



## **Renewable energy technologies adoption in Kazakhstan: potentials, barriers and solutions**

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The growth in environmental pollution alongside an increasing demand for electricity in Kazakhstan calls for a higher level of renewable energy penetration into national power systems. Kazakhstan has great potential for renewable energies from wind, solar, hydro and biomass resources that can be exploited for electricity production. In 2013, the Kazakhstani Ministry of Energy initiated a new power development plan, which aims to bring the share of renewable energy to 3% by 2020 rising to 30% by 2030 and 50% by 2050. The current contribution of renewable energy resources in the national electricity mix, however, is less than 1%. As a developing country, Kazakhstan has faced a number of barriers to increase renewable energy use, which have to be analysed and translated into a comprehensive renewable energy policy framework.

This study presents an overview of the current conditions of renewable energy development in Kazakhstan. Secondly, it identifies and describes the main barriers that prevent diffusion of renewable energy technologies in Kazakhstan. Finally, the paper provides solutions to overcome specific barriers in order to successfully develop a renewable energy technology sector in Kazakhstan.