

4^E

Implementing Agreement
Energy Efficient End-Use
Equipment

4E Mapping & Benchmarking (M&B) Latest developments and results

BMVIT Networking event, Vienna, October 29, 2015

By: Dr. Adriana Díaz – ECODESIGN company GmbH

www.iea-4e.org

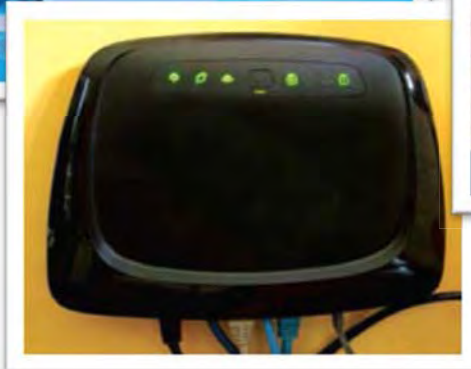
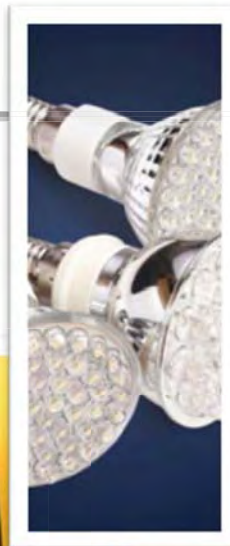
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Presentation

1. 4E Short Introduction
2. M&B introduction and selected results
3. 4E Communication & Outreach
4. Conclusions

End – Use products

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The need for International cooperation

Many policy makers are seeking answers to **similar questions:**

- How do appliances compare in different countries?
- What have been the most effective policies?
- What targets could be used?

Emerging New challenges regarding appliances:

- Proliferation of types of electrical equipment
- Growing complexity
- Increased international trade

Opportunities in international cooperation:

- Clear goals: policies better predictable (for industry)
- Shared costs make policies cheaper and more effective to develop and implement.

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4E Objectives

To promote adoption of government policies to encourage the use of energy efficient end-use equipment, by:

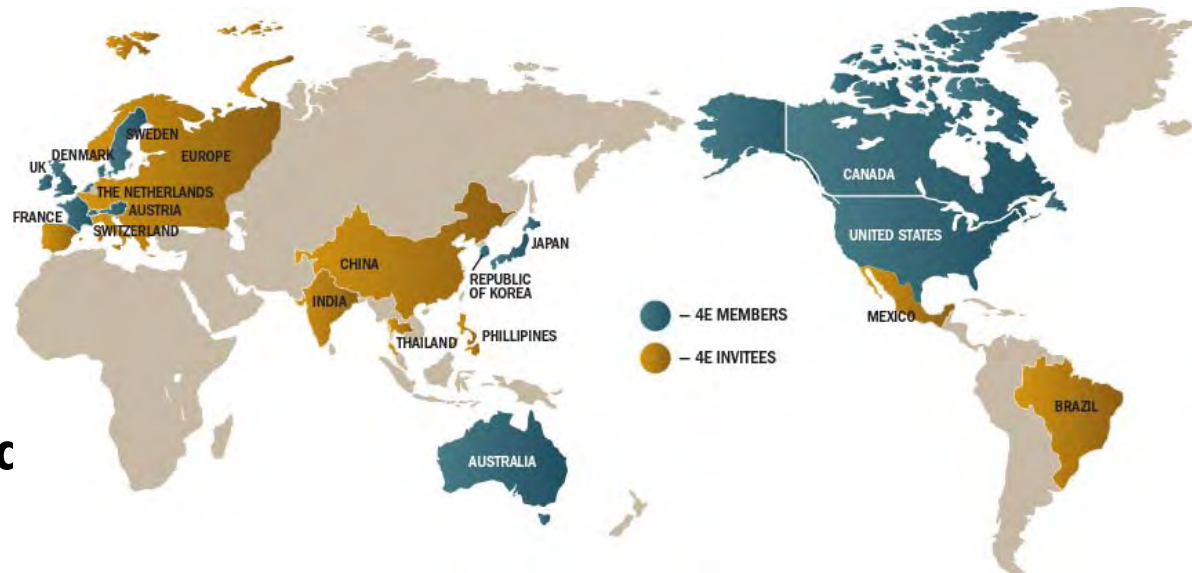
- Sharing expertise and developing greater understanding of end-use equipment and policies.
- Facilitating coordination of international approaches in the area of efficient end-use equipment.

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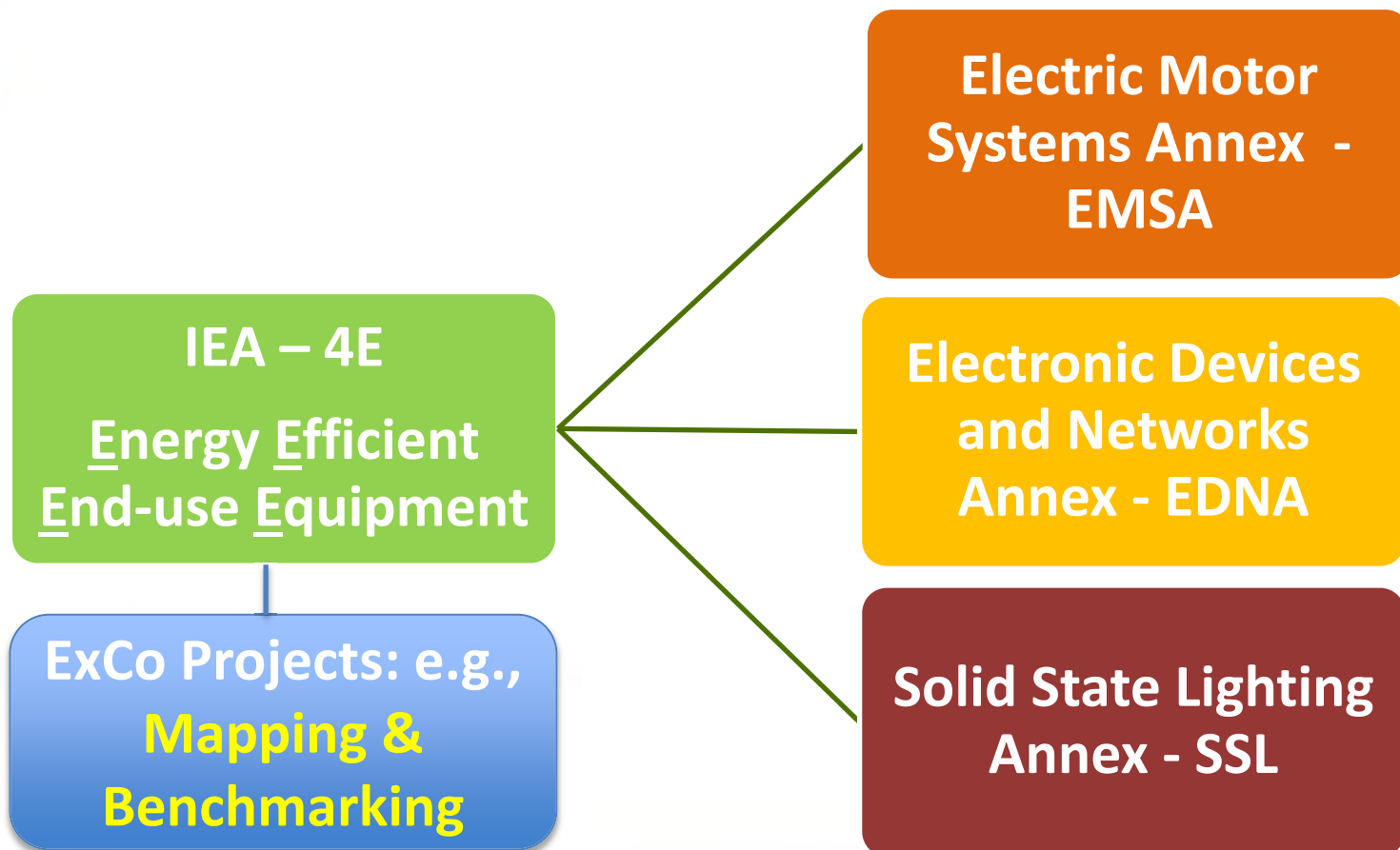
Participating Countries

