

Filip Černocho, Jan Osička, Robert Ach-Hübner and Břetislav Dančák: **Energiewende: Current State, Future Development and the Consequences for the Czech Republic.** Brno: Masaryk University, 2015. 178 pages. ISBN 978-80-210-8279-3

Energiewende is a German term for the planned reorientation of the energy system in Germany. It is a remarkable long-term project consisting not only of a phase-out of nuclear power generation, or *Atomausstieg*, by the end of 2022, but also of a shift toward greater sustainability of energy production. There are ambitious environmental goals behind this transition, such as lowering greenhouse gas emissions, increasing the share of renewable sources of energy, and better energy conservation. The roots of *Energiewende* in Germany can be traced back to the 1970s when the world went through two major oil crises and the anti-nuclear movement in Germany was born. Crucial steps towards *Atomausstieg* and the development of renewable sources were taken by the red-green coalition government of Chancellor Gerhard Schröder (1998–2005). Angela Merkel's second government accelerated the project after the Fukushima nuclear disaster in 2011.

The book here reviewed deals with the topic of *Energiewende* in a relatively broad context. It examines not only the transition itself, but also its impact on the Czech Republic and more widely on Central Europe and the European Union. The book originated in the International Institute of Political Science of Masaryk University Brno and was first published in Czech.¹ The English edition that is the subject of this review is faithful to the Czech original, although some chapters have been reorganized and a few have been added. In addition, a new member, Robert Ach-Hübner, has joined the team of authors.

The authors met at the Faculty of Social Studies of Masaryk University in Brno, Czech Republic. All of them are specialists in the field of energy and energy security in the contexts of international relations, geopolitics and European and area studies. Two of the book's authors contributed to another publication on a similar topic in 2017, which dealt with *Energiewende* and its impact on the energy security of the Czech Republic and Poland.² Three of the authors (Černocho, Dančák, and Osička) were also part of a team working on an interdisciplinary research project investigating energy infrastructure across Europe and its influence on the EU energy security. They have produced several publications in the last four years.³ The subject matter of the book here reviewed is therefore a well-established field of research at Masaryk University and among the book's team of authors.

The authors say in their introductory chapter that their book “follows the relation between the energy transition in Germany and the Czech sector in detail” (p. 14). They

¹ See Filip Černocho, Břetislav Dančák and Jan Osička, *Energiewende: Současný stav, budoucí vývoj a důsledky pro ČR* (Brno: Masarykova univerzita, 2015).

² Filip Černocho, Robert Ach-Hübner, Veronika Jurčová and Yuliya Borshchevska, *Energiewende and the Energy Security of the Czech Republic and Poland* (Brno: Masaryk University, 2017).

³ Project information: Energetická infrastruktura a její vliv na energetickou bezpečnost, Masaryk University, <https://www.muni.cz/en/research/projects/24323>.

do not really employ a specific research methodology. Rather, the goal is simply to explore the possible impact of *Energiewende* on Germany's neighbors.

The authors' research was based on both primary and secondary sources of information. The authors mostly used sources in English (most of which, however, are of German origin), some in Czech and Slovak, and only exceptionally a few written in German. Most of their sources were produced by state or supranational actors. Those include Germany's Federal Ministry for Economic Affairs and Energy, Federal Network Agency, Federal Statistical Office, and Federal Environment Office; the Czech Ministry of Industry and Trade and the Czech Energy Regulatory Office; and a few reports by European institutions, such as the European Commission, European Parliament and Eurostat. Those agencies were the main sources of the data used in the book's graphs and tables, along with a prominent Berlin think tank, Agora Energiewende, and the European Network of Transmission System Operators, ENTSO-E.

The first and longest chapter of the book introduces the reader to the issue of *Energiewende*. It sums up political developments in Germany in the field and explains the aims of the transition. This part of the book introduces the crucial actors involved, which include political parties, state institutions and private entities such as the owners of the means of energy production, the transmission network operators, and their opponents. It outlines their roles in the energy transition. It also presents technical and financial indicators, using a great deal of data and graphs on installed capacity and electricity production from the various energy sources, electricity import and export, balancing of loads for grid stability, electricity prices and subsidies for renewables.

The second chapter examines the turn to renewable sources and its impact on electricity production and trade. It explains how different factors influence the costs of energy production and how competition in the energy market works. It also shows how Germany deals with the problem of building flexibility into its energy production capacity, since production and consumption are not stable and balanced over the year or even over a day.

Next, the book focuses on the internal EU market for electricity. While in the past stability, predictability and security of supply were the most important targets of European energy policy, there is now a clear shift toward competition, which keeps prices low for consumers. However, the publication highlights some obstacles to the development of the EU internal market, such as the lack of convergence in the prices of electricity among the EU member states, deficiencies in interconnections across borders and the problem of so-called "wrong-way" energy flows.

