

# **Proceedings and outcomes of 4 training/capacity building workshops Thangadh Ceramic Cluster**

## **Capacity Building of Local Service Providers (LSPs)**

### **GEF-UNIDO-BEE Project Promoting Energy Efficiency and Renewable Energy in selected MSME clusters in India**

*Prepared for:*  
Bureau of Energy Efficiency



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## Abbreviations

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BEE	Bureau of Energy Efficiency
EE	Energy Efficiency
GEF	Global Environment Facility
LSP	Local Service Provider
MSME	Micro, Small & Medium Enterprises
PCAVT	'The Panchal Ceramic Association Vikas Trust
RE	Renewable Energy
TERI	The Energy and Resources Institute
UNIDO	United Nations Industrial Development Organization



# 1.0 Introduction

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The overall aim of the GEF-UNIDO-BEE project is to develop and promote a market environment for introducing energy efficiency and enhancing the use of renewable energy technologies in process applications in selected energy-intensive MSME clusters in India. This would help in improving the productivity and competitiveness of the MSME units, as well as in reducing the overall carbon emissions and improving the local environment.

The specific objectives of the capacity building of LSPs assignment are the following:

- Increase capacity of technology and product, service providers and finance providers
- Facilitate to enhance the demand and implementation of EE & RE technologies and practices by MSMEs
- Scale up to national level
- Strengthen policy, institutional and decision making frameworks

Under the GEF-UNIDO-BEE Project 'Promoting Energy Efficiency (EE) and Renewable Energy (RE) in selected MSME clusters in India', TERI had submitted a proposal for undertaking Capacity building of Local Service Providers (LSPs) to BEE. A contract for providing the consultancy services for ceramic and foundry sectors was awarded to TERI by BEE in September 2017.

The following three foundry clusters are targeted under the project:

- Coimbatore
- Belgaum
- Indore

The following three ceramic clusters are targeted under the project:

- Thangadh
- Morbi
- Khurja

The proceedings and outcomes of 4 training/capacity building workshops held at Thangadh ceramic cluster is provided in this report.



## 2.0 Training/ capacity building workshops conducted

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Based on the training needs assessment conducted in the cluster, four topics for training were identified. The topics identified for training are given in table 2.1.

**Table 2.1:** Topics identified for training

S.No.	Topics
1	Energy Efficiency and Renewable Energy Technologies
2	Best operating practices (Motor, Air compressors, power factor correction system, automation etc.)
3	Energy efficient and Renewable Energy (EE/ RE) Technologies
4	Kiln (Burner, automation and waste heat recovery)

Detailed training modules, were prepared for each of the topics. Particular care was taken to keep the training modules simple and practical. Customisation of the training modules as per the need assessment of the beneficiaries was done. The focus of the training modules was on practical rather than on theoretical aspects.

After preparation of the training modules, four training/capacity building workshops were conducted in the cluster between January 2018 and May 2018. The workshops dates, venue and number of participants are summarized in table 2.2.

**Table 2.2: Workshops held in Thangadh cluster**

S. No.	Date	Topic	Venue	No. of participants
1	16 <sup>th</sup> Jan. 2018	Energy Efficiency and Renewable Energy Technologies	PCAVT, Thangadh	36
2	5 <sup>th</sup> March 2018	Good practices in motor rewinding and electrical	PCAVT, Thangadh	46

<b>S. No.</b>	<b>Date</b>	<b>Topic</b>	<b>Venue</b>	<b>No. of participants</b>
		maintenance		
3	22 <sup>nd</sup> March 2018	Energy efficient and Renewable Energy (EE/ RE) Technologies	PCAVT, Thangadh	75
4	1 <sup>st</sup> May 2018	Energy efficiency in Kiln and associated systems	PCAVT, Thangadh	31

The proceedings of each of the workshops are provided in Annexure.

## 3.0 Principal outcomes

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The principal outcomes of the workshops are the following:

### 3.1 Knowledge, skills and practical knowledge on EE technologies and practices developed

Capacities of a total of about 188 LSPs were developed on EE technologies and practices in the cluster through the four training programs conducted by TERI. The training as well as the detailed training modules shared with the participants has helped to improving the technological capacity of the cluster on energy efficiency fields.

### 3.2 Key learning's by participants

A quick evaluation, through structured feedback forms, of the training were taken from the participants after each of the capacity building workshops. All the workshops were very highly rated by the participants as well as the cluster level industry association. The participants were asked to provide their feedback on the usefulness of the training material, overall program and industrial site visit. A detailed analysis of the feedback forms, specific suggestions and key learning's by the participants, for each program is provided in the proceedings provided in Annexure.