Standby Power Annex:

Summary of Activities and Outcomes

Final report

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Introduction

The IEA 4E Standby Power Annex was officially formed in 2009 with the first meeting held in November of the same year. The Annex, with its membership of 10 countries, has made a significant contribution in the area of standby power, achieving much during its 5 years. The Annex was able to form close working relations with other international organisations, working collaboratively with APEC, Asia Pacific Partnership (APP), the IEA, SEAD and SELINA. In the beginning the Annex focused on standby power in standalone products, producing data collection, horizontal policy and evaluation tools. The Annex's recent work on network standby has bought attention to the need to expand energy efficiency efforts beyond simple standby into the new, more complex area of networks. The Standby Power Annex will formally conclude in 2014 however the areas of work undertaken by the annex will become part of a new expanded annex; the Electronic Devices and Networks Annex (EDNA).

Summary of Annex Achievements

Overview

- 8 Annex meetings and 4 teleconferences
- Collaborations with APP, APEC, SELINA, IEA and SEAD
- 44 Publications (32 Reports, 9 Policy Briefs, 3 Status Updates) - See full list below
- 7 Workshops/Conferences
- 11 Editions of Loaddown, the newsletter
- Total Standby Power Annex cash budget €181 755 (2009-2014)
  Average Annual member contribution €4 500 per year.

Major Achievements of the Standby Annex 2009-2014

Alignment of data collection methodology – provides policy makers with baseline information and a tool which can assist in the design, monitoring and evaluation of different policy approaches.

Horizontal Policy Framework – provides policy makers with a framework to develop a successful horizontal standby power policy.

Evaluation Framework – provides an instrument to design an evaluation approach which will not only be more transparent but enable different policy approaches to be compared and contrasted.

Network Standby - Undertook research establishing network standby as an issue in need of investigation. This work was followed up with workshops, collaborations and publications aimed at increasing the awareness and understanding of network standby globally.

More Data Less Energy - Joint publication with the IEA is the culmination of research and workshops conducted by the Annex and the IEA. It comprehensively covers all aspects of network standby and contains a call to action, recommending Governments around the globe take steps to reduce the energy waste associated with network enabled products.

Policy Framework for Network Standby - provides a policy framework and action plan for establishing policies to achieve low energy networks.

Membership

The ten members of the Annex were Australia, Austria, Canada, Denmark, Korea, the Netherlands, Sweden, Switzerland, the UK and the USA.

Standby Power Annex Publication 2009 – 2014

All Annex publications are available on the Annex website http://standby.iea-4e.org/.

Reports

2014

Beyond Network Standby: A Policy Framework and Action Plan for Low Energy Networks – Energy Efficient Strategies

More Data, Less Energy: Making Network Standby More Efficient in Billions of Connected Devices – Joint IEA and 4E Standby Power Annex publication (to be published June 2014)

2013

Power Requirements for Functions - Xergy Consulting

Mapping Secondary Product Functions to Products and Operational Modes - Ecova

2012

Staying Connected: Unravelling energy waste issues in network standby - Maia Consulting

Report Overviews - Maia Consulting

- *Overview of Estimate of the Energy Wasted by Network Connected Equipment*
- *Overview of List of Technical Standards for Equipment Connected to Energy-Using Networks*
- *Overview of Provision of a horizontal policy approach to standby power*
- *Overview of Cutting Edge Technology Feasibility Study*
- *Overview of Power Scaling in Proportion to Data Processing*
- *Overview of Investigation and Exploration of Network Power Consumption in Set Top Boxes, VOIP Telephones and Games Consoles*
- *Overview of Examples of Low Energy Product Designs*
- *Overview of Standby Power & Low Energy Networks: Issues and Directions Report*
- *Overview of Evaluation of policies to reduce Standby Power and Development of Standard Methodology*

2011

Evaluation of Policies to Reduce Standby Power and Development of Standard Methodology – Econoler

What has the Annex Achieved – August 2011 – Maia Consulting
Provision of a Horizontal Policy Approach to Standby Power - BIO Intelligence Service

Estimate of the Energy Wasted by Network Connected Equipment - BIO Intelligence Service

List of Technical Standards for Equipment Connected to Energy-Using Networks - BIO Intelligence Service

Energy Reporting on Networks - Nordman

Testing Products with Network Connectivity - Nordman

Cutting Edge Technology Feasibility Study - ecos

Power Scaling in Proportion to Data Processing - ecos

Investigation and Exploration of Network Power Consumption in Set Top Boxes, VOIP Telephones and Games Consoles - ADT

Examples of Low Energy Product Designs - ecos

- *Standby Power: The Phantom in the Machine*
- *Ac-Dc Power Supplies: Building a Better Brick*
- *Battery Chargers: Getting Energized About Efficiency*
- *Small Networking Equipment: Making the Connection to Energy Efficiency*
- *Power Factor Correction: An Energy Efficiency Perspective*
- *Indicators and Displays: A Judicious Use of Light*

2010

Standby Power and Low Energy Networks: Issues and Directions - Energy Efficient Strategies

Estimating Stock Average Low Power Mode Attributes - Methodology for 4E Standby Annex - Energy Efficient Strategies

4E-APP-EU Standby Workshop, Vienna Summary Report and 4E-APP-EU Standby Workshop, Vienna Workshop Overview and Recommendations Detailed Report

Standby Power Annex Communication Strategy

Policy Briefs

2014

More Data, Less Energy: Addressing Energy Waste in Networks -Policy Brief SP8 (to be published 6/14)

Lowering the Energy Waste of Extra Functionality - Policy Brief SP7 (to be published 5/14)

2013

"Basket of Products" - A global approach to measuring standby power (SP6)

Tackling Standby Power Wastage with a Horizontal Policy Approach (SP5)

Measuring Success: Evaluation Methodology for Standby Power Policies (SP4)

Network Standby: Finding Solutions to Energy Waste (SP3)

2012

Standby Power in Televisions (SP2)

Standby Power Global Cooperation in Action (SP1)

Standby Power Annex Overview (SP0)

Newsletters

2014
LoadDown Edition 14

2013
LoadDown Edition 13

2012

LoadDown Newsletter Editions 10, 11 and 12

2011
LoadDown Newsletter Editions 8 and 9

2010
LoadDown Newsletter Editions 4, 5, 6, and 7

Status Reports

October 2013
March 2013
September 2012

Standby Power Annex Events 2009 – 2014

2013

September	Beyond 1-Watt – Towards energy efficiency in the digital age Conference IEA/4E/SEAD, Paris, France.
March	Networked Standby Policy Framework Workshop IEA / 4E / SEAD and Natural Resources Canada, Toronto, Canada

2012

May	Networked Standby Data Collection Methodology and Policy Development Workshop IEA/4E/SEAD, Stockholm, Sweden.

2010

October	Moving Towards 1 Watt and Beyond, Conference APEC/APP/4E Tokyo, Japan
April	Network Standby Workshop. APP/4E Paris, France
March	International Standby Power Workshop 4E/APP/SELINA, Vienna, Austria

2009

November	Standby Power Workshop APP/4E Seoul, Korea