MEMBERS

- Australia
- Austria
- Canada
- Denmark
- France
- Japan
- Korea
- The Netherlands
- Switzerland
- Sweden
- UK
- USA



Structure of 4E



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Mapping & Benchmarking

- Originally an Annex, since 2014 projects of 4E ExCo.
- Product data and information on policy implementation from 4E members enables **tracking and comparing** product performance in detail and in different markets.
- This reveals **what policy approaches work well, and how to design and implement better energy efficiency policies.**
- 4E is a source of **comprehensive information**, supporting governments in making better informed decisions.

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Mapping & Benchmarking

Selected product, completed in 2013 to 2015:

- Cold appliances (Refrigerators/freezers)
- Dishwashers
- Distribution transformers
- Domestic lights

Ongoing:

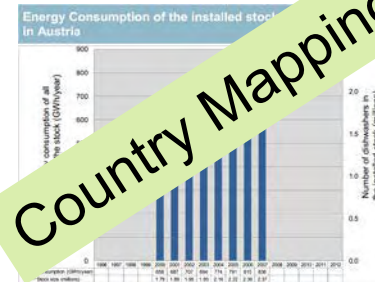
- Motors
- Water heaters

Results are available in the M&B

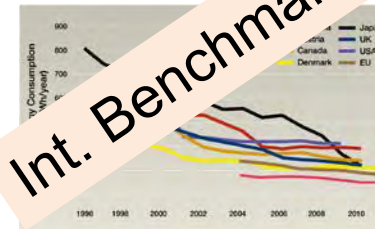
end report (2015, German):

http://www.nachhaltigwirtschaften.at/iea_pdf/endbericht_201532_iea_4e_mb_2013_2014.pdf

Country Mappings



Int. Benchmarking



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M&B Results available online

- Home
- M&B overview
- M&B Results**
- News
- Benchmarking Reports
- Country Mappings
- Members' Area ▶
- Webinars ▶
- 4E links and resources

4E Websites

- IEA 4E Main Site
- Electric Motor Systems
- Electronic Devices & Networks
- Solid State Lighting
- Standby Power



You are here > Home > **M&B Results**

Benchmark & Policy Reports

Country Reports

Full Documentation Library

The final benchmarking reports and summary policy briefs for each of the products analysed to date are shown below. A full set of all reports for each product can be viewed by clicking on the product name:

Air conditioners

Benchmarking Report



Summary Policy Brief



See all product documents

Dishwashers

Benchmarking Report



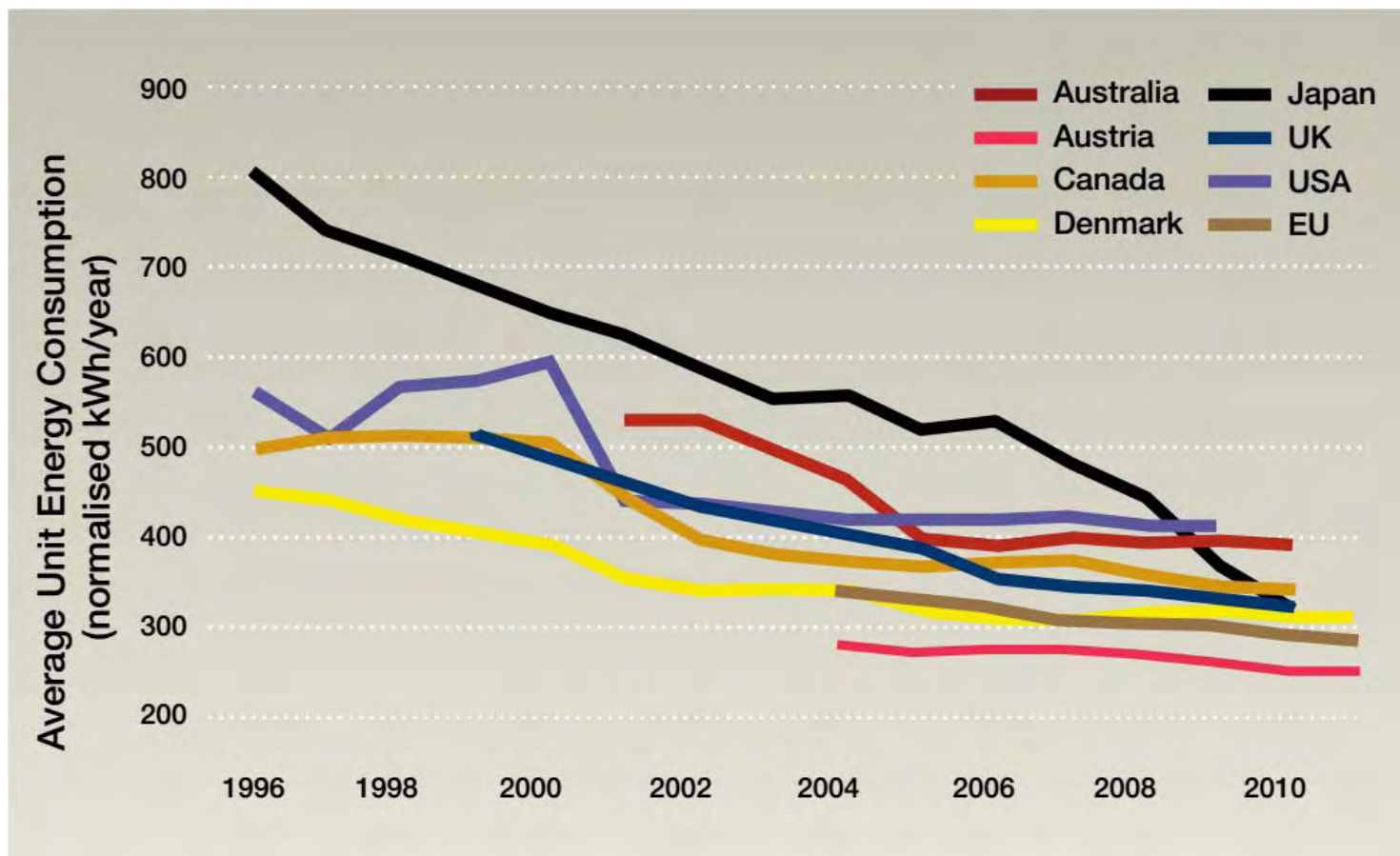
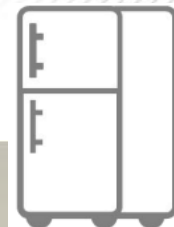
Summary Policy Brief



