

°248

The Energy Efficiency Law – A Growth Killer?

Germany's energy policymakers are currently in the process of passing what's known as the Energy Efficiency Act. In doing so, they are following the requirements of an EU directive. Contrary to the name, this law does not primarily regulate energy efficiency; rather, it caps the country's total energy consumption. Final energy consumption is to be reduced significantly by 2030: by 26.5 percent compared with consumption in 2008, and by around 22 percent compared with today. It does not matter whether the energy comes from climate-neutral sources (such as wind or sun) or from fossil fuels.

If policymakers restrict energy consumption in this way, it will cause considerable damage to prosperity in Germany unless they succeed in massively increasing the energy efficiency of the German economy by 2030. This becomes clear when you look at the correlation between economic growth and energy consumption. In the years from 2008 to 2021, Germany's gross domestic product increased by 13 percent in price-adjusted terms. More economic output tends to mean more energy consumption. Increasing energy efficiency counteracts this. In fact, energy consumption has fallen by 5 percent over the same period. Energy efficiency has therefore increased, by an average of 1.4 percent per year.

If Energy Efficiency Increases Only as Much as It Has So Far, the Gross Domestic Product Would Have to Fall by 14 Percent

What is now required by 2030 has a completely different dimension. Forecasts of economic development in Germany have so far assumed that GDP will grow by around 1.2 percent per year up through 2030. This is a modest estimate, considering that the German economy has not yet recovered from the coronavirus pandemic and the energy crisis resulting from the Russian invasion of Ukraine. Assuming that energy efficiency continues to increase at its previous rate in the coming years, energy consumption would fall 2.5 percent by 2030. The Energy Efficiency Act, however, calls for a 22 percent cut in consumption – about nine times as much.

What happens to GDP growth if, as the law requires, policymakers restrict energy consumption but increase energy efficiency no faster than in the last 15 years? In that case, GDP will not grow between now and 2030, but will shrink by 14 percent from today's levels. Compared with the development expected so far for 2030, economic output would fall by as much as 20 percent. This law would be a growth killer.

Now, one might argue that it can't be that difficult to boost energy efficiency more rapidly than has been the case to date. However, the increase required to enable the currently expected economic growth is huge: energy efficiency would have to rise 4 percent every year. That's almost a threefold increase on the current growth rate. Is that possible? No one knows at present. We can certainly do more to save energy, but those savings get harder to achieve as energy efficiency rises. The low-hanging fruit in this area has already been harvested.

Energy Consumption Does Not Harm the Environment per Se, but the Use of Fossil Energy Does

All this is bad enough, but would still be up for discussion if there were compelling economic or environmental reasons for cutting energy consumption. But energy consumption per se does not harm the environment; the use of fossil fuels does. Although the energy transition has caused many burdens, it had always offered the chance that, in the future, climate friendly energy could be available in large quantities – at least while the sun shines and the wind blows. New energy-intensive but flexible industries could emerge and secure prosperity. The requirement to reduce energy consumption, regardless of how that energy is generated, may destroy this opportunity.

In what are already difficult economic times, German politicians want to pass a law that unnecessarily restricts energy consumption and entails massive economic risks. The fact that it is following EU requirements is no justification, because the German government was involved in setting those requirements. It remains unclear which instruments are to be used to enforce the reduction in energy consumption. One wonders whether the intention is really to enforce the achievement of the target. It fits in with this that a subsidized industrial electricity price is to be introduced at the same time. This is intended to keep energy-intensive industries in the country and will tend to increase domestic energy consumption. All this gives the impression that energy policy has lost its bearings.

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