



POWER
Low Carbon Economies



INTERREG IVC
INNOVATION & ENVIRONMENT
REGIONS OF EUROPE SHARING SOLUTIONS



European Union
European Regional Development Fund

ANNEX 2

Best practice Identified and transferred

Section	Indication of content
1. Title of the best practice	Mobile telephone relay transmitter
2. Precise theme/issue tackled by the practice.	This is a case of commercially viable application of miniwind technologies, in combination with a solar PV installation and back-up diesel generator to provide power to a relay transmitter for a mobile phone company.
3. Objectives of the best practice.	Self-consumption Autoabastecimiento. -Reduction in usage of diesel generator -Reduction in Pollution. -Financial savings.
4. Location.	- Spain. - Chucena (Sevilla).
5. Detailed description of the best practice.	<ul style="list-style-type: none"> - Origin. Power supply from renewable energy. - Timescale. Operational start-up year: 2008 - Bodies involved / implementation. Private. - Process and detailed content of the practice. The installation of 10 PV panels of 24V * 185Wp, a wind turbine of 6kW nominal power, an inverter of 8kVA and 24 battery packs of 2300AhC100 ,provides a continual power of 4kW to the relay transmitter. - Legal framework. As long as it stays within the perimeter for the transmitter installation, there is no need to apply for any licenses or permissions. Neither is it connecting to the grid, therefore does not require permission, or special inverter and synchronisation technology. - Financial framework. Financially it is a commercially viable

	<p>operation, that is to say that it makes financial sense, with the prohibitive costs of connecting the repeater station to the grid, to substitute the high maintenance and generating costs of the diesel generator, with renewable energy technologies. The initial investment was 60.000 €, including the generator, and the payback is considered within 5 years.</p>
6. Evaluation	<p>- Possible demonstrated results (e.g. through indicators). The diesel generator now only operates for 3 to 4 hours a day, 5 in summer due to the 1kW of airconditioning necessary. Therefore, instead of a cost of 800 € per month being spent on fuel for the diesel generator, now only 300 € per month worth of fuel is consumed per month. The installation provides a continual power of 4kW to the relay transmitter.</p> <p>- Possible success factors</p> <ul style="list-style-type: none"> • Quick pay-back (5 años). • Significant financial savings. • CO2 avoided: 1.7 (CO2 ton/year) <p>- Difficulties encountered. The only issue encountered is that of vandalism and theft.. therefore adequate protection and security measures should be undertaken for any such installation.</p>
7. Lessons learnt from the best practice	<p>- Using new technologies to obtain electricity from renewable energy. - Economic savings that improve standard of living. - Concern for the environment to minimize contamination.</p>
8. Contact information	<p>WINERCON - Francisco Arnau Telf: +34 9625246007 Internet: www.winercon.es</p>
9. Other possible interesting information	<p>- Various documents (reports, presentations, etc.)</p>



Wind Velocity **4 m/s**

Power Capacity (kW) **6 kW (7.85 kW with PV)**

Production (MWh year) **3**

CO2 avoided (CO2 ton/year) **1.7**

Non Connection grid

Hybridized with photovoltaic

10. Best practice transferred

15/02/2010