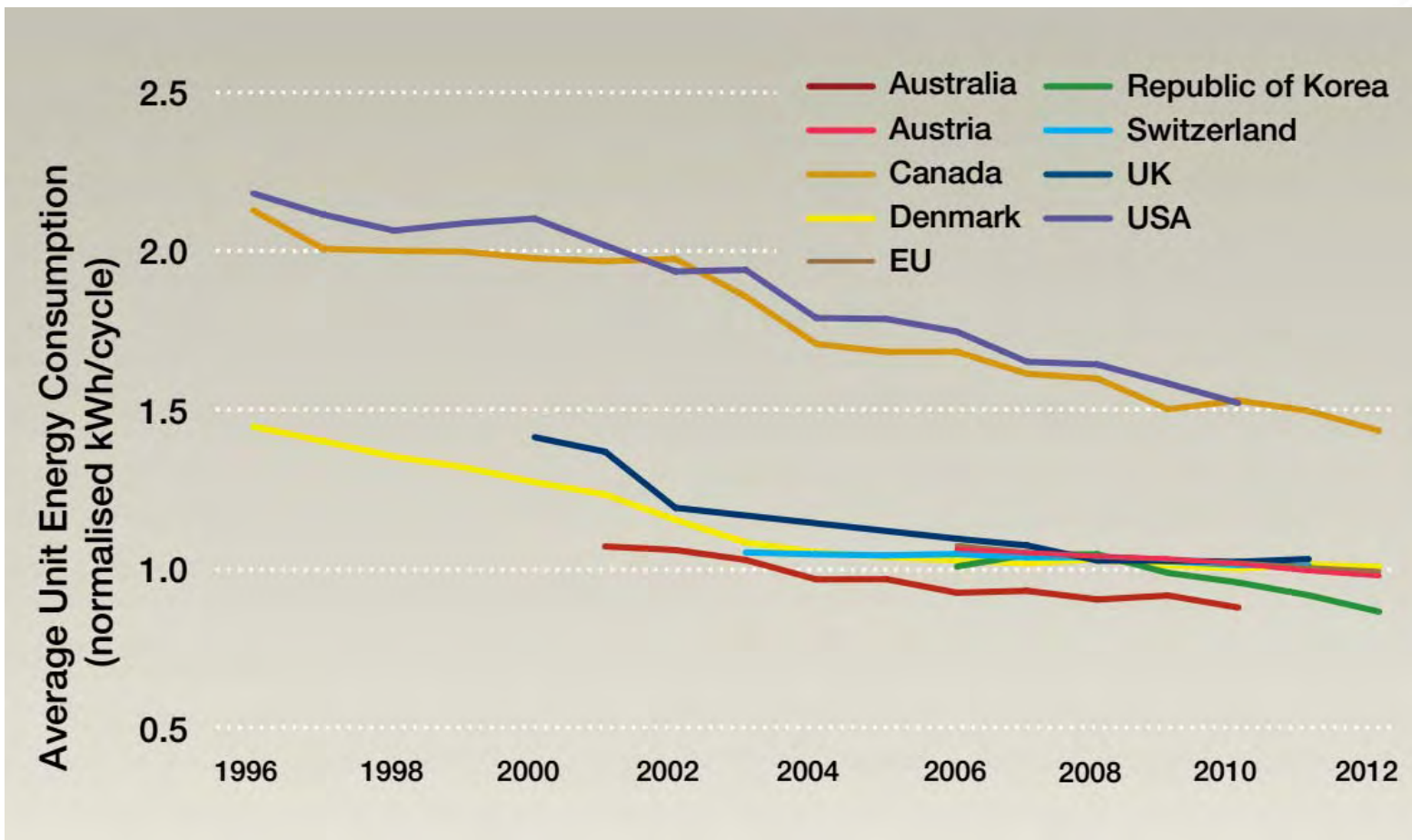
See all product documents

<http://mappingandbenchmarking.iea-4e.org>

Refrigerator/Freezers

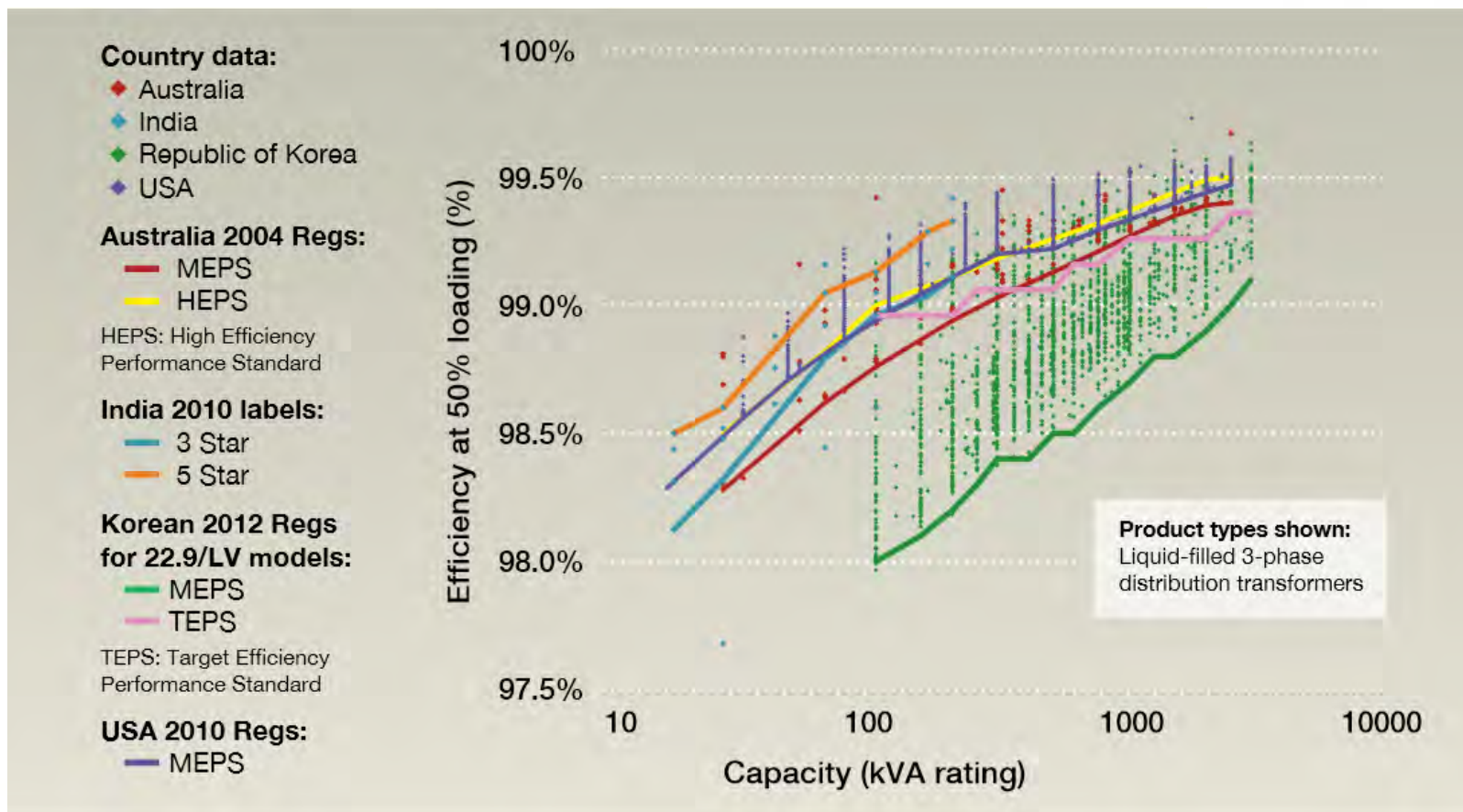
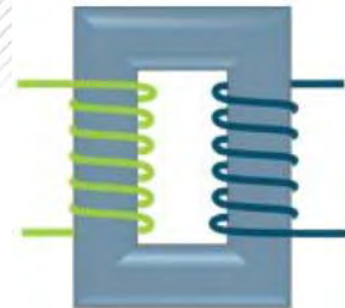


