

CONFLICTS AROUND GERMANY'S *ENERGIEWENDE*: DISCOURSE PATTERNS OF CITIZENS' INITIATIVES

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ABSTRACT: Especially since the Fukushima nuclear catastrophe (2011), Germany has expanded its renewably sourced energies. Nuclear power is to be phased out by 2022. What is central to federal policy is the expansion of wind-generated energy. Plans for new wind farms have, however, faced opposition. And the transportation of electricity from the windy north to the high-use south entails an expansion of the existing power grid, which also provokes conflict. The article scrutinises dominant patterns of discourse on these issues. Based on current discourse theory, the research sheds light on the argumentative power of citizens' initiatives with respect to nature conservation, landscape, health and economics.

KEY WORDS: renewable energies, Germany, wind energy, power grid extension, citizens' initiatives

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Introduction: Energy transition – between general acceptance and local resistance

The context

The German *Energiewende* (energy transition) is widely considered a leading project in the pursuit of sustainable global ecology. However, it is not without its critics, either international or national. Focusing on the structure and impact of citizens' response to major aspects of the *Energiewende*, and employing a discourse theory approach, the following article examines the genesis and development of a key interface between society and the environment in two issues of acute, albeit regionally diversified, spatial concern. As such it aspires to make a meaningful contribution to contemporary social geography.

The conflict

Renewably sourced electrical power has become increasingly important to Germany's energy landscape. The determination to expand this sector has been widely shared by the country's political parties since the early 1990s, with the proviso that the role of nuclear power in the energy mix was not altogether agreed or clear. Three months after the Fukushima reactor catastrophe of March 2011, the Federal Government passed a resolution to complete the phase-out of nuclear power by 2022. In contrast to many other European states, where new nuclear plants were being planned, German society in general and its politicians in particular widely agreed that this specific source of energy was not sufficiently controllable. The consequence of the planned decommissioning of nuclear power plants is, on the one hand, that coal and lignite-fired power

generation will continue – at least for the time being – to play a key role in energy provision, and on the other hand, that renewable sources of power must be expanded still more rapidly. Connected to this latter requirement is the need to step up the extension of the national power transmission grid in order to deliver power where it is needed. Together with energy saving and climate protection measures, these are key components of the energy policy adopted by the German government (Bundesregierung 2017).

Specific renewable energy targets worked out by the Federal Government have been passed down to the state and municipal level. The current target is for 40–45% of national electricity consumption to be renewably sourced by 2025, and 55–60% by 2035 (BMWI 2016). This will involve massive change: in 1991 renewable sources stood at about 3%; by 2015 their share had risen to 30% (AG Energiebilanzen 2015). The expansion of renewable energies is in principle widely accepted in German society (Agentur für Erneuerbare Energien 2015). However, in the German context renewable energy largely means wind-generated energy, and construction plans, especially for new wind farms, have often excited and still excite vocal criticism from those immediately affected¹ (Bernhardt 2013; Leibenath, Otto 2014; Pohl et al. 2014; Zoellner et al. 2008). Planning processes were – and still are – being delayed and projects partially withdrawn.

In particular, the expansion of the wind-generated energy segment has introduced another element of massive public resistance. For although the plan was to expand the nationwide provision of renewably sourced energies decentrally, the north of Germany is de facto windier than the south, and planning processes are consequently based on the forecast need for new grid lines to carry power generated in the north to its high-level industrial consumers in the south (Übertragungsnetzbetreiber 2014a, 2014b). A further 5000 km of “grid extension and reinforcement measures” is currently planned (Riegel,

Brandt 2015: 10). Failure to provide adequate transmission systems could cause shortfalls in the power supply in the south, and corresponding cutbacks to generation in the north. But grid expansion has met serious opposition in recent years: in some quarters it is rejected as altogether unnecessary, other voices call for the modification of existing plans. Either way results in delays (Neukirch 2014, 2015; Weber et al. 2016) and in view of the 2022 deadline for the exiting nuclear power, delay – for both planners and consumers – is a major problem with profound spatial repercussions.

Worldwide, many countries are turning from fossil to renewable sources of energy, but there are considerable differences in how the measures involved are received by those immediately affected. The issue has engendered widespread research interest, especially with regard to the levels of citizen participation, protest and acceptance that have been experienced in Germany, and specifically with reference to issues of landscape change (among many others, Aas et al. 2016; Bues, Gailing 2016; Krauss 2010; Kühne, Weber 2017; Leibenath, Otto 2014; Lennon, Scott 2015; Messinger-Zimmer, Zilles 2016; Pasqualetti 2001; Radtke 2014; Rygg 2012; Short 2002; Stremke 2010; Wolsink 2007), but articles devoted to the topic have tended to view power generation and transportation as independent issues rather than looking at their mutual impact. Nor has much attention been paid to the development of the social and political authority of some positions over others. There has been as yet no broad comparative analysis of the citizens’ initiatives (CIs) whose role in Germany is becoming ever more important in the context of increasing wind-generated power and the parallel extension of the power grid.² In

¹ Contributing 42.3% (2015) of this segment, wind-generated power is the most important of the renewably sourced energies in Germany (Federal Ministry for Economic Affairs and Energy 2016: 9). It is regarded as decisive for the continued growth of ‘renewables’ and is at the centre of public interest. It is for this reason that we focus on it in the present article.

