IEA Technology Collaboration Programme:
Energy Efficient End-Use Equipment 4E

Energy Efficient End-use Equipment
International Energy Agency

Electric Motor Systems Annex EMSA

Motor Workshop ECI 2017, Brussels, Belgium

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Electric Motor Systems
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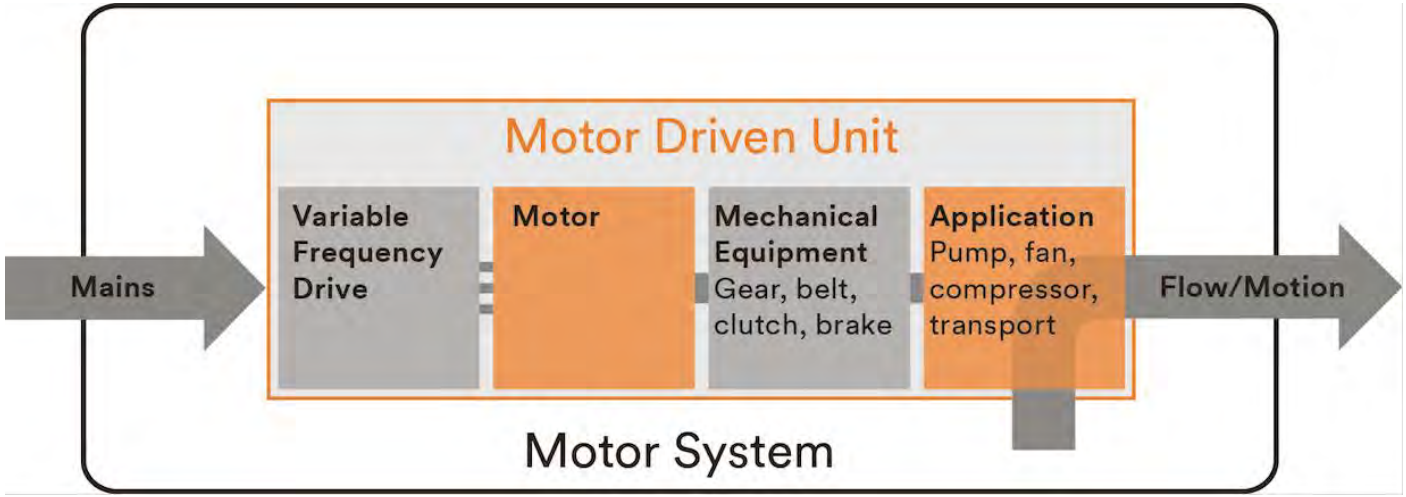
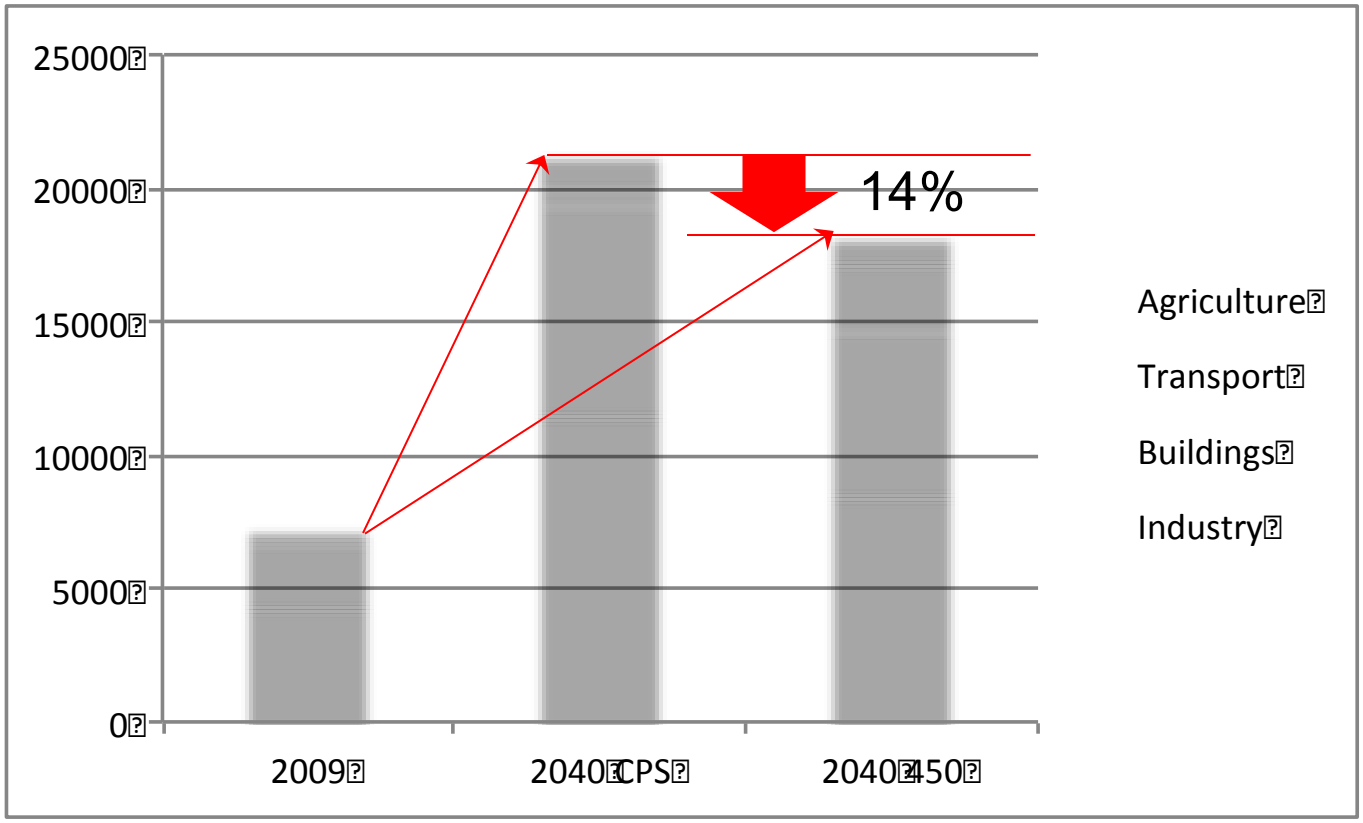
Electric Motor Systems



