11.7	0	19	23	0	0.11	17.579	23.717	31543.853	20.913579	20.913579
9	7	9.11.8	0	48	23	0	0.11	44.505	24.821	84102.672	71.610029	71.610029
9	8	9.11.9	0	20	24	0	0.11	18.539	24.756	33211.849	22.522471	22.522471
9	9	9.11.10	47	278	25	0	0.11	313.177	37.758	595326.924	564.719574	564.719574
9	10	9.11.11	24	283	26	0	0.11	293.238	37.922	552013.49	522.940907	522.940907
9	11	9.11.12	289	367	27	0	0.11	667.804	54.202	1201442.011	1149.357593	1149.357593
9	12	9.11.13	918	90	28	0	0.11	963.637	67.397	1655186.346	1587.023962	1587.023962
9	13	9.11.14	922	81	27	0	0.11	887.377	63.317	1559987.109	1495.198013	1495.198013
9	14	9.11.15	890	75	27	0	0.11	734.503	57.117	1337267.603	1280.370345	1280.370345
9	15	9.11.16	821	68	26	0	0.11	529.079	47.75	1009830.856	964.535984	964.535984
9	16	9.11.17	691	55	24	0	0.11	291.089	35.746	538002.456	509.42634	509.42634
9	17	9.11.18	393	29	22	0	0.11	67.597	24.384	84901.898	72.380936	72.380936
9	18	9.11.19	0	0	20	0	0.11	0	20	0	0	0
9	19	9.11.20	0	0	18	0	0.11	0	18	0	0	0
9	20	9.11.21	0	0	17	0	0.11	0	17	0	0	0
9	21	9.11.22	0	0	16	0	0.11	0	16	0	0	0
9	22	9.11.23	0	0	15	0	0.11	0	15	0	0	0
9	23	9.11.24	0	0	14	0	0.11	0	14	0	0	0
9	0	9.12.1	0	0	13	0	0.11	0	13	0	0	0
9	1	9.12.2	0	0	13	0	0.11	0	13	0	0	0
9	2	9.12.3	0	0	12	0	0.11	0	12	0	0	0
9	3	9.12.4	0	0	11	0	0.11	0	11	0	0	0
9	4	9.12.5	0	0	11	0	0.11	0	11	0	0	0
9	5	9.12.6	0	0	12	0	0.11	0	0	0	0	0
9	6	9.12.7	575	40	15	0	0.11	158.321	21.097	261526.599	242.747122	242.747122
9	7	9.12.8	772	58	18	0	0.11	397.589	34.258	782348.219	745.11396	745.11396
9	8	9.12.9	864	69	21	0	0.11	623.982	46.623	1193883.392	1142.066807	1142.066807
9	9	9.12.10	913	76	23	0	0.11	810.245	56.194	1476186.098	1414.366405	1414.366405
9	10	9.12.11	940	79	24	0	0.11	937.428	62.348	1651391.502	1583.363585	1583.363585
9	11	9.12.12	950	81	25	0	0.11	995.247	65.688	1721729.248	1651.208985	1651.208985
9	12	9.12.13	946	81	26	0	0.11	978.027	65.991	1691195.109	1621.756792	1621.756792
9	13	9.12.14	924	80	26	0	0.11	885.641	62.249	1564895.956	1499.93292	1499.93292
9	14	9.12.15	886	75	26	0	0.11	728.977	55.893	1334714.011	1277.907237	1277.907237
9	15	9.12.16	819	66	25	0	0.11	521.283	46.432	1000783.018	955.808746	955.808746
9	16	9.12.17	689	52	24	0.2	0.11	284.895	34.762	526692.632	498.517268	498.517268
9	17	9.12.18	389	26	21	0.6	0.11	62.881	22.81	76294.639	64.078667	64.078667
9	18	9.12.19	0	0	19	0.7	0.11	0	19	0	0	0
9	19	9.12.20	0	0	17	0.5	0.11	0	17	0	0	0
9	20	9.12.21	0	0	16	0.3	0.11	0	16	0	0	0
9	21	9.12.22	0	0	15	0.2	0.11	0	15	0	0	0
9	22	9.12.23	0	0	14	0.2	0.11	0	14	0	0	0
9	23	9.12.24	0	0	14	0.1	0.11	0	14	0	0	0
9	0	9.13.1	0	0	14	0	0.11	0	14	0	0	0
9	1	9.13.2	0	0	13	0	0.11	0	13	0	0	0
9	2	9.13.3	0	0	13	0	0.11	0	13	0	0	0
9	3	9.13.4	0	0	12	0	0.11	0	12	0	0	0
9	4	9.13.5	0	0	12	0	0.11	0	12	0	0	0
9	5	9.13.6	0	0	13	0	0.11	0	0	0	0	0
9	6	9.13.7	489	46	16	0	0.11	146.55	21.673	244540.667	226.363069	226.363069
9	7	9.13.8	706	69	20	0	0.11	380.148	35.544	743323.361	707.471908	707.471908
9	8	9.13.9	813	81	23	0	0.11	606.541	47.904	1153440.579	1103.057043	1103.057043
9	9	9.13.10	867	90	25	0	0.11	787.928	57.277	1428461.747	1368.333118	1368.333118
9	10	9.13.11	906	91	26	0	0.11	918.548	63.574	1609427.108	1542.886156	1542.886156
9	11	9.13.12	914	95	27	0	0.11	974.671	66.845	1677550.044	1608.595226	1608.595226
9	12	9.13.13	905	97	28	0	0.11	955.106	67.051	1643789.304	1576.030763	1576.030763
9	13	9.13.14	884	94	28	0	0.11	864.161	63.368	1519321.502	1455.973351	1455.973351
9	14	9.13.15	836	89	27	0	0.11	708.881	56.065	1296325.32	1240.878809	1240.878809
9	15	9.13.16	751	81	26	0	0.11	499.528	46.533	957253.552	913.821703	913.821703
9	16	9.13.17	591	65	25	0	0.11	263.86	35.645	485885.823	459.156407	459.156407
9	17	9.13.18	260	29	22	0	0.11	52.808	23.887	67723.163	55.810912	55.810912
9	18	9.13.19	0	0	20	0	0.11	0	20	0	0	0
9	19	9.13.20	0	0	19	0	0.11	0	19	0	0	0
9	20	9.13.21	0	0	19	0	0.11	0	19	0	0	0
9	21	9.13.22	0	0	18	0	0.11	0	18	0	0	0
9	22	9.13.23	0	0	18	0	0.11	0	18	0	0	0
9	23	9.13.24	0	0	18	0	0.11	0	18	0	0	0
9	0	9.14.1	0	0	18	0	0.11	0	18	0	0	0
9	1	9.14.2	0	0	18	0	0.11	0	18	0	0	0
9	2	9.14.3	0	0	18	0	0.11	0	18	0	0	0
9	3	9.14.4	0	0	18	0	0.11	0	18	0	0	0
9	4	9.14.5	0	0	17	0	0.11	0	17	0	0	0
9	5	9.14.6	0	0	18	0	0.11	0	18	0	0	0
9	6	9.14.7	376	55	20	0	0.11	132.574	25.176	223030.838	205.615419	205.615419
9	7	9.14.8	613	84	23	0	0.11	355.662	37.543	688669.198	654.75436	654.75436
9	8	9.14.9	729	100	26	0	0.11	574.15	49.568	1082538.883	1034.667676	1034.667676
9	9	9.14.10	790	112	29	0	0.11	754.228	59.889	1350673.88	1293.301584	1293.301584
9	10	9.14.11	852	102	30	0	0.11	880.579	66.019	1526296.103	1462.700813	1462.700813
9	11	9.14.12	855	109	31	0	0.11	932.267	69.108	1588548.805	1522.747654	1522.747654
9	12	9.14.13	827	119	32	0	0.11	910.773	69.231	1551689.674	1487.194589	1487.194589
9	13	9.14.14	366	297	31	0	0.11	628.637	56.661	1126984.775	1077.538673	1077.538673
9	14	9.14.15	74	259	30	0	0.11	310.394	42.666	581409.24	551.295049	551.295049
9	15	9.14.16	279	178	28	0	0.11	334.56	41.718	642253.96	609.983798	609.983798
9	16	9.14.17	187	109	27	0	0.11	170.751	33.939	320212.563	299.353609	299.353609
9	17	9.14.18	48	30	25	0	0.11	32.757	26.252	48202.585	36.982026	36.982026
9	18	9.14.19	0	0	23	0	0.11	0	23	0	0	0
9	19	9.14.20	0	0	22	0	0.11	0	22	0	0	0
9	20	9.14.21	0	0	20	0	0.11	0	20	0	0	0
9	21	9.14.22	0	0	19	0	0.11	0	19	0	0	0
9	22	9.14.23	0	0	17	0	0.11	0	17	0	0	0
9	23	9.14.24	0	0	16	0	0.11	0	16	0	0	0
9	0	9.15.1	0	0	15	0	0.11	0	15	0	0	0
9	1	9.15.2	0	0	14	0	0.11	0	14	0	0	0
9	2	9.15.3	0	0	14	0	0.11	0	14	0	0	0
9	3	9.15.4	0	0	13	0	0.11	0	13	0	0	0
9	4	9.15.5	0	0	12	0	0.11	0	12	0	0	0
9	5	9.15.6	0	0	12	0	0.11	0	12	0	0	0
9	6	9.15.7	571	39	14	0	0.11	155.191	19.96	255390.638	236.828582	236.828582
9	7	9.15.8	771	58	16	0	0.11	395.218	32.158	783554.666	746.277658	746.277658
9	8	9.15.9	864	69	19	0	0.11	621.353	44.52	1200108.188	1148.071033	1148.071033
9	9	9.15.10	914	76	20	0	0.11	807.638	53.094	1492247.066	1429.858269	1429.858269
9	10	9.15.11	396	305	22	0	0.11	681.086	49.791	1256631.797	1202.591786	1202.591786
9	11	9.15.12	948	82	23	0	0.11	989.076	63.443	1729723.621	1658.920086	1658.920086
9	12	9.15.13	944	81	24	0	0.11	969.719	63.66	1696013.54	1626.404487	1626.404487
9	13	9.15.14	924	79	24	0	0.11	877.171	59.912	1567604.21	1502.54521	1502.54521
9	14	9.15.15	885	73	24	0	0.11	718.034	53.453	1330017.867	1273.377496	1273.377496
9	15	9.15.16	813	64	23	0	0.11	507.699	43.879	985848.142	941.403073	941.403073
9	16	9.15.17	677	50	22	0.1	0.11	271.569	32.57	501456.029	474.174898	474.174898
9	17	9.15.18	350	23	19	0.3	0.11	52.232	20.541	56183.693	44.680331	44.680331
9	18	9.15.19	0	0	17	0.3	0.11	0	17	0	0	0
9	19	9.15.20	0	0	16	0.4	0.11	0	16	0	0	0
9	20	9.15.21	0	0	15	0.5	0.11	0	15	0	0	0
9	21	9.15.22	0	0	14	0.4	0.11	0	14	0	0	0
9	22	9.15.23	0	0	13	0.2	0.11	0	13	0	0	0

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
9	15	23	9.15.24	0	0	13	0	0.11	0	13	0	0	0
9	16	0	9.16.1	0	0	12	0	0.11	0	12	0	0	0
9	16	1	9.16.2	0	0	12	0	0.11	0	12	0	0	0
9	16	2	9.16.3	0	0	12	0.1	0.11	0	12	0	0	0
9	16	3	9.16.4	0	0	12	0.3	0.11	0	12	0	0	0
9	16	4	9.16.5	0	0	12	0.6	0.11	0	12	0	0	0
9	16	5	9.16.6	0	0	13	0.3	0.11	0	13	0	0	0
9	16	6	9.16.7	466	46	15	0	0.11	141.035	20.454	235465.518	217.609488	217.609488
9	16	7	9.16.8	690	71	18	0	0.11	373.994	33.29	737186.364	701.55237	701.55237
9	16	8	9.16.9	803	84	20	0	0.11	601.085	44.683	1159083.15	1108.499675	1108.499675
9	16	9	9.16.10	386	258	22	0	0.11	577.319	45.596	1089313.389	1041.202134	1041.202134
9	16	10	9.16.11	915	87	23	0	0.11	917.984	60.56	1631474.047	1564.151885	1564.151885
9	16	11	9.16.12	170	372	24	0	0.11	548.786	46.342	1016796.232	971.254549	971.254549
9	16	12	9.16.13	921	89	25	0	0.11	954.972	64.057	1667639.612	1599.03596	1599.03596
9	16	13	9.16.14	331	300	25	0	0.11	600.67	49.518	1109860.316	1061.021002	1061.021002
9	16	14	9.16.15	856	81	24	0	0.11	703.279	52.847	1305982.008	1250.193323	1250.193323
9	16	15	9.16.16	779	71	23	0	0.11	496.282	43.409	965000.25	921.293905	921.293905
9	16	16	9.16.17	634	55	22	0	0.11	260.682	32.481	480516.787	453.977617	453.977617
9	16	17	9.16.18	292	23	19	0	0.11	46.036	20.457	47132.501	35.949859	35.949859
9	16	18	9.16.19	0	0	17	0	0.11	0	17	0	0	0
9	16	19	9.16.20	0	0	15	0	0.11	0	15	0	0	0
9	16	20	9.16.21	0	0	14	0	0.11	0	14	0	0	0
9	16	21	9.16.22	0	0	13	0	0.11	0	13	0	0	0
9	16	22	9.16.23	0	0	12	0	0.11	0	12	0	0	0
9	16	23	9.16.24	0	0	12	0	0.11	0	12	0	0	0
9	17	0	9.17.1	0	0	12	0	0.11	0	12	0	0	0
9	17	1	9.17.2	0	0	11	0	0.11	0	11	0	0	0
9	17	2	9.17.3	0	0	11	0.2	0.11	0	11	0	0	0
9	17	3	9.17.4	0	0	11	0.4	0.11	0	11	0	0	0
9	17	4	9.17.5	0	0	11	0.6	0.11	0	11	0	0	0
9	17	5	9.17.6	0	0	12	0.3	0.11	0	12	0	0	0
9	17	6	9.17.7	485	44	15	0	0.11	142.443	20.494	236070.445	218.19298	218.19298
9	17	7	9.17.8	706	68	18	0	0.11	376.698	33.399	742049.081	706.242781	706.242781
9	17	8	9.17.9	806	83	20	0	0.11	601.044	44.684	1159347.811	1108.754958	1108.754958
9	17	9	9.17.10	854	94	23	0	0.11	777.622	54.862	1425781.925	1365.748252	1365.748252
9	17	10	9.17.11	873	104	24	0	0.11	897.448	60.716	1593731.641	1527.746843	1527.746843
9	17	11	9.17.12	874	111	25	0	0.11	947.332	63.732	1654933.123	1586.779712	1586.779712
9	17	12	9.17.13	859	115	26	0	0.11	923.645	63.769	1614755.328	1548.025576	1548.025576
9	17	13	9.17.14	821	117	26	0	0.11	831.605	60.037	1484501.387	1422.38705	1422.38705
9	17	14	9.17.15	760	112	25	0	0.11	669.179	52.439	1243035.69	1189.477443	1189.477443
9	17	15	9.17.16	666	98	24	0	0.11	463.167	43.039	899451.198	858.067516	858.067516
9	17	16	9.17.17	481	76	23	0	0.11	232.121	32.353	429728.538	404.988998	404.988998
9	17	17	9.17.18	136	26	21	0	0.11	35.307	22.14	36601.87	25.79237	25.79237
9	17	18	9.17.19	0	0	19	0	0.11	0	19	0	0	0
9	17	19	9.17.20	0	0	18	0	0.11	0	18	0	0	0
9	17	20	9.17.21	0	0	18	0	0.11	0	18	0	0	0
9	17	21	9.17.22	0	0	18	0	0.11	0	18	0	0	0
9	17	22	9.17.23	0	0	18	0	0.11	0	18	0	0	0
9	17	23	9.17.24	0	0	18	0	0.11	0	18	0	0	0
9	18	0	9.18.1	0	0	18	0	0.11	0	18	0	0	0
9	18	1	9.18.2	0	0	18	0	0.11	0	18	0	0	0
9	18	2	9.18.3	0	0	18	0	0.11	0	18	0	0	0
9	18	3	9.18.4	0	0	18	0	0.11	0	18	0	0	0
9	18	4	9.18.5	0	0	18	0	0.11	0	18	0	0	0
9	18	5	9.18.6	0	0	18	0	0.11	0	18	0	0	0
9	18	6	9.18.7	0	7	20	0	0.11	6.468	20.263	11135.216	1.228101	1.228101
9	18	7	9.18.8	0	19	22	0	0.11	17.588	22.72	32120.927	21.470204	21.470204
9	18	8	9.18.9	0	155	23	0	0.11	146.558	28.983	283790.099	264.221737	264.221737
9	18	9	9.18.10	157	294	24	0	0.11	426.66	41.411	810303.862	772.079025	772.079025
9	18	10	9.18.11	38	298	25	0	0.11	332.559	38.531	628346.929	596.569548	596.569548
9	18	11	9.18.12	48	328	26	0	0.11	375.645	41.276	702600.96	668.192465	668.192465
9	18	12	9.18.13	112	355	27	0	0.11	462.897	45.843	856511.855	816.649685	816.649685
9	18	13	9.18.14	53	294	27	0	0.11	339.287	40.817	637483.972	605.382831	605.382831
9	18	14	9.18.15	121	258	27	0	0.11	350.362	41.31	664690.375	631.625202	631.625202
9	18	15	9.18.16	66	174	26	0	0.11	205.487	34.412	397981.105	374.366502	374.366502
9	18	16	9.18.17	27	94	25	0	0.11	99.064	29.045	188920.571	172.713814	172.713814
9	18	17	9.18.18	0	15	23	0	0.11	13.89	23.476	15263.383	5.209991	5.209991
9	18	18	9.18.19	0	0	22	0	0.11	0	22	0	0	0
9	18	19	9.18.20	0	0	21	0	0.11	0	21	0	0	0
9	18	20	9.18.21	0	0	21	0	0.11	0	21	0	0	0
9	18	21	9.18.22	0	0	21	0	0.11	0	21	0	0	0
9	18	22	9.18.23	0	0	21	0	0.11	0	21	0	0	0
9	18	23	9.18.24	0	0	21	0	0.11	0	21	0	0	0
9	19	0	9.19.1	0	0	21	0	0.11	0	21	0	0	0
9	19	1	9.19.2	0	0	21	0	0.11	0	21	0	0	0
9	19	2	9.19.3	0	0	21	0	0.11	0	21	0	0	0
9	19	3	9.19.4	0	0	21	0	0.11	0	21	0	0	0
9	19	4	9.19.5	0	0	21	0	0.11	0	21	0	0	0
9	19	5	9.19.6	0	0	21	0	0.11	0	21	0	0	0
9	19	6	9.19.7	177	59	21	0	0.11	93.958	24.72	163227.14	147.930803	147.930803
9	19	7	9.19.8	339	119	22	0	0.11	270.721	33.07	529938.239	501.64787	501.64787
9	19	8	9.19.9	0	123	22	0	0.11	115.39	26.711	223524.495	206.091583	206.091583
9	19	9	9.19.10	0	99	23	0.1	0.11	92.159	26.632	175241.306	159.51926	159.51926
9	19	10	9.19.11	0	68	24	0.1	0.11	63.22	26.488	117604.85	103.925092	103.925092
9	19	11	9.19.12	0	76	25	0	0.11	70.697	27.872	131045.793	116.889769	116.889769
9	19	12	9.19.13	21	273	25	0	0.11	281.809	36.459	533281.821	504.872975	504.872975
9	19	13	9.19.14	46	286	24	0	0.11	325.054	37.237	619196.267	587.743131	587.743131
9	19	14	9.19.15	11	195	23	0	0.11	193.497	30.892	374278.686	351.503954	351.503954
9	19	15	9.19.16	47	167	23	0	0.11	188.345	30.709	369076.483	346.486085	346.486085
9	19	16	9.19.17	19	89	22	0	0.11	89.814	25.668	173256.382	157.604669	157.604669
9	19	17	9.19.18	0	14	21	0	0.11	12.963	21.445	14344.06	4.323243	4.323243
9	19	18	9.19.19	0	0	21	0	0.11	0	21	0	0	0
9	19	19	9.19.20	0	0	21	0.1	0.11	0	21	0	0	0
9	19	20	9.19.21	0	0	20	0	0.11	0	20	0	0	0
9	19	21	9.19.22	0	0	20	0	0.11	0	20	0	0	0
9	19	22	9.19.23	0	0	20	0	0.11	0	20	0	0	0
9	19	23	9.19.24	0	0	20	0	0.11	0	20	0	0	0
9	20	0	9.20.1	0	0	19	0.1	0.11	0	19	0	0	0
9	20	1	9.20.2	0	0	19	0.1	0.11	0	19	0	0	0
9	20	2	9.20.3	0	0	19	0.2	0.11	0	19	0	0	0
9	20	3	9.20.4	0	0	19	0.3	0.11	0	19	0	0	0
9	20	4	9.20.5	0	0	19	0.3	0.11	0	19	0	0	0
9	20	5	9.20.6	0	0	19	0.2	0.11	0	19	0	0	0
9	20	6	9.20.7	0	32	19	0.1	0.11	29.654	20.168	54940.799	43.481478	43.481478
9	20	7	9.20.8	0	89	21	0.1	0.11	83.297	24.3	162442.56	147.174024	147.174024
9	20	8	9.20.9	251	210	23	0.1	0.11	376.927	37.939	733884.925	698.367914	698.367914
9	20	9	9.20.10	185	289	26	0	0.11	443.426	44.103	834695.058	795.605943	795.605943
9	20	10	9.20.11	373	302	27	0	0.11	655.544	53.755	1189944.356	1138.267346	1138.267346
9	20	11	9.20.12	509	268	28	0	0.11	776.068	59.678	1374274.454	1316.065895	1316.065895
9	20	12	9.20.13	428	295	29	0	0.11	720.477	58.402	1281722.537	1226.793462	1226.793462
9	20	13	9.20.14	437	260	30	0	0.11	653.511	56.702	1176013.827	1124.830431	1124.830431
9	20	14	9.20.15	415	210	29	0	0.11	520.985	50.332	968549.04	924.716947	924.716947
9	20	15	9.20.16	277	163	28	0	0.11	313.42	40.859	604155.757	573.235566	573.235566
9	20	16	9.20.17	220	88	26	0.2	0.11	156.162	31.918	289276.01	269.51326	269.51326
9	20	17	9.20.18	0	20	24	0.6	0.11	18.445	24.526	20461.879	10.224283	10.224283
9	20	18	9.20.19	0	0	22	0.5	0.11	0	22	0	0	0
9	20	19	9.20.20	0	0	21	0.3	0.11	0	21	0	0	0
9	20	20	9.20.21	0	0	19	0.1	0.11	0	19	0	0	0
9	20	21	9.20.22	0	0	19	0	0.11	0	19	0	0	0
9	20	22	9.20.23	0	0	18	0	0.11	0	18	0	0	0
9	20	23	9.20.24	0	0	18	0	0.11	0	18	0	0	0
9	21	0	9.21.1	0	0	18	0	0.11	0	18	0	0	0
9	21	1	9.21.2	0	0	17	0	0.11	0	17	0	0	0
9	21	2	9.21.3	0	0	17	0	0.11	0	17	0	0	0
9	21	3	9.21.4	0	0	17	0	0.11	0	17	0	0	0
9	21	4	9.21.5	0	0	17	0	0.11	0	17	0	0	0
9	21	5	9.21.6	0	0	17	0	0.11	0	17	0	0	0
9	21	6	9.21.7	281	50	19	0	0.11	106.832	23.171	179581.349	163.705518	163.705518
9	21	7	9.21.8	448	100	21	0	0.11	296.71	33.129	581493.069	551.375908	551.375908
9	21	8	9.21.9	477	163	24	0	0.11	475.057	43.485	913717.399	871.828208	871.828208
9	21	9	9.21.10	590	179	26	0	0.11	664.506	53.202	1222571.15	1169.738043	1169.738043
9	21	10	9.21.11	892	92	27	0	0.11	895.091	63.633	1571287.702	1506.098181	1506.098181
9	21	11	9.21.12	427	300	28	0	0.11	732.365	57.882	1305085.15	1249.328244	1249.328244
9	21	12	9.21.13	413	300	29	0	0.11	711.04	58.016	1266938.466	1212.533248	1212.533248
9	21	13	9.21.14	502	231	29	0	0.11	676.311	56.648	1219950.538	1167.21029	1167.21029
9	21	14	9.21.15	478	191	29	0	0.11	544.059	51.287	1009836.463	964.541392	964.541392
9	21	15	9.21.16	305	156	28	0	0.11	319.716	41.121	616610.627	585.24911	585.24911
9	21	16	9.21.17	236	86	25	0.2	0.11	158.181	30.987	293027.406	273.13173	273.13173
9	21	17	9.21.18	0	19	22	0.3	0.11	17.495	22.545	19551.413	9.346078	9.346078
9	21	18	9.21.19	0	0	20	0.2	0.11	0	20	0	0	0
9	21	19	9.21.20	0	0	19	0.2	0.11	0	19	0	0	0
9	21	20	9.21.21	0	0	18	0.2	0.11	0	18	0	0	0
9	21	21	9.21.22	0	0	17	0.3	0.11	0	17	0	0	0
9	21	22	9.21.23	0	0	17	0.2	0.11	0	17	0	0	0
9	21	23	9.21.24	0	0	16	0.2	0.11	0	16	0	0	0
9	22	0	9.22.1	0	0	16	0.2	0.11	0	16	0	0	0
9	22	1	9.22.2	0	0	15	0.3	0.11	0	15	0	0	0
9	22	2	9.22.3	0	0	15	0.4	0.11	0	15	0	0	0
9	22	3	9.22.4	0	0	14	0.3	0.11	0	14	0	0	0
9	22	4	9.22.5	0	0	14	0.2	0.11	0	14	0	0	0
9	22	5	9.22.6	0	0	15	0.1	0.11	0	15	0	0	0

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
9	22	6	9.22.7	434	41	17	0	0.11	127.951	21.92	207975.154	191.093217	191.093217
9	22	7	9.22.8	668	67	21	0	0.11	356.839	35.581	694664.9	660.537611	660.537611
9	22	8	9.22.9	779	82	26	0	0.11	578.574	49.768	1093314.417	1045.061391	1045.061391
9	22	9	9.22.10	837	91	29	0	0.11	754.958	59.944	1355705.94	1298.155338	1298.155338
9	22	10	9.22.11	870	96	30	0	0.11	878.366	65.95	1526308.943	1462.713199	1462.713199
9	22	11	9.22.12	880	99	30	0	0.11	930.557	68.063	1597043.183	1530.941043	1530.941043
9	22	12	9.22.13	873	99	31	0	0.11	908.321	68.162	1559894.277	1495.10847	1495.10847
9	22	13	9.22.14	853	93	30	0	0.11	814.964	63.379	1437135.418	1376.699446	1376.699446
9	22	14	9.22.15	807	86	29	0	0.11	661.804	56.158	1213215.942	1160.714327	1160.714327
9	22	15	9.22.16	725	73	28	0	0.11	454.537	46.694	870682.762	830.31846	830.31846
9	22	16	9.22.17	565	53	26	0	0.11	224.727	34.987	400314.447	376.617164	376.617164
9	22	17	9.22.18	175	15	22	0	0.11	23.896	22.657	19276.436	9.080845	9.080845
9	22	18	9.22.19	0	0	20	0	0.11	0	20	0	0	0
9	22	19	9.22.20	0	0	19	0	0.11	0	19	0	0	0
9	22	20	9.22.21	0	0	18	0	0.11	0	18	0	0	0
9	22	21	9.22.22	0	0	16	0	0.11	0	16	0	0	0
9	22	22	9.22.23	0	0	16	0	0.11	0	16	0	0	0
9	22	23	9.22.24	0	0	15	0	0.11	0	15	0	0	0
9	23	0	9.23.1	0	0	15	0.1	0.11	0	15	0	0	0
9	23	1	9.23.2	0	0	15	0.1	0.11	0	15	0	0	0
9	23	2	9.23.3	0	0	15	0.1	0.11	0	15	0	0	0
9	23	3	9.23.4	0	0	15	0.1	0.11	0	15	0	0	0
9	23	4	9.23.5	0	0	15	0.1	0.11	0	15	0	0	0
9	23	5	9.23.6	0	0	15	0	0.11	0	15	0	0	0
9	23	6	9.23.7	382	43	18	0	0.11	119.763	22.62	195451.954	179.013764	179.013764
9	23	7	9.23.8	601	76	21	0	0.11	337.716	34.799	658596.661	625.747413	625.747413
9	23	8	9.23.9	142	213	24	0	0.11	306.057	36.525	594512.929	563.934422	563.934422
9	23	9	9.23.10	154	284	27	0	0.11	414.194	43.908	779003.611	741.887865	741.887865
9	23	10	9.23.11	4	190	29	0	0.11	183.779	36.475	343026.922	321.359564	321.359564
9	23	11	9.23.12	294	338	30	0	0.11	638.294	56.025	1142903.138	1092.892985	1092.892985
9	23	12	9.23.13	318	323	31	0	0.11	637.871	57.02	1139038.009	1089.164813	1089.164813
9	23	13	9.23.14	381	270	31	0	0.11	605.096	55.724	1092745.216	1044.512358	1044.512358
9	23	14	9.23.15	725	110	30	0	0.11	630.149	55.853	1155175.877	1104.730852	1104.730852
9	23	15	9.23.16	615	96	29	0	0.11	421.422	46.321	805346.368	767.297194	767.297194
9	23	16	9.23.17	383	74	27	0	0.11	189.931	34.626	341442.952	319.831721	319.831721
9	23	17	9.23.18	37	12	24	0.1	0.11	13.354	24.418	13042.129	3.067444	3.067444
9	23	18	9.23.19	0	0	22	0	0.11	0	22	0	0	0
9	23	19	9.23.20	0	0	20	0	0.11	0	20	0	0	0
9	23	20	9.23.21	0	0	18	0	0.11	0	18	0	0	0
9	23	21	9.23.22	0	0	17	0	0.11	0	17	0	0	0
9	23	22	9.23.23	0	0	15	0	0.11	0	15	0	0	0
9	23	23	9.23.24	0	0	14	0	0.11	0	14	0	0	0
9	24	0	9.24.1	0	0	14	0	0.11	0	14	0	0	0
9	24	1	9.24.2	0	0	13	0	0.11	0	13	0	0	0
9	24	2	9.24.3	0	0	13	0	0.11	0	13	0	0	0
9	24	3	9.24.4	0	0	13	0	0.11	0	13	0	0	0
9	24	4	9.24.5	0	0	12	0	0.11	0	12	0	0	0
9	24	5	9.24.6	0	0	12	0	0.11	0	12	0	0	0
9	24	6	9.24.7	325	49	12	0	0.11	113.749	16.413	193366.219	177.001935	177.001935
9	24	7	9.24.8	143	130	14	0	0.11	190.998	21.812	387374.23	364.135471	364.135471
9	24	8	9.24.9	797	82	16	0	0.11	587.675	40.146	1156640.988	1106.144049	1106.144049
9	24	9	9.24.10	295	265	18	0	0.11	511.991	38.926	991429.585	946.786743	946.786743
9	24	10	9.24.11	929	81	19	0	0.11	910.274	56.267	1652174.444	1584.118785	1584.118785
9	24	11	9.24.12	945	82	20	0	0.11	967.709	59.595	1726000.345	1655.32874	1655.32874
9	24	12	9.24.13	944	80	21	0	0.11	946.871	59.753	1689844.259	1620.453808	1620.453808
9	24	13	9.24.14	924	76	21	0	0.11	849.537	55.808	1550590.965	1486.134812	1486.134812
9	24	14	9.24.15	880	71	20	0	0.11	686.522	48.185	1304545.946	1248.808146	1248.808146
9	24	15	9.24.16	798	62	19	0	0.11	474.247	38.503	940285.595	897.454988	897.454988
9	24	16	9.24.17	628	46	18	0	0.11	230.897	27.198	419603.677	395.2229	395.2229
9	24	17	9.24.18	178	13	15	0	0.11	21.081	15.568	17107.915	6.989164	6.989164
9	24	18	9.24.19	0	0	13	0	0.11	0	13	0	0	0
9	24	19	9.24.20	0	0	12	0	0.11	0	12	0	0	0
9	24	20	9.24.21	0	0	11	0	0.11	0	11	0	0	0
9	24	21	9.24.22	0	0	11	0	0.11	0	11	0	0	0
9	24	22	9.24.23	0	0	10	0	0.11	0	10	0	0	0
9	24	23	9.24.24	0	0	10	0	0.11	0	10	0	0	0
9	25	0	9.25.1	0	0	10	0	0.11	0	10	0	0	0
9	25	1	9.25.2	0	0	9	0	0.11	0	9	0	0	0
9	25	2	9.25.3	0	0	8	0	0.11	0	8	0	0	0
9	25	3	9.25.4	0	0	8	0	0.11	0	8	0	0	0
9	25	4	9.25.5	0	0	7	0	0.11	0	7	0	0	0
9	25	5	9.25.6	0	0	7	0	0.11	0	7	0	0	0
9	25	6	9.25.7	542	33	9	0	0.11	138.827	14.267	224783.773	207.30624	207.30624
9	25	7	9.25.8	775	52	12	0	0.11	382.723	27.63	768890.555	732.133155	732.133155
9	25	8	9.25.9	878	62	14	0	0.11	611.568	39.137	1210755.701	1158.341262	1158.341262
9	25	9	9.25.10	933	68	16	0	0.11	799.59	48.79	1508879.875	1445.901712	1445.901712
9	25	10	9.25.11	962	72	17	0	0.11	927.227	54.967	1692983.934	1623.482232	1623.482232
9	25	11	9.25.12	974	73	18	0	0.11	982.036	58.188	1762927.04	1690.946975	1690.946975
9	25	12	9.25.13	970	72	19	0	0.11	958.714	58.244	1722960.291	1652.396407	1652.396407
9	25	13	9.25.14	950	69	20	0	0.11	860.156	55.249	1574559.272	1509.253826	1509.253826
9	25	14	9.25.15	909	64	19	0	0.11	695.56	47.562	1326165.001	1269.661152	1269.661152
9	25	15	9.25.16	832	55	18	0	0.11	478.707	37.685	952272.134	909.016796	909.016796
9	25	16	9.25.17	672	41	16	0	0.11	235.691	25.366	428308.625	403.619398	403.619398
9	25	17	9.25.18	225	11	13	0	0.11	20.698	13.504	15290.4	5.23605	5.23605
9	25	18	9.25.19	0	0	11	0	0.11	0	11	0	0	0
9	25	19	9.25.20	0	0	10	0	0.11	0	10	0	0	0
9	25	20	9.25.21	0	0	9	0	0.11	0	9	0	0	0
9	25	21	9.25.22	0	0	9	0	0.11	0	9	0	0	0
9	25	22	9.25.23	0	0	8	0	0.11	0	8	0	0	0
9	25	23	9.25.24	0	0	8	0	0.11	0	8	0	0	0
9	26	0	9.26.1	0	0	7	0	0.11	0	7	0	0	0
9	26	1	9.26.2	0	0	7	0	0.11	0	7	0	0	0
9	26	2	9.26.3	0	0	6	0.2	0.11	0	6	0	0	0
9	26	3	9.26.4	0	0	6	0.3	0.11	0	6	0	0	0
9	26	4	9.26.5	0	0	5	0.4	0.11	0	5	0	0	0
9	26	5	9.26.6	0	0	6	0.3	0.11	0	6	0	0	0
9	26	6	9.26.7	519	34	9	0.1	0.11	135.017	13.959	218840.022	201.573099	201.573099
9	26	7	9.26.8	758	55	13	0	0.11	378.026	28.437	756544.551	720.22462	720.22462
9	26	8	9.26.9	863	66	16	0	0.11	605.541	40.89	1190323.879	1138.633421	1138.633421
9	26	9	9.26.10	913	74	18	0	0.11	789.256	50.366	1479703.637	1417.759303	1417.759303
9	26	10	9.26.11	930	82	19	0	0.11	908.427	56.197	1650214.034	1582.227839	1582.227839
9	26	11	9.26.12	570	234	20	0	0.11	789.805	52.266	1448548.378	1387.707999	1387.707999
9	26	12	9.26.13	502	250	21	0	0.11	733.881	50.979	1353132.055	1295.672657	1295.672657
9	26	13	9.26.14	846	97	21	0	0.11	808.361	54.118	1486148.683	1423.975976	1423.975976
9	26	14	9.26.15	306	218	20	0	0.11	440.437	38.034	859497.271	819.529315	819.529315
9	26	15	9.26.16	658	84	19	0	0.11	423.574	36.406	842817.578	803.44065	803.44065
9	26	16	9.26.17	460	58	18	0	0.11	192.477	25.68	351657.177	329.684015	329.684015
9	26	17	9.26.18	0	10	17	0	0.11	9.513	17.326	10592.681	0.70479	0.70479
9	26	18	9.26.19	0	0	15	0	0.11	0	15	0	0	0
9	26	19	9.26.20	0	0	15	0	0.11	0	15	0	0	0
9	26	20	9.26.21	0	0	14	0	0.11	0	14	0	0	0
9	26	21	9.26.22	0	0	14	0	0.11	0	14	0	0	0
9	26	22	9.26.23	0	0	14	0	0.11	0	14	0	0	0
9	26	23	9.26.24	0	0	15	0	0.11	0	15	0	0	0
9	27	0	9.27.1	0	0	16	0	0.11	0	16	0	0	0
9	27	1	9.27.2	0	0	16	0	0.11	0	16	0	0	0
9	27	2	9.27.3	0	0	16	0	0.11	0	16	0	0	0
9	27	3	9.27.4	0	0	16	0	0.11	0	16	0	0	0
9	27	4	9.27.5	0	0	16	0.1	0.11	0	16	0	0	0
9	27	5	9.27.6	0	0	16	0.3	0.11	0	16	0	0	0
9	27	6	9.27.7	126	50	16	0.2	0.11	75.385	18.792	132371.446	118.168449	118.168449
9	27	7	9.27.8	323	110	17	0	0.11	253.342	27.354	505487.253	478.06328	478.06328
9	27	8	9.27.9	211	202	19	0	0.11	336.922	32.802	668741.032	635.532328	635.532328
9	27	9	9.27.10	187	275	20	0	0.11	430.21	37.573	833337.063	794.296068	794.296068
9	27	10	9.27.11	310	304	21	0	0.11	599.732	45.481	1127212.542	1077.758369	1077.758369
9	27	11	9.27.12	275	332	22	0	0.11	612.891	46.995	1141085.714	1091.13996	1091.13996
9	27	12	9.27.13	347	306	23	0	0.11	643.091	49.248	1190022.785	1138.342997	1138.342997
9	27	13	9.27.14	351	267	24	0	0.11	573.721	47.447	1073765.575	1026.205242	1026.205242
9	27	14	9.27.15	429	190	23	0	0.11	500.98	43.531	961082.088	917.514578	917.514578
9	27	15	9.27.16	532	109	22	0	0.11	385.107	37.815	758494.561	722.105533	722.105533
9	27	16	9.27.17	505	54	20	0.1	0.11	199.009	27.664	357889.345	335.695352	335.695352
9	27	17	9.27.18	0	0	17	0.3	0.11	0	0	0	0	0
9	27	18	9.27.19	0	0	15	0.2	0.11	0	15	0	0	0
9	27	19	9.27.20	0	0	15	0.1	0.11	0	15	0	0	0
9	27	20	9.27.21	0	0	14	0.2	0.11	0	14	0	0	0
9	27	21	9.27.22	0	0	14	0.5	0.11	0	14	0	0	0
9	27	22	9.27.23	0	0	15	0.6	0.11	0	15	0	0	0
9	27	23	9.27.24	0	0	15	0.4	0.11	0	15	0	0	0
9	28	0	9.28.1	0	0	14	0.5	0.11	0	14	0	0	0
9	28	1	9.28.2	0	0	12	0.4	0.11	0	12	0	0	0
9	28	2	9.28.3	0	0	12	0.1	0.11	0	12	0	0	0
9	28	3	9.28.4	0	0	12	0	0.11	0	12	0	0	0
9	28	4	9.28.5	0	0	12	0	0.11	0	12	0	0	0
9	28	5	9.28.6	0	0	12	0	0.11	0	12	0	0	0
9	28	6	9.28.7	0	18	14	0	0.11	16.657	14.675	30321.353	19.734396	19.734396
9	28	7	9.28.8	0	56	16	0	0.11	51.945	18.126	101996.47	88.869779	88.869779
9	28	8	9.28.9	17	172	18	0	0.11	174.946	25.15	347982.901	326.139933	326.139933
9	28	9	9.28.10	113	271	19	0	0.11	360.345	33.711	704659.695	670.17825	670.17825
9	28	10	9.28.11	51	292	20	0	0.11	339.693	33.834	657104.161	624.307798	624.307798
9	28	11	9.28.12	52	310	20	0	0.11	361.985	34.733	697188.728	662.972009	662.972009
9	28	12	9.28.13	6	204	20	0	0.11	199.762	28.126	387542.22	364.297509	364.297509

