

Promoting transfer of energy efficient industrial technology from Japan to India

Executive summary

Background

In order to meet the Perform, Achieve and Trade (PAT) targets, Indian industries are looking for energy efficient (EE) technologies, which are commercially available and economically viable in industrialized countries. Adoption of low-carbon EE technologies by Indian industries will reduce greenhouse gas (GHG) emissions and contribute to the goals of the United Nations Framework Convention on Climate Change (UNFCCC). Japan has been a pioneer in the development and commercialization of EE technologies in the industrial sector. A number of EE Japanese technologies such as inverter-type air compressors, industrial fans, blowers, waste heat recovery systems, electric/gas heat pumps, and so on have good potential for adoption among designated consumers (DCs)/large industries in India. The adoption of such EE technologies from Japan by Indian industry will not only reduce their carbon footprint but at the same time also help them meet the energy reduction targets set by the Bureau of Energy Efficiency (BEE) under PAT scheme.

Objective of the Project

The overall objective of the project is to reduce energy consumption with consequent reduction of GHG emissions of industrial sector in India. The specific objective of the project is to identify suitable low-carbon EE technologies that are commercially available in industrialized countries, viz., Japan and to facilitate their diffusion among large industries including DCs in India.

The narrative report provides an overview of a few low-carbon technologies available commercially in Japan and their pre-feasibility for adoption among selected DCs/large industries in India.

Tactics pursued and outputs

The promotion of EE industrial technologies from industrialized countries like Japan to large energy intensive industries/DCs in India is an important component for ensuring energy efficiency, environmental improvement, and energy security of India.

TERI's scope included engagement with large energy intensive industries/DCs in India, identification of at least two energy efficient Japanese technologies, and conducting site-specific pre-feasibility studies for the identified technologies.

TERI interacted with Japanese experts to obtain information on energy efficient technologies commercially available in Japan. Simultaneously, interactions were held with the State Designated Agencies like Maharashtra Energy Development Agency (MEDA) located in Pune and large industries/DCs in order to identify sites for undertaking the pre-feasibility studies.

TERI partnered with experts from Institute of Global Environmental Strategies (IGES), Japan, during identification of Japanese technologies. Visits to industrial sites were also conducted jointly with the Japanese team for pre-feasibility studies. Site visits/review meetings were also held with officials of Shakti Sustainable Energy Foundation during the study which contributed immensely to the timely completion of the study.