- Motors Systems use 53% of global electricity use – share is growing
  - Pumps, Fans, Compressors, machines and processes
- Efficiency improvements of 20% - 30% crucial to meet global climate goals
  - Replacing old motors, adding VFD, efficient components, applications, systems design

Global Electricity Demand Motors

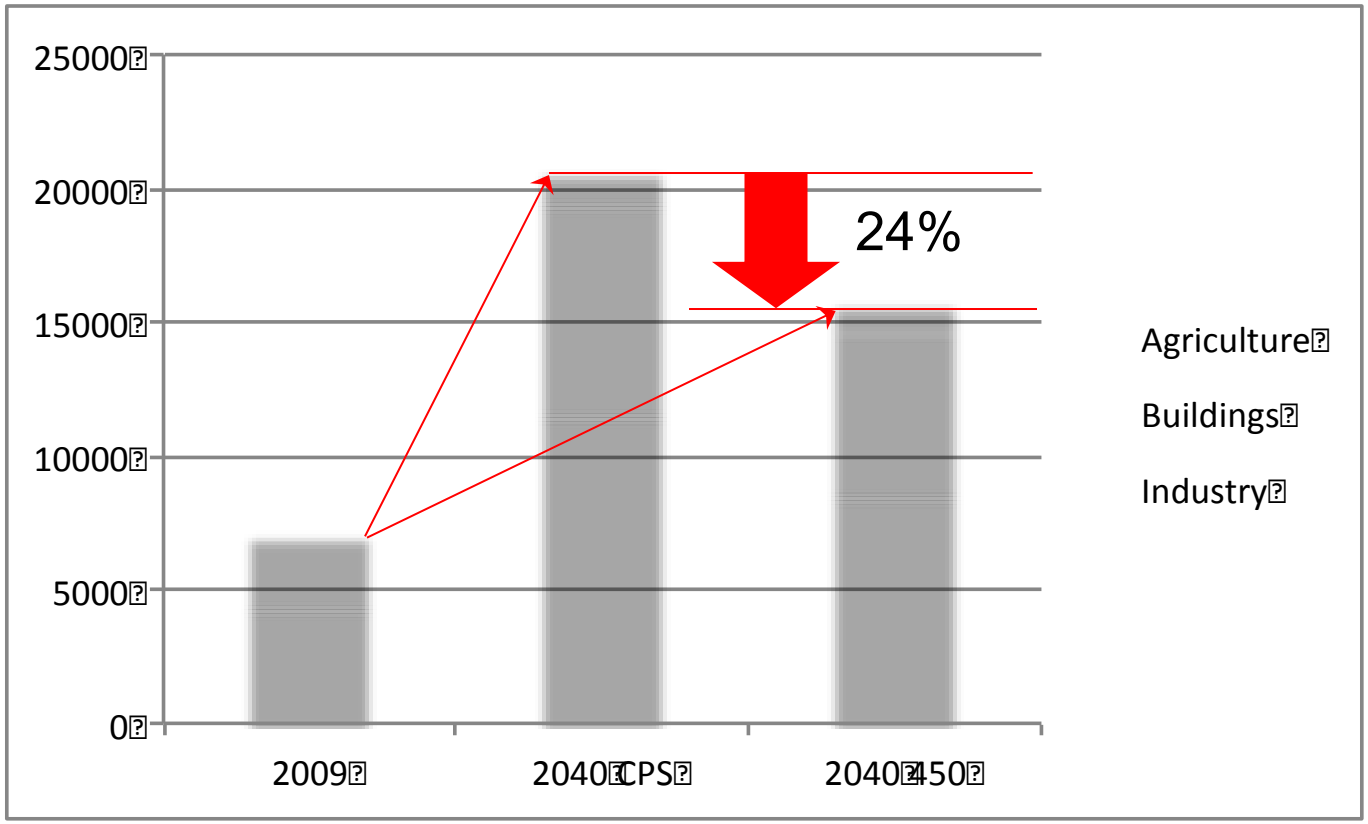
all sectors 2009-2040



Source: IEA Waide, Brunner 2009, IEA WEO 2016
CPS, 450: IEA WEO scenario's

Global Electricity Demand Motors

all sectors excl transport 2009-2040



