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Jimmy Grimault

Introduction

- ¹ In October 2019, 150 mobile gendarme officers along with a few armoured vehicles evicted the residents in the Amassada ZAD¹ in Aveyron (South France) (Dunlap, 2020). Opponents to RTE's² 400 kV power transformer had been living temporarily or permanently in owner-built makeshift dwellings on this site since 2015. This transformer meets a need to secure the electricity grid amid strong regional development in terms of renewable energies (mainly wind and solar photovoltaic power), requiring the export of this new energy generated to the national electricity grid, since local consumption is not high enough to absorb it. This infrastructure is therefore strategic: it represents the material precondition for the development of hundreds of other projects and, in this respect, has been the focus of considerable local, regional and national protests.³ Two opposing visions of ecology are therefore driving this conflict: on the one hand, an opposition movement whose ideals and occupational practices chime with those of the ZADs of Notre-Dame-des-Landes (Barbe, 2016; Verdier, 2018), Bure (Beauguitte, 2018), Sivens (Subra, 2017) and Roybon (Egon & Laslaz, 2020); and, on the other, the roll-out of energy infrastructure⁴ in a technocratic mindset and in the context of an orchestrated "energy transition" which seems above all to be sustaining the nuclear option (Aykut & Evrard, 2017).⁵ This event is an

opportunity to consider the changes underway and where research stands in this regard (Bourdier, 2019).⁶

Figure 1

Part of the transformer construction site in June 2021: occupation of the site by opponents is still visible in the trees, with an evicted cabin in view. The infrastructure is being built on a *causse*, a limestone plateau typical of the south and west of the Massif central in France.

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- 2 A foray into the history of energy sounds a more sceptical note where the notion of “transition” is concerned and prompts reservations over its ability to solve contemporary crises through technological change and innovation (Jarrige, 2014). First of all, because, from an energy point of view, history is chequered with additions rather than substitutions (Fressoz, 2014). Ever since the Industrial Revolution, global energy consumption has been following a steady upward trend. All of the new energy sources have merely come on top of the previous ones: coal, oil, gas, nuclear, renewable. The same can be said about materials (not just energetic materials) for which “the substitution processes are largely offset by rebound effects and by redirecting uses.” (Fressoz, 2020). In the paradigm of contemporary technological capitalist growth, the resolution of energy, climate and environmental crises is inconceivable (Latouche, 2006). And yet the changes in the industrial energy generation system are being conceived in the very framework of an “energy transition for green growth”.⁷
- 3 When approached from this angle, the notion of ecological modernisation strikes as more fitting than that of “ecological transition”.⁸ This modernist perspective assumes that the solution to present-day crises, tied in with modernisation and industrialisation, can be found in yet more modernisation and industrialisation and the integration of environmental dimensions in an unchanged mindset (Sartre & Doussan, 2018). The electricity grid’s role in the envisaged changes is symptomatic of this modernisation. As Fanny Lopez reminds us: “Energy sources as well as technical assemblies—such as the electricity system—shape economic and political models, they

determine a relationship with resources.” (Lopez, 2019). Underpinning the technosystem of capitalism is the large technical system (LTS), the emergence of which coincides with the construction of large cities that are undermining local energy systems and eclipsing the raw materials and physical infrastructure of the Capitalocene⁹ (Lopez, 2019). The “energy transition” is, however, reliant on this LTS (Gras, 1997, 2003; Raineau, 2011) and the massive use of non-renewable raw materials for the industrial renewable energy sources requiring significant extractivism (Vidal *et al.*, 2013) which, for the most part, takes place outside national territory in keeping with the trends of centuries past (Magalhães *et al.*, 2019). This modernisation is also not dissimilar to the previous one: that of the prosperous 30-year period following World War II. Despite the positive image commonly conveyed regarding this period, historiography, by contrast, shows the disastrous health and environmental consequences of these decades of high growth (Pessis *et al.*, 2013). Widespread criticism was levelled at these technological upheavals at the time, however, as it has been ever since the advent of the industrial society (Fressoz, 2012; Jarrige, 2014). The 21st century does not appear to be more reflective than those that came before. At the very least, the same mechanisms of “modern disinhibition” are at work to get round the limits and contradictions laid down by certain technological trajectories (Fressoz, 2012).

- 4 Traditionally, although the mountains have been instrumental, and a driving force, in energy generation and therefore in France’s industrialisation, we might well ask what their roles are in this energy modernisation, how infrastructure is taking on a territorial dimension in these spaces, the many different uses of which are fuelling conflicts (Laslaz *et al.*, 2014) and how these are managed by acceptability strategies defined as “a set of targets and actions chosen to secure the consent of local communities and stakeholders for the siting of new energy infrastructure.” (Oiry, 2017).¹⁰ Our critical approach to the “transition” will be three-pronged, focusing throughout on mid-mountain regions.¹¹ First of all, we will show what the drivers are behind the development of such infrastructure in mid-mountain areas: recent trends of these margins, and the perceptions and interests of the local elites who are co-opting these projects. Second, we will outline the reasons why these areas are a source of conflict and the regulations, negotiations and resistance at work in them as well as their stakeholders. The current energy modernisation process, like the last one, is leaving certain sections of society behind, not least in the Global South where the extractive industries are located (Sovacool *et al.*, 2020). The idea of combating climate change provides a rallying slogan for supporting the “energy transition” but is preventing some forms of reflective thinking among scientists¹²—especially when they are called on to promote the social acceptability of the energy transition (Bourdier, 2019). There is a need to regain proper analytical hindsight of the narratives of a hypothetical “energy transition” so as to turn attention to the denied and marginalised communities below the radar, often working class and dominated, who endure and sometimes oppose the surge of technology, instead suggesting alternative technological trajectories (Fressoz, 2012; Pessis *et al.*, 2013; Jarrige, 2014). Lastly, we will see that mid-mountain regions are testing grounds for a government of criticism (Topçu, 2013). Although this “art of governance” has been studied for nuclear energy (Topçu, 2013; Meyer, 2014), MREs¹³ (Oiry, 2017) and offshore wind power in particular (Evrard & Pasquier, 2018; Bourdier, 2019), in France the development of new energy infrastructure is mostly taking place around villages and in rural areas (Baggioni, 2017), typically involving smaller projects within a very different framework (in

administrative, regulatory, economic and political terms for example) to the aforementioned infrastructure, yet it has hardly been studied from this angle to date.

