

Consider this installation:

	LOAD	Power (W)	Hours/day	Total(Wh)
lighting	1. Bedrooms (LED 8x5W) DC	40	1,5	60
	2. Livingroom (LED 4x5W) DC	20	3,5	70
	3. Bathroom (LED 2x 24W) DC	48	1,5	72
	4. Kitchen (LED 4x24W) DC	96	2,5	240
	5. Outdoors (LED 10x5) DC	50	5	250
Devices	6. Kitchen	3300	3	9900
	7. Air conditioning (A+++) (*)	1100	2	2200
	8. Heating system (A+++) (*)	900	2	1800
	9. Water heater	800	2	1600
	10. Digital devices (4x45W)	180	2	360

Using the xls file attached in this e-learning module and considering this installation in your own country, make the next calculations:

1. The total PV power needed to supply the full installation in peak solar radiation periods.
2. The number of parallel batteries needed to this installation with 3 days of autonomy.
3. The nominal current needed for the load regulator
4. The nominal power needed for the DC/AC inverter.
5. The protection (interrupter and fuse) for Generators, Load regulator, inverter and batteries.
6. Estimation of Hybrid PV & Wind installation