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Is there a German Energiewende ?

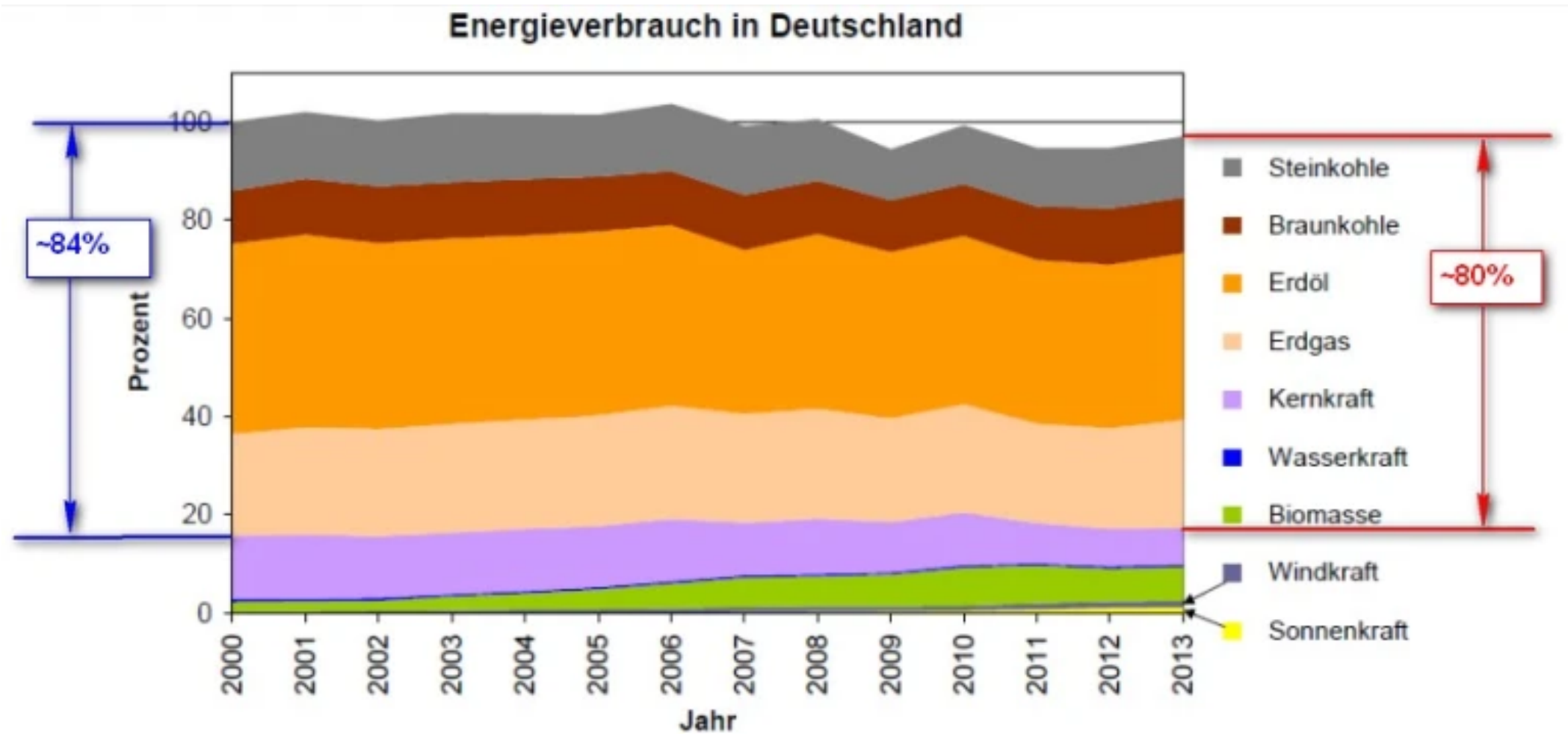


Three professors from the Physikalisches Institut Universität Heidelberg have written a very short article in February 2015, titled “[Findet eine Energiewende statt?](#)” Contrary to what one usually reads (i.e. the Energiewende is only seen as implying electricity production), they discuss how the amount of fossil energies in the **total German energy consumption** has changed between 2000 and 2013. During that period, a solar photo-voltaic capacity of nearly 39 GW, wind-turbine capacity of approx. 34 GW were installed, impressive numbers (a large nuclear reactor has a 1.5 GW capacity)!

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The costs of the PV installations alone installed from 2000 to 2012 are estimated at 108 billion Euro (including the yet to pay amounts for the future feed-in). The total costs of the EEG (Erneuerbare Energie Gesetz) are staggering, and mostly unknown. One estimation by Hermann (2011), actually seen as much too low, gives a total of 350 billion Euro up to 2030; 500 billion probably will be exceeded.

What is the effect of this huge effort? The figure below shows the **total** energy consumption in Germany from 2000 to 2013. The left scale shows the percentages, with the situation in 2000 taken as 100%. I added the boxes and arrows.



We see that the **percentage** of fossil fuel energy was about 84% in 2000 and remains at least 80% in 2013 compared to the 2000 reference; actually it is 90% of the slightly lower total consumption in 2013. So in 14 years of extraordinary expansion of renewables there is at best a **minuscule diminution** of the total amount of fossil fuels used for heating, driving, industrial processes and electricity production (and even an increase in the 2013 percentage).

The professors rightly conclude: “*Der bisherige Ausbau der Wind- und Solarenergie ist augenfällig, das bisher Erreichte fällt aber sehr bescheiden aus, gemessen am Gesamtziel einer weitgehend von fossilen Energieträgern unabhängigen Energieversorgung unseres Landes*”.

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