Dishwashers

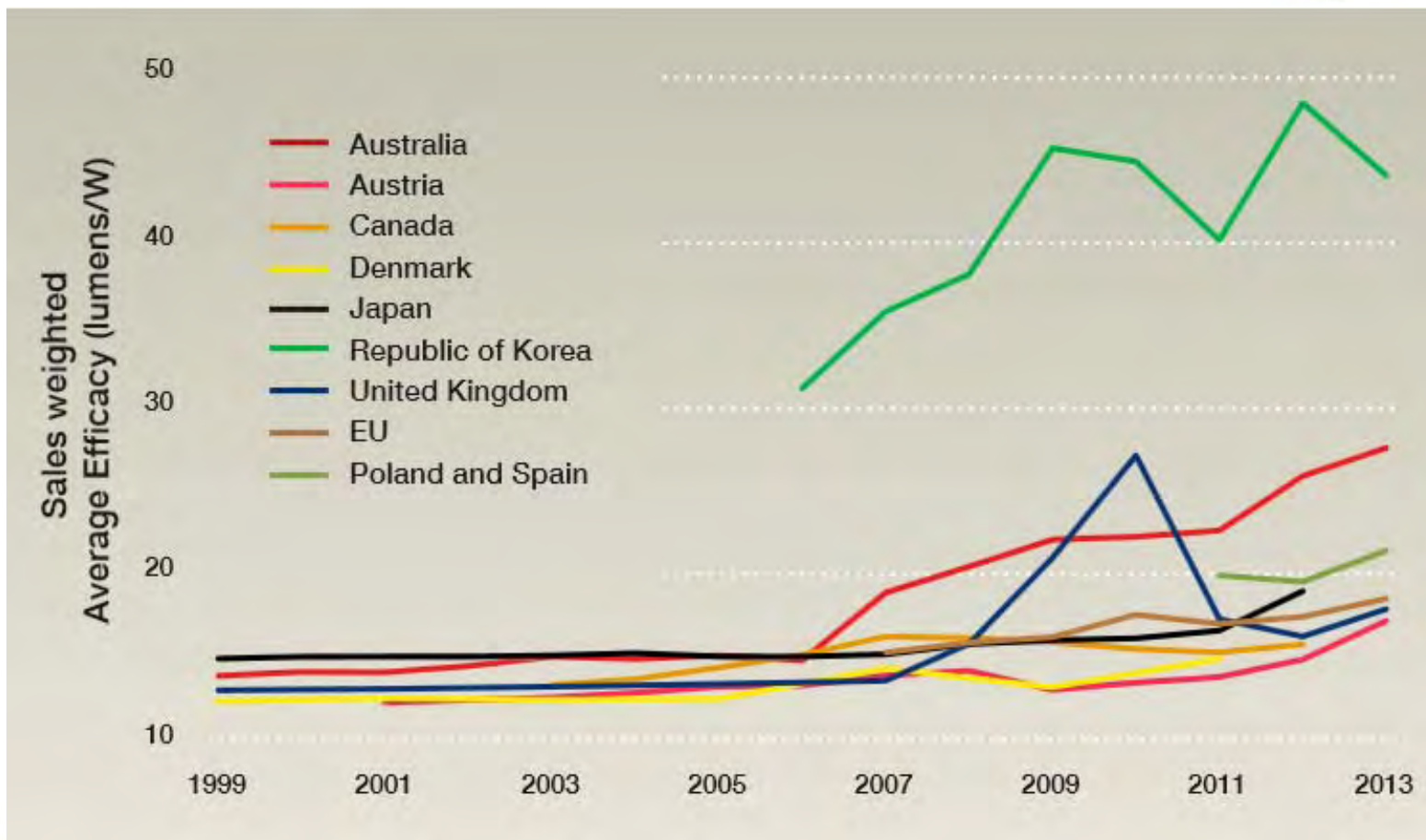


Distribution transformers

Liquid-filled, 3-phase transformers and MEPS levels

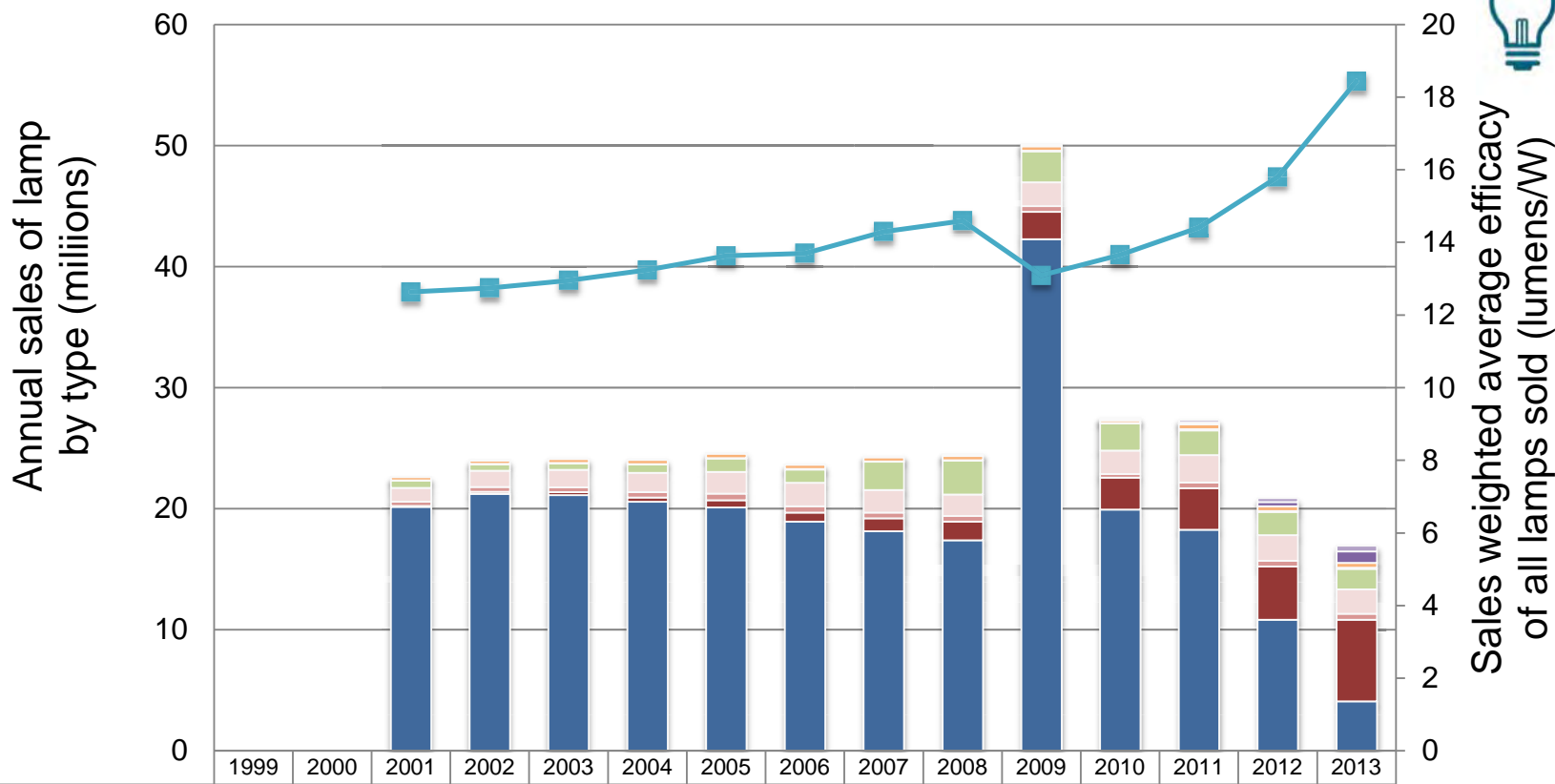


Domestic lights



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Domestic lights – Austrian Mapping



- Dedicated LED lamps
- Retrofit LED Lamps
- MV* Linear Fluorescent Tubes (T12)
- MV* Linear Fluorescent Tubes (T8)
- MV* Linear Fluorescent Tubes (T5)
- MV* Self-Ballasted CFLs
- MV* Pin Based CFLs
- Low Voltage (12V) Halogens
- MV* Halogens (double ended)
- MV* Halogens (single ended)
- MV* Incandescents
- Ave. product efficacy (lumens/W)



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4E Communication & Outreach

- Website
- Publications, Workshops, Events
- Newsletter “Bright Spark”
- Policy Briefs
- 4E Collaborations

