



## US City Solar Energy Averages

The following is a listing of US city solar energy averages. The number of solar hours your city receives, along with the number of vehicles speeding, is a determining factor in whether a 40 watt solar panel or a 65 watt solar panel is needed with a solar powered Radarsign.

Cities with a latitude listing reflect solar numbers using collected data from an angle equal to the latitude. Since the mounting bracket on all solar powered radarsigns are angled at 45°, these numbers best reflect the solar energy potential for these northern cities.

If you want the Radarsign's solar powered driver feedback signs to remain functional year round, use the **WINTER** number for your city, or a city close to you.

Once you have determined the solar energy number for your city use our traffic volume and power estimates chart to determine which size solar panel is best for your local needs.

US City Average Hours Per Day of Solar Energy					
State	City	Latitude	Summer	Avg.	Winter
AK	Fairbanks	64.8°	5.1	3.3	0.5
AK	Anchorage	61.2°	4.5	3	0.8
AK	Cold Bay	55.2°	3.3	2.4	1.1
AK	Nome	64.5°	4.9	3.3	0.7
AL	Huntsville		5.7	4.4	3.4
AL	Mobile		5.6	4.4	3.3
AL	Montgomery		5.9	4.2	3.4
AR	Bethel		6.3	3.8	2.4
AR	Little Rock		5.3	4.7	3.9
AZ	Tucson		7.4	5.7	4.1
AZ	Phoenix		8	5.7	4
CA	Santa Maria		6.5	5.9	4.4
CA	Riverside		6.4	5.9	4.4
CA	Fresno		6.2	5.4	3.4
CA	Los Angeles		6.1	5.6	4.8
CA	La Jolla		5.2	4.8	4.3
CA	Arcata	40.1°	5.4	4.4	2.9
CO	Grand Junction	39.1°	6.7	5.8	4.3
CO	Boulder	40.0°	6.1	5.5	4.3
CT	Bridgeport	41.2°	5.3	4.4	3.2
CT	Hartford	42.0°	5.3	4.4	2.8
DC	Washington		4.7	4.2	3.4
FL	Apalachicola		6	5.5	4
FL	Miami		6.3	5.6	4.6
FL	Gainesville		5.8	5.3	4.2
FL	Tampa		6.2	5.7	4.4
GA	Atlanta		5.2	4.7	3.8
GA	Griffin		5.4	5	4.1
HI	Honolulu		6.7	6	5.2

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IA	Ames		4.8	4.4	3.7
ID	Boise	43.6°	6.5	5.1	3.7
ID	Pocatello	42.9°	6.4	5	2.7
IL	Chicago	41.8°	5.6	4.4	2.6
IL	Peoria	40.7°	5.7	4.6	2.9
IL	Springfield	39.6°	5.8	4.7	3.1
IN	Indianapolis		5	4.2	2.6
KS	Wichita		6.4	4.6	3.2
KS	Dodge City		6.5	5.1	3
KY	Lexington		6	4.9	3.6
LA	Lake Charles		5.7	4.9	4
LA	New Orleans		5.7	4.9	3.6
LA	Shreveport		5	4.6	3.9
MA	Boston	42.4°	5.5	4.6	3
MA	Natick	42.1°	5.2	4.4	3.1
MD	Silver Hill		5.1	4.5	3.8
ME	Caribou	46.9°	5.1	4.2	2.5
ME	Portland	43.6°	5.5	4.6	3.1
MI	Detroit	42.4°	5.5	4.2	2.4
MI	Traverse City	44.7°	5.5	4.1	1.9
MI	Sault Ste. Marie	46.4°	5.4	4.2	2.2
MI	E. Lansing	42.8°	5.5	4.2	2.2
MN	Duluth	46.8°	5.5	4.4	2.5
MN	Minneapolis	44.8°	5.7	4.6	2.8
MN	Rochester	43.9°	5.6	4.5	2.7
MN	St. Cloud	45.5°	5.7	4.5	2.7
MO	Columbia		5.5	4.7	3.8
MO	St. Louis		4.9	4.4	3.2
MS	Meridian		4.9	4.4	3.6
MT	Billings	45.8°	6.1	5	3.2
MT	Glasgow	48.2°	6	4.7	2.8
MT	Great Falls	47.5°	6	4.8	2.9
MT	Helena	46.6°	6.1	4.7	2.7
NC	Cape Hatteras		5.8	5.3	4.2
NC	Greensboro		5.1	4.7	4
ND	Bismark	46.8°	6	4.9	3
ND	Fargo	46.9°	5.8	4.6	2.8
ND	Minot	48.3°	5.9	4.7	2.9
NE	Norfolk	42.0°	6	5	3.5
NE	Omaha	41.1°	5.9	4.6	3.3
NE	Scottsbluff	41.9°	6.3	5.2	3.9
NM	Albuquerque		7.2	5.6	4.5
NJ	Seabrook		4.8	4.2	3.2
NV	Las Vegas		8	5.7	3.1
NV	Reno	39.5°	6.9	5.8	4
NY	Albany	42.7°	5.4	4.2	2.5