46%

Source: IEA Waide, Brunner 2009, IEA WEO 2016
CPS, 450: IEA WEO scenario's

EMSA Electric Motor Systems Annex

International Energy Agency

- 6 countries
- 2009 – 2017, 3rd phase 2014 - 2017
- EMSA overview

Energy Efficient End-use Equipment
International Energy Agency

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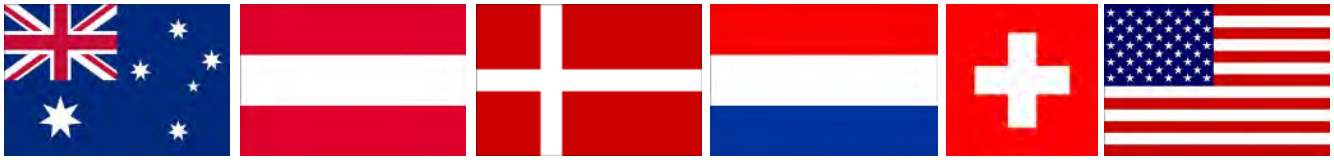

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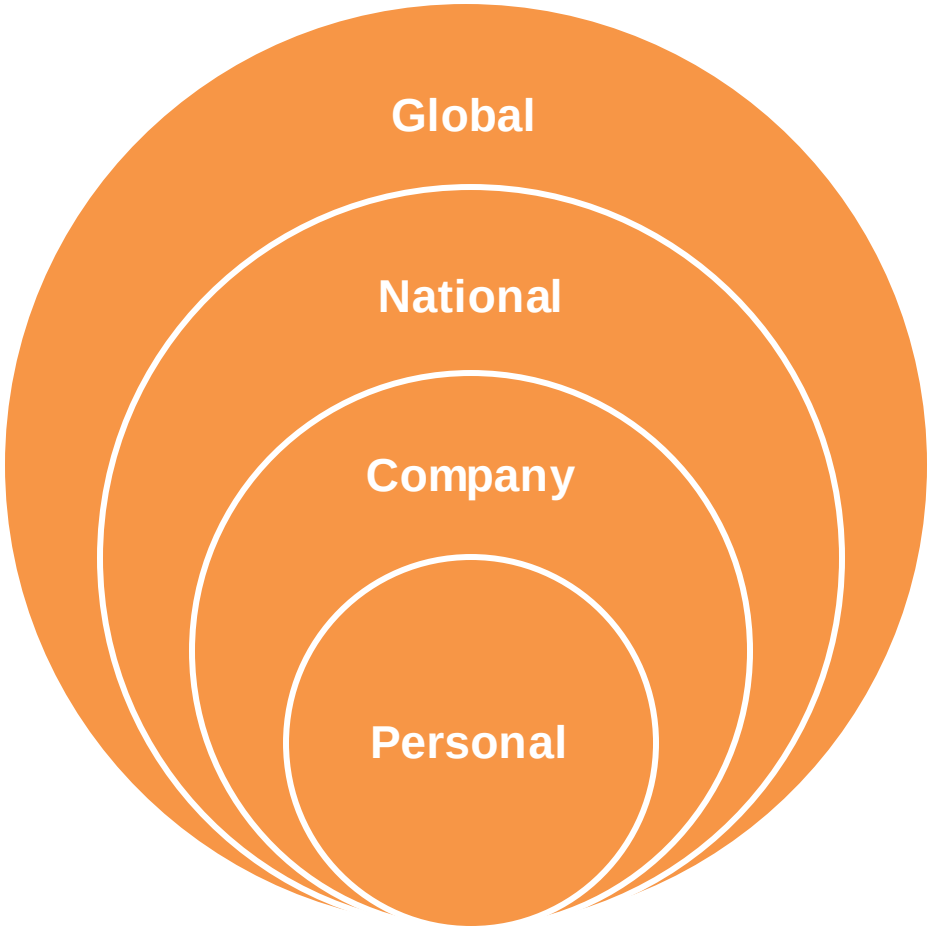
EMSA for market transformation



