

## **Small-scale Solar PV systems for rural electrification in Mongolia**

### **Abstract**

Access to electricity is probably the most important factor that attains an adequacy of basic human needs, people's stable life and enhancement of leveling, and improvement of public services such as medical care, welfare, education etc. In 2007, the government of Mongolia implemented projects of renewable energy such as small-scale Solar Photovoltaic and wind turbine systems for electrification of remote rural areas that were not connected to national grid system in Mongolia. Since starting of operation of those small-scale wind turbines systems, operational failures and other problems those were related to technical and non-technical had been started to occur in the systems in the remote village centers (soum). Therefore, we would like to analysis what happened in those systems, what went to wrong with systems and what were lessons from the failures of the systems. Based on the facts, we have thought that small-scale Solar PV systems would be better choice rather than the small-scale wind turbine systems, with support of our benchmarking case, and then have tried to develop projects of the 150kW Solar PV systems that would be replaced in those 6 villages where the 100-150 kW Wind turbines systems had been installed and failed while we considered all situations of 2007.