Global Green Growth Institute

Energy Efficiency Services Limited

Federation of Indian Chambers of Commerce & Industry

Scaling Up of Investments through ESCO Mechanism in MSME Clusters by Deploying Standard Energy Efficient Technologies (SEET)

Federation of Indian Chambers of Commerce and Industry (FICCI) in association with Energy Efficiency Services Ltd. (EESL) is implementing a project funded by Global Green Growth Institute (GGGI) titled "Scaling Up of Investments through ESCO Mechanism in MSME Clusters by Deploying Standard Energy Efficient Technologies (SEET)". The project activities will be executed in 3 MSME clusters of Haryana (a) Rice Mill Cluster in Karnal (b) Textile Cluster in Panipat (c) Mixed Industry Cluster in Kundli, Sonipat

The overall project objective is to create an eco-system to accelerate adoption of Energy Efficient (EE) Technologies by MSMEs through innovative financing mechanism supported by ESCOs, Financial Institutes (FIs); deployment of Standard Energy Efficient Technologies (SEET) already identified under the EESL UNIDO MoMSME (GEF-5) Project in the targeted clusters; aggregation of demand of EE Technologies and developing suitable IT Tools for improving efficacy of the program implementation at large scale.

Brief Note on Technology

Name of the Technology:	**Louisiana State University (LSU) Port Dryer Technology for Rice manufacturing units**
Expected Type of Major Energy Saving	☒ Electrical ☒ Thermal
Old Technology to be replaced	**Fluidized Bed Dryer (FBD)** wherein fluidization takes place in the drying chamber by hot air which is blown from the bottom of the bed. The main constrain of this type of drying system is that higher capacity blower is required leading to increased electricity consumption, higher steam requirement, longer drying cycle time, low productivity.
Brief about the New Technology	**Louisiana State University (LSU) Port Dryer Technology** for Rice manufacturing units ▪ Low energy consumption and producing the best quality grains because of the continuous mixing effect. ▪ The presence of staggered V-ports enables good mixing of paddy and improves overall drying rate. ▪ In LSU dryer, the main air blower is used for circulating hot air instead of generating sufficient pressure for fluidization, as in the case of FBD dryers, hence electrical energy is significantly reduced. ▪ Specific Electrical Energy consumption in FBD ranges about 2-2.5 kWh/bag of paddy whereas in LSU dryer it ranges between 0.7-1.2 kWh/bag of paddy depending on the operating parameter and variety of rice. ▪ Further low temperature drying in the LSU dryer results in lower steam consumption compared to FBD dryer.

Success Story: Demonstration in MSME Clusters

Year of demonstration		
Location of MSME Cluster	:	Vellore (Arni)
Type of Cluster	:	Rice Mill cluster
Name of the MSME Unit	:	Saravana Modern Rice
Specific Electricity Consumption (Baseline)	:	471.04 kWh/batch
Specific Electrical Energy Consumption (Post Implementation)	:	96.09 kWh/batch
Annual Electrical Energy Saved	:	1,12,485 kWh
Steam consumption per annum (Base line)	:	12.71 MT/Batch
Steam consumption per annum (Post implementation)	:	9.47 MT/Batch
Annual Steam savings	:	1039.8 MT
Annual Fuel savings	:	226.03 MT
Annual Money Saved	:	Rs. 17.09 Lakh
Total Project Cost	:	Rs. 31 Lakh
Simple Pay-back Period	:	1.8 years
Life of New Technology	:	15 Years
Warranty of the New Technology	:	



Benefits Incurred from the Project

- 15 - 25 % reduction in fuel consumption
- 65- 80% reduction in power consumption
- Uniformly dried product can be obtained if the dryer is designed properly.
- The dryer can be used for different types of grains.
- Increases the production capacity.

For more details, Please visit https://msme.eeslindia.org/

Availability of Technology Locally	☒ Yes ☐ No
Probable Technology Providers	• SKF Boilers and Dryers Pvt Ltd https://skf.global/ • S.L.V Food Processing Industries http://www.slvpaddydryers.com/ • APIT Pvt. Ltd. https://apit.co.in/
Supply & Implementation	**Typical Delivery time:** 8-10 Weeks
	Ease of Implementation: ☐ High ☒ Medium ☐ Low
	Is unit shut-down required: ☒ Yes ☐ No ☐ Partial
	Implementation by: Jointly by Vendor & Plant
	Buy-back Option: No
Financing Options & Models	☒ Self-Financing ☒ Private ESCO ☒ EESL ☒ Local Bank

WAY FORWARD

Expression of Interest (EoI):

The MSME Unit shall submit the EoI as per the format to FICCI duly signed by the plant authority/ authorized representative

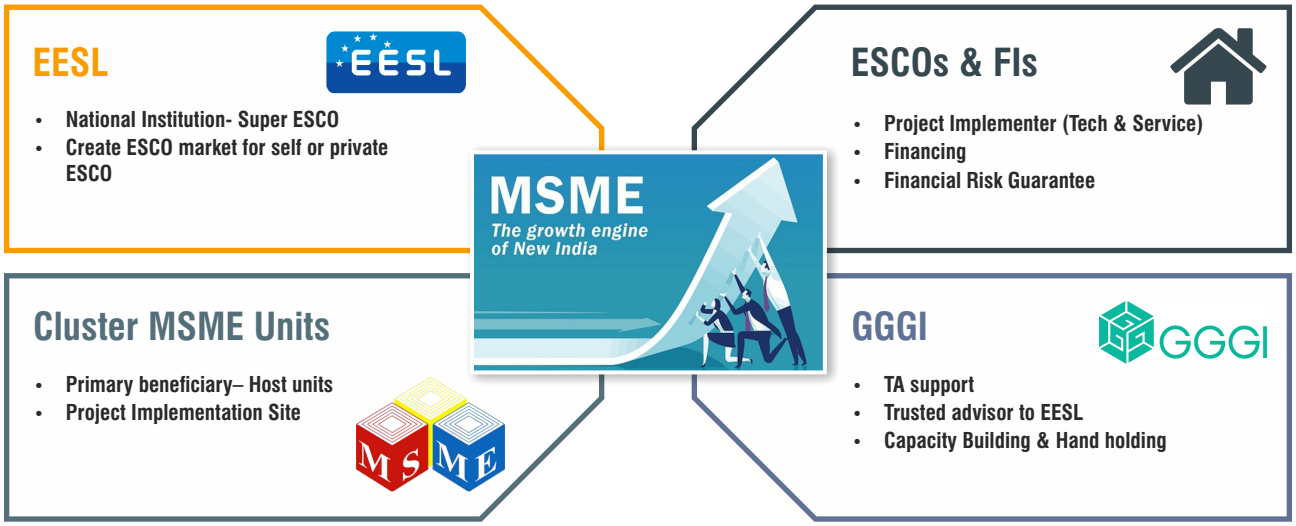
Baseline Study:

FICCI shall conduct the baseline study **"Free of cost"**. The study consists of collection of relevant data from the industry and few technical measurements. The baseline study may take maximum "One Day".

Selection of ESCOs/ Technology Provider:

To be indicated later

Project Stakeholders



For further information, please contact:

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