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Lusatia and the coal conundrum: The lived experience of the German *Energiewende*

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HIGHLIGHTS

- The German energy transition is a social process as well as a set of policy measures.
- Lusatia, in Eastern Germany, is a social laboratory of the Energiewende.
- The contestation of coal in Lusatia is a struggle to control cultural 'scripts'.
- Home and belonging, ecological modernization, and climate change are key scripts.
- More "energy democracy" would bolster the legitimacy of the energy transition.

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ABSTRACT

The German *Energiewende*, or energy transition, is an ambitious suite of policy measures which aim to decarbonize the German economy and achieve an almost complete transition to an energy system based on renewable energy by mid-century. This article contends that the energy transition is also a *social* process. We develop a provisional local ethnography of the *Energiewende*, an account of the lived experience of this social process from the perspective of villagers in Atterwasch, Kerkwitz and Grabko, in the region of Lusatia in Eastern Germany. Their experiences are particularly salient, since their villages are facing demolition to make way for the expansion of the nearby Jänschwalde coal mine. The villagers' struggle to defend their homes highlights a fundamental contradiction in the energy transition, sometimes referred to as the "coal conundrum". The contest over the future of coal in Lusatia can be seen as a struggle to control key cultural 'scripts' or narratives, of home, belonging, ecological modernization, climate change, and democratic deficit. Our research suggests that any resolution of the coal conundrum, and effective implementation of the *Energiewende,* must be informed by an understanding of these scripts, and how they underpin the motivations and mentalities of different social actors.

1. Introduction

> The common denominator must surely be to encourage progress and development in our region. The common denominator is climate policy. The very same climate policy which our Federal government has promulgated: onwards with renewable energy! That's already a fact here! You can see it right here on my farm in Atterwasch. […]I mean the solar panels, I mean our windmill, I mean our electric car. What my family and I talk about, we live as well. We're living it [the Energiewende]. We do not just talk about it, we live it. (Monika Schulz-Höpfner, Interview Atterwasch September 2015 TM).

A small village in Lusatia, a region in Eastern Germany close to the Polish border, may seem an unlikely location from which to consider the global challenge of climate change. Atterwasch, and the neighbouring villages of Kerkwitz and Grabko, have histories stretching back hundreds of years; the oldest part of the parish church of Atterwasch dates back to 1294, while Kerkwitz recently celebrated the 555th anniversary of its first mention in official records (Schatte, 2012). Yet these villages, and the surrounding countryside, also display the physical manifestations of a particular form of technological modernity. The roof of the parish rectory, next to the church in Atterwasch, is equipped with a bank of solar panels, an innovation which was recently recognized with an "Ecumenical Environmental Award" conferred by the Ecumenical Council of Berlin-Brandenburg (Märkischer Bote, 25.09.2015).

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The turbines of a small wind farm situated a few kilometres away are clearly visible from the main street of Atterwasch, and the village also has a bio-gas plant operated by a local famer, Ulrich Schulz.

These small-scale renewable energy projects embody at a local level what has been described as "one of the most ambitious national energy transition initiatives worldwide" (Moss et al., 2014, 1). This is the the German *Energiewende* or "energy transition", a comprehensive policy framework which sets a target of 35% of national electricity generation to be provided by renewables by 2020, and 80% by 2050 (Bundesregierung, 2011,Röttgen 2013). The energy transition also commits Germany to a phase-out of all currently operating nuclear power plants by 2022 (Bundesregierung, 2011). Germany aims to reduce greenhouse gas emissions by 40% by 2020 (relative to 1990 levels), and by 80–95% by 2050 (Röttgen 2013). Felix Christian Matthes describes the long-term ambition of the energy transition as "full decarbonization of the economy" by mid-century and "the transition to an energy system in which energy supply is almost fully based on renewable energies (Fabra et al., 2015, 51). However, the *Energiewende* is not simply a set of policy instruments, but also a social process; Ottmar Edenhofer, co-chair of working group III of the IPCC, has characterized it as "one of the greatest social experiments there has ever been in Germany, comparable with the process of reunification" (Focus-Online, 2011).

It is this social process which is the focus of the current article. We develop a provisional local ethnography of the *Energiewende*, an account of the lived experience of this social experiment from the perspective of villagers in Atterwasch, Kerkwitz and Grabko. Their experiences are particularly salient, since their villages are facing demolition to make way for the expansion of a nearby open-cut brown coal mine. Since 2007, the Swedish state-owned electricity company Vattenfall has been seeking approval from the State governments of Brandenburg and Saxony to expand existing open-cut brown coal mines, or open new mines, at five locations in Lusatia. If approved, they would allow Vattenfall (2012, p13) to access and mine an estimated total of about 750 million tonnes of brown coal over the life of the mines (Vattenfall, 2012; Klima Allianz, 2015). Nearly all this coal would be burnt in local coal-fired power plants to generate electricity. If all five mines go ahead, the three villages mentioned above – Kerkwitz, Atterwasch and Grabko – would be demolished or rendered uninhabitable. Altogether around 900 residents would need to be relocated, and large areas of farmland and forest would be swallowed up by the mines (Klima Allianz, 2015).