…harmonized global standards

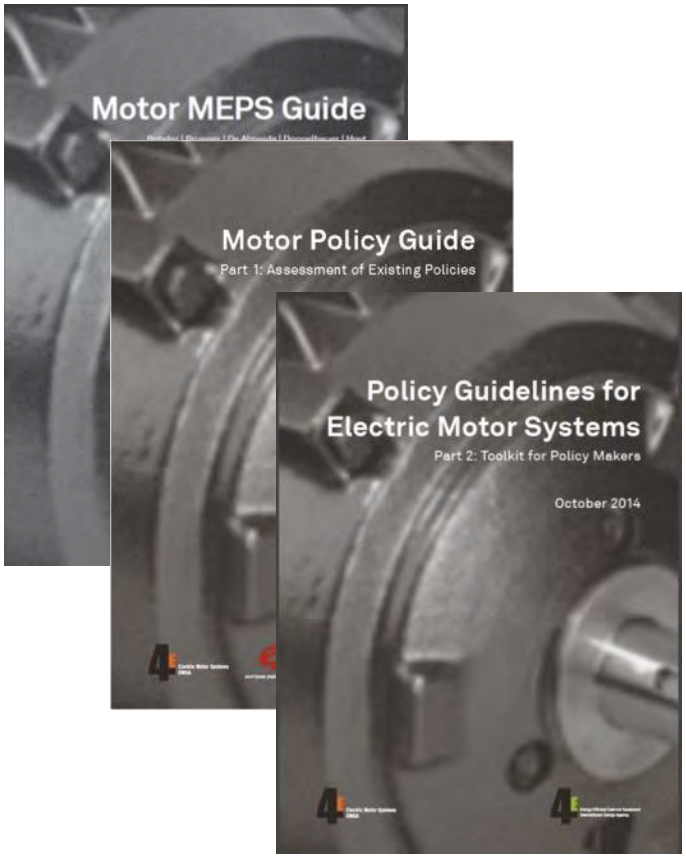
…successful policies

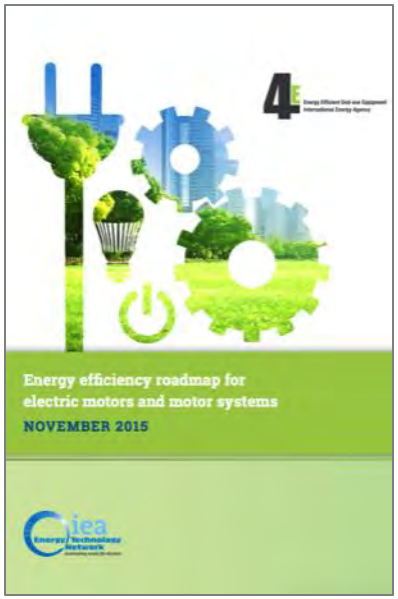
…energy management & audits

…tools & information

Successful policy implementation

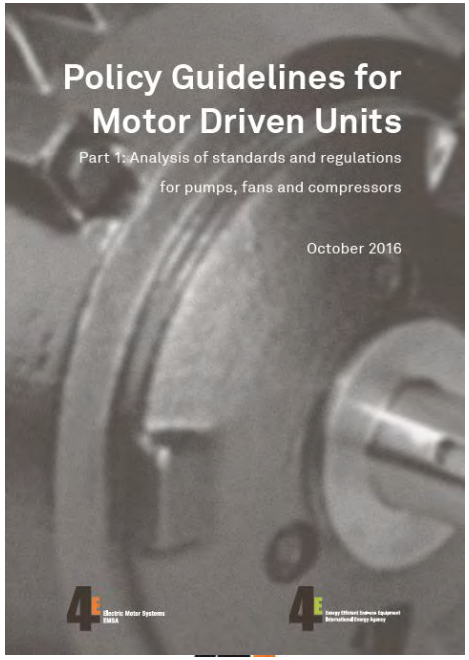
EMSA publications





