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Stewards or sticklers for change? Incumbent energy providers and the politics of the German energy transition



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ABSTRACT

This paper examines the actions and strategies of Germany's leading energy companies—E.ON, RWE, EnBW and Vattenfall—in response to the liberalization of the German electricity market and measures to promote renewable energies, market developments as well as exogenous shocks such as the Fukushima nuclear disaster and the economic crisis. The study offers a comparative analysis of these companies from 1998 to 2013, outlining their development from thriving growth at the start of liberalization up to the current state of crisis. It identifies three strategic phases which the incumbents went through nearly synchronously and show how differences between their activities can be attributed to their respective power plant complex, regional positioning and shareholder structure. With a focus on the context of the *Energiewende*—Germany's commitment to shift toward sustainable energy production—this article contributes to the current debate on the sustainable transformation of the energy supply system. The theory of strategic action fields by Fligstein and McAdam serves as a theoretical framework.

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1. Introduction

In the global discourse on the reduction of greenhouse gases and the shift toward sustainable electricity production, the German energy transition—the *Energiewende*—has attracted widespread attention. In the last 15 years, the share of electricity from renewable sources in Germany has risen from 4.7% in 1998 to 24.1% in 2013 (AG Energiebilanzen). Yet apart from the speed of this process, other aspects of the *Energiewende* stand out. The expansion of renewables in Germany was driven mainly by new actors, such that the established energy companies' share of the total installed capacity of renewable energies accounted for only 6.5% in 2010 ([1]: p. 45). These companies, falling behind the rapid developments, ultimately found themselves in a substantial crisis in 2013. How did this happen?

At about the same time when the German federal government implemented the Renewable Energy Sources Act (EEG) to promote the expansion of renewable energies, the German electricity market was liberalized. This liberalization led to a wave of mergers, from which E.ON, RWE, EnBW and Vattenfall¹ ultimately emerged

as the four dominant actors. Then, as the portion of Germany's total amount of energy generated from renewable sources rose continually due to the EEG, these companies seized the opportunity to expand beyond the borders of their former supply areas and grew in size and power. Given their focus on large-scale electricity production, and the comparably lower return on investment from renewable energies, they abstained from expanding in renewables (see also [2]). By the end of the 2000s however, the four companies were increasingly faced with challenges (for the development of the companies, see Fig. 1), most notably in the form of competition from renewable energies, but also the economic crisis and unfavorable developments in foreign markets. At about the same time, in response to the nuclear accident of Fukushima, the German government decided to phase out nuclear power. From then on, at the very latest, these four companies can be considered to be in crisis, and a steadily growing one at that. How might these developments be explained?

Sociological field theory, and in particular the approach by Fligstein and McAdam [3,4], offers a promising framework for analyzing change processes in organizational fields such as the German energy supply sector. It not only offers a dynamic view of the interrelations between organizations and their environment but also allows to include all relevant actors and influences within its scope. Applying this theory, I reconstruct the actions of the German energy providers and make two main contributions.

First, the article provides empirical insights into the activities of the established German energy providers during the energy

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¹ In this case, Vattenfall refers to the German subsidiary of the Swedish company Vattenfall AB. This subsidiary was named Vattenfall Europe AG before being rebranded to Vattenfall GmbH in 2012. However, elsewhere in this paper, Vattenfall refers to Vattenfall AB.

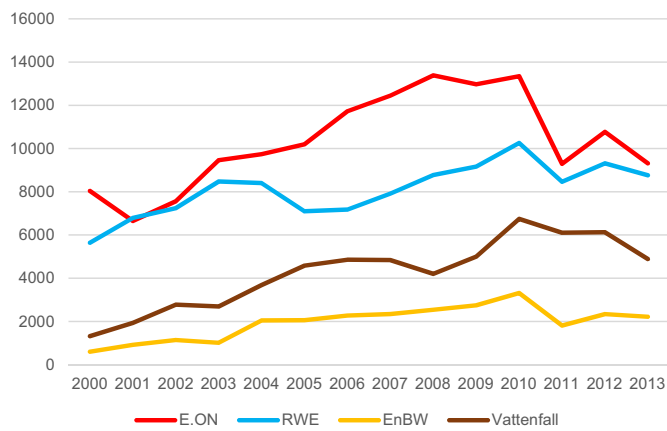


Fig. 1. EBITDA in million Euro. Partly labeled as “adjusted EBITDA.” EBITDA stands for earnings before interest, taxes, depreciation and amortization. In the case of Vattenfall, numbers were converted from Swedish Krona to Euro with the exchange rates used in the respective annual reports. EBITDA of the other companies are not fully comparable since reporting standards lacked consistency across companies and over time. When possible, previous year’s figures were chosen.