- 5 This research into the political and social geography of the environment, drawing inspiration from Annaïg Oiry's work on the French coastlines (Oiry, 2015, 2017) and tailored to our context by recent research probing the social and political issues facing rural areas (Mischi & Renahy, 2008; Bruneau *et al.*, 2019), yields more precise insight into the various determining factors of conflicts surrounding the arrival of new energy infrastructure. A technocritical approach (Jarrige, 2014) to the "energy transition" and large technical systems (Gras, 1997, 2003; Raineau, 2011) sets the stage for research no longer focusing on the conditions of social acceptability where wind energy infrastructure is concerned (Garcia, 2018; Gueorguieva-Faye, 2006) but on their government from a Foucauldian perspective of power (Topçu, 2013). Through a primarily qualitative method, it has been possible to gather material that forms part of an ongoing thesis: 125 semi-structured interviews were held with a wide range of stakeholders¹⁴, including 40 directly involved in the conflicts dividing mid-mountain regions. These interviews are rounded off by direct participants' observations¹⁵, analysis of a body of work comprising hundreds of press articles delving into the projects studied, national, regional and local policies to do with the "energy transition",¹⁶ public inquiry reports and associations' and activists' documents (articles, posters and flyers).
- 6 Two planning projects in two French mid-mountain regions, the Massif des Vosges and Massif central, were studied in particular. More specifically, one involves ten wind turbines in a wooded area across the northern part of Ballons des Vosges Regional Natural Park (PNR)¹⁷ initiated by local officials and developed by EDF Renewables;¹⁸ and the other a power transformer located in Grands Causses Regional Natural Park managed by RTE, aimed at integrating an array of "renewable" facilities for exporting energy to a previously saturated grid. The wind turbine project has been operational since 2017 but work on the transformer will not be complete for another few years owing to the eviction measures mentioned above. There are a number of factors distinguishing these two infrastructure projects. Unlike the transformer, whose size was reduced and part of whose devices were buried to minimise the impact on the surrounding scenery and the agricultural land in a bid to promote its acceptability, the wind turbines are much more visible in the landscape of the surrounding towns. Another difference between the two projects is the type of environment where they have been installed: the transformer is located on farmland (causse), the use of which is a longstanding subject in the sector (extension of the Larzac camp) and where the farmers' unions the likes of the Confédération paysanne are more organised than elsewhere. That said, some opponents to the extension of the Larzac camp see the "energy transition" in a positive light: José Bové, for example, turned down the invitations from the opponents to the transformer several times. Incidentally, he is a member of two citizen-led energy cooperatives¹⁹. On the other hand, the Vosges wind turbine project is set within wooded plots of land and we will see that this has been a key catalyst in the conflict (2.2).
- 7 These new facilities are not only an opportunity to closely study the interactions between stakeholders in local conflicts but are also tangible examples of "energy transition" projects in practice, considered at more extensive scales (European, national, regional, intermunicipal) and according to which the stakeholders take a

stance. The Saint-Victor-et-Melvieu transformer, for instance, is strategic infrastructure for Occitania's "energy transition" region-wide. There are groups opposed not just to its local impacts but also to its wider implications for the whole region (wind farms, ground-mounted solar PV panel farms, etc.). The opponents encountered mention both the specific projects they are against as well as the fate of the larger territory they call home. Owing to their importance in territorial planning, not least as regards energy questions, the PNRs in both our regions seem to come centre-stage where criticisms are concerned. That is why we will attempt to frame our narrative, on the basis of discourse analysis, around these multiple scales rather than solely the locations of these different types of infrastructure and their local impacts on the environment or surrounding scenery.

Two Remote Rural Margins Developing Local Strategies to Boost Appeal

Two Geographic Margins in Search of Economic Benefits: From Taxation to Shareholding

- 8 The municipalities studied are geographic margins (Depraz, 2017), remote from thriving urban centres and characterised mainly by low population density and no local public services or employment hubs in the vicinity. From an economic point of view, compounding the cut in funds allocated by the State is the recent economic downturns at local levels which have cast a considerable shadow over the outlook of these municipalities. The economy in the Massif des Vosges has particularly been hit by Storm Lothar in 1999 and more recently by the vulnerability of its forests to climate change, as a local mayor explains:

In '98 the village's only resource was the forest—this was a mono-resource situation. And I remember wasting no time telling my newly elected mayoral team: "we have to think about diversifying the village's revenue streams". It's like always, never put all your eggs in one basket, or one day you could find yourself snookered. All it would take is a forest disaster and everything would be lost. What did I say? A year later, Storm Lothar struck. We had anticipated our thinking, we told ourselves, "we have to anticipate, we have to diversify our revenue streams" and I would even go further, I'm forever telling my colleagues in small villages "you need to be brave enough to create wealth". And it's true that the opportunity we were given to locate renewable energy systems here was an opportunity to create wealth. Just go and ask my secretary—if we didn't have revenue from renewable energy, the village would be out of options. We'd have to file for bankruptcy. We'd have nothing left. Because we don't get anything from the forest anymore.²⁰

- 9 Finally, the benefits of tourism only reach these municipalities very partially as they are located on the margins of major tourist destinations like the Hautes Vosges or Gorges du Tarn (see 2.1.). The "energy transition" and development of renewable energies represent an opportunity for revitalising these villages. Above all, they can turn their weaknesses into strengths: wind turbines—along with their ancillary devices—are installed in sparsely populated areas away from urban infrastructure (airports, densely populated areas, etc.), which fits the description of these villages to a tee. These factors are reminiscent, incidentally, of the municipalities concerned by the development of nuclear power plants (Lafaye, 1994).

Figure 2

The Belfays wind farm is located on the margins of the PNR. The Bonhomme wind farm, located in the PNR and developed over the same period by Alsace local officials supporting the country's Green Party, was denied after a campaign fought to gain recognition of the impact on the capercaillie, an endangered species in the region and across France. The Ballons des Vosges PNR's policy is more geared towards safeguarding the identity of the landscapes and, as such, is not in favour of accommodating wind turbines like in the Grands Causses PNR.

- 10 For local stakeholders, energy modernisation is an opportunity to set positive changes in motion to secure economic resources for the sake of “survival”. The installation of wind turbines is a way of levying taxes and duties including the IFER (Flat-rate tax on utility companies). Thanks to this tax, a few thousand euros per megawatt per year can be shared out between the municipality, the public inter-municipal cooperation establishment (EPCI) and the *département*. Just as in the territorialisation of other types of energy infrastructure—nuclear (Meyer, 2014) or MRE (Oiry, 2017)—taxation is one of the primary incentives for local officials. And yet the uncertain outlook in terms of the taxation on such facilities prompts local officials to think about other forms of local economic income such as municipal or intermunicipal investment in the capital of project companies via mixed economy companies (SEMs). The president of an intermunicipal community in South Aveyron, who is in favour of the Saint-Victor-et-Melieu power transformer and involved in jointly developing a wind farm project in his municipality, makes this point:

the carrot in wind energy is taxation [but it] is never stable [...]. Generation however—being a shareholder in a company that is generating the electricity—that won't be taken away from us [...] so we, a small village, we told ourselves that to survive, we need to generate electricity, we need dividends received from operation and not just from taxation.

