

New Zealand

Matauri Bay, Northland

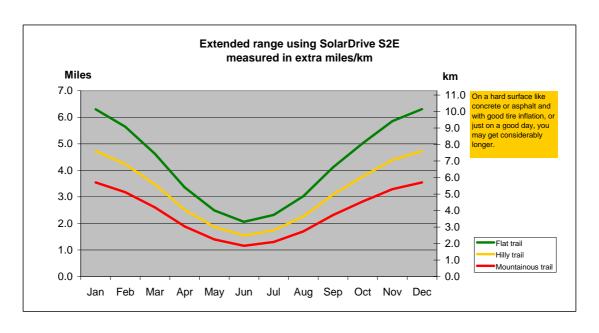
Practical effect to be expected of SolarDrive S2E (200 W)

Utility Vehicle/Trail Type			Flat	Hilly	Mount.
Consumption per mile		kWh	0.18	0.24	0.32
Power production	High (best month)	kWh	1.14	1.14	1.14
Extra mileage supplied by S2E	High (best month)	kWh	6.31	4.73	3.55
Power production	Low (weakest month)	kWh	0.37	0.37	0.37
Extra mileage supplied by S2E	Low (weakest month)	kWh	2.06	1.55	1.16
Power production	Yearly Average	kWh	0.73	0.73	0.73
Extra mileage supplied by S2E	Yearly Average	kWh	4.03	3.02	2.27

^{*}Percentage of Required Power

Basic data

Nominal effect	kW	0.200							Lat.	-35.5	Lon.	173.5	
Solar insolation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
kWh/m2/day**	6.40	5.74	4.68	3.37	2.48	2.04	2.29	2.99	4.08	5.01	5.87	6.37	4.28
Avg. day temperature (C)	24.0	24.4	22.8	20.5	18.1	15.9	15.0	15.3	16.6	18.3	20.1	22.4	19.4
Avg. day temperature (F)	75.2	75.9	73.0	68.9	64.6	60.6	59.0	59.5	61.9	64.9	68.2	72.3	66.9
Temperature loss factor	0.94	0.94	0.95	0.95	0.96	0.97	0.97	0.97	0.97	0.96	0.95	0.95	0.90
System loss factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Expected output kWh	1.13	1.02	0.83	0.60	0.45	0.37	0.42	0.54	0.74	0.90	1.05	1.14	0.73
Extra miles per day													
(1 mile 0 1.609 km)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
Flat trail	6.3	5.6	4.6	3.4	2.5	2.1	2.3	3.0	4.1	5.0	5.9	6.3	4.0
Hilly trail	4.7	4.2	3.5	2.5	1.9	1.5	1.7	2.3	3.1	3.8	4.4	4.7	3.0
Mountainous trail	3.5	3.2	2.6	1.9	1.4	1.2	1.3	1.7	2.3	2.8	3.3	3.5	2.3
Electricity savings in perc	ent assumii	ng your uti	ility vehic	le drives	7 miles in	average	per day						
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
Flat trail	90%	81%	66%	48%	36%	29%	33%	43%	59%	72%	84%	90%	58%
Hilly trail	68%	60%	50%	36%	27%	22%	25%	32%	44%	54%	63%	68%	43%
Mountainous trail	51%	45%	37%	27%	20%	17%	19%	24%	33%	40%	47%	51%	32%



Potential CO2 savings/car/year***

131 to 225 kilos or 289 to 496 lbs.

Disclaimer:

SolarDrive takes no responsability for the correctness of the basic data obtained from NASA nor for the actual experienced results. The figures above is presented as a guideline only. The actual result may be influenced by many other factors as well e.g. length of course, battery watering, altitude, time of year, time of day, present weather conditions, local shades from houses, trees, mountains, tire inflation, general maintenance etc.

^{**}Source: NASA Langley Research Center Atmospheric Science Data Center (22 year average)

^{****}CO2 savings are calculated compared to grid electricity supplied from modern power plants burning fossil fuels (0.49-0.85 kg CO2/kWh)

^{****}If battery charge level is low from the start the S2E must be allowed the necessary time to charge as the energy is accumulated over the day

Utility Vehicles



Extra	km	per	day
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	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
Flat trail	10.1	9.1	7.4	5.4	4.0	3.3	3.7	4.9	6.6	8.1	9.4	10.1	6.5
Hilly trail	7.6	6.8	5.6	4.0	3.0	2.5	2.8	3.7	5.0	6.1	7.1	7.6	4.9
Mountainous trail	5.7	5.1	4.2	3.0	2.3	1.9	2.1	2.7	3.7	4.5	5.3	5.7	3.6