

# Telecoms Energy Efficiency and Environment Forum

Reviewing Telecoms Solutions for Energy Efficiency and Climate Change

Frankfurt, Germany

April 27–29, 2009

Including a Half-Day Pre-Conference Workshop:

**Achieving Energy Efficiency with Optimised Networks**

*Workshop Leaders:*

**David Eurin**

Telecom and Energy Strategy Consultant

**Analysys Mason**

**Ali Khan**

Business Development Director

**Aqua Consultants**

**Conference Highlights:**

- **Vodafone** discusses alternative energy sources for off-grid sites
- **Telstra** presents Australian perspective and their energy saving initiatives
- **Cable and Wireless** establishes low carbon data centres
- **Belgacom** explores free air cooling for data centres
- **Orange** profits from energy saving solution in 2G and 3G base stations
- **Telecom Italia** reviews consumption in wireline network, equipment and data centres
- **Telefonica** discusses about their integrated project to face the climate change
- **Swisscom** achieves energy cost savings with fresh air cooling

**Key Benefits of Attending:**

- **Review** the telecom industry's impact on the environment
- **Explore** green technology programs to reduce diesel consumption in emerging markets
- **Understand** cost saving solutions for data centres and benefits of air cooling
- **Learn** about life cycle and supply chain analysis
- **Minimise** carbon footprint of base stations
- **Profit** from energy saving solutions – new features, site design, new equipment
- **Address** how telecommunication solutions reduce business and energy costs for customers
- **Review** EC Regulatory Framework for Energy Efficiency (EE)

Silver Plus Sponsor



Silver Sponsor



*The more*  
*Energy* efficient a company is,  
*the more cost efficient* it will be as a result

Energy – electricity has significant direct costs for telcos. These costs are rising, in some cases dramatically, due to high-usage data centers and mobile network expansion, particularly into rural areas. However, there are tactics that telcos can use to prosper amidst these challenges. Biggest telecom carriers are deploying services that tap the public's interest in energy efficiency and the environment and benefiting from real revenue opportunities.

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**Expert Speakers Panel:**

**Alberto Andreu Pillinos**

Managing Director of Corporate Reputation and Social Responsibility  
**Telefonica**

**Sibylle David**

Network Project Director Data Centre  
**Orange**

**Miguel Arranz**

Head of Radio Products  
**Vodafone**

**Adrian Pike**

Head of Radio Architecture and Tools  
**Orange**

**Dominique Singy**

Energy Expert and Environmental Manager Strategy and Innovation Unit  
**Swisscom**

**Mario Tobias**

Member of Executive Board  
**BITKOM**

**Molly Webb**

ICT Project Director  
**The Climate Group**

**Martin Adolph**

Policy Officer  
**ITU**

**Turlough Guerin**

Group Manager Environment  
**Telstra Corporation**

**Johan Vanderhaegen**

National Power Manager  
**Belgacom**

**Ulrich Blau**

Senior Manager Site Infrastructure and Energy  
**Vodafone Group**

**Gianluca Griffa**

Project Manager in the Wireline Access Innovation Area  
**Telecom Italia**

**Gareth O'Reilly**

VP, Network Power Systems Marketing  
**Power-One**

**Tyrone Heaven**

Product Manager  
**Eltek Valere**

**Alessandra Fratini**

Partner  
**Fratini Vergano**

**Paolo Gemma**

Environmental Engineering Secretary  
**ETSI**

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Day 1

27th April 2009

### HALF-DAY INTERACTIVE WORKSHOP

#### Achieving Energy Efficiency with Optimised Networks

##### Workshop leaders:

**David Eurin**  
Telecom and Energy Strategy Consultant

**Analysys Mason**

**Ali Khan**  
Business Development Director  
**Aqua Consultants**

13.30 Registration and Coffee

14.00 Workshop Leader's Opening Remarks

#### 14.10 Measuring Power Consumption and Costs of Networks

- Understanding key drivers of power consumption and costs in fixed and mobile networks
- Defining efficiency metrics of network equipment, power consumption and carbon emissions
- Discussing the practical aspects of measuring power consumption and costs, including smart metering
- Modelling the relationship between traffic and network topology with power consumption and costs
- Understanding national and European legislation regarding emission costs

