

Renewable energies contribution to rural development. Practical cases in the hinterland of Castellón.

October 21, 2015

Solar and wind energy, biomass and mini hydraulics in the Country House of Noguera

Xavier Pérez Albert



Jose Segarra Murria



lowcarboneyconomy®
Trabajando por una economía baja en carbono

Renewable energies contribution to development.



The IEA (International Energy Agency) is accused to falsify information about renewable energies.

Over last decade, it systematically underevaluated the potential borne by renewable energies, whereas, at times, it promoted conventional energy sources.

¿Is it viable to produce energy from renewable sources?



Renewable energies are **viable** and
essential to achieve a
sustainable development.



General policies are not moving in that direction

**A local action implies
a global effect**

A local action

Renewable energy project in a rural
'edutouristic' centre

Having a global effect

Awareness-raising

Education

Dissemination

Development

Environmental, economic
and social effects.



THE COUNTRY HOUSE OF NOGUERA


Un albergue, un lugar de encuentros, un centro de educación ambiental, un espacio en el que el mundo rural y la relación con la Naturaleza puede tener sentido.



Solar Photovoltaic System.

**Since 1990 we are
getting 5,5Kw.**

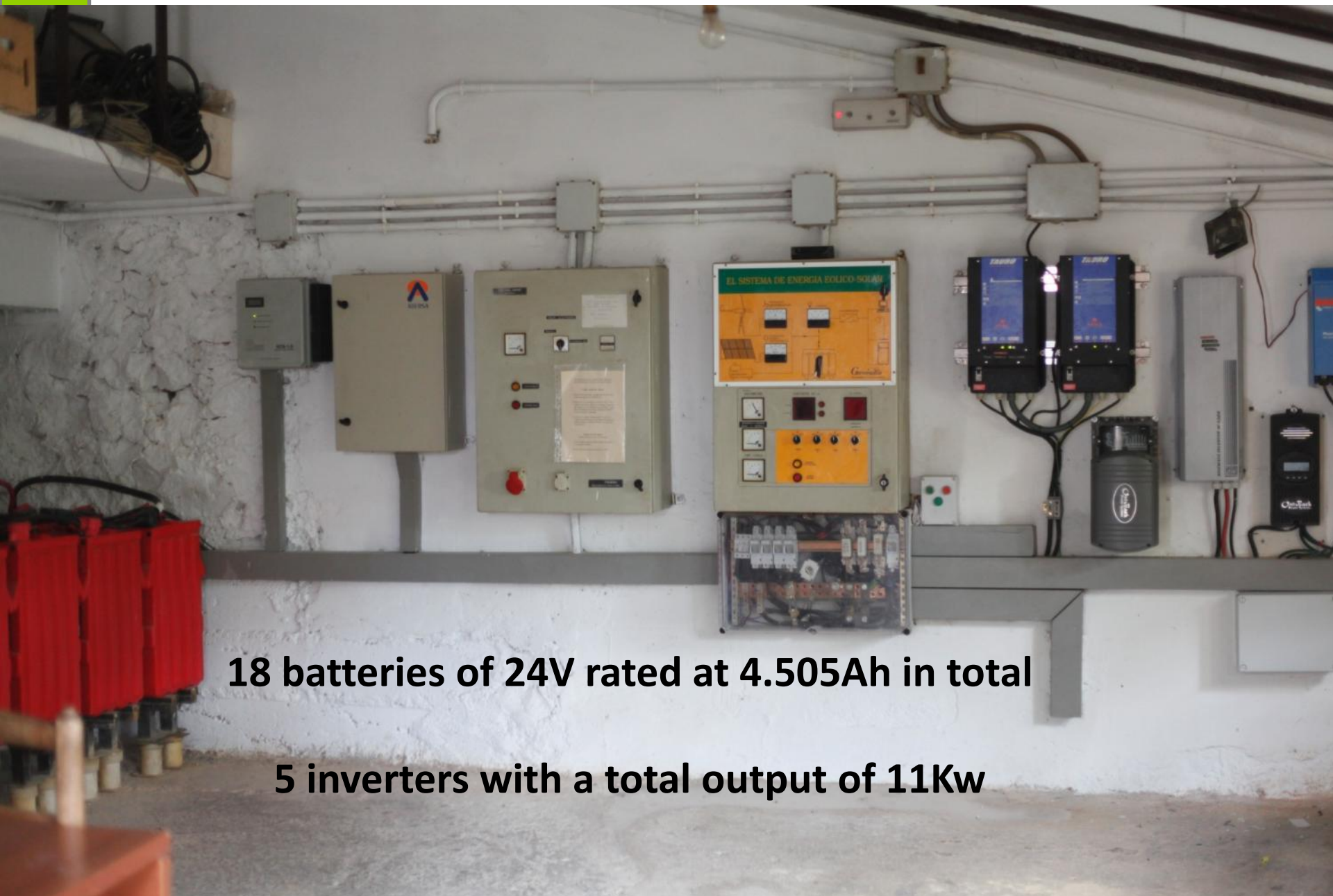




**2 years ago, the system
was enlarged to get
additional 3,42 Kw.**

Current total: 8,92Kwp

Solar Photovoltaic System.



18 batteries of 24V rated at 4.505Ah in total

5 inverters with a total output of 11Kw

Photovoltaic System. Pumping Well.

Solar panels with a peak power equal to 2,28KW



Solar Thermal System.



20 collectors covering a total surface of 40 square metre.

Solar Thermal System.



**3000 litres accumulator for sanitary
hot water warmed up by solar
panels.**

Mini Wind System

2,5 Kw GEMZ Wind Turbine installed in 1970
1,5 Kw BERGEY Wind Turbine installed in 1985
0,6 Kw BORNAY Wind Turbine installed in 1990



Mini Wind System.



**500 W Turgo PowerPal
Mini Hydraulic Turbine**

Biomass System



**35 Kw wood-fired boiler
30 Kw pellet-fired boiler
Stoves, chimneys and
Moorish ovens**

Country House of Noguera, much more than just energy systems.



A glass globe, resembling a marbled egg, is the central focus. It is cracked and shattered in several places, revealing a map of the world inside. The globe is surrounded by tall, green grass. The text "Thank you for your attention" is written in a bold, black, sans-serif font across the center of the globe.

**Thank you
for your
attention**