² As already noted, developments in Germany in the closely connected fields of renewable energy and the national power grid extension have been researched and commented from a number of different angles, but no comparative analysis has so far been undertaken, nor have CIs as yet been subjected to quantitative analysis. The present article focuses from a discourse theoretical standpoint precisely on the results of such empirical analyses. This means, however, that it cannot at the same time extensively review all available research in the area. Hence, we confine ourselves here to citing a few representative publications.

this respect the situation in Germany is unique, for although citizens' action groups have been lobbying for some twenty-five years for greater reliance on renewable energies, the rapid and radical change in federal energy policy since Fukushima is unparalleled elsewhere. And it is this that has stimulated the surge of interest of civil society in the implications of energy change, above all in its local physical impact in the form of mushrooming wind farms and power lines.

Against this background, the present article examines the structure, aims and argumentation of citizens' protest in Germany. We ask about the main goals of CIs and the hegemonic development of specific positions. The comparative approach takes research in this area a step further; the method is internationally applicable, and its focus on a country whose energy transition has a high profile in social and political discussion may well be of international interest.

The various issues and points of view are approached here via discourse theory, a research perspective that offers a focus on the genesis of 'social reality' (in the sense of Berger, Luckmann 1966) and on the hegemonic consolidation of meaning. The discourse theory perspective draws attention to processes of social negotiation, and in particular to the consolidation of attitudes that over time will appear increasingly convincing and 'natural'. At the same time, it reveals cracks and fissures in argumentative logic and highlights the temporal and spatial conditioning of the various positions and their rhetoric. Applications to energy transition have, however, been restricted in scope (Gailing, Leibenath 2015; Kühne, Weber 2017; Leibenath, Otto 2014; Lennon, Scott 2015; Zimmer et al. 2012) and have preceded the recent growth in resistance, which has intensified the conflict to the point of changing its character and scope.

After outlining the theoretical basis, methodology and constituent elements of our analysis, central argumentative patterns in the twin fields of wind-generated energy and power grid extension will be presented and compared, with special reference to regional differences. Conclusions will finally be drawn about the impact of the debate and potential consequences for the political course of the *Energiewende*.

Theoretical background and methods

The energy transition has put to the foreground certain standpoints and their arguments to the detriment of other ones. Discourse theory has proven a useful tool for understanding these developments. The following paragraphs will outline this method and its application in the present context³.

Discourse theory as a methodological perspective

Applied to the socio-political arena, the discourse theory of Ernesto Laclau and Chantal Mouffe is premised on the impossibility of achieving permanent structures of meaning. Even in ostensibly stable situations, change is always possible (Glasze et al. 2012; Laclau 1994; Laclau, Mouffe 1985; Weber 2016). In the Germany of the 1960s, for example, nuclear power plants were seen by many as pioneering, whereas today they are predominantly associated with risks and hazards (e.g. Bauer 1995).

The converse of what Glasze calls "the impossibility of an all-embracing, permanently defined social structure" (Glasze 2013: 74) is that social meanings are necessarily temporary and negotiable. A meaning is rooted in discourse, and in everyday discourse many meanings are taken for granted and appear 'normal'. According to Leibenath and Otto (2014: 3), Laclau and Mouffe "take discourses to be structured totalities which relate linguistic elements such as words and utterances to objects and practices in a contingent manner". For Laclau and Mouffe (1985: 112): "Any discourse is constituted as an attempt [...] to arrest the flow of differences", resulting in temporary consolidations of meanings.

In principle, numerous lines of discourse may exist and gain relevance at any given moment. Whether wind farms are seen as modern and

³ The discourse theory developed by Ernesto Laclau and Chantal Mouffe facilitates on the one hand the analysis of temporary consolidations of meaning and their social power, and on the other hand, the one of discursive breaks and directional changes. It is because both these aspects are important in the context of public response to the German energy transition that we have chosen here to work within the framework of Laclau and Mouffe's theory.

aesthetically appealing or as a blot on the landscape is not determined by the nature of either the wind turbine or its setting, but by processes of social negotiation. These can (temporarily) elevate specific standpoints to mainstream status and relegate others to backwaters. The decisive factor is which lines of discourse become so dominant that their constructed nature is forgotten. These particularly powerful and successful discourses are termed by Laclau and Mouffe 'hegemonic'. They emerge, on the one hand, through the establishment of equivalence between aspects around a decisive nodal point (Jørgensen, Phillips 2002). On the other hand, consolidation occurs through the demarcation of what is external to, and hence *not* part of the discourse: the discursive 'outside' also produces identity, becoming a 'constitutive outside' for the discourse in question (Laclau 1993). Alternative social realities are marginalised (Glasze, Mattissek 2009; Laclau 1993) and can be understood as sub-discourses; visible behind hegemonic discourse, they may themselves, in other circumstances, become hegemonic (Weber 2013, 2016).

As a methodological perspective, discourse theory can, on the one hand, analyse the formation of views and arguments and the establishment of hegemonic discursive nodal points with corresponding limits or 'outsides'. On the other hand, it can develop alternative strands of discourse – discursive backwaters – and indicate their potential for the mainstream.

Methodological approach: a systematisation of discursive positions and an analysis of narrative patterns

Discourse theory starts from the temporary fixation of meanings produced by a repetition of patterns. Methodologically, our approach seeks to identify and measure, on the basis of theoretical principles and within the framework of discourse theory, the regularities through which certain positions become fixed and exercise power within the context of substantial societal changes. In the context of wind farms and the grid extension, relevant positions are represented by phrases like 'disfigurement/destruction/loss of landscape/countryside', 'nature conservation' or 'health considerations'. Extracted from the websites of citizens' initiatives (CIs) and similar

corpora, keywords and phrases like these can be systematised and quantified.

