Heating power in kWh from SolarVenti Solar Air Collectors for domestic houses.

Country : Australia

Type	Solar Efficiency in %	Size of Solar Air Colletor in m2	Heating power in kWh per year (60 deg. tilt)				
			Perth	Darwin	Adelaide	Brisbane	Sidney
SV3	0,57	0,37	188	230	174	188	166
SV7	0,62	0,71	393	480	363	393	346
SV14 *	0,64	1,39	793	971	733	794	699
SV20	0,67	1,98	1.183	1.447	1.094	1.183	1.042
SV30	0,70	3,06	1.910	2.337	1.766	1.911	1.683

Heating power = Solar Efficiency x Size of Solar Air Collector in m2 x days in one year x average solar irradiotion for the chosen lokation

* Heating efficiency performance regarding SV14 has been tested by Fraunhofer Institute in Germany.
Testreport is available at www.solarventi.dk or on request

Heating power BTU from SolarVenti Solar Air Collectors for domestic houses.

Country : Australia

Type	Solar Efficiency in %	Size of Solar Air Colletor in m2	Heating power in BTU per year (60 deg. tilt)				
			Perth	Darwin	Adelaide	Brisbane	Sidney
SV3	0,57	0,37	641.783	785.184	593.373	641.990	565.377
SV7	0,62	0,71	1.339.558	1.638.872	1.238.516	1.339.990	1.180.080
SV14 *	0,64	1,39	2.707.113	3.311.996	2.502.916	2.707.984	2.384.822
SV20	0,67	1,98	4.036.934	4.938.955	3.732.429	4.038.233	3.556.323
SV30	0,70	3,06	6.518.251	7.974.704	6.026.581	6.520.349	5.742.232

BTU-kWh conversion factor 3412,416331

Source for heating data : RetScreen

DATA - PERTH

Month	Air temperature	Relative humidity	Daily solar radiation - 60 deg. slope	Atmospheric pressure	Wind speed	Earth temperature	Heating degree-days	Cooling degree-days
	℃	%	kWh/m²/d	kPa	m/s	℃	℃-d	℃-d
January	24,1	50,6%	4,98	101,1	5,3	25,3	0	437
February	24,5	50,0%	3,55	101,1	5,1	25,3	0	406
March	22,6	53,5%	1,79	101,3	4,8	24,2	0	391
April	19,3	61,2%	1,35	101,5	4,0	22,1	0	279
May	16,0	69,9%	0,96	101,6	3,5	19,5	62	186
June	13,6	75,4%	0,84	101,6	3,5	17,4	132	108
July	12,6	76,1%	0,89	101,7	3,6	16,3	167	81
August	12,9	74,6%	1,21	101,7	3,7	16,2	158	90
September	14,5	71,7%	1,56	101,7	4,0	17,3	105	135
October	16,4	65,1%	2,74	101,5	4,5	19,1	50	198
November	19,6	58,2%	4,31	101,3	5,1	21,6	0	288
December	22,0	54,0%	5,19	101,2	5,3	23,7	0	372
Annual	18,1	63,4%	**2,44**	101,4	4,4	20,6	674	2.971
Measured at	m				10,0	0,0		

Source: RetScreen

DATA - DARWIN

Month	Air temperature	Relative humidity	Daily solar radiation - 60 deg. slope	Atmospheric pressure	Wind speed	Earth temperature	Heating degree-days	Cooling degree-days
	℃	%	kWh/m²/d	kPa	m/s	℃	℃-d	℃-d
January	28,1	80,8%	4,22	100,3	3,7	28,6	0	561
February	27,8	82,1%	3,72	100,3	3,8	28,3	0	498
March	27,8	80,4%	3,11	100,4	3,2	28,2	0	552
April	27,9	71,9%	2,14	100,6	3,0	28,1	0	537
May	26,7	63,2%	1,46	100,8	3,2	27,5	0	518
June	24,7	58,0%	1,32	101,0	3,5	26,0	0	441
July	24,3	59,7%	1,34	101,0	3,3	25,8	0	443
August	25,2	62,0%	1,71	101,0	3,3	27,3	0	471
September	27,3	66,4%	2,91	100,9	3,3	29,8	0	519
October	28,8	68,5%	4,20	100,7	3,5	30,6	0	583
November	29,1	72,6%	4,98	100,5	3,4	29,8	0	573
December	28,7	76,9%	4,81	100,4	3,6	29,1	0	580
Annual	27,2	70,1%	**2,99**	100,7	3,4	28,2	0	6.276
Measured at	m				10,0	0,0		

DATA - ADELAIDE

Month	Air temperature	Relative humidity	Daily solar radiation - 60 deg. slope	Atmospheric pressure	Wind speed	Earth temperature	Heating degree-days	Cooling degree-days
	°C	%	kWh/m²/d	kPa	m/s	°C	°C-d	°C-d
January	21,6	52,7%	4,63	101,2	4,9	27,5	0	360
February	21,9	52,7%	3,28	101,3	4,6	27,0	0	333
March	19,8	57,3%	1,67	101,6	4,3	23,6	0	304
April	16,7	62,3%	1,28	101,8	3,9	19,1	39	201
May	14,0	70,3%	0,89	101,9	3,7	14,5	124	124
June	11,7	76,5%	0,76	102,0	4,1	11,1	189	51
July	10,9	76,1%	0,81	101,9	4,2	10,0	220	28
August	11,8	71,9%	1,04	101,8	4,7	11,0	192	56
September	13,6	68,0%	1,50	101,7	4,7	14,0	132	108
October	15,7	61,1%	2,49	101,5	5,1	17,8	71	177
November	18,4	55,8%	4,04	101,4	5,0	22,9	0	252
December	20,1	54,4%	4,77	101,2	5,1	26,1	0	313
Annual	16,3	63,3%	**2,26**	101,6	4,5	18,7	968	2.306
Measured at	m				10,0	0,0		

Source: RetScreen

DATA - BRISBANE

Month	Air temperature	Relative humidity	Daily solar radiation - 60 deg. slope	Atmospheric pressure	Wind speed	Earth temperature	Heating degree-days	Cooling degree-days
	℃	%	kWh/m²/d	kPa	m/s	℃	℃-d	℃-d
January	24,9	72,0%	4,51	101,2	4,1	25,7	0	462
February	24,6	73,5%	3,32	101,2	4,0	25,8	0	409
March	23,3	73,9%	2,16	101,4	3,7	25,1	0	412
April	20,9	74,3%	1,47	101,7	3,5	23,9	0	327
May	18,1	74,5%	1,09	101,8	3,2	22,3	0	251
June	15,3	71,4%	0,95	101,8	3,3	20,6	81	159
July	14,5	69,3%	1,00	101,9	3,3	19,5	109	140
August	15,4	67,4%	1,30	101,8	3,4	19,6	81	167
September	18,1	67,2%	1,63	101,7	3,8	20,8	0	243
October	20,4	69,0%	2,99	101,5	4,1	22,2	0	322
November	22,1	69,8%	4,22	101,3	4,3	23,6	0	363
December	23,9	71,7%	4,74	101,2	4,2	24,8	0	431
Annual	20,1	71,2%	**2,44**	101,5	3,7	22,8	270	3.686
Measured at	m				10,0	0,0		

