



# ENERGY MAPPING OF CHEMICAL MSME CLUSTERS

Key activities performed during the project



Energy audit  
in 50 MSME  
units



Energy  
consumption  
benchmarks

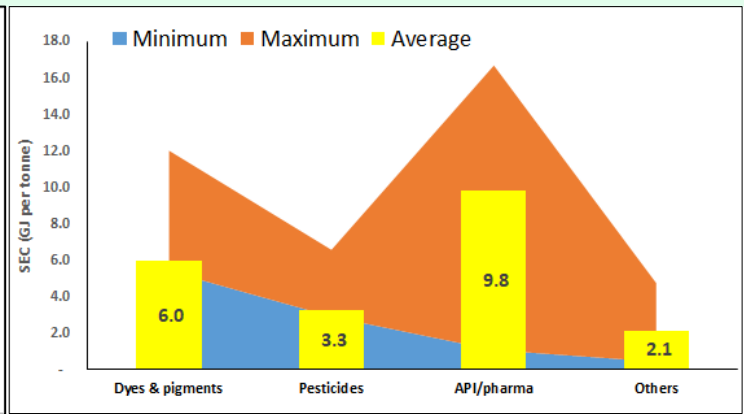
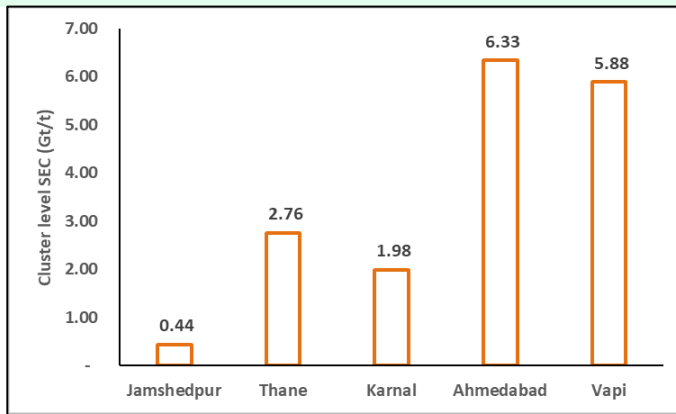


Sectoral EE  
technology  
roadmap



Implementation  
strategy and policy  
interventions

## Cluster and sectoral production and SEC findings



Parameters	Jamshedpur	Thane	Karnal	Ahmedabad	Vapi	Overall
Production (tonne/year)	99,950	532,198	104,528	956,520	728,908	2,422,104
SEC benchmarks (kgoe/tonne) [GJ/tonne]	11 [0.44]	66 [2.76]	47 [1.98]	151 [6.33]	141 [5.88]	119 [4.98]

### Energy efficient technologies

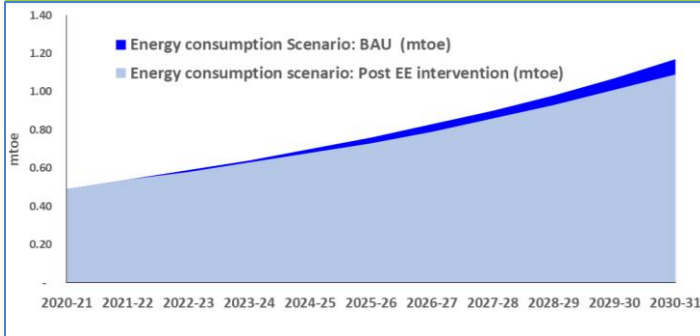
- Energy efficient boiler system
- Energy efficient thermic fluid heater
- Energy efficient air compressor
- Energy efficient motor

### State of art technologies

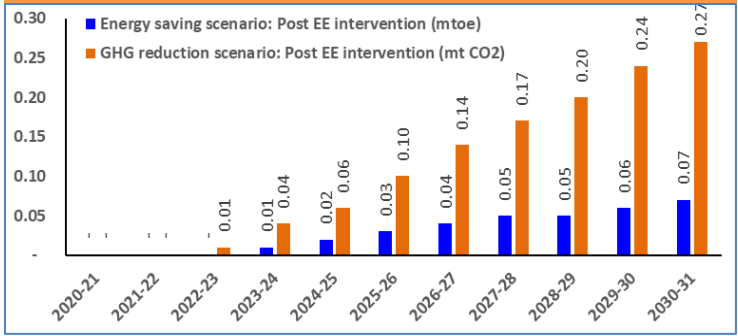
- Electrical boiler
- Fuel switch over/ electrification of thermic fluid heater
- Fluidised bed dryer in place of tray dryer
- Install rooftop photovoltaic system

# Sectoral energy consumption and saving potential

Potential energy saving : 70,000 toe



Potential GHG reduction : 270,000 mt CO<sub>2</sub>



## Recommendations and way forward



### Establish cluster level Energy Management Cell (EMC)

Facilitate adoption of energy and resource efficiency measures in a self-sustaining model; Help create linkages with equipment/ technology OEMs; Enable the setting of minimum efficiency and quality levels for equipment, systems and spare parts.



### Create technology upgradation fund

The upgradation fund will provide MSME chemical units with access to finance for adopting energy efficient technologies; sharpening skillsets; and for setting up product development and promotion centres.



### Establish common facility centre (CFC)

The CFC will provide access to high-efficiency manufacturing processes and technologies, high-quality raw materials, and standard testing facilities.



### Establish cluster-level skill development centres

The skill development centres will build capacities and strengthen skillsets of operators and supervisors.

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