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

													Reference Case	Adjusted Case
													3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
9	28	13	9.28.14	0	159	19	0	0.11	150.239	25.118	293219.729	273.317238	273.317238
9	28	14	9.28.15	0	82	18	0	0.11	76.173	21.109	148362.336	133.592718	133.592718
9	28	15	9.28.16	0	40	17	0	0.11	37.073	18.517	71469.862	59.42485	59.42485
9	28	16	9.28.17	330	71	15	0	0.11	166.045	21.642	309517.766	289.037771	289.037771
9	28	17	9.28.18	0	0	14	0	0.11	0	0	0	0	0
9	28	18	9.28.19	0	0	14	0	0.11	0	14	0	0	0
9	28	19	9.28.20	0	0	13	0	0.11	0	13	0	0	0
9	28	20	9.28.21	0	0	13	0	0.11	0	13	0	0	0
9	28	21	9.28.22	0	0	13	0	0.11	0	13	0	0	0
9	28	22	9.28.23	0	0	13	0	0.11	0	13	0	0	0
9	28	23	9.28.24	0	0	13	0	0.11	0	13	0	0	0
9	29	0	9.29.1	0	0	13	0	0.11	0	13	0	0	0
9	29	1	9.29.2	0	0	13	0	0.11	0	13	0	0	0
9	29	2	9.29.3	0	0	13	0	0.11	0	13	0	0	0
9	29	3	9.29.4	0	0	13	0	0.11	0	13	0	0	0
9	29	4	9.29.5	0	0	13	0	0.11	0	13	0	0	0
9	29	5	9.29.6	0	0	13	0	0.11	0	13	0	0	0
9	29	6	9.29.7	275	44	13	0	0.11	98.661	16.814	164762.154	149.411426	149.411426
9	29	7	9.29.8	76	121	14	0	0.11	150.405	20.153	304712.209	284.402494	284.402494
9	29	8	9.29.9	683	104	15	0	0.11	537.868	37.097	1070422.329	1022.98046	1022.98046
9	29	9	9.29.10	545	183	16	0	0.11	623.636	41.54	1206260.117	1154.004975	1154.004975
9	29	10	9.29.11	520	228	17	0	0.11	709.98	46.024	1340050.945	1283.055062	1283.055062
9	29	11	9.29.12	428	284	17	0	0.11	709.851	45.983	1333968.224	1277.187876	1277.187876
9	29	12	9.29.13	528	234	18	0	0.11	736.077	48.082	1375997.898	1317.728272	1317.728272
9	29	13	9.29.14	806	104	19	0	0.11	775.76	50.788	1447726.114	1386.914871	1386.914871
9	29	14	9.29.15	407	189	18	0	0.11	482.515	37.776	947599.704	904.509929	904.509929
9	29	15	9.29.16	653	79	17	0	0.11	408.77	33.789	819846.425	781.283456	781.283456
9	29	16	9.29.17	458	53	16	0	0.11	181.863	23.224	329920.671	308.71772	308.71772
9	29	17	9.29.18	0	0	15	0	0.11	0	0	0	0	0
9	29	18	9.29.19	0	0	14	0	0.11	0	14	0	0	0
9	29	19	9.29.20	0	0	13	0	0.11	0	13	0	0	0
9	29	20	9.29.21	0	0	12	0	0.11	0	12	0	0	0
9	29	21	9.29.22	0	0	12	0	0.11	0	12	0	0	0
9	29	22	9.29.23	0	0	12	0	0.11	0	12	0	0	0
9	29	23	9.29.24	0	0	12	0	0.11	0	12	0	0	0
9	30	0	9.30.1	0	0	12	0	0.11	0	12	0	0	0
9	30	1	9.30.2	0	0	12	0	0.11	0	12	0	0	0
9	30	2	9.30.3	0	0	12	0	0.11	0	12	0	0	0
9	30	3	9.30.4	0	0	12	0	0.11	0	12	0	0	0
9	30	4	9.30.5	0	0	12	0	0.11	0	12	0	0	0
9	30	5	9.30.6	0	0	12	0	0.11	0	12	0	0	0
9	30	6	9.30.7	71	44	12	0	0.11	57.406	14.279	103027.942	89.864702	89.864702
9	30	7	9.30.8	164	119	13	0	0.11	188.305	20.698	382727.268	359.653169	359.653169
9	30	8	9.30.9	2	152	14	0	0.11	145.915	19.962	294256.118	274.316904	274.316904
9	30	9	9.30.10	50	246	15	0	0.11	285.519	26.649	569578.199	539.883229	539.883229
9	30	10	9.30.11	85	305	16	0	0.11	383.707	31.637	752762.603	716.576681	716.576681
9	30	11	9.30.12	39	292	16	0	0.11	331.052	29.474	649786.636	617.249562	617.249562
9	30	12	9.30.13	2	177	16	0	0.11	169.573	22.899	334227.714	312.872148	312.872148
9	30	13	9.30.14	24	235	16	0	0.11	245.824	26.019	487554.148	460.765616	460.765616
9	30	14	9.30.15	0	136	15	0	0.11	128.37	20.24	256428.124	237.829306	237.829306
9	30	15	9.30.16	0	15	14	0	0.11	13.884	14.568	26055.052	15.619267	15.619267
9	30	16	9.30.17	0	6	13	0	0.11	5.544	13.226	9894.402	0.031254	0.031254
9	30	17	9.30.18	0	0	12	0	0.11	0	0	0	0	0
9	30	18	9.30.19	0	0	12	0	0.11	0	12	0	0	0
9	30	19	9.30.20	0	0	18	0	0.11	0	18	0	0	0
9	30	20	9.30.21	0	0	18	0	0.11	0	18	0	0	0
9	30	21	9.30.22	0	0	17	0	0.11	0	17	0	0	0
9	30	22	9.30.23	0	0	17	0.1	0.11	0	17	0	0	0
9	30	23	9.30.24	0	0	17	0.1	0.11	0	17	0	0	0
10	1	0	10.1.1	0	0	16	0.1	0.11	0	16	0	0	0
10	1	1	10.1.2	0	0	16	0.1	0.11	0	16	0	0	0
10	1	2	10.1.3	0	0	16	0	0.11	0	16	0	0	0
10	1	3	10.1.4	0	0	15	0	0.11	0	15	0	0	0
10	1	4	10.1.5	0	0	15	0	0.11	0	15	0	0	0
10	1	5	10.1.6	0	0	15	0	0.11	0	15	0	0	0
10	1	6	10.1.7	0	5	15	0	0.11	4.618	15.187	7794.718	0	0
10	1	7	10.1.8	0	5	16	0	0.11	4.623	16.189	8160.584	0	0
10	1	8	10.1.9	0	82	17	0	0.11	76.16	20.112	149646.477	134.831357	134.831357
10	1	9	10.1.10	0	24	18	0	0.11	22.259	18.907	41219.068	30.245962	30.245962
10	1	10	10.1.11	0	41	18	0	0.11	38.072	19.549	71645.437	59.594204	59.594204
10	1	11	10.1.12	19	256	19	0	0.11	264.203	29.751	514297.61	486.561451	486.561451
10	1	12	10.1.13	0	132	19	0	0.11	123.875	24.04	240200.957	222.177132	222.177132
10	1	13	10.1.14	0	105	19	0	0.11	97.93	22.989	189844.656	173.605155	173.605155
10	1	14	10.1.15	2	161	19	0	0.11	154.622	25.313	304798.527	284.485754	284.485754
10	1	15	10.1.16	0	64	18	0	0.11	59.388	20.431	116010.67	102.3874	102.3874
10	1	16	10.1.17	0	37	17	0	0.11	34.297	18.398	65039.324	53.222172	53.222172
10	1	17	10.1.18	0	0	15	0	0.11	0	0	0	0	0
10	1	18	10.1.19	0	0	13	0	0.11	0	13	0	0	0
10	1	19	10.1.20	0	0	12	0	0.11	0	12	0	0	0
10	1	20	10.1.21	0	0	10	0	0.11	0	10	0	0	0
10	1	21	10.1.22	0	0	10	0	0.11	0	10	0	0	0
10	1	22	10.1.23	0	0	9	0	0.11	0	9	0	0	0
10	1	23	10.1.24	0	0	9	0	0.11	0	9	0	0	0
10	2	0	10.2.1	0	0	9	0	0.11	0	9	0	0	0
10	2	1	10.2.2	0	0	9	0	0.11	0	9	0	0	0
10	2	2	10.2.3	0	0	9	0	0.11	0	9	0	0	0
10	2	3	10.2.4	0	0	10	0	0.11	0	10	0	0	0
10	2	4	10.2.5	0	0	11	0	0.11	0	11	0	0	0
10	2	5	10.2.6	0	0	12	0	0.11	0	12	0	0	0
10	2	6	10.2.7	0	2	13	0	0.11	1.847	13.074	2992.889	0	0
10	2	7	10.2.8	32	113	14	0	0.11	124.495	19.094	251835.149	233.399078	233.399078
10	2	8	10.2.9	685	106	15	0	0.11	538.159	37.113	1071682.447	1024.195927	1024.195927
10	2	9	10.2.10	798	106	16	0	0.11	731.698	46.007	1397366.633	1338.339827	1338.339827
10	2	10	10.2.11	846	109	17	0	0.11	859.682	52.206	1590264.325	1524.402387	1524.402387
10	2	11	10.2.12	866	110	18	0	0.11	914.885	55.446	1664668.251	1596.169886	1596.169886
10	2	12	10.2.13	873	103	19	0	0.11	888.004	55.36	1619241.13	1552.352429	1552.352429
10	2	13	10.2.14	358	254	19	0	0.11	560.839	41.934	1076001.55	1028.361987	1028.361987
10	2	14	10.2.15	462	172	19	0	0.11	497.036	39.384	972600.596	928.62494	928.62494
10	2	15	10.2.16	0	21	18	0	0.11	19.442	18.796	36356.08	25.555289	25.555289
10	2	16	10.2.17	0	38	16	0.2	0.11	35.229	17.345	67089.287	55.199497	55.199497
10	2	17	10.2.18	0	0	14	0.3	0.11	0	14	0	0	0
10	2	18	10.2.19	0	0	13	0.4	0.11	0	13	0	0	0
10	2	19	10.2.20	0	0	12	0.3	0.11	0	12	0	0	0
10	2	20	10.2.21	0	0	12	0.4	0.11	0	12	0	0	0
10	2	21	10.2.22	0	0	12	0.5	0.11	0	12	0	0	0
10	2	22	10.2.23	0	0	12	0.5	0.11	0	12	0	0	0
10	2	23	10.2.24	0	0	12	0.4	0.11	0	12	0	0	0
10	3	0	10.3.1	0	0	11	0.1	0.11	0	11	0	0	0
10	3	1	10.3.2	0	0	11	0	0.11	0	11	0	0	0
10	3	2	10.3.3	0	0	11	0	0.11	0	11	0	0	0
10	3	3	10.3.4	0	0	10	0	0.11	0	10	0	0	0
10	3	4	10.3.5	0	0	9	0.2	0.11	0	9	0	0	0
10	3	5	10.3.6	0	0	9	0.2	0.11	0	9	0	0	0
10	3	6	10.3.7	0	34	11	0.1	0.11	31.921	12.245	59346.762	47.73132	47.73132
10	3	7	10.3.8	0	79	12	0	0.11	74.182	15.037	149781.147	134.961255	134.961255
10	3	8	10.3.9	0	130	13	0	0.11	123.03	18.028	248651.778	230.328507	230.328507
10	3	9	10.3.10	6	184	14	0	0.11	180.227	21.349	361245.11	338.932209	338.932209
10	3	10	10.3.11	82	300	15	0	0.11	376.179	30.333	742107.593	706.29922	706.29922
10	3	11	10.3.12	863	105	16	0	0.11	897.691	52.748	1653641.907	1585.534249	1585.534249
10	3	12	10.3.13	27	263	16	0	0.11	278.477	27.339	549541.854	520.556851	520.556851
10	3	13	10.3.14	442	229	16	0	0.11	609.166	40.925	1177040.682	1125.820901	1125.820901
10	3	14	10.3.15	2	160	15	0	0.11	153.86	21.283	308527.737	288.082823	288.082823
10	3	15	10.3.16	79	144	15	0	0.11	180.685	22.401	366857.697	344.34592	344.34592
10	3	16	10.3.17	0	58	14	0.2	0.11	55.117	16.104	107422.49	94.103534	94.103534
10	3	17	10.3.18	0	0	12	0.4	0.11	0	12	0	0	0
10	3	18	10.3.19	0	0	12	0.3	0.11	0	12	0	0	0
10	3	19	10.3.20	0	0	11	0.2	0.11	0	11	0	0	0
10	3	20	10.3.21	0	0	11	0.2	0.11	0	11	0	0	0
10	3	21	10.3.22	0	0	11	0.2	0.11	0	11	0	0	0
10	3	22	10.3.23	0	0	11	0.4	0.11	0	11	0	0	0
10	3	23	10.3.24	0	0	11	0.4	0.11	0	11	0	0	0
10	4	0	10.4.1	0	0	10	0.4	0.11	0	10	0	0	0
10	4	1	10.4.2	0	0	10	0.4	0.11	0	10	0	0	0
10	4	2	10.4.3	0	0	10	0.2	0.11	0	10	0	0	0
10	4	3	10.4.4	0	0	10	0.1	0.11	0	10	0	0	0
10	4	4	10.4.5	0	0	10	0	0.11	0	10	0	0	0
10	4	5	10.4.6	0	0	10	0	0.11	0	10	0	0	0
10	4	6	10.4.7	0	9	10	0	0.11	8.318	10.335	14584.755	4.555409	4.555409
10	4	7	10.4.8	0	22	11	0	0.11	20.363	11.834	39435.005	28.525116	28.525116
10	4	8	10.4.9	0	70	12	0	0.11	64.98	14.656	129911.007	115.795193	115.795193
10	4	9	10.4.10	0	130	13	0	0.11	122.247	17.984	244867.19	226.678022	226.678022
10	4	10	10.4.11	24	249	14	0	0.11	261.346	24.645	520975.839	493.003044	493.003044
10	4	11	10.4.12	18	248	15	0	0.11	255.473	25.398	506040.304	478.596734	478.596734
10	4	12	10.4.13	0	94	15	0	0.11	87.42	18.558	171232.131	155.652145	155.652145
10	4	13	10.4.14	6	191	15	0	0.11	187.286	22.633	373270.943	350.53192	350.53192
10	4	14	10.4.15	0	88	15	0	0.11	81.842	18.342	162156.508	146.898108	146.898108
10	4	15	10.4.16	12	123	15	0	0.11	123.305	20.048	248819.203	230.49	230.49
10	4	16	10.4.17	18	59	14	0	0.11	62.4	16.533	120367.245	106.589605	106.589605
10	4	17	10.4.18	0	0	13	0	0.11	0	13	0	0	0
10	4	18	10.4.19	0	0	13	0	0.11	0	13	0	0	0
10	4	19	10.4.20	0	0	12	0	0.11	0	12	0	0	0

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
10	4	20	10.4.21	0	0	12	0	0.11	0	12	0	0	0
10	4	21	10.4.22	0	0	12	0	0.11	0	12	0	0	0
10	4	22	10.4.23	0	0	12	0	0.11	0	12	0	0	0
10	4	23	10.4.24	0	0	12	0	0.11	0	12	0	0	0
10	5	0	10.5.1	0	0	11	0	0.11	0	11	0	0	0
10	5	1	10.5.2	0	0	11	0	0.11	0	11	0	0	0
10	5	2	10.5.3	0	0	11	0	0.11	0	11	0	0	0
10	5	3	10.5.4	0	0	11	0	0.11	0	11	0	0	0
10	5	4	10.5.5	0	0	11	0	0.11	0	11	0	0	0
10	5	5	10.5.6	0	0	11	0	0.11	0	11	0	0	0
10	5	6	10.5.7	319	35	12	0	0.11	96.871	15.664	152518.873	137.601972	137.601972
10	5	7	10.5.8	84	113	14	0	0.11	149.967	20.132	303316.012	283.055769	283.055769
10	5	8	10.5.9	86	189	16	0	0.11	241.318	25.879	486715.305	459.956496	459.956496
10	5	9	10.5.10	791	108	17	0	0.11	723.724	46.686	1379342.212	1320.954084	1320.954084
10	5	10	10.5.11	862	102	18	0	0.11	859.466	53.208	1584933.443	1519.260399	1519.260399
10	5	11	10.5.12	885	101	19	0	0.11	908.168	56.185	1649613.012	1581.648114	1581.648114
10	5	12	10.5.13	891	96	19	0	0.11	887.94	55.369	1621049.841	1554.09705	1554.09705
10	5	13	10.5.14	175	275	18	0	0.11	427.436	35.461	835064.859	795.962641	795.962641
10	5	14	10.5.15	44	196	17	0	0.11	225.113	26.203	450122.427	424.66025	424.66025
10	5	15	10.5.16	712	69	16	0	0.11	410.033	32.819	821671.761	783.044113	783.044113
10	5	16	10.5.17	482	45	14	0	0.11	169.665	20.661	298594.926	278.50197	278.50197
10	5	17	10.5.18	0	0	12	0	0.11	0	12	0	0	0
10	5	18	10.5.19	0	0	11	0	0.11	0	11	0	0	0
10	5	19	10.5.20	0	0	9	0	0.11	0	9	0	0	0
10	5	20	10.5.21	0	0	8	0	0.11	0	8	0	0	0
10	5	21	10.5.22	0	0	7	0	0.11	0	7	0	0	0
10	5	22	10.5.23	0	0	5	0	0.11	0	5	0	0	0
10	5	23	10.5.24	0	0	5	0	0.11	0	5	0	0	0
10	6	0	10.6.1	0	0	5	0	0.11	0	5	0	0	0
10	6	1	10.6.2	0	0	5	0	0.11	0	5	0	0	0
10	6	2	10.6.3	0	0	4	0	0.11	0	4	0	0	0
10	6	3	10.6.4	0	0	4	0	0.11	0	4	0	0	0
10	6	4	10.6.5	0	0	4	0	0.11	0	4	0	0	0
10	6	5	10.6.6	0	0	4	0	0.11	0	4	0	0	0
10	6	6	10.6.7	407	32	5	0	0.11	108.898	9.063	170567.855	155.011407	155.011407
10	6	7	10.6.8	654	68	8	0	0.11	341.223	21.912	694773.82	660.642671	660.642671
10	6	8	10.6.9	520	131	11	0	0.11	458.332	29.827	936119.586	893.436597	893.436597
10	6	9	10.6.10	880	88	12	0	0.11	766.78	43.463	1482678.466	1420.628722	1420.628722
10	6	10	10.6.11	918	91	14	0	0.11	886.721	50.334	1656212.866	1588.014109	1588.014109
10	6	11	10.6.12	933	91	15	0	0.11	937.247	53.383	1723492.439	1652.9097	1652.9097
10	6	12	10.6.13	929	88	16	0	0.11	909.18	53.246	1675607.427	1606.721443	1606.721443
10	6	13	10.6.14	900	84	16	0	0.11	803.517	48.958	1516313.327	1453.071767	1453.071767
10	6	14	10.6.15	849	74	16	0	0.11	636.586	42.164	1244883.956	1191.260217	1191.260217
10	6	15	10.6.16	749	61	15	0	0.11	415.902	32.056	835492.901	796.375515	796.375515
10	6	16	10.6.17	507	42	12	0	0.11	170.881	18.686	300015.233	279.87195	279.87195
10	6	17	10.6.18	0	0	9	0	0.11	0	9	0	0	0
10	6	18	10.6.19	0	0	8	0	0.11	0	8	0	0	0
10	6	19	10.6.20	0	0	7	0	0.11	0	7	0	0	0
10	6	20	10.6.21	0	0	7	0	0.11	0	7	0	0	0
10	6	21	10.6.22	0	0	6	0	0.11	0	6	0	0	0
10	6	22	10.6.23	0	0	6	0	0.11	0	6	0	0	0
10	6	23	10.6.24	0	0	5	0	0.11	0	5	0	0	0
10	7	0	10.7.1	0	0	5	0	0.11	0	5	0	0	0
10	7	1	10.7.2	0	0	4	0	0.11	0	4	0	0	0
10	7	2	10.7.3	0	0	4	0	0.11	0	4	0	0	0
10	7	3	10.7.4	0	0	3	0	0.11	0	3	0	0	0
10	7	4	10.7.5	0	0	3	0.1	0.11	0	3	0	0	0
10	7	5	10.7.6	0	0	3	0.2	0.11	0	3	0	0	0
10	7	6	10.7.7	362	31	5	0.1	0.11	99.756	8.596	155378.396	140.360172	140.360172
10	7	7	10.7.8	658	60	8	0	0.11	333.308	21.584	678277.341	644.730727	644.730727
10	7	8	10.7.9	781	76	11	0	0.11	555.256	33.835	1124142.026	1074.796654	1074.796654
10	7	9	10.7.10	840	87	14	0	0.11	733.883	44.115	1415715.425	1356.038448	1356.038448
10	7	10	10.7.11	876	91	15	0	0.11	848.83	49.783	1590077.204	1524.221897	1524.221897
10	7	11	10.7.12	877	97	16	0	0.11	891.622	52.514	1646680.769	1578.819772	1578.819772
10	7	12	10.7.13	862	99	17	0	0.11	860.652	52.256	1593495.305	1527.518881	1527.518881
10	7	13	10.7.14	832	95	18	0	0.11	764.787	49.366	1440519.575	1379.963689	1379.963689
10	7	14	10.7.15	775	86	17	0	0.11	599.477	41.636	1173869.926	1122.762497	1122.762497
10	7	15	10.7.16	668	69	16	0	0.11	386.133	31.83	774137.567	737.194245	737.194245
10	7	16	10.7.17	434	43	14	0.4	0.11	152.99	19.275	267231.532	248.249907	248.249907
10	7	17	10.7.18	0	0	12	0.6	0.11	0	12	0	0	0
10	7	18	10.7.19	0	0	10	0.3	0.11	0	10	0	0	0
10	7	19	10.7.20	0	0	9	0.1	0.11	0	9	0	0	0
10	7	20	10.7.21	0	0	9	0	0.11	0	9	0	0	0
10	7	21	10.7.22	0	0	9	0	0.11	0	9	0	0	0
10	7	22	10.7.23	0	0	9	0	0.11	0	9	0	0	0
10	7	23	10.7.24	0	0	9	0	0.11	0	9	0	0	0
10	8	0	10.8.1	0	0	8	0	0.11	0	8	0	0	0
10	8	1	10.8.2	0	0	8	0	0.11	0	8	0	0	0
10	8	2	10.8.3	0	0	8	0	0.11	0	8	0	0	0
10	8	3	10.8.4	0	0	8	0	0.11	0	8	0	0	0
10	8	4	10.8.5	0	0	7	0	0.11	0	7	0	0	0
10	8	5	10.8.6	0	0	7	0	0.11	0	7	0	0	0
10	8	6	10.8.7	286	31	9	0	0.11	86.415	12.227	132727.785	118.512162	118.512162
10	8	7	10.8.8	582	67	12	0	0.11	309.818	24.627	621934.67	590.384501	590.384501
10	8	8	10.8.9	722	86	16	0	0.11	531.333	37.848	1057546.652	1010.561019	1010.561019
10	8	9	10.8.10	795	97	19	0	0.11	709.635	48.118	1346157.384	1288.945126	1288.945126
10	8	10	10.8.11	831	104	22	0	0.11	829.038	55.968	1512357.182	1449.255804	1449.255804
10	8	11	10.8.12	840	108	23	0	0.11	875.178	58.838	1572759.814	1507.51813	1507.51813
10	8	12	10.8.13	830	108	23	0	0.11	846.621	57.68	1531332.173	1467.558435	1467.558435
10	8	13	10.8.14	795	105	24	0	0.11	744.285	54.524	1371405.924	1313.299009	1313.299009
10	8	14	10.8.15	735	94	23	0	0.11	581.829	46.909	1114169.226	1065.177231	1065.177231
10	8	15	10.8.16	621	76	22	0	0.11	370.161	37.17	724619.573	689.43087	689.43087
10	8	16	10.8.17	379	44	19	0.1	0.11	139.742	24.295	238486.072	220.523012	220.523012
10	8	17	10.8.18	0	0	16	0.1	0.11	0	16	0	0	0
10	8	18	10.8.19	0	0	15	0	0.11	0	15	0	0	0
10	8	19	10.8.20	0	0	15	0	0.11	0	15	0	0	0
10	8	20	10.8.21	0	0	14	0	0.11	0	14	0	0	0
10	8	21	10.8.22	0	0	14	0	0.11	0	14	0	0	0
10	8	22	10.8.23	0	0	13	0	0.11	0	13	0	0	0
10	8	23	10.8.24	0	0	13	0	0.11	0	13	0	0	0
10	9	0	10.9.1	0	0	13	0	0.11	0	13	0	0	0
10	9	1	10.9.2	0	0	12	0	0.11	0	12	0	0	0
10	9	2	10.9.3	0	0	12	0	0.11	0	12	0	0	0
10	9	3	10.9.4	0	0	11	0	0.11	0	11	0	0	0
10	9	4	10.9.5	0	0	11	0	0.11	0	11	0	0	0
10	9	5	10.9.6	0	0	11	0	0.11	0	11	0	0	0
10	9	6	10.9.7	309	30	13	0	0.11	89.018	16.29	130998.107	116.843773	116.843773
10	9	7	10.9.8	624	62	15	0	0.11	320.117	28.041	633582.508	601.61961	601.61961
10	9	8	10.9.9	762	78	19	0	0.11	543.273	41.344	1067282.505	1019.951893	1019.951893
10	9	9	10.9.10	831	88	22	0	0.11	724.571	51.737	1354748.1	1297.231438	1297.231438
10	9	10	10.9.11	856	98	24	0	0.11	841.18	58.471	1518652.984	1455.32852	1455.32852
10	9	11	10.9.12	864	103	25	0	0.11	888.242	61.379	1579133.204	1513.665685	1513.665685
10	9	12	10.9.13	852	103	25	0	0.11	857.245	60.12	1534792.526	1470.896174	1470.896174
10	9	13	10.9.14	809	103	25	0	0.11	750.212	55.771	1375573.94	1317.319336	1317.319336
10	9	14	10.9.15	745	93	24	0	0.11	584.484	48.021	1114583.594	1065.576916	1065.576916
10	9	15	10.9.16	627	75	23	0	0.11	369.582	38.142	719763.714	684.747074	684.747074
10	9	16	10.9.17	383	43	20	0	0.11	138.329	25.402	232980.772	215.212786	215.212786
10	9	17	10.9.18	0	0	18	0	0.11	0	18	0	0	0
10	9	18	10.9.19	0	0	17	0	0.11	0	17	0	0	0
10	9	19	10.9.20	0	0	17	0	0.11	0	17	0	0	0
10	9	20	10.9.21	0	0	16	0	0.11	0	16	0	0	0
10	9	21	10.9.22	0	0	15	0	0.11	0	15	0	0	0
10	9	22	10.9.23	0	0	15	0	0.11	0	15	0	0	0
10	9	23	10.9.24	0	0	14	0	0.11	0	14	0	0	0
10	10	0	10.10.1	0	0	13	0	0.11	0	13	0	0	0
10	10	1	10.10.2	0	0	13	0	0.11	0	13	0	0	0
10	10	2	10.10.3	0	0	12	0	0.11	0	12	0	0	0
10	10	3	10.10.4	0	0	12	0	0.11	0	12	0	0	0
10	10	4	10.10.5	0	0	12	0	0.11	0	12	0	0	0
10	10	5	10.10.6	0	0	12	0	0.11	0	12	0	0	0
10	10	6	10.10.7	303	29	14	0	0.11	86.708	17.176	124136.367	110.225171	110.225171
10	10	7	10.10.8	636	60	16	0	0.11	321.683	29.101	633315.5	601.362064	601.362064
10	10	8	10.10.9	780	75	19	0	0.11	549.074	41.585	1078248.869	1030.529674	1030.529674
10	10	9	10.10.10	845	85	22	0	0.11	729.642	51.949	1363639.315	1305.807602	1305.807602
10	10	10	10.10.11	867	95	23	0	0.11	838.913	57.384	1522685.948	1459.218581	1459.218581
10	10	11	10.10.12	873	99	24	0	0.11	882.685	60.157	1578813.314	1513.357131	1513.357131
10	10	12	10.10.13	859	99	25	0	0.11	855.982	60.073	1533602.04	1469.747872	1469.747872
10	10	13	10.10.14	823	96	25	0	0.11	750.507	55.789	1376902.985	1318.601288	1318.601288
10	10	14	10.10.15	757	87	24	0	0.11	581.012	47.883	1109336.661	1060.515903	1060.515903
10	10	15	10.10.16	635	71	23	0	0.11	366.65	38.017	713455.072	678.661972	678.661972
10	10	16	10.10.17	368	42	20	0	0.11	132.659	25.17	221927.268	204.550953	204.550953
10	10	17	10.10.18	0	0	19	0	0.11	0	19	0	0	0
10	10	18	10.10.19	0	0	18	0	0.11	0	18	0	0	0
10	10	19	10.10.20	0	0	18	0	0.11	0	18	0	0	0
10	10	20	10.10.21	0	0	18	0	0.11	0	18	0	0	0
10	10	21	10.10.22	0	0	18	0	0.11	0	18	0	0	0
10	10	22	10.10.23	0	0	17	0	0.11	0	17	0	0	0
10	10	23	10.10.24	0	0	17	0	0.11	0	17	0	0	0
10	11	0	10.11.1	0	0	16	0	0.11	0	16	0	0	0
10	11	1	10.11.2	0	0	16	0	0.11	0	16	0	0	0
10	11	2	10.11.3	0	0	15	0	0.11	0	15	0	0	0