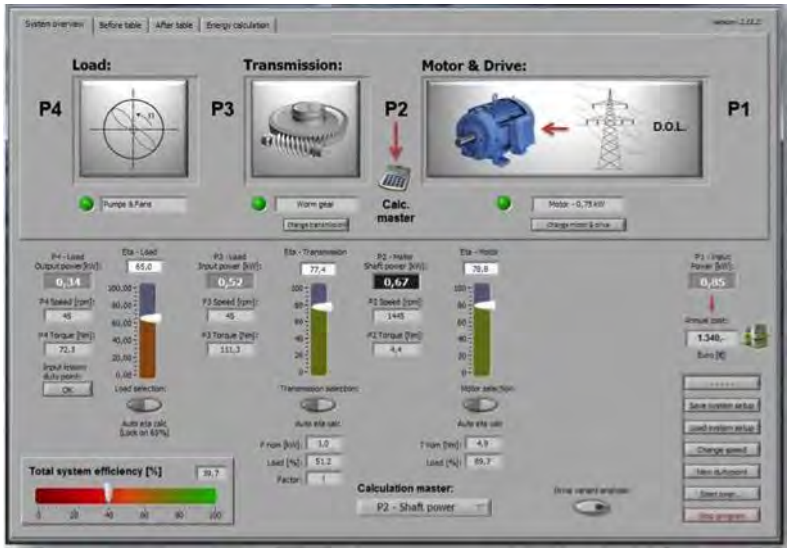
Upcoming

- Policy Guidelines for Motor Driven Units Part 1 (2016) and Part 2 (2017)



Download: www.motorsystems.org

Policy briefs, Motor Systems Tool



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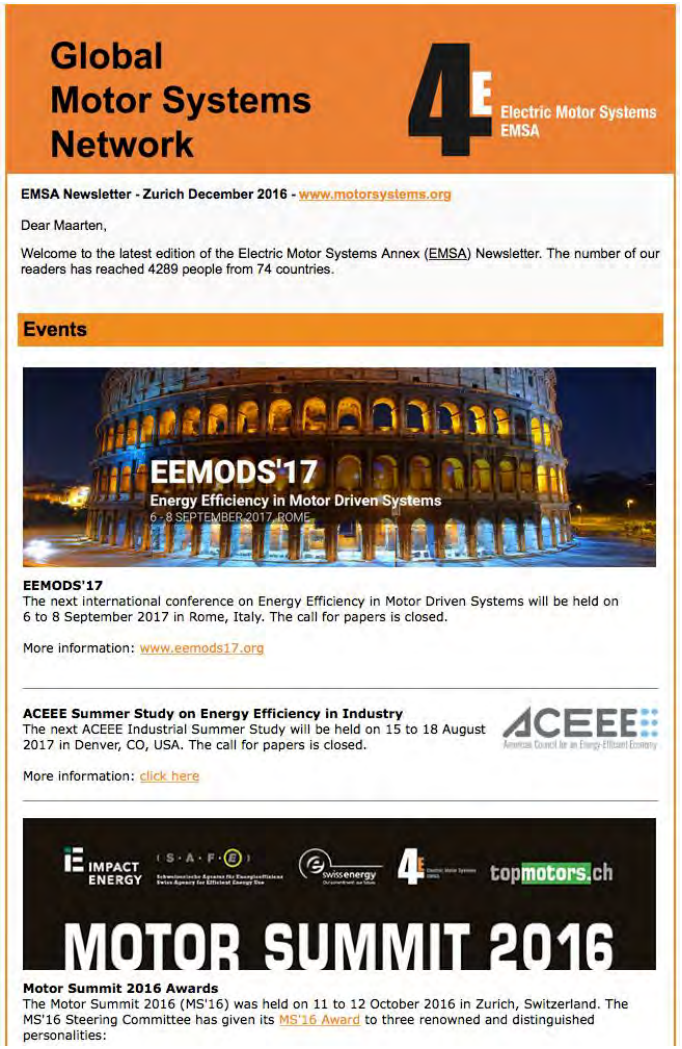
EMSA information

