

Insolation Levels (Europe)

Average Insolation (10 year average) kWh/m²/day

Countr	State/City	Latitude	Longitud	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year Avg
AT	Vienna	48' 13" N	16' 22" E	1.1	1.81	2.8	3.76	4.76	5.12	5.72	4.98	3.68	2.15	1.28	0.93	3.52
BE	Bruxelles	50' 45" N	4' 30" E	0.74	1.31	2.29	3.68	4.67	4.48	4.82	4.2	2.86	1.73	0.92	0.56	3.02
BG	Sofija	42' 40" N	23' 18" E	1.5	2.04	2.97	4.05	5	5.8	6.29	5.68	4.46	2.75	1.62	1.27	3.99
CY	Limassol	34' 40" N	33' 03" E	2.52	3.26	4.54	6	6.85	7.81	7.8	7.18	6.11	4.43	3.02	2.31	5.61
CR	Zagreb	45' 29" N	15' 35" E	1.3	2	2.94	3.91	5.03	5.37	5.93	5.19	3.94	2.39	1.39	1.09	3.72
DE	Hamburg	53' 33" N	9' 59" E	0.54	1.11	2.09	3.68	4.86	4.47	4.47	3.89	2.59	1.48	0.69	0.4	2.52
DE	Munich	48' 05" N	11' 23" E	1.05	1.8	2.82	3.95	4.84	4.65	5.14	4.46	3.2	2	1.02	0.79	2.98
ES	Madrid	40' 25" N	3' 41" W	1.93	2.75	4.09	4.83	5.85	6.52	7.11	6.3	4.91	3.07	1.97	1.59	4.62
ES	Malaga	36' 42" N	4' 42" W	2.52	3.24	4.51	5.4	6.35	7.09	7.64	6.81	5.39	3.7	2.58	2.14	5.16
ES	Barcelona	41' 24" N	2' 9" E	1.89	2.71	3.97	4.99	5.82	6.56	7.01	6.07	4.72	3.11	2.04	1.7	4.6
ES	Alicante	38' 40" N	0' 30" W	2.23	3.02	4.26	5.39	6.13	6.89	7.34	6.53	5.11	3.45	2.34	1.94	4.94
FX	Lyon	45' 46" N	4' 50" E	1.26	1.97	3.02	4.08	4.97	5.4	6.03	5.23	3.93	2.27	1.43	1.08	3.74
FX	Paris	48' 52" N	2' 20" E	0.89	1.62	2.62	3.95	4.9	4.83	5.35	4.61	3.33	2	1.12	0.72	3.34
FX	Toulouse	43' 37" N	1' 26" E	1.39	2.14	3.19	4.03	4.82	5.16	5.86	5.07	4.09	2.48	1.58	1.25	3.75
GR	Athens	38' N	23' 43" E	2	2.52	3.67	5.21	6.38	7.52	7.61	6.91	5.57	3.5	2.16	1.63	4.56
HU	Budapest	47' 30" N	19' 3" E	1	1.71	2.76	3.9	5.03	5.3	5.62	4.84	3.57	2.24	1.17	0.88	3.17
IE	Dublin	53' 20" N	6' 15" W	0.56	1.07	1.97	3.32	4.4	4.3	4.3	3.4	2.69	1.43	0.77	0.43	2.39
IT	Milan	45' 28" N	9' 12" E	1.27	1.89	2.91	3.65	4.84	5.36	5.97	5.21	3.91	2.4	1.42	1.08	3.33
IT	Rome	41' 53" N	12' 30" E	1.78	2.52	3.71	4.87	5.98	6.84	7.08	6.34	4.83	3.08	1.98	1.56	4.21
NL	Amsterdam	52' 21" N	4' 54" E	0.61	1.21	2.27	3.76	4.88	4.73	4.78	4.13	2.8	1.6	0.78	0.45	2.67
NO	Oslo	59' 56" N	10' 44" E	0.3	0.87	1.68	3.12	4.65	4.84	4.59	3.36	2.22	1.02	0.42	0.19	2.27
RO	Bucharest	44' 26" N	26' 06" E	1.36	1.94	2.91	3.94	5.03	5.6	6.15	5.53	4.15	2.59	1.37	1.1	3.47
PT	Lisboa	38' 42" N	9' 11" W	2.27	2.99	4.3	5.15	6.13	6.46	6.89	6.33	5.11	3.44	2.27	1.84	4.43
PT	Oviedo	43' 21" N	5' 50" W	1.67	2.29	3.44	4.59	5.56	6.32	6.86	5.95	4.51	2.71	1.77	1.46	3.93
UA	Odessa	46' 30" N	30' 46" E	1.08	1.78	2.68	3.87	5.4	5.7	6.39	5.63	3.96	2.45	1.06	0.87	3.41
UK	Edinburgh	55' 55" N	3' 10" W	0.44	0.94	1.86	3.18	4.33	4.34	4.13	3.41	2.43	1.2	0.59	0.32	2.26
UK	London	51' 32" N	0' 5" W	0.67	1.26	2.22	3.48	4.54	4.51	4.74	4.01	2.86	1.65	0.89	0.52	2.61
SZ	Bern	46' 57" N	7' 26" E	1.1	1.77	2.74	3.6	4.7	5.07	5.68	4.95	3.66	2.18	1.26	0.92	3.14
SZ	Lausanne	46' 32" N	6' 39" E	1.1	1.81	2.8	3.76	4.76	5.12	5.72	4.98	3.68	2.15	1.28	0.93	3.17
YU	Beograd	44' 50" N	20' 30" E	1.29	1.89	2.92	3.86	4.88	5.45	6	5.3	4.05	2.5	1.4	1.11	3.39

Data courtesy of: [NASA - Surface meteorology and Solar Energy Data Set](#)

Reference:

Whitlock, C. E., et al., Release 3 NASA Surface Meteorology and Solar Energy Data Set for Renewable Energy Industry Use. Rise & Shine 2000, the 26th Annual Conference of the Solar Energy Society of Canada Inc. and Solar, Oct. 21-24, 2000, Halifax, Nova Scotia, Canada.

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