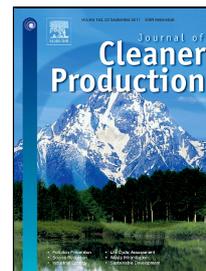


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The Transition of Germany's Energy Production, Green Economy, Low-Carbon Economy, Socio-Environmental Conflicts, and Equitable Society



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Abstract

Low carbon transitions have been predominantly analysed using quantitative methods, mostly building on present and forecasted data of social metabolism. This paper addresses both the economic and social dimensions of low carbon emissions by analysing the presence of socio-environmental conflicts in Germany. These conflicts appear to be a consequence of unsustainable policies targeting firms' planning and behaviour, mainly based on neoclassical economic thinking and various stakeholder groups that oppose carbon intensive businesses. By applying a Delphi Method with 18 experts, the authors analyse 117 socio-environmental conflicts (e.g. derived from extractive activity, energy production, and infrastructure projects) in Germany. Most of these conflicts include the struggle of various society groups to achieve a low carbon economy but also a more equitable society. The analyses presented in this paper shows that Germany provides both the best and the worse of achieving low carbon paths: a significant investment into renewable energy, but also a strong dependency on lignite which supplies the most polluting power stations of Europe. By addressing the problem from an historical perspective, the authors demonstrate how carbon intensive extractive activity has been one of the major causes for environmental activism and protest in both socialist and capitalist societies.

Highlights:

German energy transition raises questions of equitability as energy poverty has increased

Green Economy focus favours mega projects as high voltage power lines

Despite ambitious goals, Germany (so far) has remained a high-carbon economy

Extraction activities targeting lignite had been dominant in both socialist and post-socialist Germany

The Vattenfall's divestment from Lusatian Lignite is presented as a case of corporate de-growth

Keywords:

Germany, Energy Transition, Green Economy, Low-Carbon Economy, Socio-Environmental Conflicts, Equitable Society

1. Introduction

The "Green Economy" manifesto, launched during the Rio+20 summit in 2014, addresses growth in income and employment which is "driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services" (UNEP, 2011 p.16). Germany ranks first in the so called Green Economy Perception Index (Tamanini, 2014). German policymakers tend to associate a greener economy with the transition towards a low-carbon economy (Federal Ministry of Education and Research, 2014). Particularly with the "*Energiewende*" ("Energy Turnaround") project, the German government has taken a quite radical approach with the aim to change the country's energy supply by withdrawing from nuclear energy and mostly relying on renewable energies. However, Kunze and Becker (2014) argue that *energy transformations* regularly generate and bring together social movements opposing opencast mining, fracking and energy poverty. These movements tend to ally with local groups frequently promoting and campaigning in favour of renewable energy in socio-environmental conflicts which arise from structural inequalities related to income and power-supply. These conflicts affect the environment as well as people's wellbeing at regional and sub-regional levels, pushing local communities to organise massive protests in order to preserve their physical environment and quality of life (EJOLT 2016).

Although small-sized renewable energy projects may awake environmental consciousness, broader initiatives targeting energy transformations can divert vast segments of German society from focusing on the

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