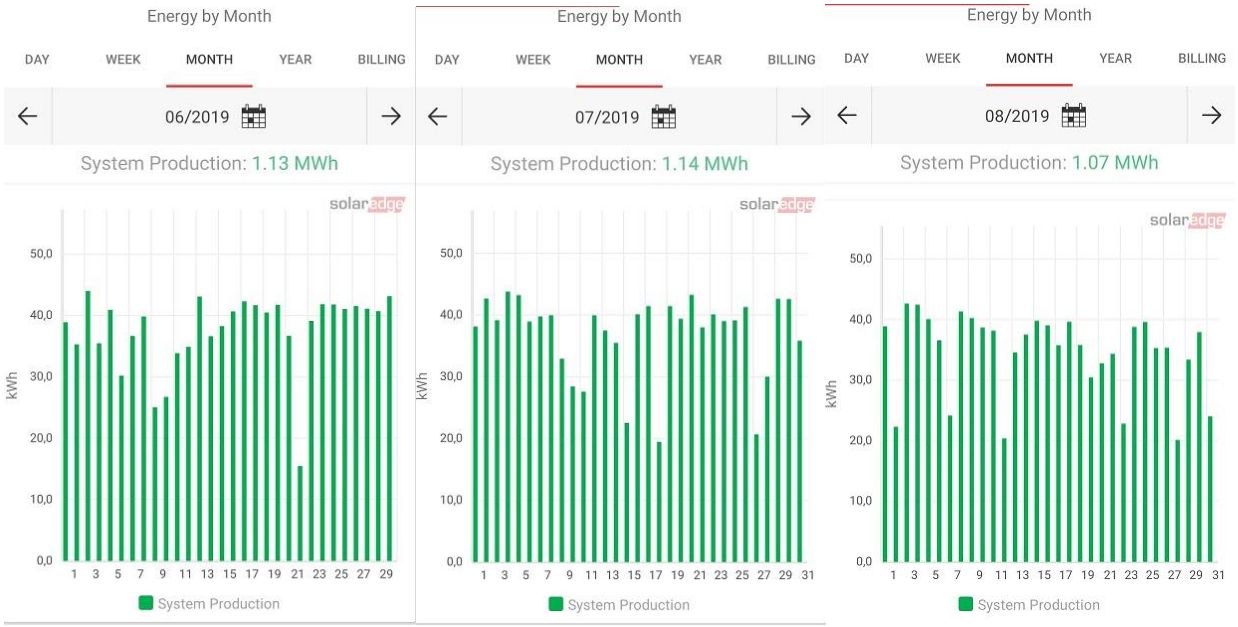
VITTRA

COMPLY WITH NATURE

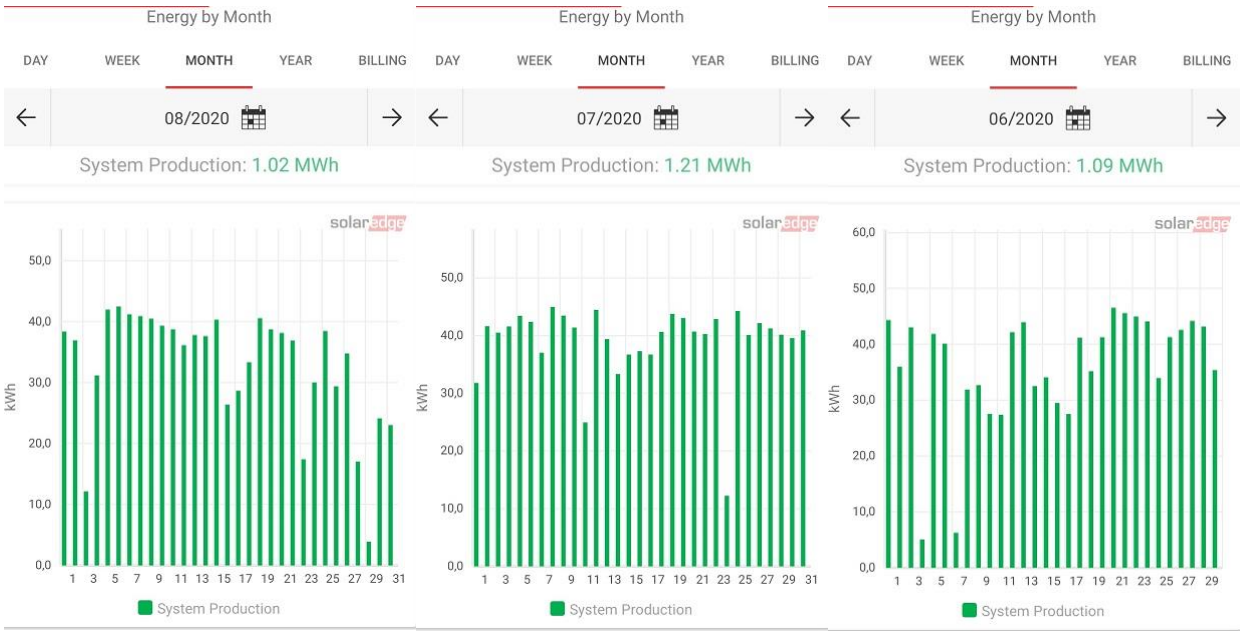
Report

Our team led a two-year (2019 - 2020) test to monitor the efficiency in the real world of a 6.48 kWp photovoltaic system for everyday life support (system located at 45° latitude on a 25° slope - South).
Below are shown the data recorded during the 92 days of high summer season (June 1st - August 31st) and the annual production of the system.

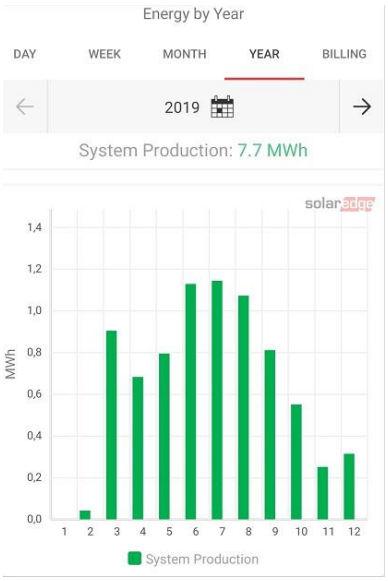
2019

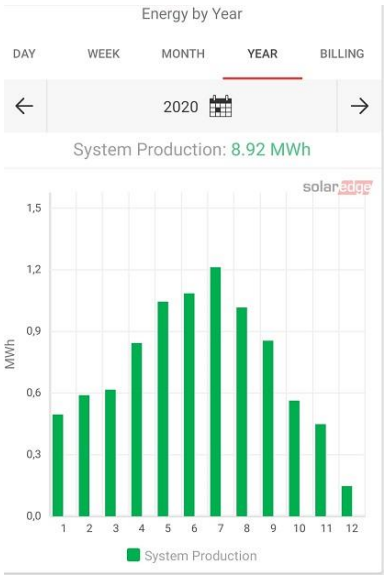


2020



Annual production curves:





This chart summarizes the data reported above.

Solar Power @ 45° Latitude - 25° slope south					
	6.48 kWp			recorded	
MWh	June	July	August	Av. Day KW	year
2019	1,13	1,14	1,07	36,30	7,7*
2020	1,09	1,21	1,02	36,09	8,92

* systems was activated only on February 27th

Having these postive results in mind, we made simulations in order to test the energetic potential of the fully extended solar roof featured on our coach: 12.0 kWp, 0° slope.
We located the system in two very different places in Europe to virtually test its effectiveness (simulations were made using PVGIS - https://re.jrc.ec.europa.eu/pvg_tools/it/#PVP).

Data collected are reported in the chart below:

	12 kWp - @ 45° latitude 0° slope					12 kWp - @ 60° latitude 0° slope				
				kW/day					kW/day	
MWh	1,83	1,97	1,68	59,57	13,4	1,61	1,56	1,19	47,39	9,13

Economic return

Whereas in Italy (45° latitude, approx. Milan) the lowest price paid by state authority for electricity sold to the grid is 0.04 €/kW, our system would have produced energy for -at least- **€536/00**.

Whereas in Sweden (60° latitude, approx. Stockholm) the average price paid by authorities for electricity is 0,4 SEK/kW; our system would have produced energy for -at least- **3.652 SEK**.

However these esteems are prudential considering that the prices for the electricity sold on grid by privates is often higher than lowest possible which was used to make the calculation above.

If we imagine that our solar roof may be connected to feed a private house located in same places used for the simulation above, the economic return for the householder would be much bigger.

Whereas average price for electricity in Italy (45° latitude) is 0.2226 €/kW*, our solar roof located there would produce energy worth **€2.982,84**.

Whereas average price for electricity in Sweden (60° latitude) is 0.1826 €/kW*, our solar roof located there would produce energy worth €1.667,14 (about **16.877,82 SEK**).

** Source, Eurostat*