The growing demand for power generated from renewable energy sources also drives innovation in the sector, according to research on the German renewables industry. An increase in the number of patents granted for green technologies in Germany was linked to both increased demand – driven by renewable energy policies – and increased public spending on the sector.

Under the Renewable Energy Directive (2009/28/EC), the EU has set mandatory national targets for the share of total energy to be generated from renewable sources by 2020.[1] Germany is an example of a country with more ambitious goals for renewable energy. While the EU as a whole is committed to achieving a 20% share, Germany has set its 2020 target at 35%. The new study provides insights into how developing energy policy in the country has shaped the market for, and driven innovation in, renewable energy over the last two decades.

Two key pieces of national legislation on renewable energies have influenced the adoption of green technologies in Germany. The Electricity Feed Law or *Stromeinspeisungsgesetz* (SEG) came into effect in 1991, requiring utilities providers to connect those generating renewable energy to the grid and to buy their electricity at 65-90% of the cost charged to consumers of that electricity. In 2000, the Renewable Energy Sources Act or *Erneuerbare-Energien-Gesetz* (EEG) extended the range of renewable energy technologies covered and set different tariffs for different types of energy. Between 2007 and 2010, Germany more than doubled the proportion of its energy mix made up by renewables – from 7% to 17%.[2]

The renewables industry in Germany currently produces 20% of total electricity generated, with around 382,000 jobs linked to the industry.[3]

By looking at the number of patents granted for renewable energy technologies between 1990 and 2005 the author shows that a period of increased innovation followed the introduction of the two key energy laws. Based on these results, the study concludes that a growing market positively affects innovation. According to the author, however, the connection between demand and innovation is complicated. There are interdependencies between these two areas and once demand has been established, the relationship also works the other way around, with innovation driving demand. In addition, when levels of innovation within the different energy sectors – solar, wind, water, biogas and geothermal – were considered separately, the association between demand and innovation was weaker than overall.

Solar and wind energy showed the highest levels of innovation in terms of patents granted. Increased public spending on research and development in the sector also led to greater innovation.

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