

SOLAR-ELECTRIC SITE ASSESSMENT REPORT

Date of Assessment:	4/23/2007
Client:	Dristy Family
Client Phone #:	610-349-3614
Client E-mail:	md@MarcEdward.com
Assessment Address:	Dristy Residence, Kempton PA
Assessment ZIP CODE:	19529

Site Description: SITE 1. South side of dwelling 25' south of outside basement steps.



Potential System: 3 kW (DC) two-axis tracked solar array.

Estimated Installed Cost:	\$33,000
Rebates:	\$0
Tax Credits:	\$10,000
Cost to Client:	\$23,000
Current Electric Rate:	\$0.085 per kW-hr
Estimated Annual Electric Rate Hike:	10 %
Est. Annual Solar Electricity Generated:	3,898 kW-hr (AC)
Avg CO ₂ emissions per kW-hr grid electricity produced in the US:	1.34 lb

Year	Electric Rate (per kW-hr)	Cumulative Savings	Cumulative CO ₂ Savings (lbs)
1	\$0.085	\$331	5,223
2	\$0.094	\$696	10,447
3	\$0.103	\$1,097	15,670
4	\$0.113	\$1,538	20,893
5	\$0.124	\$2,023	26,117
6	\$0.137	\$2,556	31,340
7	\$0.151	\$3,143	36,563
8	\$0.166	\$3,789	41,787
9	\$0.182	\$4,499	47,010
10	\$0.200	\$5,281	52,233
11	\$0.220	\$6,140	57,457
12	\$0.243	\$7,085	62,680
13	\$0.267	\$8,125	67,903
14	\$0.293	\$9,269	73,126
15	\$0.323	\$10,527	78,350
16	\$0.355	\$11,911	83,573
17	\$0.391	\$13,434	88,796
18	\$0.430	\$15,108	94,020
19	\$0.473	\$16,951	99,243
20	\$0.520	\$18,977	104,466
21	\$0.572	\$21,206	109,690
22	\$0.629	\$23,658	114,913
23	\$0.692	\$26,355	120,136
24	\$0.761	\$29,322	125,360
25	\$0.837	\$32,585	130,583





Marc Edward LLC Solar Site Analysis Report

Report Title Dristy Residence, Kempton PA, SITE #1
Image File SITE 1.JPG
Report Date Monday, April 23, 2007
Declination -11d 58m
Latitude/Longitude 40.628 / -75.883
Analysis Site KEMPTON, PA, Zipcode: 19529
Weather Station ALLENTOWN, PA, Elevation: 117 m
Station/Site Distance 23.67 miles

Array Type TwoAxis
Tilt Angle 0.00 degrees
Cost of Electricity 9 cents/kWhr
DC Rate 3.00 kW
Derate Factor 0.77
Azimuth (180 = south) 0.00 degrees

Month	Unshaded % of Ideal Site	Ideal Solar Rad w/o Shading	Actual Solar Rad w/ Shading	Ideal AC Power (KWH) w/o shading	Actual AC Power (KWH) w/ shading	Actual Solar Savings
	Azimuth=180.0 Tilt=40.6	Azimuth=180 Tilt=40.6 KWH/m ² /day	Azimuth=180.0 Tilt=0.0 KWH/m ² /day	Azimuth=180.0 Tilt=40.6	Azimuth=180.0 Tilt=0.0	
January	81.60%	3.88	3.15	293.0	238.92	\$20.31
February	91.90%	4.55	4.09	309.0	279.41	\$23.75
March	88.20%	5.82	4.82	425.0	352.79	\$29.99
April	89.20%	6.76	5.65	461.0	383.99	\$32.64
May	91.30%	7.04	6.12	472.0	409.04	\$34.77
June	90.10%	7.25	5.93	464.0	377.88	\$32.12
July	91.70%	7.64	6.72	497.0	436.04	\$37.06
August	90.60%	7.03	6.04	458.0	393.39	\$33.44
September	87.60%	6.07	4.95	394.0	320.41	\$27.24
October	92.60%	5.38	4.86	370.0	334.21	\$28.41
November	79.90%	3.45	2.63	239.0	182.34	\$15.50
December	75.60%	3.34	2.55	246.0	189.23	\$16.08
Totals	87.53%	--	--	4628.0	3897.67	\$331.30
Unweighted Yearly Avg		Effect: 100% Sun Hrs: 5.69	Effect: 84.27% Sun Hrs: 4.79			

NOTES: 3 kW (DC) ground based two-axis tracked array.
 Center/back of main structure 15 feet south of basement door.
 Estimated system cost: \$33,000.

