



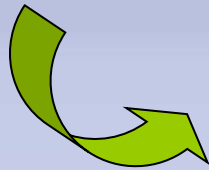
WORKSHOP ON MARKET

Huelva, 10th May 2010



SITUATION IN SPAIN

- Wind turbines with outputs below 100 kW, only used for electricity generation in isolated environments.



Waste of great potential for input into the grid.

- **Renewable energy has great potential** but must overcome the existing barriers:

- LEGISLATIVE
- ADMINISTRATIVE
- TECHNOLOGY
- SOCIAL

PREVENT sector development even though there is appropriate Spanish technology and manufacturers.

SITUATION IN SPAIN :

BARRIERS TO DEVELOPMENT

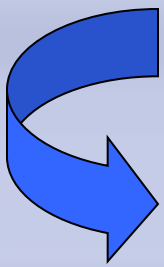
➤ LEGISLATIVE

Lack of:

- regulatory and remuneration framework.
- rules of grid connection proper to small wind equipment power.

Specific legislation : Inexistent

B.2 group including: facilities using only wind as primary energy (RD-661/2007)



PREVENTS

Development of reliable technology at competitive costs

Market activation

➤ ADMINISTRATIVE

Local regulations and permits are excessive and poorly defined.

CCAA Councils industry, are **unaware on how to proceed.**

Currently, if you want to connect an installation to the grid:

- Administrative processing as **photovoltaic requirements <100kW.**
- Procedures as for **high-power wind farms**

BARRIERS TO DEVELOPMENT

- TECHNOLOGY
- Dealing the small wind in the great wind even when there are clear differences in **technology and costs**.
- Lack of standardization and mass production technology that allows lower prices.
- SOCIETY

Need for acceptance by the society of this relatively new technology.

Information and Awareness Campaigns

enhance penetration in urban environments

increase their use in markets already entered



POWER
Low Carbon Economies



European Union
European Regional Development Fund



INTERREG IVC
INNOVATION & ENVIRONMENT
REGIONS OF EUROPE SHARING SOLUTIONS

PROPOSALS FOR DEVELOPMENT OF MINI WIND SECTOR

1. Specific and different regulatory framework from the big wind.

2. Specific retributive adjustment system.

3. Payback on projects / facilities in a period not exceeding 2/3 of the equipment useful life.

4. Limit the economic return per year (KW subsidized).

5. Regulatory system to prevent large facilities.

6. Supply point previously contracted with the supplier company.

7. Limiting the installed power to 150% of the supply contract.

8. Values complying with noise and safety regulation.

9. Safety Regulations for connection to the grid.

10. Establish a simplified administrative process, to streamline administrative procedures .

- There is a lack of technology knowledge by the administration.
 - APPA is developing "Bylaws" for municipalities to implement application requirements :
 - UNE (IEC) Standards compliance safety and noise.
 - Hitch installer bulletin.
 - Production estimate.
- Feed-in tariffs must be just enough to prevent exponential growth of mini wind systems.
- Subsidies to installed power are a mistake because it's installed a lot of power and insufficient accumulation so the installation does not work properly.
- New of microgeneration Law is proposed. Scheduled date : 16 June.

Ranks:

- Photovoltaic: Up to 2 MW.
- Mini wind: Up to 25kW.
- No assignment registration is necessary.
- Less than 10 kW: attached to connection point .Just presenting technical report.
- Greater than 10kW: the supplier company must accept the connection point we propose. If company want to contest it, it has to bear the cost of the complaint/refusal.

How do you create market?

- Feed-in tariffs: Must be granted up to a production maximum.
- Limiting the installed power 150% of supply contract. To avoid “mini wind parks”.
- You can not give feed-in tariffs / subsidies to large plants.
- The mini wind should not be a financial product. Must be profitable for the consumer / producer, installer and manufacturer.
- Need for awareness campaigns , demonstration facilities of good practice.
- Equipment must be amortized over 10 years, which implies that for a system of winds about 4-5 m/s, and a 3 kW installation, feed-in tariff required is 40-45 €cents.
- The goal is to reach 50 MW installed up to next year.

NATIONAL PLAN FOR RENEWABLE ENERGY:

- Onshore
- Offshore
- Mini wind

Regulation system

It is proposed to apply the concept of DISTRIBUTED microgeneration,

i.e.: energy transfer production to the place of demand (decentralized).

- avoiding losses in transmission and distribution.
- avoiding the proliferation of large power plants but allowing micro installations.
- venting distribution networks not overloads occur .

STANDARDS FOR WIND TURBINES

To avoid low-quality imports that may be dangerous and bad press to small wind technology that prevent the development of the potential market.

Because there are currently no:

Appropriate certification procedures.

Useful and understandable documentation (for installer and user).

The proximity of facilities to residential areas involves greater emphasis on noise and vibration parameters.

CIEMAT:

•Is developing a rating and energy efficiency label for facilities.It should be disseminated to consumers.

Required:

- The training of installers.
- Installers accreditation.
- The regulation of its obligations