In order to identify "supra-individual hegemonic patterns" (Mattissek 2008: 115), recourse is also taken to the analysis of narrative patterns – a method that can be classified as a coding procedure (Glasze et al. 2009). It examines how meanings are constituted by integrating linguistic elements within regular patterns, especially of equivalence and opposition (Somers 1994). Linguistic usage falls back on certain narratives for this purpose, among them landscape stereotypes (Glasze et al. 2009; Mattissek, Glasze 2016). Accordingly, the analysis of narrative patterns aims to detect recurrent types of argumentation used to consolidate meanings, and conversely, to determine suppressed positions that in this context define the 'outside' of the discourse.

Empirical database

To plot the structures of assent and dissent with respect to wind-generated energy and the grid extension in Germany, we focused on citizens' response to national and regional plans as determined via *Google* searches of appropriate websites – *Google* is currently used in Germany by almost 95% of people looking for information on the Internet (Statista 2015). We identified CIs formed with the express purpose of influencing politics and planning in the context of wind-generated energy and the grid extension. Launched by local citizens – sometimes with the support of established political parties – these groups are often constituted as registered associations. Using the key phrases *Bürgerinitiative* (CI) *Windkraft/Windpark/pro Windkraft* (wind power/wind park/for wind power), *Bürger für/gegen Windkraft* (citizens for/against wind power), *Bürger Gegenwind* (citizens' headwind), *Bürger machen Wind* (citizens making headwind), and *Windkraftgegner* (opponents of wind power), 10 CIs⁴ supporting and 270 (locally) opposing

⁴ Our survey covered citizens' action groups concerned with the expansion of wind-generated electricity triggered by the German energy transition. Germany also has numerous cooperative energy associations initiated and run as economic entities by citizen shareholders. These were not especially covered by our survey.

wind-generated electricity were identified⁵ (December 2015). Their key discursive positions and argumentative patterns were inductively determined and systematised, and hegemonic positions and sub-discourses mapped.

A similar *Google* search had already been undertaken for the grid extension issue (January 2015). Here keywords were *Bürgerinitiative* (CI) or *Interessengemeinschaft* (interest group) linked to *Stromnetzausbau* (power grid extension), *Netzausbau* (grid extension), *Stromtrasse* (power lines), *Gleichstromtrasse* (DC power lines), *Monstertrasse* (monster grid corridor) and similar concepts from this field (see also Weber et al. 2016). Here, 90 CIs opposing current plans were identified through *Google search* or *Facebook*. Again, their central motivation was determined and classified to facilitate comparison and the mapping of patterns.

The following two sections of the article focus on hegemonically constituted positions, central patterns of argument and regional differences.⁶ They deal first with the development of wind-generated power and then with the extension of the power transmission grid. Finally, the results of these two analyses will be compared.

Wind farms: Analysis of assent/dissent

Introduction: geographical concentrations and political tendencies

On the one hand there is, as already mentioned, widespread assent in Germany to the ongoing development of alternative energy sources (Agentur für Erneuerbare Energien 2015), and a number of CIs have sprung up expressly to propagate the construction of wind farms. Far more

numerous, however, are the groups that oppose this project, especially at the local level. The figure below tells its own story: of the 280 CIs covered by our wind energy survey, 270 are critical of the further construction of wind farms; only 10 support this goal as an effective decentralised contribution to the *Energiewende* (Fig. 1).

CIs against wind farms are concentrated in the west and south-west of the country, with North Rhine-Westphalia counting 42, Hesse 60 and Baden-Württemberg 45 groups. The distribution of wind turbines, however, is exactly the reverse: southern Germany has significantly fewer than the windy north, and in Hesse and Baden-Württemberg in particular a relatively large number of initiatives oppose a mere scattering of wind-turbine plants.

The statistical picture could to some extent be explained by regional differences in the economic and political structure of Germany's 16 federal states. Thus, the wide spaces of the north-east, coupled with weaker economic structures, make openness to investment and a corresponding sparseness of citizen opposition a priori credible. On the other hand, there seems to be a correlation between sparsely populated areas and opposition to change in the physical and spatial environment. Related to population density, the distribution of CIs against wind farms reveals a high concentration in thinly populated areas.

By either promoting or restricting the development of alternative energy sources, the laws and regulations of the various states also exercise a political influence on the growth and spatial distribution of CIs. Thus, for example, the protest in the Rhineland-Palatinate increased in direct relation to the plans of the state government post-2011 to promote the construction of wind farms (Brühne et al. 2015). One CI there goes so far as to condemn state political goals as "ideological eco-totalitarianism" and "red-green [Social Democrat and Green Party] eco-terrorism", and accuses politicians of "bypassing citizens' concerns and going through the back door" (CI-26). Conversely, the Bavarian government influences the social negotiation process by formulating strict regulations for the establishment of wind parks. The restriction of these to the few sites that meet these regulations automatically restricts the probability of citizens' protest.

⁵ The sources of CI citations have been systematised and saved in a separate file which, in the interests of transparency, can be requested at any time from the authors. One reason for this procedure is to save space in the present article; but we also want to emphasise that the quotations chosen here provide only an example of established patterns of argumentation within the different discourses. We do not focus on the argumentation pattern of any particular initiative or group. Sources in the text are numbered CI-01 to CI-28.

⁶ Direct citations of citizens' responses in the following paragraphs have been translated into English for ease of reading.