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Website: iea-4e.org

IEA 4E

MAPPING & BENCHMARKING

ELECTRIC MOTOR SYSTEMS

SOLID STATE LIGHTING

STANDBY POWER

ELECTRONIC DEVICES & NETWORKS

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Energy Efficient End-use Equipment
International Energy Agency

- Bright Spark Newsletter
- RSS Feed
- Twitter
- 4E Member Area Login



ABOUT 4E

NEWS

4E PROJECTS

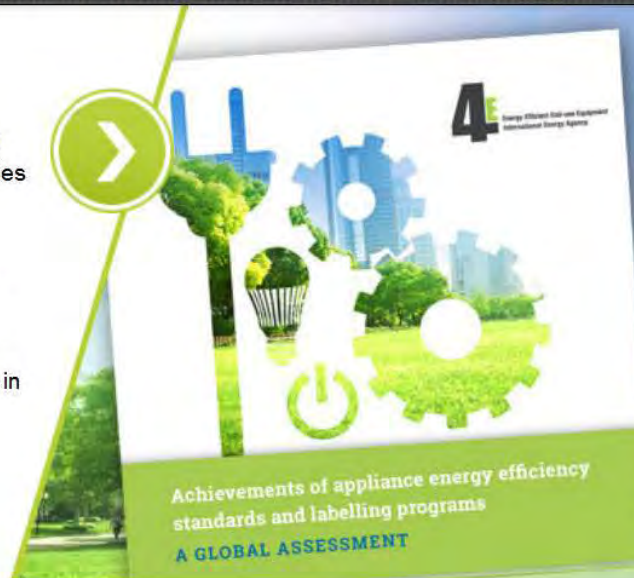
4E EVENTS & MEETINGS

PUBLICATIONS

ENERGY EFFICIENCY INITIATIVES

NEW IEA 4E REPORT

Energy efficiency standards and labelling programs operate in more than 80 countries around the world, and provide the cornerstone of most national energy efficiency and climate change mitigation programs. Read what impact they have made in saving energy, greenhouse gas emissions and on the price of appliances in a new 4E report.

