



**General overview of
Electra conclusions
from an industry
perspective**

**ELECTRA WORKSHOP
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1



20 recommendations

- Energy efficiency and CO₂ reductions as drivers of innovation: the technology is there but how do we get it into the market? We must generate more growth from innovation and investment in key European electrical engineering markets
- Opening the internal and export markets of the European electrical engineering industry: challenges in the area of regulation, trade barriers and standards

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2



The report

➤ Electra report covers 3 main areas:

1. Energy efficiency -> now
2. Lead markets / high-tech infrastructures - > longer term
3. Regulation + export markets -> now and for the longer term

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3



1. Energy efficiency

Energy efficiency
& CO₂
reductions as
drivers of
innovation



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1. Energy efficiency

- Political commitment in EU:
 - Minus 20% CO₂ in 2020
 - 20% more renewables in 2020
 - 20% more energy efficiency in 2020
- But... without the help of our industries none of these targets will be met.
- **Energy efficiency will be the key!**

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5



1. Energy efficiency

Estimates for full energy saving potential in end-use sectors

Sector	Energy consumption (Mtoe 2005)	Energy consumption (Mtoe) 2020 (Business as usual)	Energy saving potential 2020 (Mtoe)	Full energy saving potential 2020 (%)
Households (residential)	280	338	91	27%
Commercial buildings (tertiary)	157	211	63	30%
Transport	332	405	105	26%
Manufacturing industry	297	382	95	25%

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1. Energy efficiency

The main challenges

- Upgrading the installed base: 80% of the buildings existing in 2020 are already built.
- People are reluctant to pay up front for long term efficiency gains
- Retrofitting buildings is not 'politically sexy' (unlike wind mills or photovoltaic panels)

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7



1. Energy efficiency

What should Brussels do?

- Foster R&D, early demonstration and deployment
- Set overall energy efficiency targets
- Foster adaption of the power grid
- Develop benchmarks and good practice sharing
- Develop incentive schemes making investment attractive

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8



1. Energy efficiency

What should Member States do?

- Launch massive information and education campaigns
- Ensure leadership of public authorities
- Launch fiscal and financial incentives to generate change in the market.

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9



1. Energy efficiency

What should industry do?

- Develop technical regulation for homes and buildings
- Set appropriate minimum energy efficiency requirements
- Work at standardising energy efficiency measurement

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10



**The solutions are here:
Let's show them!**



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11



2. Lead markets

Generating more
growth from
innovation and
investment in key
electrical
engineering
markets



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12

2. Lead markets

The core ideas

- Future technology
- Made in Europe
- Applied in Europe first and
- Showcased to the rest of the world

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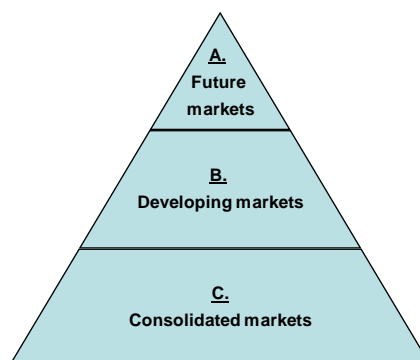
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13

2. Lead markets

Potential Lead Customer Markets for the Electrical Engineering and Electronics Industry:

- Trans-European networks/ transport infrastructures/ telematics
- eHealth infrastructures
- Energy generation, transmission and distribution infrastructures
- Civil protection / Homeland security and defence
- Buildings / Intelligent Living / Ambient assisted living
- Automation / Industrial IT
- Digital radio & TV / HDTV



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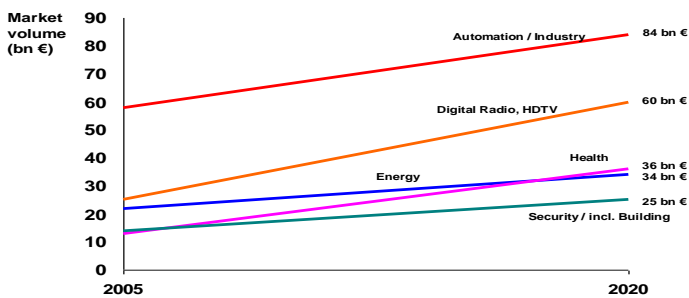
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14



2. Lead markets

- Growth Potential: Estimates of growth potentials from 2005 until 2020



Source: ZVEI – German Electrical and Electronic Manufacturers' Association

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15



2. Lead markets

Drivers

- Legislation
- Economic and fiscal incentives
- Investment conditions, access to capital
- EU Single Market, harmonization
- Standardization
- Public acceptance

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16



3. Standardization

Standardization -
an important tool
that contributes to
the sustainable
use of energy



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17



3. Standardization

The core ideas

- Promotes best practices
- Supports innovation
- Facilitates deployment of new technologies
- Provides authorities and companies with the tools to design sound policies, optimize installations and systems and improve energy efficiency



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18



4. Standardization

The benefits of standardization:

Help companies adopt sustainable practices in order to:

- gain competitive edge
- increase their market share

In the current context of economic crisis, support the creation of new markets and new employment opportunities by fostering investment in:

- energy efficiency, new clean technologies and innovative products and services



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19



3. Standardization

Mission

- Prepare *voluntary* standards that help develop the European Single Market

European standards in co-regulation

- These “Harmonised Standards”, when listed in the Official Journal, give “presumption of conformity” to the essential requirements of the applicable Directive.



