

ICT 2008 Conference Working Group

Sustainability I - Energy efficiency Scope & Description

1. SCOPE & DESCRIPTION OF THIS PARALLEL SESSION

1.1. Overall Objective

This session aims to provide an overview on how ICT can contribute to turning climate and sustainability challenges into opportunities, in particular for the potential to increase energy efficiency. The session is divided into a first part dealing with running efforts on electronics and photonics technologies to reduce the CO2 footprint towards standby power reduction, advance servers, new processor architectures, etc. as well as what can be done to develop new breakthrough technologies. The second part aims to illustrate how to turning ICT challenges into opportunities for energy efficiency in three key sectors: transport, electricity distribution grids and building.

1.2. Topics to be addressed:

- **Heading of Topic 1: Enhancing energy efficiency towards R&D efforts on electronic components.** This presentation will introduce the technical aspects and opportunities of electronic technologies as well as what can be done to develop new breakthrough technologies and potential impacts on energy efficiency.
- **Heading of Topic 2: Energy efficiency and the role of photonics.** Photonics is well established as a key technology in telecommunication and precision production but recent advances in photonic technology have seen its increased adoption within the key sectors of aerospace, automotive, medical healthcare, environmental sensing as well as other high specification technology engineering. This presentation will provide a detailed exploration of the subject and illustrate its potential for energy saving in the lighting sector which accounts for 19% of global electricity consumption.
- **Heading of Topic 3: Making intelligent buildings to meet user and energy efficiency requirements.** This presentation will show some visions on how ICT can contribute to provide a healthy and comfortable habitat for all, promoting a new image of European cities, and developing mobility and supply through efficient networks while reducing resources consumption (energy, materials, water) and general environmental impact of human activities.
- **Heading of Topic 4: Turning ICT challenges into opportunities for Smart Electricity Networks.** Smart Networks aim at increasing the efficiency, safety and reliability of electricity system by transforming the current electricity grids into an interactive (customers-operators) service network and removing obstacles to the large-scale deployment and effective integration of distributed and renewable energy sources. This presentation will introduce these concepts and indicate the pathways for turning ICT challenges into opportunities for smart grids.
- **Heading of Topic 5: Moving towards Smart Mobility.** The use of ICT based systems in Transport has a high potential to contribute to clean mobility, by reducing emissions,

tackling the congestion problem and changing driving behaviour. This can be done through in-vehicle advanced systems and applications, infrastructure based systems allowing better traffic management strategies and co-operative systems with the vehicles communicating with other vehicles and the infrastructure. This presentation will provide an overview of these systems and applications and illustrate some examples of ICT for Clean Mobility.

1.3. Participants:

Speaker's name	Gender	Employer	Position held	Nationality	Rationale for selection (3-5 lines)
Prof. J.A Cobos	M	Universidad Politécnica de Madrid	Professor	ES	His expertise is focused in the field of power supply systems for telecom, aerospace, automotive and medical applications. He is Advisory Committee member of the IEEE Power Electronics Society (PELS), and Chair of the Technical Committee on DC Power Supply Systems. He is serving as Associate Editor of the Transactions on Power Electronics.
Dr. Christian Fricke	M	OSRAM Opto Semiconductors GmbH	Chief Technology Officer	DE	Expert in the field of very efficient lighting (solid state lighting). She also represents a European company which is world leader in the lighting sector and is very advanced in the development of this new lighting technology. He is a very active advocate for the wide deployment use of energy efficient lighting.
Dr. Alain Zarli	M	CSTB – Centre Scientifique & Technique du Bâtiment	Head of Division – “Engineering of Innovation and Services”	FR	World-wide expert in the ICT/building sector, he is an active member of the Core Group of the Focus Area “Processes and ICT” of the European Construction Technology Platform.
Pier Nabuurs.	M	KEMA	CEO	NL	Wide experience in energy technologies and business management in the energy sector, he is also the Chairman of the Advisory Council of ETP-SmartGrids
Maurizio Tomassini	M	ISIS	Director of Development	IT	Wide experience in the use of ICT based solutions for clean mobility and large experience in leadership of European projects in this sector. He is also the Director of Società Trasporti Automobilistici

1.4. Choreography:

It is planned to invite Ms Jordan Cizelj (MEP, ITRE member) as moderator of the session; alternatively we are also contacting Ms Edit Herczog (MEP Hungary, ITRE substitute member). She will introduce her-self, welcome the participants and opening the conference reminding the objectives of the session. The moderator will introduce the names of the speakers at the beginning of the session and speakers' CV before their individual presentation. Each presentation will take a maximum of about 15 minutes, including a possible "urgent" question/answer at the end of the presentation. Once finished all presentations, the moderator should ask one question to each speaker

to be prepared jointly with the speakers), which will give them the chance to remark and summarise the main messages to the audience. This latest part should not be longer than ten minutes.

1.5. Timing & Venue:

- Day 2 (26 November 2008), from 11:00 to 12:30
- Centre de Congrès, Lyon, France.

2. RESPONSIBILITY FOR ORGANISATION OF THIS PARALLEL SESSION

Manuel SANCHEZ JIMENEZ, DG INFSO Unit H4 (with input from Directorate G)