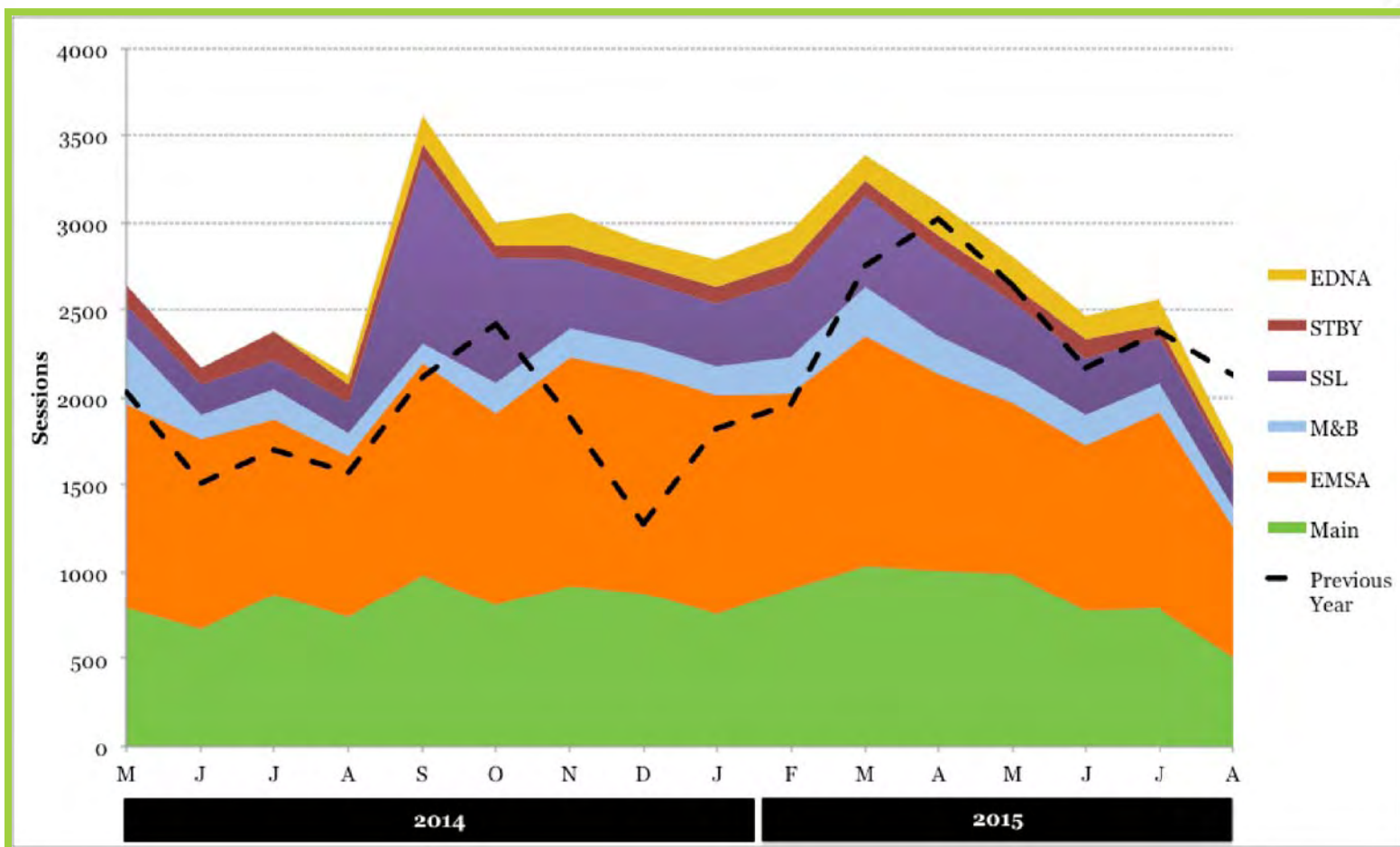


- ▶ THE SSL ANNEX IN TWO MINUTES!
- ▶ POLICY BRIEFS SHOWING RESULTS OF EMSA WORK
- ▶ MOTOR SYSTEMS WEBINARS: SAVE THE DATE!



ELECTRONIC NEWSLETTER
ABOUT ENERGY EFFICIENCY,
EVENTS AND CURRENT TOPICS

Website traffic - Past 12 months



Website links - member countries

Country	Status of Links to 4E
Australia	Active links from Energy Rating site
Austria	Extensive active links BMVIT
Canada	Active - NRCAN
Denmark	Active - DEA
Korea	Active - new Korea Energy Agency website
Sweden	Active links - SEA
Switzerland	Website BFE redesign underway

