

Appendix 12 - Glossary and abbreviations

AAAS – The American Association for the Advancement of Science. This is an international non-profit organization dedicated to advancing science around the world by serving as an educator, leader, spokesperson and professional association.

Age UK – This UK charity seeks to help create a world in which older people flourish. It believes that everyone should be able to enjoy good health in later life, free from the diseases and disabilities associated with growing older. It funds research into, amongst other things, dementia and strokes.

AFCI – Arc-fault circuit interrupters (AFCI) are circuit breakers designed to prevent fires by detecting non-intentional electrical arcs and disconnecting the power supply before the arcing starts a fire.

Anonymisation – The process of removing the ability for Smart Meter data to be traced to an individual.

APHA – The American Public Health Association. This is a professional organisation for public health professionals based in the United States. Its mission is “... *to protect all Americans and their communities from preventable, serious health threats* ...”

Autism – This is a lifelong developmental disability characterised by restricted and repetitive behavior, impaired communication and impaired social interaction. It affects how individuals relate and communicate with others.

BEAMA – The British Electrotechnical & Allied Manufacturers Association. This is the independent expert knowledge base & forum for the electrotechnical industry in the UK & Europe.

BECTA – The British Educational Communications and Technology Agency. This was the UK Government's partner for the use of ICT in education. It closed on 31st March 2011.

bemri.org – The Bio-Electromagnetic Research Initiative, a cooperative formed to provide an EMF research portal for the scientific community and interested members of the lay public showing the latest scientific information and hypotheses regarding EMFs.

BERR – [UK Department for] Business Enterprise and Regulatory Reform.

Bio-sustainability – a core concept for purposefully creating beneficial environments to enhance the health and wellbeing of humans, animals and Nature's eco-systems both now and for the future.

Blastoma – A type of cancer caused by malignancies in precursor cells (*often called blasts cells*).

CASLE – Canadians for a Safe Learning Environment. Website with practical resources for parents to work within the educational system to improve the condition of school buildings and products and practices used within so children and school staff occupy safe and healthy environments.

CCST – The California Council on Science and Technology. This offers expert advice to the State government and recommends solutions to policy issues that are science and technology-related.

SMART METERS - SMARTER PRACTICES

Consumer Focus – This is presently the statutory consumer champion for the UK, though it is being disbanded with some of its functions being likely to transfer to Citizens Advice. It is involved in ensuring a fair deal for energy consumers and vulnerable consumers.

Council of Europe – This organisation works to develop common and democratic principles based on the European Convention on Human Rights and other reference texts on the protection of individuals throughout Europe.

CPUC – California Public Utilities Commission. This regulates amongst other things privately owned electric, gas, telecommunications and water companies. Its mandate is to serve the public interest through protecting consumers and ensuring the provision of safe, reliable utility services and infrastructures at reasonable rates whilst being committed to environmental enhancement and a healthy Californian economy.

CTIA - The Wireless Association® - an International Association for the Wireless Telecommunications Industry.

DCA – The former UK Department for Constitutional Affairs. All its affairs were taken over by the Ministry of Justice in 2007.

DECC – the UK's Department of Energy and Climate Change. Its brief includes supporting vulnerable customers, delivering secure energy and enabling a low carbon energy economy.

DH – The UK's Department of Health. It is the government department responsible for public health issues, adult social care and the UK's National Health Service. The UK's Health Improvement & Protection Directorate is part of this department.

Diabetes – A group of metabolic diseases where individuals have high blood sugar; either because cells are unresponsive to insulin the body produces, or because the body produces too little insulin.

Directgov – The UK Government's digital single point of access to UK public sector information and services. The information shown is developed by government departments.

DRA – Division of Ratepayer Advocates in California, USA. Its statutory mandate is to obtain the lowest feasible rate for service that is consistent with safe and dependable service levels. As part of this mandate it also advocates for customer and environmental protections.

Eco-sustainability – a means to create beneficial environments for living things and the world both now and for the future.

