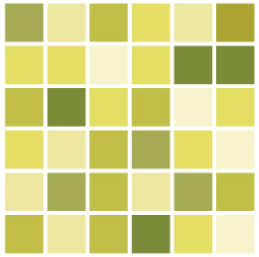
SmartGridGB

For an intelligent future

Presentation for Telecomms for Smart Grids

Content

- About us
- The importance of smart grid communications
  - Nervous system analogy
  - Challenges facing smart gird communications
- What needs doing?
  - Developing the institutional landscape for energy sector transformation
  - Is a flexible, resilient network required?
- What are we doing?
  - Facilitating learning and knowledge transfer
  - Next Steps



SmartGridGB

For an intelligent future

ABOUT US

INTRODUCING SMARTGRID GB

Launched 23rd June 2011 by the former Energy Minister, Charles Hendry MP, at the Royal Society of Engineering in London

Visit our website at www.smartgridgb.org

SO WHO ARE SMARTGRID GB?

- We are a cross industry stakeholder group that acts as the national champion for smart grid development in Britain.
- We believe that smart grid technologies can help address Britain's energy 'trilemma'.
- In addition, we believe that the creation of smart grids is of fundamental importance to the British economy.
- To make a smart grid a reality, a nascent value chain needs to be brought together to discuss the various challenges that exist and to look at the ways of overcoming them.
- This is why SmartGrid GB was formed…
- Our work programme is tailored to address the main challenges, and we work closely with the Department of Energy and Climate Change and Ofgem.


accenture
AIRWAVE
arqiva
British Gas
BT
Cable&Wireless Worldwide
Consumer Focus
DEPARTMENT OF ENERGY & CLIMATE CHANGE
EDF ENERGY
ELEXON
engage consulting limited
GE
HITACHI
hp
IBM
intellect
REPRESENTING THE UK TECHNOLOGY INDUSTRY
ofgem
ORACLE
POWER PLUS COMMUNICATIONS
SAP
SCOTTISHPOWER
sensus
SIEMENS
TOSHIBA
UK Power Networks
vodafone
utiligroup
WIPRO
Applying Thought

ABOUT US

- Our current chairman is Lord O'Neill, a parliamentarian and former Chairman of the Nuclear Industries Association.

- We recognise the importance of international collaboration and view energy network modernisation as a shared, global challenge.

- This is why we are members of the Global Smart Grid Federation

GSGF MEMBERS

Danish Intelligent Energy Alliance	EDSO for Smart Grids (European Union)
Gridwise Alliance	India Smart Grid Forum
Industrial Technology Research Institute (Taiwan)	Israel Smart Energy Association
Japan Smart Community Alliance	Korea Smart Grid Association
Norwegian Smartgrid Centre	SmartGrid Australia
Smart Grid Canada	SmartGridIreland
SmartGrid GB	

SmartGridGB
For an intelligent future

THE IMPORTANCE OF SMART GRID COMMUNICATIONS

Smart Grid Nervous System

Nature uses the same pathways for conscious and unconscious measurement and control

Great - except when different brains control different body parts!

Nor when we disagree on the level of control to delegate to the spinal column

Challenges Facing Smart Gird communications

The choice of communications technology will be affected by many factors. Requirements for speed, reliability and resilience will dictate network topology and the mix of wired/wireless communications.

- Uncertainty in both the:
  - Particular requirements for a range of smart grid application types
  - Scope and scale of the smart gird applications themselves
- Market based challenges
  - Market environments that often act as a disincentive to innovation
    - Capex for development and trialling at scale
    - