

Looking back at the end of this second part of the book, the answer to the original question as to where Germany stands today—after 5 years of implementation of the *Energiewende*—can be summarized as follows:

1. The **targets** of the *Energiewende*—i.e. the planned milestones for the shutdown of nuclear power plants, the expansion of renewable energies and the increase in electricity efficiency—have been fully achieved and even exceeded.
2. The **motives** of the *Energiewende* have been satisfied accordingly. In particular, CO₂ emissions from electricity generation—for domestic consumption—have fallen significantly, though in 2015 they have been slightly higher than the 2015 target. However:
 - That is no fault of the *Energiewende* but rather a direct consequence of the market economy in conventional electricity generation interacting with global market prices for hard coal and natural gas—and was therefore actually predictable.
 - That does not mean the central motive of a largely CO₂-free (“decarbonized”) electricity system in 2050 is at risk.
3. Whether or to what extent the **framework conditions**—security of supply, cost-efficiency and market economy in electricity generation—have been complied with in the implementation of the *Energiewende* so far is the subject of much discussion and controversy. This should come as no surprise since the *Energiewende* inevitably challenges all three framework conditions.

The *facts*, however, say that the framework conditions of security of supply and market economy have not been significantly limited, beyond the inevitable scope inherent in the *Energiewende* concept; by and large they can be considered as having been complied with.

By contrast, the facts also say that the framework condition of cost-efficiency has *not* been complied with as yet. 20%, probably as much as 25% of the costs of the RE expansion accrued so far could have been avoided, and these are significant amounts in the region of € 100 billion. The decision to prioritize

underground cabling in the nationwide grid expansion will likewise and in addition lead to unnecessarily high costs.

This implies a clear call to policymakers to focus more consistently on the framework condition of cost-efficiency in the future—in actions, not just in words.

4. The **systemic consequences** of the *Energiewende* are, without exception, clearly visible. They are already shaping, to a substantial degree, the reality in the German electricity system. They have also already led to heated debates between and within various stakeholder and policymaker groups. This was—for this is a systemic consequence as well—to be expected in principle. And it is at least in part the outward expression of the inevitable, yet respectable, struggle to find the best way to implement the *Energiewende*.

However, even now—after only 5 years, so actually still in the initial phase of the project—it is evident that the *Energiewende* needs clear political leadership that has the courage to assert its principles against a wide variety of interests.

Overall, we can say that the *Energiewende* is well on track but has so far been unnecessarily expensive; and it will take wise and steadfast political decision-making to keep it on track at a reasonable cost.

Given this conclusion and also given the paramount importance of the issue of the costs of the *Energiewende* for its prestige in German society as well as for its international reputation, it suggests itself to examine this issue once more in greater detail, i.e. to address the question: “How much does the *Energiewende* cost, and how should we judge these costs?”

The third part of the book is devoted to this question.