EFF – The Electronic Frontier Foundation is a US based organisation is involved in matters related to consumer rights, innovation, privacy and free speech.

EHS – Electrohypersensitivity. This condition is also known by a variety of other names including 'Electrosensitivity' (ES), 'Electromagnetic Hypersensitivity' (EHS) and 'Idiopathic Environmental Intolerance with Attribution to Electromagnetic Fields' (IEI-EMF).

SMART METERS - SMARTER PRACTICES

EIA – Environmental Impact Assessment. This is an assessment of the possible beneficial or detrimental impact a proposed scheme may have on the environment taking into account natural, social and economic aspects.

EIS – The Electric Infrastructure Security Council. The EIS helps coordinate US and international infrastructure protection against electromagnetic threats. *“Working together to protect our nations’ vital infrastructures against severe geomagnetic storms and EMP risks.”*

EMF – Electromagnetic field.

EMPact America – This is a bipartisan, non-profit organisation concerned with protecting Americans from natural or nuclear EMP catastrophes.

EM Radiation Research Trust – a UK registered charity involved in raising public awareness of the health effects of electromagnetic radiation worldwide. It also works with cross party members of the UK and European parliaments to help provide advice and information for parliamentary questions and reports, and is supported by Independent Scientific, Public Health and Technical advisors.

The EMR Policy Institute – This organisation was formed to advance sound electromagnetic radiation (EMR) public policy for the USA.

ERA – Energy Retail Association. This organisation represents the six main electricity and gas suppliers in the domestic market in Great Britain. It works closely with the Government, NGOs, charities and other organisations to ensure a coordinated approach related to energy.

ERDF – Électricité Réseau Distribution France. This subsidiary company of Électricité de France (EDF) manages 95% of the public electricity network in the French territories.

ES-UK – ElectroSensitivity UK is charity whose aim is to provide unbiased and balanced information to help those who have become EHS.

FCC – The Federal Communications Commission. This is an independent US Government agency. It works towards goals in the areas of broadband, competition, homeland security, the media, public safety, the spectrum and modernising itself. It provides varied degrees of cooperation, leadership and oversight for communications bodies in other American countries.

Fibre-optics – Optical fibres that act as waveguides, or ‘light pipes’ to transmit light between the two ends of a fibre. They are used in for communications purposes and allow transmission over longer distances and at higher data rates than other types of communication.

FIPR – The Foundation for Information Policy Research is an independent body that undertakes study on the interaction between information technology and society.

Fuel poor households – Households which spend at least 10% of their annual disposable income on home energy use.

FPAG – The UK Fuel Poverty Advisory Group. This advisory Non-Departmental Public Body for England is sponsored by DECC. The role of the

SMART METERS - SMARTER PRACTICES

Group is amongst other things to consider and report on the effectiveness of current policies aiming at reducing fuel poverty.

GAO – The US Government Accountability Office is also sometimes referred to as the “congressional watchdog” and has a brief to investigate how the US federal government spends taxpayers’ dollars.

Geomagnetic storms – These are temporary disturbances of the Earth's magnetosphere caused by disturbances in the matter occurring between the stars in our Galaxy.

GFI – Ground Fault Interrupters, also known as Residual Current Devices (RCDs), are circuit breakers that protect from individuals from electrical shock.

GNP – Gross national product. This the market value of all services and products produced annually by labour and property supplied by a country’s residents.

HAN – Home area network. These can be used to enable communication between Smart Meters, In-Home Displays (IHDs) and other devices in consumers’ premises.

HIA – Health Impact Assessment. This is a combination of procedures, methods and tools by which a policy, program or project may be assessed for its potential effects on public health and the distribution of those effects.

IARC – International Agency for Research on Cancer. Its mission is to coordinate and undertake research on the causes of human cancer, mechanisms of carcinogenesis, and to develop scientific strategies for cancer control and prevention.

ICNIRP – International Commission on Non-Ionizing Radiation Protection. It is an international commission that specialises in radiation protection issues, including determining exposure standards for RF/microwave emissions.