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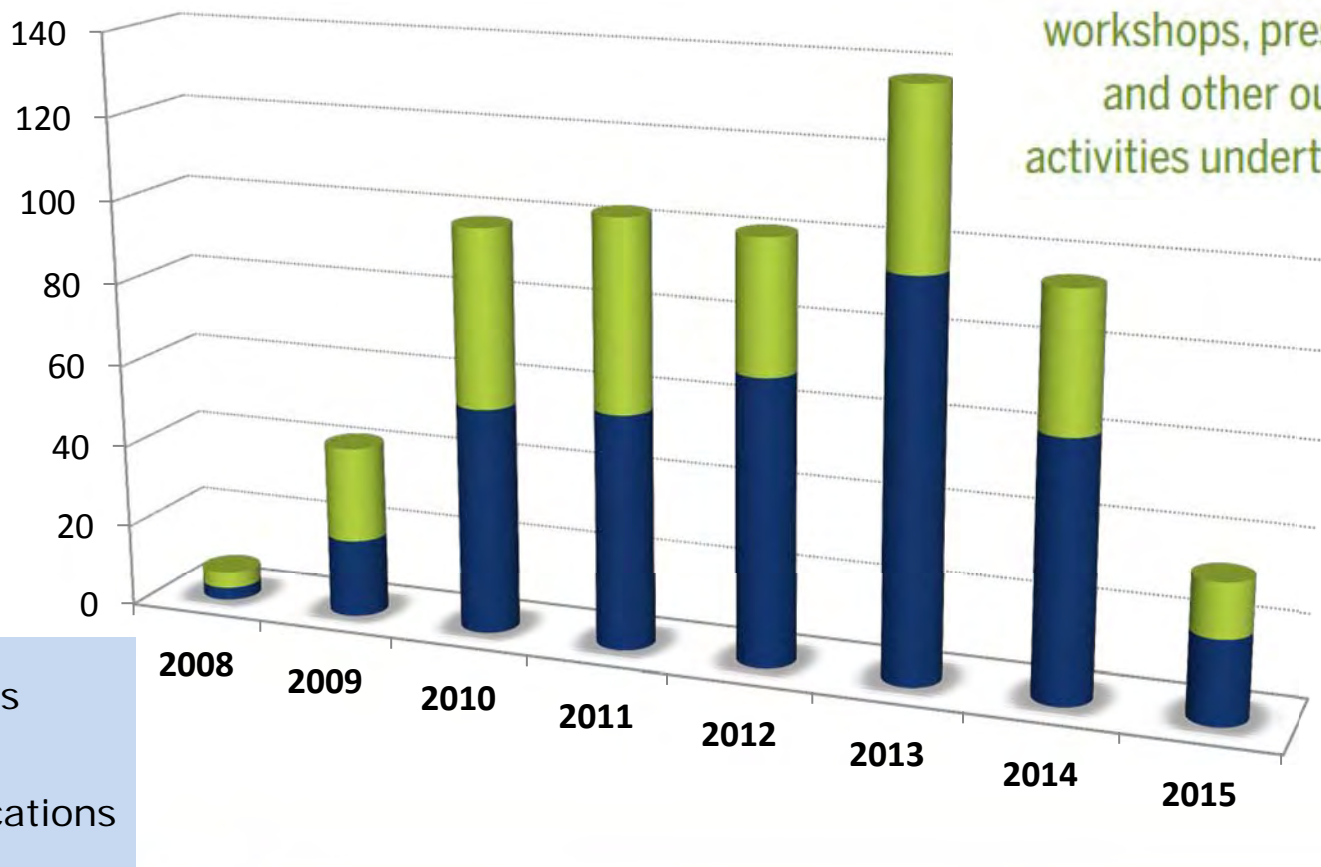
Date		LATEST 4E Publication, Workshop, Event
May 15	SSL	10 th Experts meeting, Sydney, Australia
	4E	G20 Networked Devices Report to ESWG (Meeting 2)
June 15	SSL	Workshop: ECEEE Summer study: <ul style="list-style-type: none"> • 100 Labs in World's largest comparison of LED Test Labs • The SEAD global efficiency medal
	4E	G20 Networked Devices Workshop (Paris, France)
July 15	EMSA	Motor Summit - Workshop (Beijing, China)
Aug 15	EMSA	ACEEE Summer Study - Energy Efficiency in Industry Workshop (Buffalo, USA)
	4E	G20 Networked Devices Technical Report to ESWG & Video
	4E	International Benchmarking Report: Packaged Liquid Chillers
Sept 15	4E	Bright Spark Ed 9
	EMSA	Energy Efficiency in Motor Driven Systems - EEMODS Workshop (Helsinki, Finland)

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Date	COMING 4E Publications, Workshop, Event	
Oct 15	4E	Report: Motors & VFD Roadmap
	EMSA	Six Webinars – leonardo.org
Nov/Dec 15	4E	Bright Spark Ed 10
March 16	4E	M&B Mapping Reports on Water Heaters
	4E	Bright Spark Ed 11
May 16	4E	M&B International Benchmark Report: Water Heaters
June 16	4E	M&B Policy Brief and Webinar: Water Heaters
	4E	Bright Spark Ed 12

Tracking communications

“ Between 2008 and the end of 2014, there have been a total of 580 publications, workshops, presentations and other outreach activities undertaken by 4E. ”

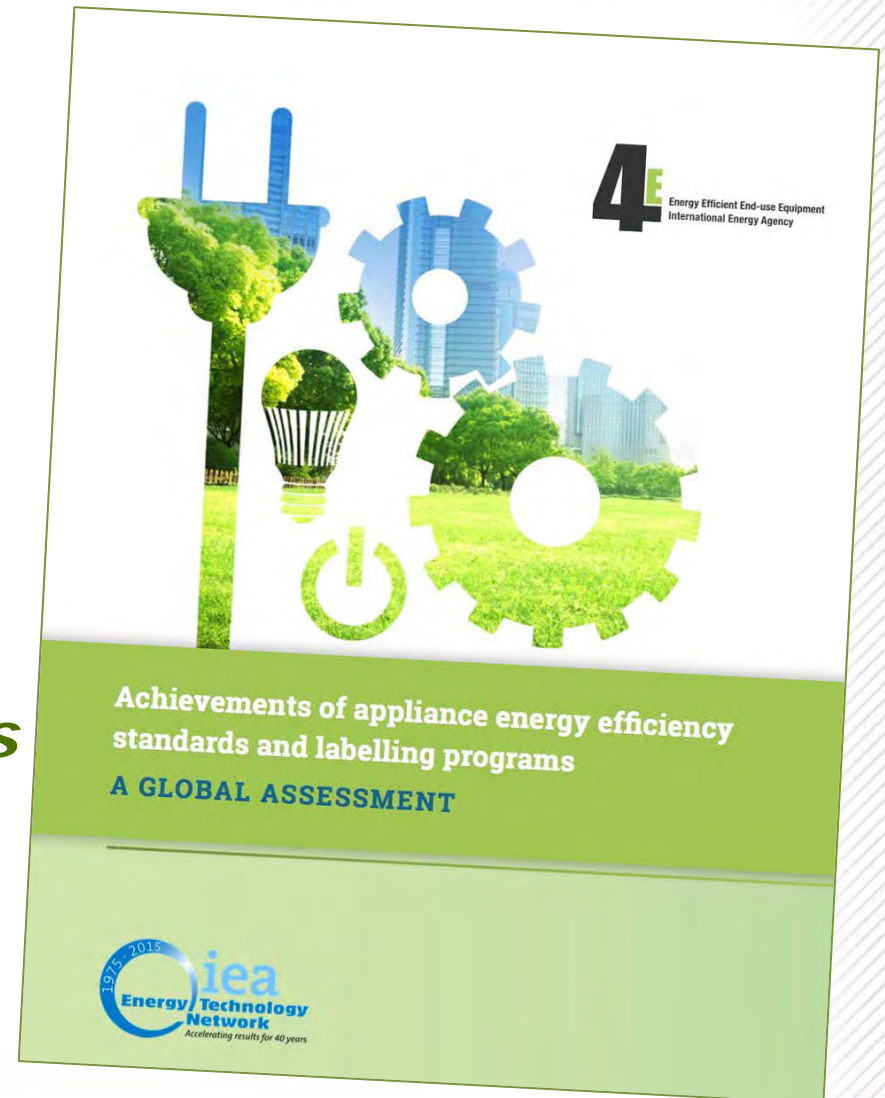


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Latest 4E
publication:

