Hans-Paul Siderius
Chairperson 4E

London, 14 September 2010

Efficient End-use Electrical Equipment
4E at a glance

• 4E provides an international forum for governments and other stakeholders to:
  – Share expertise and develop understanding of electrical end-use equipment and policies
  – Facilitate co-ordination of international approaches in the area of efficient electrical end-use equipment

• 4E seeks to meet the challenges for policy makers to maximize energy efficiency on all types of non-transport electrical equipment.

• Launched in March 2008, 4E now has 11 member countries actively participating in collaborative projects.
### Participating countries

<table>
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<tr>
<th>Members:</th>
<th>Considering membership:</th>
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<tr>
<td>Australia (vice-chair)</td>
<td>China</td>
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<td>Austria</td>
<td>Japan</td>
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<td>Canada</td>
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<td>The Netherlands (chair)</td>
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<td>Switzerland</td>
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**Efficient End-use Electrical Equipment**
Global electricity consumption set to double by 2030
Provides a major driver for greenhouse gas emissions and investment in new generation and T&D infrastructure
Residential electricity consumption

- Despite national efforts, residential electricity consumption is growing at nearly twice the rate estimated in Cool Appliances, 2003
- Driven by changes in consumption patterns in OECD – mainly electronics
- And growth in penetration rates in non-OECD countries
Energy efficiency – the largest resource

- Analysis suggests that energy efficiency has the greatest opportunity to cut CO2 emissions and one of the quickest.
- End-use appliances and equipment are the largest contributor.

Source: IEA ETP 2010
End-use efficiency – the cheapest, most available resource

- In equipment, large cost-effective opportunities are already available.
- But, the opportunities are widely dispersed and impeded by market barriers.
- Policies aimed at overcoming these barriers have proved highly successful.
Why international cooperation is the way forward

- 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 we use?

- New challenges regarding appliances:
  - Proliferation of types of electrical equipment
  - Growing complexity
  - Increased international trade

- Opportunities in international co-operation:
  - Clear goals and road maps: policies better predictable for industry,
  - Shared costs make policies cheaper to develop and implement (by countries and industry),
  - and more effective
Mapping & Benchmarking - compares and contrasts policies and outcomes with global best policy practice. This long-term endeavour will help identify future projects for 4E.

- **Annex Motor Systems**
  - Electric Motor Systems: reporting the means used to improve efficiency and encourages alignment on policies proven to be effective.

- **Annex Standby Power**
  - Standby Power: identifying new trends in standby power and the policies with potential to reverse increasing energy use.

- **Annex SSL**
  - Lighting: Definition and measurement methods for good LED lighting

**Structure of 4E**

4E ExCo

- Annex Mapping & Benchmarking
- Annex Motor Systems
- Annex Standby Power
- Annex SSL
Why benchmarking across countries is valuable

- Data collected and normalised
- Presented to show policy implications
- Least efficient – most efficient = 43% improvement
Motor Systems Annex

- Motor systems - responsible for 40% of global electricity demand.
- Strengthening alignment amongst national programmes through EEMODS conferences.
- Participation in International Electrotechnical Commission (IEC) process.
- Published "Guide for the selection and application of energy-efficient motors".
- Co-ordination and training of test laboratories to increase capacity.
Standby Annex

- 4 Tasks:
  - Data collection
  - Evaluation of policies
  - Horizontal policies
  - Network Standby

- Co-operation with other international projects on standby (APP, SELINA, Ecodesign Lot 26).

- Network standby scoping study summarizes developments and highlights technical and policy options to reduce network standby consumption.
SSL Annex

Goal: to provide governments with the tools to assess the performance of SSL:

• Definition of key performance characteristics.

• Suite of minimum performance levels.

• International specification for LED replacement lamp equivalency claims.

• Test methods for testing performance characteristics.

• Assess possibilities to coordinate international accreditation of test labs.
4E and MVE

- 4E provides a mechanism for
  - the co-operation between governments on policies,
  - sharing resources to tackle emerging issues and
  - investigating opportunities for closer policy alignment.

- Regarding MVE procedures:
  - Exchange best practices
  - Find interfaces between procedures
  - Align procedures

- Product level:
  - Experiences with product testing.
  - Share test results.
  - Brand reputation
More information on 4E

- 4E and Annex newsletters
- 4E website: [www.iea-4E.org](http://www.iea-4E.org)
- Operating agent: Mark Ellis (mark@energyellis.com)

Efficient End-use Electrical Equipment
I hope this conference will be the start of many (4E) MVE activities

Thank you for your attention