Newsletter

- EN, CN, JP, RU, DE
- 4,800 contacts
- 75 countries



Global Motor Systems Network

4E Electric Motor Systems EMSA

EMSA Newsletter - Zurich December 2016 - www.motorsystems.org

Dear Maarten,

Welcome to the latest edition of the Electric Motor Systems Annex (EMSA) Newsletter. The number of our readers has reached 4289 people from 74 countries.

Events

EEMODS'17
The next international conference on Energy Efficiency in Motor Driven Systems will be held on 6 to 8 September 2017 in Rome, Italy. The call for papers is closed.

More information: www.eemods17.org

ACEEE Summer Study on Energy Efficiency in Industry
The next ACEEE Industrial Summer Study will be held on 15 to 18 August 2017 in Denver, CO, USA. The call for papers is closed.

More information: click here

Motor Summit 2016 Awards
The Motor Summit 2016 (MS'16) was held on 11 to 12 October 2016 in Zurich, Switzerland. The MS'16 Steering Committee has given its MS'16 Award to three renowned and distinguished personalities:

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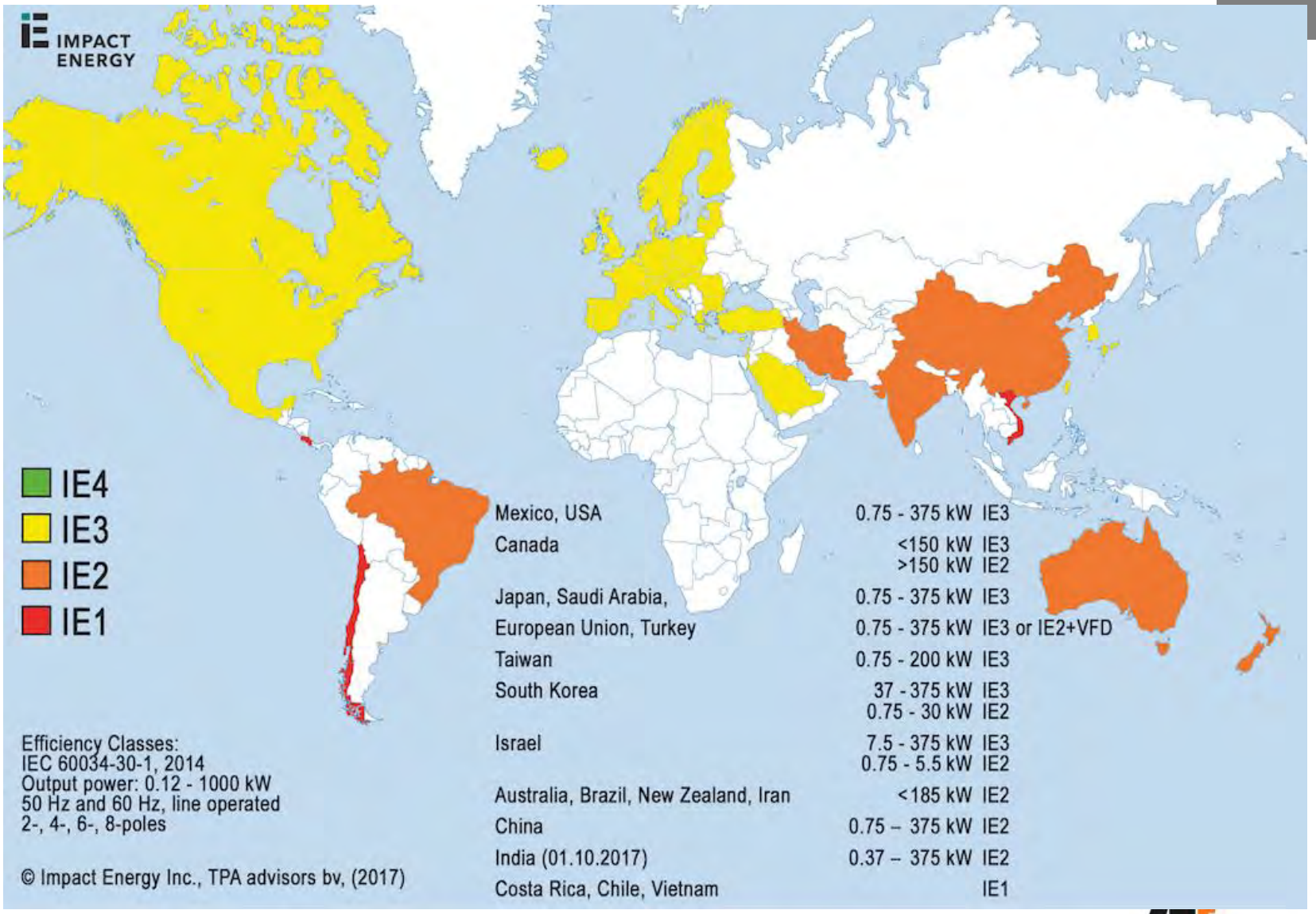
Global MEPS overview - motors



