

# Economics in brief



No. 11, 25<sup>th</sup> February 2013

## Rising power supply costs, rising electricity rates: who carries the additional burden?

Author: Dr Caroline Dieckhöner, phone +49 (0)69 7431-3854, research@KfW.de

The rising costs of the EEG (Renewable Energy Sources Act) have unleashed a public debate about electricity prices and costs in Germany. Particularly the exceptions from the EEG levy for energy-intensive industry and the rising prices for private households have inflamed the debate. On 14<sup>th</sup> February federal ministers Altmaier and Rösler submitted a joint proposal for containing the cost of expanding renewable energies.

### Are rising electricity rates bad for the economy?

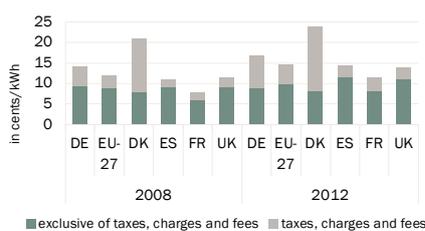
Transforming Germany's power supply into a green, low-carbon system requires high capital expenditure on wind energy and PV systems, grid expansion and other measures. These rising electricity costs must be borne by the economy and are passed on in the form of rising electricity price components, particularly increasing taxes, levies and grid charges. This does not have to lead to a decline in welfare over the long term. The present energy system, after all, produces costs as well – in the form of environmental damage and increasingly necessary permanent nuclear waste disposal solutions. Therefore, burdens carried by today's generations can actually lead to welfare gains for future generations.

However, the political debate focuses on the question of who should bear the additional costs and how the burdens should be distributed between industry and households. This is just as important for Germany's competitiveness as for the acceptance of the *Energiewende*.

### Electricity rates for industry – do they cause competitive disadvantages?

The example of electricity rates paid by an industrial consumer with a consumption of 500 to 2,000 MWh shows that Germany's average electricity price increase has not been much higher than the EU-27 price increase. Enterprises in this category usually are not exempted from the EEG levy. Including all taxes and charges, between 2008 and 2012 the price increased by an average 5 % per annum in EU-27 and by 4.8 % per annum in Germany (see Chart 1). Thus, an obvious competitive disadvantage does not appear to exist in an EU comparison.

Chart 1: Electricity price for industry, 500-2,000 MWh



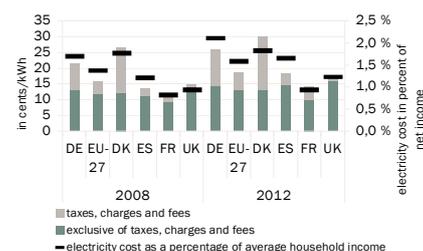
Source: Eurostat (2013)

Energy-intensive enterprises pay a reduced EEG levy and benefit from a reduced electricity price at the electricity exchange as a result of the rising supply of low-priced electricity from renewable energies. While these savings are intended to reduce competitive disadvantages against foreign enterprises, they also reduce incentives to optimise electricity procurement. Under the current system, in particular, price reductions for businesses are shifting the burdens from the EEG-induced costs onto private households.

### Higher burdens for households

Between 2008 and 2012 the electricity rates for a German household that consumes 3,500 kWh rose by 4.8 % per annum on average, a stronger increase than the 4.1 % in EU-27. The cost of electricity for a German household as a percentage of net income has also risen. In 2008 this share was still 1.7 % (EU-27: 1.4 %). In 2012 it was 2.1 % while it was 1.6 % in EU-27 (see Chart 2).

Chart 2: Electricity prices for households, 3,500 kWh



Source: Eurostat (2013)

It can be summarised that rising electricity costs in the years ahead will result from the transformation of the power system and that this transformation is also socially desired. The increased taxes and levies on the electricity price for businesses do not result in any noticeable competitive disadvantages in a European comparison, but the exemptions have distributional effects that burden private households. In the end, a reform of the EEG will have to ensure both the competitiveness of German industry and the acceptance of the *Energiewende* without at the same time jeopardising the necessary expansion of renewable energies. ■