

MOTOR SUMMIT 2016  
Zurich, Switzerland

# **Efficient Motor Policy for Europe View from CEMEP**

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# CEMEP Members Across the European Member States

Country	Association
Belgium	Agoria
Denmark	Dansk Industri
Finland	The Federation of Finnish Technology Industries
France	GIMELEC
Germany	ZVEI
Italy	ANIE
Netherland	FEDA
Poland	PIGE
Portugal	ANIMEE
Spain	AFBEL
UK	GAMBICA
UK	BEAMA

- CEMEP is the European Committee of Manufacturers of Electrical Machines and Power Electronics.
- CEMEP is representing an industry with a market value of 6.3 Bln € and 130.000 employees
- About 30 companies are involved with their experts in the activities of CEMEP
- The members of CEMEP are the National Associations that representing important industries

# Markets of CEMEP Products



Uninterruptible power  
supplies



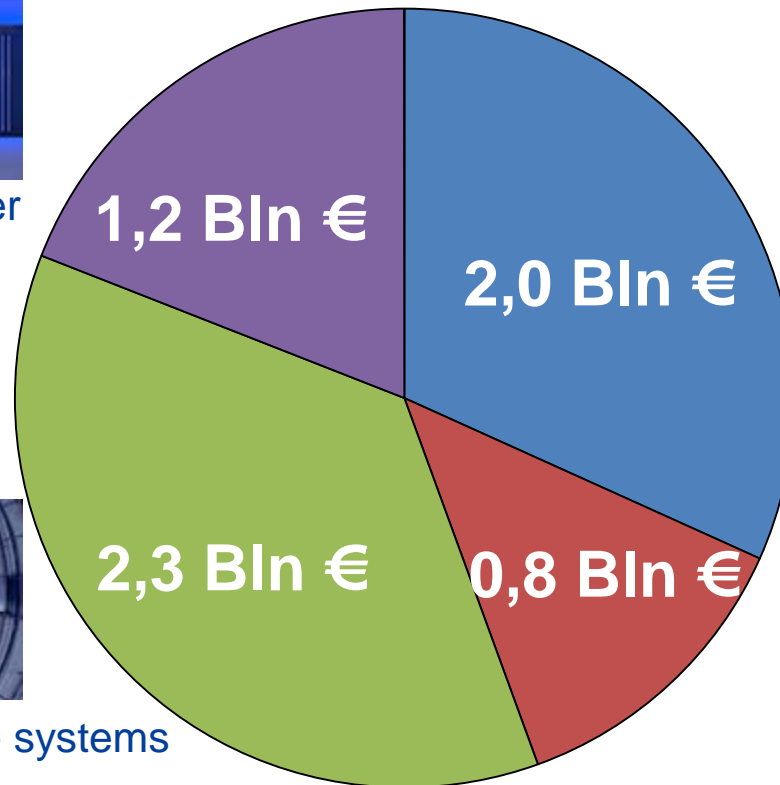
CEMEP  
share 50%



Variable speed drive systems



CEMEP  
share 80%



Low voltage motors



CEMEP  
share 70%



High voltage motors



CEMEP  
share 90%

# Social Responsibility of the CEMEP Manufacturing Industries

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- Unemployment rate in Europe shall be as low as possible. Small and Medium sized Enterprises, representing more than 70% of the production
- Competitiveness of European industries should be benchmark
- Economic earnings from sold motors and drive systems shall be competitive for the European industry
- Value added from European manufacturing shall be a brand, understood as a quality promise

# General Principles

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- ❑ We have to face a global evolution in all areas and our industrial sector in Europe is ready to compete but also to pay the necessary attention to social responsibility aspects
- ❑ We have to evaluate the existing “technical” shifts on social, economic, technical and political as well as ethical levels. All these processes are sustained by and for people
- ❑ **To enable this virtuous process we need, as Industry, a new level of quality**
- ❑ This means that we need a new framework but also considering the competence and intelligence of the individuals.
- ❑ **This new approach exists today in the concept of Better Regulation and Circular Economy**
- ❑ We as CEMEP are taking part of this innovative process and we need to be involved more and more. We need Europe

# Main Tasks and Activities

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- ❑ We are working to strengthen Cemep organization to become more representative
  
- ❑ We strongly want to support proactively the qualitative changes in Regulation and Legislation in Europe in the near future. Cemep is implementing a new Task Force on Circular Economy with the aim to create common positions of our sector to support the development of the concept of circular economy at EU level.
  
- ❑ In our Industrial Groups we are discussing about the future requirements in different fields, for example:
  - ✓ Ecodesign Lot 30 Motors and Drives
  - ✓ Digitization (ICT)
  - ✓ WEEE 2 (Waste Electrical & Electronic Equipment )
  - ✓ REACH (phthalic anhydrides ...) (Registration, Evaluation, Authorisation and Restriction of Chemicals)
  - ✓ Standardization aspects (tolerances for motors, new Mandates ...)
  - ✓ ...