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
10	11	3	10.11.4	0	0	14	0	0.11	0	14	0	0	0
10	11	4	10.11.5	0	0	14	0	0.11	0	14	0	0	0
10	11	5	10.11.6	0	0	13	0	0.11	0	13	0	0	0
10	11	6	10.11.7	69	30	14	0	0.11	45.317	15.718	69569.852	57.592166	57.592166
10	11	7	10.11.8	527	65	16	0	0.11	283.595	27.55	559971.996	530.617412	530.617412
10	11	8	10.11.9	378	152	17	0	0.11	393.373	33.151	789359.633	751.876933	751.876933
10	11	9	10.11.10	847	82	19	0	0.11	725.749	48.793	1375131.944	1316.893001	1316.893001
10	11	10	10.11.11	884	86	20	0	0.11	840.703	54.463	1546259.202	1481.95654	1481.95654
10	11	11	10.11.12	895	88	21	0	0.11	886.979	57.34	1607200.707	1540.738646	1540.738646
10	11	12	10.11.13	593	188	21	0	0.11	727.582	50.78	1352321.265	1294.890596	1294.890596
10	11	13	10.11.14	657	141	21	0	0.11	672.932	48.59	1270087.637	1215.570832	1215.570832
10	11	14	10.11.15	377	168	20	0	0.11	418.273	37.164	825162.63	786.411287	786.411287
10	11	15	10.11.16	303	109	19	0	0.11	250.913	29.273	499983.851	472.754885	472.754885
10	11	16	10.11.17	330	41	17	0.2	0.11	122.059	21.453	206163.566	189.345821	189.345821
10	11	17	10.11.18	0	0	15	0.1	0.11	0	15	0	0	0
10	11	18	10.11.19	0	0	14	0	0.11	0	14	0	0	0
10	11	19	10.11.20	0	0	14	0	0.11	0	14	0	0	0
10	11	20	10.11.21	0	0	13	0	0.11	0	13	0	0	0
10	11	21	10.11.22	0	0	13	0	0.11	0	13	0	0	0
10	11	22	10.11.23	0	0	12	0	0.11	0	12	0	0	0
10	11	23	10.11.24	0	0	12	0	0.11	0	12	0	0	0
10	12	0	10.12.1	0	0	11	0	0.11	0	11	0	0	0
10	12	1	10.12.2	0	0	11	0	0.11	0	11	0	0	0
10	12	2	10.12.3	0	0	10	0	0.11	0	10	0	0	0
10	12	3	10.12.4	0	0	10	0	0.11	0	10	0	0	0
10	12	4	10.12.5	0	0	10	0	0.11	0	10	0	0	0
10	12	5	10.12.6	0	0	10	0	0.11	0	10	0	0	0
10	12	6	10.12.7	257	29	10	0	0.11	77.863	12.794	107622.542	94.296497	94.296497
10	12	7	10.12.8	277	92	12	0	0.11	207.145	20.446	418551.946	394.208437	394.208437
10	12	8	10.12.9	481	130	13	0	0.11	429.284	30.638	873913.818	833.435027	833.435027
10	12	9	10.12.10	174	242	13	0	0.11	383.918	28.702	772391.412	735.509964	735.509964
10	12	10	10.12.11	70	274	14	0	0.11	338.961	27.826	675441.395	641.995271	641.995271
10	12	11	10.12.12	134	306	15	0	0.11	443.709	33.1	871148.762	830.767947	830.767947
10	12	12	10.12.13	59	275	15	0	0.11	331.501	28.516	657498.355	624.688024	624.688024
10	12	13	10.12.14	0	109	15	0	0.11	101.958	19.158	202042.775	185.371046	185.371046
10	12	14	10.12.15	43	180	14	0	0.11	208.292	22.521	422785.485	398.291964	398.291964
10	12	15	10.12.16	0	41	13	0	0.11	37.996	14.555	74747.52	62.586368	62.586368
10	12	16	10.12.17	0	29	12	0	0.11	26.881	13.086	49975.068	38.691702	38.691702
10	12	17	10.12.18	0	0	12	0	0.11	0	12	0	0	0
10	12	18	10.12.19	0	0	12	0	0.11	0	12	0	0	0
10	12	19	10.12.20	0	0	12	0	0.11	0	12	0	0	0
10	12	20	10.12.21	0	0	12	0	0.11	0	12	0	0	0
10	12	21	10.12.22	0	0	12	0	0.11	0	12	0	0	0
10	12	22	10.12.23	0	0	12	0	0.11	0	12	0	0	0
10	12	23	10.12.24	0	0	12	0	0.11	0	12	0	0	0
10	13	0	10.13.1	0	0	12	0	0.11	0	12	0	0	0
10	13	1	10.13.2	0	0	13	0	0.11	0	13	0	0	0
10	13	2	10.13.3	0	0	13	0	0.11	0	13	0	0	0
10	13	3	10.13.4	0	0	13	0	0.11	0	13	0	0	0
10	13	4	10.13.5	0	0	13	0	0.11	0	13	0	0	0
10	13	5	10.13.6	0	0	13	0	0.11	0	13	0	0	0
10	13	6	10.13.7	0	2	13	0	0.11	1.846	13.07	2461.163	0	0
10	13	7	10.13.8	0	40	14	0	0.11	37.069	15.517	72403.922	60.325813	60.325813
10	13	8	10.13.9	0	23	15	0	0.11	21.303	15.871	40437.094	29.491697	29.491697
10	13	9	10.13.10	0	140	16	0	0.11	132.573	21.409	263440.009	244.592732	244.592732
10	13	10	10.13.11	0	150	18	0	0.11	141.936	23.782	278382.166	259.005429	259.005429
10	13	11	10.13.12	1	170	19	0	0.11	162.482	25.616	317213.348	296.460668	296.460668
10	13	12	10.13.13	21	235	20	0	0.11	245.655	30.011	479316.918	452.820264	452.820264
10	13	13	10.13.14	4	176	20	0	0.11	171.573	26.999	336010.959	314.592205	314.592205
10	13	14	10.13.15	0	103	20	0	0.11	96.693	23.952	189032.116	172.821407	172.821407
10	13	15	10.13.16	590	68	19	0	0.11	337.46	32.807	666804.782	633.664687	633.664687
10	13	16	10.13.17	290	40	18	0	0.11	109.762	22.258	181830.049	165.874537	165.874537
10	13	17	10.13.18	0	0	17	0	0.11	0	17	0	0	0
10	13	18	10.13.19	0	0	17	0	0.11	0	17	0	0	0
10	13	19	10.13.20	0	0	16	0	0.11	0	16	0	0	0
10	13	20	10.13.21	0	0	16	0	0.11	0	16	0	0	0
10	13	21	10.13.22	0	0	16	0	0.11	0	16	0	0	0
10	13	22	10.13.23	0	0	16	0	0.11	0	16	0	0	0
10	13	23	10.13.24	0	0	16	0	0.11	0	16	0	0	0
10	14	0	10.14.1	0	0	16	0	0.11	0	16	0	0	0
10	14	1	10.14.2	0	0	16	0	0.11	0	16	0	0	0
10	14	2	10.14.3	0	0	16	0	0.11	0	16	0	0	0
10	14	3	10.14.4	0	0	16	0	0.11	0	16	0	0	0
10	14	4	10.14.5	0	0	17	0	0.11	0	17	0	0	0
10	14	5	10.14.6	0	0	17	0	0.11	0	17	0	0	0
10	14	6	10.14.7	0	1	17	0	0.11	0.923	17.034	0	0	0
10	14	7	10.14.8	66	98	18	0	0.11	123.745	23.055	244668.951	226.486807	226.486807
10	14	8	10.14.9	31	158	19	0	0.11	176.857	26.239	352308.294	330.31206	330.31206
10	14	9	10.14.10	12	186	19	0	0.11	187.983	26.674	370843.466	348.190457	348.190457
10	14	10	10.14.11	0	141	20	0	0.11	133.098	25.423	258728.447	240.048119	240.048119
10	14	11	10.14.12	0	121	21	0	0.11	113.433	25.619	218443.991	201.191102	201.191102
10	14	12	10.14.13	0	147	21	0	0.11	138.968	26.661	268986.166	249.942367	249.942367
10	14	13	10.14.14	39	224	21	0	0.11	256.97	31.491	502407.291	475.092453	475.092453
10	14	14	10.14.15	0	104	20	0	0.11	97.734	23.995	191186.439	174.899393	174.899393
10	14	15	10.14.16	0	95	20	0	0.11	90.841	23.718	178273.294	162.443813	162.443813
10	14	16	10.14.17	0	2	19	0	0.11	1.846	19.074	2869.428	0	0
10	14	17	10.14.18	0	0	18	0	0.11	0	18	0	0	0
10	14	18	10.14.19	0	0	17	0	0.11	0	17	0	0	0
10	14	19	10.14.20	0	0	17	0	0.11	0	17	0	0	0
10	14	20	10.14.21	0	0	16	0	0.11	0	16	0	0	0
10	14	21	10.14.22	0	0	14	0	0.11	0	14	0	0	0
10	14	22	10.14.23	0	0	13	0	0.11	0	13	0	0	0
10	14	23	10.14.24	0	0	13	0	0.11	0	13	0	0	0
10	15	0	10.15.1	0	0	12	0	0.11	0	12	0	0	0
10	15	1	10.15.2	0	0	12	0	0.11	0	12	0	0	0
10	15	2	10.15.3	0	0	12	0	0.11	0	12	0	0	0
10	15	3	10.15.4	0	0	11	0	0.11	0	11	0	0	0
10	15	4	10.15.5	0	0	11	0	0.11	0	11	0	0	0
10	15	5	10.15.6	0	0	11	0	0.11	0	11	0	0	0
10	15	6	10.15.7	222	26	11	0	0.11	66.934	13.178	75495.247	63.307601	63.307601
10	15	7	10.15.8	537	69	12	0	0.11	287.99	23.715	575086.349	545.196203	545.196203
10	15	8	10.15.9	693	92	14	0	0.11	511.289	35.03	1029954.512	983.946578	983.946578
10	15	9	10.15.10	777	104	15	0	0.11	690.933	43.365	1339086.059	1282.124366	1282.124366
10	15	10	10.15.11	288	267	16	0	0.11	532.675	37.777	1037720.448	991.437336	991.437336
10	15	11	10.15.12	41	265	16	0	0.11	306.412	28.489	605769.183	574.791822	574.791822
10	15	12	10.15.13	71	276	17	0	0.11	343.269	31.003	675864.094	642.402992	642.402992
10	15	13	10.15.14	155	248	16	0	0.11	380.309	31.55	755509.414	719.226162	719.226162
10	15	14	10.15.15	0	47	15	0	0.11	43.584	16.782	84999.239	72.474828	72.474828
10	15	15	10.15.16	0	40	15	0	0.11	37.068	16.517	72185.847	60.115466	60.115466
10	15	16	10.15.17	0	13	14	0	0.11	12.023	14.483	20898.574	10.645505	10.645505
10	15	17	10.15.18	0	0	13	0	0.11	0	13	0	0	0
10	15	18	10.15.19	0	0	13	0	0.11	0	13	0	0	0
10	15	19	10.15.20	0	0	12	0	0.1	0	12	0	0	0
10	15	20	10.15.21	0	0	12	0	0.1	0	12	0	0	0
10	15	21	10.15.22	0	0	11	0	0.1	0	11	0	0	0
10	15	22	10.15.23	0	0	11	0	0.1	0	11	0	0	0
10	15	23	10.15.24	0	0	11	0	0.1	0	11	0	0	0
10	16	0	10.16.1	0	0	11	0	0.1	0	11	0	0	0
10	16	1	10.16.2	0	0	11	0	0.1	0	11	0	0	0
10	16	2	10.16.3	0	0	10	0	0.1	0	10	0	0	0
10	16	3	10.16.4	0	0	10	0	0.1	0	10	0	0	0
10	16	4	10.16.5	0	0	9	0	0.1	0	9	0	0	0
10	16	5	10.16.6	0	0	9	0	0.1	0	9	0	0	0
10	16	6	10.16.7	217	25	9	0	0.1	64.436	10.973	66420.891	54.554785	54.554785
10	16	7	10.16.8	595	61	11	0	0.1	300.687	23.223	600767.455	569.967325	569.967325
10	16	8	10.16.9	747	80	13	0	0.1	525.627	34.627	1062163.079	1015.013868	1015.013868
10	16	9	10.16.10	810	94	14	0	0.1	701.899	42.821	1364539.527	1306.675916	1306.675916
10	16	10	10.16.11	882	85	15	0	0.1	825.545	48.857	1557595.334	1492.890988	1492.890988
10	16	11	10.16.12	891	87	16	0	0.1	868.636	51.605	1616148.391	1549.369278	1549.369278
10	16	12	10.16.13	506	210	16	0	0.1	665.657	43.248	1276701.163	1221.950015	1221.950015
10	16	13	10.16.14	36	217	16	0	0.1	247.365	26.101	494064.792	467.045562	467.045562
10	16	14	10.16.15	0	119	16	0	0.1	112.804	20.612	225277.249	207.782231	207.782231
10	16	15	10.16.16	0	56	15	0	0.1	51.939	17.126	102365.108	89.225355	89.225355
10	16	16	10.16.17	0	16	14	0	0.1	14.803	14.592	25658.282	15.236557	15.236557
10	16	17	10.16.18	0	0	13	0	0.1	0	13	0	0	0
10	16	18	10.16.19	0	0	13	0	0.1	0	13	0	0	0
10	16	19	10.16.20	0	0	13	0	0.1	0	13	0	0	0
10	16	20	10.16.21	0	0	13	0	0.1	0	13	0	0	0
10	16	21	10.16.22	0	0	14	0	0.1	0	14	0	0	0
10	16	22	10.16.23	0	0	14	0	0.1	0	14	0	0	0
10	16	23	10.16.24	0	0	14	0	0.1	0	14	0	0	0
10	17	0	10.17.1	0	0	14	0	0.1	0	14	0	0	0
10	17	1	10.17.2	0	0	13	0	0.1	0	13	0	0	0
10	17	2	10.17.3	0	0	13	0	0.1	0	13	0	0	0
10	17	3	10.17.4	0	0	12	0	0.1	0	12	0	0	0
10	17	4	10.17.5	0	0	11	0	0.1	0	11	0	0	0
10	17	5	10.17.6	0	0	10	0	0.1	0	10	0	0	0
10	17	6	10.17.7	255	23	10	0	0.1	67.746	12.038	67858.95	55.941888	55.941888
10	17	7	10.17.8	644	56	12	0	0.1	312.72	24.704	620406.941	588.910906	588.910906
10	17	8	10.17.9	803	71	13	0	0.1	546.154	35.477	1101365.48	1052.827172	1052.827172
10	17	9	10.17.10	879	78	14	0	0.1	727.036	43.864	1409200.597	1349.754466	1349.754466

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
10	17	10	10.17.11	918	79	15	0	0.1	845.608	49.686	1590614.748	1524.740394	1524.740394
10	17	11	10.17.12	929	79	16	0	0.1	889.198	52.454	1649173.801	1581.224466	1581.224466
10	17	12	10.17.13	921	76	16	0	0.1	855.595	51.09	1598932.056	1532.762986	1532.762986
10	17	13	10.17.14	875	78	16	0	0.1	744.325	46.564	1424965.319	1364.960582	1364.960582
10	17	14	10.17.15	810	70	16	0	0.1	575.846	39.691	1140923.553	1090.983545	1090.983545
10	17	15	10.17.16	684	56	15	0	0.1	354.404	29.476	706064.187	671.532976	671.532976
10	17	16	10.17.17	370	30	13	0	0.1	112.908	17.25	175310.96	159.586446	159.586446
10	17	17	10.17.18	0	0	12	0	0.1	0	12	0	0	0
10	17	18	10.17.19	0	0	12	0	0.1	0	12	0	0	0
10	17	19	10.17.20	0	0	11	0	0.1	0	11	0	0	0
10	17	20	10.17.21	0	0	11	0	0.1	0	11	0	0	0
10	17	21	10.17.22	0	0	10	0	0.1	0	10	0	0	0
10	17	22	10.17.23	0	0	9	0	0.1	0	9	0	0	0
10	17	23	10.17.24	0	0	9	0	0.1	0	9	0	0	0
10	18	0	10.18.1	0	0	9	0	0.1	0	9	0	0	0
10	18	1	10.18.2	0	0	9	0	0.1	0	9	0	0	0
10	18	2	10.18.3	0	0	9	0	0.1	0	9	0	0	0
10	18	3	10.18.4	0	0	9	0	0.1	0	9	0	0	0
10	18	4	10.18.5	0	0	9	0	0.1	0	9	0	0	0
10	18	5	10.18.6	0	0	9	0	0.1	0	9	0	0	0
10	18	6	10.18.7	0	5	9	0	0.1	4.618	9.158	5170.242	0	0
10	18	7	10.18.8	0	47	11	0	0.1	43.573	12.782	86564.313	73.984446	73.984446
10	18	8	10.18.9	0	42	13	0	0.1	38.923	14.592	76455.362	64.233694	64.233694
10	18	9	10.18.10	86	228	15	0	0.1	295.746	27.092	594245.627	563.676592	563.676592
10	18	10	10.18.11	39	244	16	0	0.1	281.244	27.473	558754.843	529.443387	529.443387
10	18	11	10.18.12	41	259	17	0	0.1	300.343	29.245	592342.1	561.840514	561.840514
10	18	12	10.18.13	810	107	18	0	0.1	801.885	50.877	1498872.028	1436.248483	1436.248483
10	18	13	10.18.14	764	105	18	0	0.1	696.901	46.607	1332252.872	1275.533306	1275.533306
10	18	14	10.18.15	694	91	18	0	0.1	528.7	39.744	1044955.566	998.416086	998.416086
10	18	15	10.18.16	415	81	17	0	0.1	266.593	27.89	530533.897	502.222422	502.222422
10	18	16	10.18.17	229	34	15	0.4	0.1	87.787	17.926	136541.202	122.190454	122.190454
10	18	17	10.18.18	0	0	14	0.8	0.1	0	14	0	0	0
10	18	18	10.18.19	0	0	14	0.9	0.1	0	14	0	0	0
10	18	19	10.18.20	0	0	13	0.9	0.1	0	13	0	0	0
10	18	20	10.18.21	0	0	12	0.9	0.1	0	12	0	0	0
10	18	21	10.18.22	0	0	12	0.8	0.1	0	12	0	0	0
10	18	22	10.18.23	0	0	12	0.6	0.1	0	12	0	0	0
10	18	23	10.18.24	0	0	12	0.3	0.1	0	12	0	0	0
10	19	0	10.19.1	0	0	12	0	0.1	0	12	0	0	0
10	19	1	10.19.2	0	0	12	0	0.1	0	12	0	0	0
10	19	2	10.19.3	0	0	12	0	0.1	0	12	0	0	0
10	19	3	10.19.4	0	0	11	0	0.1	0	11	0	0	0
10	19	4	10.19.5	0	0	11	0	0.1	0	11	0	0	0
10	19	5	10.19.6	0	0	11	0	0.1	0	11	0	0	0
10	19	6	10.19.7	0	0	11	0	0.1	0	0	0	0	0
10	19	7	10.19.8	0	21	12	0	0.1	19.429	12.794	37226.226	26.394602	26.394602
10	19	8	10.19.9	0	19	12	0	0.1	17.588	12.72	33628.171	22.924041	22.924041
10	19	9	10.19.10	0	91	14	0	0.1	84.693	17.458	168464.368	152.982456	152.982456
10	19	10	10.19.11	0	34	15	0	0.1	31.536	16.285	60079.927	48.438507	48.438507
10	19	11	10.19.12	0	34	16	0	0.1	31.543	17.285	59694.744	48.066972	48.066972
10	19	12	10.19.13	0	53	17	0	0.1	49.192	19.005	94388.604	81.53149	81.53149
10	19	13	10.19.14	1	163	17	0	0.1	156.814	23.4	311305.991	290.762632	290.762632
10	19	14	10.19.15	0	72	16	0	0.1	66.823	18.733	131808.231	117.625191	117.625191
10	19	15	10.19.16	0	54	16	0	0.1	50.081	18.049	98069.819	85.082265	85.082265
10	19	16	10.19.17	265	30	16	0	0.1	90.364	19.358	133248.559	119.014483	119.014483
10	19	17	10.19.18	0	0	15	0	0.1	0	15	0	0	0
10	19	18	10.19.19	0	0	15	0	0.1	0	15	0	0	0
10	19	19	10.19.20	0	0	15	0	0.1	0	15	0	0	0
10	19	20	10.19.21	0	0	15	0	0.1	0	15	0	0	0
10	19	21	10.19.22	0	0	15	0	0.1	0	15	0	0	0
10	19	22	10.19.23	0	0	15	0	0.1	0	15	0	0	0
10	19	23	10.19.24	0	0	15	0	0.1	0	15	0	0	0
10	20	0	10.20.1	0	0	15	0	0.1	0	15	0	0	0
10	20	1	10.20.2	0	0	16	0	0.1	0	16	0	0	0
10	20	2	10.20.3	0	0	16	0	0.1	0	16	0	0	0
10	20	3	10.20.4	0	0	17	0	0.1	0	17	0	0	0
10	20	4	10.20.5	0	0	18	0	0.1	0	18	0	0	0
10	20	5	10.20.6	0	0	18	0	0.1	0	18	0	0	0
10	20	6	10.20.7	0	1	18	0	0.1	0.923	18.032	0	0	0
10	20	7	10.20.8	0	7	18	0	0.1	6.469	18.264	11435.125	1.517383	1.517383
10	20	8	10.20.9	64	157	18	0	0.1	195.755	26.02	393166.259	369.722265	369.722265
10	20	9	10.20.10	740	115	18	0	0.1	669.561	45.494	1287428.465	1232.297206	1232.297206
10	20	10	10.20.11	841	101	18	0	0.1	805.999	51.06	1507711.015	1444.774269	1444.774269
10	20	11	10.20.12	302	273	18	0	0.1	559.58	40.876	1077097.787	1029.41938	1029.41938
10	20	12	10.20.13	301	262	17	0	0.1	538.317	39.016	1045176.552	998.629241	998.629241
10	20	13	10.20.14	301	224	17	0	0.1	469.017	36.21	924153.141	881.89417	881.89417
10	20	14	10.20.15	153	179	16	0	0.1	281.195	27.528	569149.198	539.469429	539.469429
10	20	15	10.20.16	572	69	15	0	0.1	317.484	27.953	631970.116	600.064352	600.064352
10	20	16	10.20.17	239	31	14	0	0.1	85.087	17.121	122164.454	108.323131	108.323131
10	20	17	10.20.18	0	0	13	0	0.1	0	13	0	0	0
10	20	18	10.20.19	0	0	13	0	0.1	0	13	0	0	0
10	20	19	10.20.20	0	0	12	0	0.1	0	12	0	0	0
10	20	20	10.20.21	0	0	12	0	0.1	0	12	0	0	0
10	20	21	10.20.22	0	0	11	0	0.1	0	11	0	0	0
10	20	22	10.20.23	0	0	11	0	0.1	0	11	0	0	0
10	20	23	10.20.24	0	0	10	0	0.1	0	10	0	0	0
10	21	0	10.21.1	0	0	10	0	0.1	0	10	0	0	0
10	21	1	10.21.2	0	0	10	0	0.1	0	10	0	0	0
10	21	2	10.21.3	0	0	9	0	0.1	0	9	0	0	0
10	21	3	10.21.4	0	0	9	0	0.1	0	9	0	0	0
10	21	4	10.21.5	0	0	8	0	0.1	0	8	0	0	0
10	21	5	10.21.6	0	0	8	0	0.1	0	8	0	0	0
10	21	6	10.21.7	186	19	8	0	0.1	46.46	9.418	47282.237	36.094289	36.094289
10	21	7	10.21.8	600	54	10	0	0.1	289.377	21.737	576093.987	546.168136	546.168136
10	21	8	10.21.9	746	74	11	0	0.1	509.95	31.989	1042236.825	995.79368	995.79368
10	21	9	10.21.10	810	88	13	0	0.1	684.612	41.125	1342458.896	1285.37769	1285.37769
10	21	10	10.21.11	858	90	14	0	0.1	804.762	47.016	1532187.772	1468.383717	1468.383717
10	21	11	10.21.12	866	93	14	0	0.1	846.598	48.713	1596711.219	1530.620842	1530.620842
10	21	12	10.21.13	852	93	15	0	0.1	812.39	48.323	1537230.017	1473.247296	1473.247296
10	21	13	10.21.14	839	80	15	0	0.1	713.339	44.3	1379967.184	1321.55691	1321.55691
10	21	14	10.21.15	764	73	14	0	0.1	541.192	36.27	1087289.723	1039.250175	1039.250175
10	21	15	10.21.16	28	94	13	0	0.1	106.192	17.343	214569.86	197.454247	197.454247
10	21	16	10.21.17	0	24	11	0	0.1	22.622	11.86	34480.597	23.746263	23.746263
10	21	17	10.21.18	0	0	10	0	0.1	0	10	0	0	0
10	21	18	10.21.19	0	0	9	0	0.1	0	9	0	0	0
10	21	19	10.21.20	0	0	9	0	0.1	0	9	0	0	0
10	21	20	10.21.21	0	0	9	0	0.1	0	9	0	0	0
10	21	21	10.21.22	0	0	8	0	0.1	0	8	0	0	0
10	21	22	10.21.23	0	0	8	0	0.1	0	8	0	0	0
10	21	23	10.21.24	0	0	7	0	0.1	0	7	0	0	0
10	22	0	10.22.1	0	0	7	0	0.1	0	7	0	0	0
10	22	1	10.22.2	0	0	7	0	0.1	0	7	0	0	0
10	22	2	10.22.3	0	0	6	0	0.1	0	6	0	0	0
10	22	3	10.22.4	0	0	6	0	0.1	0	6	0	0	0
10	22	4	10.22.5	0	0	6	0	0.1	0	6	0	0	0
10	22	5	10.22.6	0	0	6	0	0.1	0	6	0	0	0
10	22	6	10.22.7	174	17	7	0	0.1	41.154	8.257	41918.543	30.920652	30.920652
10	22	7	10.22.8	609	50	9	0	0.1	287.106	20.637	572559.746	542.759127	542.759127
10	22	8	10.22.9	169	158	11	0	0.1	262.423	21.766	543789.348	515.008179	515.008179
10	22	9	10.22.10	849	72	13	0	0.1	687.278	41.243	1348665.277	1291.364154	1291.364154
10	22	10	10.22.11	0	121	14	0	0.1	113.715	18.637	226626.817	209.083978	209.083978
10	22	11	10.22.12	50	256	14	0	0.1	305.456	26.461	610644.13	579.49403	579.49403
10	22	12	10.22.13	0	85	15	0	0.1	78.968	18.219	155300.286	140.284829	140.284829
10	22	13	10.22.14	0	119	14	0	0.1	112.114	18.577	224404.912	206.940804	206.940804
10	22	14	10.22.15	756	75	14	0	0.1	536.18	36.064	1078128.245	1030.413324	1030.413324
10	22	15	10.22.16	110	97	13	0	0.1	147.215	19.014	297786.893	277.722569	277.722569
10	22	16	10.22.17	303	25	11	0	0.1	88.391	13.994	108203.15	94.856532	94.856532
10	22	17	10.22.18	0	0	9	0	0.1	0	9	0	0	0
10	22	18	10.22.19	0	0	8	0	0.1	0	8	0	0	0
10	22	19	10.22.20	0	0	7	0	0.1	0	7	0	0	0
10	22	20	10.22.21	0	0	7	0	0.1	0	7	0	0	0
10	22	21	10.22.22	0	0	6	0	0.1	0	6	0	0	0
10	22	22	10.22.23	0	0	5	0	0.1	0	5	0	0	0
10	22	23	10.22.24	0	0	5	0	0.1	0	5	0	0	0
10	23	0	10.23.1	0	0	4	0	0.1	0	4	0	0	0
10	23	1	10.23.2	0	0	4	0	0.1	0	4	0	0	0
10	23	2	10.23.3	0	0	4	0	0.1	0	4	0	0	0
10	23	3	10.23.4	0	0	4	0	0.1	0	4	0	0	0
10	23	4	10.23.5	0	0	5	0	0.1	0	5	0	0	0
10	23	5	10.23.6	0	0	5	0	0.1	0	5	0	0	0
10	23	6	10.23.7	135	18	5	0	0.1	35.662	6.114	37737.255	26.887524	26.887524
10	23	7	10.23.8	0	42	7	0	0.1	38.927	8.591	78124.97	65.844141	65.844141
10	23	8	10.23.9	0	91	10	0	0.1	85.594	13.503	174677.887	158.975805	158.975805
10	23	9	10.23.10	0	113	11	0	0.1	106.335	15.343	215544.048	198.393915	198.393915
10	23	10	10.23.11	3	177	12	0	0.1	172.336	19.028	348352.691	326.49662	326.49662
10	23	11	10.23.12	0	167	13	0	0.1	159.395	19.496	319926.308	299.077497	299.077497
10	23	12	10.23.13	116	266	14	0	0.1	369.877	29.109	738900.744	703.206003	703.206003
10	23	13	10.23.14	58	213	14	0	0.1	260.457	24.647	526181.916	498.024649	498.024649
10	23	14	10.23.15	568	104	13	0	0.1	458.03	31.836	932241.69	889.69611	889.69611
10	23	15	10.23.16	598	61	12	0.1	0.1	314.019	24.38	630079.822	598.241038	598.241038
10	23	16	10.23.17	253	26	11	0.4	0.1	77.773	13.187	85445.578	72.905352	72.905352