#### 14.50 Minimising Energy Costs by Optimising Existing Networks

- Minimising energy costs with network audits and planning reviews
- Designing efficient network platforms to minimise power consumption and costs
- Reviewing the equipment and topology of the network to reduce power consumption
- Using carbon management as an emission and cost management tool

15.30 Afternoon Tea and Networking Break

#### 15.50 Achieving Greater Energy Efficiency

- How the different network sharing options can improve energy efficiency
- Highlighting the impact of RAN sharing strategies on CAPEX and OPEX
- By how much can network sharing reduce power bills and carbon emissions?
- Achieving the lowest full value chain carbon emissions and greater energy efficiency

16.30 Workshop Leader's Closing Remarks

16.40 End of Workshop

**Analysys Mason** provides strategy consulting advice, operations support, and market intelligence to the telecommunications, IT and media sectors. They deliver value to clients in over 80 countries by excelling at solving some of their toughest problems.

The range of services they offer spans across the business development cycle from strategy advice and planning support, to partnering on project implementations and review of key operational processes. The breadth and depth of their industry expertise and operational experience built up over twenty years sets them apart from others in this space. They are acknowledged for their objectivity, intellectual rigour and the practical nature of their advice.

**Aqua** has in-depth specialist knowledge and experience of the Water and Environment sectors. Their niche market focus means they only have staff with the relevant experience and understanding of the challenges and opportunities facing the industry. Their Carbon Management consultants include specialist staff with intricate knowledge of the industry. With in-depth experience they are at the forefront of assisting their clients in going green.

Their experience extends to managing large multi-million ££ programmes, working with main contractors and commercial consultants, development of commercial reporting tools, design and cost estimates, research, contract structure and due diligence exercises.

28th April 2009

# Booking Line

Tel: +44 (0) 20 3002 3315

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08.30 Registration and Morning Coffee

09.00 Chair's Opening Address

## AN OVERVIEW OF THE TELECOM INDUSTRY'S IMPACT ON THE ENVIRONMENT

09.10 **Opening Session**

### Assessing the Environmental Impact of ICT and Promising the Win-Win of Cost and Carbon Saving

- An overview of the evolving environmental and regulatory climate, and the likely impact to telecom network owners and their equipment suppliers
- Assessing the impact that the green movement is having on the telecommunications infrastructure industry
- Taking steps towards building an efficient and environmentally sustainable network
- Reviewing the advantages of renewable energy sources, wind and solar powered base stations

**Molly Webb**ICT Project Director  
The Climate Group09.50 **Operator Perspective**

### Telstra Perspective: How Telecommunications Solutions Reduce Business Costs and Energy Costs for Customers

- Reviewing telecommunications solutions: high definition video conferencing
- How flexible working increases productivity, reduces commuting fuel consumption and enables consolidation of commercial office space
- Promoting GPS/GIS enabled field workforce scheduling programs
- Discussing why investment in these solutions deliver value particularly in a geographically-dispersed (low density) customer base such as Australia

**Dr. Turlough Guerin**Group Manager Environment  
Telstra Corporation Australia

10.30 Morning Coffee and Networking Break

10.50 **Reducing the Impact on the Environment with ICT – Politics, Trends and Communications**

- Green IT - from research to procurement, usephase and recycling ...
- Offering enterprise customers enhanced cost management through communications innovation
- Highlighting how companies can use telecommunications to green their own businesses- video-conferencing, audio-conferencing, desktop web conferencing
- Promoting new habits, social structures, and consumption patterns through the use of telecom networks

**Mario Tobias**Member of Executive Board  
BITKOM

## REDUCING THE POWER CONSUMPTION IN THE NETWORK AND DATA CENTRES

11.30 **Solution Provider Case Study**

### Addressing Ecological and Environmental Impacts of Reducing the Power Conversion Inefficiencies of AC-DC Power Systems used in Telecommunications Networks

