



ETHIOPIA, INDIA, KENYA:

The Low Carbon Low Emission Clean Energy Technology Transfer (LCET) Programme

Context

Low-carbon low-emission technologies (LCETs) have emerged as potential solutions that can simultaneously address three key global challenges of energy poverty, jobs creation and climate change. Low-carbon technologies can help not only in reducing greenhouse gas emissions but also in promoting access to energy and linking sustainable energy with productive uses, small businesses and job opportunities, especially in rural areas, which are not connected to national grids in developing countries.

Main approach

UNIDO and the Ministry of Economy, Trade and Industry of Japan (METI) are implementing a collaborative global programme to promote the rapid deployment and dissemination of LCETs through demonstration projects, capacity-building and knowledge management. In addition, suitable business models are being identified and market conditions strengthened to enable the scaling up of LCET investments in selected developing countries.

Development goal and impact

The LCET programme provides a comprehensive technology transfer mechanism in developing countries with the three key building blocks: identifying appropriate LCETs and conducting feasibility studies to assess techno-socio-economic needs during the inception stage and design and implementation of pilot demonstration projects; establishing public-private partnerships for scaling-up the demonstrated technologies; and knowledge management and policy recommendation for replication and market environment development towards dissemination.

To begin with, the LCET programme will focus on LCETs such as micro hydropower, solar energy and waste-to-energy technologies in Africa. One example demonstrating the programme involves the introduction of ultra-low head micro hydropower (ULH-MHP) technology in order

to increase access to renewable energy for productive uses. In contrast to conventional hydro-power systems, ULH-MHP systems can generate electricity when installed in agricultural irrigation canals, as well as drinking and waste water canals. The systems are easy to install and maintain. A pilot project in India, implemented by UNIDO with a grant of USD 1.3 million from the Government of Japan, has successfully installed a 10kW ultra-low head micro hydro-power system. Initial business partnerships have been established for local manufacturing, and a master plan and capacity development plans are under development with Indian counterparts.

The programme is now ready to implement pilot ULH-MHP projects in Ethiopia and Kenya, and the Government of Japan will provide further funding for the further scaling up of activities.

At a glance

Project title: Low Carbon Low Emission Clean Energy Technology Transfer (LCET) Programme
Duration: September 2013 – March 2017
Budget: USD 5.6 million
Donor: Government of Japan (Ministry of Economy, Trade and Industry)
Partners: Ministries of Energy, Industry and Environment, National Irrigation Boards, State Governments in Kenya and Ethiopia

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