- 11 In addition to taxation, and sometimes the siting of wind turbines on municipal land which unlocks rent (as is the case for most wind turbines in the Vosges project), local investment is therefore a way of maximising and sustaining the local economic benefits amid tax uncertainty and an economic downturn. Over and above these general

considerations which explain the interest of new economic benefits for these territories, more specific factors emerge.

Energy Infrastructure as a Previous Development Model in Aveyron

- 12 Saint-Victor-et-Melviu has previously benefited from the economic benefits of an initial transformer, Le Planol, built to evacuate the electricity generated by the Tarn dams. For the long-serving local officials of this area, this infrastructure has meant prosperity at the collective (for the municipality as a whole) and individual levels alike (via the jobs with EDF and economic benefits for the municipality's independent tradespeople). This partly explains their support for the new transformer project:

We backed it. As we have always backed EDF in the area. Because there is a long-standing track record—a dam in 1927 [...] then Le Planol, and after that a number of small things: the highlights are evident for the village of Saint-Victor. First of all, the financial effects were not insignificant and second, lots of people in Saint-Victor-et-Melviu were employed with EDF.²¹

- 13 This dependence on energy infrastructure extends beyond municipal boundaries since some local authorities in Aveyron also reap the economic benefits of the dams operated, for the most part, by EDF (Crozes, 2014).²² Furthermore, the dam reservoirs have helped tourism to develop across the high Lézou plains. In reality, Saint-Victor-et-Melviu is embracing the same strategy as many other neighbouring municipalities, as attested by the development from 2006 of the first wind farms in the area. This shows that there is indeed a historical link between the prosperity of these villages and the electricity infrastructure which sets this mountainous region apart from other areas in mainland France where large wind farms are gaining ground.

Figure 3

The major development of hydro-power dams along the Tarn, as well as the ancillary infrastructure (pylons and transformer), represents a local development model for the local officials in the previous mayoral team.

In the Massif Des Vosges: Moving “Into the 21st Century” by Being an “Energy Transition” Territory

- 14 For Vosges officials, the “energy transition” is a way of symbolically restoring value to their villages amid competition between local areas. These villages are looking to stand out in the same way as those of the “energy transition” by harnessing the natural resources they harbour: timber, wind, sunshine. Indeed, Vosges villages boast a number of wood-fired heating plants, two solar PV farms and a series of large wind turbines. Whereas these rural areas have long been perceived as “behind the times”, such energy infrastructure helps to “improve the image of our territory” by ushering it “into the 21st century” explains one mayor who is initiating this type of project which he considers to be “ahead” regarding “all the key challenges”²³. Another official hopes that this positive image of the territory can help it to thrive with the arrival of investors supportive of these initiatives. Renewable energies are also seen as “an advantage for tourism” and pave the way for industrial tourism for “fans of sustainable development”. An educational trail on the themes of renewable energy, heritage and biodiversity has been designed by officials and funded by EDF R. For the technical team at Ballons des Vosges PNR, the strategy of these “key villages in the Park” is “exemplary”, chiming perfectly with the promotion of “eco-tourism” as long as the Park’s iconic scenery is protected (see 2.1). Renewable energies are perceived as symbolising the technological progress of a greener and more reflective modernity. Whether, as in Occitania’s case, it is about becoming “the first energy-plus region in Europe” or the revitalised villages visited for their “innovative” approaches, renewable energies are a means—just as nuclear power was for France—of showing their “greatness” and “influential standing” (Hecht, 2004).

Conflictual Mid-Mountain Regions: Regulation, Negotiation and Resistance to Energy Modernisation

Local Areas with More at Stake Environment- and Landscape-Wise: Regulating So as to Keep Protests to a Minimum

- 15 Although the location of these mid-mountain areas on the margins makes them ideally placed for energy modernisation projects, it also increases the stakes in terms of the environment and their landscapes compared with other rural areas (Figure 4).²⁴ Energy infrastructure is regulated and steered at local government level based on “resources” and “issues at stake”. East France is graced with sweeping agricultural lowlands (the Champagne chalklands, Meuse and Moselle plateaus) where wind farms can be developed whilst protecting the most sensitive areas such as the Massif des Vosges. The Occitania region, however, has no option but to cluster wind turbines in the Aveyron, Tarn and Aude mid-mountain regions (Lévézou, Monts de Lacaune, Montagne Noire). These harbour significant “potential for wind energy” and the impact for the human population is considered low. However, as pointed out by the Energy Director at the Occitania Regional Directorate for the Environment, Planning and Housing (DREAL), “what’s complicated about the Occitania region is that these sites, these ridges, are also home to a wealth of biodiversity, migratory bird corridors and protected species”

Moreover, since these “soft” ridges are usually carpeted in forest, they have to be partially cleared to bring and install the machinery. There are groups who are specifically opposed to the damage done to the forests²⁵. From a landscape point of view, at the scale of these mid-mountain regions, the landmark sites (Hautes Vosges, Gorges du Tarn, Causse du Larzac, Cévennes, etc.) are dismissed from the start²⁶. Regarding the Belfays Plateau wind farm, Ballons des Vosges Regional Natural Park recognises that: “the fact that it does not lie on the great ridge or one of the major ridges at the heart of the Park, that it does not have as great an impact, were arguments in its favour too—it made it easier it must be said.” (Figure 2).

Figure 4

This image shows a wind farm in South Aveyron installed on a windswept ridge. Two types of turbines can be distinguished: large, modern ones and small, two-blade ones. This is a landscape feature of early wind power development in Occitania. Clearing is generally necessary to bring the turbine blades—currently between 40 and 60 metres long—to the site. June 2021.