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

	Reference Case	Adjusted Case
	3,025,628	3,025,628

Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
10	23	17	10.23.18	0	0	10	0.5	0.1	0	10	0	0	0
10	23	18	10.23.19	0	0	10	0.4	0.1	0	10	0	0	0
10	23	19	10.23.20	0	0	9	0.4	0.1	0	9	0	0	0
10	23	20	10.23.21	0	0	8	0.5	0.1	0	8	0	0	0
10	23	21	10.23.22	0	0	7	0.7	0.1	0	7	0	0	0
10	23	22	10.23.23	0	0	6	0.8	0.1	0	6	0	0	0
10	23	23	10.23.24	0	0	6	0.7	0.1	0	6	0	0	0
10	24	0	10.24.1	0	0	6	0.6	0.1	0	6	0	0	0
10	24	1	10.24.2	0	0	6	0.4	0.1	0	6	0	0	0
10	24	2	10.24.3	0	0	6	0.3	0.1	0	6	0	0	0
10	24	3	10.24.4	0	0	6	0.3	0.1	0	6	0	0	0
10	24	4	10.24.5	0	0	6	0.2	0.1	0	6	0	0	0
10	24	5	10.24.6	0	0	6	0.2	0.1	0	6	0	0	0
10	24	6	10.24.7	0	16	7	0.1	0.1	15.221	7.505	18202.244	8.044716	8.044716
10	24	7	10.24.8	183	79	9	0	0.1	154.951	15.3	313109.043	292.501795	292.501795
10	24	8	10.24.9	398	124	11	0	0.1	365.252	26.013	755833.889	719.539139	719.539139
10	24	9	10.24.10	441	171	12	0	0.1	508.908	32.878	1023711.076	977.924372	977.924372
10	24	10	10.24.11	385	223	13	0	0.1	555.486	35.746	1098105.084	1049.682304	1049.682304
10	24	11	10.24.12	135	273	14	0	0.1	406.96	30.621	809315.94	771.126109	771.126109
10	24	12	10.24.13	0	161	15	0	0.1	153.667	21.266	306432.789	286.062107	286.062107
10	24	13	10.24.14	0	81	15	0	0.1	75.217	18.071	148604.692	133.826487	133.826487
10	24	14	10.24.15	0	79	14	0	0.1	73.59	17.011	147014.418	132.292562	132.292562
10	24	15	10.24.16	245	86	13	0	0.1	192.661	20.856	387855.029	364.599233	364.599233
10	24	16	10.24.17	30	24	12	0	0.1	30.593	13.024	35061.356	24.306443	24.306443
10	24	17	10.24.18	0	0	10	0	0.1	0	10	0	0	0
10	24	18	10.24.19	0	0	10	0	0.1	0	10	0	0	0
10	24	19	10.24.20	0	0	9	0	0.1	0	9	0	0	0
10	24	20	10.24.21	0	0	9	0	0.1	0	9	0	0	0
10	24	21	10.24.22	0	0	9	0	0.1	0	9	0	0	0
10	24	22	10.24.23	0	0	10	0	0.1	0	10	0	0	0
10	24	23	10.24.24	0	0	9	0	0.1	0	9	0	0	0
10	25	0	10.25.1	0	0	8	0	0.1	0	8	0	0	0
10	25	1	10.25.2	0	0	8	0	0.1	0	8	0	0	0
10	25	2	10.25.3	0	0	8	0	0.1	0	8	0	0	0
10	25	3	10.25.4	0	0	7	0	0.1	0	7	0	0	0
10	25	4	10.25.5	0	0	7	0	0.1	0	7	0	0	0
10	25	5	10.25.6	0	0	7	0	0.1	0	7	0	0	0
10	25	6	10.25.7	146	15	7	0	0.1	27.745	7.847	27799.759	17.302153	17.302153
10	25	7	10.25.8	569	55	8	0	0.1	274.337	19.105	547162.384	518.261695	518.261695
10	25	8	10.25.9	163	150	9	0	0.1	249.803	19.25	522294.866	494.275332	494.275332
10	25	9	10.25.10	823	87	11	0	0.1	683.622	39.094	1353303.001	1295.837545	1295.837545
10	25	10	10.25.11	887	85	12	0	0.1	806.098	45.086	1549618.534	1485.196838	1485.196838
10	25	11	10.25.12	900	86	13	0	0.1	849.633	47.855	1611020.302	1544.422898	1544.422898
10	25	12	10.25.13	890	84	13	0	0.1	815.622	46.473	1558186.102	1493.460823	1493.460823
10	25	13	10.25.14	859	78	13	0	0.1	714.28	42.35	1394926.876	1335.98652	1335.98652
10	25	14	10.25.15	790	68	13	0	0.1	540.713	35.258	1092123.222	1043.912404	1043.912404
10	25	15	10.25.16	649	51	12	0	0.1	317.899	24.933	633558.831	601.596772	601.596772
10	25	16	10.25.17	286	21	10	0	0.1	71.529	12.184	73319.923	61.209357	61.209357
10	25	17	10.25.18	0	0	9	0	0.1	0	9	0	0	0
10	25	18	10.25.19	0	0	8	0	0.1	0	8	0	0	0
10	25	19	10.25.20	0	0	7	0	0.1	0	7	0	0	0
10	25	20	10.25.21	0	0	7	0	0.1	0	7	0	0	0
10	25	21	10.25.22	0	0	6	0	0.1	0	6	0	0	0
10	25	22	10.25.23	0	0	5	0	0.1	0	5	0	0	0
10	25	23	10.25.24	0	0	5	0	0.1	0	5	0	0	0
10	26	0	10.26.1	0	0	5	0	0.1	0	5	0	0	0
10	26	1	10.26.2	0	0	6	0	0.1	0	6	0	0	0
10	26	2	10.26.3	0	0	6	0	0.1	0	6	0	0	0
10	26	3	10.26.4	0	0	6	0	0.1	0	6	0	0	0
10	26	4	10.26.5	0	0	6	0.2	0.1	0	6	0	0	0
10	26	5	10.26.6	0	0	6	0.4	0.1	0	6	0	0	0
10	26	6	10.26.7	0	3	6	0.3	0.1	2.854	6.089	3174.164	0	0
10	26	7	10.26.8	0	37	7	0	0.1	34.281	8.4	68331.338	56.397537	56.397537
10	26	8	10.26.9	0	50	9	0	0.1	46.352	10.897	93343.436	80.523357	80.523357
10	26	9	10.26.10	0	135	10	0	0.1	128.614	15.254	262887.39	244.059694	244.059694
10	26	10	10.26.11	32	220	11	0	0.1	250.649	21.232	509992.605	482.408989	482.408989
10	26	11	10.26.12	13	204	12	0	0.1	208.48	20.502	421571.44	397.120937	397.120937
10	26	12	10.26.13	0	148	13	0	0.1	140.725	18.739	282815.674	263.281841	263.281841
10	26	13	10.26.14	6	167	14	0	0.1	165.543	20.762	333866.806	312.524028	312.524028
10	26	14	10.26.15	31	146	14	0	0.1	166.347	20.812	338691.264	317.177535	317.177535
10	26	15	10.26.16	0	18	13	0.1	0.1	16.649	13.659	31527.75	20.898047	20.898047
10	26	16	10.26.17	0	2	12	0.4	0.1	1.846	12.056	1940.005	0	0
10	26	17	10.26.18	0	0	11	0.5	0.1	0	11	0	0	0
10	26	18	10.26.19	0	0	10	0.6	0.1	0	10	0	0	0
10	26	19	10.26.20	0	0	9	0.5	0.1	0	9	0	0	0
10	26	20	10.26.21	0	0	9	0.4	0.1	0	9	0	0	0
10	26	21	10.26.22	0	0	9	0.2	0.1	0	9	0	0	0
10	26	22	10.26.23	0	0	9	0.2	0.1	0	9	0	0	0
10	26	23	10.26.24	0	0	9	0.2	0.1	0	9	0	0	0
10	27	0	10.27.1	0	0	9	0.1	0.1	0	9	0	0	0
10	27	1	10.27.2	0	0	9	0	0.1	0	9	0	0	0
10	27	2	10.27.3	0	0	9	0	0.1	0	9	0	0	0
10	27	3	10.27.4	0	0	8	0	0.1	0	8	0	0	0
10	27	4	10.27.5	0	0	8	0	0.1	0	8	0	0	0
10	27	5	10.27.6	0	0	7	0	0.1	0	7	0	0	0
10	27	6	10.27.7	0	0	6	0	0.1	0	0	0	0	0
10	27	7	10.27.8	0	6	6	0	0.1	5.543	6.226	10280.914	0.40407	0.40407
10	27	8	10.27.9	3	123	5	0	0.1	120.548	9.934	252973.694	234.49728	234.49728
10	27	9	10.27.10	0	93	5	0	0.1	86.806	8.546	179691.334	163.811605	163.811605
10	27	10	10.27.11	0	90	5	0	0.1	83.641	8.412	172021.49	156.413535	156.413535
10	27	11	10.27.12	6	186	5	0	0.1	184.186	12.511	382590.644	359.521386	359.521386
10	27	12	10.27.13	0	135	5	0	0.1	127.767	10.211	264789.197	245.894113	245.894113
10	27	13	10.27.14	0	76	5	0	0.1	70.557	7.882	145164.956	130.508634	130.508634
10	27	14	10.27.15	0	74	4	0	0.1	68.794	6.815	143026.005	128.445475	128.445475
10	27	15	10.27.16	0	49	3	0	0.1	45.445	4.858	93326.462	80.506984	80.506984
10	27	16	10.27.17	0	6	2	0	0.1	5.543	2.19	6488.308	0	0
10	27	17	10.27.18	0	0	2	0	0.1	0	2	0	0	0
10	27	18	10.27.19	0	0	2	0	0.1	0	2	0	0	0
10	27	19	10.27.20	0	0	2	0	0.1	0	2	0	0	0
10	27	20	10.27.21	0	0	2	0	0.1	0	2	0	0	0
10	27	21	10.27.22	0	0	1	0	0.1	0	1	0	0	0
10	27	22	10.27.23	0	0	1	0	0.1	0	1	0	0	0
10	27	23	10.27.24	0	0	1	0	0.1	0	1	0	0	0
10	28	0	10.28.1	0	0	0	0	0.1	0	0	0	0	0
10	28	1	10.28.2	0	0	0	0	0.1	0	0	0	0	0
10	28	2	10.28.3	0	0	0	0	0.1	0	0	0	0	0
10	28	3	10.28.4	0	0	0	0.1	0.1	0	0	0	0	0
10	28	4	10.28.5	0	0	0	0.2	0.1	0	0	0	0	0
10	28	5	10.28.6	0	0	-1	0.2	0.1	0	-1	0	0	0
10	28	6	10.28.7	203	11	0	0.1	0.1	23.997	0.686	23541.872	13.19514	13.19514
10	28	7	10.28.8	661	44	1	0	0.1	289.589	12.691	586951.292	556.640724	556.640724
10	28	8	10.28.9	817	60	3	0	0.1	519.894	24.41	1096578.267	1048.209589	1048.209589
10	28	9	10.28.10	891	69	4	0	0.1	698.493	32.72	1420744.801	1360.889614	1360.889614
10	28	10	10.28.11	929	73	5	0	0.1	817.015	38.547	1614829.812	1548.097421	1548.097421
10	28	11	10.28.12	939	75	6	0	0.1	860.207	41.302	1677484.881	1608.532372	1608.532372
10	28	12	10.28.13	921	77	7	0	0.1	823.441	40.806	1611824.345	1545.19845	1545.19845
10	28	13	10.28.14	881	74	7	0	0.1	712.253	36.277	1427125.659	1367.044373	1367.044373
10	28	14	10.28.15	800	67	7	0	0.1	537.907	29.146	1113488.405	1064.520533	1064.520533
10	28	15	10.28.16	646	51	5	0.1	0.1	310.974	17.222	634087.52	602.106728	602.106728
10	28	16	10.28.17	0	31	3	0.2	0.1	31.958	4.027	40087.569	29.154557	29.154557
10	28	17	10.28.18	0	0	3	0.2	0.1	0	3	0	0	0
10	28	18	10.28.19	0	0	3	0.2	0.1	0	3	0	0	0
10	28	19	10.28.20	0	0	3	0.1	0.87	0	3	0	0	0
10	28	20	10.28.21	0	0	2	0.1	0.87	0	2	0	0	0
10	28	21	10.28.22	0	0	2	0	0.87	0	2	0	0	0
10	28	22	10.28.23	0	0	2	0	0.87	0	2	0	0	0
10	28	23	10.28.24	0	0	2	0	0.87	0	2	0	0	0
10	29	0	10.29.1	0	0	1	0	0.87	0	1	0	0	0
10	29	1	10.29.2	0	0	0	0.1	0.87	0	0	0	0	0
10	29	2	10.29.3	0	0	0	0.1	0.87	0	0	0	0	0
10	29	3	10.29.4	0	0	0	0.1	0.87	0	0	0	0	0
10	29	4	10.29.5	0	0	0	0.1	0.87	0	0	0	0	0
10	29	5	10.29.6	0	0	0	0.1	0.87	0	0	0	0	0
10	29	6	10.29.7	0	2	0	0	0.87	1.903	0.065	2143.117	0	0
10	29	7	10.29.8	0	45	1	0	0.87	42.615	2.736	86987.932	74.393054	74.393054
10	29	8	10.29.9	0	104	1	0	0.87	101.119	5.133	213626.839	196.54464	196.54464
10	29	9	10.29.10	0	88	2	0	0.87	83.451	5.405	173741.261	158.072368	158.072368
10	29	10	10.29.11	0	81	2	0	0.87	76.588	5.12	158241.734	143.12205	143.12205
10	29	11	10.29.12	0	79	2	0	0.87	74.701	5.041	153924.738	138.958022	138.958022
10	29	12	10.29.13	0	64	2	0	0.87	60.48	4.463	124120.235	110.209611	110.209611
10	29	13	10.29.14	0	37	2	0	0.87	34.917	3.424	70793.713	58.772661	58.772661
10	29	14	10.29.15	0	35	2	0	0.87	33.009	3.349	67254.385	55.358745	55.358745
10	29	15	10.29.16	0	15	1	0	0.87	14.122	1.576	27820.283	17.32195	17.32195
10	29	16	10.29.17	0	2	1	0	0.87	1.879	1.064	2089.923	0	0
10	29	17	10.29.18	0	0	1	0	0.87	0	1	0	0	0
10	29	18	10.29.19	0	0	1	0.1	0.87	0	1	0	0	0
10	29	19	10.29.20	0	0	1	0.1	0.87	0	1	0	0	0
10	29	20	10.29.21	0	0	0	0.1	0.87	0	0	0	0	0
10	29	21	10.29.22	0	0	0	0.1	0.87	0	0	0	0	0
10	29	22	10.29.23	0	0	0	0	0.87	0	0	0	0	0
10	29	23	10.29.24	0	0	0	0	0.87	0	0	0	0	0

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
10	30	0	10.30.1	0	0	0	0	0.87	0	0	0	0	0
10	30	1	10.30.2	0	0	0	0	0.87	0	0	0	0	0
10	30	2	10.30.3	0	0	0	0	0.87	0	0	0	0	0
10	30	3	10.30.4	0	0	0	0	0.87	0	0	0	0	0
10	30	4	10.30.5	0	0	0	0	0.87	0	0	0	0	0
10	30	5	10.30.6	0	0	0	0	0.87	0	0	0	0	0
10	30	6	10.30.7	0	0	0	0	0.87	0	0	0	0	0
10	30	7	10.30.8	589	52	0	0	0.87	272.735	11	553613.916	524.484623	524.484623
10	30	8	10.30.9	765	77	1	0	0.87	512.28	22.078	1086238.694	1038.236388	1038.236388
10	30	9	10.30.10	851	93	1	0	0.87	703.416	29.896	1441516.689	1380.925472	1380.925472
10	30	10	10.30.11	873	110	2	0	0.87	822.548	35.74	1637476.148	1569.941308	1569.941308
10	30	11	10.30.12	903	107	3	0	0.87	875.508	38.895	1717297.184	1646.933967	1646.933967
10	30	12	10.30.13	906	99	3	0	0.87	844.11	37.624	1667624.904	1599.021773	1599.021773
10	30	13	10.30.14	874	90	4	0	0.87	730.748	34.014	1472825.405	1411.124795	1411.124795
10	30	14	10.30.15	806	75	5	0	0.87	549.181	27.595	1141002.558	1091.059751	1091.059751
10	30	15	10.30.16	654	53	4	0	0.87	315.484	16.795	641310.833	609.074091	609.074091
10	30	16	10.30.17	239	16	2	0	0.87	40.463	3.216	41149.726	30.179077	30.179077
10	30	17	10.30.18	0	0	1	0.1	0.87	0	1	0	0	0
10	30	18	10.30.19	0	0	0	0.1	0.87	0	0	0	0	0
10	30	19	10.30.20	0	0	0	0.1	0.87	0	0	0	0	0
10	30	20	10.30.21	0	0	0	0.1	0.87	0	0	0	0	0
10	30	21	10.30.22	0	0	0	0.2	0.87	0	0	0	0	0
10	30	22	10.30.23	0	0	0	0.2	0.87	0	0	0	0	0
10	30	23	10.30.24	0	0	0	0.2	0.87	0	0	0	0	0
10	31	0	10.31.1	0	0	-1	0.3	0.87	0	-1	0	0	0
10	31	1	10.31.2	0	0	-1	0.4	0.87	0	-1	0	0	0
10	31	2	10.31.3	0	0	-1	0.4	0.87	0	-1	0	0	0
10	31	3	10.31.4	0	0	-1	0.4	0.87	0	-1	0	0	0
10	31	4	10.31.5	0	0	-1	0.5	0.87	0	-1	0	0	0
10	31	5	10.31.6	0	0	-1	0.7	0.87	0	-1	0	0	0
10	31	6	10.31.7	0	0	0	0.6	0.87	0	0	0	0	0
10	31	7	10.31.8	469	65	1	0.2	0.87	242.669	10.175	493431.962	466.435155	466.435155
10	31	8	10.31.9	656	102	4	0	0.87	478.584	23.681	1005937.455	960.780541	960.780541
10	31	9	10.31.10	474	150	5	0.1	0.87	505.365	25.064	1047678.526	1001.04256	1001.04256
10	31	10	10.31.11	601	146	6	0.2	0.87	651.757	31.03	1318699.927	1262.460595	1262.460595
10	31	11	10.31.12	652	140	7	0.2	0.87	709.289	34.23	1415728.744	1356.051296	1356.051296
10	31	12	10.31.13	614	144	8	0.2	0.87	665.278	33.547	1332678.659	1275.944005	1275.944005
10	31	13	10.31.14	531	143	8	0.2	0.87	545.58	28.972	1115407.887	1066.372001	1066.372001
10	31	14	10.31.15	526	98	8	0.1	0.87	417.833	24.623	872008.889	831.597597	831.597597
10	31	15	10.31.16	249	73	7	0.3	0.87	177.49	13.546	361387.645	339.069693	339.069693
10	31	16	10.31.17	0	14	5	0.6	0.87	13.318	5.38	15990.133	5.910989	5.910989
10	31	17	10.31.18	0	0	4	0.5	0.87	0	4	0	0	0
10	31	18	10.31.19	0	0	4	0.3	0.87	0	4	0	0	0
10	31	19	10.31.20	0	0	13	0	0.1	0	13	0	0	0
10	31	20	10.31.21	0	0	12	0	0.1	0	12	0	0	0
10	31	21	10.31.22	0	0	11	0	0.1	0	11	0	0	0
10	31	22	10.31.23	0	0	10	0	0.1	0	10	0	0	0
10	31	23	10.31.24	0	0	10	0	0.1	0	10	0	0	0
11	1	0	11.1.1	0	0	10	0	0.1	0	10	0	0	0
11	1	1	11.1.2	0	0	10	0	0.1	0	10	0	0	0
11	1	2	11.1.3	0	0	9	0	0.1	0	9	0	0	0
11	1	3	11.1.4	0	0	9	0	0.1	0	9	0	0	0
11	1	4	11.1.5	0	0	8	0	0.1	0	8	0	0	0
11	1	5	11.1.6	0	0	8	0	0.1	0	8	0	0	0
11	1	6	11.1.7	0	0	8	0	0.1	0	0	0	0	0
11	1	7	11.1.8	83	67	9	0	0.1	101.339	13.114	202302.819	185.621876	185.621876
11	1	8	11.1.9	722	68	10	0	0.1	469.568	29.335	970183.399	926.293394	926.293394
11	1	9	11.1.10	816	77	11	0	0.1	651.085	37.774	1298670.578	1243.140966	1243.140966
11	1	10	11.1.11	866	80	12	0	0.1	770.669	43.65	1493850.01	1431.404414	1431.404414
11	1	11	11.1.12	885	80	12	0	0.1	810.651	45.277	1557886.704	1493.172034	1493.172034
11	1	12	11.1.13	885	77	13	0	0.1	783.719	45.185	1509339.496	1446.345047	1446.345047
11	1	13	11.1.14	174	201	13	0	0.1	337.864	26.842	687140.783	653.280103	653.280103
11	1	14	11.1.15	789	61	12	0	0.1	515.694	33.236	1050978.933	1004.22602	1004.22602
11	1	15	11.1.16	633	45	11	0	0.1	292.887	22.864	578012.016	548.018202	548.018202
11	1	16	11.1.17	205	13	10	0	0.1	30.155	10.91	29403.031	18.848615	18.848615
11	1	17	11.1.18	0	0	8	0	0.1	0	8	0	0	0
11	1	18	11.1.19	0	0	7	0	0.1	0	7	0	0	0
11	1	19	11.1.20	0	0	6	0	0.1	0	6	0	0	0
11	1	20	11.1.21	0	0	5	0	0.1	0	5	0	0	0
11	1	21	11.1.22	0	0	5	0	0.1	0	5	0	0	0
11	1	22	11.1.23	0	0	4	0	0.1	0	4	0	0	0
11	1	23	11.1.24	0	0	3	0	0.1	0	3	0	0	0
11	2	0	11.2.1	0	0	3	0	0.1	0	3	0	0	0
11	2	1	11.2.2	0	0	3	0	0.1	0	3	0	0	0
11	2	2	11.2.3	0	0	3	0	0.1	0	3	0	0	0
11	2	3	11.2.4	0	0	3	0	0.1	0	3	0	0	0
11	2	4	11.2.5	0	0	3	0	0.1	0	3	0	0	0
11	2	5	11.2.6	0	0	3	0	0.1	0	3	0	0	0
11	2	6	11.2.7	0	0	3	0	0.1	0	0	0	0	0
11	2	7	11.2.8	0	32	5	0	0.1	29.641	6.208	58834.957	47.237651	47.237651
11	2	8	11.2.9	0	34	7	0	0.1	31.49	8.289	63145.274	51.395236	51.395236
11	2	9	11.2.10	0	39	9	0	0.1	36.146	10.477	71811.607	59.754486	59.754486
11	2	10	11.2.11	19	193	10	0	0.1	202.85	18.284	415532.406	391.295891	391.295891
11	2	11	11.2.12	44	227	11	0	0.1	270.021	22.026	549492.13	520.508889	520.508889
11	2	12	11.2.13	31	209	12	0	0.1	239.106	21.766	485756.348	459.031519	459.031519
11	2	13	11.2.14	252	191	13	0	0.1	389.153	28.955	789547.352	752.058	752.058
11	2	14	11.2.15	110	142	12	0	0.1	213.864	20.772	441819.226	416.651265	416.651265
11	2	15	11.2.16	148	73	11	0	0.1	138.462	16.629	277228.213	257.892365	257.892365
11	2	16	11.2.17	0	11	10	0	0.1	10.464	10.359	12128.008	2.185714	2.185714
11	2	17	11.2.18	0	0	10	0	0.1	0	10	0	0	0
11	2	18	11.2.19	0	0	10	0	0.1	0	10	0	0	0
11	2	19	11.2.20	0	0	10	0	0.1	0	10	0	0	0
11	2	20	11.2.21	0	0	10	0	0.1	0	10	0	0	0
11	2	21	11.2.22	0	0	10	0	0.1	0	10	0	0	0
11	2	22	11.2.23	0	0	11	0	0.1	0	11	0	0	0
11	2	23	11.2.24	0	0	11	0	0.1	0	11	0	0	0
11	3	0	11.3.1	0	0	11	0	0.1	0	11	0	0	0
11	3	1	11.3.2	0	0	11	0	0.1	0	11	0	0	0
11	3	2	11.3.3	0	0	11	0	0.1	0	11	0	0	0
11	3	3	11.3.4	0	0	11	0	0.1	0	11	0	0	0
11	3	4	11.3.5	0	0	10	0	0.1	0	10	0	0	0
11	3	5	11.3.6	0	0	8	0	0.1	0	8	0	0	0
11	3	6	11.3.7	0	0	7	0	0.1	0	0	0	0	0
11	3	7	11.3.8	541	46	7	0	0.1	243.751	16.804	477810.943	451.367651	451.367651
11	3	8	11.3.9	753	64	8	0	0.1	477.558	27.666	993784.529	949.058242	949.058242
11	3	9	11.3.10	851	73	9	0.1	0.1	665.194	35.478	1340154.889	1283.155323	1283.155323
11	3	10	11.3.11	904	75	10	0	0.1	783.106	42.17	1528629.587	1464.951613	1464.951613
11	3	11	11.3.12	921	77	11	0	0.1	830.366	45.094	1598015.661	1531.879063	1531.879063
11	3	12	11.3.13	916	74	12	0	0.1	798.679	44.807	1541643.384	1477.504279	1477.504279
11	3	13	11.3.14	885	68	12	0	0.1	691.926	40.457	1366263.647	1308.338943	1308.338943
11	3	14	11.3.15	809	59	11	0	0.1	520.009	32.416	1063724.352	1016.519819	1016.519819
11	3	15	11.3.16	645	44	10	0	0.1	293.02	21.853	577700.316	547.717547	547.717547
11	3	16	11.3.17	178	12	8	0	0.1	23.779	8.728	23687.13	13.33525	13.33525
11	3	17	11.3.18	0	0	6	0	0.1	0	6	0	0	0
11	3	18	11.3.19	0	0	5	0	0.1	0	5	0	0	0
11	3	19	11.3.20	0	0	4	0	0.1	0	4	0	0	0
11	3	20	11.3.21	0	0	3	0	0.1	0	3	0	0	0
11	3	21	11.3.22	0	0	3	0	0.1	0	3	0	0	0
11	3	22	11.3.23	0	0	2	0	0.1	0	2	0	0	0
11	3	23	11.3.24	0	0	1	0	0.1	0	1	0	0	0
11	4	0	11.4.1	0	0	0	0	0.1	0	0	0	0	0
11	4	1	11.4.2	0	0	0	0	0.1	0	0	0	0	0
11	4	2	11.4.3	0	0	0	0	0.1	0	0	0	0	0
11	4	3	11.4.4	0	0	0	0.1	0.1	0	0	0	0	0
11	4	4	11.4.5	0	0	0	0.4	0.1	0	0	0	0	0
11	4	5	11.4.6	0	0	0	0.6	0.1	0	0	0	0	0
11	4	6	11.4.7	0	0	0	0.4	0.1	0	0	0	0	0
11	4	7	11.4.8	275	55	1	0.1	0.1	161.607	7.306	327255.178	306.146676	306.146676
11	4	8	11.4.9	120	129	3	0	0.1	202.238	11.298	433172.194	408.310631	408.310631
11	4	9	11.4.10	317	171	4	0	0.1	404.701	20.608	851538.136	811.852204	811.852204
11	4	10	11.4.11	201	226	5	0	0.1	398.499	21.314	828490.312	789.621056	789.621056
11	4	11	11.4.12	122	243	6	0	0.1	361.654	20.785	748090.702	712.070324	712.070324
11	4	12	11.4.13	45	213	6	0	0.1	254.897	16.415	530503.502	502.193103	502.193103
11	4	13	11.4.14	0	131	7	0	0.1	125.287	12.121	259550.441	240.840987	240.840987
11	4	14	11.4.15	109	138	6	0	0.1	208.768	14.564	441612.042	416.451421	416.451421
11	4	15	11.4.16	0	57	6	0	0.1	54.507	8.224	110427.932	97.002481	97.002481
11	4	16	11.4.17	0	4	6	0	0.1	3.805	6.131	4291.39	0	0
11	4	17	11.4.18	0	0	6	0	0.1	0	6	0	0	0
11	4	18	11.4.19	0	0	7	0	0.1	0	7	0	0	0
11	4	19	11.4.20	0	0	7	0	0.1	0	7	0	0	0
11	4	20	11.4.21	0	0	7	0	0.1	0	7	0	0	0
11	4	21	11.4.22	0	0	8	0	0.1	0	8	0	0	0
11	4	22	11.4.23	0	0	7	0.1	0.1	0	7	0	0	0
11	4	23	11.4.24	0	0	7	0.2	0.1	0	7	0	0	0
11	5	0	11.5.1	0	0	7	0.1	0.1	0	7	0	0	0
11	5	1	11.5.2	0	0	7	0	0.1	0	7	0	0	0
11	5	2	11.5.3	0	0	7	0	0.1	0	7	0	0	0
11	5	3	11.5.4	0	0	7	0	0.1	0	7	0	0	0
11	5	4	11.5.5	0	0	6	0	0.1	0	6	0	0	0
11	5	5	11.5.6	0	0	6	0	0.1	0	6	0	0	0
11	5	6	11.5.7	0	0	6	0	0.1	0	0	0	0	0

