

Urban Wind Turbines for Smart Cities: capturing the perceptions of EU experts

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This research aims to analyze the perception of experts in the field of wind energy generation as shapers of renewable energy policy in Europe. Experts as members of society have an impact on social perception of renewable technologies. They can lead influential roles in changing societies and governments' policy regarding dependency on grid-generated fossil fuels. Wind power continues to have a major role as part of the emerging global shift to diversify sources of the energy supply and its mix, to spur sustainable development and security of energy supply. According to the Global Wind Energy Council (GWEC), the deployment of wind power has more than tripled since 2007, bringing the total installed global capacity to 486.8GW at the end of 2016. This research captured responses of 51 scientists researching wind turbines aspiring to improve their structural, electrical and mechanical performance. This research presented them with 10 common visual scenarios of WT integration scenarios. It is acknowledged that the experts will not only judge the visual aspects of the photographs but scientific knowledge will play a major part in their judgment. The authors were keen to understand the experts' perceptions of siting, sizing, proximity and length of exposure preferences, as well as the experts' perceptions of the maturity of urban wind turbine technologies.