

The Development of Wind Energy and Its Social Acceptance: The Role of Income Received by Wind Farm Owners, the Case of Galicia, Northwest Spain

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Abstract : The last decades have witnessed a significant increase in renewable energy, especially wind energy, to achieve sustainable development. Specialized literature in this field has carried out interesting case studies to extensively analyze both the environmental benefits of this energy and its social acceptance. However, to the best of our knowledge, work to date makes no analysis of the role of private owners of lands with wind potential within a broader territory of strong wind implantation, nor does it estimate their economic incomes relating them to social acceptance. This work fills this gap by focusing on Galicia, territory housing over 4,000 wind turbines and almost 3,400 MW of power. The main difficulty in getting this financial information is that it is classified, not public. We develop methodological techniques (semi-structured interviews and work groups), inserted within the Participatory Research, to overcome this important obstacle. In this manner, the work directly compiles qualitative and quantitative information on the processes as well as the economic results derived from implementing wind energy in Galicia. During the field work, we held 106 semi-structured interviews and 32 workshops with owners of lands occupied by wind farms. The compiled information made it possible to create the socioeconomic database on wind energy in Galicia (SDWEG). This database collects a diversity of quantitative and qualitative information and contains economic information on the income received by the owners of lands occupied by wind farms. In the Galician case, regulatory framework prevented local participation under the community wind farm formula. The possibility of local participation in the new energy model narrowed down to companies wanting to install a wind farm and demanding land occupation. The economic mechanism of local participation begins here, thus explaining the level of acceptance of wind farms. Land owners can receive significant income given that these payments constitute an important source of economic resources, favor local economic activity, allow rural areas to develop productive dynamism projects and improve the standard of living of rural inhabitants. This work estimates that land owners in Galicia perceive about 10 million euros per year in total wind revenues. This represents between 1% and 2% of total wind farm invoicing. On the other hand, relative revenues (Euros per MW), far from the amounts reached in other spaces, show enormous payment variability. This signals the absence of a regulated market, the predominance of partial agreements, and the existence of asymmetric positions between owners and developers. Sustainable development requires the replacement of conventional technologies by low environmental impact technologies, especially those that emit less CO₂. However, this new paradigm also requires rural owners to participate in the income derived from the structural transformation processes linked to sustainable development. This paper demonstrates that regulatory framework may contribute to increasing sustainable technologies with high social acceptance without relevant local economic participation.

Keywords : regulatory framework, social acceptance, sustainable development, wind energy, wind income for landowners

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