

# **The Struggle for a Sustainable Energy Supply – Legal Challenges in the Implementation of Renewable Energy Policies in the Arctic**

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## **Introduction**

This paper deals with issues connected to the struggle for a sustainable energy supply in the context of climate change in the Arctic region. Climate change – or global warming – is strongly related to the industrial society and the use of energy in various forms, and the energy sector is therefore affected by – not only climate change itself, but also by the policies and measures that are implemented to mitigate its adverse effects.

The Arctic holds an unusual position in relation to climate change; on the one hand the region is considered particularly vulnerable to changes in the climate (ACIA, 2004), and on the other hand, the Arctic consists only of Annex I countries to the United Nations Framework Convention on Climate Change (UNFCCC). Hence, notwithstanding the Arctic's somewhat weak position impact wise, most Arctic states are bound by the substantive provisions that follow from the climate regime, foremost the legally binding targets in the Kyoto Protocol (Annex B, Kyoto Protocol). As a result, the Arctic States strive to reduce their emissions of greenhouse gases, for example by increasing the use of renewable energy sources, such as wind and hydropower.

However, in spite of national (and indeed) global objectives in this respect, the diffusion and implementation of renewable energy technologies may encounter serious obstacles in the form of legal rules and administrative systems that counteract the desired development, for example land-use rights, environmental protection and local decision-making. The purpose of this paper is to highlight some of the legal challenges that may arise in connection with the development of renewable energy sources in the Arctic states with examples from the Nordic countries.

## **Relevant Legal Regimes and Functions**

The accomplishment of the renewable energy policy objectives is thus partly dependent on the requirements of the law, or, in other words, the institutional setting. This implies rules governing the planning, location and operation of renewable energy installations. More specifically: resource rights (land, water, wind etc.); physical planning; environmental considerations; authorisation (concession regimes); and public participation regulation/processes (Pettersson, 2008). To illustrate with examples, the development of wind power with reference to the function of law in the three Nordic states, Sweden, Denmark and Norway, is depicted next.

## **National Legal Challenges**

At the national level, some legal functions have proven to be especially challenging. These are in short:

- a) Physical planning and local decision making. A lack of coherent planning from national to local level and substantial discretion on behalf of local authorities can create a problem of “global policies and local obstacles” (Söderholm et. al., 2007). The much decentralized Swedish planning system implies that development activities can easily be hampered by an unwilling municipality. The establishment of a windmill installation for example generally requires a so called detail plan, which, in conjunction with a municipal planning monopoly leads to a situation where the installation in principle is up to the municipality. As a consequence, local implementation of the national (and indeed global) renewable energy policy objectives cannot be guaranteed (Pettersson, 2008).

In Denmark, the planning situation is rather different. The Danish planning system is vertically integrated with a much stronger steering control and hence greater potential for carrying out development targets. The system basically implies that overarching plans for, for example, wind power developments cannot be overlooked by the regional and municipal planning authorities (Tegner Anker, 2006; Pettersson, 2006).

The Norwegian system can be described as a hybrid between the Swedish and the Danish system with rather strong control functions, but still in the presence of substantial local discretion. Norway has recently adopted guidelines for the planning and installation of windmills that provides guidance for the balancing of different interests and conflict solving (Winge, 2007; Pettersson, 2008).

- b) Multiple and time-consuming concession requirements. In Sweden, as many as four different permits to establish a windmill installation may be required. The processes can be very time-consuming (5-10 years is not unusual) and the investor receives no indications of the outcome prior to the final decision. The substantial rules guiding the process are moreover so vague that the outcome is difficult to predict. Several permits are required also under Norwegian law, whereas in Denmark the entire installation process takes place within the framework of physical planning (Pettersson, 2008). All in all, multiple processes and a high degree of uncertainty increase the rate of return requirements and it may well be considered more profitable to play the waiting game or invest elsewhere.
- c) Incompatible interests in conjunction with a lack of “appropriate” balancing guidance in view of the conceptual understanding of the objective of a sustainable development may lead to incongruous decisions where subjective environmental impacts (e.g., visual intrusion) outstrip climate change mitigation measures. Old-fashioned, or traditional, environmental regulation tend to view preservation and conservation as environmentally benign, while use of renewable energy sources is categorised as exploitation that hence may be seen as less environmentally friendly.
- d) Ownership rights, especially if expropriation possibilities are lacking, may constitute a hindrance to the development of renewable energy. Energy installations, such as windmills, dams or pipelines generally claim rather sizeable land- or water areas and developments may well be hindered or held up as a result of ownership rights. The right to expropriate areas for, for example, windmill installations is perfectly possible in Norway (see e.g., Fleischer, 1992), against compensation of course, while the corresponding Swedish regulation indicates that it is not possible to expropriate areas with the intention of harnessing energy from a natural energy resource, such as wind, which another person has the right of disposition of (Michanek, 1990; Pettersson, 2008).

## **Concluding Remarks**

The development of renewable energy sources as a means to mitigate the adverse effects of climate change may thus come across unpredictable legal challenges. Challenges related to the legal framework may in other words appear – and serve as serious obstacles – even in the presence of strong economic incentives to develop renewable energy. To guarantee that the overall objectives are reached it is thus necessary to consider, not just the design of the policy

instruments, but also the formal institutional framework in which the instruments are meant to function. To fulfil the obligations under the climate regime and mitigate climate change as such via an increased use of renewable energy sources it is thus important to have in place laws and legal rules that are able to satisfactorily balance different interests (from the viewpoint of a sustainable development) as well as streamlined procedures for planning permission and other permits.

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