For the last eight years, residents of the villages have been campaigning to stop the mine extensions. Many of the villagers see this campaign as a struggle to defend not only their homes, farms and fields, but the goals of the *Energiewende*. Their struggle highlights a fundamental contradiction in the energy transformation, one which Arne Jungjohann and Craig Morris describe in recent analysis for the Heinrich Böll Foundation as the "coal conundrum" (Jungjohann and Morris, 2014, 4). The coal conundrum can be expressed as follows: while renewables' share of the German energy mix has been growing, so too has that of brown coal (lignite), one of the most polluting and carbon-intensive fossil fuels of all. As Ortwin Renn argues elsewhere in this Special Issue, a paradoxical situation has emerged: "the more Germany invested in the energy transition and poured more than 24 billion Euros into energy subsidies […], the more the amount of Co2 increased due to the fact that among the fossil fuel providers only lignite coal was able to remain competitive in the energy market" (Renn, this issue).

Germany is the world's largest producer of lignite, and overall, coal (both lignite and metallurgical coal) accounts for 43.6% of current electricity generation and 25.1% of primary energy consumption (AG Energiebilanzen, 2014), Since the passing of the energy transformation laws in 2011 and the beginning of the nuclear phaseout, consumption of brown coal for electricity generation has actually increased, from 25.4% in 2013 to 25.6% in 2014 (Agora Energiewende 2015, Vasagar, 2015). This has led some commentators to argue that coal has made a "comeback" (Schultz, 2012; McCown, 2013). As Jungjohann & Morris ask rhetorically in their analysis of the coal conundrum, "is Germany building new coal plants to replace nuclear despite the country's green ambitions?" (Jungjohann and Morris, 2014, 4).

There has been vigorous debate amongst policy analysts about the coal conundrum – sometimes referred to as the "dark side" of the energy transformation – and the future role of coal and coal-fired power in the German electricity market (Gawel et al., 2013, Dehmer, 2013, Kunze and Lehmann, 2015; Fabra et al., 2015). This debate tends to focus on the energy mix and energy policy at the national level. At a local level, in Lusatia where our study is based, the coal industry is deeply imbricated in local political and economic structures. The State governments of Brandenburg and Saxony have indicated strong in-principle support for the mine extensions, and a continuing role for coal mining and coal-fired power in the regional economy.

The contest over coal in Lusatia has polarized local populations, and led many to question whether or not policy makers are truly committed to the goals of the *Energiewende*. Regional and national environmental organizations such as Greenpeace and Friends of the Earth have become involved in local campaigns, and protests both supporting and opposing the mine extensions have attracted national media attention.

In this highly charged and extremely fluid social setting, we have been conducting an ethnographic study of the local contestation of coal since mid-2014. For many of the actors involved in this contestation, the *Energiewende* is not simply an abstract policy framework; it is already a part of the texture of everyday life, and provides an important background script for their actions and motivations. This paper focuses on what the energy transition means in concrete terms for local protagonists, in a region where its aims collide with entrenched reliance on brown coal. Our approach starts from the basic premise that implementing the *Energiewende*, and the climate protection goals which form an important part of its underlying motivation, is not simply a technocratic issue, but also a sociopolitical question. As Ortwin Renn has noted, "a better understanding of the human drivers for initiating, promoting, or hindering political change [in the arena of climate action] is as crucial to effective decision-making as are the findings of the natural and climate sciences." (Renn, 2011, 165).

1.1. The Energiewende and ecological modernization: a brief history

As Renn notes elsewhere in this issue, the Fukushima nuclear accident was a crucial turning point in the evolution of German energy policy, and had an immediate effect on public debate about the future of nuclear power (Renn, 2011, 13). However, the energy transition itself needs to be seen as the continuation of a policy approach and process of self-definition which has been unfolding at least since the early 1990s. Felix Christian Matthes points out that the German term *Energiewende* was originally coined in 1980, but did not become the "official headline of the new German energy paradigm" until 2011 (Fabra et al., 2015, 51). There were a number of important milestones on what Matthes calls the "long political road" to the *Energiewende*, including the passing of the Renewable Energy Law (Erneuerbare-Energien-Gesetz (EEG)) in 2000, and the 2010 Energy and Climate Policy Package, which set out Germany's ambitious emissions reduction targets (ibid.) It was the decision for an exit from nuclear energy in 2011, however, which turned the energy transition into an "official headline".

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