Source: Annual reports of the companies.

transition process. Although a number of studies have examined this topic ([5–9]; among others), none go beyond 2011, resulting in a lack of coverage of more recent developments that have contributed to the pressure on the companies. For example, there is no research on the activities of these companies since the nuclear accident of Fukushima. Nor is there a satisfactory sociological analysis of the changes in the German energy sector, one that would, for example, conceive of the change processes in the German energy sector as a result of social contestation.² Overall, the German case is of specific relevance for three main reasons: the speed of the expansion of renewable energies was singular; it was driven significantly by actors who had not been engaged in electricity production before; and it was accompanied by a steady decline of the incumbent industry.³ The second contribution of this paper consists of addressing previous discussions in this journal about barriers to the spread of renewable energies [10,11], energy markets [12] or energy transitions in general [13].

Overall, this paper seeks to provide answers to the following research questions:

- (1) What were the most important changes in the environments of the companies, and how did the companies react to these changes?
- (2) Are there differences and similarities between the companies’ actions and, if so, how might these be explained?

The main body of the paper consists of four sections: a presentation of the theoretical framework (Section 2); a presentation of the methodological approach (Section 3); an outline of the changes in the German energy supply sector from 1998 to 2013 (Section 4); and a comparative analysis of the strategies of the four companies (Section 5). This latter section, comprising the bulk of the paper, highlights the similarities between the companies’ actions over time, such as the phases which the companies went through

nearly simultaneously, and also points out the main differences between the companies. Section 6, the conclusion, then presents further empirical implications of these findings.

2. Theoretical background—the theory of fields

When analyzing change processes in economic sectors from a sociological perspective, neo-institutional field theory ([14,15], among others) proves to be very appropriate since it focuses not only on the economic actors or the organizations that actually interact but also on “the totality of relevant actors” ([14]: p. 148). In that sense, organizational fields spread beyond the borders of an economic sector in that they encompass any actor that influences its institutional setting. Yet, the concept of organizational fields, as originally formulated, appears to be too static for conceptualizing change processes.⁴ To overcome these and other shortcomings, subsequent works then sought to enhance the understanding of dynamics ([16,17], among others) and agency ([18], among others) in organizational fields. Furthermore, Fligstein and McAdam [4] maintain that neo-institutional field theory neglects aspects of power and conflict ([4]: p. 28).

In their most recent approach on a “theory of fields,” Fligstein and McAdam offer a dynamic view of organizational fields that also takes aspects of power and conflict into account. The authors analyze organizational fields using the term “strategic action field,” which they define as “a constructed mesolevel social order in which actors (who can be individual or collective) are attuned to and interact with one another on the basis of shared (which is not to say consensual) understandings about the purposes of the field, relationships to others in the field (including who has power and why), and the rules governing legitimate action in the field” ([4]: p. 9). All strategic action fields are themselves made up of multiple fields. For example, any collective actor comprises a strategic action field in and of itself, and any division within an organization makes up a (subordinate) action field which is again comprised of multiple action fields. Fligstein and McAdam use the metaphor of the Russian doll to illustrate this interlacing structure of the field. The constitution of the field as well as its borders may shift from time to time, since the fields are constructed on a situational basis and since its borders depend on the issues at stake. In this study, the field borders and the criteria of field membership are defined as follows: Any actor producing, feeding in and trading electricity is seen as a field member. Other actors such as politicians or social movements are allocated to proximate fields (see below).

Fligstein and McAdam [3,4] identify three types of field actors, the *incumbents*, the *challengers* and *internal governance units*. Incumbents “are those actors who wield disproportionate influence within a field and whose interests and views tend to be heavily reflected in the dominant organization of the strategic action field” ([4]: p. 13). As the field’s rules tend to favor them, they wield disproportionate influence and claim formidable resource advantages. They have to defend their position against the challenger actors, who have built up less privileged niches and typically wield little influence over the field’s operation. A field is characterized by a constant wrangling between the incumbents and the challengers over the definition of field rules and the scarce resources. The third type of actor, the internal governance units, is charged with overseeing compliance with field rules and protects the interests of the incumbents. The four researched companies are the incumbents in electricity supply in Germany, which is the field under study in this research. The configuration of electricity production based on large centralized structures and big fossil and nuclear power plants

² Sovacool’s [41] content analysis of about 4500 research articles in leading energy journals indicates that sociology is generally underrepresented in energy research.

³ In no other European country have the incumbent energy providers been challenged to this degree. Instead, the incumbent regimes in most other countries have remained rather stable (See for example Geels et al. [38]). Gerring [39] lists 10 criteria for selecting a case, among them extremity. He sees this criterion as an appropriate and highly valuable rationale for selecting a case compared to other possible cases ([39]: 88).

⁴ For an overview of the critique on neo-institutional field theory as well as further attempts toward a more dynamic concept of organizational fields, see ([43]: p. 72).

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