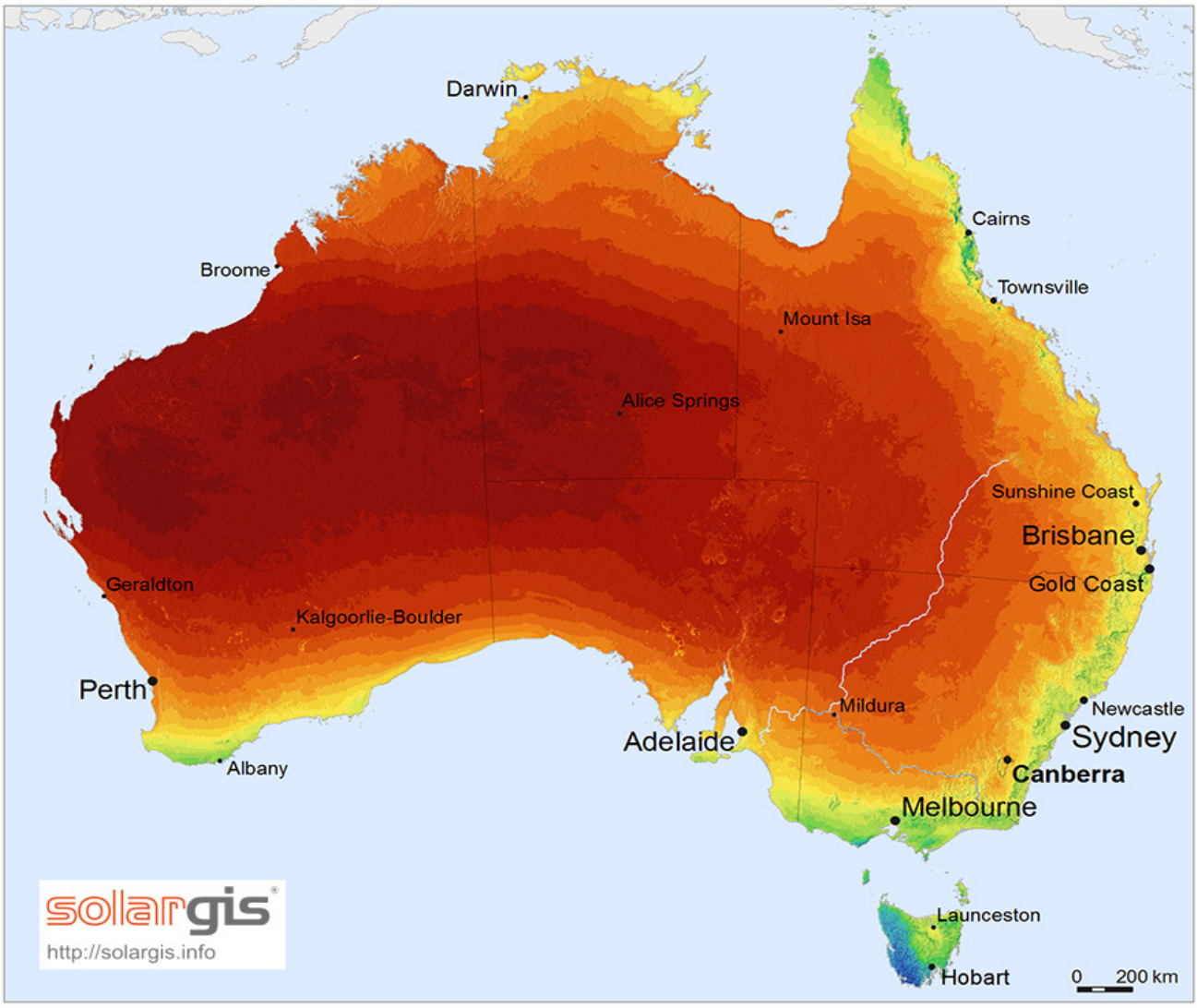
DATA - SIDNEY

Month	Air temperature	Relative humidity	Daily solar radiation - 60 deg. slope	Atmospheric pressure	Wind speed	Earth temperature	Heating degree-days	Cooling degree-days
	℃	%	kWh/m²/d	kPa	m/s	℃	℃-d	℃-d
January	22,6	71,2%	4,04	99,6	5,0	23,7	0	391
February	22,7	72,5%	2,94	99,7	4,8	23,6	0	356
March	21,3	72,4%	1,72	100,0	4,4	22,5	0	350
April	18,8	71,6%	1,31	100,3	3,9	20,7	0	264
May	16,0	72,4%	0,92	100,3	3,6	18,3	62	186
June	13,3	69,9%	0,78	100,3	3,7	16,2	141	99
July	12,5	67,6%	0,84	100,2	3,8	15,2	171	78
August	13,6	62,8%	1,06	100,1	4,2	15,7	136	112
September	16,0	62,6%	1,52	99,9	4,5	17,4	60	180
October	18,1	63,9%	2,52	99,8	4,9	19,4	0	251
November	19,6	67,8%	3,84	99,7	5,1	20,8	0	288
December	21,6	68,5%	4,38	99,6	5,2	22,6	0	360
Annual	18,0	68,6%	**2,15**	100,0	4,4	19,6	570	2.913
Measured at	m				10,0	0,0		

Source: RetScreen

Direct Normal Irradiation

Australia



Average annual sum, period 2007-2012

SolarGIS © 2013 GeoModel Solar

< 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 kWh/m^2

Model	SV3	SV7	SV14	SV20	SV30
Recommended maximum area in m^2	25 m2	50 m2	80 m2	100 m2	150 m2
Maximum air flow - m^3 / hour	35 m3	90 m3	110 m3	140 m3	200 m3
Expected time for air change	< 2 hours				
Utilization of solar irradiation	57%	62%	64%	67%	70%
Estimated average energy supplement kWh/m^2 per year *	570	620	640	670	700
Estimated energy supplement kWh/SV-unit/year *	200	434	924	1.340	2.100
Temperature rise relative to outdoor temperature, approx.	15 ^{0} C	15 ^{0} C	30 ^{0} C	35 ^{0} C	40 ^{0} C
Dimensions (panel) in mm: L x B x D, excl. packaging	524 x 704 x 55	1004 x 704 x 55	1974 x 704 x 55	1974 x 1004 x 55	3000 x 1020 x 75
Dimensions (panel) in mm: L x B x D, incl. packaging	900 x 600 x 140	1190x 770 x 150	2170 x 770 x 150	2170 x 1040 x 150	3060 x 1060 x 90
Dimensions (roof rack) in mm: L x B x D, incl. packaging	*Not available*	790 x 260 x 220	790 x 260 220	1080 x 260 x 220	1080 x 260 x 220
Area in m^2	0,35	0,7	1,4	2	3
Solar cell - perfomance in watt	6 watt	12 watt	12 watt	12 watt	18 watt
Fan—performance in watt	3,4 watt	3,4 watt	3,4 watt	3,4 watt	5,1 watt
Weight (panel) – kg excl. packaging	5,5	8	14	15	29
Weight (panel) – kg incl. packaging	8	14	19	21	31
Weight (roof rack) – kg incl. packaging	*Not available*	5	5	7	7
Maintenance	Maintenance- free up to 15 years				
Product warranty	5 years				
Frame material (alloy is salt resistant)	Aluminium				
Air outlet – dimensioner – mm	125 mm				
Coating	Polycarbonate				
Injection valve for indoor wall	Yes	Yes	Yes	Yes	Yes
Patented moisture stop for counteracting condense and draught	Yes	Yes	Yes	Yes	Yes
Tubes for wall lead-in, gaskets, screws etc.	Yes	Yes	Yes	Yes	Yes

* Annual kWh solar irrradiation/m2 in DK – 60 degrees slope in Danish weather conditions. Value: 1,000 kWh/m2/year

Subject to data alterations and printing errors