

The Significance of Control and Auditing in the Windpower Plant Relevant Engineering Projects and Controlling Purposed Positional and Geometric Measurement Services.

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Abstract—Wind energy and wind power plants that are included among the renewable energy resources, have an important place in our days. The consumption of wind energy that has no adverse effects in terms of the human health and environmental protection, and performing fast technologic progress, presents apparent advantages in comparison with the fossil fuels. Conducting controls and auditing becoming very important issue, in such a useful power plants, in design, field application, production of digital field models, conducting topographic measurements stages (realized levelling and GPS measurements in geodetic network) of the projects. In the application of engineering projects for the design and construction of the power plants that utilizes the wind power and generating electricity, a lot of problems and non-conformities could be faced that might be emerged due to insufficiencies in the project data and/or the realized design works that are made depending on the available data. In order to present these problems and take precautionary actions, the intended technical controls and auditing in each stages of the geographic based projects are necessary as well as the requirement for verification of the applicability of the project and for compliance with the implemented geograpy. In this context, in performing the relevant duties, technical control and auditing, in other words to verify the difference between existing one and intended one and realized one and the one has to be made carries great importance. The activities made in this context, are the kind of multidisciplinary studies and have to be made by the mapping, energy systema, industrial, ..etc engineers that are expert and qualified in their discipline. Again in this context risk analysis, administration activities and organizational studies have to be controlled in the project. In this study, it is attempted to give some valuable information on the wind power plants that realizes generating electricity by utilizing wind energy, and their status in Turkey and in the world, as well as the importance of the topographic measurements for controlling and auditing purposes during the construction and operation stages of these power plants.

Keywords: Geographic Based Engineering Projects, Engineering Control Measurements, Wind Energy, Control and Audit, Surveying and Topographic Measurements