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
11	5	7	11.5.8	504	47	6	0	0.1	229.874	15.233	450364.022	424.893284	424.893284
11	5	8	11.5.9	722	67	7	0	0.1	460.489	25.962	963803.565	920.139623	920.139623
11	5	9	11.5.10	380	159	8	0.1	0.1	441.422	25.538	914332.117	872.421145	872.421145
11	5	10	11.5.11	377	197	9	0.1	0.1	508.548	29.176	1035045.292	988.856972	988.856972
11	5	11	11.5.12	333	221	9	0.1	0.1	514.325	29.387	1042609.933	996.153568	996.153568
11	5	12	11.5.13	550	157	9	0.1	0.1	610.391	33.235	1228487.195	1175.444459	1175.444459
11	5	13	11.5.14	852	73	9	0.1	0.1	674.779	35.858	1357161.117	1299.558952	1299.558952
11	5	14	11.5.15	785	61	9	0.1	0.1	504.974	29.126	1045908.549	999.335301	999.335301
11	5	15	11.5.16	616	44	8	0	0.1	279.477	19.291	553317.643	524.198849	524.198849
11	5	16	11.5.17	0	0	7	0	0.1	0	0	0	0	0
11	5	17	11.5.18	0	0	6	0	0.1	0	6	0	0	0
11	5	18	11.5.19	0	0	6	0	0.1	0	6	0	0	0
11	5	19	11.5.20	0	0	5	0	0.1	0	5	0	0	0
11	5	20	11.5.21	0	0	5	0	0.1	0	5	0	0	0
11	5	21	11.5.22	0	0	4	0	0.1	0	4	0	0	0
11	5	22	11.5.23	0	0	4	0	0.1	0	4	0	0	0
11	5	23	11.5.24	0	0	4	0	0.1	0	4	0	0	0
11	6	0	11.6.1	0	0	3	0	0.1	0	3	0	0	0
11	6	1	11.6.2	0	0	3	0	0.1	0	3	0	0	0
11	6	2	11.6.3	0	0	2	0	0.1	0	2	0	0	0
11	6	3	11.6.4	0	0	2	0	0.1	0	2	0	0	0
11	6	4	11.6.5	0	0	2	0	0.1	0	2	0	0	0
11	6	5	11.6.6	0	0	2	0	0.1	0	2	0	0	0
11	6	6	11.6.7	0	0	3	0	0.1	0	0	0	0	0
11	6	7	11.6.8	260	53	4	0	0.1	153.405	10.177	305231.182	284.903077	284.903077
11	6	8	11.6.9	260	117	6	0	0.1	267.297	16.983	567657.953	538.031024	538.031024
11	6	9	11.6.10	0	135	8	0	0.1	129.953	13.313	268680.97	249.647985	249.647985
11	6	10	11.6.11	36	202	10	0	0.1	235.801	19.636	483918.366	457.258664	457.258664
11	6	11	11.6.12	300	224	11	0	0.1	490.972	31.107	987521.402	943.017042	943.017042
11	6	12	11.6.13	304	212	12	0	0.1	472.368	31.354	950337.706	907.150913	907.150913
11	6	13	11.6.14	481	143	13	0	0.1	497.792	33.446	1003226.914	958.166046	958.166046
11	6	14	11.6.15	260	126	12	0	0.1	283.397	23.643	587258.735	556.937273	556.937273
11	6	15	11.6.16	169	66	11	0	0.1	137.478	16.576	272767.232	253.589455	253.589455
11	6	16	11.6.17	0	0	10	0	0.1	0	0	0	0	0
11	6	17	11.6.18	0	0	10	0	0.1	0	10	0	0	0
11	6	18	11.6.19	0	0	10	0	0.1	0	10	0	0	0
11	6	19	11.6.20	0	0	9	0	0.1	0	9	0	0	0
11	6	20	11.6.21	0	0	8	0	0.1	0	8	0	0	0
11	6	21	11.6.22	0	0	7	0	0.1	0	7	0	0	0
11	6	22	11.6.23	0	0	6	0	0.1	0	6	0	0	0
11	6	23	11.6.24	0	0	6	0	0.1	0	6	0	0	0
11	7	0	11.7.1	0	0	5	0	0.1	0	5	0	0	0
11	7	1	11.7.2	0	0	5	0	0.1	0	5	0	0	0
11	7	2	11.7.3	0	0	4	0	0.1	0	4	0	0	0
11	7	3	11.7.4	0	0	4	0	0.1	0	4	0	0	0
11	7	4	11.7.5	0	0	4	0.2	0.1	0	4	0	0	0
11	7	5	11.7.6	0	0	3	0.3	0.1	0	3	0	0	0
11	7	6	11.7.7	0	0	4	0.2	0.1	0	4	0	0	0
11	7	7	11.7.8	470	43	6	0	0.1	212.1	14.503	413033.04	388.885087	388.885087
11	7	8	11.7.9	684	64	10	0	0.1	435.813	27.943	903957.216	862.413868	862.413868
11	7	9	11.7.10	784	76	13	0	0.1	614.417	38.276	1224567.52	1171.663674	1171.663674
11	7	10	11.7.11	839	79	15	0	0.1	733.287	45.129	1415506.684	1355.837104	1355.837104
11	7	11	11.7.12	856	80	16	0	0.1	777.26	47.92	1480201.558	1418.239582	1418.239582
11	7	12	11.7.13	844	79	17	0	0.1	744.351	47.58	1421725.052	1361.835131	1361.835131
11	7	13	11.7.14	799	75	17	0	0.1	636.576	43.183	1243193.645	1189.629801	1189.629801
11	7	14	11.7.15	702	66	16	0	0.1	461.949	35.022	933113.231	890.536769	890.536769
11	7	15	11.7.16	501	48	15	0	0.1	242.388	24.787	466753.132	440.701662	440.701662
11	7	16	11.7.17	0	0	14	0	0.1	0	0	0	0	0
11	7	17	11.7.18	0	0	13	0	0.1	0	13	0	0	0
11	7	18	11.7.19	0	0	12	0	0.1	0	12	0	0	0
11	7	19	11.7.20	0	0	12	0	0.1	0	12	0	0	0
11	7	20	11.7.21	0	0	12	0	0.1	0	12	0	0	0
11	7	21	11.7.22	0	0	12	0	0.1	0	12	0	0	0
11	7	22	11.7.23	0	0	12	0	0.1	0	12	0	0	0
11	7	23	11.7.24	0	0	11	0	0.1	0	11	0	0	0
11	8	0	11.8.1	0	0	10	0	0.1	0	10	0	0	0
11	8	1	11.8.2	0	0	9	0	0.1	0	9	0	0	0
11	8	2	11.8.3	0	0	7	0	0.1	0	7	0	0	0
11	8	3	11.8.4	0	0	6	0	0.1	0	6	0	0	0
11	8	4	11.8.5	0	0	4	0	0.1	0	4	0	0	0
11	8	5	11.8.6	0	0	3	0	0.1	0	3	0	0	0
11	8	6	11.8.7	0	0	3	0	0.1	0	3	0	0	0
11	8	7	11.8.8	608	37	3	0	0.1	247.138	12.881	481981.987	455.390899	455.390899
11	8	8	11.8.9	808	52	5	0	0.1	481.745	24.838	1013354.063	967.93435	967.93435
11	8	9	11.8.10	891	61	6	0	0.1	660.422	33.179	1345342.504	1288.15912	1288.15912
11	8	10	11.8.11	931	64	7	0	0.1	776.502	38.916	1538773.125	1474.735725	1474.735725
11	8	11	11.8.12	937	67	8	0	0.1	816.978	41.562	1598215.071	1532.071406	1532.071406
11	8	12	11.8.13	511	163	8	0	0.1	583.052	31.922	1179403.569	1128.100061	1128.100061
11	8	13	11.8.14	862	68	8	0	0.1	668.657	35.508	1348022.595	1290.744245	1290.744245
11	8	14	11.8.15	340	113	7	0	0.1	318.112	20.077	671744.274	638.429153	638.429153
11	8	15	11.8.16	120	67	6	0	0.1	116.557	10.727	235309.536	217.459034	217.459034
11	8	16	11.8.17	0	0	5	0	0.1	0	0	0	0	0
11	8	17	11.8.18	0	0	4	0	0.1	0	4	0	0	0
11	8	18	11.8.19	0	0	3	0	0.1	0	3	0	0	0
11	8	19	11.8.20	0	0	2	0	0.1	0	2	0	0	0
11	8	20	11.8.21	0	0	1	0	0.1	0	1	0	0	0
11	8	21	11.8.22	0	0	0	0	0.1	0	0	0	0	0
11	8	22	11.8.23	0	0	0	0	0.1	0	0	0	0	0
11	8	23	11.8.24	0	0	0	0	0.1	0	0	0	0	0
11	9	0	11.9.1	0	0	0	0	0.1	0	0	0	0	0
11	9	1	11.9.2	0	0	-1	0	0.1	0	-1	0	0	0
11	9	2	11.9.3	0	0	-1	0	0.1	0	-1	0	0	0
11	9	3	11.9.4	0	0	-2	0	0.1	0	-2	0	0	0
11	9	4	11.9.5	0	0	-2	0	0.1	0	-2	0	0	0
11	9	5	11.9.6	0	0	-2	0	0.1	0	-2	0	0	0
11	9	6	11.9.7	0	0	-1	0	0.1	0	-1	0	0	0
11	9	7	11.9.8	566	38	0	0	0.1	232.983	9.308	458555.805	432.794799	432.794799
11	9	8	11.9.9	780	56	0	0	0.1	469.81	19.341	1007517.326	962.304431	962.304431
11	9	9	11.9.10	879	65	1	0	0.1	654.731	27.945	1360965.035	1303.228083	1303.228083
11	9	10	11.9.11	927	69	2	0	0.1	776.671	33.924	1569822.869	1504.685253	1504.685253
11	9	11	11.9.12	943	70	3	0	0.1	822.431	36.788	1640015.164	1572.390356	1572.390356
11	9	12	11.9.13	935	68	4	0	0.1	789.694	36.455	1579592.6	1514.108804	1514.108804
11	9	13	11.9.14	899	64	4	0	0.1	681.909	32.058	1394360.074	1335.439803	1335.439803
11	9	14	11.9.15	818	55	3	0	0.1	508.011	23.925	1074064.626	1026.493695	1026.493695
11	9	15	11.9.16	642	40	2	0	0.1	279.176	13.245	559625.903	530.283582	530.283582
11	9	16	11.9.17	0	0	0	0	0.1	0	0	0	0	0
11	9	17	11.9.18	0	0	0	0	0.1	0	0	0	0	0
11	9	18	11.9.19	0	0	-1	0	0.1	0	-1	0	0	0
11	9	19	11.9.20	0	0	-2	0	0.1	0	-2	0	0	0
11	9	20	11.9.21	0	0	-3	0	0.1	0	-3	0	0	0
11	9	21	11.9.22	0	0	-3	0	0.1	0	-3	0	0	0
11	9	22	11.9.23	0	0	-4	0	0.1	0	-4	0	0	0
11	9	23	11.9.24	0	0	-4	0.1	0.1	0	-4	0	0	0
11	10	0	11.10.1	0	0	-4	0.1	0.1	0	-4	0	0	0
11	10	1	11.10.2	0	0	-4	0.2	0.1	0	-4	0	0	0
11	10	2	11.10.3	0	0	-4	0.3	0.1	0	-4	0	0	0
11	10	3	11.10.4	0	0	-4	0.4	0.1	0	-4	0	0	0
11	10	4	11.10.5	0	0	-3	0.3	0.1	0	-3	0	0	0
11	10	5	11.10.6	0	0	-3	0.3	0.1	0	-3	0	0	0
11	10	6	11.10.7	0	0	-2	0.2	0.1	0	-2	0	0	0
11	10	7	11.10.8	18	50	-1	0	0.1	57.242	1.32	116512.021	102.870987	102.870987
11	10	8	11.10.9	87	117	0	0	0.1	171.533	7.034	370664.271	348.017612	348.017612
11	10	9	11.10.10	803	73	2	0	0.1	616.38	27.363	1283202.967	1228.221434	1228.221434
11	10	10	11.10.11	848	79	3	0	0.1	732.368	33.099	1484722.245	1422.600082	1422.600082
11	10	11	11.10.12	847	85	4	0	0.1	768.455	35.564	1539458.605	1475.396915	1475.396915
11	10	12	11.10.13	215	214	5	0	0.1	395.064	21.182	823320.85	784.634769	784.634769
11	10	13	11.10.14	766	84	5	0	0.1	618.323	30.434	1270462.344	1215.932262	1215.932262
11	10	14	11.10.15	665	72	4	0	0.1	446.519	22.383	946330.5	903.285698	903.285698
11	10	15	11.10.16	470	49	2	0	0.1	229.682	11.258	462599.259	436.694977	436.694977
11	10	16	11.10.17	0	0	0	0	0.1	0	0	0	0	0
11	10	17	11.10.18	0	0	0	0	0.1	0	0	0	0	0
11	10	18	11.10.19	0	0	0	0	0.1	0	0	0	0	0
11	10	19	11.10.20	0	0	0	0	0.1	0	0	0	0	0
11	10	20	11.10.21	0	0	0	0	0.1	0	0	0	0	0
11	10	21	11.10.22	0	0	0	0	0.1	0	0	0	0	0
11	10	22	11.10.23	0	0	0	0	0.1	0	0	0	0	0
11	10	23	11.10.24	0	0	0	0	0.1	0	0	0	0	0
11	11	0	11.11.1	0	0	1	0	0.1	0	1	0	0	0
11	11	1	11.11.2	0	0	1	0	0.1	0	1	0	0	0
11	11	2	11.11.3	0	0	1	0	0.1	0	1	0	0	0
11	11	3	11.11.4	0	0	1	0	0.1	0	1	0	0	0
11	11	4	11.11.5	0	0	1	0	0.1	0	1	0	0	0
11	11	5	11.11.6	0	0	2	0	0.1	0	2	0	0	0
11	11	6	11.11.7	0	0	2	0	0.1	0	2	0	0	0
11	11	7	11.11.8	139	50	4	0	0.1	104.232	8.19	205109.961	188.32955	188.32955
11	11	8	11.11.9	80	115	5	0	0.1	159.517	11.54	337930.344	316.443578	316.443578
11	11	9	11.11.10	368	148	7	0	0.1	415.496	24.065	866002.124	825.803676	825.803676
11	11	10	11.11.11	108	211	8	0	0.1	300.656	20.305	623019.002	591.430411	591.430411
11	11	11	11.11.12	74	220	9	0	0.1	287.18	20.742	591128.863	560.670267	560.670267
11	11	12	11.11.13	396	183	10	0	0.1	515.179	31.129	1042539.039	996.085185	996.085185
11	11	13	11.11.14	657	111	11	0	0.1	577.168	34.731	1163775.78	1113.026027	1113.026027

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
11	11	14	11.11.15	579	88	10	0	0.1	417.063	27.164	865590.392	825.406533	825.406533
11	11	15	11.11.16	389	55	9	0	0.1	206.493	17.326	405446.116	381.566998	381.566998
11	11	16	11.11.17	0	0	6	0	0.1	0	0	0	0	0
11	11	17	11.11.18	0	0	5	0	0.1	0	5	0	0	0
11	11	18	11.11.19	0	0	5	0	0.1	0	5	0	0	0
11	11	19	11.11.20	0	0	5	0	0.1	0	5	0	0	0
11	11	20	11.11.21	0	0	6	0	0.1	0	6	0	0	0
11	11	21	11.11.22	0	0	6	0	0.1	0	6	0	0	0
11	11	22	11.11.23	0	0	5	0	0.1	0	5	0	0	0
11	11	23	11.11.24	0	0	5	0	0.1	0	5	0	0	0
11	12	0	11.12.1	0	0	4	0	0.1	0	4	0	0	0
11	12	1	11.12.2	0	0	4	0	0.1	0	4	0	0	0
11	12	2	11.12.3	0	0	3	0	0.1	0	3	0	0	0
11	12	3	11.12.4	0	0	3	0	0.1	0	3	0	0	0
11	12	4	11.12.5	0	0	2	0	0.1	0	2	0	0	0
11	12	5	11.12.6	0	0	2	0	0.1	0	2	0	0	0
11	12	6	11.12.7	0	0	2	0	0.1	0	2	0	0	0
11	12	7	11.12.8	38	48	2	0	0.1	61.658	4.49	122662.861	108.803878	108.803878
11	12	8	11.12.9	0	21	2	0	0.1	19.432	2.795	39089.936	28.192274	28.192274
11	12	9	11.12.10	0	87	2	0	0.1	81.456	5.332	171162.77	155.585242	155.585242
11	12	10	11.12.11	0	92	3	0	0.1	85.859	6.507	179036.314	163.179796	163.179796
11	12	11	11.12.12	0	96	3	0	0.1	89.643	6.66	186724.658	170.595711	170.595711
11	12	12	11.12.13	0	80	2	0	0.1	74.282	5.034	154887.124	139.886307	139.886307
11	12	13	11.12.14	0	102	2	0	0.1	96.361	5.941	203049.866	186.342452	186.342452
11	12	14	11.12.15	0	40	1	0	0.1	37.059	2.517	76660.085	64.431163	64.431163
11	12	15	11.12.16	0	41	1	0	0.1	38.403	2.563	77815.808	65.545934	65.545934
11	12	16	11.12.17	0	0	1	0	0.1	0	0	0	0	0
11	12	17	11.12.18	0	0	1	0	0.1	0	1	0	0	0
11	12	18	11.12.19	0	0	0	0	0.1	0	0	0	0	0
11	12	19	11.12.20	0	0	0	0	0.87	0	0	0	0	0
11	12	20	11.12.21	0	0	0	0	0.87	0	0	0	0	0
11	12	21	11.12.22	0	0	0	0	0.87	0	0	0	0	0
11	12	22	11.12.23	0	0	0	0	0.87	0	0	0	0	0
11	12	23	11.12.24	0	0	0	0	0.87	0	0	0	0	0
11	13	0	11.13.1	0	0	0	0	0.87	0	0	0	0	0
11	13	1	11.13.2	0	0	0	0	0.87	0	0	0	0	0
11	13	2	11.13.3	0	0	0	0	0.87	0	0	0	0	0
11	13	3	11.13.4	0	0	0	0	0.87	0	0	0	0	0
11	13	4	11.13.5	0	0	0	0	0.87	0	0	0	0	0
11	13	5	11.13.6	0	0	0	0	0.87	0	0	0	0	0
11	13	6	11.13.7	0	0	-1	0	0.87	0	-1	0	0	0
11	13	7	11.13.8	21	46	0	0	0.87	54.912	2.216	109594.683	96.198757	96.198757
11	13	8	11.13.9	289	101	0	0	0.87	261.888	10.746	566193.254	536.618226	536.618226
11	13	9	11.13.10	769	101	0	0	0.87	626.628	25.762	1308199.429	1252.332172	1252.332172
11	13	10	11.13.11	869	99	1	0	0.87	768.915	32.58	1557703.73	1492.995543	1492.995543
11	13	11	11.13.12	917	94	2	0	0.87	831.995	36.156	1658628.142	1590.343802	1590.343802
11	13	12	11.13.13	927	86	3	0	0.87	806.475	36.124	1611116.72	1544.515899	1544.515899
11	13	13	11.13.14	895	76	3	0	0.87	693.914	31.535	1418547.632	1358.7703	1358.7703
11	13	14	11.13.15	810	63	3	0	0.87	508.575	23.934	1072545	1025.027916	1025.027916
11	13	15	11.13.16	613	42	2	0	0.87	267	12.725	530473.242	502.163916	502.163916
11	13	16	11.13.17	0	0	0	0	0.87	0	0	0	0	0
11	13	17	11.13.18	0	0	0	0	0.87	0	0	0	0	0
11	13	18	11.13.19	0	0	0	0	0.87	0	0	0	0	0
11	13	19	11.13.20	0	0	0	0	0.87	0	0	0	0	0
11	13	20	11.13.21	0	0	-1	0	0.87	0	-1	0	0	0
11	13	21	11.13.22	0	0	-2	0	0.87	0	-2	0	0	0
11	13	22	11.13.23	0	0	-2	0	0.87	0	-2	0	0	0
11	13	23	11.13.24	0	0	-3	0	0.87	0	-3	0	0	0
11	14	0	11.14.1	0	0	-4	0	0.87	0	-4	0	0	0
11	14	1	11.14.2	0	0	-4	0	0.87	0	-4	0	0	0
11	14	2	11.14.3	0	0	-4	0	0.87	0	-4	0	0	0
11	14	3	11.14.4	0	0	-4	0	0.87	0	-4	0	0	0
11	14	4	11.14.5	0	0	-4	0.1	0.87	0	-4	0	0	0
11	14	5	11.14.6	0	0	-5	0.1	0.87	0	-5	0	0	0
11	14	6	11.14.7	0	0	-4	0.1	0.87	0	-4	0	0	0
11	14	7	11.14.8	474	40	-2	0	0.87	202.457	6.044	394359.145	370.872883	370.872883
11	14	8	11.14.9	705	68	0	0	0.87	439.879	18.075	940318.171	897.48641	897.48641
11	14	9	11.14.10	808	85	2	0	0.87	627.919	27.823	1302254.108	1246.597517	1246.597517
11	14	10	11.14.11	858	94	3	0	0.87	752.673	33.916	1517681.747	1454.391699	1454.391699
11	14	11	11.14.12	874	98	4	0	0.87	800.726	36.872	1592275.029	1526.341843	1526.341843
11	14	12	11.14.13	860	96	5	0	0.87	765.39	36.433	1527153.922	1463.528237	1463.528237
11	14	13	11.14.14	811	89	6	0	0.87	650.702	32.753	1322955.3	1266.565183	1266.565183
11	14	14	11.14.15	710	75	5	0	0.87	470.695	24.368	988735.015	944.187653	944.187653
11	14	15	11.14.16	501	48	4	0	0.87	236.807	13.515	468138.449	442.037892	442.037892
11	14	16	11.14.17	0	0	3	0	0.87	0	0	0	0	0
11	14	17	11.14.18	0	0	1	0	0.87	0	1	0	0	0
11	14	18	11.14.19	0	0	1	0	0.87	0	1	0	0	0
11	14	19	11.14.20	0	0	1	0	0.87	0	1	0	0	0
11	14	20	11.14.21	0	0	0	0	0.87	0	0	0	0	0
11	14	21	11.14.22	0	0	0	0	0.87	0	0	0	0	0
11	14	22	11.14.23	0	0	0	0	0.87	0	0	0	0	0
11	14	23	11.14.24	0	0	0	0	0.87	0	0	0	0	0
11	15	0	11.15.1	0	0	0	0	0.87	0	0	0	0	0
11	15	1	11.15.2	0	0	0	0	0.87	0	0	0	0	0
11	15	2	11.15.3	0	0	0	0	0.87	0	0	0	0	0
11	15	3	11.15.4	0	0	0	0	0.87	0	0	0	0	0
11	15	4	11.15.5	0	0	0	0	0.87	0	0	0	0	0
11	15	5	11.15.6	0	0	0	0	0.87	0	0	0	0	0
11	15	6	11.15.7	0	0	0	0	0.87	0	0	0	0	0
11	15	7	11.15.8	490	38	1	0	0.87	204.033	9.091	390469.144	367.120719	367.120719
11	15	8	11.15.9	728	65	3	0	0.87	445.736	21.313	940975.214	898.12017	898.12017
11	15	9	11.15.10	829	81	5	0	0.87	634.489	31.097	1300104.679	1244.524251	1244.524251
11	15	10	11.15.11	873	90	8	0.1	0.87	756.59	38.079	1501484.522	1438.768405	1438.768405
11	15	11	11.15.12	887	92	9	0.1	0.87	801.408	40.844	1569460.193	1504.335428	1504.335428
11	15	12	11.15.13	876	89	10	0.1	0.87	767.11	40.493	1506911.035	1444.002635	1444.002635
11	15	13	11.15.14	835	80	11	0.1	0.87	654.685	37.054	1309631.326	1253.713331	1253.713331
11	15	14	11.15.15	745	66	10	0	0.87	474.62	29.534	978253.665	934.077698	934.077698
11	15	15	11.15.16	543	43	7	0	0.87	245.153	16.839	477074.105	450.656922	450.656922
11	15	16	11.15.17	0	0	5	0	0.87	0	5	0	0	0
11	15	17	11.15.18	0	0	4	0	0.87	0	4	0	0	0
11	15	18	11.15.19	0	0	4	0	0.87	0	4	0	0	0
11	15	19	11.15.20	0	0	3	0	0.1	0	3	0	0	0
11	15	20	11.15.21	0	0	3	0	0.1	0	3	0	0	0
11	15	21	11.15.22	0	0	2	0	0.1	0	2	0	0	0
11	15	22	11.15.23	0	0	2	0	0.1	0	2	0	0	0
11	15	23	11.15.24	0	0	2	0	0.1	0	2	0	0	0
11	16	0	11.16.1	0	0	1	0	0.1	0	1	0	0	0
11	16	1	11.16.2	0	0	1	0	0.1	0	1	0	0	0
11	16	2	11.16.3	0	0	1	0	0.1	0	1	0	0	0
11	16	3	11.16.4	0	0	1	0	0.1	0	1	0	0	0
11	16	4	11.16.5	0	0	1	0	0.1	0	1	0	0	0
11	16	5	11.16.6	0	0	1	0	0.1	0	1	0	0	0
11	16	6	11.16.7	0	0	1	0	0.1	0	1	0	0	0
11	16	7	11.16.8	219	41	2	0	0.1	122.414	6.875	235699.496	217.835176	217.835176
11	16	8	11.16.9	269	98	4	0	0.1	244.6	14.038	521708.334	493.709583	493.709583
11	16	9	11.16.10	284	151	6	0	0.1	352.414	20.472	741843.013	706.044015	706.044015
11	16	10	11.16.11	290	188	7	0	0.1	425.325	24.443	880571.212	839.856523	839.856523
11	16	11	11.16.12	259	208	8	0	0.1	435.147	25.831	893654.373	852.476095	852.476095
11	16	12	11.16.13	295	192	9	0	0.1	436.729	26.908	895566.5	854.320468	854.320468
11	16	13	11.16.14	482	127	10	0	0.1	469.537	29.299	963643.12	919.984863	919.984863
11	16	14	11.16.15	680	65	9	0.1	0.1	438.435	26.469	914736.849	872.811535	872.811535
11	16	15	11.16.16	472	42	8	0.4	0.1	218.572	15.728	425785.922	401.186084	401.186084
11	16	16	11.16.17	0	0	6	0.7	0.1	0	6	0	0	0
11	16	17	11.16.18	0	0	4	0.5	0.1	0	4	0	0	0
11	16	18	11.16.19	0	0	4	0.4	0.1	0	4	0	0	0
11	16	19	11.16.20	0	0	3	0.3	0.1	0	3	0	0	0
11	16	20	11.16.21	0	0	2	0.3	0.1	0	2	0	0	0
11	16	21	11.16.22	0	0	2	0.3	0.1	0	2	0	0	0
11	16	22	11.16.23	0	0	1	0.2	0.1	0	1	0	0	0
11	16	23	11.16.24	0	0	1	0.1	0.1	0	1	0	0	0
11	17	0	11.17.1	0	0	0	0	0.1	0	0	0	0	0
11	17	1	11.17.2	0	0	0	0	0.1	0	0	0	0	0
11	17	2	11.17.3	0	0	0	0	0.1	0	0	0	0	0
11	17	3	11.17.4	0	0	0	0	0.1	0	0	0	0	0
11	17	4	11.17.5	0	0	0	0.2	0.1	0	0	0	0	0
11	17	5	11.17.6	0	0	0	0.4	0.1	0	0	0	0	0
11	17	6	11.17.7	0	0	0	0.4	0.1	0	0	0	0	0
11	17	7	11.17.8	355	38	2	0.1	0.1	160.218	8.141	304156.482	283.866459	283.866459
11	17	8	11.17.9	605	65	4	0	0.1	379.72	19.598	804079.003	766.074737	766.074737
11	17	9	11.17.10	160	160	7	0	0.1	276.025	18.324	580292.304	550.217691	550.217691
11	17	10	11.17.11	260	191	10	0	0.1	406.619	26.673	833451.687	794.40663	794.40663
11	17	11	11.17.12	822	80	11	0	0.1	727.087	40.881	1429150.036	1368.997018	1368.997018
11	17	12	11.17.13	385	178	12	0	0.1	485.762	31.932	980833.405	936.566028	936.566028
11	17	13	11.17.14	17	148	12	0	0.1	156.268	18.396	319861.167	299.014664	299.014664
11	17	14	11.17.15	0	55	11	0	0.1	51.005	13.088	102245.684	89.110162	89.110162
11	17	15	11.17.16	463	40	10	0.4	0.1	212.807	17.519	410354.935	386.301878	386.301878
11	17	16	11.17.17	0	0	9	0.8	0.1	0	9	0	0	0
11	17	17	11.17.18	0	0	7	0.9	0.1	0	7	0	0	0
11	17	18	11.17.19	0	0	6	0.8	0.1	0	6	0	0	0
11	17	19	11.17.20	0	0	5	0.7	0.1	0	5	0	0	0
11	17	20	11.17.21	0	0	4	0.5	0.1	0	4	0	0	0

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
11	17	21	11.17.22	0	0	4	0.3	0.1	0	4	0	0	0
11	17	22	11.17.23	0	0	4	0.4	0.1	0	4	0	0	0
11	17	23	11.17.24	0	0	4	0.6	0.1	0	4	0	0	0
11	18	0	11.18.1	0	0	4	0.7	0.1	0	4	0	0	0
11	18	1	11.18.2	0	0	4	0.8	0.1	0	4	0	0	0
11	18	2	11.18.3	0	0	4	0.8	0.1	0	4	0	0	0
11	18	3	11.18.4	0	0	3	0.9	0.1	0	3	0	0	0
11	18	4	11.18.5	0	0	3	0.9	0.1	0	3	0	0	0
11	18	5	11.18.6	0	0	4	0.9	0.1	0	4	0	0	0
11	18	6	11.18.7	0	0	4	0.9	0.1	0	4	0	0	0
11	18	7	11.18.8	364	36	5	0.5	0.1	158.177	10.345	295326.621	275.349475	275.349475
11	18	8	11.18.9	614	65	8	0	0.1	382.349	23.702	796446.52	758.712703	758.712703
11	18	9	11.18.10	363	137	11	0	0.1	393.374	27.163	810627.812	772.391495	772.391495
11	18	10	11.18.11	791	84	13	0	0.1	677.445	40.854	1334098.287	1277.31333	1277.31333
11	18	11	11.18.12	142	214	14	0	0.1	342.66	28.029	692065.802	658.030609	658.030609
11	18	12	11.18.13	129	206	15	0	0.1	321.047	28.147	647631.261	615.17056	615.17056
11	18	13	11.18.14	148	171	14	0	0.1	284.009	25.647	579905.317	549.844415	549.844415
11	18	14	11.18.15	124	117	13	0	0.1	192.737	20.908	397193.258	373.606572	373.606572
11	18	15	11.18.16	370	47	11	0	0.1	188.106	18.55	360739.126	338.444155	338.444155
11	18	16	11.18.17	0	0	10	0	0.1	0	10	0	0	0
11	18	17	11.18.18	0	0	10	0	0.1	0	10	0	0	0
11	18	18	11.18.19	0	0	9	0	0.1	0	9	0	0	0
11	18	19	11.18.20	0	0	9	0	0.1	0	9	0	0	0
11	18	20	11.18.21	0	0	9	0	0.1	0	9	0	0	0
11	18	21	11.18.22	0	0	8	0	0.1	0	8	0	0	0
11	18	22	11.18.23	0	0	8	0	0.1	0	8	0	0	0
11	18	23	11.18.24	0	0	8	0	0.1	0	8	0	0	0
11	19	0	11.19.1	0	0	8	0	0.1	0	8	0	0	0
11	19	1	11.19.2	0	0	8	0	0.1	0	8	0	0	0
11	19	2	11.19.3	0	0	7	0	0.1	0	7	0	0	0
11	19	3	11.19.4	0	0	7	0	0.1	0	7	0	0	0
11	19	4	11.19.5	0	0	7	0	0.1	0	7	0	0	0
11	19	5	11.19.6	0	0	7	0	0.1	0	7	0	0	0
11	19	6	11.19.7	0	0	7	0	0.1	0	7	0	0	0
11	19	7	11.19.8	0	30	9	0	0.1	28.178	10.134	52407.674	41.038112	41.038112
11	19	8	11.19.9	150	101	11	0	0.1	183.298	18.513	379211.675	356.262148	356.262148
11	19	9	11.19.10	291	145	13	0	0.1	347.975	27.293	713869.83	679.062033	679.062033
11	19	10	11.19.11	489	146	14	0	0.1	528.118	35.689	1055252.642	1008.348295	1008.348295
11	19	11	11.19.12	494	158	15	0	0.1	563.683	38.137	1113774.762	1064.796744	1064.796744
11	19	12	11.19.13	451	159	14	0	0.1	521.282	35.399	1041033.635	994.633124	994.633124
11	19	13	11.19.14	402	137	14	0	0.1	426.497	31.525	865365.313	825.189429	825.189429
11	19	14	11.19.15	285	104	13	0	0.1	266.43	23.948	550880.713	521.848269	521.848269
11	19	15	11.19.16	373	45	10	0	0.1	186.742	17.49	358602.942	336.383664	336.383664
11	19	16	11.19.17	0	0	8	0	0.1	0	8	0	0	0
11	19	17	11.19.18	0	0	7	0	0.1	0	7	0	0	0
11	19	18	11.19.19	0	0	6	0	0.1	0	6	0	0	0
11	19	19	11.19.20	0	0	5	0	0.1	0	5	0	0	0
11	19	20	11.19.21	0	0	4	0	0.1	0	4	0	0	0
11	19	21	11.19.22	0	0	4	0	0.1	0	4	0	0	0
11	19	22	11.19.23	0	0	3	0	0.1	0	3	0	0	0
11	19	23	11.19.24	0	0	3	0	0.1	0	3	0	0	0
11	20	0	11.20.1	0	0	2	0	0.1	0	2	0	0	0
11	20	1	11.20.2	0	0	2	0	0.1	0	2	0	0	0
11	20	2	11.20.3	0	0	2	0	0.1	0	2	0	0	0
11	20	3	11.20.4	0	0	2	0	0.1	0	2	0	0	0
11	20	4	11.20.5	0	0	2	0	0.1	0	2	0	0	0
11	20	5	11.20.6	0	0	3	0	0.1	0	3	0	0	0
11	20	6	11.20.7	0	0	3	0	0.1	0	3	0	0	0
11	20	7	11.20.8	33	37	3	0	0.1	47.772	4.908	90430.193	77.713341	77.713341
11	20	8	11.20.9	0	88	5	0	0.1	86.048	8.521	179107.448	163.248408	163.248408
11	20	9	11.20.10	731	74	7	0	0.1	549.495	29.619	1134941.788	1085.213737	1085.213737
11	20	10	11.20.11	178	193	8	0	0.1	339.27	21.906	704536.93	670.059835	670.059835
11	20	11	11.20.12	0	110	9	0	0.1	103.828	13.242	212295.913	195.260875	195.260875
11	20	12	11.20.13	47	187	9	0	0.1	229.39	18.385	474695.561	448.362659	448.362659
11	20	13	11.20.14	0	133	8	0	0.1	129.482	13.297	268286.157	249.267161	249.267161
11	20	14	11.20.15	0	81	7	0	0.1	77.437	10.17	159732.008	144.559518	144.559518
11	20	15	11.20.16	0	22	6	0	0.1	20.362	6.826	39038.967	28.143111	28.143111
11	20	16	11.20.17	0	0	6	0	0.1	0	6	0	0	0
11	20	17	11.20.18	0	0	6	0	0.1	0	6	0	0	0
11	20	18	11.20.19	0	0	6	0	0.1	0	6	0	0	0
11	20	19	11.20.20	0	0	6	0	0.1	0	6	0	0	0
11	20	20	11.20.21	0	0	6	0	0.1	0	6	0	0	0
11	20	21	11.20.22	0	0	6	0	0.1	0	6	0	0	0
11	20	22	11.20.23	0	0	6	0	0.1	0	6	0	0	0
11	20	23	11.20.24	0	0	6	0	0.1	0	6	0	0	0
11	21	0	11.21.1	0	0	6	0	0.1	0	6	0	0	0
11	21	1	11.21.2	0	0	6	0	0.1	0	6	0	0	0
11	21	2	11.21.3	0	0	6	0	0.1	0	6	0	0	0
11	21	3	11.21.4	0	0	6	0	0.1	0	6	0	0	0
11	21	4	11.21.5	0	0	6	0	0.1	0	6	0	0	0
11	21	5	11.21.6	0	0	6	0	0.1	0	6	0	0	0
11	21	6	11.21.7	0	0	6	0	0.1	0	6	0	0	0
11	21	7	11.21.8	0	20	6	0	0.1	18.515	6.742	33832.638	23.121263	23.121263
11	21	8	11.21.9	0	21	6	0	0.1	19.43	6.795	38328.832	27.458139	27.458139
11	21	9	11.21.10	0	46	7	0	0.1	42.636	8.745	86309.494	73.738656	73.738656
11	21	10	11.21.11	0	132	8	0	0.1	126.938	13.189	262100.541	243.300727	243.300727
11	21	11	11.21.12	0	50	8	0	0.1	46.369	9.894	93141.639	80.32871	80.32871
11	21	12	11.21.13	0	129	8	0	0.1	123.59	13.051	254904.627	236.359792	236.359792
11	21	13	11.21.14	6	137	9	0	0.1	137.795	14.639	284885.819	265.278631	265.278631
11	21	14	11.21.15	3	99	9	0	0.1	98.598	13.036	202959.03	186.254834	186.254834
11	21	15	11.21.16	0	1	8	0.2	0.1	0.923	8.035	0	0	0
11	21	16	11.21.17	0	0	7	0.3	0.1	0	7	0	0	0
11	21	17	11.21.18	0	0	7	0.2	0.1	0	7	0	0	0
11	21	18	11.21.19	0	0	7	0.1	0.1	0	7	0	0	0
11	21	19	11.21.20	0	0	7	0	0.1	0	7	0	0	0
11	21	20	11.21.21	0	0	7	0	0.1	0	7	0	0	0
11	21	21	11.21.22	0	0	7	0	0.1	0	7	0	0	0
11	21	22	11.21.23	0	0	6	0	0.1	0	6	0	0	0
11	21	23	11.21.24	0	0	6	0	0.1	0	6	0	0	0
11	22	0	11.22.1	0	0	6	0.1	0.1	0	6	0	0	0
11	22	1	11.22.2	0	0	6	0	0.1	0	6	0	0	0
11	22	2	11.22.3	0	0	6	0	0.1	0	6	0	0	0
11	22	3	11.22.4	0	0	6	0	0.1	0	6	0	0	0
11	22	4	11.22.5	0	0	5	0	0.1	0	5	0	0	0
11	22	5	11.22.6	0	0	5	0	0.1	0	5	0	0	0
11	22	6	11.22.7	0	0	4	0	0.1	0	4	0	0	0
11	22	7	11.22.8	143	35	4	0	0.1	87.283	7.44	160079.332	144.894535	144.894535
11	22	8	11.22.9	272	89	5	0	0.1	232.163	14.516	491316.088	464.394256	464.394256
11	22	9	11.22.10	315	137	7	0	0.1	351.484	21.442	738707.09	703.019211	703.019211
11	22	10	11.22.11	308	175	9	0	0.1	419.359	26.208	864013.467	823.885484	823.885484
11	22	11	11.22.12	324	188	10	0	0.1	457.389	28.76	932756.1	890.192293	890.192293
11	22	12	11.22.13	341	176	10	0	0.1	448.333	28.397	916984.477	874.979521	874.979521
11	22	13	11.22.14	52	156	10	0	0.1	196.348	18.044	406964.188	383.031279	383.031279
11	22	14	11.22.15	122	111	9	0	0.1	184.776	16.58	386484.419	363.277189	363.277189
11	22	15	11.22.16	85	51	7	0.1	0.1	86.651	10.38	169462.108	153.944841	153.944841
11	22	16	11.22.17	0	0	6	0.3	0.1	0	6	0	0	0
11	22	17	11.22.18	0	0	6	0.5	0.1	0	6	0	0	0
11	22	18	11.22.19	0	0	5	0.6	0.1	0	5	0	0	0
11	22	19	11.22.20	0	0	5	0.6	0.1	0	5	0	0	0
11	22	20	11.22.21	0	0	4	0.7	0.1	0	4	0	0	0
11	22	21	11.22.22	0	0	3	0.8	0.1	0	3	0	0	0
11	22	22	11.22.23	0	0	3	0.8	0.1	0	3	0	0	0
11	22	23	11.22.24	0	0	2	0.7	0.1	0	2	0	0	0
11	23	0	11.23.1	0	0	1	0.6	0.1	0	1	0	0	0
11	23	1	11.23.2	0	0	0	0.4	0.1	0	0	0	0	0
11	23	2	11.23.3	0	0	0	0.2	0.1	0	0	0	0	0
11	23	3	11.23.4	0	0	0	0	0.1	0	0	0	0	0
11	23	4	11.23.5	0	0	0	0	0.1	0	0	0	0	0
11	23	5	11.23.6	0	0	0	0.1	0.1	0	0	0	0	0
11	23	6	11.23.7	0	0	0	0.2	0.1	0	0	0	0	0
11	23	7	11.23.8	348	32	1	0.1	0.1	134.51	6.067	242228.967	224.133281	224.133281
11	23	8	11.23.9	625	59	4	0	0.1	372.331	19.27	784278.442	746.975789	746.975789
11	23	9	11.23.10	745	74	7	0	0.1	551.918	29.722	1140064.931	1090.155347	1090.155347
11	23	10	11.23.11	805	81	10	0	0.1	673.254	37.691	1344472.021	1287.319482	1287.319482
11	23	11	11.23.12	807	88	11	0	0.1	712.784	40.301	1405765.382	1346.440975	1346.440975
11	23	12	11.23.13	310	186	11	0	0.1	437.304	28.941	891413.278	850.314412	850.314412
11	23	13	11.23.14	323	145	11	0	0.1	373.494	26.343	770652.678	733.83284	733.83284
11	23	14	11.23.15	0	29	10	0	0.1	26.848	11.099	52783.455	41.400578	41.400578
11	23	15	11.23.16	352	46	9	0	0.1	179.176	16.173	343084.419	321.415024	321.415024
11	23	16	11.23.17	0	0	7	0	0.1	0	7	0	0	0
11	23	17	11.23.18	0	0	7	0	0.1	0	7	0	0	0
11	23	18	11.23.19	0	0	7	0	0.1	0	7	0	0	0
11	23	19	11.23.20	0	0	7	0	0.09	0	7	0	0	0
11	23	20	11.23.21	0	0	6	0	0.09	0	6	0	0	0
11	23	21	11.23.22	0	0	6	0	0.09	0	6	0	0	0
11	23	22	11.23.23	0	0	6	0	0.09	0	6	0	0	0
11	23	23	11.23.24	0	0	5	0	0.09	0	5	0	0	0
11	24	0	11.24.1	0	0	5	0	0.09	0	5	0	0	0
11	24	1	11.24.2	0	0	6	0	0.09	0	6	0	0	0
11	24	2	11.24.3	0	0	6	0	0.09	0	6	0	0	0
11	24	3	11.24.4	0	0	6	0	0.09	0	6	0	0	0

