



# **Presentation on RESOURCE CONSERVATION & MANAGEMENT (RCM)**

## **A FICCI Initiative**



# FICCI Vision & Mission



Resource  
Conservation &  
Management

## Vision

- To be the thought leader for industry, its voice for policy change and its guardian for effective implementation

## Mission

- To carry forward our initiatives in support of rapid, inclusive and sustainable growth that encompasses health, education, livelihood, governance and skill development.
- To enhance efficiency and global competitiveness of Indian industry and to expand business opportunities both in domestic and foreign markets through a range of specialized services and global linkages.

We listen

We analyze

We influence

We connect



# About FICCI



Resource  
Conservation &  
Management

- Established in **1927**, **largest and oldest** apex business organization in India
- **Non-government, not-for-profit** organization
- Serves members from **Indian private and public corporate sectors**, as well as multinational companies and draws strength from **diverse regional chambers of commerce and industry** across states
- Engages with over **250,000 companies**
- Provides **platform for networking and consensus building** within and across sectors
- Primary **liaison** for Indian industry, policymakers, and international business community

***I do not for a moment believe that commercial prosperity is incompatible with strict honesty.***

*Mahatma Gandhi at FICCI's 4th AGM, 1931*



- The RCM (Resource Conservation & Management) is a technical wing of FICCI which provides integrated technical consultancy services to industries to enhance their competitiveness, particularly through sustainable use of the resources (Energy, Water etc.), energy transition, decarbonisation, water neutrality, cleaner production and waste minimisation and improving Occupational Safety & Health etc.
- RCM Group has inhouse experts and consultants including Accredited Energy and Water Auditors. It also has potable & latest Instruments to conduct Resource Conservation & Environmental Projects.

# RCM Objectives

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To support Indian Industries and other stakeholders to



**ENHANCE  
RESOURCE  
EFFICIENCY**



**IMPROVE  
ENVIRONMENTAL  
PERFORMANCE**



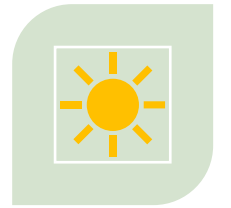
**MEET  
ENVIRONMENTAL  
COMPLIANCE**



**IMPROVE  
PRODUCTIVITY  
AND COST  
REDUCTION**



**PROMOTE  
OVERALL  
SUSTAINABILITY  
AND ACHIEVE  
SDG GOALS**



**DECARBONIZE  
THROUGH  
ENERGY  
TRANSITION**

## Energy Audit

- Mandated by the [Energy Conservation Act \(EC Act\) 2001](#).
- Designated consumer industries must conduct Mandatory Energy Audit & Monitoring & Verification audits.

## Water Audit

- Mandated by **Ministry of Jal Shakti notification**.
- Date of [Notification](#): 24th September 2020.
- Industries abstracting groundwater exceeding 100 cubic metre per day must conduct water audit once in two years through certified auditors of accredited agencies like FICCI.

# Government Accreditations

- An ***Empanelled Accredited Energy Auditing Organization*** with Bureau of Energy Efficiency (BEE), Ministry of Power, Government of India for Conducting Mandatory Energy Audits and M&V Audits under Energy Conservation Act 2001
- ***Notified as Recognized Water Auditing Organisation*** by Central Ground Water Authority (CGWA), Ministry of Jal Shakti, Government of India



# RCM Team Strength

**Qualified & experienced experts in environment management , energy efficiency, water conservation, and sustainability**

**Accredited energy & certified water auditors by Government of India**

**ISO certified environment, energy & safety professionals**

**Pool of empanelled experts from different industry sectors**



# Services Offered



**Energy Efficiency &  
Demand Side Management**



**Water &  
Wastewater Audits**



**Environment  
Management,  
Health & Safety**



**National Level Studies  
& Policy Development**



**Training &  
Capacity Building**



## Energy Efficiency & Demand Side Management

**Energy Audits** for Energy Intensive Industries under EC Act 2001

Cluster Level Studies towards **Decarbonisation** in MSME's, large industrial sectors

**Demand Side Management** studies for utilities.

Evolving **Low Carbon Sustainability Plans**

**Project Management Cell** for implementation of various government schemes

Dissemination of **National & International Cutting-edge Technologies for Energy Efficiency**



## Water & Wastewater Audits

**Water & Wastewater Audits** for Industries/ Water Pumping & Distribution companies/ Commercial Building etc.

**CGWA Compliance audits** for NOC renewal of industries abstracting groundwater > 100 KLD.

**Preparing Water Management Plan** for Achieving Zero Liquid Discharge (ZLD).

# Saving Potential



**Energy Studies: Energy Saving potential of up to 5-20% with payback periods less than 3 years**



**Water Studies: Water use efficiency by 10-50 % with a discounted payback period < 2 years and Reduction in operating costs (like energy, chemical consumption) by 5-20%.**

# Sectors served

The team has successfully accomplished energy and water conservation studies for more than 1300 industrial units covering following sectors

