

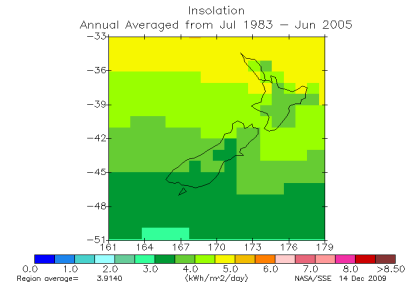
New Zealand

Cape Kidnappers, Hawke's Bay

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

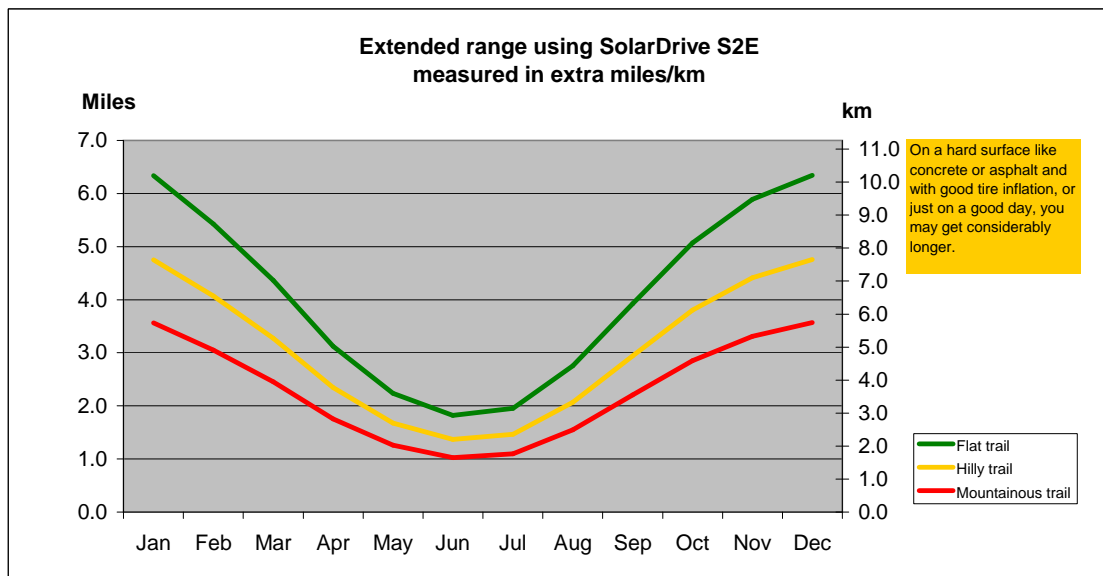
Utility Vehicle/Trail Type		Flat	Hilly	Mount.	
Consumption per mile	kWh	0.18	0.24	0.32	
Power production	High (best month)	kWh	1.14	1.14	1.14
Extra mileage supplied by S2E	High (best month)	kWh	6.34	4.76	3.57
Power production	Low (weakest month)	kWh	0.33	0.33	0.33
Extra mileage supplied by S2E	Low (weakest month)	kWh	1.82	1.37	1.03
Power production	Yearly Average	kWh	0.70	0.70	0.70
Extra mileage supplied by S2E	Yearly Average	kWh	3.90	2.92	2.19

*Percentage of Required Power



Basic data

Nominal effect	kW	0.200											Lat.	-39.5	Lon.	177.5
Solar insolation		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average		
kWh/m2/day**		6.39	5.47	4.38	3.11	2.21	1.79	1.91	2.7	3.87	5.03	5.87	6.37	4.09		
Avg. day temperature (C)		21.9	21.7	20.1	17.8	15.5	13.4	12.2	12.6	14.5	16.6	18.2	20.5	17.1		
Avg. day temperature (F)		71.4	71.1	68.2	64.0	59.9	56.1	54.0	54.7	58.1	61.9	64.8	68.9	62.8		
Temperature loss factor		0.95	0.95	0.95	0.96	0.97	0.97	0.98	0.98	0.97	0.97	0.96	0.95	0.91		
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		1.14	0.98	0.79	0.56	0.40	0.33	0.35	0.50	0.71	0.91	1.06	1.14	0.70		
Extra miles per day		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average		
(1 mile 0 1.609 km)																
Flat trail		6.3	5.4	4.4	3.1	2.2	1.8	2.0	2.8	3.9	5.1	5.9	6.3	3.9		
Hilly trail		4.8	4.1	3.3	2.3	1.7	1.4	1.5	2.1	2.9	3.8	4.4	4.8	2.9		
Mountainous trail		3.6	3.1	2.5	1.8	1.3	1.0	1.1	1.6	2.2	2.9	3.3	3.6	2.2		
Electricity savings in percent assuming your utility vehicle drives 7 miles in average per day		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average		
Flat trail		91%	78%	62%	45%	32%	26%	28%	39%	56%	72%	84%	91%	56%		
Hilly trail		68%	58%	47%	33%	24%	20%	21%	30%	42%	54%	63%	68%	42%		
Mountainous trail		51%	44%	35%	25%	18%	15%	16%	22%	32%	41%	47%	51%	31%		



Potential CO2 savings/car/year* 127 to 218 kilos or 279 to 480 lbs.**

**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

Disclaimer:

SolarDrive takes no responsibility 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.

Utility Vehicles



Extra km per day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
Flat trail	10.2	8.7	7.0	5.0	3.6	2.9	3.1	4.4	6.3	8.2	9.5	10.2	6.3
Hilly trail	7.6	6.5	5.3	3.8	2.7	2.2	2.4	3.3	4.7	6.1	7.1	7.7	4.7
Mountainous trail	5.7	4.9	4.0	2.8	2.0	1.6	1.8	2.5	3.6	4.6	5.3	5.7	3.5