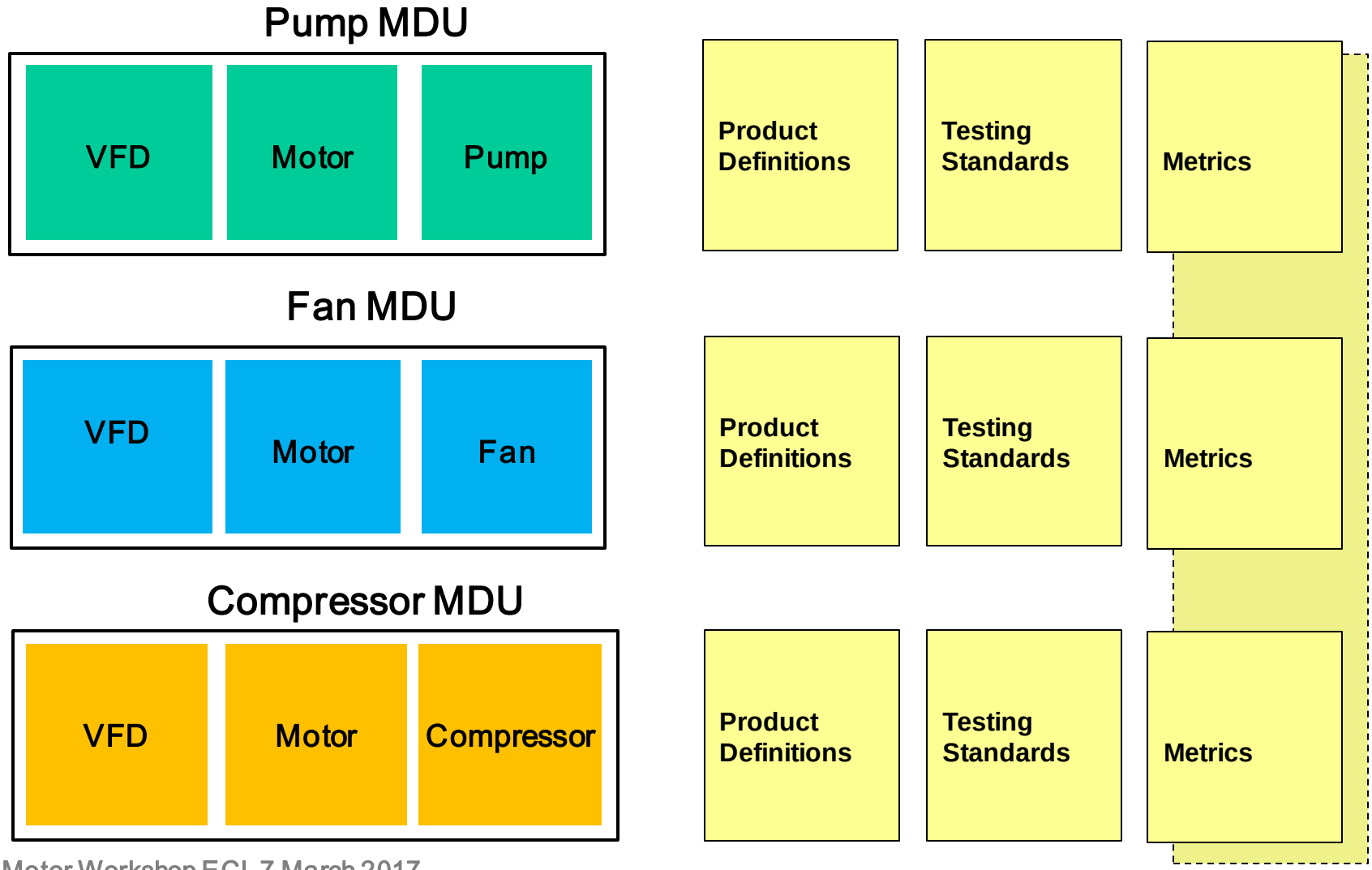
Policy Guidelines for Motor Driven Units

