Wind power development and the function of law

This chapter relates to the function of the law in relation to the implementation of renewable energy policy objectives. Four different legal regimes are analysed in respect of their functions (or malfunctions) with regard to the development of wind power. The targeted countries are Sweden, Denmark, Norway and England. The comparative studies of the legal systems aim to present ideas about how ineffective systems can be improved. In a wider context, this relates to the implementation of renewable energy policy objectives as a means towards sustainable development.

Together with the decisive factors of economic and technological prerequisites, the implementation of renewable energy policies, such as planning goals for wind power, is also dependent upon the requirements of the law. In the face of supposedly strong economic incentives to promote the development of wind power, barriers to implementation exist in the design of the legal and administrative systems.

This chapter describes and analyses legal systems in the development of renewable energy in general and wind power in particular. Among the key questions are: what roles do the legal regimes surrounding the planning, installation, and operation of windmills play in the implementation process? The legal regimes are evaluated in terms of their abilities to facilitate and impede the development of wind power. Therefore, the starting point is that the law does in fact have a bearing on the possibilities to implement effectively wind power, as well as other renewable energy policies. Consequently, it is presumed that the institutional settings in countries with a significant installed capacity for wind power have adjusted in a manner that allows the execution of such developments. With a careful analysis of these legal preconditions the study thus aspires to disclose some of the reasons to the unsuccessful story of Swedish wind power development.
In addition to the analysis of the relevant laws and legal rules, this chapter also includes a comparative analysis of the legal functions in the different countries with starting point in the Swedish legal system. The purpose of the comparison is in brief to produce some ideas regarding the choice between different legal solutions that would meet the Swedish planning goal for wind power. The selection of Denmark and Norway is motivated by their overall similarities in social and legal system designs and their considerable differences in terms of installed wind power capacity. The decision to include England in the comparison is driven by that country’s strong and sudden development during the first decade of the 21st Century.

APPLICABLE LEGAL FUNCTIONS

A key issue regarding the function of law vis-à-vis the development of wind power is what legal rules that should be studied; obviously not all rules are relevant in this respect. The initial task was therefore to identify the laws and legal rules that have impact on the development of wind power. From the starting point of the characteristics of wind power as such the core legal functions are:

a) The laws and legal rules related to the use of natural resources that are essential for wind energy production, most notably wind along with land and water areas;

b) the legal framework for physical planning, including relevant policy guidelines;

c) environmental consideration rules;

d) rules relating to authorisations for windmill installations, for instance, permits and environmental impact assessment regulations; and

e) legal rules regarding the possibilities for public participation

ACQUIRED EXPERIENCES FROM THE COUNTRY STUDY

The examination of the legal functions has brought several similar and dissimilar features to light. With regard to the use of wind, land, and water areas the law generally provides some guidance as to how, by whom, and for what purpose resources may or may not be used. The right to harness wind energy for energy purposes is something that typically lacks specific regulation. In Sweden it is generally considered that the right of disposition of “land-based” wind belongs to the land owner, and the right to expropriate areas for this purpose is open to question (Michanek, 1990). The corresponding regulation in Norway however clearly allows for expropriation with the intention to harness wind, something that clearly increases the possibilities for implementing plans for wind power development.
On the subject of land use and the balancing of opposing interests, the country-based examination shows some differences regarding the regulation of land use and the mechanisms for dealing with potential conflicts of interests in connection with wind power development. Denmark has chosen to regulate explicitly wind power development through the use of a specific planning instrument, while Norway and England have adopted rather detailed guidelines for the planning and location of windmill installations, which aim to prevent conflicts by presenting assessment criteria for the balancing of interests. In Sweden, the use of land is legally controlled through non-wind-power-specific regulations. There are several problems associated with the Swedish rules, as compared with the more precise and directed regulations applied in the other examined countries, most notably that the design and wording of the rules imply a high degree of uncertainty in connection with their application.

In Sweden, the majority of the environmentally related rules are laid down in the Environmental Code, as are the environmental requirements for windmill installations. The rules for environmental consideration are expressed in the form of assessment rules, which basically implies that every activity (e.g., a windmill installation) is assessed individually for compliance with the requirements. The system has in-built flexibility with regard to local conditions, and the end result is essentially the same as that achieved through the use of legal standards. However, for activities such as wind power production, with foreseeable and specific environmental impacts, the use of legal standards might be a better choice; the Danish legal standards for windmill installations concerning, for example, noise pollution, construction, visual impacts etc., seem to entail shorter trials, less uncertainty, and fewer appeals, without compromising protection of the environment.