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Figure 5

For the sake of comparison, here is a site for a future wind farm in the agricultural lowlands of Bourgogne-Franche-Comte, with parts of the turbines visible on the ground. The components can be brought to the site without too much environmental disruption since only the farming plots are concerned, unlike the mid-mountain ridges which are often carpeted in forest. June 2021

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Negotiating Energy Infrastructure: The Example of Alsace Nature

- 16 Beyond this regulation of the siting of infrastructure, projects are subject to negotiations not least with environmental associations which are not against the “energy transition” but want to limit the environmental impacts. This is the case for Alsace Nature, which is a regional offshoot of France Nature Environnement. The association’s president explains the regional energy situation which informs their position:

We have the River Rhine, which is developed for hydroelectric purposes—generating 50% of end electricity consumption in Alsace, solely because of the Rhine, or thanks to the Rhine. So we’ve been meeting our renewable energy quota for a long time if you like [laughs]. But this hydropower development on the Rhine has completely messed up its alluvial functioning. It has taken a heavy toll, since we have lost 90% of alluvial forests. These forests are no longer alluvial today—they are no longer flooded because of the Rhine’s development, and have therefore stopped being functional. So the hydropower development—which doesn’t just involve electricity, pipework has also been laid for other reasons—has resulted in very significant damage to the alluvial environment. Well, it’s done now, isn’t it, we’re not going to return the Rhine to how it was. So you see, renewable energy use is already fairly developed in Alsace owing to the Rhine. One of the arguments was therefore to say ‘we’ve done that on the Rhine, now we’re not going to develop, increase land take in the Vosges on the other hand for a production capacity that will be much less than that achieved in hydraulic power plants, as the Rhine generates several TWh annually, whereas wind turbines produce a few MWh, so we’re not talking the same order of magnitude in terms of productivity.’²⁷

- 17 Here again, contemporary conflicts in connection with energy modernisation need reframing within a longer history of spatial planning and its environmental consequences. For the Alsatian environmental federation, the Massif des Vosges represents an as yet unaffected territory that must be protected.
- 18 This protection involves minimising bat mortality. The wind turbines in the Vosges are turned off during the most sensitive times and weather conditions for the mammals, for example. Extended rotation stands and the recreation of shelters would, in principle, offset the residual impact of the wind farm (Weissgerber *et al.*, 2019). All of these measures are the fruit of lengthy negotiations between EDF R and Alsace Nature which helped to secure the federation's backing. These negotiations with EDF R had sparked discussions and fuelled tensions within the federation between its different member associations (bearing on nature and the environment). Caught between these two trends, Alsace Nature underscores the urgent need to bring down overall energy consumption and then the need to develop renewable energies "by factoring in the local specifics pertaining to ecosystems each time". Some of its members who were interviewed lament the loss of autonomy associated with integrating electricity in the grid: "you'll find this consideration of autonomy at Ellul, Gorz, Illich and others too. In our association's culture, this question of autonomy is important. Winning back a measure of autonomy."²⁸ Alsace Nature's stance exemplifies the contradictions, and therefore the discomfort, of traditional environmental protesters with respect to the "energy transition" based on the massive roll-out of industrial infrastructure with considerable impacts on natural habitats. Although energy modernisation infrastructure is subject to compensatory measures which limit its impact on the landscape and the environment, these are to be viewed as acceptability strategies for keeping opposition to a minimum (Kermagoret *et al.*, 2015). That said, some stakeholders simply refuse to negotiate, preferring to oppose the projects.

Opponents to Energy Modernisation in Mid-Mountain Regions: Disparate Classes, Residential Origins and Political Aspirations

- 19 Resistance to energy modernisation is higher in mid-mountain areas than in lowlands where most wind power projects are concentrated (Grimault, 2021)²⁹. These areas where uses are wide-ranging are more prone to conflict (Laslaz *et al.*, 2014) than the agricultural lowlands in the North and East of France. This can also be put down to the unequal distribution of social classes across the area (Bruneau *et al.*, 2019). New residents, often retired executives, are reinvesting in mid-mountain regions, alongside indigenous community leaders³⁰. Contrary to common belief, their opposition to projects is far from a foregone conclusion. A number of them are strongly attuned to environmental issues and initially support the wind power projects developed in the surrounding villages. Their spread does seem to be a catalyst, however. An artist and a teacher, both members of the Plateau Survolté association, which is against the Saint-Victor-et-Mellevieu, explain:

we found out about the project by chance and [...] we were curious, we didn't immediately grasp that they wanted to go so large-scale, when, for us, wind turbines are at the devolved level—to meet local requirements. We thought that that's how this energy would be used. That every time they installed a wind farm, it would be to supply the local level as much as possible—you know, the local area where it is installed. [...] And little by little it would replace nuclear power, it would

take the place of nuclear energy in homes, so we were obviously in favour, because we're anti-nuclear.³¹

- 20 Thanks to their wide choice of resources (schools, funds, etc.), new residents can engage in a long, costly and complex battle. But that does not sum up the latter's engagement. In the Vosges, the planned wind farm was supported by new residents (an English teacher and an agricultural engineer berry grower), when opposition to it was organised around a doctor living in the area and then a media campaign led by new residents opposed to the industrialisation of the Massif. In Aveyron, support for the RTE project has come from locals (a banker, company manager, operator, farmer), while its opponents also come from a range of backgrounds, a mixture of locals and new residents and socio-economic categories (farmers, teacher, employee, operator, artist, physiotherapist, executive). Protests against energy infrastructure are not therefore led solely by new residents or the wealthiest categories, even if the latter tend to speak up more loudly in the public arena (see Figure 6 Distribution of respondents across two axes depending on their social class and residential origin. The triangles correspond to stakeholders in the Belfays Plateau wind power project, the circles to the Saint-Victor-et-Melvieu power transformer project. Red indicates their opposition to the project while green indicates their support. To acknowledge the opinions and resistance of subordinate groups (Scott, 2009), it is necessary to go beyond the representative positions (mayor, association president) which tend to be held by the superordinate classes, especially since the rural working classes are caught in personalised relations of domination which partly explain their difficulty engaging, even though the intensity of the latter admittedly varies considerably depending on the local context (Mischi & Renahy, 2008).

Figure 6

Distribution of respondents across two axes depending on their social class and residential origin. The triangles correspond to stakeholders in the Belfays Plateau wind power project, the circles to the Saint-Victor-et-Melvieu power transformer project. Red indicates their opposition to the project while green indicates their support.

This figure only shows inhabitants of the municipalities concerned and neighbouring these types of new infrastructure. It does not show eco-modernisers who do not tend to live in the municipalities earmarked for such infrastructure or "ZAD activists" as it is hard to obtain information about their socio-economic backgrounds.

- 21 Above all, as pointed out by the historian François Jarrige: “opposition to technological change is not about rejecting technology, but is instead aimed at opposing the social and political order that this conveys; more than a rejection of change, it is a proposal for an alternative trajectory.” (Jarrige, 2014). Indeed, the interviews conducted with opponents debunk the myth of the “anti-wind turbine” nuclear energy advocate firmly opposed to any technological change via renewable energy. Studying these conflicts gives an idea of the political diversity that can drive rural territories, especially mountain areas—a far cry from the archaism to which it is sometimes tempting to reduce them (Mischi & Renahy, 2008).³² Whereas the “energy transition” is considered within the framework of “green growth”, the common denominator between the opponents encountered seems to be degrowth³³. One member of a Vosges-based association against the mountain range’s industrialisation told me that: ‘[the problem] is first of all the capitalist society as it is currently conceived—a society geared towards productivity, in a ‘more and more’ mindset of growth [...] This notion of growth and ever more wealth needs to stop, quite simply, and we need to move in a different direction’³⁴. As an alternative to the centralised electricity grid developed at European level, the Plateau Survolté association proposes the development of horizontal and local grids. To counter the gigantic modern wind turbines, the anti-capitalist members of the Amassada zone erected a small wind turbine that could be “tinkered with” and “fixed” drawing on some ‘specific knowledge [...] that is easy to access’³⁵. As an alternative to a top-down approach to the transition, some propose a critical analysis of the political setup in favour of deliberative alternatives –or even a political arrangement outside and against the State. Far from running solely counter to their perceptions of place, energy modernisation infrastructure does not align with their political aspirations either—however diverse these may be. These groups are also highly critical of acceptability strategies, which they may even boycott and block, as happened in Aveyron for the public inquiry associated with the DUP.³⁶ Persisting opposition to energy modernisation, despite regulation and negotiation, is therefore prompting eco-modernisers to reconsider the government of contentious technology.³⁷

Mid-Mountain Regions: Testing Grounds for the Government of Criticism

- 22 Behind the government of criticism of contentious technologies is a whole host of schemes (Topçu, 2013). We have seen that the economic benefits –in terms of tax and henceforth shareholding—play a key role in the acceptability of projects for municipalities on the geographic margins in mainland France. The case of Alsace Nature has also showed us that environmental compensatory measures help to secure social acceptability where wind power projects are concerned. However, two strategies observed strike us as new and very under-explored by the literature—if at all: local investment and the door-to-door approach, which mean that these territories are “testing grounds” in the words of a PNR President.³⁸

Local Investment as a Government of Criticism Scheme

- 23 As we have seen, local investment is a way to maximise the economic benefits for local authorities³⁹. At a time of waning acceptability for large wind turbines, eco-

modernisers (the State, DREAL, ADEME, regions, PNR, industry, etc.) see local investment as a conflict avoidance scheme⁴⁰. Indeed, private, inward investment can give rise to tensions whereas “citizen-led” projects are better accepted. The latter are equated with a fairer distribution of the benefits, allow citizens to participate more actively in decisions and increase trust in the developer (Bauwens, 2015). In the same way as our wind power project in the Massif des Vosges, local initiatives promoted by activist elected representatives, who may be affiliated to green political parties, attest to this higher local acceptability. After a period of resistance from the sector to these “alternatives”⁴¹ (Evrard, 2013), many stakeholders at all levels are therefore endorsing this scheme which is still very marginal in France for all that (Wokuri, 2019). ADEME and the regions contribute funding to local initiatives, promote their emergence through calls for expressions of interest, sometimes initiate mixed economy companies (SEMs) themselves⁴² and finance such “citizen-led” energy advocacy groups as ECLR⁴³ for Occitania and GECLER⁴⁴ for East France. Via the tenders of the French Energy Regulatory Commission (CRE), the French State also encourages the emergence of such projects by increasing the electricity feed-in tariff for “citizen-led” and “participatory” projects⁴⁵. Caisse des Dépôts et Consignations supports local authorities in financing these “citizen-led” projects⁴⁶. Regional Natural Parks (PNRs) are also proactive in these efforts by supporting these “innovative” projects, as confirmed by the technical teams at Ballons des Vosges PNR: “we believe that renewable energy projects with slightly more impacts, either in terms of biodiversity, architecture or landscape, will be better accepted if they are citizen-led, and we are supporting this transition effort. [...] A citizen-led project shows that inhabitants have been involved in the decision-making, in the choices, and therefore, technically speaking, accept it”. Local investment is a scheme implemented to make new infrastructure appealing through “positive communication” and “political engineering”⁴⁷ so as to “capture, mobilise and align behaviours in favour of the technology” (Fressoz, 2012). This is done by creating a favourable local base which is generally lacking (Enevoldsen & Sovacool, 2016), whilst undermining the credibility and legitimacy of any opponents who have already been marginalised and stigmatised owing to their supposed selfish attitude (Wolsink, 2000).

Door-to-Door as an Effective “Information” Tool

- 24 A study of the territorialisation of new infrastructure in mid-mountain regions cannot overlook the “consultation” practices, whether regulatory or not, through which these projects are discussed, negotiated, criticised and so on. Research on other energy infrastructure developed offshore shows that consultation is more a “series of consultation, negotiation, information and communication processes” (Oiry, 2015). The South Aveyron electrical substation is an example of electricity transmission infrastructure governed by special regulations but which does not involve the “general public”⁴⁸. In Aveyron, amid strong opposition, RTE had to adapt its practices: the traditional public meeting was too high-risk for the developer, which preferred to “inform” and “explain” its project, “listen”, “reassure” and “soothe”⁴⁹ inhabitants via a door-to-door campaign.⁵⁰ These are envisaged as information and communication tools prepared upstream:

I am going to approach the customer to try and find out as much as possible about their project, a bit like a lawyer who is starting a case, in the sense that I need to know the strengths of their project but also the questions which might be

contentious, so as to be able to anticipate answers. I am then going to prepare arguments that I will teach the ambassadors we work with before sending them out into the field.⁵¹

- 25 This scheme is a means of “*gaining acceptance*”⁵² of the infrastructure, a far cry from the democratic ideal of renewable energies (Evrard, 2013).
- 26 For all that, door-to-door is not limited to one-sided information. It is also a way to gather the opinion of inhabitants and gauge the project’s social acceptability: “in exchange for this information that we are going to give residents, we are going to ask [...] what they think about such-and-such a subject, potential crowdfunding, whether they have identified needs for their town, things like that”. The aim is then to advise techno-industrial groups in the “strategies they could adopt to improve acceptability, and such-and-such a subject they would do well to communicate about”⁵³. Door-to-door is therefore designed to be a sociometric instrument for pinpointing fears and criticisms. It enables communication to be adapted, new acceptability strategies to be crafted (Topçu, 2013; Oiry, 2017; Bourdier, 2019) and supplements a “contextual study” carried out upstream of projects by RTE. This maps the stakeholders, any opponents and potential support. Door-to-door is therefore part of a broader range of schemes demonstrating territorial intelligence on the part of developers (Meyer, 2014).

Conclusion

- 27 Resistance to energy modernisation is higher in mid-mountain areas. These regions on the margins are choice settings for their development owing to the economic and symbolic benefits reaped, but also throw up challenges in terms of the environment, landscape and tourism which can spark fierce conflicts of use. This is what sets them apart from rural lowlands where large wind turbines are tending to develop (Grimault, 2021). That said, the development of wind power across mid-mountain regions varies to an extent that they cannot simply be lumped together as all the same. Whilst Ballons des Vosges Regional Natural Park (PNR) only has one wind farm partially within its boundaries and no other park lies within a dozen kilometres of it⁵⁴, Grands Causses PNR has seen major wind power development on its site and on its southern boundary⁵⁵. In the Massif des Vosges, the PNR showcases the image of a nature spot with sweeping landscapes shaped by dairy cattle-farming traditions. Against such a backdrop, industrial infrastructure has been relegated to its margins, a long way from Hautes-Vosges and its main summits (Hohneck, Grand Ballon, etc.). For Grands Causses PNR, wind power is seen as more of an eco-friendly solution than an industrial technology, and is therefore an integral part of its energy strategy, whilst excluding the most sensitive sites. What is more, the villages studied in the Vosges do not have a long history of electricity production, unlike those in Aveyron, near Saint-Vicor-et-Melvieu, which already harbour an extensive network of hydroelectric dams⁵⁶. The development of new energy infrastructure is therefore perceived as an opportunity to be seized since previous development of hydroelectric infrastructure has been linked with individual and collective prosperity. In the Vosges, such changes have gained local legitimacy more because of the impending decline in spruce forests (and the associated income). Furthermore, such infrastructure is subject to varied regulations and opposition by stakeholders who are picking back up the gauntlet of environmental protest and proposing other technological trajectories (Fressoz, 2012; Jarrige, 2014). Some of these

opponents are new residents either living in the area or visiting it occasionally (their numbers are higher in these areas than in the North and East of France) while others are members of the local elite who often instigate protest movements and are soon joined by other inhabitants—sometimes from the working classes—who have been in the area for generations (2.3.). Some farmers have also protested in Aveyron against land take, which is not the case in the Vosges, since the plots of land in question are forested areas. To ensure the smooth deployment of energy infrastructure, eco-modernisers therefore need to rethink their acceptability strategies (Oiry, 2017). With that in mind, mid-mountain regions strike as testing grounds for the government of criticism (Topçu, 2013): new schemes are being tested in them, including local investment and door-to-door (3.1. and 3.2.). These schemes do not nip all forms of resistance in the bud, far from it, but they do make these less straightforward through the building and strengthening of a positive image aimed at defusing criticism (Grimault, 2021).

- 28 This paper shows that the State is still the key stakeholder in energy projects, including in mid-mountain regions—even if its action might appear distant and a multitude of other stakeholders do get involved. It encourages the development of wind power thanks to public support schemes (feed-in tariffs, tender procedures, supplementary income), guarantees their local acceptability through taxation, encourages “local” investment for better acceptability by counteracting the alternatives (Wokuri, 2019), regulates protests by spatialising infrastructure, provides a framework for and limits the decentralisation of energy questions all the while getting local stakeholders involved to apply its national strategy in practice (Poupeau, 2013), legislates to limit the opponents’ legal options (elimination of a level of jurisdiction), expropriates and evicts the most radical among them (Dechezelles 2017; Dunlap, 2020). Physical decentralisation of infrastructure does not translate into organisational decentralisation (Chabrol & Grasland, 2015) and therefore more political autonomy for local communities (Bourdier, 2019). A comparison of “participatory” or “citizen-led” initiatives as being inevitably at odds with industrial capitalism is therefore far from obvious. This would first require “renewable” technologies to be considered neutral (as not being the crystallisation of an industrial ideal). It would also come down to not seeing the power mechanisms for governing this technological change, by steering perceptions in favour of technology (Fressoz, 2012). At a time when we are entering a new, uncertain geological age, regaining proper analytical hindsight (Pessis *et al.*, 2013) of the narratives of a hypothetical “energy transition” in favour of a critical approach would enable more precise study of the changes underway.

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NOTES

1. The Zone à Défendre (zone to be defended/ZAD) is an activists’ re-interpretation of Zone d’Aménagement Différée (Zone for future development/ZAD) which enables pre-emption of plots of land earmarked for redevelopment.

2. RTE stands for Réseau de Transport d’Électricité, the operator of France’s high-voltage electricity transmission grid. It is a public limited company with a public service mission. Its shareholders are EDF (50.1%), Caisse des Dépôts et Consignations (29.9%) and CNP Assurances (20%).

3. The strategic importance of electricity grids is not new. They have courted controversy throughout history (World War II) and are considered “critical” by the European Union and the United States today (see the work of Angélique Palle). These days, their opponents regard them as battlefields. Online: <https://lundi.am/Les-reseaux-comme-champ-de-bataille> (visited December 27th 2021).

4. Definition: “Energy infrastructure is physical infrastructure enabling the production, transmission and storage of different forms of energy (power grids and plants, oil and gas pipelines). It is the artefact which transforms and has elements of the environment (water, air, energy, resource) in flow, whether consumable material or fluid. [...] Its scale, architecture and integration reflects a specific relationship between a territory and local resources.” Fanny Lopez, p. 91.

5. A number of terms are indicated in quotation marks to show that the author wishes to put some distance between himself and them.

6. Such radical opposition to the energy transition is far from commonplace; it is typically limited to petitions, leaflets, streamers/signs and, more occasionally, information meetings, demonstrations and above all lawsuits. For all that, the intensity of conflicts seems to be minimised at times. A statistical analysis of the regional daily press in France since 2010 (which is therefore inevitably inexhaustive and patchy) shows dozens of acts of sabotage (48 to be exact) on wind turbines and their ancillary devices (delivery stations), especially the met masts during the project development stage, which is the most contentious. Other ZADs have also risen up against planned wind farms, all in mid-mountain regions.

7. <https://www.ecologie.gouv.fr/loi-transition-energetique-croissance-verte> (visited December 27th 2021).

8. In the same way that the notion of “energy modernisation” appears more appropriate than that of “energy transition”. The former is part of the phenomenon of ecological modernisation, in terms of its energy generation aspects. Ecological modernisation, in the same way as “ecological transition”, encompasses a range of sectors that are called to become more sustainable: mobility, construction, industry, agriculture, recreation and so on.

9. The Capitalocene is an alternative concept to that of the Anthropocene, the latter having been deemed historically misleading. In Andreas Malm’s opinion, global climate change has not been caused by the human species as a uniform group, but rather by a very specific economic system:

capitalism. Other terms have been put forward by Christophe Bonneuil and Jean-Baptiste Fressoz in *L'évènement Anthropocène*.

