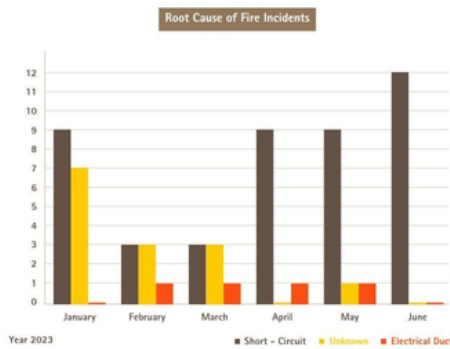
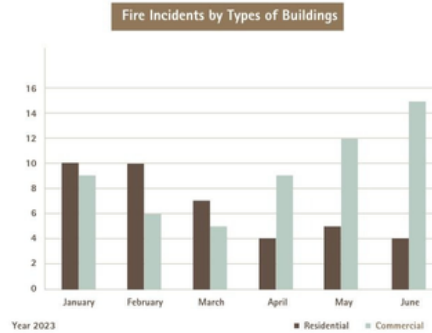
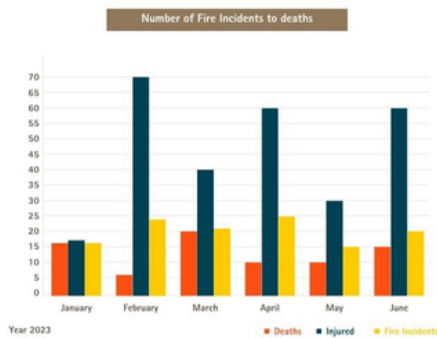


July 2023

Cover Story

Short circuit is the cause behind 37% of the building fires between Jan 23 to June 23, observes ICA India’s Fire Tracker



78 Fatalities

278 Injuries

40 Fires in Residential buildings

56 Fires in Commercial Buildings

Root Causes of Electrical Fires in Buildings

37% of the Fires incidents were caused due to Short circuits

4% of Fire incidents started and spread through electrical ducts.

The exact cause of the remaining incidents remains under investigation.

Disclaimer : Data collected from publicly available news sources. This is indicative data and may not be comprehensive.

ICA India has been closely tracking the building fires across India to analyse root causes and understand the loss of lives and property. The data provides incisive insights into the state of electrical safety across various regions, types of buildings, and electrical installations.

[Download Fire Tracker >>](#)

In Focus

Empowering our first line of defense: Enhancing Safety and Emergency Response for Fire Service Personnel



ICA India conducted a Technical Session on July 19, 2023, for Fire Services, Govt. of West Bengal.

The session aimed at improving fire safety parameters, reducing the danger of electrical fire incidents, and strengthening emergency response capabilities. The team from ICA India, including Mr. Amol Kalsekar, Chief Manager of ICA India, Mr. Hemant Sali, Ex SE & Electrical Inspector of PWD, Maharashtra, and Mr. Indrajit Biswas, Project Associate of Eastern Region at ICA India, facilitated various sessions for the attendees.

Announcement

Assessing benefits of solar based micro irrigation in India



Stakeholder consultation by ICA through its Alliance for Solarised Irrigation (ASI) along with Indian council for Agricultural Research (ICAR)

The discussion focused on assessing the appropriateness and feasibility of bundling solar pumping systems with micro-irrigation and promoting these technologies together.

The consultation saw participation from the industry experts from solar, irrigation and pumping systems, international Institutes working on agriculture and water management, NGOs and field extension personnels

This consultation is a part of the ongoing study by ICA and ICAR-NIAP for policy advocacy to states (Rajasthan and Uttar Pradesh) on convergence of solar and micro irrigation subsidy schemes of federal government.

ICA India is glad to have been a part of fourth ETWG meeting DAKSHTA with EESL under India's G20 presidency and the 14th Clean Energy Ministerial meeting.



The event aimed to discuss energy efficiency experience and learning in the global context.

Mayur Karmarkar, MD, ICA India as a part of the expert panel shared his views on how EESL's demand aggregation & innovative financing model has helped in market transformation for IE3 motors by addressing high upfront cost for industrial users.

ICA India has been an active knowledge partner to EESL on this journey since 2017.

ICA India at the 4th Green Pro Summit 2023 organized by CII Green Buildings



The 4th Green Pro Summit was held on 20th July 2023, at Bengaluru. The theme for this edition was 'Towards Net Zero'.

GreenPro is a prominent Indian Ecolabel that empowers industrial and building sector users to select sustainable products, materials, and technologies to reduce environmental impacts.

Since its establishment in 2015, GreenPro has been supporting manufacturers and end-users in achieving their sustainability objectives. To date, we have certified over 6600+ products in the building and industrial sectors.



Mayur Karmarkar, MD, ICA India presented his views on "Copper Industry Decarbonisation: Aiding the Automotive Sector", highlighting Copper as a strategic raw material for Energy Transition & copper industry's pathway to NetZero.