In all four examined countries, the main components of the systems for physical planning are the same, involving decentralisation, different planning levels, and several types of plans. However, there are considerable differences between the countries with regard to how the planning is controlled and by which bodies. Therefore, the possibilities to achieve energy policy objectives vary significantly. The major factors to consider in this respect are: 1) the control of the content of the plans; 2) the responsibility for planning; and 3) the enforcement of planning and the legal effects of plans. In brief, the examination of the planning systems in the different countries revealed the following interesting supportive legal functions.

- The Danish (and to some extent the Norwegian) vertically integrated system for planning means that the overarching planning goals must be reflected
and addressed in the legally binding plans. Implementation deficits are thereby significantly reduced.

- The Danish wind power-specific legislation, particularly the wind power planning directive, is probably very important for the potential to implement legally the wind power policies.

- The possibilities for developers to produce proposals for zone-plans for windmill installations under Norwegian law to some extent offset the problem associated with passive planning authorities.

- The Norwegian and English guidelines for the planning and location of windmills complement the planning law with wind power-specific regulations that produce substantial guidance for the assessment of different sites and conflicts of interest.

Finally, depending on the size and location of the installation, the development of wind power often requires some sort of authorization, such as a permit, license or plan. The rationale behind permit requirements is the necessity to control the activity beforehand, for example, to prevent environmental damage. The Swedish legal system involves multiple trials for windmill installations and appears to be more complicated than what can be justified considering the relatively uncomplicated environmental impacts of windmill installations.

**Comparative analyses of wind law in different countries**

After determining the relevant legal functions, the valid law applicable to the planning, installation, and operation of windmills has been determined for all four countries in keeping with the method of constructive jurisprudence (see Chapter 5 in the *Methods and Models* book). A somewhat more comprehensive analysis is made with regard to Swedish law. Valid law in the four countries was subsequently used as the basis for the comparative analysis in which the relevant legal regimes were compared in relation to the specific research questions. Finally, the legal functions are revisited from the starting point of the analysis of the legal material and the comparative samples, with the goal of outlining the main characteristics of a legal and administrative system that meet the requirements for efficient and environmentally considerate production of wind power.
LEGAL SYSTEM CREATES BARRIERS

The results of the analysis of Swedish law indicate that the legal system creates barriers to the development of wind power. The main obstacles are found in the system for physical planning and the concession system, although quite a few individual hindering provisions are also identified. The lack of sufficient control and extensive municipal power structures together create an unpredictable and ineffective planning system, which basically lacks the confidence to implement effectively the planning goals. The installation of windmills may require several different permits, which may seriously hamper development owing to lengthy processes and appeals. Among the individual rules, the location requirement in the Environmental Code is a noteworthy obstacle to the development of wind power generation; the requirement that alternative sites be assessed objectively has in several cases obstructed the installation of windmills. Overall, the implementation deficits detected in the Swedish system are considerable.

The examination of the corresponding legal functions in Denmark, Norway, and England reveals some very important differences with respect to planning control and permit requirements, as well as regarding substantial provisions. Generally, it appears that there is a correlation between the level of overarching control over the physical planning on the one hand, and the potential to implement successfully national energy policy objectives on the other. Time limits for permit procedures, legal standards for emissions, and explicit rules for the balancing of opposing interests are among the valuable procedures that could be employed in Sweden. Realisation of the Swedish wind power planning goals will presumably require changes in the law. The most important issue is perhaps to reduce the implementation deficits by improving the legal framework governing the planning and installation processes. The factors that emerge as crucial in this respect are: 1) removal of the general permit requirement, which would transfer the entire trial to the planning system; and 2) breaking up of the municipal planning monopoly.

The present study presents some ideas for the design of a planning system that would implement key environmental and energy policy objectives. Such a system would have to include national planning instruments for setting targets and directing lower-level planning. Moreover, it is necessary to establish control functions for the contents, adoption, and implementation of the overview plans, since these are to serve as the link between the national level and the legally binding detailed plans. Substantial rules for the planning and location of windmills, including an environmental impact assessment, should be implemented at this stage in the planning process. The final stage in the process would be the detailed plan; if well designed, this plan would represent the optimal instrument for controlling local development.
The law should state that the use of renewable energy promotes and enhances security of supply and mitigates the adverse effects of climate change, and that the potential for using and developing such energy sources must always be considered in the context of physical planning. The law should furthermore specify that it is the responsibility of the planning authorities to develop and integrate new renewable energy sources through physical planning. It must be made clear that the purpose of planning, particularly at the local level, is to develop the community as well as to implement national planning objectives.

In summary, the achievement of wind power planning goals, renewable energy policies, and ultimately, sustainable development necessitates changes in the existing legal system. The current institutional framework, especially in Sweden, contains substantial implementation deficits that seriously jeopardise the possibilities to reach the targets.

For more information:

Maria Pettersson,
Social Science, Luleå University of Technology
Gabriel Michanek,
Faculty of Law, Uppsala University

Further reading