• Beverage	• Oil & Gas Exploration
• Building Complex	• Oil Refinery
• Cement	• Petrochemical
• Chemical	• Pharmaceuticals
• Fertilizers	• Power plants
• Iron & Steel	• Pulp & Paper
• Mining	• Textile
• MSME sector industries	• Zinc, Aluminium



# Projects for enhancing energy & water efficiency in MSME clusters

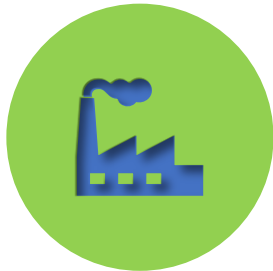
- Rice Mill cluster – Karnal
- Textile processing – Sonipat
- Garment , Auto-ancillaries, Cutlery Manufacturing – Kundli
- Brass Foundries – Jamnagar
- Steel Foundries – Kolhapur
- Steel Re-rolling mill- Tamil Nadu & Kerala
- Engineering Industries – Faridabad
- Textile dyeing & printing – Surat
- Engineering Industries – Pune
- Pulp & Paper, Meerut
- Sugar- Muzaffarnagar



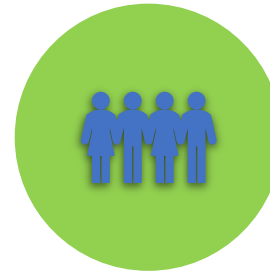
Steel Foundry



## **Environment Management, Health & Safety**



**Performance Up-gradation  
of Existing less efficient Air  
Pollution Control Devices  
(APCDs)**



**Human Health Risk  
Assessment (HHRA) Studies  
to identify & improve on  
environmental impacts**



**Industrial Safety Audits and  
EHS Documentation**



**Cleaner Production and  
Waste minimization  
projects**

# Reducing Air Pollution in Delhi NCR Region

- FICCI provided its expert's service, to be part of a Technical experts committee formed by CPCB under NGT Direction
- The Air pollution by Brick Kilns operating in Delhi NCR region was studied
- Various field observations & measurements were conducted in few brick kilns using different technologies
- Root cause of air pollution were identified
- Recommendations were provided to reduce air pollution
- Technical analysis was done to help evolve viable solution to improve productivity of brick kilns along with reduction in Air pollution



Brick Klin



## National Level Studies & Policy Development



- Evolving Energy Consumption Benchmarks for Industry Sectors
- Energy studies for various Industry sectors



Evolving  
Environmental  
Regulatory Standards  
for Industry sectors



जल शक्ति मंत्रालय  
MINISTRY OF  
**JAL SHAKTI**

सत्यमेव जयते

Evolving Water Use  
Benchmarks and  
Accounting  
Guidelines for  
Industrial Sectors



सत्यमेव जयते  
Government of Gujarat

Facilitating Multiplier  
Effect of  
Implemented Cleaner  
Production Options  
in Non-Ferrous SME  
Foundries in  
Jamnagar cluster



## National Level Studies & Policy Development



Setting up load-based emission standards for Industries for The Abdul Latif Jameel Poverty Action Lab (J-PAL) which is a global research center.



Scaling Up of Investments through ESCO Mechanism in three MSME Clusters by Deploying Standard Energy Efficient Technologies (SEET) in Haryana for The Global Green Growth Institute (GGGI) which is a treaty-based international, inter-governmental organization.



- Promotion of micro solar water pumps for marginal farmers (Odisha, Jharkhand, Assam)
- Developing training modules on sustainable soil management in India.



Project for Energy Efficiency monitoring for Secondary RE-Rolling Mills for the United Nations Development Programme (UNDP) which is international development organization.





## National Level Studies & Policy Development



Canadian International Development Agency



**SHAKTI**  
SUSTAINABLE ENERGY  
FOUNDATION



UNITED NATIONS  
INDUSTRIAL DEVELOPMENT

- Project on Capacity Building for Energy Manager
- Project on Indian Industry program for Energy Conservation for preparation of energy conservation sectoral taskforce for different sectors

“Capacity building of Vendors for increasing penetration of Energy efficient technologies in 5 MSME clusters

- Climate Works Foundation project on Capacity Building for Energy Managers & Auditors
- Project on Identification of Energy Efficient Technologies for Designated Consumers for achieving PAT Targets and conduction of Workshop.