Energy Efficient motors to power India's net zero roadmap

Mayur Karmarkar, MD, ICA India writes on the urgent need for higher energy efficiency standards in India and the importance of aligning with global emission reduction commitments
Published by The Indian Express Delhi (Sunday Edition) |

ADVERTORIAL

Energy-efficient motors to power India's net-zero roadmap

By Mayur Karmarkar

India has committed to achieve net-zero emissions by 2070, underscoring the urgency of climate action. However, India's energy consumption is projected to grow approximately 2.5 times faster than the global average in the next three decades.¹ Electric motors and motor-driven systems account for approximately 70% of the electricity consumed by industries at a global level. Given that the industry contributes to about 40% of India's electricity demand, motors consume around 28% of the total electricity, surpassing lighting at 24%.

In FY22, the Indian electric motors market was estimated to be around INR 10,000 Crores, with a compound annual growth rate (CAGR) of 7.9% in value terms and 5.4% in volume (V/V) terms. The domestic motor manufacturers are represented by members of the Indian Electrical & Electronics Manufacturers' Association (IEEMA), All India Electric Motor Manufacturers Association (AIEMMA), and Southern India Engineering Manufacturing Association (SIEMA).

It is crucial to recognise the increasing need for energy efficiency due to various reasons such as scarcity of energy and climate change concerns. Many countries have acknowledged the potential of energy-efficient motors and issued directives to phase out lower efficiency motors for the adoption of higher efficiency ones as per the Minimum Energy Performance Standards (MEPS). While for the in-efficient installed base to be replaced with higher efficiency motors, a voluntary program such as National Motor Rejuvenation Program, where ICA is a knowledge partner to Energy Efficiency Services Limited (EESL) could be helpful to accelerate the adoption of higher efficiency motors at lower than market price by the industries.

Recent events, Mr. Anil Malik, Assistant Vice President, Inland Bussell Ltd. highlights that 13 economies worldwide have adopted IE3 as the minimum efficiency standard for industrial motors. However, India has been following the IE2 standard as its MEPS since January 2018. According to the latest statistics from the Indian Electrical and Electronics Manufacturers' Association (IEEMA) in March 2023, 32% of motors produced in India meet IE3 and higher standards, and this percentage is

expected to reach 40% next year based on the current trend. He further opines that upgrading to IE3 motors as MEPS is crucial to save INR 400 Crores in imports and boost the exports in the country.

Minimum energy performance standards (MEPS) serve as a crucial mechanism for regulating the energy performance of appliances and equipment. These standards are widely recognized and offer a cost-effective approach for governments to mitigate the adverse environmental effects associated with the utilization of various appliances. At present, India's MEPS include IE2 and onwards energy-efficient motors. Since the mandatory implementation of MEPS at the IE2 level in 2018, the market share of energy-efficient motors has risen from 22% in FY17 to 37% in FY22.

Following the implementation of motor MEPS in 2018, the Bureau of Indian Standards (BIS) has issued licenses to 120 manufacturers for producing energy-efficient motors with BIS certification (BISmark). Out of these, 75 licenses have been granted for the manufacturing of premium efficiency (IE3) motors, and 20 units have obtained licenses for producing super-premium (IE4) efficiency motors. These 75 licenses for IE3 motors alone save more than 95% of the market demand.

The adoption of IE4 motors still presents a challenge for motor manufacturers due to weak demand and higher prices. Furthermore, the use of variable frequency drives (VFDs) in combination with IE3 motors to enhance overall energy savings results in even higher costs. If IE3 becomes the new MEPS, focus on IE4 motors is highly likely to increase. With increases in competition and volume, the cost of IE4 motors is

expected to decrease.

Considering that IE3 motors have achieved a substantial market share of around 36% in India, with numerous licenses obtained for manufacturing these motors, it is now necessary to upgrade the current mandatory MEPS from IE2 to IE3 in India by FY24.

Without timely upgrades to higher MEPS, there is a risk to the nation's climate action commitments. Implementing higher energy performance standards will contribute to India's industrial decarbonization efforts in combating climate change. Switching to IE3 and above motors is estimated to save 23.1 terawatt hours (TWh) of energy and INR 176 billion over the next five years. It will also align with India's commitment to achieving net-zero emissions by 2070 and reduce carbon emissions by 10 million tonnes over the next five years.

However, there is also the risk of becoming a dumping ground for the import of lower efficiency motors in the absence of higher MEPS. As several countries have already adopted IE3 as MEPS and are exporting IE2 motors to countries like India, upgrading to IE3 as MEPS would significantly curb the import of lower efficiency motors.

Higher energy efficiency motors will not only contribute to India's climate goals but also support sustainable growth and development. The holistic effort of law enforcement and policymakers is crucial in providing and adapting higher energy efficiency motors, paving the way for a greener and more sustainable future.

The author is Managing Director, International Cooper Association, India.

ELECTRIC MOTORS & MOTOR-DRIVEN SYSTEMS

69% OF INDUSTRY CONSUMPTION IN THE INDUSTRIAL SECTOR

28% OF TOTAL ELECTRICITY IN THE COUNTRY

13+ COUNTRIES HAVE ADOPTED IE3 AS MINIMUM ENERGY PERFORMANCE STANDARD (MEPS)

WILL BE MANDATED BY FY24

UPGRADING TO IE3 AS MEPS WILL HELP CONSERVE 21.1 TWh OF ENERGY

WORTH INR 126 BILLION IN COST SAVINGS

BY 2025

IT WILL HELP REDUCE 19 MILLION TONNES OF CARBON EMISSIONS

BY 2025

1. <https://www.iea.org/reports/world-energy-outlook-2023>

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