

# Albuquerque Solar Resource

Sandia National Laboratories

Photovoltaic Systems Evaluation Laboratory

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Annual Daytime Average Values									
Year	Global Normal Irradiance	Direct Normal Irradiance (TMY3 = 6.7)	Global Horizontal Irradiance** (TMY3 = 5.43)	Latitude Tilt Irradiance**	Diffuse Horizontal Irradiance (TMY3 = 1.46)	Peak GNI (1-hr avg)	Peak DNI (1-hr avg)	Peak GHI (1-hr avg)	Peak Lat.Tilt (1-hr avg)
	----- kWh/m <sup>2</sup> /d -----					----- W/m <sup>2</sup> -----			
<b>TMY2</b>	8.8	6.7	5.6	6.4	1.6	-	-	-	-
<b>2015</b>	8.26	6.58	5.29	6.07	1.34	1167	1067	1090	1208
<b>2014</b>	8.85	7.10	5.54	6.40	1.28	1176	1083	1098	1196
<b>2013</b>	8.82	7.23	5.59	6.63	1.24	1192	1076	1093	1182
<b>2012</b>	9.17	7.41	5.69	6.65	1.21	1177	1080	1091	1204
<b>2011</b>	9.06	7.29	5.65	6.59	1.21	1210	1092	1084	1184
<b>2010</b>	9.02	7.33	5.58	6.40	1.14	1184	1083	1091	1180
<b>2009</b>	8.88	7.10	5.47	6.49	1.29	1195	1083	1091	1208
<b>2008</b>	9.01	7.31	5.57	6.54	1.22	1204	1086	1077	1233
<b>2007</b>	8.73	6.93	5.46	6.32	1.27	1180	1088	1072	1178
<b>2006</b>	8.80	6.88	5.51	6.43	1.31	1195	1096	1103	1228
<b>2005</b>	8.60	6.82	5.39	6.23	1.30	1171	1075	1100	1202
<b>2004</b>	8.82	7.06	5.55	6.31	1.24	1191	1078	1120	1176
<b>2003</b>	8.80	7.05	5.38	6.29	1.29	1181	1089	1080	1164
<b>2002</b>	8.96	7.15	5.58	6.50	1.29	1294	1118	1115	1211
<b>2001</b>	8.75	7.00	5.46	6.31	1.28	1195	1086	1105	1172
<b>2000</b>	8.73	7.01	5.48	6.29	1.27	1209	1083	1125	1209
<b>1999</b>	9.03	7.37	5.53	6.53	1.23	1167	1095	1107	1176
<b>1998</b>	8.81	7.04	5.45	6.23	1.30	1239	1091	1102	1217
<b>1997</b>	8.39	6.76	5.22	6.05	1.32	1212	1087	1099	1170
<b>1996</b>	8.76	7.19	5.42	6.39	1.24	1161	1076	1096	1173
<b>1995</b>	8.49	6.91	5.42	6.26	1.33	1183	1066	1082	1211
<b>1994</b>	8.53	6.71	5.35	6.19	1.33	1189	1066	1112	1206
<b>1993</b>	8.57	6.48	5.36	6.20	1.47	1210	1039	1132	1160
<b>1992***</b>	7.92	5.48	5.26	5.80	1.74	1172	987	1100	1162
<b>1991</b>	8.52	6.52	5.45	-	1.49	1174	1076	1124	-
<b>25 yr avg:</b>	<b>8.73</b>	<b>6.95</b>	<b>5.47</b>	<b>6.34</b>	<b>1.31</b>	<b>1195</b>	<b>1076</b>	<b>1102</b>	<b>1190</b>

Notes: \* Includes daytime and nighttime values.

\*\* Pyranometer corrected for angle of incidence starting in 1996 for horizontal and 1997 for latitude tilt.

Latitude tilt sensor moved from the equivalent of the back row to the front row of an array on 10/10/2007.

\*\*\*Mt. Pinatubo, Phillipines, erupted 6/91, reduced solar resource late 1991, 1992, early 1993.

TMY = Typical Meteorological Year

**Albuquerque Weather**  
**Sandia National Laboratories**  
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Year	Annual Average Values								
	Ambient Temp. (24 hrs)	Ambient Temperature (day)	Relative Humidity*	Avg. Wind Speed (@10m)*	Peak Avg WndSpd (1hr avg)*	Peak Wnd Spd (Instant.)*	Wind Direction*	Rainfall (total annual)*	Lightning Near Strikes~
	Degrees Celsius	%		meters/sec		deg	cm	#	
<b>TMY2</b>	13.4	16.0	44	4.3	-	-	-	-	-
<b>2015</b>	14.6	17.5	45	3.0	16.6	26.4	126	26.7	71
<b>2014</b>	14.8	17.7	38	3.2	14.8	27.2	142	21.2	49
<b>2013</b>	14.1	17.1	38	3.1	15.9	25.6	165	38.1	30
<b>2012</b>	15.4	17.9	34	3.1	15.7	24.8	111	13.7	18
<b>2011</b>	14.4	17.5	35	3.1	17.4	27.0	113	20.6	17
<b>2010</b>	14.5	17.3	47	3.2	15.6	25.2	121	34.4	51
<b>2009</b>	14.5	16.8	34	3.3	14.9	24.5	122	24.0	12
<b>2008</b>	14.2	16.6	36	3.4	14.7	24.0	148	26.9	20
<b>2007</b>	14.5	16.9	38	3.3	15.5	23.5	112	28.3	34
<b>2006</b>	14.5	17.0	36	3.5	15.0	25.4	137	51.4	61
<b>2005</b>	14.7	17.2	38	3.6	17.5	27.2	133	39.4	40
<b>2004</b>	13.9	16.8	37	3.9	19.0	27.0	138	42.1	41
<b>2003</b>	15.0	17.5	34	3.6	18.7	27.5	133	20.8	24
<b>2002</b>	14.4	17.0	36	3.6	18.9	32.2	135	20.8	40
<b>2001</b>	14.5	17.0	42	3.7	20.1	29.3	111	18.7	23
<b>2000</b>	14.6	17.2	42	3.9	18.6	27.5	104	34.2	59
<b>1999</b>	14.1	16.6	40	4.1	20.6	30.2	72	25.9	-
<b>1998</b>	13.9	16.4	32	4.0	17.4	25.8	91	32.3	-
<b>1997</b>	13.2	15.7	32	4.1	20.6	30.8	93	45.9	-
<b>1996</b>	14.2	16.8	32	3.4	19.8	31.8	99	39.3	-
<b>1995</b>	14.5	16.9	23	3.3	17.3	25.4	-	19.7	-
<b>1994</b>	14.0	16.6	26	3.4	18.4	28.4	-	45.3	-
<b>1993</b>	13.6	16.2	30	3.6	22.1	35.1	-	40.2	-
<b>1992</b>	12.9	15.4	38	3.3	18.9	29.0	-	37.1	-
<b>1991</b>	13.0	15.5	40	4.0	19.6	30.0	-	30.6	-
<b>25 yr avg:</b>	<b>14.2</b>	<b>16.8</b>	<b>36.1</b>	<b>3.5</b>	<b>17.7</b>	<b>27.6</b>	<b>120</b>	<b>31.1</b>	<b>37</b>

Notes: ~ Near strike definition restricted 6/29/00 to be adjacent (< 4s) Potential Gradient readings of opposite polarity with magnitudes greater than 5kV/m.

### Annual Averages