part 2

- Goal: recommendations for further alignment of standards and regulations for MDU's
  - Motor Driven Units: Pumps, Fans, Compressors
- Part 1: Overview of current standards and regulations
  - Published October 2016
- Part 2: on going – US, EU, CN
  - Product definitions
  - Testing and efficiency standards
  - Metrics
  - Recommendations for alignment

Policy Guidelines for Motor Driven Units

part 2



4E EMSA Energy efficiency roadmap for electric motors and motor systems

1. Set IE3 Premium Efficiency level as global target for MEPS before 2020
2. Expand MEPS to cover VFD and motors plus VFD
3. Expand the coverage of existing regulations in line with IEC 60034-30-1 (i.e. 0.75 – 375 kW -> 0.12 – 1000 kW)
4. Adopt IE4 level as MEPS in major industrial economies after 2020
5. Improve international alignment (frame sizes, 50/60 Hz efficiency curves)
6. Promote technologically neutral policies (no differentiation of efficiency requirements for certain types of technologies, e.g. US small motor rule)
7. Reinforce policy-makers' involvement in standardization (bringing in the policy view, standards fir for policy implementation)

Further areas of interest

- High voltage motors
- Regulating Motor Driven Units: from component to system
  - Pumps, Fans, Compressors
- Compliance, market surveillance

Technology progress

1980

2017

The new efficient motor

- More efficient
- Smaller
- Lighter
- Less precious active material
- Less rare earth

Contact

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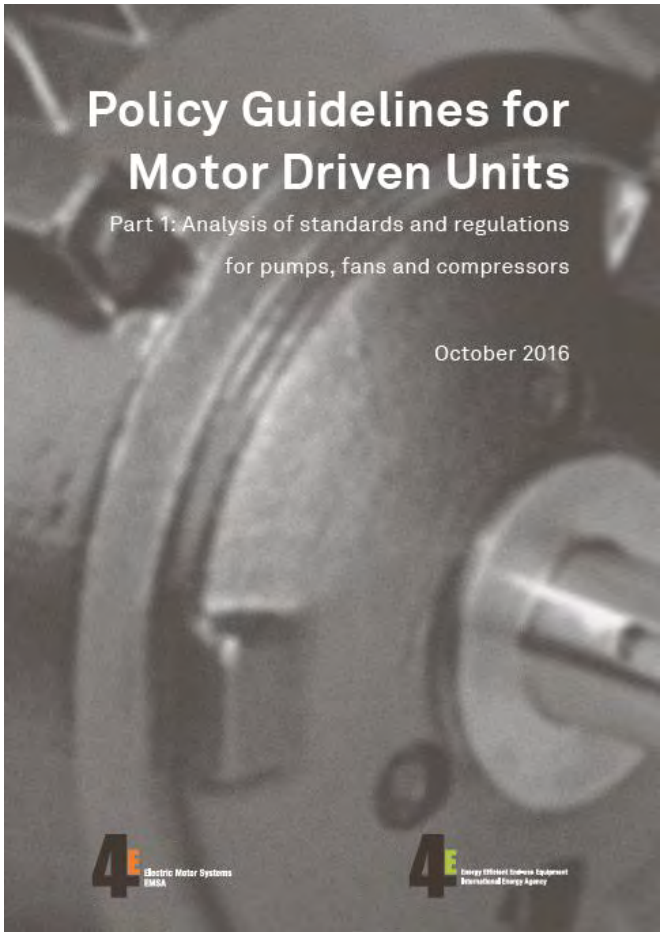

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