# The principle of a better regulation

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- ❑ CEMEP supports the approach that a European regulation in conjunction with a European standard lays down the requirements for eco-friendly design of motors
- ❑ EU's product policy should pursue the "better regulation" agenda always! There are however several contradictory situations
- ❑ For example while the Circular Economy Package places a greater emphasis on the availability of spare parts, the Ecodesign requirements for motors forbid to use spare parts and make it difficult to repair these products
- ❑ Another example is related to the additional Mandate M 543 of the European Commission that already requests standardization for increasing the raw material efficiency but adversely affects the component efficiency (Mandates M/470 and M/476) which requires more raw materials
- ❑ We are not interested in consuming more material but we strongly want to be more innovative and to put more intelligence in or products and systems thanks to the competences in our companies
- ❑ **CEMEP therefore calls the European policy makers for a careful application of the "better regulation" principle with a coordinated and homogeneous approach. Otherwise the result is to confuse the market and hinder the Industry**

# Battle of Materials



A surprising view on  
the giant consumption  
of material in the field  
of „high efficiency  
competition“



# Position

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Energy savings with line-fed asynchronous motors, even of an IE4 class are poor compared with the potential (200 TWh) of variable-speed driven equipment, when it benefits from adapting the speed (e.g. pumps, compressors, fans etc.)

At 11 kW, comparison with a line-fed IE1 motor shows:

	IE1	IE4
Energy Savings	0%	5,7%
Material	60 kg	100 kg

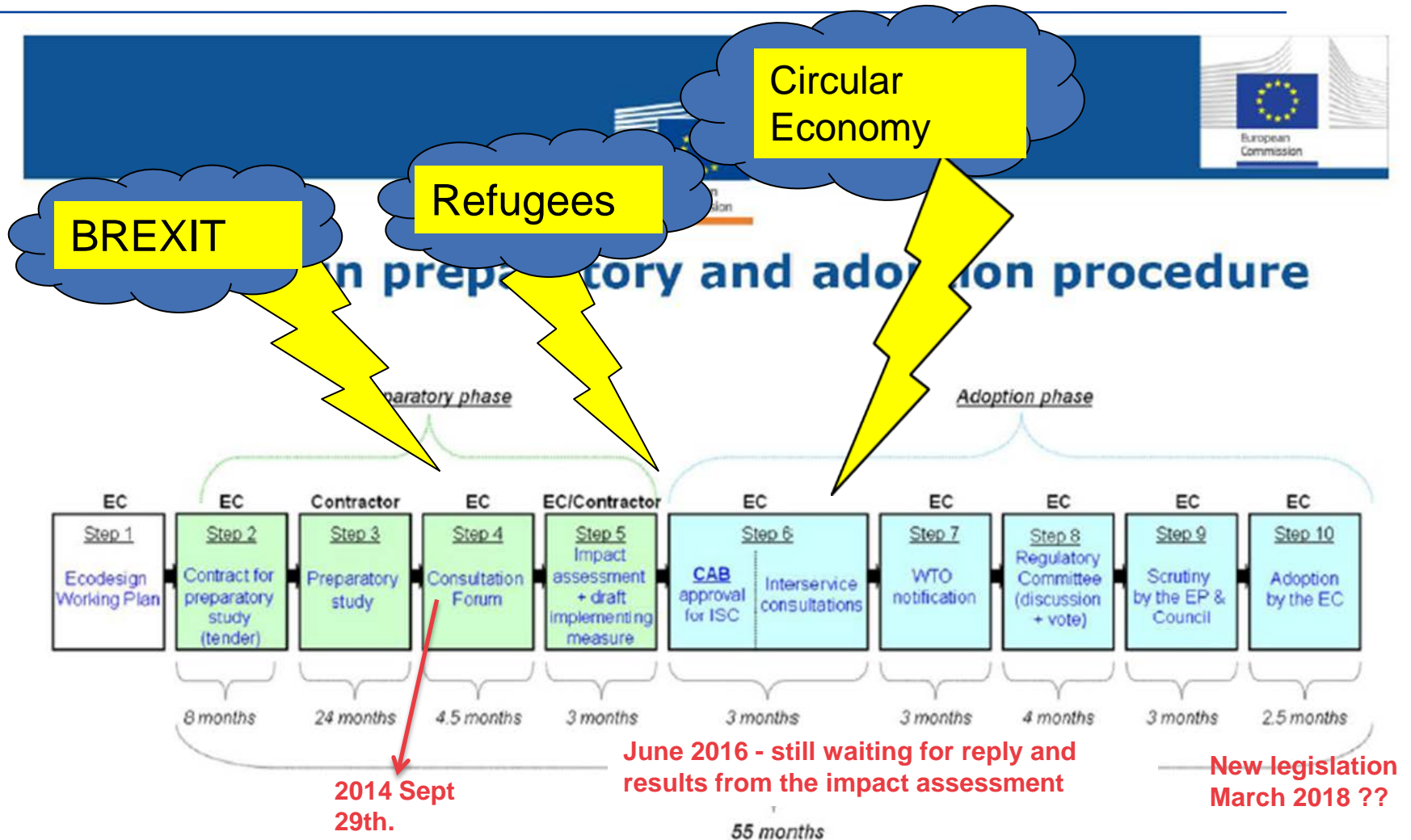
At 11 kW, energy savings with variable-speed (PDS) of IES1 class against the IE1 motor

	IE1	PDS (IES1)
Energy savings	0%	>55%
Material	60 kg	60 kg + 10 kg = 70 kg

Increasing of line-fed IE classes leads to a giant depletion of material (environmental resources) with low CO2 savings benefit.