UNIDO project for Facilitation of private sector development in India: Energy Efficiency Intervention in Pulp & Paper industries in India



## Training & Capacity Building

### FOCUS AREAS

Advanced Technologies in Air Pollution Control & Monitoring	Plant Maintenance summit
Advanced Air handling Systems	Reliability of Electrical Systems
Cleaner Production/Technologies and Waste Management	Safety Management in Industries etc.
Corrosion Management	Thermal Insulation
Desalination and Membrane Technologies	Total Power Quality Management
Rainwater Harvesting & Groundwater Recharge	Water & Wastewater Management etc.
Recent Advancements in Combustion technology	

- ***More Than 15,000 Professionals*** Across Industry Sectors, Government & Regulatory Authorities Trained in Energy, Water, Environment, Occupational Health & Industrial Safety since 1999
- *Around 450 international delegates trained*

# FICCI Clients (Member Organizations)



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हिन्दुस्तान पेट्रोलियम कॉर्पोरेशन लिमिटेड  
Hindustan Petroleum Corporation Limited  
(A Maharatna Company)



# FICCI Key Clients



BHARAT FORGE



Cipla

*DENSO*  
Crafting the Core



**INOX CVA**<sup>®</sup>  
HISTORICALLY FUTURISTIC

**kirloskar**  
Oil Engines



**PRISM JOHNSON LIMITED**



**Parlé Agro**  
refreshing india





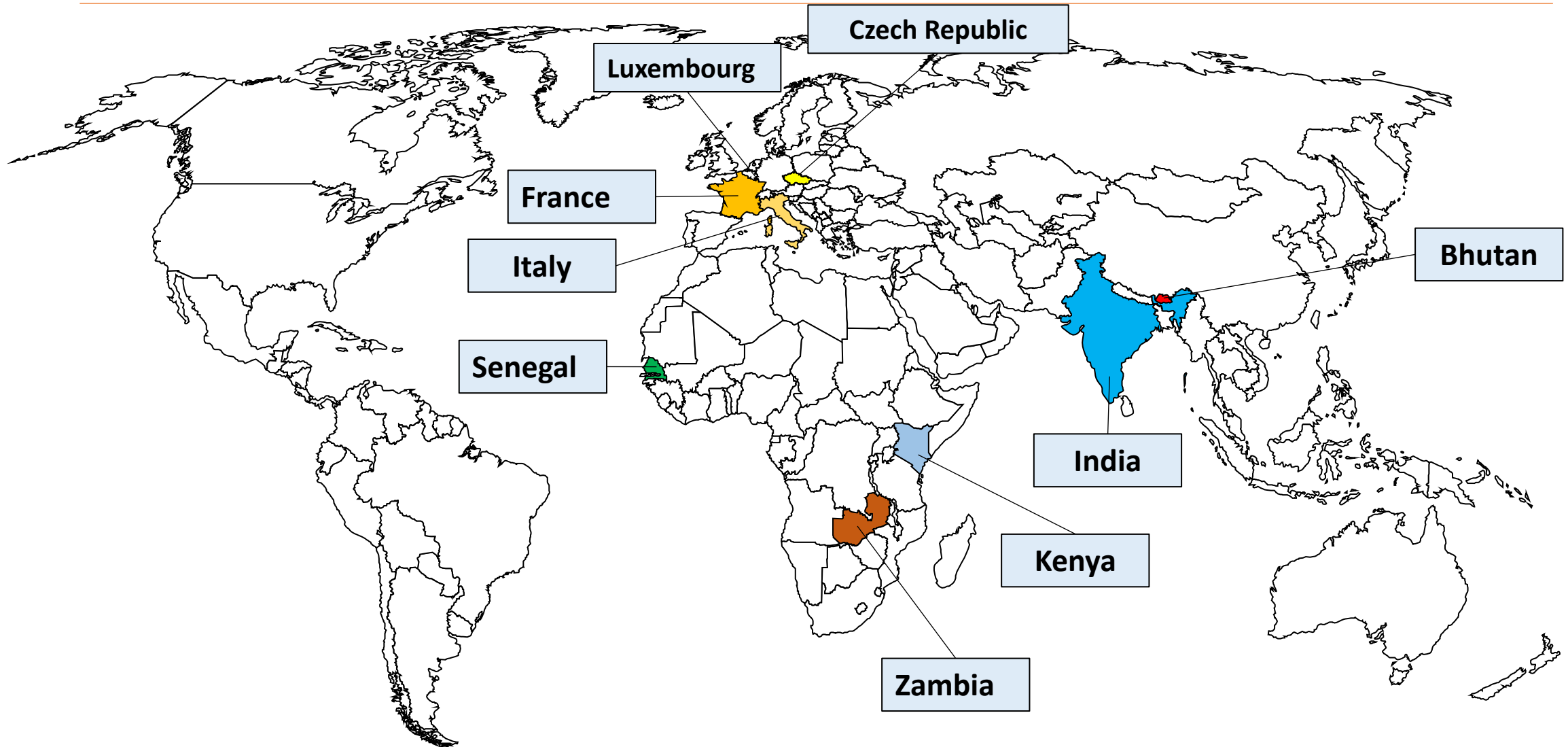
# Government & International Agencies



Canadian International  
Development Agency



# RCM Services- Global Footprint



# RCM Services: Benefits

Reducing Production Costs, by reducing energy & water bills, saving resources

Reducing water footprint, by conserving water, increased recycling of water, achieving ZLD

Achieving Sustainable growth through optimum use of resources and waste minimisation

Reducing greenhouse gas emissions by improving energy, water & resource use efficiency

Improving Occupational Health & Safety

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**Thank you for your attention.**

*Together, let's pave the way for a greener and  
more sustainable future!*