Electric motor systems are responsible for 45% of global electricity consumption. The technology, know-how and software tools for reducing this consumption by 20 - 30% already exist, however these are not widely applied.

The 4E Electric Motor Systems Annex raises worldwide awareness of the efficiency potential of motor systems and provides guidance and tools to exploit this. EMSA's work focuses on the following areas:

- **Motor Systems Policy.** EMSA presents international experience on successful and comprehensive motor policies.
- **Testing.** EMSA provides guidance for repeatable and accurate motor testing for its Testing Centres Network members.
- **International Standards.** EMSA works for globally harmonized and robust technical standards for the classification and testing of motors and variable frequency drives through representation in standards working groups, and for implementing motor systems management as part of the energy management systems standard ISO 50001.
- **Capacity Building.** EMSA designs tools for optimal system design and presents the results to the engineering community.
- **Bridge to SEAD**. EMSA works with SEAD to mutually benefit from the accumulated knowledge of both initiatives. Common topics of interest are compliance, certification and enforcement requirements for motors. EMSA supports SEAD in the Global Efficiency Medal competition for electric motors, selecting the world’s most efficient motor.

EMSA provides a forum for the direct and in-depth exchange between members on their experience with motor systems efficiency policy, as well as vehicle for collaborative projects. EMSA's research results are publicly available.

1. Super-efficient Equipment and Appliance Deployment Initiative
Who’s Involved?
The following six national Governments are members of the Annex: Australia, Austria, Denmark, Netherlands, Switzerland, and the United States of America*. Information from other countries is also used in the EMSA work, but those countries do not have access to the benefits of membership.

*Member listing April 2012

Motor Systems Policy
The Motor Policy Guide - Part 1: Assessment of Existing Policies comprises an analysis of existing motor systems policy instruments in different parts of the world (Australia, China, Europe, USA) and recommendations for successful policy design.

Part 2 - Road map to a comprehensive motor systems policy will be ready by 2013.

Testing
The Testing Centres Network has about 50 test laboratories among its members from 30 countries. At the workshop in September 2011 the group discussed the EMSA Guide for the use of electric motor testing methods based on IEC 60034-2-1.

Capacity Building
The Motor Systems Tool calculates the efficiency of a motor system, taking into account load characteristics, transmission, motor and controls. It is intended for engineers, machine builders, energy consultants and others working on analysing existing and optimizing new machine systems.

Where can I access the EMSA outputs?
All publicly available EMSA outputs can be found on the EMSA website at www.motorsystems.org.
For further information contact Rita Werle (rita.werle@abinternational.ch).
For a regular update on motor systems efficiency and EMSA subscribe to the EMSA Newsletter (available in English, Chinese, Japanese, Russian and German): www.motorsystems.org/emsa-newsletter