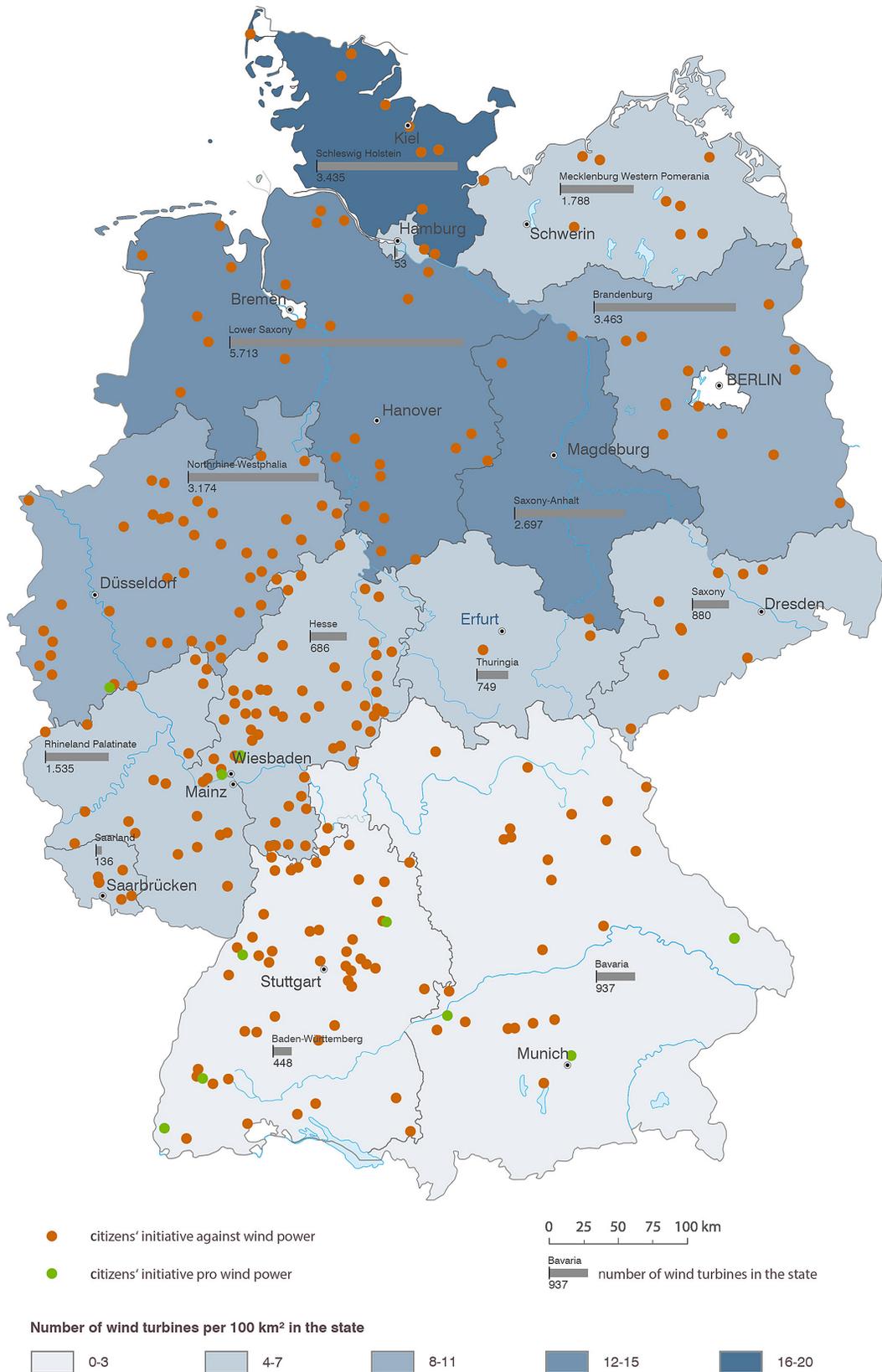


Fig. 1. National distribution of CIs in relation to the number of wind farms per 100 km² (by federal state), the year 2015.

Source: own presentation based on Google research of CIs and data from the Bundesverband WindEnergie 2016 and Statista 2016.

Aims and arguments of assenting groups

CIs supporting wind-generated power are almost all motivated by the perceived urgency of the *Energiewende* and the need for appropriately mixed renewable energy sources. Nuclear and coal-powered plants must be replaced and are accordingly relegated to the outside of the energy discourse. This adds to the argumentative force of the assenters. A Bavarian CI argues on its website, for instance, that “Wind-generated energy [...] must be further developed to replace dangerous nuclear and climate-killing coal-fired power stations. [...] Together with solar energy, wind-power is the mainstay of renewably generated electricity” (CI-08). A strong supporting argument for phasing out risky or high-emission sources of energy is often found in the Fukushima nuclear catastrophe (Weber et al. 2016), and CIs also commonly cite the optimisation of CO₂ and energy balances as arguments for low-risk wind-generated power. Regularly advanced by politicians and media, these arguments, are frequently reproduced by CIs (e.g. CI-03, CI-08).

Other arguments are based on the economic opportunities offered by wind farms at the municipal level, not only in terms of a socially equitable distribution of profits but also of a decentralised power supply. A typical argument is that “wind-generated energy creates local jobs and added value. [...] The participation of local citizens fosters a sense of community and changes the emphasis from being simply ‘affected parties’ to being entrepreneurial actors in a local project” (CI-25).