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
11	24	4	11.24.5	0	0	6	0	0.09	0	6	0	0	0
11	24	5	11.24.6	0	0	6	0	0.09	0	6	0	0	0
11	24	6	11.24.7	0	0	6	0	0.09	0	6	0	0	0
11	24	7	11.24.8	0	19	7	0	0.09	17.586	7.698	30863.448	20.257284	20.257284
11	24	8	11.24.9	0	75	8	0	0.09	72.45	10.963	148161.5	133.398999	133.398999
11	24	9	11.24.10	0	39	9	0	0.09	36.125	10.479	72127.461	60.059148	60.059148
11	24	10	11.24.11	0	75	10	0	0.09	69.602	12.846	140787.684	126.286466	126.286466
11	24	11	11.24.12	0	128	11	0	0.09	122.404	16.002	249279.885	230.934358	230.934358
11	24	12	11.24.13	0	100	12	0	0.09	94.105	15.847	190115.118	173.866033	173.866033
11	24	13	11.24.14	0	52	12	0	0.09	48.201	13.972	95879.893	82.969937	82.969937
11	24	14	11.24.15	0	13	12	0	0.09	12.019	12.492	22635.909	12.321279	12.321279
11	24	15	11.24.16	0	1	12	0	0.09	0.923	12.037	0	0	0
11	24	16	11.24.17	0	0	12	0	0.09	0	12	0	0	0
11	24	17	11.24.18	0	0	12	0	0.09	0	12	0	0	0
11	24	18	11.24.19	0	0	12	0	0.09	0	12	0	0	0
11	24	19	11.24.20	0	0	13	0	0.09	0	13	0	0	0
11	24	20	11.24.21	0	0	13	0	0.09	0	13	0	0	0
11	24	21	11.24.22	0	0	14	0	0.09	0	14	0	0	0
11	24	22	11.24.23	0	0	14	0	0.09	0	14	0	0	0
11	24	23	11.24.24	0	0	14	0	0.09	0	14	0	0	0
11	25	0	11.25.1	0	0	15	0	0.09	0	15	0	0	0
11	25	1	11.25.2	0	0	15	0	0.09	0	15	0	0	0
11	25	2	11.25.3	0	0	15	0	0.09	0	15	0	0	0
11	25	3	11.25.4	0	0	15	0	0.09	0	15	0	0	0
11	25	4	11.25.5	0	0	15	0	0.09	0	15	0	0	0
11	25	5	11.25.6	0	0	15	0	0.09	0	15	0	0	0
11	25	6	11.25.7	0	0	15	0	0.09	0	15	0	0	0
11	25	7	11.25.8	267	31	15	0	0.09	108.84	19.202	179960.586	164.071317	164.071317
11	25	8	11.25.9	0	60	15	0	0.09	56.529	17.312	111389.932	97.930394	97.930394
11	25	9	11.25.10	0	84	16	0	0.09	79.079	19.237	157211.308	142.128136	142.128136
11	25	10	11.25.11	0	84	16	0	0.09	78.28	19.201	154962.19	139.958713	139.958713
11	25	11	11.25.12	27	179	16	0	0.09	196.764	24.047	395678.52	372.145507	372.145507
11	25	12	11.25.13	345	172	16	0	0.09	444.926	34.261	889776.886	848.736003	848.736003
11	25	13	11.25.14	670	84	16	0	0.09	537.086	38.102	1071342.788	1023.868304	1023.868304
11	25	14	11.25.15	0	62	15	0	0.09	57.944	17.372	114589.324	101.016418	101.016418
11	25	15	11.25.16	0	24	12	0	0.09	22.217	12.9	41320.414	30.343718	30.343718
11	25	16	11.25.17	0	0	8	0.1	0.09	0	8	0	0	0
11	25	17	11.25.18	0	0	5	0	0.09	0	5	0	0	0
11	25	18	11.25.19	0	0	3	0	0.09	0	3	0	0	0
11	25	19	11.25.20	0	0	2	0	0.09	0	2	0	0	0
11	25	20	11.25.21	0	0	1	0	0.09	0	1	0	0	0
11	25	21	11.25.22	0	0	1	0	0.09	0	1	0	0	0
11	25	22	11.25.23	0	0	0	0	0.09	0	0	0	0	0
11	25	23	11.25.24	0	0	0	0	0.09	0	0	0	0	0
11	26	0	11.26.1	0	0	0	0	0.09	0	0	0	0	0
11	26	1	11.26.2	0	0	0	0	0.09	0	0	0	0	0
11	26	2	11.26.3	0	0	0	0	0.09	0	0	0	0	0
11	26	3	11.26.4	0	0	-1	0	0.09	0	-1	0	0	0
11	26	4	11.26.5	0	0	-1	0	0.09	0	-1	0	0	0
11	26	5	11.26.6	0	0	-1	0	0.09	0	-1	0	0	0
11	26	6	11.26.7	0	0	-2	0	0.09	0	-2	0	0	0
11	26	7	11.26.8	385	29	-1	0	0.09	131.408	4.017	225107.426	207.618424	207.618424
11	26	8	11.26.9	649	57	0	0	0.09	376.048	15.408	800983.576	763.088994	763.088994
11	26	9	11.26.10	752	76	2	0	0.09	555.327	24.863	1168889.068	1117.958131	1117.958131
11	26	10	11.26.11	384	157	3	0	0.09	458.91	21.844	965275.496	921.559397	921.559397
11	26	11	11.26.12	421	164	4	0	0.09	509.128	24.899	1058557.79	1011.536329	1011.536329
11	26	12	11.26.13	146	191	4	0	0.09	315.301	16.921	665764.841	632.661596	632.661596
11	26	13	11.26.14	791	73	5	0	0.09	597.201	29.585	1234703.645	1181.440636	1181.440636
11	26	14	11.26.15	676	63	4	0	0.09	425.047	21.483	899911.211	858.511228	858.511228
11	26	15	11.26.16	457	39	2	0	0.09	206.157	10.226	401275.733	377.544388	377.544388
11	26	16	11.26.17	0	0	0	0	0.09	0	0	0	0	0
11	26	17	11.26.18	0	0	0	0	0.09	0	0	0	0	0
11	26	18	11.26.19	0	0	0	0	0.09	0	0	0	0	0
11	26	19	11.26.20	0	0	0	0	0.09	0	0	0	0	0
11	26	20	11.26.21	0	0	0	0	0.09	0	0	0	0	0
11	26	21	11.26.22	0	0	-1	0	0.09	0	-1	0	0	0
11	26	22	11.26.23	0	0	-1	0.2	0.09	0	-1	0	0	0
11	26	23	11.26.24	0	0	-1	0.3	0.09	0	-1	0	0	0
11	27	0	11.27.1	0	0	-1	0.2	0.09	0	-1	0	0	0
11	27	1	11.27.2	0	0	-1	0.2	0.09	0	-1	0	0	0
11	27	2	11.27.3	0	0	-1	0.2	0.09	0	-1	0	0	0
11	27	3	11.27.4	0	0	-1	0.2	0.09	0	-1	0	0	0
11	27	4	11.27.5	0	0	-1	0.3	0.09	0	-1	0	0	0
11	27	5	11.27.6	0	0	-1	0.4	0.09	0	-1	0	0	0
11	27	6	11.27.7	0	0	0	0.3	0.09	0	0	0	0	0
11	27	7	11.27.8	272	30	1	0.1	0.09	104.604	4.847	174787.441	159.081477	159.081477
11	27	8	11.27.9	116	89	3	0	0.09	152.293	9.232	322599.146	301.655625	301.655625
11	27	9	11.27.10	688	80	6	0	0.09	519.645	27.392	1082128.568	1034.2719	1034.2719
11	27	10	11.27.11	440	144	8	0	0.09	482.32	27.813	993872.018	949.142631	949.142631
11	27	11	11.27.12	274	188	9	0	0.09	418.055	26.146	859792.586	819.814166	819.814166
11	27	12	11.27.13	325	171	9	0	0.09	428.638	26.592	882834.48	842.039594	842.039594
11	27	13	11.27.14	195	154	9	0	0.09	293.344	21.041	612500.882	581.284991	581.284991
11	27	14	11.27.15	348	90	8	0	0.09	287.775	19.822	605256.184	574.297001	574.297001
11	27	15	11.27.16	76	46	7	0	0.09	77.693	10.125	150366.917	135.526269	135.526269
11	27	16	11.27.17	0	0	5	0	0.09	0	5	0	0	0
11	27	17	11.27.18	0	0	4	0	0.09	0	4	0	0	0
11	27	18	11.27.19	0	0	4	0	0.09	0	4	0	0	0
11	27	19	11.27.20	0	0	3	0	0.09	0	3	0	0	0
11	27	20	11.27.21	0	0	3	0	0.09	0	3	0	0	0
11	27	21	11.27.22	0	0	4	0	0.09	0	4	0	0	0
11	27	22	11.27.23	0	0	4	0	0.09	0	4	0	0	0
11	27	23	11.27.24	0	0	5	0	0.09	0	5	0	0	0
11	28	0	11.28.1	0	0	5	0	0.09	0	5	0	0	0
11	28	1	11.28.2	0	0	6	0	0.09	0	6	0	0	0
11	28	2	11.28.3	0	0	6	0	0.09	0	6	0	0	0
11	28	3	11.28.4	0	0	7	0	0.09	0	7	0	0	0
11	28	4	11.28.5	0	0	8	0	0.09	0	8	0	0	0
11	28	5	11.28.6	0	0	8	0	0.09	0	8	0	0	0
11	28	6	11.28.7	0	0	9	0	0.09	0	9	0	0	0
11	28	7	11.28.8	0	6	9	0	0.09	5.54	9.214	8351.078	0	0
11	28	8	11.28.9	0	43	9	0	0.09	39.845	10.629	79503.413	67.173741	67.173741
11	28	9	11.28.10	0	53	10	0	0.09	49.129	12.011	98761.679	85.74961	85.74961
11	28	10	11.28.11	0	24	10	0	0.09	22.221	10.909	43215.333	32.171492	32.171492
11	28	11	11.28.12	0	56	11	0	0.09	51.929	13.122	103545.744	90.364157	90.364157
11	28	12	11.28.13	0	45	12	0	0.09	41.706	13.705	82282.734	69.854579	69.854579
11	28	13	11.28.14	0	53	13	0	0.09	49.13	15.011	97413.839	84.449529	84.449529
11	28	14	11.28.15	0	72	13	0	0.09	68.475	15.802	137229.589	122.854449	122.854449
11	28	15	11.28.16	0	12	12	0	0.09	11.09	12.449	19934.814	9.715894	9.715894
11	28	16	11.28.17	0	0	12	0	0.09	0	12	0	0	0
11	28	17	11.28.18	0	0	11	0	0.09	0	11	0	0	0
11	28	18	11.28.19	0	0	10	0	0.09	0	10	0	0	0
11	28	19	11.28.20	0	0	9	0	0.09	0	9	0	0	0
11	28	20	11.28.21	0	0	7	0	0.09	0	7	0	0	0
11	28	21	11.28.22	0	0	6	0	0.09	0	6	0	0	0
11	28	22	11.28.23	0	0	5	0	0.09	0	5	0	0	0
11	28	23	11.28.24	0	0	4	0	0.09	0	4	0	0	0
11	29	0	11.29.1	0	0	4	0	0.09	0	4	0	0	0
11	29	1	11.29.2	0	0	3	0	0.09	0	3	0	0	0
11	29	2	11.29.3	0	0	3	0	0.09	0	3	0	0	0
11	29	3	11.29.4	0	0	2	0	0.09	0	2	0	0	0
11	29	4	11.29.5	0	0	2	0	0.09	0	2	0	0	0
11	29	5	11.29.6	0	0	1	0	0.09	0	1	0	0	0
11	29	6	11.29.7	0	0	1	0	0.09	0	1	0	0	0
11	29	7	11.29.8	326	28	2	0	0.09	107.872	5.981	166257.535	150.85382	150.85382
11	29	8	11.29.9	651	55	3	0	0.09	369.617	18.129	776135.612	739.121491	739.121491
11	29	9	11.29.10	790	66	5	0	0.09	558.05	27.981	1161913.315	1111.229557	1111.229557
11	29	10	11.29.11	858	69	6	0	0.09	684.149	34.152	1387948.545	1329.25546	1329.25546
11	29	11	11.29.12	877	70	7	0	0.09	732.347	37.122	1465732.75	1404.283461	1404.283461
11	29	12	11.29.13	865	68	8	0	0.09	703.308	36.935	1410205.864	1350.724113	1350.724113
11	29	13	11.29.14	409	125	8	0	0.09	411.991	24.936	858620.518	818.683629	818.683629
11	29	14	11.29.15	702	56	7	0	0.09	425.871	24.515	890989.329	849.905484	849.905484
11	29	15	11.29.16	472	36	4	0	0.09	203.216	12.096	390421.416	367.074683	367.074683
11	29	16	11.29.17	0	0	2	0	0.09	0	2	0	0	0
11	29	17	11.29.18	0	0	2	0	0.09	0	2	0	0	0
11	29	18	11.29.19	0	0	2	0	0.09	0	2	0	0	0
11	29	19	11.29.20	0	0	1	0	0.09	0	1	0	0	0
11	29	20	11.29.21	0	0	0	0	0.09	0	0	0	0	0
11	29	21	11.29.22	0	0	0	0	0.09	0	0	0	0	0
11	29	22	11.29.23	0	0	0	0.1	0.09	0	0	0	0	0
11	29	23	11.29.24	0	0	0	0.2	0.09	0	0	0	0	0
11	30	0	11.30.1	0	0	0	0.2	0.09	0	0	0	0	0
11	30	1	11.30.2	0	0	0	0.1	0.09	0	0	0	0	0
11	30	2	11.30.3	0	0	0	0	0.09	0	0	0	0	0
11	30	3	11.30.4	0	0	0	0	0.09	0	0	0	0	0
11	30	4	11.30.5	0	0	0	0.1	0.09	0	0	0	0	0
11	30	5	11.30.6	0	0	0	0.1	0.09	0	0	0	0	0
11	30	6	11.30.7	0	0	0	0.2	0.09	0	0	0	0	0
11	30	7	11.30.8	0	4	1	0.1	0.09	3.692	1.134	5231.202	0	0
11	30	8	11.30.9	0	12	3	0	0.09	11.091	3.453	21596.496	11.318696	11.318696
11	30	9	11.30.10	0	57	6	0	0.09	52.849	8.163	108298.57	94.948571	94.948571
11	30	10	11.30.11	0	95	7	0	0.09	89.439	10.658	184525.303	168.474288	168.474288

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
11	30	11	11.30.12	34	177	8	0	0.09	209.688	16.579	435785.931	410.831753	410.831753
11	30	12	11.30.13	847	65	9	0	0.09	680.562	37.002	1364719.038	1306.849066	1306.849066
11	30	13	11.30.14	273	145	9	0	0.09	340.145	22.971	709261.387	674.616886	674.616886
11	30	14	11.30.15	11	95	8	0.1	0.09	99.289	11.933	205340.002	188.551439	188.551439
11	30	15	11.30.16	8	42	6	0.4	0.09	44.028	7.566	85430.471	72.89078	72.89078
11	30	16	11.30.17	0	0	5	0.5	0.09	0	5	0	0	0
11	30	17	11.30.18	0	0	4	0.3	0.09	0	4	0	0	0
11	30	18	11.30.19	0	0	4	0	0.09	0	4	0	0	0
11	30	19	11.30.20	0	0	-3	0.2	0.11	0	-3	0	0	0
11	30	20	11.30.21	0	0	-3.4	0.2	0.11	0	-3.4	0	0	0
11	30	21	11.30.22	0	0	-3.7	0.2	0.11	0	-3.7	0	0	0
11	30	22	11.30.23	0	0	-4	0.2	0.11	0	-4	0	0	0
11	30	23	11.30.24	0	0	-4.3	0.2	0.11	0	-4.3	0	0	0
12	1	0	12.1.1	0	0	-4.6	0.2	0.11	0	-4.6	0	0	0
12	1	1	12.1.2	0	0	-4.9	0.2	0.11	0	-4.9	0	0	0
12	1	2	12.1.3	0	0	-4.9	0.2	0.11	0	-4.9	0	0	0
12	1	3	12.1.4	0	0	-5	0.2	0.11	0	-5	0	0	0
12	1	4	12.1.5	0	0	-5	0.1	0.11	0	-5	0	0	0
12	1	5	12.1.6	0	0	-5	0.2	0.11	0	-5	0	0	0
12	1	6	12.1.7	0	0	-4.8	0.2	0.11	0	-4.8	0	0	0
12	1	7	12.1.8	48	26	-4.2	0.2	0.11	39.382	-2.867	57461.382	45.912747	45.912747
12	1	8	12.1.9	129	82	-3	0.1	0.11	149.351	2.909	322742.747	301.794138	301.794138
12	1	9	12.1.10	37	122	-1.8	0.1	0.11	148.275	4.08	321728.283	300.815621	300.815621
12	1	10	12.1.11	16	127	-0.9	0.2	0.11	133.654	4.225	287386.093	267.690311	267.690311
12	1	11	12.1.12	0	49	-0.4	0.2	0.11	45.444	1.34	94667.617	81.800617	81.800617
12	1	12	12.1.13	0	71	-0.3	0.2	0.11	65.908	2.225	138890.485	124.456493	124.456493
12	1	13	12.1.14	0	16	-0.4	0.2	0.11	14.81	0.168	29766.952	19.199641	19.199641
12	1	14	12.1.15	0	14	-0.6	0.2	0.11	12.95	-0.104	25902.63	15.472247	15.472247
12	1	15	12.1.16	0	9	-0.7	0.2	0.11	8.318	-0.385	15619.741	5.553722	5.553722
12	1	16	12.1.17	0	0	-0.8	0.3	0.11	0	-0.8	0	0	0
12	1	17	12.1.18	0	0	-0.8	0.3	0.11	0	-0.8	0	0	0
12	1	18	12.1.19	0	0	-0.7	0.3	0.11	0	-0.7	0	0	0
12	1	19	12.1.20	0	0	-0.3	0.4	0.11	0	-0.3	0	0	0
12	1	20	12.1.21	0	0	-0.1	0.4	0.11	0	-0.1	0	0	0
12	1	21	12.1.22	0	0	0.1	0.4	0.11	0	0.1	0	0	0
12	1	22	12.1.23	0	0	0.3	0.4	0.11	0	0.3	0	0	0
12	1	23	12.1.24	0	0	0.5	0.4	0.11	0	0.5	0	0	0
12	2	0	12.2.1	0	0	0.7	0.4	0.11	0	0.7	0	0	0
12	2	1	12.2.2	0	0	0.8	0.4	0.11	0	0.8	0	0	0
12	2	2	12.2.3	0	0	0.9	0.4	0.11	0	0.9	0	0	0
12	2	3	12.2.4	0	0	0.9	0.3	0.11	0	0.9	0	0	0
12	2	4	12.2.5	0	0	1	0.3	0.11	0	1	0	0	0
12	2	5	12.2.6	0	0	1	0.3	0.11	0	1	0	0	0
12	2	6	12.2.7	0	0	1	0.3	0.11	0	1	0	0	0
12	2	7	12.2.8	0	7	1.1	0.3	0.11	6.469	1.308	8204.931	0	0
12	2	8	12.2.9	0	25	1.1	0.3	0.11	23.143	1.959	46749.144	35.580086	35.580086
12	2	9	12.2.10	0	51	1.1	0.3	0.11	47.292	2.858	98602.431	85.596005	85.596005
12	2	10	12.2.11	0	54	1.2	0.3	0.11	50.087	3.06	104231.838	91.02594	91.02594
12	2	11	12.2.12	0	72	1.4	0.3	0.11	66.841	3.881	139884.238	125.415033	125.415033
12	2	12	12.2.13	1	82	1.4	0.3	0.11	77.076	4.262	162119.088	146.862014	146.862014
12	2	13	12.2.14	0	44	1.4	0.3	0.11	40.787	2.916	84449.122	71.944204	71.944204
12	2	14	12.2.15	0	51	1.1	0.3	0.11	47.301	2.857	98473.184	85.471337	85.471337
12	2	15	12.2.16	104	24	0.7	0.4	0.11	68.042	3.099	132428.952	118.223918	118.223918
12	2	16	12.2.17	0	0	0.1	0.4	0.11	0	0.1	0	0	0
12	2	17	12.2.18	0	0	-0.4	0.4	0.11	0	-0.4	0	0	0
12	2	18	12.2.19	0	0	-0.7	0.4	0.11	0	-0.7	0	0	0
12	2	19	12.2.20	0	0	-1.6	0.4	0.87	0	-1.6	0	0	0
12	2	20	12.2.21	0	0	-2.1	0.4	0.87	0	-2.1	0	0	0
12	2	21	12.2.22	0	0	-2.5	0.4	0.87	0	-2.5	0	0	0
12	2	22	12.2.23	0	0	-2.7	0.4	0.87	0	-2.7	0	0	0
12	2	23	12.2.24	0	0	-2.7	0.4	0.87	0	-2.7	0	0	0
12	3	0	12.3.1	0	0	-2.7	0.4	0.87	0	-2.7	0	0	0
12	3	1	12.3.2	0	0	-2.6	0.4	0.87	0	-2.6	0	0	0
12	3	2	12.3.3	0	0	-2.6	0.3	0.87	0	-2.6	0	0	0
12	3	3	12.3.4	0	0	-2.7	0.3	0.87	0	-2.7	0	0	0
12	3	4	12.3.5	0	0	-2.9	0.3	0.87	0	-2.9	0	0	0
12	3	5	12.3.6	0	0	-3.1	0.3	0.87	0	-3.1	0	0	0
12	3	6	12.3.7	0	0	-3.4	0.3	0.87	0	-3.4	0	0	0
12	3	7	12.3.8	0	21	-3.3	0.3	0.87	20.263	-2.671	25528.114	15.111001	15.111001
12	3	8	12.3.9	26	78	-2.7	0.3	0.87	94.542	0.804	201490.648	184.838483	184.838483
12	3	9	12.3.10	60	132	-1.7	0.3	0.87	176.344	4.857	382448.759	359.384528	359.384528
12	3	10	12.3.11	108	170	-0.8	0.3	0.87	265.26	9.061	572347.193	542.554106	542.554106
12	3	11	12.3.12	68	181	-0.1	0.3	0.87	242.739	8.913	520500.827	492.544863	492.544863
12	3	12	12.3.13	137	181	0.2	0.3	0.87	300.619	11.377	645197.685	612.823215	612.823215
12	3	13	12.3.14	292	140	0.2	0.3	0.87	349.125	13.213	753813.725	717.590558	717.590558
12	3	14	12.3.15	741	53	-0.1	0.3	0.87	442.507	16.416	952900.147	909.622556	909.622556
12	3	15	12.3.16	540	33	-0.8	0.3	0.87	214	6.922	416392.127	392.125148	392.125148
12	3	16	12.3.17	0	0	-1.5	0.3	0.87	0	-1.5	0	0	0
12	3	17	12.3.18	0	0	-2	0.3	0.87	0	-2	0	0	0
12	3	18	12.3.19	0	0	-2.2	0.3	0.87	0	-2.2	0	0	0
12	3	19	12.3.20	0	0	-2.9	0.3	0.87	0	-2.9	0	0	0
12	3	20	12.3.21	0	0	-3.7	0.3	0.87	0	-3.7	0	0	0
12	3	21	12.3.22	0	0	-4.8	0.3	0.87	0	-4.8	0	0	0
12	3	22	12.3.23	0	0	-5.5	0.3	0.87	0	-5.5	0	0	0
12	3	23	12.3.24	0	0	-5.8	0.4	0.87	0	-5.8	0	0	0
12	4	0	12.4.1	0	0	-6.1	0.4	0.87	0	-6.1	0	0	0
12	4	1	12.4.2	0	0	-6.1	0.4	0.87	0	-6.1	0	0	0
12	4	2	12.4.3	0	0	-5.7	0.4	0.87	0	-5.7	0	0	0
12	4	3	12.4.4	0	0	-5.1	0.4	0.87	0	-5.1	0	0	0
12	4	4	12.4.5	0	0	-4.6	0.3	0.87	0	-4.6	0	0	0
12	4	5	12.4.6	0	0	-4.2	0.3	0.87	0	-4.2	0	0	0
12	4	6	12.4.7	0	0	-3.8	0.3	0.87	0	-3.8	0	0	0
12	4	7	12.4.8	24	22	-3	0.2	0.87	29.486	-2.064	36924.242	26.10332	26.10332
12	4	8	12.4.9	332	70	-1.3	0.1	0.87	237.782	8.098	508691.859	481.154334	481.154334
12	4	9	12.4.10	202	118	0.5	0.1	0.87	258.284	10.758	558437.918	529.137692	529.137692
12	4	10	12.4.11	192	170	1.7	0.1	0.87	322.548	14.493	687938.941	654.049979	654.049979
12	4	11	12.4.12	244	183	2.1	0.1	0.87	392.493	17.665	829996.045	791.073435	791.073435
12	4	12	12.4.13	122	179	2.1	0.2	0.87	287.62	13.132	612319	581.109553	581.109553
12	4	13	12.4.14	205	138	1.9	0.2	0.87	292.035	13.124	626779.258	595.057426	595.057426
12	4	14	12.4.15	382	82	1.6	0.2	0.87	296.585	13.007	638712.844	606.568158	606.568158
12	4	15	12.4.16	204	43	0.7	0.2	0.87	123.922	5.339	242836.793	224.719569	224.719569
12	4	16	12.4.17	0	0	-0.1	0.2	0.87	0	-0.1	0	0	0
12	4	17	12.4.18	0	0	-0.4	0.2	0.87	0	-0.4	0	0	0
12	4	18	12.4.19	0	0	-0.5	0.2	0.87	0	-0.5	0	0	0
12	4	19	12.4.20	0	0	-0.7	0.2	0.87	0	-0.7	0	0	0
12	4	20	12.4.21	0	0	-0.8	0.2	0.87	0	-0.8	0	0	0
12	4	21	12.4.22	0	0	-0.8	0.2	0.87	0	-0.8	0	0	0
12	4	22	12.4.23	0	0	-1	0.2	0.87	0	-1	0	0	0
12	4	23	12.4.24	0	0	-1.1	0.2	0.87	0	-1.1	0	0	0
12	5	0	12.5.1	0	0	-1.3	0.2	0.87	0	-1.3	0	0	0
12	5	1	12.5.2	0	0	-1.4	0.2	0.87	0	-1.4	0	0	0
12	5	2	12.5.3	0	0	-1.6	0.2	0.87	0	-1.6	0	0	0
12	5	3	12.5.4	0	0	-1.7	0.2	0.87	0	-1.7	0	0	0
12	5	4	12.5.5	0	0	-1.7	0.2	0.87	0	-1.7	0	0	0
12	5	5	12.5.6	0	0	-2	0.2	0.87	0	-2	0	0	0
12	5	6	12.5.7	0	0	-2.4	0.2	0.87	0	-2.4	0	0	0
12	5	7	12.5.8	106	23	-1.6	0.2	0.87	50.687	-0.017	62401.587	50.6779	50.6779
12	5	8	12.5.9	177	79	0.2	0.2	0.87	173.708	6.843	369314.693	346.715855	346.715855
12	5	9	12.5.10	672	81	1.7	0.2	0.87	501.732	21.042	1067709.145	1020.363415	1020.363415
12	5	10	12.5.11	447	123	2.4	0.3	0.87	460.012	19.555	976634.404	932.515814	932.515814
12	5	11	12.5.12	798	80	2.6	0.3	0.87	683.575	28.114	1413588.953	1353.987326	1353.987326
12	5	12	12.5.13	653	101	2.5	0.3	0.87	594.583	24.687	1243956.192	1190.365328	1190.365328
12	5	13	12.5.14	211	138	2.2	0.3	0.87	295.767	13.218	634918.398	602.908164	602.908164
12	5	14	12.5.15	679	61	1.6	0.3	0.87	423.094	17.387	906205.364	864.582355	864.582355
12	5	15	12.5.16	422	38	0.8	0.3	0.87	184.843	7.479	358938.321	336.707159	336.707159
12	5	16	12.5.17	0	0	0	0.3	0.87	0	0	0	0	0
12	5	17	12.5.18	0	0	-0.5	0.3	0.87	0	-0.5	0	0	0
12	5	18	12.5.19	0	0	-0.8	0.3	0.87	0	-0.8	0	0	0
12	5	19	12.5.20	0	0	-1.3	0.3	0.87	0	-1.3	0	0	0
12	5	20	12.5.21	0	0	-1.7	0.3	0.87	0	-1.7	0	0	0
12	5	21	12.5.22	0	0	-2.2	0.3	0.87	0	-2.2	0	0	0
12	5	22	12.5.23	0	0	-2.7	0.3	0.87	0	-2.7	0	0	0
12	5	23	12.5.24	0	0	-3.4	0.3	0.87	0	-3.4	0	0	0
12	6	0	12.6.1	0	0	-4	0.3	0.87	0	-4	0	0	0
12	6	1	12.6.2	0	0	-4.8	0.4	0.87	0	-4.8	0	0	0
12	6	2	12.6.3	0	0	-5.7	0.5	0.87	0	-5.7	0	0	0
12	6	3	12.6.4	0	0	-6.2	0.6	0.87	0	-6.2	0	0	0
12	6	4	12.6.5	0	0	-6.1	0.7	0.87	0	-6.1	0	0	0
12	6	5	12.6.6	0	0	-5.9	0.7	0.87	0	-5.9	0	0	0
12	6	6	12.6.7	0	0	-5.4	0.7	0.87	0	-5.4	0	0	0
12	6	7	12.6.8	30	19	-3.9	0.5	0.87	26.188	-3.144	32551.373	21.885399	21.885399
12	6	8	12.6.9	81	79	-1.3	0.3	0.87	125.871	3.363	267936.263	248.929666	248.929666
12	6	9	12.6.10	223	120	1	0.2	0.87	272.298	11.472	588322.206	557.963061	557.963061
12	6	10	12.6.11	329	137	1.9	0.2	0.87	384.813	16.699	821451.002	782.831177	782.831177
12	6	11	12.6.12	683	97	2.3	0.2	0.87	622.937	26.282	1295256.15	1239.847525	1239.847525
12	6	12	12.6.13	407	145	2.5	0.2	0.87	467.461	20.477	986811.349	942.33215	942.33215
12	6	13	12.6.14	352	125	2.9	0.3	0.87	377.953	16.995	807545.349	769.418256	769.418256
12	6	14	12.6.15	354	85	3.1	0.3	0.87	286.192	13.765	613554.844	582.301606	582.301606
12	6	15	12.6.16	184	43	3.2	0.3	0.87	117.51	7.465	228177.385	210.579603	210.579603
12	6	16	12.6.17	0	0	3.3	0.3	0.87	0	3.3	0	0	0
12	6	17	12.6.18	0	0	3.1	0.3	0.87	0	3.1	0	0	0