ICT - Information and Communication Technology.

IEEE – The Institute of Electrical and Electronics Engineers. This is the World’s largest professional association that is committed to advancing technological innovation and excellence for the benefit of humanity.

IEQ – Indoor Environmental Quality. The overall quality of a building’s interior as related to the comfort and health of its occupants.

IHD – In-Home Display. These are electronic devices linked to Smart Meters for providing information on individual customer’s energy consumption.

IUHPE – The International Union for Health Promotion and Education. A worldwide, independent and professional association committed to improving the health and wellbeing through education, community action and the development of appropriate public health policy.

The International Electro-Magnetic Fields Alliance (IEMFA) - This is an independent global body of scientific experts on living processes, with a multilevel, multidisciplinary health focus. Its principal aim is to disseminate coherent, health-oriented information and advice.

LCC – Life Cycle Costing. The investigation and valuation of environmental impacts of scheme caused by its existence.

SMART METERS - SMARTER PRACTICES

Mast Action UK – Mast Action UK (MAUK) is a voluntary national organisation set up to help communities and individuals with mast siting problems.

Mast Sanity – National organisation in the UK opposing the inappropriate siting of mobile phone and Tetra masts and the installation of wireless Smart Meters.

Microwaves (MW) – These are electromagnetic waves between 1 m and 1 mm in length that occur over the frequency range of 300 MHz (0.3 GHz) to 300 GHz. Sometimes frequencies in this range are (*incorrectly in the present author's opinion*) referred to as radiowaves.

MLA – Member of the Legislative Assembly. A representative elected by the constituency's voters to the legislature or legislative assembly of a sub-national jurisdiction.

NASA – The US's National Aeronautics and Space Administration is an executive branch agency of the US government, responsible for the US civilian space program, aeronautics and aerospace research and the prediction of space weather.

NHS – The UK's National Health Service. This is the shared name for 3 of the 4 four publicly funded healthcare systems in the UK.

National Security Council (NSC) – This is the UK's chief forum for collective discussion of the UK Government's objectives for national security and how they can be best achieved in the current financial climate.

NK cells – Natural killer cells. These are a type of cytotoxic lymphocyte which are a major component of the innate immune system. They cells play a major role in the rejection of tumors and cells infected by viruses.

NRR – The UK's National Risk Register of Civil Emergencies.

NOAA – US National Oceanic and Atmospheric Administration. The brief of this agency is to enrich life through science. Its reach extends from the surface of the Sun to the depths of the oceans.

Ofgem – Office of Gas and Electricity Markets, the UK's regulator for electricity and gas markets. It is responsible for protecting gas and electricity consumers in the UK.

PACE - The Parliamentary Assembly of the Council of Europe. This deals with Human Rights issues, Democracy and Rule of Law for 47 Member States. It is committed to preserving the environment and environmental health, whilst also improving prevention of environment-related health hazards. Observer States for the Council of Europe include the United States and Canada.

PLC – Power Line Communications. These are systems developed to carry data on a conductor that is also used for electric power transmission. Also known as 'Linky' [in France], Broadband over Power Line (BPL), Power Line Access (PLA) and Power Line Telecommunication / Technology / Transmission (PLT).

Power density – This is the usual unit of measurement above 30 MHz, though electric and magnetic fields can also be measured. It is usually expressed in milli- or microwatts per square centimetre (mW/cm^2 or $\mu\text{W}/\text{cm}^2$), and is defined

SMART METERS - SMARTER PRACTICES

as the amount of power per unit area in a radiated microwave field or other type of electromagnetic field.

Powerwatch – A small independent non-profit UK organisation involved in the EMF and microwave health debate. It works closely with decision-makers in government and business, and other like-minded groups, promoting policies for a safer environment.

Privacy by design – this is a design philosophy whereby privacy issues are considered before and during system is designed, rather than afterwards.

