

'Clean energy village' relies on wind, solar power

ADB hands over pilot project at Dhaubadi to state-owned AEPC

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The Asian Development Bank (ADB) handed over its pilot project on wind-solar hybrid energy system at Dhaubadi village of Nawalparasi district to the state-owned Alternative Energy Promotion Centre (AEPC) amidst a function held here today.

A transfer document was signed by Yongping Zhai, director of the ADB's Energy Division, South Asia Department, and Ram Prasad Dhital, acting executive director of the AEPC. The transfer would come into effect on June 13.

"Wind energy is still a new concept in Nepal ... We hope the project will serve as a milestone in providing access to clean energy in rural areas," ADB's Country Director for Nepal Kenichi Yokoyama told journalists today.

The wind-solar hybrid system was installed in December 2011 under ADB's regional technical assistance (RETA) for effective development of distributed small wind power systems in Asian rural areas, for which the AEPC was the implementing agency in Nepal.

The \$3.8 million RETA was part of ADB's 'Energy For All' initiative, which supports increasing access to energy in remote rural areas.

Under the pilot project, two wind turbines that can produce 10 kilowatts (kW) of electricity and 18 solar panels that can generate two kW of electricity have been installed at Dhaubadi village, which does not have potential to generate electricity through micro-hydro projects and has limited fuel-wood resources.

These wind turbines and solar PV panels are currently serving 46 households of the village located 170 km from Kathmandu and fulfilling their per day electricity demand of 43.6 kWh.

Prior to this, the village — now dubbed Nepal's first clean energy

village — was relying on firewood, kerosene and batteries to meet its energy needs. In those days, monthly energy expenses of each household in the village topped \$11 (approximately Rs 1,045). "With the installation of the new energy system, we now have to spend only around Rs 300 per month. At this cost, students now get the leverage to study till late at night and things have become much easier for the homemakers," Padam Bahadur Rana, a resident of Dhaubadi village, told the press meet.

The ADB had entered into Nepal's wind energy sector a few years ago by establishing a plant in Kagbeni. But after its failure, the ADB had kept itself at a distance from such projects.

"The success of this project has demonstrated that it is indeed viable to provide reliable energy access to rural Nepal through solar-wind hybrid systems as one of the clean energy options," said Yokoyama, adding, "The lessons learnt from this project will be very useful in scaling up the systems across Nepal, as well as in other developing member countries of ADB."

It is said Nepal has the potential to generate over 3,000 megawatts of electricity through wind power. "However, only a small percentage of this potential has been tapped due to lack of technical know-how and financial resources," said Prakash Aryal, acting manager, Wind Energy Sub-component at the AEPC. The AEPC has so far identified 522 isolated villages that do not have access to national grid and water resources, but have potential of generating energy through wind power.

"ADB is now supporting the government of Nepal to scale up initiatives (as in Dhaubadi village) in other rural areas of the country under its proposed South Asia Sub-regional Economic Cooperation (SASEC) power system expansion project," said ADB Director Zhai.