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
12	6	18	12.6.19	0	0	3	0.3	0.87	0	3	0	0	0
12	6	19	12.6.20	0	0	2	0.3	0.87	0	2	0	0	0
12	6	20	12.6.21	0	0	1.3	0.3	0.87	0	1.3	0	0	0
12	6	21	12.6.22	0	0	0.4	0.3	0.87	0	0.4	0	0	0
12	6	22	12.6.23	0	0	-0.7	0.3	0.87	0	-0.7	0	0	0
12	6	23	12.6.24	0	0	-1.8	0.3	0.87	0	-1.8	0	0	0
12	7	0	12.7.1	0	0	-3	0.3	0.87	0	-3	0	0	0
12	7	1	12.7.2	0	0	-4.1	0.3	0.87	0	-4.1	0	0	0
12	7	2	12.7.3	0	0	-5	0.3	0.87	0	-5	0	0	0
12	7	3	12.7.4	0	0	-5.8	0.4	0.87	0	-5.8	0	0	0
12	7	4	12.7.5	0	0	-6.4	0.5	0.87	0	-6.4	0	0	0
12	7	5	12.7.6	0	0	-6.7	0.7	0.87	0	-6.7	0	0	0
12	7	6	12.7.7	0	0	-6.7	0.7	0.87	0	-6.7	0	0	0
12	7	7	12.7.8	383	24	-5.8	0.5	0.87	90.005	-3.307	109013.029	95.637714	95.637714
12	7	8	12.7.9	704	50	-3.7	0.3	0.87	372.023	10.084	795523.075	757.821979	757.821979
12	7	9	12.7.10	830	66	-1.7	0.2	0.87	570.001	20.284	1219973.868	1167.232793	1167.232793
12	7	10	12.7.11	425	132	-0.5	0.2	0.87	454.056	16.97	972569.554	928.594997	928.594997
12	7	11	12.7.12	502	133	0.1	0.2	0.87	528.802	20.442	1119361.893	1070.185901	1070.185901
12	7	12	12.7.13	894	77	0.3	0.2	0.87	730.831	28.458	1511522.526	1448.450723	1448.450723
12	7	13	12.7.14	852	72	0	0.2	0.87	630.181	24.299	1327964.514	1271.396901	1271.396901
12	7	14	12.7.15	750	61	-0.8	0.2	0.87	455.009	16.72	978313.446	934.13536	934.13536
12	7	15	12.7.16	516	39	-2.2	0.2	0.87	213.445	5.75	417650.637	393.339064	393.339064
12	7	16	12.7.17	0	0	-3.9	0.3	0.87	0	-3.9	0	0	0
12	7	17	12.7.18	0	0	-5.1	0.4	0.87	0	-5.1	0	0	0
12	7	18	12.7.19	0	0	-5.6	0.5	0.87	0	-5.6	0	0	0
12	7	19	12.7.20	0	0	-6.7	0.6	0.87	0	-6.7	0	0	0
12	7	20	12.7.21	0	0	-7.3	0.7	0.87	0	-7.3	0	0	0
12	7	21	12.7.22	0	0	-8	0.7	0.87	0	-8	0	0	0
12	7	22	12.7.23	0	0	-8.5	0.7	0.87	0	-8.5	0	0	0
12	7	23	12.7.24	0	0	-8.9	0.6	0.87	0	-8.9	0	0	0
12	8	0	12.8.1	0	0	-9.4	0.6	0.87	0	-9.4	0	0	0
12	8	1	12.8.2	0	0	-9.9	0.6	0.87	0	-9.9	0	0	0
12	8	2	12.8.3	0	0	-10.2	0.6	0.87	0	-10.2	0	0	0
12	8	3	12.8.4	0	0	-10.5	0.6	0.87	0	-10.5	0	0	0
12	8	4	12.8.5	0	0	-10.6	0.5	0.87	0	-10.6	0	0	0
12	8	5	12.8.6	0	0	-10.6	0.4	0.87	0	-10.6	0	0	0
12	8	6	12.8.7	0	0	-10.5	0.4	0.87	0	-10.5	0	0	0
12	8	7	12.8.8	398	23	-9.5	0.3	0.87	85.255	-7.005	103688.653	90.502001	90.502001
12	8	8	12.8.9	704	48	-7	0.1	0.87	368.377	7.542	793748.81	756.110583	756.110583
12	8	9	12.8.10	828	60	-3.8	0.1	0.87	560.331	18.524	1207343.81	1155.050268	1155.050268
12	8	10	12.8.11	865	68	-1.3	0.1	0.87	677.223	25.661	1417810.458	1358.059247	1358.059247
12	8	11	12.8.12	801	66	0.2	0.2	0.87	665.679	25.844	1389808.419	1331.049431	1331.049431
12	8	12	12.8.13	724	78	0.9	0.2	0.87	612.254	24.485	1284451.648	1229.425869	1229.425869
12	8	13	12.8.14	554	95	1	0.2	0.87	473.121	19.227	1010561.257	965.240503	965.240503
12	8	14	12.8.15	300	89	0.5	0.2	0.87	264.151	10.654	570997.741	541.25247	541.25247
12	8	15	12.8.16	157	42	-0.4	0.2	0.87	102.123	3.424	200470.051	183.85405	183.85405
12	8	16	12.8.17	0	0	-1.4	0.2	0.87	0	-1.4	0	0	0
12	8	17	12.8.18	0	0	-1.6	0.2	0.87	0	-1.6	0	0	0
12	8	18	12.8.19	0	0	-1.5	0.3	0.87	0	-1.5	0	0	0
12	8	19	12.8.20	0	0	-0.7	0.3	0.87	0	-0.7	0	0	0
12	8	20	12.8.21	0	0	0	0.3	0.87	0	0	0	0	0
12	8	21	12.8.22	0	0	0.6	0.3	0.87	0	0.6	0	0	0
12	8	22	12.8.23	0	0	1.1	0.2	0.87	0	1.1	0	0	0
12	8	23	12.8.24	0	0	1.5	0.2	0.87	0	1.5	0	0	0
12	9	0	12.9.1	0	0	1.7	0.2	0.87	0	1.7	0	0	0
12	9	1	12.9.2	0	0	2	0.2	0.87	0	2	0	0	0
12	9	2	12.9.3	0	0	2.5	0.2	0.87	0	2.5	0	0	0
12	9	3	12.9.4	0	0	3	0.2	0.87	0	3	0	0	0
12	9	4	12.9.5	0	0	3.1	0.2	0.87	0	3.1	0	0	0
12	9	5	12.9.6	0	0	3.1	0.2	0.87	0	3.1	0	0	0
12	9	6	12.9.7	0	0	3.1	0.2	0.87	0	3.1	0	0	0
12	9	7	12.9.8	23	19	3.3	0.2	0.87	24.803	4.087	29998.825	19.423297	19.423297
12	9	8	12.9.9	39	74	4.7	0.2	0.87	96.174	8.374	198380.823	181.838852	181.838852
12	9	9	12.9.10	123	129	6.5	0.3	0.87	216.953	14.576	458358.673	432.604652	432.604652
12	9	10	12.9.11	117	166	7.5	0.3	0.87	266.309	17.404	557696.375	528.422425	528.422425
12	9	11	12.9.12	108	181	8.3	0.4	0.87	281.551	18.45	586531.219	556.235535	556.235535
12	9	12	12.9.13	84	174	9.2	0.3	0.87	245.602	18.326	509784.456	482.208215	482.208215
12	9	13	12.9.14	77	144	9.7	0.3	0.87	202.38	17.226	420711.568	396.291534	396.291534
12	9	14	12.9.15	21	93	9.5	0.2	0.87	109.275	13.686	224168.481	206.71275	206.71275
12	9	15	12.9.16	0	37	8.9	0.2	0.87	36.609	10.282	69145.21	57.18257	57.18257
12	9	16	12.9.17	0	0	8.4	0.2	0.87	0	8.4	0	0	0
12	9	17	12.9.18	0	0	8.5	0.2	0.87	0	8.5	0	0	0
12	9	18	12.9.19	0	0	8.7	0.2	0.87	0	8.7	0	0	0
12	9	19	12.9.20	0	0	9.5	0.2	0.12	0	9.5	0	0	0
12	9	20	12.9.21	0	0	10.2	0.3	0.12	0	10.2	0	0	0
12	9	21	12.9.22	0	0	10.9	0.3	0.12	0	10.9	0	0	0
12	9	22	12.9.23	0	0	11.1	0.3	0.12	0	11.1	0	0	0
12	9	23	12.9.24	0	0	11	0.3	0.12	0	11	0	0	0
12	10	0	12.10.1	0	0	10.8	0.3	0.12	0	10.8	0	0	0
12	10	1	12.10.2	0	0	10.6	0.2	0.12	0	10.6	0	0	0
12	10	2	12.10.3	0	0	10.5	0.2	0.12	0	10.5	0	0	0
12	10	3	12.10.4	0	0	10.4	0.2	0.12	0	10.4	0	0	0
12	10	4	12.10.5	0	0	10.4	0.2	0.12	0	10.4	0	0	0
12	10	5	12.10.6	0	0	10.4	0.2	0.12	0	10.4	0	0	0
12	10	6	12.10.7	0	0	10.3	0.2	0.12	0	10.3	0	0	0
12	10	7	12.10.8	39	18	10.5	0.2	0.12	25.158	11.294	29194.673	18.64764	18.64764
12	10	8	12.10.9	179	72	11	0.2	0.12	163.461	17.247	332341.09	311.052374	311.052374
12	10	9	12.10.10	120	120	11.6	0.2	0.12	201.739	19.357	419177.688	394.812006	394.812006
12	10	10	12.10.11	14	126	12.4	0.2	0.12	131.758	17.453	269163.306	250.11323	250.11323
12	10	11	12.10.12	2	77	13.2	0.2	0.12	72.933	15.994	145991.977	131.306351	131.306351
12	10	12	12.10.13	5	109	13.5	0.2	0.12	107.385	17.616	217062.646	199.858703	199.858703
12	10	13	12.10.14	20	109	13.2	0.2	0.12	117.82	17.722	240083.53	222.063866	222.063866
12	10	14	12.10.15	2	58	12.4	0.2	0.12	55.199	14.516	110158.117	96.742227	96.742227
12	10	15	12.10.16	0	26	11.2	0.1	0.12	24.097	12.141	44566.648	33.474924	33.474924
12	10	16	12.10.17	0	0	9.7	0.1	0.12	0	9.7	0	0	0
12	10	17	12.10.18	0	0	8.5	0.1	0.12	0	8.5	0	0	0
12	10	18	12.10.19	0	0	7.9	0.2	0.12	0	7.9	0	0	0
12	10	19	12.10.20	0	0	6.7	0.2	0.87	0	6.7	0	0	0
12	10	20	12.10.21	0	0	5.8	0.2	0.87	0	5.8	0	0	0
12	10	21	12.10.22	0	0	4.9	0.2	0.87	0	4.9	0	0	0
12	10	22	12.10.23	0	0	3.8	0.2	0.87	0	3.8	0	0	0
12	10	23	12.10.24	0	0	2.8	0.2	0.87	0	2.8	0	0	0
12	11	0	12.11.1	0	0	1.9	0.2	0.87	0	1.9	0	0	0
12	11	1	12.11.2	0	0	1.3	0.2	0.87	0	1.3	0	0	0
12	11	2	12.11.3	0	0	0.8	0.2	0.87	0	0.8	0	0	0
12	11	3	12.11.4	0	0	0.3	0.2	0.87	0	0.3	0	0	0
12	11	4	12.11.5	0	0	-0.2	0.2	0.87	0	-0.2	0	0	0
12	11	5	12.11.6	0	0	-0.6	0.2	0.87	0	-0.6	0	0	0
12	11	6	12.11.7	0	0	-1	0.2	0.87	0	-1	0	0	0
12	11	7	12.11.8	9	8	-1.1	0.2	0.87	9.44	-0.801	11194.253	1.285046	1.285046
12	11	8	12.11.9	0	21	-0.9	0.2	0.87	19.782	-0.145	39636.105	28.71909	28.71909
12	11	9	12.11.10	1	47	-0.3	0.2	0.87	44.922	1.421	93533.239	80.706434	80.706434
12	11	10	12.11.11	157	129	0.6	0.2	0.87	248.23	10.135	535409.286	506.925056	506.925056
12	11	11	12.11.12	761	99	1.4	0.2	0.87	676.681	27.458	1402202.82	1343.004649	1343.004649
12	11	12	12.11.13	902	77	1.7	0.2	0.87	733.756	29.973	1509267.111	1446.275227	1446.275227
12	11	13	12.11.14	854	72	1.6	0.2	0.87	630.534	25.913	1320826.079	1264.51141	1264.51141
12	11	14	12.11.15	740	62	1	0.2	0.87	451.638	18.39	964956.089	921.251308	921.251308
12	11	15	12.11.16	500	40	-0.9	0.3	0.87	209.379	6.663	408851.2	384.851426	384.851426
12	11	16	12.11.17	0	0	-2.4	0.4	0.87	0	-2.4	0	0	0
12	11	17	12.11.18	0	0	-2.6	0.4	0.87	0	-2.6	0	0	0
12	11	18	12.11.19	0	0	-2.5	0.4	0.87	0	-2.5	0	0	0
12	11	19	12.11.20	0	0	-2.6	0.3	0.87	0	-2.6	0	0	0
12	11	20	12.11.21	0	0	-2.7	0.3	0.87	0	-2.7	0	0	0
12	11	21	12.11.22	0	0	-2.7	0.3	0.87	0	-2.7	0	0	0
12	11	22	12.11.23	0	0	-2.8	0.3	0.87	0	-2.8	0	0	0
12	11	23	12.11.24	0	0	-3	0.3	0.87	0	-3	0	0	0
12	12	0	12.12.1	0	0	-3.4	0.3	0.87	0	-3.4	0	0	0
12	12	1	12.12.2	0	0	-4.1	0.3	0.87	0	-4.1	0	0	0
12	12	2	12.12.3	0	0	-4.9	0.3	0.87	0	-4.9	0	0	0
12	12	3	12.12.4	0	0	-5.4	0.4	0.87	0	-5.4	0	0	0
12	12	4	12.12.5	0	0	-5.7	0.4	0.87	0	-5.7	0	0	0
12	12	5	12.12.6	0	0	-5.8	0.4	0.87	0	-5.8	0	0	0
12	12	6	12.12.7	0	0	-5.7	0.4	0.87	0	-5.7	0	0	0
12	12	7	12.12.8	269	21	-4.8	0.3	0.87	60.651	-3.009	72829.072	60.735898	60.735898
12	12	8	12.12.9	685	48	-3.2	0.2	0.87	354.189	10.316	750938.89	714.817589	714.817589
12	12	9	12.12.10	744	57	-1.7	0.2	0.87	502.747	17.691	1085424.552	1037.451094	1037.451094
12	12	10	12.12.11	745	68	-0.6	0.2	0.87	591.665	22.204	1254255.208	1200.299409	1200.299409
12	12	11	12.12.12	779	69	0.2	0.2	0.87	650.102	25.244	1360491.29	1302.771124	1302.771124
12	12	12	12.12.13	854	71	0.8	0.2	0.87	692.815	27.496	1438934.462	1378.434743	1378.434743
12	12	13	12.12.14	796	66	0.9	0.1	0.87	587.494	24.299	1237877.888	1184.502402	1184.502402
12	12	14	12.12.15	661	54	0.5	0.1	0.87	404.207	16.576	868069.535	827.79783	827.79783
12	12	15	12.12.16	369	39	-0.6	0.3	0.87	169.225	5.521	331352.704	310.09901	310.09901
12	12	16	12.12.17	0	0	-1.6	0.5	0.87	0	-1.6	0	0	0
12	12	17	12.12.18	0	0	-2.6	0.6	0.87	0	-2.6	0	0	0
12	12	18	12.12.19	0	0	-3.1	0.5	0.87	0	-3.1	0	0	0
12	12	19	12.12.20	0	0	-3.6	0.4	0.87	0	-3.6	0	0	0
12	12	20	12.12.21	0	0	-3.4	0.4	0.87	0	-3.4	0	0	0
12	12	21	12.12.22	0	0	-3	0.3	0.87	0	-3	0	0	0
12	12	22	12.12.23	0	0	-2.7	0.3	0.87	0	-2.7	0	0	0
12	12	23	12.12.24	0	0	-2.3	0.3	0.87	0	-2.3	0	0	0
12	13	0	12.13.1	0	0	-1.9	0.3	0.87	0	-1.9	0	0	0

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
12	13	1	12.13.2	0	0	-1.5	0.3	0.87	0	-1.5	0	0	0
12	13	2	12.13.3	0	0	-1.2	0.3	0.87	0	-1.2	0	0	0
12	13	3	12.13.4	0	0	-0.9	0.3	0.87	0	-0.9	0	0	0
12	13	4	12.13.5	0	0	-0.7	0.3	0.87	0	-0.7	0	0	0
12	13	5	12.13.6	0	0	-0.4	0.3	0.87	0	-0.4	0	0	0
12	13	6	12.13.7	0	0	0	0.3	0.87	0	0	0	0	0
12	13	7	12.13.8	28	16	0.7	0.3	0.87	21.111	1.347	25507.09	15.090722	15.090722
12	13	8	12.13.9	65	69	1.8	0.2	0.87	106.576	5.868	222183.18	204.797796	204.797796
12	13	9	12.13.10	60	113	2.8	0.2	0.87	153.745	8.7	327548.69	306.429787	306.429787
12	13	10	12.13.11	27	138	3.7	0.2	0.87	163.213	9.954	344695.381	322.968903	322.968903
12	13	11	12.13.12	119	179	4.3	0.2	0.87	286.927	15.305	605769.783	574.792401	574.792401
12	13	12	12.13.13	98	164	4.4	0.2	0.87	252.764	14.095	534335.049	505.888884	505.888884
12	13	13	12.13.14	41	116	4.4	0.2	0.87	146.45	10.017	309211.638	288.74249	288.74249
12	13	14	12.13.15	141	99	4.3	0.2	0.87	183.252	11.335	389217.222	365.913158	365.913158
12	13	15	12.13.16	56	43	4.2	0.2	0.87	68.237	6.767	132294.054	118.0938	118.0938
12	13	16	12.13.17	0	0	4.3	0.3	0.87	0	4.3	0	0	0
12	13	17	12.13.18	0	0	4.3	0.2	0.87	0	4.3	0	0	0
12	13	18	12.13.19	0	0	4.3	0.2	0.87	0	4.3	0	0	0
12	13	19	12.13.20	0	0	4.1	0.3	0.87	0	4.1	0	0	0
12	13	20	12.13.21	0	0	4.2	0.3	0.87	0	4.2	0	0	0
12	13	21	12.13.22	0	0	4.5	0.3	0.87	0	4.5	0	0	0
12	13	22	12.13.23	0	0	5.2	0.3	0.87	0	5.2	0	0	0
12	13	23	12.13.24	0	0	6.2	0.3	0.87	0	6.2	0	0	0
12	14	0	12.14.1	0	0	6.7	0.3	0.87	0	6.7	0	0	0
12	14	1	12.14.2	0	0	6.9	0.3	0.87	0	6.9	0	0	0
12	14	2	12.14.3	0	0	7.2	0.3	0.87	0	7.2	0	0	0
12	14	3	12.14.4	0	0	7.8	0.3	0.87	0	7.8	0	0	0
12	14	4	12.14.5	0	0	8	0.2	0.87	0	8	0	0	0
12	14	5	12.14.6	0	0	7.6	0.2	0.87	0	7.6	0	0	0
12	14	6	12.14.7	0	0	7.4	0.2	0.87	0	7.4	0	0	0
12	14	7	12.14.8	70	17	7.9	0.2	0.87	23.769	8.641	27161.332	16.686348	16.686348
12	14	8	12.14.9	201	69	9	0.2	0.87	169.163	15.454	344528.58	322.808012	322.808012
12	14	9	12.14.10	293	113	10.4	0.2	0.87	300.835	21.977	627674.977	595.921407	595.921407
12	14	10	12.14.11	343	143	11.6	0.2	0.87	397.946	26.906	818162.264	779.658972	779.658972
12	14	11	12.14.12	394	153	12.3	0.2	0.87	471.619	30.433	957805.632	914.35422	914.35422
12	14	12	12.14.13	173	166	12.6	0.2	0.87	307.443	24.404	630203.703	598.36053	598.36053
12	14	13	12.14.14	144	137	12.4	0.2	0.87	244.17	21.78	503609.071	476.251649	476.251649
12	14	14	12.14.15	28	47	12.1	0.2	0.87	59.815	14.393	119902.33	106.141164	106.141164
12	14	15	12.14.16	10	22	12.2	0.3	0.87	23.993	13.076	43646.055	32.586951	32.586951
12	14	16	12.14.17	0	0	12.7	0.3	0.87	0	12.7	0	0	0
12	14	17	12.14.18	0	0	12.8	0.3	0.87	0	12.8	0	0	0
12	14	18	12.14.19	0	0	12.6	0.3	0.87	0	12.6	0	0	0
12	14	19	12.14.20	0	0	11	0.4	0.12	0	11	0	0	0
12	14	20	12.14.21	0	0	9.4	0.4	0.12	0	9.4	0	0	0
12	14	21	12.14.22	0	0	7.6	0.4	0.12	0	7.6	0	0	0
12	14	22	12.14.23	0	0	6.1	0.4	0.12	0	6.1	0	0	0
12	14	23	12.14.24	0	0	5.1	0.4	0.12	0	5.1	0	0	0
12	15	0	12.15.1	0	0	4.4	0.4	0.12	0	4.4	0	0	0
12	15	1	12.15.2	0	0	4.1	0.4	0.12	0	4.1	0	0	0
12	15	2	12.15.3	0	0	3.9	0.4	0.12	0	3.9	0	0	0
12	15	3	12.15.4	0	0	3.9	0.4	0.12	0	3.9	0	0	0
12	15	4	12.15.5	0	0	4	0.4	0.12	0	4	0	0	0
12	15	5	12.15.6	0	0	4	0.4	0.12	0	4	0	0	0
12	15	6	12.15.7	0	0	3.8	0.4	0.12	0	3.8	0	0	0
12	15	7	12.15.8	24	11	4	0.4	0.12	12.963	4.385	15057.091	5.011008	5.011008
12	15	8	12.15.9	13	68	4.9	0.4	0.12	73.407	7.537	150561.012	135.713486	135.713486
12	15	9	12.15.10	73	117	6	0.5	0.12	163.958	11.751	347718.714	325.885107	325.885107
12	15	10	12.15.11	281	144	6.6	0.5	0.12	354.184	19.041	750049.989	713.960185	713.960185
12	15	11	12.15.12	412	147	6.8	0.5	0.12	473.038	23.418	990594.576	945.981322	945.981322
12	15	12	12.15.13	139	159	6.6	0.5	0.12	272.081	16.142	575493.661	545.589082	545.589082
12	15	13	12.15.14	8	112	6	0.5	0.12	113.696	9.981	238237.142	220.282903	220.282903
12	15	14	12.15.15	202	92	5.3	0.5	0.12	210.431	12.685	449000.074	423.577666	423.577666
12	15	15	12.15.16	83	41	4.3	0.4	0.12	73.1	6.884	141827.545	127.289481	127.289481
12	15	16	12.15.17	0	0	3.4	0.5	0.12	0	3.4	0	0	0
12	15	17	12.15.18	0	0	2.4	0.5	0.12	0	2.4	0	0	0
12	15	18	12.15.19	0	0	1.9	0.5	0.12	0	1.9	0	0	0
12	15	19	12.15.20	0	0	0.5	0.4	0.11	0	0.5	0	0	0
12	15	20	12.15.21	0	0	-0.2	0.4	0.11	0	-0.2	0	0	0
12	15	21	12.15.22	0	0	-0.8	0.4	0.11	0	-0.8	0	0	0
12	15	22	12.15.23	0	0	-1.4	0.3	0.11	0	-1.4	0	0	0
12	15	23	12.15.24	0	0	-1.7	0.3	0.11	0	-1.7	0	0	0
12	16	0	12.16.1	0	0	-1.9	0.3	0.11	0	-1.9	0	0	0
12	16	1	12.16.2	0	0	-2	0.3	0.11	0	-2	0	0	0
12	16	2	12.16.3	0	0	-2.3	0.2	0.11	0	-2.3	0	0	0
12	16	3	12.16.4	0	0	-2.4	0.2	0.11	0	-2.4	0	0	0
12	16	4	12.16.5	0	0	-2.4	0.2	0.11	0	-2.4	0	0	0
12	16	5	12.16.6	0	0	-2.6	0.2	0.11	0	-2.6	0	0	0
12	16	6	12.16.7	0	0	-2.6	0.2	0.11	0	-2.6	0	0	0
12	16	7	12.16.8	9	12	-1.9	0.2	0.11	12.316	-1.507	15005.135	4.960893	4.960893
12	16	8	12.16.9	68	70	-0.6	0.2	0.11	108.108	3.528	227825.604	210.240287	210.240287
12	16	9	12.16.10	0	47	0.5	0.2	0.11	43.573	2.171	90829.772	78.098762	78.098762
12	16	10	12.16.11	2	101	1.3	0.2	0.11	97.52	5.039	206757.321	189.918537	189.918537
12	16	11	12.16.12	1	122	1.9	0.2	0.11	118.064	6.424	250064.5	231.69117	231.69117
12	16	12	12.16.13	0	115	2.3	0.2	0.11	110.257	6.525	232999.508	215.230858	215.230858
12	16	13	12.16.14	37	128	2.3	0.2	0.11	156.035	8.29	333609.296	312.275642	312.275642
12	16	14	12.16.15	69	99	1.5	0.2	0.11	139.284	6.848	298443.769	278.356169	278.356169
12	16	15	12.16.16	24	43	0	0.2	0.11	53.317	2.013	105774.462	92.513903	92.513903
12	16	16	12.16.17	0	0	-0.9	0.3	0.11	0	-0.9	0	0	0
12	16	17	12.16.18	0	0	-0.8	0.3	0.11	0	-0.8	0	0	0
12	16	18	12.16.19	0	0	-0.7	0.3	0.11	0	-0.7	0	0	0
12	16	19	12.16.20	0	0	-0.8	0.4	0.87	0	-0.8	0	0	0
12	16	20	12.16.21	0	0	-1	0.3	0.87	0	-1	0	0	0
12	16	21	12.16.22	0	0	-1	0.2	0.87	0	-1	0	0	0
12	16	22	12.16.23	0	0	-1.1	0.2	0.87	0	-1.1	0	0	0
12	16	23	12.16.24	0	0	-1.2	0.2	0.87	0	-1.2	0	0	0
12	17	0	12.17.1	0	0	-1.1	0.2	0.87	0	-1.1	0	0	0
12	17	1	12.17.2	0	0	-1.1	0.2	0.87	0	-1.1	0	0	0
12	17	2	12.17.3	0	0	-1.2	0.2	0.87	0	-1.2	0	0	0
12	17	3	12.17.4	0	0	-1.5	0.3	0.87	0	-1.5	0	0	0
12	17	4	12.17.5	0	0	-1.7	0.3	0.87	0	-1.7	0	0	0
12	17	5	12.17.6	0	0	-1.9	0.3	0.87	0	-1.9	0	0	0
12	17	6	12.17.7	0	0	-2	0.4	0.87	0	-2	0	0	0
12	17	7	12.17.8	4	6	-1.9	0.4	0.87	6.092	-1.717	7216.68	0	0
12	17	8	12.17.9	0	24	-1.8	0.4	0.87	22.615	-0.989	45586.416	34.458557	34.458557
12	17	9	12.17.10	0	35	-1.6	0.4	0.87	33.004	-0.412	68375.769	56.440394	56.440394
12	17	10	12.17.11	0	30	-1.4	0.4	0.87	28.288	-0.382	58128.39	46.55612	46.55612
12	17	11	12.17.12	0	69	-1.1	0.3	0.87	65.189	1.317	137080.837	122.710968	122.710968
12	17	12	12.17.13	8	117	-0.7	0.3	0.87	119.87	3.747	255690.559	237.117876	237.117876
12	17	13	12.17.14	0	34	-0.6	0.3	0.87	32.063	0.59	66030.075	54.177817	54.177817
12	17	14	12.17.15	0	18	-0.7	0.3	0.87	16.953	-0.071	34070.269	23.350473	23.350473
12	17	15	12.17.16	0	10	-0.8	0.3	0.87	9.409	-0.455	17641.649	7.503985	7.503985
12	17	16	12.17.17	0	0	-0.7	0.3	0.87	0	-0.7	0	0	0
12	17	17	12.17.18	0	0	-0.6	0.3	0.87	0	-0.6	0	0	0
12	17	18	12.17.19	0	0	-0.6	0.3	0.87	0	-0.6	0	0	0
12	17	19	12.17.20	0	0	-0.8	0.3	0.87	0	-0.8	0	0	0
12	17	20	12.17.21	0	0	-1.2	0.3	0.87	0	-1.2	0	0	0
12	17	21	12.17.22	0	0	-1.7	0.3	0.87	0	-1.7	0	0	0
12	17	22	12.17.23	0	0	-2.4	0.3	0.87	0	-2.4	0	0	0
12	17	23	12.17.24	0	0	-3.1	0.3	0.87	0	-3.1	0	0	0
12	18	0	12.18.1	0	0	-3.9	0.3	0.87	0	-3.9	0	0	0
12	18	1	12.18.2	0	0	-4.7	0.4	0.87	0	-4.7	0	0	0
12	18	2	12.18.3	0	0	-5.2	0.5	0.87	0	-5.2	0	0	0
12	18	3	12.18.4	0	0	-5.5	0.5	0.87	0	-5.5	0	0	0
12	18	4	12.18.5	0	0	-5.6	0.5	0.87	0	-5.6	0	0	0
12	18	5	12.18.6	0	0	-5.7	0.6	0.87	0	-5.7	0	0	0
12	18	6	12.18.7	0	0	-5.7	0.7	0.87	0	-5.7	0	0	0
12	18	7	12.18.8	239	18	-4.8	0.6	0.87	39.169	-3.751	45652.581	34.522378	34.522378
12	18	8	12.18.9	662	46	-2.2	0.4	0.87	334.977	9.794	705557.035	671.043794	671.043794
12	18	9	12.18.10	807	63	0.1	0.3	0.87	537.851	20.205	1151110.742	1100.809762	1100.809762
12	18	10	12.18.11	863	76	1.2	0.3	0.87	673.842	26.374	1407472.285	1348.087395	1348.087395
12	18	11	12.18.12	858	88	1.5	0.3	0.87	724.822	28.56	1497598.703	1435.020277	1435.020277
12	18	12	12.18.13	702	85	1.5	0.3	0.87	605.701	24.112	1272246.53	1217.653227	1217.653227
12	18	13	12.18.14	419	106	1.1	0.4	0.87	398.257	15.517	858486.011	818.553888	818.553888
12	18	14	12.18.15	372	84	0.3	0.4	0.87	296.504	11.023	643573.389	611.256475	611.256475
12	18	15	12.18.16	249	39	-0.7	0.4	0.87	134.526	4.038	266363.829	247.412949	247.412949
12	18	16	12.18.17	0	0	-1.8	0.5	0.87	0	-1.8	0	0	0
12	18	17	12.18.18	0	0	-2.8	0.5	0.87	0	-2.8	0	0	0
12	18	18	12.18.19	0	0	-3.3	0.5	0.87	0	-3.3	0	0	0
12	18	19	12.18.20	0	0	-4.3	0.5	0.87	0	-4.3	0	0	0
12	18	20	12.18.21	0	0	-5	0.5	0.87	0	-5	0	0	0
12	18	21	12.18.22	0	0	-5.8	0.5	0.87	0	-5.8	0	0	0
12	18	22	12.18.23	0	0	-6.8	0.5	0.87	0	-6.8	0	0	0
12	18	23	12.18.24	0	0	-7.9	0.6	0.87	0	-7.9	0	0	0
12	19	0	12.19.1	0	0	-8.7	0.6	0.87	0	-8.7	0	0	0
12	19	1	12.19.2	0	0	-9	0.6	0.87	0	-9	0	0	0
12	19	2	12.19.3	0	0	-9.5	0.6	0.87	0	-9.5	0	0	0
12	19	3	12.19.4	0	0	-10.1	0.6	0.87	0	-10.1	0	0	0
12	19	4	12.19.5	0	0	-10.7	0.6	0.87	0	-10.7	0	0	0
12	19	5	12.19.6	0	0	-11.2	0.5	0.87	0	-11.2	0	0	0
12	19	6	12.19.7	0	0	-11.6	0.5	0.87	0	-11.6	0	0	0
12	19	7	12.19.8	195	17	-11.6	0.5	0.87	33.52	-10.672	40288.934	29.348787	29.348787

