

# THE STRENGTH OF A KINGDOM

**INVEST IN** NAVARRA



DIRECT JOBS

5,000



REGIONAL GDP

**5** %



COMPANIES

100



THE MAIN WORLD COMPANIES ARF IN NAVARRA

World benchmark

Navarra is a pioneer and a benchmark at European level in the production of renewable energies, with a strong technological and industrial commitment to its development

## Navarra is the birthplace of innovation in wind power:

In the period covering 2008-2013 it has become the third economic area in terms of number of patents.

Renewables currently cover the 81.1 % of energy demand in Navarra.



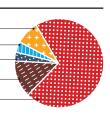
**ELECTRICITY CONSUMPTION FOR 911,000 HOMES.** 

# 21.3 % of the energy produced in Navarra comes from renewable energy sources

Navarra has already passed the European objective for 2020 in terms of energy. It beats the 20 % target set by the European Union for the start of the next decade.

## Renewable energy sources

- MINI-HYDRO 9 %
- LARGE HYDRO 4 %
- BIOMASS 3 %
- PV SOLAR 13 %
- WIND 71 % -



**CENER** 

National Centre of Renewable Energies



200

RESEARCHERS



WIND TURBINE RESEARCH LABORATORY



National Reference Centre in Energies Renewables and Energy Efficiency



PEOPLE TRAINED





CLASSROOMS & LABS

**SIEMENS** Gamesa

Siemens Gamesa Renewable Energy

1,600 EMPLOYEES

acciona Acciona Energía

550 EMPLOYEES

**INORDEX** (acciona Nordex Acciona

Windpower

950 EMPLOYEES



Navarra is a pioneer and a benchmark at European level in the production of renewable energies



In the 2008-2013 period it became the third economic area in terms of number of patents, reaching 6.4 % of the total

**ECONOMIC** ARFA

Navarra is a **pioneer** and a **benchmark** at European level in the production of renewables, thanks to a historic technological and industrial commitment to their development and the application of new global standards for wind power.

Navarra has surpassed the European target set for 2020 in renewable energy sources: Since 2009, 21.3 % of total energy production in Navarra comes from **renewable energy sources**; this figure already surpasses the target of 20 % set by the European Union for the start of the next decade.

Furthermore, in 2008-2013 it has consolidated itself as the third economic area in terms of number of patents, reaching 6.4 % of the total. Navarra is very well equipped with infrastructures and skills for the carrying out of R&D+i for the sector:

**CENER:** National Centre of Renewable Energies. A technology centre specialised in applied research and the development and promotion of renewable energies. Cener's work is oriented towards the development of technology through R&D+i projects, technical assistance and the provision of services, and the preparation of technical and economic viability reports and studies. It can call on cutting-edge technological infrastructures such as the Wind Turbine Testing Laboratory (LEA), unique in the world. More than 200 researchers work in Cener, offering services to companies and institutions from all over the world.

**CENIFER:** The National Reference Centre for Renewable Energies and Energy Efficiency was the first initiative of its kind in Europe in vocational training in the sector. Over 5,000 people trained, 22 full-time instructors, 17 classrooms and laboratories. A wind power cluster has been recently created. It is a pioneer in this market and consists of 11 companies, the aim being to improve the competitiveness of the sector.

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Since December 2009, the installed capacity of renewables in the region is around 1.570 MW, of which 970 MV come from wind farms.

Renewable energies cover 81.1 % of electricity demand in Navarra, equivalent to the consumption of 911,000 homes (there are 240,000 in Navarra). Around 40 % of the energy produced is exported.



#### Navarra is also the "birthplace of innovation in wind power"

It is home to several energy sector companies that have taken the leap into international expansion after consolidating their presence in Navarra.

The key factors that have made Navarra a pioneer in renewables are:

A. The Energy Plan for Navarra 1995/2000, which was followed by another two similar plans enacted by the Government of Navarra with the following objectives:

- 1. Promoting energy saving and efficiency.
- 2. Taking maximum advantage of renewable sources of energy, making them compatible with the environment.
- Extending transmission and distribution networks.
- **B**. The growing **social acceptance** of wind farms.

**C**. The presence of **private enterprise**, which has made a firm commitment to renewable energy and carried out considerable investment in the initial launch phase.

### Main companies in the sector



ACCIONA Energía, is a world leader in the field of renewable energies. Its mission is to demonstrate the technical and economic viability of new energy model. It employs more than 550 people in Navarra.



Ingeteam is a leading electrical engineering company, developing electrical equipment, drives, generators and frequency converters for wind, photovoltaic solar, thermal solar and hydroelectric power biomass biofuels power, biomass, biofuels, combined cycles and cogeneration. It employs 400 people in Navarra.



Sakana is a foundry for windmills, machine tooling, engine blocks and others. It is a cooperative, founded in 1975. It manufactures grey iron and ductile iron parts weighing between 3 and 60 tonnes, mostly for the wind power sector. employs 80 people in



Fluitecnik works in the industrial sector and on renewable energies (wind and thermoelectric) Thanks to the increasing role of renewables, the company has undertaken a process strong growth in investments and turnover.



Nordex, which recently took over **Acciona Windpower**, designs manufacture, markets installs and operates wind turbines that give the wind power developer maximum performance at the lowest possible energy cost throughout a turbine's working life. It employs 950 people.



SIEMENS Gamesa Gamesa is a global technology leader with 20 years' experience and more than 30,000 MW installed in 45 countries. Its range includes start-up services and wind turbine maintenance its offices are maintenance. Its offices and plants in Navarra employ more than 1,600 people.



M. Torres. Its corporate purpose is the promotion, development and start-up of wind farms; the design, manufacture and installation of automatic process for the manufacture of wind turbine blades: research and development of wind power components. Its plant in Navarra employs more than 470 people.



Design and development of advanced wind power or advanced wind power technologies, as well as engineering consultancy. Its technologies can be easily integrated into existing wind turbines. It supplies certified technologies and components that do not require the redesign and re-certification of wind turbines.

Nabrawind Technologies



**Naweco** is a group of comapnies from navarra that is highly consolidated in the sector, and it has entered international markets with the greatest potential. Its 15 years' experience and wide range of products and services helps it to increase its clients' competitiveness by adapting its products to their needs and offering end-to-end management of projects.

The group consists of eight companies that manufacture products for wind turbines. It also offers engineering services with its own processes and product design team.

sapa:

Sapa Perfiles is a world leader in the production of extruded aluminium profiles. Its solutions are applied in almost all industrial sectors. In the field of renewable energies, it provides a wide range of solutions. The company employs 130 people in its plant in Navarra.



**Grupo Ríos Renovables** is a consolidated company in the renewable energy market. It manages and develops activities around wind power, photovoltaic energy and energy efficiency.