



The IECEE Global Motor Energy Efficiency Program

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Introduction

Electric motors driving pumps, fans, compressors and other machines are responsible for 45% of global electricity use. Through higher efficiency of motors and the use of optimized motor systems, electricity savings of 20% to 30% can be achieved.ⁱ

Many countries have established mandatory Minimum Energy Performance Standards (MEPS) for electric motors with efficiency requirements. Over time, several other countries are likely to introduce MEPS for motors as well and their respective MEPS are becoming more and more stringent. While MEPS are now most often based on the motor efficiency classification in IEC 60034-30-1 and the efficiency test method IEC 60034-2-1, the process and requirements for certification and compliance vary greatly from country to country, including test standards, laboratory accreditation, sampling, test process and labeling.

Electric motors and their driven equipment are being manufactured in and shipped across many countries worldwide to satisfy global demand. Differences in national regulations and customs import requirements create technical barriers to trade. In addition, the lack of effective enforcement of MEPS and verification processes weaken the trust in motor markets and quality products.

Global Motor Energy Efficiency Program (GMEE).

To address the multitude of trade barriers due to these differing country regulations for motor efficiency and in an attempt of setting up a globally harmonized and applicable program, the IECEEⁱⁱ and the US National Electrical Manufacturers' Association (NEMA) have joined forces for launching the new **Global Motor Energy Efficiency Program (GMEE)**.

The goal of the GMEE program is to have:

- one recognized motor efficiency test method (IEC 60034-2-1)
- one test report format
- one certification process with clearly defined requirements
- one motor efficiency labelⁱⁱⁱ

for electric motors in all participating countries.

Thus, each motor will have an "international passport": once certified for one particular level of energy efficiency in one country this will be recognized in any other participating country as well. This will enable an international cooperation among different countries on enforcement of regulations.

Based on the IECEE Certification Bodies' (CB) Scheme

GMEE is based on the IECEE Certification Bodies' (CB) Scheme. The scheme is based on international IEC standards, while in special cases also accounting for national differences. The main objective of the scheme is to realize the concept of "one product, one test, one mark, where applicable" through promoting the harmonization of national standards with international standards. The IECEE has more than 50 member countries, over 60 participating National Certification Bodies (NCBs) and close to 300 Certification Body Testing Laboratories (CBTLs). National Certification Bodies are assessed on site to verify their compliance against ISO/IEC Guide 65 and the IECEE Rules of Procedure and Operational Documents. NCBs are peer assessed by teams composed of other



NCBs and CBTLs to ensure that each member NCB has the necessary technical capability, competence and experience. CBTLs are assessed for compliance with ISO/IEC 17025.^{iv}

Figure 1 illustrates the process for obtaining national certification of a specific product.

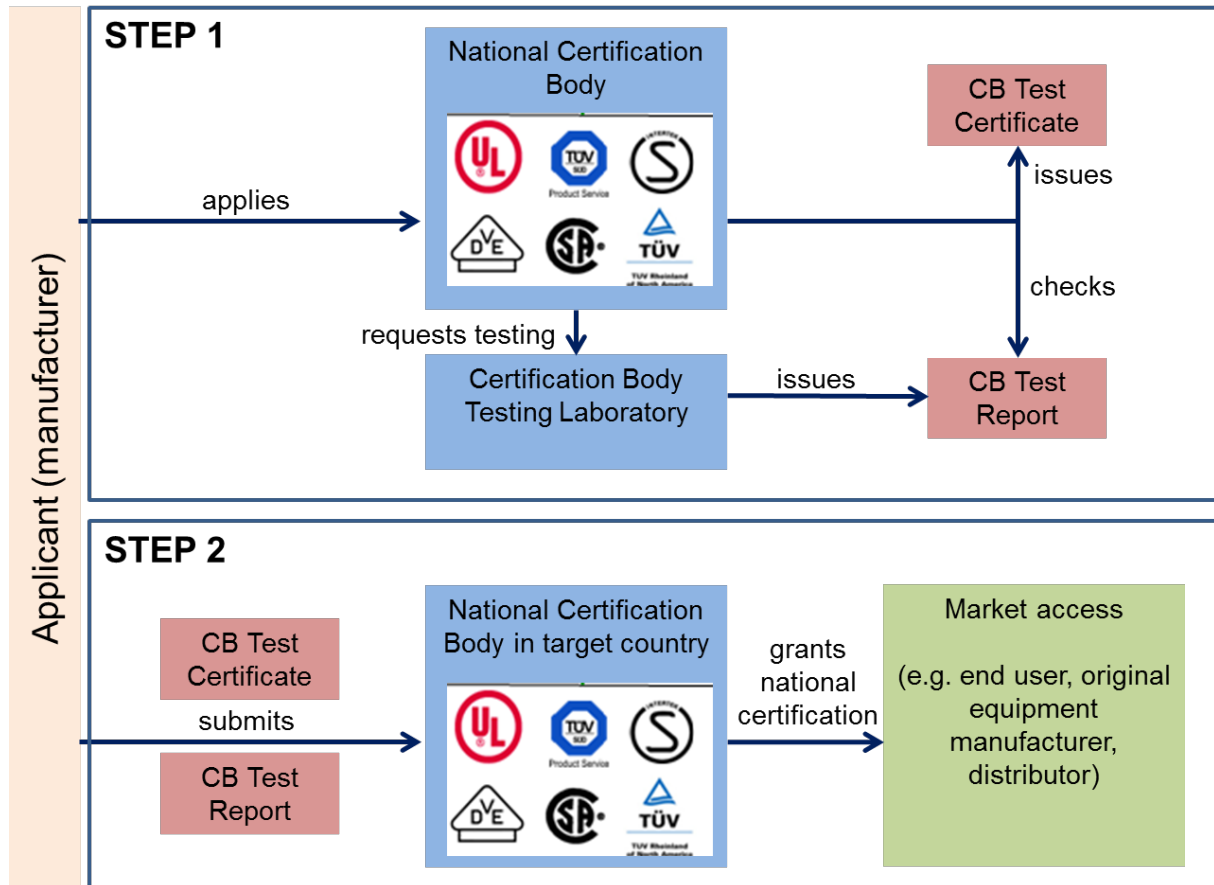


Figure 1 Process for obtaining national certification under the IECEE CB Scheme

The GMEE Operational Document was approved by IECEE in June 2015.

The program's official launch is planned to take place in September 2015 at the International Conference on Energy Efficiency in Motor Driven Systems (www.eemods15.info) in Helsinki, Finland.

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ⁱ Paul Waide, Conrad U. Brunner, et al.: Energy-Efficiency Policy Opportunities for Electric Motor-Driven Systems, IEA Working Paper, 2011, Paris.

ⁱⁱ IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components: www.iecee.org

ⁱⁱⁱ The uniform label shall be established in the second phase of the program within the framework of the Global Motor Labeling Program.

^{iv} IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE System), Rules of Procedure – Part I: Scheme of the IECEE for Mutual Recognition of Test Certificates for Electrotechnical Equipment and Components (CB Scheme).

^v www.iecee.org/cbscheme/cbfunct.pdf