This is an unsocial evolution for the upcoming generations. For line-fed use IE3 shall remain as the economic and ecologic optimum

# Ecodesign Process STANDSTILL



# Design Products

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- ❑ Electric Motors or Variable Speed Drives are complex products to design
- ❑ The balance between technical, economic and environmental feasibility is addressed in the product design, with the ultimate aim of producing a functional and safe product
- ❑ To design products that are complex as well as sustainable requires scope for innovation
- ❑ For example for all considerations regarding potential expansion of Ecodesign requirements, CEMEP calls for consistent attention of the relevance and avoidance of double regulation. Components like a motor or a VSD are in fact used in many other products
- ❑ **CEMEP therefore calls the European policy makers to apply the product policies paying attention without causing restrictions for this trend to innovation**

# Market surveillance in Europe

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- ❑ Market Surveillance is one of the key points for the right implementation of all the measures that touches the competitiveness of an industrial sector
- ❑ For Cemep sectors market surveillance is mainly related to the Ecodesign Lot 30 Regulation
- ❑ Market surveillance is the responsibility of the EU Member States
- ❑ **At present, market surveillance performs very few checks for cost reasons**
- ❑ The member states shall designate the authorities responsible for market surveillance and specify the necessary tasks, powers and organizational arrangements. The market surveillance itself checks the identification and mandatory information on the product: the Declaration of Conformity and technical documents and device characteristics (random samples), particularly the efficiency that is measured in a certified laboratory.
- ❑ **CEMEP asks the EU and the Member States to fulfill their duty and take care of a fair competition in Europe. There is no need for further regulation, product database or additional labels. First, we have to follow the existing system that the authorities are responsible for market surveillance**

# European demand for the CEMEP motor market

Power Range 0.75 < 7.5 kW	IE2	IE3	IE4
<b>2013</b>	<b>96,14%</b>	<b>3,82%</b>	<b>0,04%</b>
<b>2014</b>	<b>95,09%</b>	<b>4,78%</b>	<b>0,13%</b>
1 <sup>st</sup> half 2015	89,74%	10,09%	0,17%
2 <sup>nd</sup> half 2015	79,04%	20,74%	0,22%
<b>2015</b>	<b>84,45%</b>	<b>15,36%</b>	<b>0,19%</b>

Power Range 7.5 < 375 kW	IE2	IE3	IE4
<b>2013</b>	<b>93,32%</b>	<b>6,62%</b>	<b>0,06%</b>
<b>2014</b>	<b>93,76%</b>	<b>6,16%</b>	<b>0,08%</b>
1 <sup>st</sup> half 2015	67,05%	32,72%	0,23%
2 <sup>nd</sup> half 2015	59,14%	40,56%	0,30%
<b>2015</b>	<b>63,20%</b>	<b>36,54%</b>	<b>0,26%</b>

# European market demand of LV Motors in the range of the Efficiency Classes IE2 - IE4

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## Comments:

- The basis are about 3.0 million motors sold p.a. in Europe - many of them are embedded in machinery, which may be exported outside of Europe.
- The motor manufactures in CEMEP have already invested in new and challenging technologies. However, the European market demand seems to be ok for IE3 but low for IE4.
- Developing the industrial market acceptance needs a longer process (~ 2 to 3 years) than just short regulative timing slots (2011, 2015, 2017). The economic situation of the machine builders as well as the commitment for system improvement are decisive for the evolvement of the shares of IE2, IE3 and IE4 motors

## Conclusion:

- The efficiency of applied motors which are not in the scope of the Ecodesign regulation no 640/200, should be as high as appropriate. Therefore, deeper understanding about applicative life cycle costs and system efficiency is necessary.
- Persuasive actions are desired in order to support an increasing understanding of the market mechanism, which may result in an appropriate understanding for the right efficiency classes on the European market.

# Summary and Future Expectations

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CEMEP to protect the European social responsibility for 130.000 employees in the motors and drives manufacturing industries !

CEMEP to strengthen the national market surveillance but balanced to protecting the industrial expertise and economics !

CEMEP to stop the “battle of materials” and to showing “eco-design” alternatives (e.g. Extended Product Approach), for improving industrial efficiency !

CEMEP to go through “better regulation” principle with a coordinated and homogeneous approach. Otherwise the result is to confuse the market and hinder the Industry

CEMEP to defend the industrial trend for innovation avoiding European policies potential cause of restrictions on the freedom of the designers

CEMEP to collaborate with non-European associations but rejecting new global labelling programs !

**Thank you!**

**Jürgen Sander**

President

European Committee

of Manufacturers of Electrical

Machines and Power Electronics

(CEMEP )