Psychosomatic responses – These are reactions created by the mind in response to a physical change just from the belief something has occurred. In medicine it is also known as the 'placebo effect'.

PUIAF – The Public Utilities Access Forum – This is an informal association of organisations that helps develop policy on public utilities' regulation in England and Wales.

RCD – Residual Current Device, also known as Ground Fault Interrupters (GFIs), are circuit breakers that protect from individuals from electrical shock.

RF – Radiofrequency waves. These are in the frequency range of between 3 kHz to 300 MHz. Some authorities state that RF waves cover the frequency range of 3 kHz to 300 GHz that also encompasses all microwave frequencies.

RF/microwaves – This term covers wavelengths in both the radio frequency and microwave frequency areas, i.e. of 3 kHz to 300 GHz.

REFLEX – Risk Evaluation of Potential Environmental Hazards From Low Energy Electromagnetic Field Exposure Using Sensitive *in vitro* Methods. This EU funded project ran from 2000 to 2004.

Safe School Committee – Organisation set up in Canada to fully support equal access to technology for all children in schools through the use of wired internet connections. It seeks to help create the healthiest learning environment for children.

SHE – Schools for Health in Europe. The SHE Network is open for any organisation or professional with an interest in schools and health. It aims to support organisations and professionals to further develop and sustain school health promotion by providing the European platform for school health promotion.

Security by Design – This is a design philosophy aimed to ensure the security of a system is designed from conception to be secure. With this concept security risks and issues are identified early in the system's development.

Smart grids – These can intelligently and efficiently integrate the actions of all users connected to them for the economic and sustainable use of energy supplies. They are created through the integration of a globe-spanning network of thousands of companies.

SmartGrid GB – This initiative has been set up to provide an open forum for a wide range of concerned organisations to come together, share ideas and information and develop thinking on how the smart grid can be optimised to create consumer, economic and environmental benefits.

SMART METERS - SMARTER PRACTICES

Smart Meter – This is a utility meter that records energy consumption in intervals of an hour or less and communicates that information at least daily back to the utility for billing and monitoring. They enable two-way communication between the meter and the utility.

SmartReach – This UK consortium was created to address the UK Government mandate on Smart Meter installation and is comprised of three UK companies: BT, Arqiva and Detica. It is “*committed to helping protect the environment and to making a meaningful contribution to the development of a thriving low-carbon economy.*”

SMPS – Switching-Mode Power Supply. These can induce electromagnetic interference and high-frequency transients in the wiring systems they are attached to.

Solar flares – These are large energy releases on the surface of the Sun. They eject clouds of atoms, electrons and ions through the corona into space. The clouds they create often reach Earth a day or two after each event.

Solar maxima – This is the period of greatest solar activity in the solar cycle of the Sun.

SSITA - Safe Schools Information Technology Alliance. A UK alliance of partner organisations, parents, teachers, scientists, lawyers and other experts working to identify issues and concerns regarding wireless technologies in schools, nurseries, day care environments and colleges.

UL – Underwriters Laboratories Inc. (UL) is a global independent safety science company. It develops standards and test procedures for assemblies, components, equipment, materials, products and tools, predominantly dealing with product safety.

UN – United Nations. This is an international organisation whose stated aims are facilitating cooperation in economic development, Human Rights, international law, international security, social progress and achievement of World peace.

US NRC – The US National Research Council. Its mission is to improve government decision making and public policy, increase public understanding, and promote the acquisition and dissemination of knowledge in matters involving science, engineering, technology, and health.

VaasaETT Global Energy Think Tank – This provides global reach for best practice and knowledge in the energy industry. Its own expertise is combined with a network of thousands of specialists and partners in five continents to provide high quality independent work.

Verband Baubiologie – An international professional association for building biologists and adjacent vocational fields.

WAN - Wide Area Network – Smart Metering WAN can be used for two-way communication between Smart Meters and DCC (via the WAN module in the customer's premises).

Which? – This is an independent UK based campaigning and product-testing charity that undertakes advocacy campaigns on consumer protection issues,