- What impact could the HE rectifier have on energy usage?
- Understanding energy savings associated with the HE rectifiers versus standard models
- HE as an outstanding vehicle to help accomplish both their environmental and financial objectives

**Tyrone Heaven**Product Manager  
Eltel Valere12.10 **Operator Case Study**

### Exploring Energy Efficiency for Data Centres

- Creating power efficient data centres
- Implementing energy saving measures
- Reducing energy use in data centres through more efficient energy use and switching off unnecessary equipment

**Sibylle David**Network Project Director Data Centre  
Orange

12.50 Lunch

13.50 Coffee and Networking Break

14.10 **Solution Provider Perspective**

### Discussing Clean Energy Initiatives

- OPEX and CO2 reductions through intelligent management of renewable and conventional energy sources
- Power architectures to enable energy intensity reduction in developed markets

**Gareth O'Reilly**VP, Network Power Systems Marketing  
Power-One

## REGULATION AND STANDARDISATION

14.50 **Operator Case Study**

### Reviewing Energy Efficiency Inter-Operator Collaboration Group (EE IOCG) Initiative

- Sharing energy critical issues and agreeing common goals
- Defining high level strategic actions and coordinated guidance towards:
  - Standardisation
  - Equipment suppliers
- Finalising high level analysis to support operators' strategy (energy trends, KPI, etc.)

**Gianluca Griffa**Project Manager  
Telecom Italia

15.30 Afternoon Tea and Networking Break

15.50 **Exploring ETSI activities on Energy Saving Standardisation**

- Why standardisation is needed?
- Reviewing actual published documents on energy saving
- Understanding broadband energy saving methods of measurement and limits
- Discussing radio base station evolution
- LCA for telecom equipment and services
- Alternative telecom energy resources
- Reviewing standardisation outside ETSI

**Paolo Gemma**Environmental Engineering Secretary  
ETSI16.30 **Reviewing EC Regulatory Framework for Energy Efficiency (EE): Challenges and Requirements**

- Discussing EE in the EC treaty: legal basis, principles and legislative powers
- Reviewing EE in the ICT sector-specific EC regulation: the 2008 Commission Communication
- The fight against CO2 emissions: the Energy and Climate Change Package and the Strategic Energy Technology Plan (SET Plan)

**Alessandra Fratini**Partner  
Fratini Vergano17.10 **Interactive Panel Discussion**

### Strategies to Make Base Stations Greener

- Making base stations green – benefits and challenges
- Exploring alternative commercially viable energy sources to run base stations
- Highlighting the commercial benefits of greener base stations
- Exploring the benefits to the community of bio-fuel powered base stations in rural areas beyond telecoms
- Factoring out the volatility of the cost of the energy

Moderator:

**David Eurin**Telecom Strategy Consultant  
Analysys Mason

17.50 Chair's Closing Remarks

18.00 End of Day Two

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29th April 2009

# Booking Line

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08.30 Registration and Morning Coffee

09.00 Chair's Opening Remarks

## CLIMATE CHANGE INITIATIVE

09.10 **Exploring ITU Initiatives on Climate Change**

- Reviewing ITU's climate change work
- Discussing the role of standards in climate change
- Next Generation Networks and energy efficiency
- Understanding the importance of energy efficient telecoms in developing countries

**Martin Adolph**  
Policy Officer  
ITU

## ENERGY EFFICIENT BASE STATIONS

09.50 **Operator Case Study**

### Minimising the Carbon Footprint of Telco Base Stations

- Discussing how mobile phone operators can enhance efficiency in their base stations
- Reducing power requirements and promoting a greener approach to networking
- Understanding the RAN product evolution for base station architectures that enable more power-efficient solutions
- Looking into collateral actions from a wider business perspective

**Miguel Arranz**  
Head of Radio Products  
Vodafone

10.30 Morning Coffee and Networking Break

10.50 **Operator Case Study**

### Energy consumption in 2G and 3G Base Stations

- Energy saving solutions - new features, site design, new equipment
- Renewable energy solutions - solar, wind and energy storage
- Financial consideration of the above

