



Wind energy and the job market

Wind energy provides jobs for European citizens

In 2007 there were 108,600 jobs directly related to wind energy in the EU-27. On average, the wind energy sector in Europe has created 33 new jobs every day, seven days a week over the past five years.

Wind energy jobs can be broken down into separate and wide-ranging types, from workers in wind turbine factories to project managers.

Wind energy also generates indirect jobs, for example suppliers of raw materials. EWEA estimates the total number of wind energy jobs in 2007 at 154,000. By 2030, more than 375,000 people should be employed directly in the sector – 160,000 onshore and 215,000 offshore.

Where can wind energy jobs be found?

Wind energy companies are established in all nearly all EU Member States.

However, 75% of the jobs in the sector are in Denmark, Germany and Spain, the three wind energy 'pioneers'. Schleswig-Holstein in Germany gets one-third of its electricity from wind and 7,000 people are directly employed by the industry.

How do these jobs break down by country?

Positions such as engineers, operations and maintenance technicians and site managers.

Wind energy promoters need more project managers - the professionals responsible for getting the permits in the country where the wind farm is going to be installed.

It requires a rare combination of specific knowledge of the country in question, wind energy expertise and negotiating skills.



No. of direct jobs in the wind industry (in 2007)

Country	No. of direct jobs
Austria	700
Belgium	2,000
Bulgaria	100
Czech Republic	100
Denmark	23,500
Finland	800
France	7,000
Germany	38,000
Greece	1,800
Hungary	100
Ireland	1,500
Italy	2,500
Netherlands	2,000
Poland	800
Portugal	800
Spain	20,500
Sweden	2,000
United Kingdom	4,000
Rest of EU	400
TOTAL	108,600

SOURCE: Estimates based on EWEA survey; ADEME, 2008; AEE, 2008a; DWIA, 2008; Federal Ministry of the Environment in Germany, BMU 2008.

What about indirect jobs?

Statistics show that 15.1 jobs are created in the EU for every MW installed and 0.4 jobs are created per MW of cumulative capacity in operations and maintenance and other activities.

These figures do not take into account the higher employment effect of installing, operating and maintaining offshore wind turbines.

Based on these figures, the total employment from wind energy in the EU in 2007 can be calculated at 154,000 people.



What about the future?

According to EWEA's reference scenario (EWEA, 2008), 180 GW of wind energy will be operating in the EU in 2020 and 300 GW by the end of 2030.

Using EWEA's reference scenarios and the assumed onshore and offshore capacity cost of wind energy up to 2030, we can estimate that future EU employment in wind energy will more than double from 154,000 in 2007 to almost 330,000 in 2020.

Onshore wind energy will continue to be the largest contributor to employment throughout the period but by 2025, offshore wind energy employment will exceed onshore employment.

By 2030, more than 375,000 people will be employed in the European wind energy sector – 160,000 onshore and 215,000 offshore.

Who works in wind?

The fact that over half the jobs (59%) are in manufacturing affects the gender balance of wind energy employees: 78% are men.

Currently, there is a serious shortage of candidates, especially for high-level positions such as engineers, operations and maintenance technicians and site managers.

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Key objectives

- Ensure a quick and efficient implementation of the EU's Renewables Directive to increase the number of clean technology jobs.
- Encourage public authorities and private companies to make joint efforts to provide training to allow workers to transfer from declining economic sectors to the wind power sector.
- Encourage better communication on the possibility of wind energy as a career path at secondary school and university level.