*Achievements of
Appliance Energy
Efficiency
Standards and
Labelling programs*

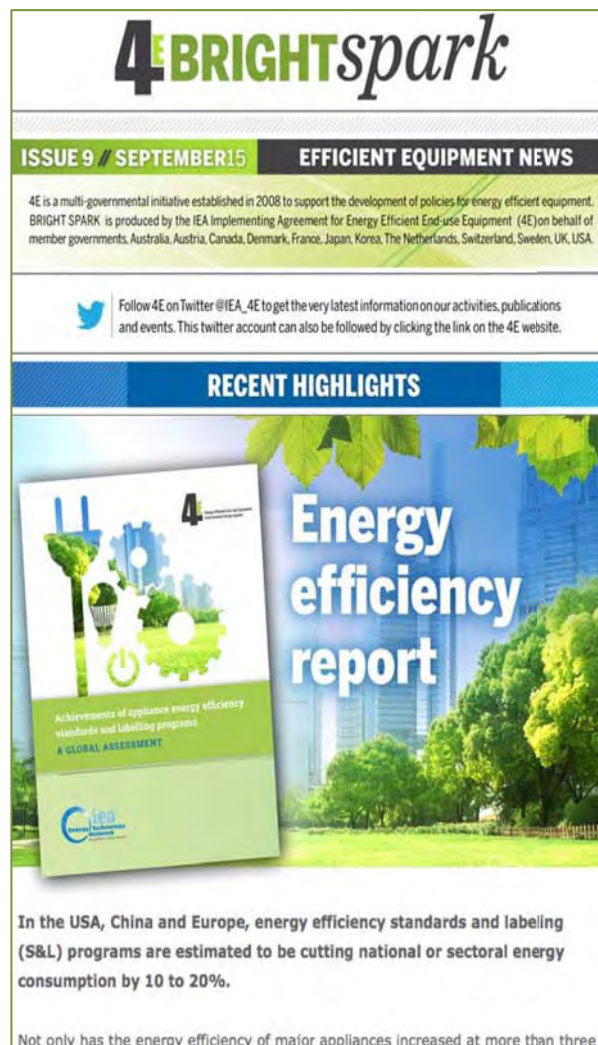
<http://www.iea-4e.org/publications>



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Energy Efficient End-Use Equipment



Latest 4E Newsletter: *Bright Spark,* *September 2015.*



4E Policy Briefs

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4E Energy Efficient End-Use Equipment International Energy Agency

Mapping & Benchmarking of the Impact of “Phase-out” on the Lighting Market (updated)

MB15



The IEA's 4E Mapping and Benchmarking activities provide policy makers with evidence based comparisons of the performance of products sold in various national markets. This allows benchmarking of the success of national policies in managing product energy consumption and efficiency and enables identification of opportunities to further encourage the uptake of energy efficient products.

This briefing updates the outcomes of the international comparison on the impact of policies to phase-out inefficient lighting products from national lighting markets. The analysis includes information drawn from Australia, Austria, Canada, Denmark, the EU, Japan, the Republic of Korea, the UK and the USA.

Observations for Policy Makers

- Although regulatory actions to phase-out the least efficient lamps from individual markets appear very similar, **variations in the detail of each regulation have the potential to lead to different outcomes.** Harmonisation of requirements would yield higher energy savings, better compliance, improved enforcement opportunities and cost reductions for consumers.
- Minimum Energy Performance Standards (MEPS)** to phase-out less efficient lighting products **have resulted in substantial falls in the sales of traditional incandescent lamps.** However, in most markets, a consumer migration to halogen lamps means increases in overall efficiency are often substantially less than anticipated.
- Failure to maintain the current momentum of market change to transition away from halogen lamps to the most efficient lighting options represents a significant missed energy saving opportunity and risks **halogen products becoming the default choice for consumers** making their later removal from the market more challenging.
- Despite heavy promotion and rapidly increasing sales, **LED lamps typically accounted for only 5% of all 2013 lamp sales** in any market researched, and no more than 15% in markets where their penetration is most advanced.
- Non-regulatory interventions in lighting markets can have significant impact.** However, in general these impacts are not sustained, and purchasing patterns rapidly revert to their original state when the interventions are ended.
- Lighting products with extended functionality (e.g. internet connectivity, changeable colour, etc) are beginning to enter all markets.** The energy impacts of these products need to be monitored to inform the development of appropriate policy frameworks. This may be best achieved through international collaboration.

More Information

All publicly available mapping and benchmarking outputs are available at <http://mappingandbenchmarking.iea-4e.org>.
For further information email: webmaster4e@gmail.com

Published March 2015

- High level summaries of 4E reports
- Recommendations for policy makers
- Available in English, French, German, Japanese, Korean
- **20 are published in German**
- <http://www.iea-4e.org/publications>

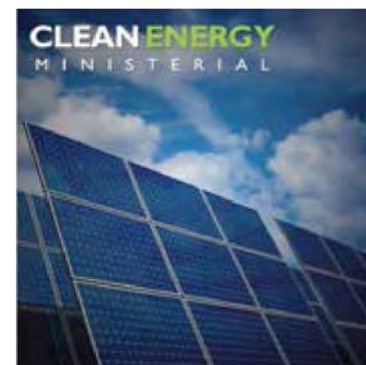
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Dissemination of information through collaboration



4E is now one of the more established groups working to stimulate greater energy efficiency through international collaboration between governments.



Implementing Agreement
Energy Efficient End-Use Equipment

Engagement with International Standardization Organizations

Energy efficiency policies (MEPS, labels, awards and financial incentives) rely on testing methods for products.

4E encourages the use of test procedures (and efficiency metrics) which are:

- Repeatable
- Reproducible
- Representative
- Affordable
- Viable

4E together with the Super-efficient Equipment and Appliance Deployment (SEAD) work on developing more effective mechanisms for engaging with the IEC and ISO.

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More communication efforts

- To develop closer links with the IEA Secretariat to help our outreach with 4E non-member countries.
- To strengthen communication with the IEA End-Use Working Party.
- To develop processes for systematically identifying and communicating with key organizations.
- To make better use of the linkages between ExCo member countries and relevant groups and organizations.
- To continue to translate key 4E documents into languages other than English.

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Conclusions

- 4E working plan was extended to 2019 to assist countries meet their aspirations on energy efficiency.
- A range of ambitious 4E projects were launched to tackle key energy efficiency issues in the evolving world of end-use equipment.
- 4E members are committed to the further development of 4E, of its projects and Annexes.

“ Some people call energy efficiency low-hanging fruit. I would even say energy efficiency is fruit lying on the ground. **We only need to bend over and pick it up.** ”

*Harry Verhaar, head of global and public affairs
at Philips Lighting*

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Thank you

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