The fourth chapter discusses the future of the Central European power sector. It analyzes the different energy sources that are available, their advantages and disadvantages, and how the energy mix should look if it is to both provide energy security and make economic sense. Some traditional energy sources will have to remain in operation in order to ensure the security of supply, even though they will no longer be very profitable.

The actual topic of the book – the impact of *Energiewende* on the Czech Republic – is the subject of its fifth chapter. It lays out the main problems Germany is dealing with in the course of its energy transition and how they affect the Czech energy sector. These

include unequal geographic distribution of energy production and consumption, an insufficient domestic network in Germany, growing export of electricity surpluses, and the continued utility of the German-Austrian bidding zone for pricing of energy. The way these issues are resolved can have negative financial and technical consequences for the Czech Republic.

Furthermore, the authors evaluate the Czech Republic's official State Energy Policy (issued in 2014), which they roundly criticize. In their opinion, the Czech Republic's energy policy runs counter to the reality of the market because it promotes the construction of new nuclear power plants and assumes that self-sufficiency in itself can ensure the country's energy security. According to the book, the Czech energy policy does not take into account important factors such as the unpredictability of electricity prices and of the European and German energy market, the very long time required to license and build a new nuclear power plant in the Czech Republic, and the difficulty of securing public funding for one.

The sixth chapter examines *Energiewende* in a broader context, analyzing its Europeanization. There are several issues that must be solved at the EU level, such as the permissibility of state interventions, the applicability of the new system of emissions trading (ETS), rules for cross-border trading in electricity, and increasing the capacity of cross-border networks. Other issues can only be solved at the member state level. In the authors' view, Germany is not pursuing a European nuclear power phase-out nor an EU-wide system to support use of renewable sources of energy. Germany is choosing to Europeanize only a select set of topics, like the common energy market, ETS, and climate objectives, because it recognizes the tensions between national energy sectors and member states' policies.

The authors conclude that "there is no reason to expect any significant change in course" in Germany (p. 161). There is a broad social consensus in Germany on energy policy. Renewable sources already cover a larger part of consumption than expected, and the planned nuclear phase-out and restrictions on the use of coal are to follow. However, as the authors point out, the future is not entirely easy to predict due to the changing environment of the energy sector. This poses a challenge for the Czech Republic. Its current main strategy paper, the State Energy Policy, and the priorities it sets for the Czech energy sector largely fail to reflect ongoing changes in the European energy market. Therefore, according to the authors, Czech politicians should create a new development strategy for the Czech energy sector.

The book contains a list of abbreviations, an introductory summary, a concluding summary of the authors' findings, an index and references. The chapters include several illustrations such as graphs and tables, which support the text and are a valuable source of data. Some of the chapters also have a brief summary of their content.

The subject matter of the book is very broad, and it opens up a number of topics for consideration. Not all of them have been elaborated as much as they deserve to be because of the book's limited length. In addition, some of the data in the tables is presented without interpretation in the text. Therefore, the book offers the reader only an

introduction to *Energiewende*, not a full picture of it. It is more an overview than a strictly academic text.

While its analysis of policy is perceptive, I would have expected to see more about politics in the book, especially how specific decisions were made and who pushed them through. It is notable that the book does not cover the influence of some actors on energy policy in depth. The attitudes of German political parties and their leaders to *Energiewende* are summed up very briefly. Some controversial political topics, such as subsidies for renewables and exemptions from paying EEG fees,⁴ are only mentioned and not really analyzed.

Unfortunately, the book needs plenty of editorial revision, and the reader will note some shortcomings. To name a few, the summary at the beginning of the book, which contains its most important statements about the current state of *Energiewende*, its impact on the Czech Republic and the Czech Republic's future prospects, and which provides links directing the reader to the corresponding text in the following chapters, was simply translated from the original Czech version. For that reason, it fails to reflect important information found in some of the chapters of the English version. The links pointing to particular sections of the book where information is dealt with in detail do not match the chapters as they appear in the English edition. There is an index of names, but it lists only three persons, whereas many more people are mentioned in the text. Some graphs and pictures are almost unreadable due to low resolution printing (e.g. p. 61, 113). In one place, the text refers to a graph and uses colors to describe the individual lines when the entire publication is printed in black and white only (p. 52). The format used to write the names of German legislative acts varies as well. Moreover, there are occasional errors of fact; for example, the town where a nuclear power plant was planned is "Wyhl," not "Wahl" as it is written on p. 17. On the same page, the text states that the CDU/CSU, SPD and FDP were all opposed to nuclear power, while in fact they supported the technology.

To conclude, I would recommend this book to students and to the general public because it offers a good introduction to Germany's *Energiewende* and its European and regional contexts. For those who are already familiar with the field – practitioners, professionals, and the like – the book will seem very basic. Nevertheless, even they can glean some useful data from it.

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⁴ The EEG fee is a part of the final price of electricity that is earmarked for development of renewable sources. It was introduced by the German Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz).