CHALLENGING WIND TURBINE PROJECTS IN THE NAME OF LANDSCAPE : LOOKING BEYOND 'NIMBY' TO A DISCUSSION OF THE DEVELOPMENT OF THE LAND[1]

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DEVELOPING THE WIND 'RESOURCE' : PUBLIC POLICY PUT TO THE LANDSCAPE TEST

At the turn of the 21st century, wind seemed to be a new resource that could meet the energy needs of our contemporary societies. Over the past decade there has been a 30 % increase, on average, of the world's production of this

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1. This article is an amended version of a paper presented at two conferences : "Ressources naturelles et culturelles : enjeux de modélisation interdisciplinaire, d'évaluation et de gouvernance territorial" (Trois-Rivières, Acfas, 2007) and "Environnement, engagement esthétique et espace public : l'enjeu du paysage" (Paris, May 2007). The research presented was undertaken within the project "Les paysages d'Eole à l'épreuve du développement durable" ("Wind turbine landscapes put to the test of sustainable development"), headed by Sophie Le Floch and funded by the national program "Landscape and sustainable development" (MEEDDAT, 2006-2008). It was also part of post-doctoral research funded by the SSHRC (2006-2008), which we would like to thank. We are also grateful to the anonymous reviewers for their relevant comments.

renewable form of energy. In 2008, the overall electricity-generating capacity of wind turbines world-wide was some 120 000 MW[2]. Although historically it has always invested mainly in hydroelectricity[3], the government of Québec has included wind power in its current energy policy[4]. As a result, several significant steps have been taken to set up a new energy industry. However, strong local resistance to planned wind turbine farms could compromise the future of this industry[5].

Early initiatives were undertaken to exploit wind power in eastern Québec over two decades ago. The famous vertical wind turbine was put into operation at Cap-Chat in 1987, and ten years later the first large wind farm, Le Nordais, was opened on two sites, at Cap-Chat (1998) and Matane (1999). During that interval, in 1995, the first simulations were undertaken by the Department of Natural Resources to identify locations for "wind fields[6]". In 1994, the Canadian Wind Energy Association and national environmental groups commissioned the firm Hélimax Energie Inc. to undertake a socioeconomic study on the wind power industry[7]. The study concluded that there was a likelihood of significant spin-off benefits in terms of employment in Québec[8]. Finally, state-owned Hydro-Québec invested heavily in this source of energy, which it argued was 'complementary' to hydro-electricity. It negotiated production agreements with private firms

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2. Data from the Global Wind Energy Council, http://www.gwec.net/index.php?id=13 (accessed 14 February 2010).

3. In 2010, hydropower was counting for 94 % of Hydro-Québec's installed capacity (Source : http://www.hydroquebec.com/generation/index.html, accessed 7 October 2011).

4. Ministère des Ressources naturelles et de la Faune (MRNF), *L'énergie pour construire le Québec de demain. La stratégie énergétique du Québec, 2006-2015* (Québec, Gouvernement du Québec, 2006). Available at : http ://www.mrnf.gouv.qc.ca/energie/strategie/.

5. In another article, we describe in detail the four main phases in the evolution of the situation around the creation of the wind energy industry in Québec : 1) exploration and technological experimentation ; 2) design and establishment of a government energy policy ; 3) emergence of protest movements ; and 4) adoption of framework measures in regional planning. See Marie-Josée FORTIN, Anne-Sophie DEVANNE and Sophie LE FLOCH, "Le paysage politique pour territorialiser l'action publique et les projets de développement : le cas de l'éolien au Québec", *Développement durable et territoire,* 1, 2 (2010) (URL : http://developpementdurable.revues.org/index8540.html)

6. This work is the fruit of collaboration between the ministry, a team of UQAR researchers and the consulting firm Wind Economics and Technology Inc. (WECTEC) (http://www.hydroquebec.com/comprendre/eolienne/historique-eolien-hydro-quebec.html (accessed 8 February 2010).

7. HÉLIMAX ÉNERGIE INC., *Étude sur l'évaluation du potentiel éolien, de son prix de revient et des retombées séconomique pouvant en découler. Avis sur la sécurité énergétique des Québécois à l'égard des approvisionnements électriques et la contribution du projet du Suroît.* Rapport présenté au Regroupement des organismes environnementaux en énergie (ROEÉ), à l'Association canadienne de l'énergie éolienne (ACÉÉ), au Regroupement national des conseils régionaux de l'environnement du Québec (RNCEQ), 2004.

8. As Greenpeace noted in its report submitted to a BAPE commission in 2005 : "in quantitative terms and according to one of the hypotheses of the study, that is, with an output of 4 000 MW by 2008, 14 000 jobs would be created directly (person years) and 48 000 indirectly within 25 years". [our translation from the French]

(2002-2003) and later launched two major calls for tenders[9], in 2003 (1 000 MW) and 2005 (2 000 MW). The objective was to attain an installed wind power production capacity of 4 000 MW by 2015, equal to roughly 10 % of the installed production capacity of Hydro-Québec.

Regarding Québec's energy strategy, it is worth noting that regional economic development is among the objectives of these public policies. Hence, the system of calls for tenders includes a "regional content" clause stipulating that a certain percentage of the wind turbines have to be located in an area corresponding to the administrative region of Gaspésie and the MRC (Municipalité régionale de compté, or Regional County Municipality) of Matane. The first call for tenders for 1 000 MW therefore stipulated that the wind farms had to be built in these two regions. This provides an incentive for large foreign manufacturers to set up farms in this area where the economy is weak, and thus to develop Québec's expertise in what is seen as a promising sector. Combined with other incentives provided for in the official Agreement[10] – such as tax deductions related to employment – the objective is to diversify the regional economy and, hopefully, to enable this new industry to break into the global market.

From a spatial point of view, this strategy also has the consequence of concentrating the presence of large wind farms in the east of Québec. Hence, if all the projects selected by Hydro-Québec are implemented, over 20 farms, each with 30 to 150 wind turbines, will be built in the Gaspé Peninsula and the Bas-Saint-Laurent region, of which about 15 will be built over a ten-year period (2004-2014)[11]. However, some of these projects are likely to be shelved as several of them have encountered strong opposition.

Within a few months, the social dynamics in these regions changed rapidly. For the first time, in 2005, opposition to the projects started to be voiced publicly, at municipal council meetings, in the regional media, at protest demonstrations, and at BAPE hearings. Beginning in 2008, the situation also became tense in several other Québec MRCs which were

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9. A third call for tenders was launched in the autumn of 2009, for 250 MW, targeting community projects, and another is currently planned for projects promoted by local groups, also for 250 MW.

10. The *Accord (Action concertée de coopération régionale et de développement)* agreement was implemented by the Ministry for Economic Development, Innovation and Exports (MDÉIE).

11. Data consulted in February 2009, which excluded the results of the community call for tenders, as well as developments in certain projects such as the one planned at Sainte-Luce, likely to be abandoned (Sources : http://www.mrnf.gouv.qc.ca/energie/eolien/eolien-potentiel-projets.jsp, accessed 20 February2009 ; http://www.hydroquebec.com/comprendre/eolienne/parcs_eoliens.html, accessed 20 February 2009 ; http://www.hydroquebec.com/distribution/fr/marchequebecois/parc_eoliens.html#, accessed 20 February 2009).

targeted to have wind farms set up on their territory, following the approval of projects in the second call for tenders. In several regions, citizens grouped together to lend more weight to their demands concerning the economy (high expectations of economic spin-offs, such as through licence fees, calls for permanent jobs associated more with the wider industry than with the wind farms themselves), regional planning (noise, impacts on the avifauna and local and regional landscapes) and governance (lack of knowledge concerning various impacts, including cumulative effects on the tourist industry, costs for municipalities, development considered to be too rapid or too weak from the point of view of planning and management). Due to certain intense conflicts, some projects were postponed or even cancelled by their promoters or by the public authorities.

Landscape is a recurrent argument in these social debates. Opponents express their fear of seeing local and regional landscapes transformed by the presence of wind turbines, and thus the alteration of the 'beauty' of their surroundings, their identity, their quality of life and other factors structuring the bonds with their territory. From this perspective, even if the objectives of economic development supported by public policies coincide with the demands voiced for many years by certain regional groups, the emerging critics reveal other types of concerns in local communities, also related to regional planning.

Strong protests against wind farm projects in the name of landscape are not peculiar to Québec[12]. In France, for example, where wind farms have only a few turbines – generally about ten – several building permits have been refused for this reason[13]. This type of situation has been a focus of attention by decision-makers and scientists alike.

Public and private decision-makers are tending more and more to consider "the social" as an important aspect in the success of wind farm projects and even in the development of the entire industry. Some of them see the problem as a lack of "social acceptability". They agree on the importance of taking action and finding solutions to neutralize tensions around projects. Several important initiatives have thus been taken at the local, regional and provincial levels. On the issue of landscape, they can be grouped together in four main approaches : 1) regulatory, 2) negotiation on

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12. Our own research in Québec and France shows similarities between the situations observed, such as the underlying reasons for the conflicts, their evolution and public policy responses.

13. More precisely, data of the Department of the Economy, Finance and Industry, reported in the 23 March 2005 edition of the national daily *Le Monde*, show that 95 projects were refused in 2004 for this reason, and that 25 % of the 175 building permits issued were subsequently challenged in court.

a case-by-case basis, 3) regional planning, and 4) participative regional planning[14]. This type of investment is, moreover, a historical watershed in Québec's public policy, for until now policy-makers have been reluctant to address this complex issue[15].

Scholars have likewise focused on conflicts over wind turbines and have adopted the term "social acceptability". Many recent studies aim to identify one or more factors to explain the attitudes of different types of protest actors with regard to wind farms, including people living in the vicinity. Several factors are identified as relevant in the cases studied, including the size of the farms, their proximity to residential areas, the involvement of actors affected by decisions, financial participation in the projects, the capacity of decision-makers and other local actors to debate and to reach compromises, the impression of justice (or injustice) with regard to governance practices, etc[16]. Landscape is also seen as a factor determining attitudes[17].

On the whole, the influence that each of these factors exerts on the attitudes of individuals and social groups remains difficult to assess. Several authors therefore stress that social attitudes and dynamics are very

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14. See the following two documents : Ministère des Affaires municipales et des régions (MAMR), *Les orientations du gouvernement en matière d'aménagement. Pour un développement durable de l'énergie éolienne* (Québec, Gouvernement du Québec, 2007) ; Ministère des Affaires municipales et des régions (MAMR), *Guide d'intégration des éoliennes au territoire, vers de nouveaux paysages* (Québec, Gouvernement du Québec, 2007).

15. These changes are discussed in another article, notably underlining the difficulty of linking up stated objectives with practices. See Marie-Josée FORTIN, Anne-Sophie DEVANNE and Sophie LE FLOCH, 2010, *op. cit*.

16. The case study is often chosen as a research strategy to identify these factors. Examples include : Patrick DEVINE-WRIGHT, "Local aspects of UK renewable energy development : Exploring public beliefs and policy implications", *Local Environment*, 10, 1 (2005) : 57-69 ; Arthur JOBERT, Pia LABORGNE and Solveig MILMER, "Local acceptance of wind energy : Factors of success identified in French and German case studies", *Energy Policy*, 35 (2007) : 2751-2760 ; Carol SAUCIER, Gilles CÔTÉ et *al.*, *Développement territorial et filière éolienne. Des installations éoliennes socialement acceptables : élaboration d'un modèle d'évaluation de projets dans une perspective de développement territorial durable* (Research report, UQAR, 2009) ; David TOKE, Sylvia BREUKERS and Maarten WOLSINK, "Wind power deployment outcomes : How can we account for the différences ?", *Renewable and Sustainable Energy Reviews*, 12 (2008) : 1129-1147 ; Élodie VALETTE, "Intégration environnementale de l'éolien et régulation locales des conflits : l'action des collectivités territoriales dans l'Aude (France)", *VertigO – la revue électronique en sciences de l'environnement*, 6, 3 (2005) ; Maarten WOLSINK, "Wind power implementation : The nature of public attitudes : Equity and fairness instead of 'backyard motives'", *Renewable and Sustainable Energy Reviews*, 11, 6 (2007) : 1188-1207.

17. See, in particlar : Patrick DEVINE-WRIGHT, "Beyond NIMBYism : Towards an integrated framework for understanding public perceptions of wind energy", *Wind Energy*, 8, 2 (2005) : 125-139 ; Étienne LYRETTE and Michel TRÉPANIER, "Les dynamiques sociales engendrées par l'implantation du parc éolien Le Nordais", *VertigO – la revue électronique en sciences de l'environnement*, 1 (2004) : 1-9 ; Charles R. WARREN, Carolyn LUMSDEN, Simone O'DOWD and Richard V. BIRNIE, "'Green on green' : Public perceptions of wind power in Scotland and Ireland", *Journal of Environmental Planning and Management*, 48, 6 (2005) : 853-875.

closely related to the geographical, historical and sociological characteristics of the context. On the basis of statistical analyses, Marteen Wolsink (2000)[18], one of the rare researchers to have proposed a theoretical explanatory model, concludes that perceived effects on the landscape are the best indicator of positive or negative attitudes toward a wind farm[19].

Several decision-makers and scholars therefore agree that feared changes to the landscape strongly influence the conflictual relations observed around land wind farms, which are an essential element in the energy strategy of Québec and some other jurisdictions. Yet very little research has directly focused on this issue, especially from the point of view of the social demands encompassed within the notion of landscape. Therefore, when it comes to conflicts over wind turbines, landscape remains an unknown quantity, as it has in many other major projects concerning infrastructure and large facilities since the mid-1990s[20].

This article endeavours to better know this quantity. It examines discourses on the notion of landscape and tries to identify the issues that they raise concerning the establishment of the wind energy industry. But first it describes our methodology.

METHODOLOGICAL APPROACH

The polysemous nature of the notion of landscape is often seen as a problem. Some believe that this problem stems from the fact that the concept has a subjective side to it, which makes it complex and difficult to grasp. We believe, on the contrary, that polysemy can facilitate our analysis of actors' dynamics and further our understanding of tense and conflictual situations. The notion of landscape can enable people, social groups and institutions to express their relationship to the land by associating it with concerns that they consider to be important, among other ways. This type of association is constructed in relation to the material dimensions of the land as much as its

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18. Maarteen WOLSINK, "Wind power and the NIMBY-myth : Institutional capacity and the limited significance of public support", *Renewable Energy*, 21, 1 (2000) : 49-64.

19. "The strongest impact on the attitudes concerned the aesthetic value of wind turbines. The perceived impact on scenery, visual intrusion of the landscape as well as positive judgements, is the best predictor of the attitude" See *Ibid.,* :51.

20. We have addressed this question in other texts, positing that if landscape is at the centre of so many debates, then it must constitute a new object of mediation in our contemporary societies, between social groups, large development projects and a territory. See Marie-Josée FORTIN, "Les paysages industriels comme lieu de médiation des rapports entre firmes productives et communautés locales", in Michel BOISVERT (ed.), in collaboration with Paula NEGRON-POBLETE, *L'urbain, un enjeu environnemental* (Sainte-Foy, Presses de l'Université du Québec, 2004), 189-216.

symbolic dimensions, and to other actors (individuals or groups), thereby involving social interactions and relations[21]. We adopted this constructivist and critical perspective in our research and have applied it in this article as well.

By examining discourse on the issue of landscape, we have sought to understand the grounds for social demands, to identify the rationalities of the groups of actors concerned by specific wind farm projects and to determine what the problems are from their point of view. The following questions have guided our analysis : What meanings are attributed to landscape and by whom ? Do they relate to specific social demands with regard to the wind power projects in question ? What issues do these demands raise regarding regional planning and development ?

To answer these questions we chose to examine the demands expressed at a public hearing held by the BAPE in 2005 in the Gaspé Peninsula[22], and for which all the material was available (including briefs, transcripts and reports) at the time of our study. The commissioners submitted their report to the Ministry on 16 September 2005 (BAPE, 2005). As well as being a recent hearing, the BAPE inquiry concerned two separate wind farm projects with the same the proponent, in two areas in the two 'extremities' of the region concerned : the municipalities of Baie-des-Sables and of Anse-à-Valleau. This diversity afforded the possibility of seeing whether different opinions would be expressed, depending on local contexts[23].

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21. This triple articulation is consistent with other studies : Denis COSGROVE, *Social Formation and Symbolic Landscape* (Madison, University of Wisconsin Press, 1998) ; Marie-Josée FORTIN, "Le paysage, cadre d'évaluation pour une société reflexive" in Daniel TERRASSON, Martine BERLAN and Yves LUGINBÜHL (eds.), *De la connaissance des paysages à l'action paysagère* (Versailles, Éditions Quae, 2007), 223-231 ; Thomas GREIDER and Loraine GARKOVICH, "Landscapes : The Social Construction of Nature and the Environment", *Rural Sociology*, 59, 1 (1994) : 1-24 ; Richard HOWITT and Susan SUCHET-PEARSON, "Ontological Pluralism in Contested Cultural Landscapes" in Kay ANDERSON, Mona DOMOSH, Steve PILE and Nigel THRIFT (eds.), *Handbook of Cultural Geography* (London, Thousand Oaks : Sage, 2003), 557-569 ; Kenneth OLWIG and Don MITCHELL, "Justice, power and the political landscape : From American space to the European Landscape Convention", *Landscape Research*, 32, 5 (2007) : 525-31.

22. In Québec, the BAPE hearings were an ideal place to identify landscape-related demands with regard to infrastructure projects in general and wind farm projects in particular. Founded over thirty years ago, the BAPE's mode of organization has often been described as an original model in environmental evaluation practice. The scope of the process, the public character of interactions, the dynamics of interactions between the actors, and the reports submitted (or the oral opinions expressed) all differ from the way in which public inquiries are conducted in France. This institution has been the subject of many studies, including Michel GARIÉPY and Michel MARIÉ (eds), *Ces réseaux qui nous gouvernent* ? (Montréal/Paris, L'Harmattan, 1997), 425-451 ; Louis SIMARD, Louison LEPAGE, Jean-Michel FOURNIAU, Michel GARIÉPY and Mario GAUTHIER (eds), *Le débat public en apprentissage. Aménagement et environnement. Regards croisés sur les expériences française et québécoise* (Paris/Montréal, L'Harmattan 2006).

23. In the end, due to the small number of briefs, we were unable to conduct our analysis from this angle.

Thus, our corpus consists of 33 briefs concerning either one or the other of the two projects discussed at the public hearing[24].

Initially, the exercise involved identifying excerpts from the discourse pertaining to landscape. These were then examined by means of a framework of analysis consisting of nine conceptions of landscape, associated with three main paradigms : territorial, cultural and political. Each of these conceptions was defined on the basis of a review of the scientific and institutional literature on landscape, from a preceding exercise[25], which was amended slightly (Table 1). Then, by comparing the content of the citations, we tried to see whether it was possible to identify coherent sets of ideas common to actors who, in one way or another, expressed particular demands and ways of perceiving the wind power projects and their presence in the area.

There are limits to the value of a public hearing for studying the discourses surrounding the wind power industry. For instance, for various reasons, the actors are not all in favour of this mode of expression as a platform for their concerns and opinions.[26] Hence, we cannot claim to be able to grasp all landscape-related social demands by studying the hearings alone. Likewise, the hearings take place at a particular point in the course of the projects, yet the social dynamics may evolve afterwards, sometimes even radically and rapidly. As a result, the concerns and opinions expressed by certain actors at the hearings may subsequently change. The conclusions drawn from the analysis of the hearings can therefore not be generalized to explain all conflicts in Québec or even in the Gaspé Peninsula. They do, however, enable us to draw some early conclusions which could later be tested and further developed. These factors are considered in the following section.

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24. The briefs are available on the BAPE website (www.bape.gouv.qc.ca). To limit the length of this article, we mention only the number of the briefs and the page as references to the citations.

25. Marie-Josée FORTIN, "Paysage industriel : lieu de médiation sociale et enjeu de développement durable et de justice environnementale. Les cas des complexes d'Alcan (Alma, Québec) et de Péchiney (Dunkerque, France)" (Thesis, PhD in Human Geography, Université de Paris 1 – Panthéon-Sorbonne, Lille, ANRT, 2005).

26. For example, because they feel social pressure, as we found in the study of another case concerning the setting up of an industry. See Marie-Josée FORTIN, "L'évaluation environnementale de grands projets industriels : potentialités et limites pour la gouvernance territoriale", *VertigO – la revue électronique en sciences de l'environnement*, 9, 1, (2009) (URL : http://vertigo.revues.org/index8505.html, accessed 8 June 2009).

TABLE 1 : THEORETICAL CONCEPTIONS OF LANDSCAPE

Conception of landscape as…	Definition
… *an environment*	Bio-geographical system, indicator of evolution and transformations of the territory and of the quality of the biophysical environment
… *a living environment*	Living environment, territory supporting (individual or collective) social practices of importance in the lives and lifestyles of groups of actors
… *an amenity*	Resource at the service of social actors, in relation to a market logic (supply/demand) and the idea of rareness
… *scenery*	What one sees and from which one derives aesthetic pleasure stemming from the arrangement of the physical, visible dimensions of the territory (effects of composition of forms, lines, colours, etc.) and strongly influenced by the arts (painting, photography, cinema), the media and tourism
… *heritage*	Portion of the territory considered to be representative of a type of nature (wild, inhabited, etc.) by a cultural group that wishes to transmit it to others, in the future
… *representation*	Symbolic expression and meaningful imagery for an individual or collective actor, reflecting a lived relationship with the area
… *an identity*	Reflexive relationship of the subject with the place where the territory strengthens (or alters) the symbolic belonging and collective identity ; based on the specificity of places, of forms recognized as particular

CONCEPTIONS OF LANDSCAPE AND IMPLICATIONS FOR THE WIND POWER INDUSTRY

Our analysis revealed four main groups of actors. The first group was easy to identify : it consisted of those individuals and organizations that did not mention landscape in their brief. In relation to the perspective that we had chosen, namely that decisions pertaining to resources are made in a broader process of social negotiation, the study of this group seemed appropriate. In other words, even arguments not concerning landscape influence the negotiations and social dynamics formed around infrastructure and development projects.

Each of the other three groups had its own conception of landscape with regard to the wind turbine issue. They related respectively to what we have termed : 1) the 'scenic' landscape ; 2) the 'scenic landscape as a resource' ; and 3) the landscape as a 'territorial project'.

Below, each of these four groups is described in turn, based primarily on the conception of landscape present in the discourse, the type of actor(s) present in the group, concerns related to the 'new' landscape created by the wind farm in question, demands made in relation to the project and, finally, the group's position in relation to the project.

Group No. 1 : Landscape Absent

The first group identified is the one that makes no mention of landscape in any terms whatsoever. It consists of nine briefs, that is, a quarter of the 33 briefs studied. This group is not homogeneous ; it has a large proportion of economic actors (firms and public economic institutions) and actors with economic interests (landowners who signed agreements with developers to rent their land). The economy is predominant in their discourse, and the latter is generally positive with regard to the projects submitted and to wind turbines in general. The regional actors in this group express high expectations with regard to the growth and diversification of the Gaspé Peninsula's economy. Their goal is to create a new industry that is competitive and even a leader in the global market[27], in the particular geographical context of an economically fragile region. In this respect, wind farms are perceived as an element in a broader economic development strategy aimed at boosting and even diversifying the regional economy. The majority of the actors in this group are in favour of the wind farm projects discussed. Theirs is therefore a social representation of the wind turbine or the power production farm considered not as an object set in a territory, but rather as a component of an industry that they wish to create. This representation thus appears to be more sectoral than territorial.

The question of the environment is strongly present in this first group's discourse, even more so than in that of the other three. It is used to justify the production of 'green' wind power and to support the wind farm projects submitted. Interestingly, this group also makes reference to the global environment. Thus, while acknowledging that the existence of large wind farms can cause negative environmental impacts on a local scale, the authors of several briefs consider that these impacts must be weighed against positive effects on a global scale, as well as the positive contribution to the regional economy "that will offset impacts in many other respects" (DM-20 : 7) :

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27. Establishment of factories, direct and indirect creation of jobs, exports, development of expertise.

> the environmental impact **locally** must be put into a **global context**. (…) the development of renewable energy sources is an urgent duty to replace thermal energy and fight climate change (DM-10 : 7-8 ; emphasis in the original text) ;
>
> Even though they do exist, local impacts have to be weighed up against a global context (DM-10 : 10) ;
>
> It stands to reason that the economic impacts of the Anse-à-Valleau wind power project should not be the only ones considered. Any development project necessarily has certain drawbacks, from a human and social as well as environmental point of view. We nevertheless believe that the advantages of the current wind power projects are far greater than the disadvantages (DM-20 : 5).

Group No. 2 : Scenic Landscape

The second group has some overlap with the first. With regard to its composition, a majority of the actors also have economic interests or aims. All of them are in favour of the wind power projects, which they present as "development opportunities". More broadly, they believe that "the development of wind power is a major source of hope for populations" (DM-22 : 2). They nevertheless recognize that there will be changes in the landscape, which distinguishes them from members of the preceding group.

The members of the second group focus primarily on the notion of scenic landscape. As we define it, this is a classic conception relating to the idea of "beautiful landscape", associated with the pleasure derived from the visual contemplation of a space whose forms correspond to the prevailing canons of landscape culture. Significantly, this conception is present in almost all the discourses that spontaneously include the landscape issue. Whereas in many briefs the scenic landscape is associated with one or more other conceptions, in this second group all 10 briefs convey *only* this conception of the scenic landscape. They account for close to half of the 24 briefs that discuss landscape at the hearing studied.

According to our definition, the aesthetic aspect is *a priori* central to this way of considering the landscape. Yet this second group's discourses do not contain the adjectives generally associated with a 'beautiful', 'harmonious' landscape, etc. On the whole, the arguments are limited to descriptions of the visual consequences of the presence of wind turbines in an area, in more neutral language using the notions of 'integration' and 'alteration' in particular.

Differences exist within the group with regard to the subjectivity of landscape. Some briefs argue that it is possible to avoid this subjectivity or

at least to try to better control it. The main angle of approach in this respect is visual impacts, which are supposed to be the biggest problem posed by wind farms. According to the authors of these briefs, managing to control such changes in the shape of the territory, which are clearly apparent and very real, would automatically help to neutralize protests. The reasoning is that the measurement of visual impacts would be a way of objectifying the methods of reading and evaluating the landscape. This would be the work of an expert (usually a landscape architect) who would be able to see things 'objectively' and thus resolve the problem of the subjectivity of landscape perception, as well as the tricky issue of determining aesthetic value. Well-designed and well-planned measures of mitigation could then be taken to reduce visual changes to the landscape and to meet opponents' demands. These are measures concerning the location of wind farms, the creation of sites, the spatial layout and the visibility of the wind turbines.

For other actors in this group, including the international NGO Greenpeace, subjectivity is at the core of their argument, and they affirm that changes to landscape can be neither grasped nor evaluated, let alone debated and categorized : "As for the question of visual impacts, we agree that they are very real, although highly subjective. We wish to point out that the promoter has made a considerable effort to reduce the visual impacts of the project" (DM-12 : 11).

In the final analysis, while it is acknowledged that the creation of wind farms will have consequences for local landscapes, these consequences are deemed to be secondary to the positive effects sought, namely job creation and economic spin-offs from the wind farms and manufacturing activities. As in the case of the first group, the premise is that "every project has drawbacks" and that they have to be accepted to obtain the expected benefits. In particular, benefits related to the economy are highlighted, especially by the NGO Greenpeace, which considers that "Québec was sitting on a real wind power goldmine" (DM-12 : 10).

Group No. 3 : Scenic Landscape as a Resource

The third group identified in our analysis is the one in which two conceptions of landscape are combined : 'scenic' landscape and landscape as a 'resource'. This conception of "scenic landscape as a resource" is presented in four briefs from two municipalities, from the *Association Touristique Régionale de la Gaspésie* (ATR) and from the *Technocentre éolien*, a regional organization working to establish the wind power industry.

These actors argue that the aesthetic experience of the scenic landscape is a fundamental resource, for both the tourist industry and for small rural communities working to maintain or renew their social fabric. In their brief, a question that is raised with regard to the creation of wind farms is how visitors and residents, both present and future, will perceive the 'new' landscape. As a municipality in which one of the controversial farms was to be set up put it : "will young families choose to settle in a village surrounded by huge wind turbines ? " (DM-9 : 4). From their point of view, the main issue is the attractiveness of the areas in which the wind farms are to be created. This issue is strongly emphasized in the Gaspé Peninsula, where tourism contributes significantly to the regional economy. Moreover, the large number and size of the wind farms planned for the inhabited and highly valued coastline of the peninsula raised questions on the cumulative impacts such as those mentioned in the briefs.

These impacts do, of course, partly concern the visibility of the wind turbines but above all they are about the observer's perception and interpretation of them. Thus, the changes to the landscape due to the presence of large wind farms are conceived of as being essentially of a subjective nature. In this respect, this third group expresses a counter-discourse compared to that which prevails in the second group. This counter-discourse is strongly affirmed by the members of the *Association touristique régionale*, in particular, who focus on "the quality of the landscapes" which they claim "arouse emotions in tourists" (DM-33 : 7). They see the experience of the landscape as a basic resource for their industry. The tourist industry plays on the subjectivity of this experience, and tries to stimulate it and to orient it in a particular direction.

This third group is, moreover, not homogeneous when it comes to the ways of anticipating the changes triggered by large wind farms in the region, especially with regard to tourists' perceptions. The representatives of the *Technocentre éolien* consider that various tools can help to reduce the visibility of the wind farms from tourist sites. In one of the projects concerned, they point out that the wind turbines have been moved by the promoter, to meet citizens' demands, and that the simulations provided show that they will not be visible. On a broader, regional scale, and in view of the increasing number of wind farms, the organization bases its arguments on the conclusions of a survey of around 600 tourists, completed in 2004, when three sites with a total of 163 wind turbines were operating in the area : "the respondents are highly in favour of the idea of installing two or three times more wind turbines on the Gaspé Peninsula, as long as the beauty of the tourist

sites is preserved, the environment is not threatened, and there are economic spin-offs" (DM-21 : 5).

The other three signatories of the briefs in this group appear to be more concerned than the *Technocentre* representatives. From their point of view, measures to mitigate the formal aspects of the project affecting localization and visibility (as suggested in the second group[28]) could partially solve the problem, but only partially. They argue that the whole question of landscape, in all its subjective and necessarily complex dimensions, should be better integrated better into the design of wind farms. It should thus be recognized as a determining factor in decision-making concerning the design of wind farms, and considered well before the design stage, via new approaches and strategies in regional and landscape planning. Fairly precise proposals are put forward in this respect, especially by the *Association touristique régionale*, in terms of regional planning and amendments to be made to the regulations in force. The organization also demands that "the question of landscape, in the construction of wind farms as a whole, be seriously considered in order to avoid the destruction of another part of the regional natural heritage" (DM-33 : 8), and that "a landscape development approach rather than landscape protection approach" be favoured, to anticipate and plan in relation to "landscape opportunities" instead of the "avoidance of negative impacts" (idem : 10). In short, according to this economic actor, "the objective should be to set the development of wind farms in a 'landscape project' that meets the challenges of sustainable development" (idem : 10).

The majority of actors in this group still trust that existing regulatory measures will be adequate, provided they are improved. Likewise, they do not adopt a defensive attitude based on a wish to completely protect the existing landscape ; instead, they aim for a pro-active attitude to the creation of the industry, in the hope of orienting changes in a direction that they deem to be desirable.

Group No. 4 : Landscape as a Territorial Project

The fourth and final group appears to be very large. Many overlapping conceptions of landscape are found here : the classic idea of a scenic landscape, as well as landscape as heritage, as an identity, as a living environment and as a territorial project. Nine briefs make up this group, that is over one

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28. Suggestions are made for the creation of wind farms concentrated in clusters rather than laid out in a linear fashion, and for the absence of wind turbines "visible from a site of major interest" or located between the road and the sea (DM- 33 : 9-10).

third of those which addressed this issue at the hearing in question. Most of them were written by citizens, either individually or in groups, as well as by four activist environmental groups operating on a local or regional scale, including the two CREs (Conseils régionaux de l'Environnement, or Regional Environmental Councils) representing the areas where the wind farms would be built.

On the whole, the notion of landscape is used essentially for three purposes, namely : 1) to express concerns about, or even denounce the shortcomings of the projects presented ; 2) to demand new resource management practices that take their diverse needs and concerns (economic, social, cultural, environmental) into account more adequately, from the perspective of 'territorializing' what are said to be development initiatives ; and, finally, 3) to trigger a process of co-construction of a territorial project, that is, a global project that involves all the actors around a compromise vision of the future common to as many parties as possible.

