

# Policy Guidelines for Electric Motor Systems



The 4E Electric Motor Systems Annex (EMSA) promotes the opportunities for energy efficiency in motor systems by disseminating best practice information worldwide. It supports the development of internationally harmonised test standards and policies to improve the energy performance of new and existing motor systems with the aim of achieving 20% to 30% energy savings.

This briefing summarises the key findings and recommendations of the EMSA report: *Policy Guidelines for Electric Motor Systems*. The report identifies best policy practices for transforming markets towards energy efficient motor systems based on examples of policy measures across a range of economies.



PHOTOGRAPH BY THOMAS BURLA, SWITZERLAND

## Observations for Policy Makers

National governments can take the lead in transforming markets through the implementation of a range of mandatory and voluntary policies and programmes. In doing so, governments will need to form partnerships with relevant bodies amongst product suppliers, end-users and utilities.

Best practice for policies and programmes for electric motor systems include:

- **Implement mandatory minimum energy performance standards (MEPS)** based on international standards and at a level appropriate to national circumstances.
- **Take an active role in the international standards development process** (e.g. through direct participation in the relevant standards committees), to ensure these standards meet the needs of national policy implementation.
- **Implement a (national) product registration program.**
- **Establish a government laboratory accreditation program**, including initiatives to improve the quality of test laboratories (e.g. joint training, calibration, round robin programs, etc.).
- **Implement an effective national compliance program** for MEPS.
- **Implement energy management and/or energy audit programs** covering motor systems.
- **Set energy efficiency targets** for utilities and/or industrial end-users.
- **Implement a program for the systematic replacement** of old motor systems.
- **Establish an awareness-raising campaign for industry and benchmarking databases** (in cooperation with manufacturer associations).
- **Establish a framework of financial incentives** to support energy efficient motor driven systems in industry. Implement subsidy programs for industry in cooperation with power utility programs.
- **Implement procurement programs** for public institutions and large buyers.

## More Information

Download the report at [www.motorsystems.org/policy-publications](http://www.motorsystems.org/policy-publications). For specific questions on the Policy Guidelines contact Konstantin Kulterer at [Konstantin.Kulterer@energyagency.at](mailto:Konstantin.Kulterer@energyagency.at).

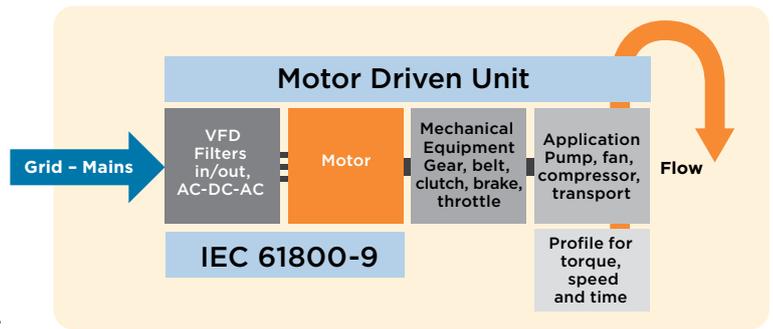
All publicly available EMSA work outputs can be accessed at [www.motorsystems.org](http://www.motorsystems.org).

For further information on EMSA contact Maarten van Werkhoven at [mvanwerkhoven@tpabv.nl](mailto:mvanwerkhoven@tpabv.nl).

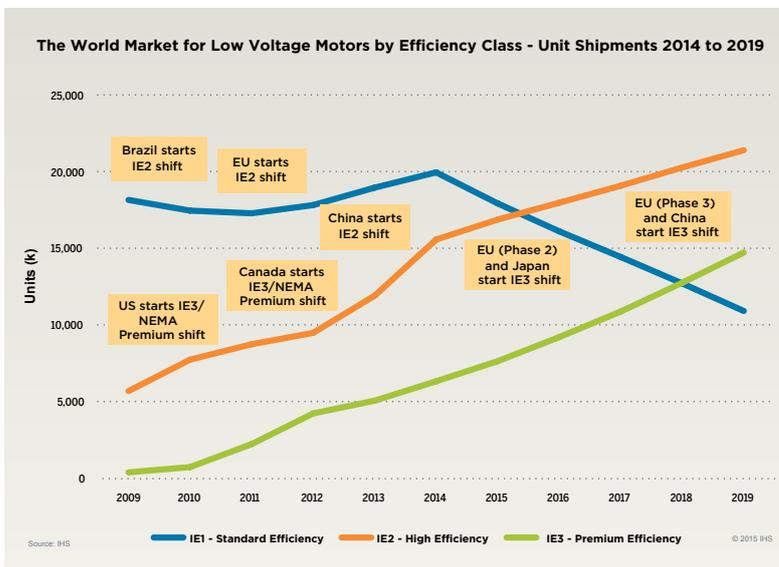
## Move from component to system

Developing policies to capture the major savings potential of motor systems is best achieved through a phased approach that includes the following steps:

1. Targeting all energy relevant components of a motor system, including motors, variable frequency drives, transmissions, gears and applications (pumps, fans, compressors).
2. Focusing on integrated systems that include the motor, converter and an application (e.g. pump, fan, compressor, etc.).
3. Moving to more complex motor systems.



## Use international standards and a toolkit of measures



Minimum Energy Performance Standards (MEPS) are one of the strongest instruments to move the market. For electric motors, consider acknowledging and applying the international test standard IEC 60034-2-1 and the international efficiency classification standard IEC 60034-30-1 as a basis for MEPS and labels.

To reach the bulk of motor systems that are already installed, additional policy instruments are necessary and have been applied successfully across different economies. These include voluntary agreements with industry, energy management and audit programs, company motor policies, financial incentives, awareness raising and the provision of information.

## Engage all stakeholders

The most effective government policies are those that stimulate action amongst key stakeholders within the motor systems market to achieve long term market transformation.

A comprehensive range of policies are therefore required to engage international/national standards makers, industry associations, major industrial users and power utilities. Involving relevant actors in the policy development process ensures that opportunities and constraints of all parties affected are considered and leads to optimal implementation.