10. Social acceptability of energy infrastructure is perceived as a “problem” as it cannot be controlled, i.e. there are stakeholders who are against it. As such it has “become almost the linchpin in wind power projects in recent years” according to someone working on project development at EDF Renewables, and requires the roll-out of “strategie” aimed at building consent.

11. The reason for this focus on mid-mountain regions is the complete absence of large wind turbines in high mountain regions in France.

12. Among all those who conduct scientific research, all subjects included.

13. Marine Renewable Energies.

14. Not least local communities (permanent or part-time residents), farmers (farm owners and farming union representatives), environmental associations (protecting biodiversity, promoting citizen-led energies), local authorities (mayors, heads of intermunicipal associations), technical departments working on the energy transition at different scales (energy policy officers within regional natural parks, energy transition directors at Regional Directorates for the Environment, Planning and Housing/DREALs and regions), industry/project leaders (project manager, consultation unit manager), consultation agencies called on by manufacturers, association representing wind power stakeholders (FEE), central departments at the French Agency for Ecological Transition (ADEME) specialising in wind energy.

15. Particularly in Amassada during the 2019 wind festival for 3 days, and during the National Wind Energy Symposium (CNE) organised that year by France Énergie Éolienne for 2 days, an interests group representing the industrial sector.

16. These are Midi Libre, La Dépêche and Centre Presse Aveyron for the transformer project; Vosges Matin, Dernières Nouvelles d'Alsace and L'Est Républicain for the wind turbines in the Massif des Vosges; Libération, Le Monde, Les Echos and Le Figaro for national energy policy.

17. There are only three wind turbines within the Ballons des Vosges PNR; the other seven are installed in neighbouring municipalities. To date, these are the PNR's only turbines.

18. EDF Renewables (EDF R) is a wholly-owned subsidiary of EDF. It develops, builds, operates and maintains renewable energy projects worldwide, primarily wind turbines in Europe and North America.

19. <https://larzac.org/accueil/un-territoire-organise/energies-renouvelables/sas-lum-del-larzac/> (visited December 27th 2021).

20. Interview held in October 2019 with a local official in the Vosges.

21. Interview held in June 2021 with members of the Saint-Victor-et-Mellevieu mayoral team in office before 2014.

22. We could mention Lake Pareloup, the 5th largest artificial reservoir in France, resulting from the construction of a dam commissioned in 1953. This dam is connected to others to form the aménagement hydroélectrique du Pouget with a 440MW capacity that generates the equivalent consumption of 220,000 inhabitants. Aveyron is home to a population of 270,000.

23. Interview held in October 2019 with a local official in the Vosges.

24. Note that although agricultural lowlands face fewer challenges in this respect, they are not completely free of them. Not least as regards some species of bird found in the open and semi-open spaces often earmarked for wind power (Montagu's Harrier, Hen Harrier, Stone Curlew, Bustard, Red Kite or more common passerines whose numbers are nevertheless declining, such as the Skylark, Corn Bunting and the Linnet). Hedgerows, which are a typical feature of West France, can be an important habitat for bats as they act as wildlife corridors for them.

25. <https://www.vosgesmatin.fr/edition-de-saint-die/2017/03/24/on-constate-la-destruction-massive-de-la-foret-et-de-son-biotope> (visited December 27th 2021).

26. There is a wind farm on the margins of the Causse du Larzac, in the village of Lapanouse-de-Cernon. Major environmental repercussions for birds have been observed, leading to an additional prefectural order in 2018 to prohibit its operation during the day. Online: http://www.aveyron.gouv.fr/IMG/pdf/arretprefparceolienlabaumelapanousedecernon_dreal.pdf (visited December 27th 2021).
27. Interview held in October 2019 with the President of Alsace Nature.
28. Interview held in October 2019 with the President of Alsace Nature.
29. For example, no association has formed across the Aube and Marne parts of the Champagne chalklands where the concentration of wind turbines is the highest in France. However, opposition in other agricultural lowlands, such as in the Somme and Aisne *départements*, is real enough, even if it is less systematic.
30. New residents in rural areas are not all rural newcomers eager to “get back to nature”. There is also a relegation in these areas of the most vulnerable urban populations who, for various reasons, are hardly represented in these conflicts – if at all.
31. Interview held with members of the Plateau Survolté association in November 2019.
32. In a thesis currently being written, we will come back to the similarities and differences between rural areas in lowlands and rural areas in mid-mountain regions.
33. Far from being politically uniform, these groups and associations are very diverse. They may well all be opposed to the same infrastructure, but over years of protests, they can be divided by disagreements, tensions and conflict of all kinds.
34. Interview held with opponents in the Vosges and Alsace to the Belfays Plateau wind power project in October 2019.
35. Interview held at the end of 2019 with members of the Amassada zone.
36. Declaration of Public Interest (DUP), which paves the way for expropriation and the eviction of landowners; it was signed by Nicolas Hulot, then Minister for the Ecological and Inclusive Transition, on 21st June 2018.
37. Eco-modernisers are defined as an array of stakeholders (government department or DREAL officials, ADEME engineers, scientists, manufacturers, the technical departments of intermunicipal communities, PNRs or regions, high-level elected representatives, etc.) who back ecological and energy modernisation and study, establish frameworks, legislate, manage and regulate as far as this technological change is concerned, based on connection to the large technical system of industrial renewable energies. These stakeholders have widely varying roles, motivations and stances, so under no circumstances are we seeking to render these categories uniform. That said, just as during the previous modernisation process, there are areas where a modernising consensus is in action, such as during the symposia of the France Énergie Éolienne association or the Renewable Energies Union (SER). The same scenes are orchestrated by the regional-level DREALs, aimed at fostering dialogue between State departments and the renewable energy industry.
38. Interview held in June 2021 with the President of Grands Causses PNR from 2011 to 2020.
39. Referring to “local investment” may well be rather vague, but this is an apt umbrella term encompassing all forms of investments and stakeholders, as long as the latter can demonstrate their legitimacy acting as local stakeholders, in comparison with foreign pension funds which are often decried. This sometimes includes stakeholders who could not be further from the green-minded “citizen”, such as private companies that market fossil fuels, but at a local level.
40. The study of local investment as a government of criticism scheme is strictly limited to wind energy in this paper. Large wind turbines are a technology that must be clearly distinguished from solar photovoltaic energy to which it is often, incorrectly, compared. The former is by definition industrial – it produces a significant amount of energy and cannot, therefore, be linked to direct use by households. What makes the latter distinct is its technological component which, in terms of size, always has more or less the same characteristics: the solar panel. This

technological component can thus be used across a very wide range of projects, from industrial farms spread over hundreds of hectares to use on home roofs, comprising a few panels which are not connected to the grid. The strong resurgence of interest in solar photovoltaic energy among citizen organisations can be attributed to this distinctive feature, as they can adjust the size of their projects to their aspirations and investment capabilities. The *Énergie Partagée* map of citizen-led initiatives shows (in August 2021) 225 projects, including 25 wind power (12.4%) and 180 solar photovoltaic (80%) for a respective installed capacity of 277.95 MW and 128.66 MW. On average, wind power projects therefore have a capacity of over 10 MW, whereas solar photovoltaic projects do not tend to exceed a megawatt on average. This explains the very high level of citizen-led funding where solar photovoltaic energy is concerned, as the applications are not too costly, complex or time-consuming.