Repeatedly proposed by CIs, these arguments take on hegemonic force in the discourse supporting wind-generated power. They are underpinned by morally coloured narrative topics such as that of the *‘Heimat’* (home environment). A Bavarian CI website (CI-02), for example, cites the need for citizens’ participation in the *Energiewende* against a background of changing local landscapes and structures: “Local people must be better integrated [in the process]. They frequently feel passed over when it comes to transforming their home environment by planting wind farms”.

A further locally slanted discursive node is generational equity and solidarity. Thus, another CI argues: “It’s a matter of future values and

quality of life – of our health, of finally putting nuclear power behind us” (CI-03). The sense of belonging and the familiarity of the local environment are, in these arguments, constitutive elements of the concept of home. For “we can only complete the *Energiewende*, we can only protect our countryside, our flora and fauna if we act together; only by acting together can we foster the life of our villages” (CI-02).

In sum, the *Energiewende* as a central nodal point is closely linked with the further development of wind-generated power – on the one hand, under the aspect of economic and social opportunity, on the other, under that of the risks of nuclear and coal-powered energy. These are relegated to the ‘outside’ of the discourse. The spatial and structural consequences of expanding the wind-energy sector are not denied, but explicitly addressed, albeit in the sense of factors that must be accepted as ‘necessary evils’.

Aims and arguments of dissenting groups

CIs opposed to wind-generated power tend to argue from the point of view of physical effects of the *Energiewende*, specifically the local impact of wind farms. Aiming to prevent or delay the implementation of concrete plans, they view the technology critically, question its usefulness – or in some cases even the relevance of the *Energiewende* as such – or oppose specific project details. While 139 of the 280 CIs reject local implementation of wind-energy installations, 49 initiatives oppose the *Energiewende* in principle. In 83 of the identified CIs, no precise key targets could be specified.

Narratives of loss and devaluation dominate the local rejection contexts, which frequently focus on the position and size of wind-energy projects. At the same time, care is taken not to reject wind-generated power as such, but only its local manifestations: “We say YES to the preservation of the quality of our regional life and residential environment. YES to regional nature conservation with areas set apart for birds, for fauna and flora, for biodiversity, and for local recreational purposes. And YES, we are open to renewable energy sources. But NO, we reject the siting of the planned [local] wind park” (CI-28). More narrowly specified rejection of this type is clearest in the states of Lower Saxony, Bavaria, North Rhine-Westphalia and Rhineland-Palatinate.

The more radical groups aim to stop the construction of wind farms altogether and demand a rethinking of the *Energiewende* by politicians and society. The Greiner Eck initiative, for instance, complains that “within the straitjacket of an energy transition that not only doesn’t work, but in the minds of many experts cannot work, the preservation of our environment and countryside is as unimportant as our long-term health and quality of life” (CI-14). For these and similar reasons outright rejection of the politically driven expansion of wind-generated power is most common in Baden-Württemberg, Hesse, Brandenburg and Bavaria.

Behind the most frequently advanced arguments lie nature conservation concerns: 91% of dissenting groups reject the impact of wind-generated power on the natural environment. In detail, they fear for the habitats of endangered species and censure the disturbance of flora and woodland. The construction of wind-turbine plants and access roads in forested, as well as nature and water conservation areas, and the use of chemicals during their construction and operation, constitutes in the eyes of the groups involved a level of environmental disturbance and destruction that can no longer be justified by the questionably beneficial effects of renewable energies. Forest clearance and the sealing of significant areas of soil are perceived as the damaging consequences of an ostensibly Earth-friendly ideology, and the political drive for wind-generated power as the paradoxical development of a profit-oriented wind lobby that is blind to the “ecological and economic senselessness” of the measures it propagates (CI-13).

Similar arguments appeal to the concept of ‘landscape’ and publicise morally slanted narratives of ‘home environment’. Taking regional and federal groups together, 86% of dissenting voices are motivated by fear of loss and devaluation. Dominant here is the perception of industry as intruding on and alienating (especially long-standing cultural) landscapes: “Pristine rural landscapes of great recuperative and recreational value for the urban population will be turned into energy-producing industrial adjuncts of the cities” (CI-26). In this context – playing metaphorically on the visual appearance of wind farms – concepts such as ‘asparagus beds’ or ‘paling fences’ are bandied about. Landscapes perceived as the “physical manifestation of cultural identity”

(Kühne 2008: 319) are fraught with the sense of a home environment and local belonging and defended against the threat of “disappear[ing] forever” (CI-26).

Some 83% of CIs advance health-based arguments against the construction of wind farms. Key aspects here are emissions and accident prevention. Among relevant emissions are infrasound (in the inaudible sound spectrum) and the rotating shadow of wind turbines. Permanent exposure to the former could cause sleep disturbance, cardiac arrhythmia and depression. In the wake of “irresponsible [health] planning” (CI-10), the “wellbeing of both humans and animals” is in danger (CI-14).

Finally, 69% of CIs in the survey cite economic reasons such as impairment of property values, loss of touristic attractiveness – especially with regard to cultural monuments – and diminution of the recuperative and recreational values associated with nature. Narratives of nature, landscape, health and economic wellbeing are often interwoven and consolidated into a discursive cluster: “the health and economic wellbeing (from tourism) of the people who live here are jeopardised; and property values (leaving aside actual wind turbine sites) are down by more than 30%” (CI-12).

