

Wind Energy Status in Turkey

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Abstract : Since large part of electricity generation is provided by using fossil based resources, energy is an important agenda for countries. Depletion of fossil resources, increasing awareness of climate change and global warming concerns are the major reasons for turning to alternative energy resources. Solar, wind and hydropower energy are the main renewable energy sources. Among of them, wind energy is promising for Turkey whose installed power capacity increases approximately eight times between 2008 - seventh month of 2014. Signing of Kyoto Protocol can be accepted as a milestone for Turkey's energy policy. Turkish government has announced 2023 Vision (2023 targets) in 2010-2014 Strategic Plan prepared by Ministry of Energy and Natural Resources (MENR). 2023 Energy targets can be summarized as follows: Share of renewable energy sources in electricity generation is 30% of total electricity generation by 2023. Installed capacity of wind energy will be 20 GW by 2023. Other renewable energy sources such as solar, hydropower and geothermal are encouraged with new incentive mechanisms. Share of nuclear power plants in electricity generation will be 10% of total electricity generation by 2023. Dependence on foreign energy is reduced for sustainability and energy security. As of seventh month of 2014, total installed capacity of wind power plants is 3.42 GW and a lot of wind power plants are under construction with capacity 1.16 GW. Turkish government also encourages the locally manufactured equipments. MILRES is an important project aimed to promote the use of renewable sources in electricity generation. A 500 kW wind turbine will be produced in the first phase of project. Then 2.5 MW wind turbine will be manufactured domestically within this project

Keywords : wind energy, wind speed, 2023 vision, MILRES, wind energy potential in TURKEY

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