

WHAT THEY ARE

Minimum Energy Performance Standards (MEPS) for industrial electric motors are a regulatory instrument in the [industry policy package](#). They set requirements for a minimum level of energy efficiency that electric motors must meet to be sold in a particular jurisdiction.

MEPS typically specify minimum efficiency levels for electric motors based on their size, type and application. Motors meeting or exceeding the specified efficiency levels are considered compliant, and non-compliant models are not allowed to be sold on the market. Efficiency is usually measured as a ratio of the motor's output power (mechanical power delivered to the load) to its input power (electrical power consumed).

MEPS for electric motors are often based on international standards for efficiency classes, such as [IEC](#), [NEMA](#), and [GB](#). MEPS can help countries to meet their energy efficiency and carbon dioxide emissions targets. These standards not only foster an overall enhancement in motor efficiency but also facilitate [comparability of efficiency levels](#) among manufacturers for motor users.

MEPS for industrial electric motors have been implemented in [62 countries](#), encompassing over half of the global industrial motor fleet as of 2022.

HOW TO IMPLEMENT

The successful implementation of MEPS for industrial electric motors relies on a multi-faceted approach encompassing leadership, technical enhancements, effective communication, compliance monitoring, and supportive enforcement mechanisms.

This often involves several steps:

- 1. Stakeholder engagement:** Before establishing MEPS, proactively engage stakeholders through workshops involving motor suppliers, users and authorities to ensure the MEPS are relevant to the specific market context. These workshops serve as platforms for gathering input and support for subsequent actions. It can be useful to consult behavioural experts in the design phase to ensure the policy has its intended effects.
- 2. Technical aspects:** Develop and refine motor test methods and testing capacity, ensuring accurate measurement and assessment of energy performance. These technical enhancements are essential to underpin the efficacy of MEPS regulations.
- 3. Development and publication:** Draft the legislation and present it to authorities for approval. Adopt the MEPS through legislative or regulatory means.

- 4. Raising awareness:** Develop effective communication strategies which ensure widespread awareness and understanding of the new standards. Create a comprehensive communication campaign targeting both market stakeholders and end-users. This campaign is useful to not only prepare the market for the required changes but also to educate users and buyers on the efficiency gains from MEPS-compliant motors.

HOW TO MONITOR

Monitoring the compliance of motors with MEPS is essential to assess the effectiveness of the policy. Standardised testing procedures based on the MEPS parameters (i.e. power factor, temperature, and energy consumption) can increase compliance.

Monitoring those parameters is essential to evaluate the impact of energy performance. Technical assistance programmes and labelling initiatives can also increase the effectiveness of a monitoring and evaluation system, providing support to stakeholders to comply with the regulation.

From a market perspective, the availability, delivery and price of motors can be barriers to rapid market turnover. These factors should also be taken into account during the evaluation phase. The government can also assess the investment capacity of stakeholders to help determine whether potential subsidies are also needed to enable the phaseout of inefficient motors.