Through repetition, arguments such as these become central to the discourse against wind-generated power – a discourse which relegates wind farms to the outside, setting them in polar opposition to ‘landscape’ and ‘countryside’. Defined less by inherent aesthetic qualities than by habitual perceptions, the “‘normal’ familiar landscape” (Kühne 2006) tends to be accorded a higher value, and the concept of change is denigrated, or altogether excluded from the discourse.

Grid extension: Analysis of assent/dissent

Geographical distribution of citizen involvement

Citizens’ reception of grid extension plans in Germany bears some striking similarities to that of the plans for wind-generated electricity: on the one hand, surveys show general support for the rapid grid extension as “indispensable for the *Energiewende*” (e.g. Forsa Survey, commissioned

by TenneT TSO GmbH 2014), on the other hand, tough negotiations are required in places directly affected by the plans.

Placing the 90 CIs from our Google-based search on a map of Germany marked with the current grid routing plans reveals a clear overall match between the routing and the sites of the CIs (Fig. 2): these are found notably along the HVDC corridors. Discussion within civil society, in other words, is institutionalised against the background of political and administrative planning (Glasze 2013, Weber 2013). This is especially clear in Bavaria, where CIs lie (predictably) in a dense line along the projected HVDC south-east extension link. This should not, however, be taken to mean that these groups automatically reject the grid extension as such. In contrast, there are relatively few CIs along the western grid corridor (the Ultranet), which is an upgrading of existing lines rather than an entirely new corridor. Residents here are used to living with the existing power lines. Resistance might still grow in view of the fact that the planned upgrading will involve HVDC (as opposed to AC) transmission, but, at the time of our survey, opposition to this specific aspect had not yet formed.

Key objectives

An analysis of the overall aims of the 90 CIs in the survey indicates that 70% are wholly against current routing plans, 23% advocate buried cabling, and the remaining 7% constitute a sub-discourse voting either for alternative routing or for a revision of statutory limits governing proximity to housing and other critical factors. Almost a third of the groups, it appears, are more concerned with having a say in the implementation of current plans than in stopping them altogether. The distribution of opposition groups is also important. Straightforward rejection is confined to the states of Hesse, Baden-Württemberg and Thuringia. While 37 of the 38 groups in Bavaria oppose existing extension plans as such, the picture in Brandenburg, Lower Saxony and North Rhine-Westphalia is different: here 24 of 30 initiatives advocate buried cabling, alternative routing, or revision of proximity or other legal constraints; only 6 groups reject grid routing plans outright.

In line with the widely divergent situations in different federal states, various arguments

are adduced against the need for the grid extension. Groups in Lower Saxony and North Rhine-Westphalia tend to accept the basic need for new power transportation systems, but often call for a change in current plans, advocating either buried cabling or alternative routing. Narrative patterns here are highly comparable, accepting the grid extension but relegating overhead power lines to the outside of the discourse. For example, a CI in Lower Saxony states (CI-22): "We are for the *Energiewende*, but in an ecologically, economically and humanly meaningful form: i.e. HVDC buried cabling". Another initiative in Lower Saxony (CI-06) accepts that "expert opinion sees new grid routes as indispensable"; but they also support buried cabling as being "significantly better rated" than overhead power lines. The preference for buried cabling has developed to the point where one can speak of a firmly anchored narrative nodal point, especially in northern Germany.

Bavarian CIs, on the other hand, almost unanimously reject the HVDC south-east extension link outright "as unnecessary for the energy provision of Southern Germany. It profits only the firms behind it [...]; moreover, as it will be used to carry power generated from lignite and nuclear sources in Eastern Europe, it contradicts the essence of a sustainable energy transition" (CI-01).

While in north Germany the logical link between the central nodal point of the *Energiewende* and the grid extension is largely accepted – with an outright rejection of the grid extension confined to a marginal sub-discourse – in Bavaria the grid extension is often seen as contradicting the *Energiewende*, which is regarded as a decentralised, regional project focused on the local production of electricity. Thus, the grid extension "hinders a genuinely decentralised *Energiewende*" (CI-01); it has "nothing to do with a sustainable *Energiewende*" (CI-21).

Given these disparate usages, the term *Energiewende* has become what Ernesto Laclau called a "floating signifier" (Laclau 2007: 131), compatible or incompatible with the grid extension according to one's point of view. The grid extension debate does not, then, follow a straight line of assent/dissent: the goalposts shift as one moves from north to south, and this naturally affects the question of buried cabling as an alternative to overhead power lines.

