National Workshop on Application of Solar PV in MSME clusters in India
2.00-4.00 PM, July 30, 2020, New Delhi

The Micro, Small, and Medium enterprises (MSMEs) sector has been one of the most significant drivers of the Indian economy that contribute around 29% of total Gross Domestic Product (GDP) and employ nearly 111 million people[1]. The central and state governments have been rolling out various policies and schemes to enhance and improve infrastructure, technology, financing, and institutional support for the growth of MSMEs. The sector has been heavily reliant upon a wide range of fossil fuel based energy sources (coal, wood, diesel, grid electricity, etc.) to meet their energy requirements for processing, despite the fact that fuel prices and pollution are ever increasing. At the same time, there has been a gradual shift in technology and price reduction in producing reliable energy through cleaner source particularly solar photovoltaic (PV). It is environmentally clean and reduces the dependency on fossil fuels and at the same time reduces the cost of production due to local generation and management.

The Energy and Resources Institute (TERI), with support from Shakti Sustainable Energy Foundation (SSEF), New Delhi, recently undertook a research study to explore the feasibility and potential of solar PV applications in manufacturing based micro and home based enterprise clusters I across 3 states in rural India. As part of the project, TERI team conducted primary energy survey in 9 (nine) micro and home based enterprises clusters in the states of Gujarat, Jharkhand and Karnataka.

Based on the survey, it is found that a majority of the enterprises, in the study clusters have a power requirement of 1kW to 10kW for operating their processing/manufacturing unit. The enterprise owners were found to be aware of the benefits of the solar energy and have shown interest in adoption of a solar PV technology. However, they lack initial investment capacity. Hence, necessary subsidy and easy financing mechanisms will have to be provisioned to trigger the adoption of a solar photovoltaic system. In a few clusters, where reliability of electricity is an issue, the enterprise owners were found to be relatively more interested to undertake necessary investment. With a total number of units, in most of these clusters varying from 100 – 2000 operational units, there is a huge potential for the deployment of solar technology. In the 9 study clusters, it was found that there is an aggregate solar potential capacity of 155 MW. A transition to solar PV technology is likely to lead to a reduction in input cost of production and higher profitability of the micro enterprise sector.

The study recommends that there is a need for enhancing the energy efficiency of production process in most clusters. Many of the enterprise owners are not aware of energy efficient equipment; hence, a cluster wise equipment database will enable the identification of energy-efficient action plan and technology development. The study also emphasizes on facilitation for provisioning of customized subsidy and financing schemes to micro and home based enterprises. Additionally, electricity distribution companies (DISCOMs) can explore the possibility of leveraging existing electricity tariff subsidy to incentivize the deployment of solar PV at micro enterprises by provisioning capital subsidy on hardware. There should be a mandatory target for solar energy financing to micro and home based enterprises under priority sector lending.

To take this forward, there is a need to create adequate awareness generation among micro-enterprise owners, and key stakeholders such as the government agencies and financial institutions.

[1] Annual Report (2018-19) of Ministry of Micro Small and Medium Enterprise

Towards this, few pilots could be set up to showcase best practices and to incite interest among the larger group of micro-entrepreneurs.

The workshop, supported by the Shakti Sustainable Energy Foundation (SSEF), aims at sharing the study findings with a larger group of experts from the clean energy and the MSME sectors as well as aggregate feedback from the key stakeholders on priority areas for triggering the deployment of solar PV technology in small and micro industry clusters of India.