In several respects, their briefs relate to the political dimension of landscape and to what unites or divides societies. From this perspective, landscape and debate are not seen as mutually exclusive. The briefs generally mention landscape while advocating the need for information, dialogue and local negotiation. The actors in this fourth group thus try to create a space to negotiate and weigh different interests : private/collective, national/local.

The individuals and organizations in this group demand the right to voice their opinions on decisions affecting the areas in which they live, and challenge certain decisions taken with regard to wind power. For instance, the way of setting up wind power production is criticized for being based on an 'economic' development model which fails to take into account other important dimensions of the inhabitants' lives, including the aesthetic dimension :

> In the name of what economic logic would we wish to disfigure the most beautiful region of Québec, threaten the quality of life of the local population, and chase away tourists ? The beauty of the landscape is the only resource in the Gaspé Peninshula that has not yet been despoiled. Hence, the symbolic importance of saying 'No' to the Baie-des-Sables project, to block the implementation of such a devastating economic development strategy from the outset. (…) Has economic development become such an obsession that we are prepared to destroy our most beautiful asset for its sake ? (DM-3 : 4-5).

From this perspective, one of the main characteristics of this group is that its members consider landscape to be the tangible and visible

result of a decision-making process characterized by power struggles. If a process is deemed to be faulty (for example, because it is believed to disadvantage some, or to lack transparency), the resulting landscape is qualified negatively. In this respect, the vocabulary used clearly reveals the divergence between current representations of the landscape and those that are anticipated for the future, altered by the wind power projects. For example, on the coast of the Gaspé Peninsula, seen as "an immense green park (…) one of the most beautiful natural sites in the world", even "a work of art", would become "a fleet of giant machines", a coastline "[disfigured] by a string of wind turbines" and "marked (…) by signs of 'green' modernity". An inhabitant of Baie-des-Sables expressed the loss of meaning that he foresaw with regard to his living environment : "Baie-des-Sables will no longer be Baie-des-Sables", it will be a "wind turbine village". "Baie-des-Sables is a landscape ; with 73 wind turbines it would no longer make sense. (…) What does that give me, I who came here because I found it so beautiful ?" (DM-25 : 7). Here, the discourse on landscape, unlike that of the other three groups, plays strongly on feelings and emotions.

This fourth group of briefs thus raises the issues of the inhabitability of territories and the regulation of projects so that they meet the population's diverse needs. Projects of an economic nature, especially those concerning jobs, as well as those concerning services and infrastructures, are considered important. But others which contribute to lifestyles and quality of life, and fulfill the need for meaning, a sense of belonging and identity, are also highlighted. As a "collective heritage", landscape is presented as one of the elements to consider in decision-making, once which could even be decisive in regulating the individual rights of landowners, as the CREs explain :

> (…) landscape is a heritage that is an integral part of the living environment. It should be recognized and protected. This protection should limit landowners' power to use this collective resource by exercising their individual rights. The CRE BSL considers that the surface area and configuration of the Baie-des-Sables wind farm project could alter the atmosphere of certain places in the municipalities concerned. This could affect the relationship that inhabitants and visitors have with the territory, change their lifestyle and even spoil the enjoyment they derive from these places (DM-11 : 14).
>
> The CREGIM is proud of the wind power industry that it has given to the region. To be sure, the impacts of wind turbines are incomparable with those of mini-power plants (sic) or nuclear plants. However, the CREGIM thinks that the development of wind energy

> should be in harmony with the other sectors of current development, and at the same time respect the lifestyle of Gaspésiens (sic) and Madelinots, who have chosen a calm environment with breathtaking mountain and coastal landscapes (DM-16 : addenda).

THREE LINES STRUCTURING THE ACTORS' POSITIONS

Over the past decade, the wind turbine has appeared as a new source of energy and several countries have adopted policies and measures to support the development of this renewable energy industry. The government of Québec has invested heavily in it as a complementary source of power in addition to hydroelectricity, which has always been the mainstay of the province's energy production. Bold public policies have been designed, in which wind energy is envisioned as a driver of economic development in the Gaspé Peninsula and the MRC of Matane. In concrete terms, these policies pave the way for large wind farm projects that have, however, encountered resistance. Critical attitudes have gradually emerged and, in certain cases, have become full-blown conflicts that have caused certain projects to be shelved.

As in several other countries, social debates focus sharply on the question of landscape. Our analysis of 33 briefs filed for a public hearing held in 2005, concerning two wind farm projects in the Gaspé Peninsula, shows that the debates are not constructed according to a binary opposition between those who are 'for' wind turbines and those who are 'against' them in the name of the landscape. Diverse and subtle arguments are put forward in the discourses studied. Although exploratory, this analysis affords some insight into the conflict. From this perspective, we have identified what seem to be three main lines structuring the actors' positions and thereby the social dynamics surrounding the establishment of the wind power industry in Québec.

The first demarcation line appears clearly between the actors who mention landscape and those who do not do so at all. In the first group, the wind turbine is considered as a component of a power production farm which, in turn, is part of an industrial sector that is to be strongly encouraged for the economic spin-offs it brings to the region. It should also be noted that this is the group where the environmental theme is most present. Seen as a problem of global dimensions, the environment becomes an argument to legitimize renewable energy production projects – in this case, wind farms.