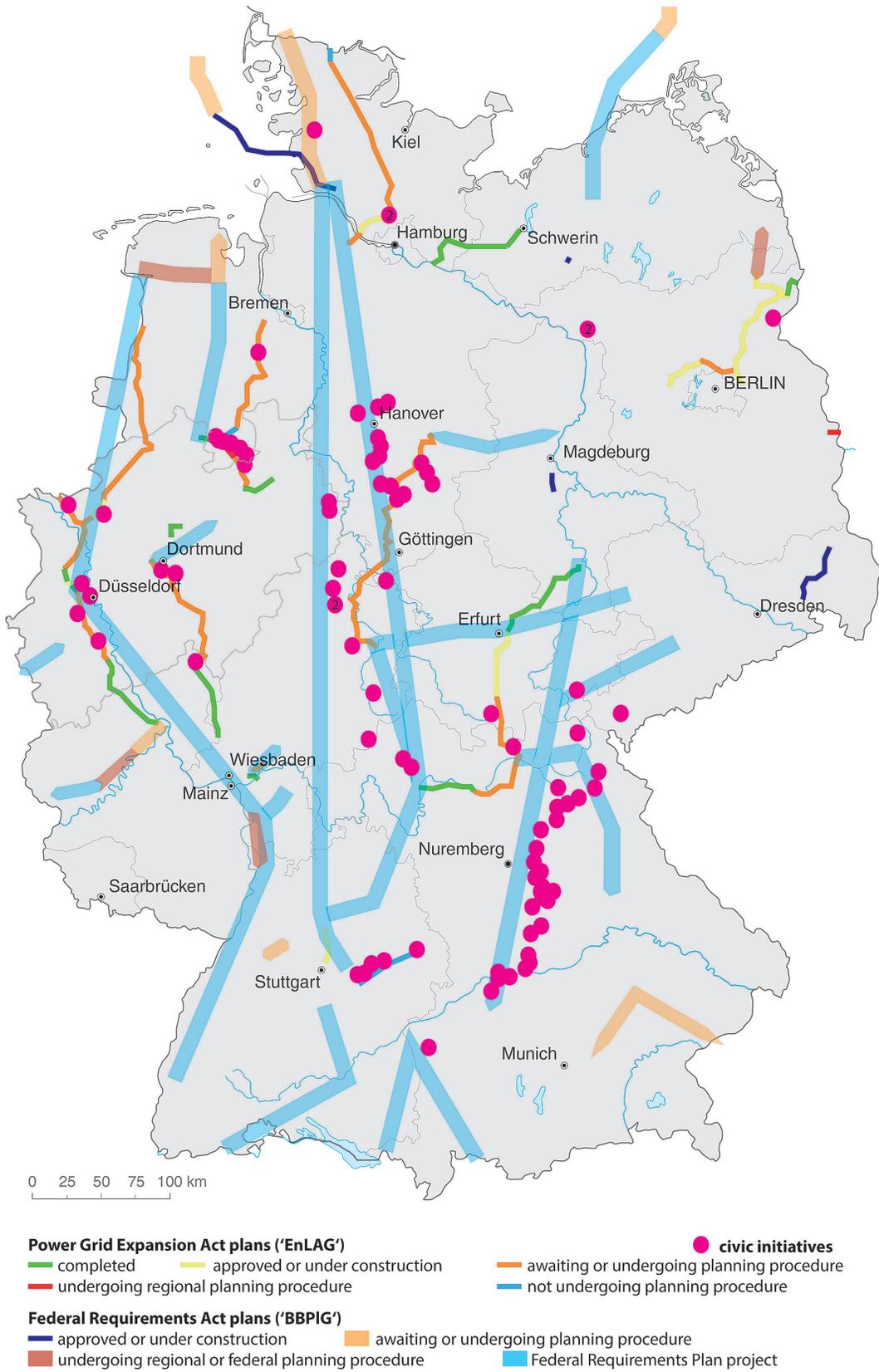


Fig. 2: Planned grid routing and CIs.
 Source: own survey and presentation based on grid routing plans of Federal Requirements Plan Act and Power Grid Expansion Act; CI sites from Web and Facebook data.

Central argumentative patterns

For 86% of CIs against the grid extension, landscape and home environments are central concerns, followed closely by 82% that fear impairment to health, specifically from electromagnetic radiation from overhead power lines. These two aspects are hegemonically established. At a considerable distance follow nature conservation (58%) and economic (53%) arguments, the latter led by worries about the impact of grid extensions on property values and tourism.

The argument about landscape and home environments focuses above all on the requisitioning of land for power lines and their aesthetic impact. Accordingly, narratives tend to highlight symbolic values – for instance the destruction of the traditionally perceived integrity of the Fichtelgebirge (an upland region of eastern Bavaria), which, “as habitat, living space and recuperative and recreational area, [would] be substantially and irreparably destroyed by HVDC buried cabling” (CI-09), or the impact of grid corridors on home surroundings, which, it is asserted, will lead to a “destruction of our living environment, our home and its natural heritage” (CI-16). Such emotive associations are common above all in Bavaria.

With an 82% citation rate, impairment to health – in a number of cases founded on comprehensive scientific research into the impact of electromagnetic radiation (“electrosmog”) from overhead power lines – is high on the list of arguments against the planned grid extension (e.g. CI-04; CI-23; CI-27). Enhanced risks are feared specifically with regard to cancer, amyotrophic lateral sclerosis (ALS), Alzheimer’s disease, and childhood leukaemia. The repetition of these somewhat diffuse fears establishes them as discursive constants.

In the grid extension debate, nature conservation tends to be used as a flanking argument, often woven into a cluster with other environmental aspects, e.g.: “Every solution proposed so far excessively impacts the lives of people, nature and the environment. Whole tracts of countryside will be laid waste, villages disfigured, livelihoods threatened, and property values undermined” (CI-07); another group cites “destruction of the natural habitat and home environment” (CI-19).

Economic grounds often include impacts on property values and tourism, e.g.: “A gigantic

drop in property values will follow, and with it the annihilation of citizens’ wealth” (CI-25); again, with the southern grid extension, “the economic potential of the region, especially its development for tourism, will be permanently undermined, alongside a general drop in property values” (CI-11).

Citizens’ opposition to the grid extension is, then, essentially local, with protest groups largely confined to planned grid routing corridors. Two camps can be distinguished: those that approve alternative routing, or buried as opposed to overhead cabling; and (especially in southern Germany) those that reject the planned grid extension altogether.

Comparison of argumentative patterns: wind-generated power and the grid extension

A comparison of the foregoing analyses of reactions to wind-generated power and grid extension will shed clearer light on the structures and political consequences of the opposition to federal plans within German civil society.

