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The Use of Solar Energy in Ukraine: Perspectives and Challenges

The geography of Ukraine shows a great potential for the solar energy market development, thus the potential of solar energy is high enough for the wide application of solar equipment. The incidence of solar radiation increases from northwest (1070 kW/m²) to southeast (1440 kW/m²) with the highest potential on the Crimean peninsula. The time period for the efficient usage of solar collectors in the southern regions of Ukraine is 7 months, in the northern regions - 5 months. Currently solar collectors for water heating are implemented in the southern part of Ukraine and their volume is growing.

According to National Agency for Energy Saving and Energy Efficiency the solar potential of Ukraine is much higher than that of Germany and it is technically possible that the share of solar energy will reach 10% of Ukraine's energy balance till 2030. Despite the fact that the equipment for generation of solar energy is still quite expensive, the world experiences a trend of decreasing production costs of such equipment. According to EBRD, Ukraine appears to be ready to become a leader in Europe's clean energy economy soon, especially with regard to the solar energy market which seems to be one of the most perspective markets of the renewable energy. Currently, Ukraine became a host for the biggest solar power plant in Europe and it is projected that solar energy market of Ukraine will grow by 90% annually until 2015. Ukraine has all the prerequisites for the successful development of the solar energy market: high indicator of DNI (Direct Normal Irradiance), high feed-in "green" tariff, possibility to use JI under the Kyoto Protocol for solar power projects and favorable tax exemption provisions.

Additionally, Ukrainian energy strategy aims at growing up to 20% of energy from renewable sources by 2020 and Ukrainian feed-in tariff for alternative energy is nearly twice as of some G8 members. Ukraine's renewable energy market looks very promising, especially with the adoption of feed-in tariff as incentive for solar energy which is among highest in Europe. The introduction of "green" tariff became a powerful stimulus to the development of industrial photovoltaic generation in Ukraine. RENTECHNO is one of the leaders in the implementation of integrated engineering solutions using energy-efficient technologies and renewable energy sources. Organization of solar module manufacturing in Ukraine with annual yield up to 25 MW is currently at the stage of pre-feasibility study. This production facility will be built in order to meet a growing demand for solar modules in Ukraine and taking into account the fact that certain provisions of green tariff legislation for PV farms come into force from January 1, 2013, i.e. a requirement for a 30 per cent share of materials and components of local origin in solar modules.