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20



3. Standardization

Ongoing activities related to energy efficiency (1/3):

- Standards containing measurement methods that support the "Labelling Directive" (92/75/EEC) and its implementing Directives



- Standby and off modes power consumption measurement for energy using products (EuP – 2005/32/EC) – Commission mandate M/439

Energy		Washing machine
Manufacturer Model		
More efficient		B
A		
B		
C		
D		
E		
F		
Less efficient		
G		
Energy consumption kWh/cycle		1.75
Washing performance		A
Spin-drying performance		B
Capacity (control kg)		4.0
Water consumption		4.0
Noise		74
Washing (dB(A) re 1 µW)		74
Spinning		74

- Harmonized standards in support of the Measuring Instruments Directive (2004/22/EC)



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21



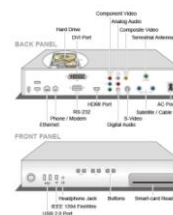
3. Standardization

Ongoing activities related to energy efficiency (2/3):

- Measurement procedure for establishing the power consumption of simple set-top boxes in 'active' and 'standby' modes – Commission mandate M/451 – EuP context



- Measurement procedure for establishing the no-load electric power consumption and the average active efficiency of external power supplies – Commission mandate M/450 – EuP context



- Several other mandates for a measurement procedure of power consumption of electrical equipment under preparation at Commission level in EuP context (motors, variable speed drives, circulators,...)



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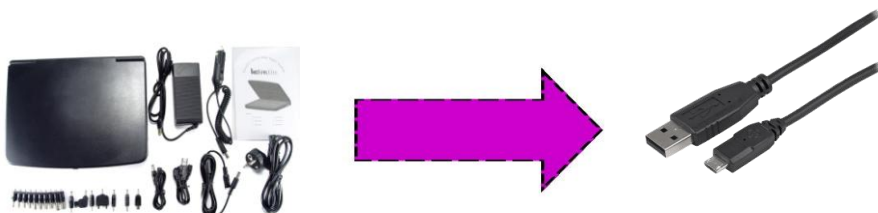
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3. Standardization

Ongoing activities related to energy efficiency (3/3):

Commission mandate on Common Charging Capability for Mobile Phones (M/455)



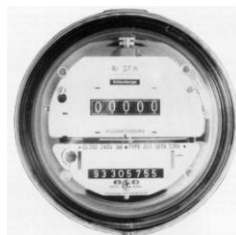
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23



3. Standardization

➤ Data exchange for meter reading, tariff and load control (EN 62056 series – CLC/TC 13 “Electricity meters”)



➤ PLC standards (EN 61334 – CLC/SR 57)

➤ HBES Open Communication System (EN 50090 - CLC/TC 205) – series being taken over by ISO/IEC JTC 1



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3. Standardization

- Green Data Centres – CLC/BTWG 132-3 , preparing work programme



- Bus for household appliances
CLC/TC 59X



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25



3. Standardization

CEN/CENELEC Sector Forum on Energy Management



Platform aiming at facilitating the exchange of information between the different stakeholders, coordinating and identifying the standardization needs in the field of energy management.

To develop a common general strategy for the improvement of energy efficiency standardization



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26

3. Standardization

Current Challenges – Smart Metering

- Interest from ESMIG (www.esmig.eu), an industry consortium (CENELEC Co-operating Partner)
- Complemented by Commission mandate M/441
- Interoperability of utility meters (electricity, gas, water, heat)
- Legal framework = Measuring Instruments Directive (2004/22/EC)
- Phase one of M/441 asks for (a) EN comprising software and hardware open architecture for utility meters and (b) a list of potential solutions for additional functionalities
- Joint ESO effort with participation of all stakeholders (European Commission, energy regulators, industry associations and federations, consumers,...)



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3. Standardization

- ESO **Coordination Body** – with major stakeholder participation – “Smart Metering Coordination Group” is developing the skeleton of the required activities and will coordinate thereafter all activities
- Principle = use as far as possible existing ESO structures (technical bodies) and deliverables
- A selection of **technical bodies** involved: water meters, prefabricated district heating pipe systems, heat meters, gas meters, communication systems for meters and remote reading of meters, hydrometry, system aspects of electrical energy supply, electricity meters and their communication aspects, bus for household appliances, Home and Building Electronic Systems, electrotechnical aspects of telecommunication equipment
- A selection of **Co-operating Partners** and **Liaison Partners** involved: ESMIG, OIML, ERGEG/CEER, EURELECTRIC, KNX Association, AQUA, FACOGAZ, MARCOGAZ.
- Special attention to take care of **security** and **privacy**

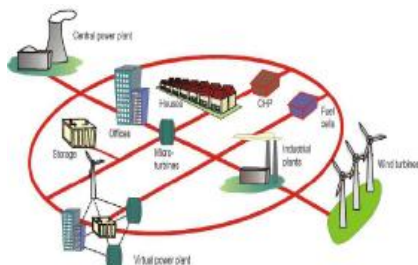
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3. Standardization

Future Challenge – Smart Grid

- Currently scope of work under examination at IEC level



- European standards expected through mechanism of IEC/CENELEC Co-operation Agreement (Dresden Agreement)



THANK YOU!

Looking for more information?

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