US City Average Hours Per Day of Solar Energy					
NY	Binghamton	42.2°	5.2	4	2.2
NY	Buffalo	42.9°	5.4	4	2.1
NY	Rochester	43.1°	5.4	4.1	2.2
NY	New York City	40.8°	5.5	4	3
NY	Syracuse	43.1°	5.4	4.1	2.1
OH	Columbus	40.0°	5.3	4.2	2.5
OH	Cleveland	41.4°	5.5	4.1	2.2
OK	Stillwater		5.5	5	4.2
OK	Oklahoma City		6.3	5.6	4.3
OR	Astoria	46.1°	4.9	3.5	1.8
OR	Eugene	44.1°	5.9	4	1.8
OR	Medford	42.2°	6.9	4.8	2
OR	Portland	45.6°	5.6	3.9	1.7
OR	Salem	44.9°	5.9	4	1.8
PA	Allentown	40.6°	5.3	4.3	2.8
PA	Erie	42.1°	5.6	3.9	2
PA	Philadelphia	39.9°	5.5	4.6	3.1
PA	Pittsburg	40.5°	5.3	4.2	2.3
RI	Providence	41.7°	5.4	4.5	3
SC	Charleston		5.7	5.1	4.2
SD	Pierre	44.4°	6	5	3.3
SD	Rapid City	44.1°	6.2	5.2	3.5
SD	Sioux Falls	43.6°	5.9	4.8	3.1
TN	Nashville		5.2	4.5	3.1
TN	Oak Ridge		5.1	4.4	3.2
TX	San Antonio		5.9	5.1	4.5
TX	Brownsville		5.5	4.9	4.4
TX	El Paso		7.4	5.9	4.2
TX	Midland		6.3	5.5	4
TX	Fort Worth		6	5.4	4.4
UT	Salt Lake City	40.8°	7.1	5.3	3
VA	Richmond		5.5	4.1	2.8
VT	Burlington	44.5°	5.8	3.7	1.8
WA	Olympia	47.0°	5.2	3.6	1.4
WA	Seattle	47.4°	5.4	3.6	1.5
WA	Spokane	47.6°	6.1	4.3	2
WI	Green Bay	44.5°	5.5	4.4	2.6
WI	Madison	43.1°	5.6	4.5	2.7
WI	Milwaukee	42.9°	5.7	4.5	2.6
WV	Charleston		4.1	3.7	2.5
WY	Casper	42.9°	6.4	5.3	3.7
WY	Cheyenne	41.1°	6	5.2	4
WY	Lander	42.8°	6.5	5.6	4

Solar hour estimates courtesy of National Renewable Energy Laboratory

[www.nrel.gov](http://www.nrel.gov)