PVWatts Hourly PV Performance Data		
Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		
	Jan	0
	Feb	0
	Mar	0
	Apr	0
	May	0
	June	0
	July	0
	Aug	0
	Sept	0
	Oct	0
	Nov	0
	Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
12	19	8	12.19.9	602	47	-11	0.5	0.87	313.899	-0.09	683488.267	649.75701	649.75701
12	19	9	12.19.10	830	62	-10	0.5	0.87	548.565	9.314	1221559.859	1168.762587	1168.762587
12	19	10	12.19.11	890	71	-8.9	0.5	0.87	685.246	15.214	1491828.678	1429.454706	1429.454706
12	19	11	12.19.12	877	68	-7.9	0.5	0.87	714.817	17.242	1541718.7	1477.576927	1477.576927
12	19	12	12.19.13	887	72	-7.2	0.5	0.87	716.139	17.991	1540999.241	1476.882961	1476.882961
12	19	13	12.19.14	806	60	-6.9	0.5	0.87	588.645	13.821	1289458.691	1234.255493	1234.255493
12	19	14	12.19.15	755	52	-7.1	0.5	0.87	453.066	8.833	1004452.317	959.348027	959.348027
12	19	15	12.19.16	442	35	-7.8	0.5	0.87	192.694	-1.223	390678.81	367.322956	367.322956
12	19	16	12.19.17	0	0	-8.5	0.4	0.87	0	-8.5	0	0	0
12	19	17	12.19.18	0	0	-8.9	0.4	0.87	0	-8.9	0	0	0
12	19	18	12.19.19	0	0	-9.1	0.4	0.87	0	-9.1	0	0	0
12	19	19	12.19.20	0	0	-9.8	0.4	0.87	0	-9.8	0	0	0
12	19	20	12.19.21	0	0	-10.3	0.4	0.87	0	-10.3	0	0	0
12	19	21	12.19.22	0	0	-10.7	0.4	0.87	0	-10.7	0	0	0
12	19	22	12.19.23	0	0	-10.9	0.4	0.87	0	-10.9	0	0	0
12	19	23	12.19.24	0	0	-11	0.4	0.87	0	-11	0	0	0
12	20	0	12.20.1	0	0	-11	0.4	0.87	0	-11	0	0	0
12	20	1	12.20.2	0	0	-11	0.4	0.87	0	-11	0	0	0
12	20	2	12.20.3	0	0	-11	0.4	0.87	0	-11	0	0	0
12	20	3	12.20.4	0	0	-11.2	0.4	0.87	0	-11.2	0	0	0
12	20	4	12.20.5	0	0	-11.5	0.4	0.87	0	-11.5	0	0	0
12	20	5	12.20.6	0	0	-11.7	0.4	0.87	0	-11.7	0	0	0
12	20	6	12.20.7	0	0	-11.8	0.4	0.87	0	-11.8	0	0	0
12	20	7	12.20.8	292	17	-10.7	0.4	0.87	41.142	-9.541	48546.184	37.31345	37.31345
12	20	8	12.20.9	707	38	-8.7	0.4	0.87	342.836	3.567	736989.511	701.362493	701.362493
12	20	9	12.20.10	839	54	-6.8	0.4	0.87	543.416	12.908	1195198.636	1143.335446	1143.335446
12	20	10	12.20.11	892	68	-5.2	0.4	0.87	682.385	19.533	1462777.865	1401.433279	1401.433279
12	20	11	12.20.12	920	71	-3.7	0.4	0.87	748.593	23.418	1578148.078	1512.715467	1512.715467
12	20	12	12.20.13	915	69	-2.5	0.4	0.87	732.259	24.031	1541263.251	1477.137616	1477.137616
12	20	13	12.20.14	877	64	-2	0.3	0.87	638.465	21.863	1358546.252	1300.895007	1300.895007
12	20	14	12.20.15	794	52	-2.3	0.3	0.87	473.596	15.385	1026509.145	980.623295	980.623295
12	20	15	12.20.16	447	37	-4	0.3	0.87	197.613	3.166	395429.107	371.904931	371.904931
12	20	16	12.20.17	0	0	-6	0.4	0.87	0	-6	0	0	0
12	20	17	12.20.18	0	0	-7.1	0.5	0.87	0	-7.1	0	0	0
12	20	18	12.20.19	0	0	-7.5	0.5	0.87	0	-7.5	0	0	0
12	20	19	12.20.20	0	0	-8.5	0.7	0.87	0	-8.5	0	0	0
12	20	20	12.20.21	0	0	-8.9	0.7	0.87	0	-8.9	0	0	0
12	20	21	12.20.22	0	0	-9.3	0.7	0.87	0	-9.3	0	0	0
12	20	22	12.20.23	0	0	-9.5	0.7	0.87	0	-9.5	0	0	0
12	20	23	12.20.24	0	0	-9.7	0.7	0.87	0	-9.7	0	0	0
12	21	0	12.21.1	0	0	-9.8	0.7	0.87	0	-9.8	0	0	0
12	21	1	12.21.2	0	0	-9.8	0.7	0.87	0	-9.8	0	0	0
12	21	2	12.21.3	0	0	-9.9	0.7	0.87	0	-9.9	0	0	0
12	21	3	12.21.4	0	0	-9.8	0.7	0.87	0	-9.8	0	0	0
12	21	4	12.21.5	0	0	-9.5	0.6	0.87	0	-9.5	0	0	0
12	21	5	12.21.6	0	0	-8.9	0.5	0.87	0	-8.9	0	0	0
12	21	6	12.21.7	0	0	-8.4	0.4	0.87	0	-8.4	0	0	0
12	21	7	12.21.8	107	14	-7.6	0.3	0.87	22.111	-6.941	26357.083	15.910596	15.910596
12	21	8	12.21.9	408	52	-5.9	0.2	0.87	238.977	3.197	510673.131	483.065401	483.065401
12	21	9	12.21.10	643	63	-4	0.1	0.87	446.56	13.785	975511.733	931.432923	931.432923
12	21	10	12.21.11	719	71	-2.7	0.1	0.87	571.235	20.041	1220667.04	1167.901403	1167.901403
12	21	11	12.21.12	572	114	-1.8	0.1	0.87	555.487	20.284	1179650.971	1128.338697	1128.338697
12	21	12	12.21.13	425	140	-1.3	0.1	0.87	472.66	17.479	1010145.628	964.839602	964.839602
12	21	13	12.21.14	243	139	-1.1	0.1	0.87	318.166	11.536	689190.069	655.256775	655.256775
12	21	14	12.21.15	216	97	-1.3	0.1	0.87	226.6	7.695	492892.645	465.914948	465.914948
12	21	15	12.21.16	276	41	-2.1	0.3	0.87	147.621	3.267	295255.513	275.280886	275.280886
12	21	16	12.21.17	0	0	-3	0.5	0.87	0	-3	0	0	0
12	21	17	12.21.18	0	0	-3.6	0.5	0.87	0	-3.6	0	0	0
12	21	18	12.21.19	0	0	-3.8	0.5	0.87	0	-3.8	0	0	0
12	21	19	12.21.20	0	0	-4.2	0.6	0.11	0	-4.2	0	0	0
12	21	20	12.21.21	0	0	-4.4	0.6	0.11	0	-4.4	0	0	0
12	21	21	12.21.22	0	0	-4.8	0.6	0.11	0	-4.8	0	0	0
12	21	22	12.21.23	0	0	-5.2	0.6	0.11	0	-5.2	0	0	0
12	21	23	12.21.24	0	0	-5.2	0.6	0.11	0	-5.2	0	0	0
12	22	0	12.22.1	0	0	-4.9	0.5	0.11	0	-4.9	0	0	0
12	22	1	12.22.2	0	0	-5.2	0.6	0.11	0	-5.2	0	0	0
12	22	2	12.22.3	0	0	-5.6	0.6	0.11	0	-5.6	0	0	0
12	22	3	12.22.4	0	0	-5.7	0.6	0.11	0	-5.7	0	0	0
12	22	4	12.22.5	0	0	-5.6	0.6	0.11	0	-5.6	0	0	0
12	22	5	12.22.6	0	0	-5.2	0.5	0.11	0	-5.2	0	0	0
12	22	6	12.22.7	0	0	-5.1	0.5	0.11	0	-5.1	0	0	0
12	22	7	12.22.8	82	13	-4.3	0.4	0.11	18.849	-3.752	22255.687	11.954529	11.954529
12	22	8	12.22.9	209	63	-2.2	0.3	0.11	161.822	3.775	342412.855	320.767256	320.767256
12	22	9	12.22.10	541	79	-0.2	0.2	0.11	405.239	15.426	878851.901	838.198134	838.198134
12	22	10	12.22.11	534	107	1.4	0.2	0.11	489.515	20.264	1042976.619	996.50726	996.50726
12	22	11	12.22.12	725	88	2.5	0.2	0.11	629.051	26.744	1310994.339	1255.028047	1255.028047
12	22	12	12.22.13	511	124	3.1	0.2	0.11	509.846	22.736	1074420.962	1026.837405	1026.837405
12	22	13	12.22.14	461	110	3.2	0.2	0.11	427.295	19.666	910714.838	868.93204	868.93204
12	22	14	12.22.15	439	76	2.6	0.2	0.11	320.786	14.955	690659.993	656.674614	656.674614
12	22	15	12.22.16	443	36	1.3	0.3	0.11	197.447	8.47	389228.197	365.923745	365.923745
12	22	16	12.22.17	0	0	0.6	0.3	0.11	0	0.6	0	0	0
12	22	17	12.22.18	0	0	0.3	0.3	0.11	0	0.3	0	0	0
12	22	18	12.22.19	0	0	0.1	0.3	0.11	0	0.1	0	0	0
12	22	19	12.22.20	0	0	0.1	0.3	0.11	0	0.1	0	0	0
12	22	20	12.22.21	0	0	0	0.3	0.11	0	0	0	0	0
12	22	21	12.22.22	0	0	-0.3	0.3	0.11	0	-0.3	0	0	0
12	22	22	12.22.23	0	0	-0.6	0.3	0.11	0	-0.6	0	0	0
12	22	23	12.22.24	0	0	-0.8	0.3	0.11	0	-0.8	0	0	0
12	23	0	12.23.1	0	0	-1.1	0.3	0.11	0	-1.1	0	0	0
12	23	1	12.23.2	0	0	-1.4	0.4	0.11	0	-1.4	0	0	0
12	23	2	12.23.3	0	0	-1.5	0.4	0.11	0	-1.5	0	0	0
12	23	3	12.23.4	0	0	-1.6	0.4	0.11	0	-1.6	0	0	0
12	23	4	12.23.5	0	0	-1.7	0.4	0.11	0	-1.7	0	0	0
12	23	5	12.23.6	0	0	-1.8	0.4	0.11	0	-1.8	0	0	0
12	23	6	12.23.7	0	0	-1.9	0.5	0.11	0	-1.9	0	0	0
12	23	7	12.23.8	192	15	-0.6	0.4	0.11	28.89	0.222	32853.379	22.176703	22.176703
12	23	8	12.23.9	607	42	1.7	0.2	0.11	303.162	13.233	626544.224	594.830721	594.830721
12	23	9	12.23.10	762	55	3.5	0.3	0.11	496.715	22.076	1056908.204	1009.945194	1009.945194
12	23	10	12.23.11	831	62	5.1	0.3	0.11	629.371	28.63	1306895.559	1251.074503	1251.074503
12	23	11	12.23.12	859	64	6.4	0.3	0.11	686.671	32.06	1404901.204	1345.607419	1345.607419
12	23	12	12.23.13	856	63	7.2	0.3	0.11	675.138	32.432	1379933.785	1321.524694	1321.524694
12	23	13	12.23.14	826	57	6.9	0.3	0.11	596.57	29.209	1237025.246	1183.679973	1183.679973
12	23	14	12.23.15	738	49	5.6	0.2	0.11	442.927	22.677	935816.156	893.143918	893.143918
12	23	15	12.23.16	534	34	4.3	0.3	0.11	223.323	12.407	434858.553	409.937235	409.937235
12	23	16	12.23.17	0	0	3.6	0.4	0.11	0	3.6	0	0	0
12	23	17	12.23.18	0	0	3.3	0.4	0.11	0	3.3	0	0	0
12	23	18	12.23.19	0	0	3.1	0.4	0.11	0	3.1	0	0	0
12	23	19	12.23.20	0	0	3.1	0.4	0.12	0	3.1	0	0	0
12	23	20	12.23.21	0	0	2.9	0.3	0.12	0	2.9	0	0	0
12	23	21	12.23.22	0	0	2.6	0.3	0.12	0	2.6	0	0	0
12	23	22	12.23.23	0	0	2.3	0.3	0.12	0	2.3	0	0	0
12	23	23	12.23.24	0	0	2.1	0.3	0.12	0	2.1	0	0	0
12	24	0	12.24.1	0	0	1.8	0.3	0.12	0	1.8	0	0	0
12	24	1	12.24.2	0	0	1.3	0.3	0.12	0	1.3	0	0	0
12	24	2	12.24.3	0	0	0.5	0.3	0.12	0	0.5	0	0	0
12	24	3	12.24.4	0	0	-0.3	0.3	0.12	0	-0.3	0	0	0
12	24	4	12.24.5	0	0	-0.9	0.3	0.12	0	-0.9	0	0	0
12	24	5	12.24.6	0	0	-1.3	0.4	0.12	0	-1.3	0	0	0
12	24	6	12.24.7	0	0	-1.5	0.4	0.12	0	-1.5	0	0	0
12	24	7	12.24.8	252	15	-0.6	0.3	0.12	32.838	0.355	36946.254	26.124551	26.124551
12	24	8	12.24.9	493	45	1.2	0.3	0.12	262.973	10.896	546398.505	517.524883	517.524883
12	24	9	12.24.10	540	78	2.7	0.3	0.12	402.625	17.746	865606.865	825.422422	825.422422
12	24	10	12.24.11	906	51	3.9	0.4	0.12	659.922	27.839	1375796.682	1317.534186	1317.534186
12	24	11	12.24.12	931	53	4.8	0.3	0.12	723.836	31.853	1482900.773	1420.843152	1420.843152
12	24	12	12.24.13	925	54	5.1	0.3	0.12	712.45	31.73	1460840.959	1399.565005	1399.565005
12	24	13	12.24.14	876	52	4.9	0.3	0.12	618.218	28.022	1288627.166	1233.453432	1233.453432
12	24	14	12.24.15	790	46	3.4	0.3	0.12	466.954	20.852	994915.625	950.149259	950.149259
12	24	15	12.24.16	503	34	0.7	0.3	0.12	215.233	8.52	426062.162	401.452535	401.452535
12	24	16	12.24.17	34	3	-1.2	0.3	0.12	0	-1.2	0	0	0
12	24	17	12.24.18	0	0	-1.5	0.3	0.12	0	-1.5	0	0	0
12	24	18	12.24.19	0	0	-1.6	0.3	0.12	0	-1.6	0	0	0
12	24	19	12.24.20	0	0	-2.1	0.3	0.12	0	-2.1	0	0	0
12	24	20	12.24.21	0	0	-2.4	0.3	0.12	0	-2.4	0	0	0
12	24	21	12.24.22	0	0	-2.6	0.4	0.12	0	-2.6	0	0	0
12	24	22	12.24.23	0	0	-2.4	0.4	0.12	0	-2.4	0	0	0
12	24	23	12.24.24	0	0	-2.4	0.4	0.12	0	-2.4	0	0	0
12	25	0	12.25.1	0	0	-2.7	0.4	0.12	0	-2.7	0	0	0
12	25	1	12.25.2	0	0	-3	0.4	0.12	0	-3	0	0	0
12	25	2	12.25.3	0	0	-3.1	0.4	0.12	0	-3.1	0	0	0
12	25	3	12.25.4	0	0	-3.2	0.4	0.12	0	-3.2	0	0	0
12	25	4	12.25.5	0	0	-3.2	0.3	0.12	0	-3.2	0	0	0
12	25	5	12.25.6	0	0	-3.1	0.3	0.12	0	-3.1	0	0	0
12	25	6	12.25.7	0	0	-2.8	0.3	0.12	0	-2.8	0	0	0
12	25	7	12.25.8	185	15	-1.9	0.2	0.12	27.503	-1.066	31488.278	20.859973	20.859973
12	25	8	12.25.9	642	41	0.1	0.2	0.12	314.66	12.064	652534.547	619.900104	619.900104
12	25	9	12.25.10	797	53	2.1	0.1	0.12	512.468	22.527	1089169.428	1041.063275	1041.063275
12	25	10	12.25.11	712	83	3.7	0.2	0.12	578.476	26.006	1210880.344	1158.461489	1158.461489
12	25	11	12.25.12	534	125	4.5	0.2	0.12	532.637	25.012	1113014.688	1064.063602	1064.063602
12	25	12	12.25.13	360	153	4.7	0.2	0.12	428.734	21.199	903807.39	862.26935	862.26935
12	25	13	12.25.14	387	124	4.4	0.2	0.12	398.347	19.743	846207.059	806.710028	806.710028
12	25	14	12.25.15	316	91	3.1	0.3	0.12	277.464	13.452	597656.471	566.966576	566.966576

PVWatts Hourly PV Performance Data

Requested Location	Hartford, CT	
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66	
Latitude (degrees)	41.77	
Longitude (degrees)	-72.66	
Elevation (m)	15.35999966	Adjusted
DC System Size (kW)	2400	2400
Module Type	Standard	
Array Type	Fixed (open rack)	
Array Tilt (deg)	20	
Array Azimuth (deg)	180	
System Losses (%)	14.08	
DC to AC Size Ratio	1.2	
Inverter Efficiency (%)	96	
Ground Coverage Ratio	NA	
Albedo	From weather file	
Bifacial	No (0)	
Monthly Irradiance Loss (%)		

Jan	0
Feb	0
Mar	0
Apr	0
May	0
June	0
July	0
Aug	0
Sept	0
Oct	0
Nov	0
Dec	0

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
12	25	15	12.25.16	186	46	1.5	0.6	0.12	126.838	5.74	254040.223	235.526018	235.526018
12	25	16	12.25.17	25	3	0.6	0.7	0.12	0	0.6	0	0	0
12	25	17	12.25.18	0	0	0.3	0.7	0.12	0	0.3	0	0	0
12	25	18	12.25.19	0	0	0.2	0.6	0.12	0	0.2	0	0	0
12	25	19	12.25.20	0	0	0.6	0.7	0.12	0	0.6	0	0	0
12	25	20	12.25.21	0	0	1.1	0.7	0.12	0	1.1	0	0	0
12	25	21	12.25.22	0	0	1.1	0.6	0.12	0	1.1	0	0	0
12	25	22	12.25.23	0	0	0.6	0.6	0.12	0	0.6	0	0	0
12	25	23	12.25.24	0	0	-0.1	0.5	0.12	0	-0.1	0	0	0
12	26	0	12.26.1	0	0	-0.1	0.4	0.12	0	-0.1	0	0	0
12	26	1	12.26.2	0	0	0.3	0.3	0.12	0	0.3	0	0	0
12	26	2	12.26.3	0	0	0.5	0.2	0.12	0	0.5	0	0	0
12	26	3	12.26.4	0	0	0.6	0.2	0.12	0	0.6	0	0	0
12	26	4	12.26.5	0	0	0.6	0.3	0.12	0	0.6	0	0	0
12	26	5	12.26.6	0	0	0.5	0.3	0.12	0	0.5	0	0	0
12	26	6	12.26.7	0	0	0.4	0.2	0.12	0	0.4	0	0	0
12	26	7	12.26.8	0	4	0.7	0.3	0.12	3.805	0.819	4410.943	0	0
12	26	8	12.26.9	0	31	1.4	0.3	0.12	28.726	2.463	57782.62	46.222602	46.222602
12	26	9	12.26.10	0	75	2.4	0.3	0.12	71.029	5.04	149092.147	134.29667	134.29667
12	26	10	12.26.11	0	85	3.5	0.3	0.12	79.865	6.467	167135.081	151.700271	151.700271
12	26	11	12.26.12	2	131	4.3	0.3	0.12	128.361	9.067	269915.72	250.838982	250.838982
12	26	12	12.26.13	4	130	4.6	0.3	0.12	128.869	9.386	270874.341	251.763636	251.763636
12	26	13	12.26.14	0	97	4.2	0.2	0.12	92.571	7.75	193956.601	177.571397	177.571397
12	26	14	12.26.15	0	22	3.1	0.2	0.12	20.366	3.881	40808.842	29.850273	29.850273
12	26	15	12.26.16	0	9	1.9	0.3	0.12	8.32	2.206	15582.033	5.517349	5.517349
12	26	16	12.26.17	13	2	1.5	0.3	0.12	0	1.5	0	0	0
12	26	17	12.26.18	0	0	1.5	0.3	0.12	0	1.5	0	0	0
12	26	18	12.26.19	0	0	1.5	0.3	0.12	0	1.5	0	0	0
12	26	19	12.26.20	0	0	1.2	0.3	0.12	0	1.2	0	0	0
12	26	20	12.26.21	0	0	0.9	0.3	0.12	0	0.9	0	0	0
12	26	21	12.26.22	0	0	0.6	0.3	0.12	0	0.6	0	0	0
12	26	22	12.26.23	0	0	0.5	0.3	0.12	0	0.5	0	0	0
12	26	23	12.26.24	0	0	0.5	0.3	0.12	0	0.5	0	0	0
12	27	0	12.27.1	0	0	0.6	0.3	0.12	0	0.6	0	0	0
12	27	1	12.27.2	0	0	0.7	0.3	0.12	0	0.7	0	0	0
12	27	2	12.27.3	0	0	1	0.3	0.12	0	1	0	0	0
12	27	3	12.27.4	0	0	1.4	0.3	0.12	0	1.4	0	0	0
12	27	4	12.27.5	0	0	1.9	0.3	0.12	0	1.9	0	0	0
12	27	5	12.27.6	0	0	2.2	0.3	0.12	0	2.2	0	0	0
12	27	6	12.27.7	0	0	2.4	0.3	0.12	0	2.4	0	0	0
12	27	7	12.27.8	8	6	2.9	0.3	0.12	6.248	3.093	7188.398	0	0
12	27	8	12.27.9	1	42	3.7	0.3	0.12	39.666	5.167	79897.98	67.554326	67.554326
12	27	9	12.27.10	2	59	4.8	0.3	0.12	55.852	6.876	115368.583	101.768065	101.768065
12	27	10	12.27.11	2	105	6	0.3	0.12	101.805	9.783	212226.828	195.194238	195.194238
12	27	11	12.27.12	1	108	7.1	0.3	0.12	103.488	10.943	214349.941	197.24212	197.24212
12	27	12	12.27.13	2	93	7.7	0.3	0.12	88.928	11.003	183232.892	167.227672	167.227672
12	27	13	12.27.14	1	64	7.7	0.3	0.12	60.033	9.931	122668.988	108.809788	108.809788
12	27	14	12.27.15	0	12	7.2	0.3	0.12	11.101	7.613	21301.146	11.033811	11.033811
12	27	15	12.27.16	0	14	6.5	0.3	0.12	12.951	6.977	24228.503	13.857441	13.857441
12	27	16	12.27.17	6	1	5.9	0.3	0.12	0	5.9	0	0	0
12	27	17	12.27.18	0	0	5.2	0.3	0.12	0	5.2	0	0	0
12	27	18	12.27.19	0	0	4.9	0.2	0.12	0	4.9	0	0	0
12	27	19	12.27.20	0	0	4.4	0.2	0.12	0	4.4	0	0	0
12	27	20	12.27.21	0	0	3.8	0.2	0.12	0	3.8	0	0	0
12	27	21	12.27.22	0	0	3.4	0.2	0.12	0	3.4	0	0	0
12	27	22	12.27.23	0	0	3.2	0.3	0.12	0	3.2	0	0	0
12	27	23	12.27.24	0	0	3.1	0.3	0.12	0	3.1	0	0	0
12	28	0	12.28.1	0	0	3.1	0.3	0.12	0	3.1	0	0	0
12	28	1	12.28.2	0	0	2.8	0.3	0.12	0	2.8	0	0	0
12	28	2	12.28.3	0	0	2.4	0.3	0.12	0	2.4	0	0	0
12	28	3	12.28.4	0	0	2.1	0.3	0.12	0	2.1	0	0	0
12	28	4	12.28.5	0	0	1.7	0.3	0.12	0	1.7	0	0	0
12	28	5	12.28.6	0	0	1.3	0.3	0.12	0	1.3	0	0	0
12	28	6	12.28.7	0	0	0.9	0.3	0.12	0	0.9	0	0	0
12	28	7	12.28.8	172	13	1.6	0.3	0.12	23.737	2.297	26531.558	16.078889	16.078889
12	28	8	12.28.9	627	41	3.4	0.3	0.12	306.733	14.698	628405.212	596.625767	596.625767
12	28	9	12.28.10	788	53	5	0.3	0.12	506.113	23.929	1069797.229	1022.377509	1022.377509
12	28	10	12.28.11	862	60	6.1	0.4	0.12	641.714	29.375	1329210.704	1272.598934	1272.598934
12	28	11	12.28.12	814	76	6.8	0.3	0.12	675.631	32.041	1381073.615	1322.624135	1322.624135
12	28	12	12.28.13	515	125	7.1	0.3	0.12	515.976	26.358	1072344.93	1024.834936	1024.834936
12	28	13	12.28.14	459	114	6.8	0.3	0.12	433.856	23.001	912948.571	871.086623	871.086623
12	28	14	12.28.15	506	73	5.3	0.2	0.12	359.059	19.14	765256.154	728.627535	728.627535
12	28	15	12.28.16	488	37	2.5	0.2	0.12	225.199	10.969	447056.892	421.703339	421.703339
12	28	16	12.28.17	34	4	0.4	0.3	0.12	0	0.4	0	0	0
12	28	17	12.28.18	0	0	-0.1	0.3	0.12	0	-0.1	0	0	0
12	28	18	12.28.19	0	0	-0.1	0.3	0.12	0	-0.1	0	0	0
12	28	19	12.28.20	0	0	-0.1	0.3	0.12	0	-0.1	0	0	0
12	28	20	12.28.21	0	0	-0.2	0.3	0.12	0	-0.2	0	0	0
12	28	21	12.28.22	0	0	-0.1	0.3	0.12	0	-0.1	0	0	0
12	28	22	12.28.23	0	0	-0.2	0.3	0.12	0	-0.2	0	0	0
12	28	23	12.28.24	0	0	-0.3	0.3	0.12	0	-0.3	0	0	0
12	29	0	12.29.1	0	0	-0.5	0.3	0.12	0	-0.5	0	0	0
12	29	1	12.29.2	0	0	-0.6	0.3	0.12	0	-0.6	0	0	0
12	29	2	12.29.3	0	0	-0.8	0.3	0.12	0	-0.8	0	0	0
12	29	3	12.29.4	0	0	-1.1	0.3	0.12	0	-1.1	0	0	0
12	29	4	12.29.5	0	0	-1.5	0.3	0.12	0	-1.5	0	0	0
12	29	5	12.29.6	0	0	-1.8	0.3	0.12	0	-1.8	0	0	0
12	29	6	12.29.7	0	0	-1.7	0.3	0.12	0	-1.7	0	0	0
12	29	7	12.29.8	40	9	-0.3	0.2	0.12	11.16	0.049	12926.484	2.955897	2.955897
12	29	8	12.29.9	235	61	1.8	0.2	0.12	174.734	8.45	362764.667	340.397922	340.397922
12	29	9	12.29.10	402	95	3.3	0.2	0.12	341.363	16.454	733298.395	697.802167	697.802167
12	29	10	12.29.11	459	122	4.2	0.2	0.12	453.053	21.652	957929.689	914.473882	914.473882
12	29	11	12.29.12	433	144	4.6	0.1	0.12	484.126	23.846	1012879.683	967.476779	967.476779
12	29	12	12.29.13	276	167	4.5	0.1	0.12	387.857	19.906	818106.427	779.605113	779.605113
12	29	13	12.29.14	265	142	4.1	0.2	0.12	334.458	16.971	713216.557	678.431909	678.431909
12	29	14	12.29.15	14	98	3.3	0.4	0.12	104.33	7.063	220541.045	203.213849	203.213849
12	29	15	12.29.16	0	43	2.3	0.6	0.12	41.779	3.709	83541.413	71.068659	71.068659
12	29	16	12.29.17	15	1	1.8	0.6	0.12	0	1.8	0	0	0
12	29	17	12.29.18	0	0	1.6	0.4	0.12	0	1.6	0	0	0
12	29	18	12.29.19	0	0	1.5	0.3	0.12	0	1.5	0	0	0
12	29	19	12.29.20	0	0	1.4	0.2	0.12	0	1.4	0	0	0
12	29	20	12.29.21	0	0	1.4	0.2	0.12	0	1.4	0	0	0
12	29	21	12.29.22	0	0	1.5	0.3	0.12	0	1.5	0	0	0
12	29	22	12.29.23	0	0	1.6	0.3	0.12	0	1.6	0	0	0
12	29	23	12.29.24	0	0	1.6	0.3	0.12	0	1.6	0	0	0
12	30	0	12.30.1	0	0	1.6	0.4	0.12	0	1.6	0	0	0
12	30	1	12.30.2	0	0	1.6	0.4	0.12	0	1.6	0	0	0
12	30	2	12.30.3	0	0	1.6	0.4	0.12	0	1.6	0	0	0
12	30	3	12.30.4	0	0	1.5	0.5	0.12	0	1.5	0	0	0
12	30	4	12.30.5	0	0	1.6	0.5	0.12	0	1.6	0	0	0
12	30	5	12.30.6	0	0	1.5	0.6	0.12	0	1.5	0	0	0
12	30	6	12.30.7	0	0	1.4	0.6	0.12	0	1.4	0	0	0
12	30	7	12.30.8	8	4	1.4	0.6	0.12	4.316	1.521	4881.285	0	0
12	30	8	12.30.9	0	29	1.5	0.6	0.12	26.868	2.41	53883.343	42.461492	42.461492
12	30	9	12.30.10	0	43	1.5	0.6	0.12	39.864	2.856	82562.317	70.124256	70.124256
12	30	10	12.30.11	0	32	1.6	0.7	0.12	29.654	2.581	60654.103	48.992337	48.992337
12	30	11	12.30.12	0	23	1.7	0.7	0.12	21.309	2.404	42929.349	31.895642	31.895642
12	30	12	12.30.13	0	36	1.7	0.7	0.12	33.372	2.803	68382.349	56.44674	56.44674
12	30	13	12.30.14	0	24	1.6	0.7	0.12	22.23	2.335	45012.405	33.904887	33.904887
12	30	14	12.30.15	22	14	1.5	0.7	0.12	25.641	2.351	52897.933	41.510999	41.510999
12	30	15	12.30.16	409	44	1.5	0.7	0.12	209.227	8.302	421805.605	397.346806	397.346806
12	30	16	12.30.17	0	0	1.4	0.7	0.12	0	1.4	0	0	0
12	30	17	12.30.18	0	0	1.3	0.6	0.12	0	1.3	0	0	0
12	30	18	12.30.19	0	0	1.2	0.5	0.12	0	1.2	0	0	0
12	30	19	12.30.20	0	0	1.1	0.5	0.12	0	1.1	0	0	0
12	30	20	12.30.21	0	0	1.1	0.5	0.12	0	1.1	0	0	0
12	30	21	12.30.22	0	0	1.1	0.6	0.12	0	1.1	0	0	0
12	30	22	12.30.23	0	0	1.1	0.6	0.12	0	1.1	0	0	0
12	30	23	12.30.24	0	0	1	0.5	0.12	0	1	0	0	0
12	31	0	12.31.1	0	0	1	0.5	0.12	0	1	0	0	0
12	31	1	12.31.2	0	0	1	0.5	0.12	0	1	0	0	0
12	31	2	12.31.3	0	0	1	0.4	0.12	0	1	0	0	0
12	31	3	12.31.4	0	0	1	0.4	0.12	0	1	0	0	0
12	31	4	12.31.5	0	0	0.9	0.4	0.12	0	0.9	0	0	0
12	31	5	12.31.6	0	0	0.7	0.4	0.12	0	0.7	0	0	0
12	31	6	12.31.7	0	0	0.6	0.3	0.12	0	0.6	0	0	0
12	31	7	12.31.8	101	11	0.6	0.3	0.12	16.839	1.1	19060.746	8.872798	8.872798
12	31	8	12.31.9	201	43	1	0.3	0.12	138.914	6.122	288466.266	268.732209	268.732209
12	31	9	12.31.10	16	102	1.4	0.3	0.12	108.922	5.451	232325.662	214.580889	214.580889
12	31	10	12.31.11	134	158	1.7	0.2	0.12	263.552	11.828	566666.774	537.074967	537.074967
12	31	11	12.31.12	22	154	1.9	0.2	0.12	167.197	8.31	356368.114	334.228025	334.228025
12	31	12	12.31.13	0	66	2.1	0.2	0.12	61.267	4.447	127688.014	113.65097	113.65097
12	31	13	12.31.14	0	54	2.3	0.2	0.12	50.095	4.221	103978.841	90.781907	90.781907
12	31	14	12.31.15	0	23	2.2	0.2	0.12	21.294	3.017	42930.868	31.897107	31.897107
12	31	15	12.31.16	0	10	1.4	0.3	0.12	9.246	1.741	17549.974	7.415558	7.415558
12	31	16	12.31.17	18	2	0.6	0.4	0.12	1.903	0.657	2136.309	0	0
12	31	17	12.31.18	0	0	0.6	0.4	0.12	0	0.6	0	0	0
12	31	18	12.31.19	0	0	0.7	0.4	0.12	0	0.7	0	0	0
12	31	19	12.31.20	0	0	-2	0.1	0.87	0	-2	0	0	0
12	31	20	12.31.21	0	0	-2	0.1	0.87	0	-2	0	0	0
12	31	21	12.31.22	0	0	-2	0.1	0.87	0	-2	0	0	0

PVWatts Hourly PV Performance Data			
Requested Location	Hartford, CT		
Solar Resource Data Location	NSRDB Lat/Lng: 41.77, -72.66		
Latitude (degrees)	41.77		
Longitude (degrees)	-72.66		
Elevation (m)	15.35999966	Adjusted	
DC System Size (kW)	2400	2400	
Module Type	Standard		
Array Type	Fixed (open rack)		
Array Tilt (deg)	20		
Array Azimuth (deg)	180		
System Losses (%)	14.08		
DC to AC Size Ratio	1.2		
Inverter Efficiency (%)	96		
Ground Coverage Ratio	NA		
Albedo	From weather file		
Bifacial	No (0)		
Monthly Irradiance Loss (%)			
	Jan	0	
	Feb	0	
	Mar	0	
	Apr	0	
	May	0	
	June	0	
	July	0	
	Aug	0	
	Sept	0	
	Oct	0	
	Nov	0	
	Dec	0	

												Reference Case	Adjusted Case
												3,025,628	3,025,628
Month	Day	Hour	Reference	Beam Irradiance (W/m2)	Diffuse Irradiance (W/m2)	Ambient Temperature (C)	Wind Speed (m/s)	Albedo	Plane of Array Irradiance (W/m2)	Cell Temperature (C)	DC Array Output (W)	AC System Output (kW)	AC System Output (kW)
12	31	22	12.31.23	0	0	-2	0.1	0.87	0	-2	0	0	0
12	31	23	12.31.24	0	0	-2	0.1	0.87	0	-2	0	0	0