In those briefs that mention landscape, we find three main conceptions of the notion in relation to the wind farm issue. We see this as the second axis structuring the actors' positions and the surrounding social dynamics. While they all refer to the scenic aspect of landscape in their discourse, they differ with regard to how they perceive the subjectivity of this notion. Some consider it disruptive and impossible to evaluate or discuss, and see the question of landscape as secondary compared to other more positive effects of the wind farms. Others consider, on the contrary, that the subjectivity of the landscape is part of a person's experience of it, and that it should be recognized and discussed. They see landscape in two different ways : either as a resource for the tourist industry and a source of a place's attractiveness, or as an element that satisfies socio-cultural needs, pertaining to identity in general and quality of life in particular. Questions concerning governance mechanisms and practices are important in the discourse of all three groups, but the latter two see it as having to be either improved or thoroughly revised.

On the whole, the demands of the four groups of actors, defined according to their conceptions of landscape, relate to the four main issues surrounding the establishment of the wind power industry. These issues constitute as many challenges facing decision-makers in their choices for the development of the industry and territories. Presented in a way that is sometimes conflictual, they concern, respectively :

1. the socio-spatial distribution of the economic spin-offs from the exploitation of a natural resource, namely wind ;
2. the control of the infrastructures associated with the industry, in order to facilitate the local and regional take up of this resource and to make it a 'specific' resource that is anchored in the territories of the Gaspé Peninsula and and the Bas-Saint-Laurent region ;
3. the coexistence of different industries and their respective resources, specifically the relationship between the the wind power sector and the tourist industry with its 'landscape' resource ;
4. and, finally, the embedding of various needs and aspirations of the populations in the governance of the allocation and management of resources, so that they take into account cultural needs – such as identity, which is partly determined by local

and regional landscapes – and, in so doing, ensure that territories remain pleasant places to live.

Finally, a third line structuring the social dynamics relates to these four challenges : the representations associated with the future of the affected territories and their development, which underpin judgements of the acceptability of the wind farm projects and their role in the economy. We distinguish two representations in this respect : the land seen as a *space of production* and the territory seen as an *inhabited landscape*.

In the first representation, the regions contain 'resources' which are primarily natural. The exploitation of these resources drives the regions' economies and thereby ensures their future development. In the case of the wind turbine, ways have to be found to exploit wind as an energy resource. From this point of view, the wind power industry is not so much a new source of energy as a new productive activity. When the theme is present, the landscape is seen as a resource for both the tourist industry and municipalities. The landscape is thus envisaged as an economic good which could be threatened by the presence of many large wind farms.

In the second representation, called the inhabited landscape, the land is above all a living environment. Its quality depends on several factors, including economic ones. For example, the wish to improve job opportunities and living conditions, for oneself or for other members of the community, is present in almost all the critical discourses. There is no opposition to the idea of developing a new industry to boost the region's fragile economy. However, groups opposed to wind farms point out that economic activity should not threaten the other attributes of people's environment, notably social and cultural attributes affecting lifestyle, practices linked to the land, social relations, identity and belonging. Protest therefore focuses on how the wind power industry is established, that is, by introducing large wind power farms (a key element in Hydro-Québec's calls for tenders), without adequately taking into account their impact on the living environment.

Thus, two systems of representing the land – as a *space of production* and as an *inhabited landscape* – seem to be underpinning the conflict and acting as a framework for judging changes to the landscape ('beautiful', 'integrated', 'wrecked') and the acceptability of wind farm projects. However, it is not possible to associate these two systems of representation with specific social groups when, for example, local populations oppose elected representatives or governmental institutions. While some elected representatives

have a representation of the territory as a productive space, others may see it primarily as an inhabited landscape. Likewise, "local populations" are not homogeneous either, which is, moreover, why some citizens feel marginalized while other members of the same community do not. We believe that a better understanding of these representations and their distribution in local communities and in Québec society would also increase understanding of the debates and tensions surrounding large infrastructure projects presented in the name of development.

CONCLUSION : QUESTIONING RELATIONS BETWEEN SOCIETY, PRODUCTION AND THE LAND

Landscape enables us to test the level of territorialization of a wind farm project, as well as the public policies underpinning it. With regard to this theme, actors in Québec, France and other industrialized countries are calling for new concerns to be taken into account in the design of infrastructure projects and in decision-making with regard to developing the land. Likewise, the qualification of landscape can be considered as an indicator of social acceptability. It is a way for individuals and social groups to raise the following question : "Is this project likely to be integrated (or not) into the regional landscape as it exists today and as it is hoped to be in the future ?" The answer is by no means clear cut. Significant nuances in the actors' discourses reflect the huge implications of development models and choices made about them.

Moreover, debates on energy projects relate to the economic and political dynamics that create such landscapes. They reflect the crucial challenges for the regions concerned, pertaining as much to territorial governance as to social justice. Why these large projects ? By whom ? For the benefit of whom ? And to whose detriment ? The ecological virtues of wind power cannot serve as a pretext to avoid addressing other concerns considered important for people and groups living in these regions : quality of life, well-being, identity.

More broadly still, debates relate to relations that our present-day societies maintain with production, in its modernist, even industrial, perspective, on the one hand, and with non-metropolitan regions, on the other. To what extent are major infrastructure, energy or other projects (keep in mind the strong resistance to the pork industry in Québec) adapted to meet the needs and values of our advanced modern societies ? Are recurrent debates a way for social groups to force public and private decision-makers to review more traditional ways of envisioning the future of non-metropolitan regions and of stimulating their development ? Serious analysis of these

complex relations between societies, production and territory could be our best option if we are to have answers for the critics and if we are to resolve the conflicts. It may be a demanding approach but it is one that we can ill afford to ignore.

(translation : Liz Libbrecht)