**Adrian Pike**  
Head of Radio Architecture and Tools  
Orange

## ALTERNATIVE ENERGY SOURCES

11.30 **Operator Case Study**

### A Green Technology Program to Reduce Diesel Consumption in Emerging Markets

- Understanding the need to finding reliable, sustainable and economic sources of power for off-grid sites
- Reviewing solar, wind and other renewable energy sources that help to connect the unconnected
- Exploring the benefits and disadvantages of deploying base stations that use renewable energy
- Highlighting the impact on OPEX and CAPEX
- Addressing the challenges: commercial viability, equipment availability and lack of expertise

**Ulrich Blau**  
Senior Manager Site Infrastructure and Energy  
Vodafone Group

12.10 Lunch

13.10 Coffee and Networking Break

## FRESH AIR COOLING

13.30 **Operator Case Study**

### Delivering Energy Cost Savings with Fresh Air Cooling

- Profiting from the massive reduction of energy consumption with fresh air cooling
- Reducing capital and maintenance costs for network equipment cooling systems and fulfilling climatic requirements
- Addressing the feasibility of using solely fresh air for cooling the network equipment at base stations

**Dominique Singy**  
Energy Expert and Environmental Manager, Strategy and Innovation Unit  
Swisscom

14.10 **Operator Case Study**

### Exploring Free Air Cooling for Data Centres

- Describing the proof of concept
- Is free air cooling in the data centre realistic? Limitations and contingencies
- Reviewing the potential savings in investment and operational costs

**Johan Vanderhaegen**  
National Power Manager  
Belgacom

14.50 **Operator Case Study**

### Telecom Italia Trial: Innovative Cooling Solutions for FTTCab Total Replacement

- Analysing results of the trial
- Discussing free air cooling and underground cooling
- Addressing the benefits of these solutions

**Gianluca Griffa**  
Project Manager  
Telecom Italia

15.30 Afternoon Tea and Networking Break

## LIFE CYCLE ENERGY MEASUREMENT AND SUPPLY CHAIN

15.50 **Operator Case Study**

### Learning from Telefonica's Climate Change Office: an Integrated Project to Face the Climate Change

- Climate Change
- Carbon footprint and emissions reduction targets of Telefonica
- Telefonica in the center of the solution to combat climate change: An integrated approach to a global problem
- Energy efficiency in Telefonica operations
- Future challenges and opportunities for ICT and Telefonica on climate change

**Alberto Andreu Pillinos**  
Managing Director of Corporate Reputation and Social Responsibility  
Telefonica

16.30 **Operator Case Study**

### Applying Life Cycle and Supply Chain Analysis to the Telecommunications Sector: Examples from Australia's Largest Telecommunications and Media Communications Company

- Comparing environmental impacts of online and conventional billing processes
- Measuring the environment impacts of data, voice and mobile services, and network, edge and customer equipment
- Network-wide initiatives to reduce greenhouse gas emissions
- Understanding and managing carbon impacts in the supply chain

**Dr. Turlough Guerin**  
Group Manager Environment  
Telstra Corporation Australia

17.10 **Panel Discussion**

### Impact of Green Trend on Company Branding and Image Management

- Incorporating your green strategy into your CSR program
- Highlighting the dangers and benefits of identifying green with the brand
- Measuring the impact of environmental policies on the public image of the company and value of the brand
- Ensuring veritable data to support marketing campaigns to prevent greenwashing

*The panel will be joined by key speakers from both days*

17.50 Chair's Closing Remarks

18.00 End of Conference

## Business development opportunities

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**James Driscoll** Sponsorship Director, **marcus evans** Stockholm  
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# Telecoms Energy Efficiency and Environment Forum

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- 2 DAY CONFERENCE + ONLINE DOC @ £2995**
- ONLINE DOCUMENTATION @ £895**

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A 24% service charge has been added to all conferences fees prior to the event and is inclusive of programme materials, luncheon and refreshments.

## Registration Details

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**DATE(S):** APRIL 27 – 29, 2009

**VENUE:** FRANKFURT, GERMANY

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