41. The term “alternative” is somewhat ambiguous since the origin of the materials used, the industrial stakeholders who manufacture these types of technology and the injection of the energy generated into the grid essentially define the sector. More than an alternative to the sector, these projects represent an alternative *in* the sector.

42. The Occitania region is the main shareholder of the SEM AREC (<https://www.arec-occitanie.fr/les-actionnaires-de-la-sem-arec.html>) Owned by a socialist, communist and green majority, this company is in favour of “cooperative” initiatives.

43. Which stands for Local and Renewable Citizen-led Energies Network: <https://ec-lr.org/>.

44. Which stands for East France Renewable Energy, Local and Citizen-led Network: <https://gecler.fr/>.

45. CRE, *Cahier des charges de l'appel d'offres portant sur la réalisation et l'exploitation d'installations de production d'électricité à partir de l'énergie mécanique du vent, implantées à terre*, May 2020.

46. One official in Vosges mentions this in a 2019 interview: “These were also of interest from the point of view of the ‘population’s acceptability’, everything is the CDC, Caisse des dépôts et consignations.” See also: <https://enrcit.fr/>.

47. <https://ec-lr.org/fiche-projet-codev/>.

48. The construction of new grid infrastructure is subject to the so-called “Fontaine” consultation procedure between State departments, environmental associations, local officials and so on, but does not extend more widely to include inhabitants or the “general public”. The public may get involved during the public inquiry stage. This does not happen until the end of development, however, when leverage in terms of negotiation is practically non-existent.

49. Interview held in February 2021 with the person in charge of developing the Saint-Victor-et-Melvieu transformer project between 2015 and 2019 at RTE.

50. As its name suggests, door-to-door involves knocking on the doors of people living near a planned installation. In the past, this has traditionally been a practice used during elections and by associations. It is new in the sphere of planning projects. It can be used by opponents and industry alike. The imbalance of power existing between these stakeholders should be noted, however. For such door-to-door campaigns cost tens of thousands of euros for manufacturers and local associations evidently do not have the means to make use of such services.

51. Interview held with someone working in an agency specialising in consultations. This was the agency that ran the door-to-door campaign on this project.

52. Interview held with the person in charge of developing the Saint-Victor-et-Melvieu transformer project between 2015 and 2019.

53. Interview held in July 2020 with someone working in an agency specialising in consultations. This was the agency that ran the door-to-door campaign on this project.

54. A study into the renewable energy potential of Ballons des Vosges PNR shows that there will not be any additional wind farm in a baseline scenario. Only the proactive scenario indicates the possibility of developing one or two farms by 2050.

55. It should nevertheless be noted that within the Occitania region, stances excluding wind power are adopted. For example, Aubrac PNR, which straddles two regions, has enshrined in its charter that “development of industrial wind power is considered to be incompatible with the goals to protect Aubrac’s defining landscapes, across the whole of the perimeter of the Park put forward for listing” (Charter of Aubrac Regional Natural Park 2018-2033).

56. In the Vosges, water power used to be harnessed to operate the sawmills and textile industries in the valleys. However, apart from the STEP (Pumped Energy Transfer Station) of Lake Noir (Orbey, 68), no other plant generates electricity on a massive scale in the Massif des Vosges. This STEP, with a capacity of 80 MW, was beset by two accidents. The first in 1934, with nine fatalities, and the second in 2002 which prompted its closure. The municipal officials are calling for it to reopen today.

RÉSUMÉS

This paper sets out to study the changes underway, dubbed “ecological transition”, through the prism of “ecological modernisation”, which involves fitting the environment into the capitalist mindset without making any fundamental changes in this regard. It explores conflictual territorialisation and the government of criticism of new energy infrastructure in mid-mountain regions. Mid-mountain areas appear to be ambivalent where energy infrastructure is concerned. They are both drawn to wind farms (economic and symbolic benefits) and partially incompatible (challenges in terms of the environment and landscape which can spark conflicts of use). Their territorialisation is therefore subject to regulation, negotiation and resistance. Opponents to infrastructure which symbolises ecology for the sake of ecology are picking back up the gauntlet of environmental protest and proposing new, competing technological trajectories (Fressoz, 2012). To ensure the smooth deployment of energy infrastructure, eco-modernisers therefore need to rethink their acceptability strategies (Oiry, 2017). In such a context, mid-mountain regions come across as testing grounds for the government of criticism (Topçu, 2013): new schemes are being tested in them, including local investment and door-to-door. These schemes do not nip all forms of resistance in the bud, however, far from it.

Cet article propose d’étudier les mutations en cours, nommées « transition écologique », sous l’angle d’une « modernisation écologique » qui consiste à intégrer l’environnement dans la logique capitaliste sans en changer ses fondements. La territorialisation conflictuelle et le gouvernement de la critique des nouvelles infrastructures énergétiques en moyennes montagnes y sont étudiés. Les espaces de moyenne montagne paraissent ambivalents face aux infrastructures énergétiques. Ils sont à la fois propices à l’éolien industriel (retombées économiques et symboliques) et partiellement incompatibles (enjeux environnementaux et paysagers générateurs de conflits d’usages). Sa territorialisation fait donc l’objet de régulations, de négociations et de résistances. Ces dernières, en s’opposant à des infrastructures symboles de l’écologie au nom de l’écologie, renouvellent la contestation environnementale et proposent de nouvelles trajectoires techniques concurrentes (Fressoz, 2012). Le bon déploiement des infrastructures énergétiques nécessite donc pour les éco-modernisateurs de repenser leurs stratégies d’acceptabilité (Oiry, 2017). Dans ce contexte, les moyennes montagnes apparaissent comme des laboratoires pour le gouvernement de la critique (Topçu, 2013) : de nouveaux

dispositifs y sont expérimentés comme l'investissement local et le porte-à-porte. Cependant ces dispositifs sont loin de contenir toutes les contestations.

INDEX

Keywords : wind power, mid-mountain, conflicts of use, energy modernisation, energy transition

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