Wind electricity in Denmark: A survey of policies, their effectiveness and factors motivating their introduction

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Abstract

This paper surveys the development of the policies supporting the introduction of wind electricity in Denmark in the last 15 years, with special attention to the new policy introduced after a 2-year long debate. The aim of this paper is to explore the roles of financial support, policy certainty and planning constraints in the diffusion of wind electricity in Denmark and the reasons prompting the change of the system in the current decade. It is discovered that political uncertainty has badly affected the effectiveness of the feed-in law in the years immediately after its introduction. With regard to the new system, it is concluded that the change has been prompted by generous conditions under the feed-in law and by the desire to facilitate the modernisation of old turbines. It is also concluded that incentive-based systems can be more effective than tradable quotas in promoting the modernisation of renewable plants. This finding is relevant to the development of energy policy in countries such as Germany and Spain, where the average age of wind turbines is much younger than those existing in Denmark.

Keywords: Wind electricity; Renewable electricity; Feed-in law