Both strands of resistance have similarly structured goals: some 69% of the CIs in the survey reject wind-generated power outright, especially in Lower Saxony, North Rhine-Westphalia, Rhineland-Palatinate, Baden-Württemberg, Hesse and Bavaria; with the planned grid extension the equivalent figure is 70% and the focus especially in Thuringia, Hesse, Baden-Württemberg and Bavaria. The main thrust of opposition to the *Energiewende* in its current form lies in southern Germany; its political impact is felt most intensely in Bavaria. Resistance here is not only strong, it also receives wide media coverage, to the extent that it has caused a significant shift in the state policy. While in June 2013, in line with the then hegemonic discourse of necessity, Bavaria still voted in the *Bundesrat* (upper house of the German parliament) for the grid extension, by October 2014 the same Bavarian government rejected the extension plans outright. In July 2015 buried cabling was then proposed by the Federal Government as a political solution to the conflict, but it remains to be seen if this will receive widespread acceptance (Weber et al. 2016). What this indicates is that citizens’ protest can and does influence political

decisions, which underlines the effectiveness of hegemonically established arguments.

Another aspect that emerges from comparison of the two strands of resistance is the incidence of support for change and adaptation rather than complete revocation or cessation of current plans. This may take the form of proximity restrictions, alternative corridor routing, or buried versus overhead cabling. Here the north German states stand in clear contrast to the south. Wind farms and the grid extension are not relegated here to the 'outside' of the discourse. What the northern CIs want is better communication and wider participation.

Specific arguments in the two areas also reveal striking parallels: across all federal states, up to 91% of CIs in the two surveys cite the threat of loss of essential values, whether these are related to the natural/home environment, economic wellbeing or health (see also Aas et al. 2016 for local opposition to high-voltage grids in Norway). And again, it is the repetition – and with it the hegemonic consolidation – of such arguments that lends them social and political force, to the point of swinging a government round (see the example of Bavaria above). The development and outcome of this process, it may be appropriate to observe here, are made all the more visible by the application of the discourse-theoretical perspective taken in this article.

Conclusion

Germany's exit from nuclear power, scheduled for 2022, has led to the need to speed up an energy transition that already began with the expansion of the alternative energy sector in the 1990s. Here, wind-generated power played (and continues to play) a major role (BMW 2016). The *Energiewende* has dominated the energy aspect of German political discourse since 2011. As such it has become, in the discourse-theoretical terminology of Laclau and Mouffe, a central nodal point. But it is also a 'floating signifier' (see above), understood e.g. in Bavaria as a regional project without the need for a national grid extension, and in the rest of Germany as one of national and European outreach.

At the same time there is a discrepancy between the general acceptance of the *Energiewende*

and local opposition to its concrete manifestations in the shape of wind farms and HVDC grid corridors. In an age of diminishing belief in technology (Renn 2005), industrial plant is widely felt to be intrusive, rather than merely a necessary evil. A sudden change and upheaval in one's accustomed surroundings brings added insecurity to an already insecure world. NIMBY attitudes (Dear 1992; Devine-Wright 2009) account partly, but not wholly, for this: "'normal' familiar landscapes" should remain as they are, but resentment is also felt for top-down political decision-making and its enforcement; the times when this passed unquestioned are gone (Walter et al. 2013). Today's citizens have their own questions, desires and goals; they want (and expect) to participate; and they are often well informed about issues of nature conservation and health protection (on the lay understanding of landscape/countryside see Hokema 2015; Kühne 2008). Understandably in this context, down-the-line information evenings to keep the locals at bay do not meet with enthusiasm. On the contrary, they add to the resolve of citizens' action groups, whose political impact has become an undeniable factor in the *Energiewende* project. This development is not confined to Germany: its international/European dimensions require further research across disciplinary as well as national boundaries.

What conclusions and consequences can be drawn from these considerations? Discourse theory itself is concerned with the analysis of socio-political conflict rather than with recommendations for its solution; this would contradict the contingency and changeability of social reality on which the theory is premised. But the undeniable social relevance of its analyses enhances the need to apply the results of such analyses to practical situations (Mouffe 2000, 2005) – without losing sight of the central theoretical tenet of the contingency of social realities.

In this sense it is clear that, to gain assent, both the fundamental need for new power transportation corridors and the contribution of wind-generated electricity to the power supply must be communicated more effectively to the citizens of this country. Communication means listening and discussion. People's cares and fears – especially with regard to health – must be addressed; people must be involved in the negotiations instead of being palmed off with 'expert opinions'.

Although in a postmodern age unidimensional perspectives are doomed to failure, they are, sadly, still sometimes pursued. 'Home', for example, is a deep-seated emotional anchor. That the home environment is naturally and regularly subject to change is not immediately apparent, but awareness of this might, if sensitively communicated, ease the acceptance of the changes in question.

The emotional nature of the issues involved is writ large in the utterances of many CIs. Neither rational, cognitive argumentation based on economic and technological considerations nor the reduction of the issues involved in the political and corporate dimension meets the needs of this situation. Rather than simply attempting to demonstrate the legitimacy of the projects, their emotional implications must be adequately addressed. Reflection on the inherent changeability of social reality and its perception may enable politicians, industrialists and planners to better understand why their arguments fall on deaf ears, and what they can do to improve the situation. Once a particular point of view has become so firmly established that it can no longer be effectively questioned, it is – as discourse theory indicates – increasingly difficult to introduce other perspectives into the negotiation process.

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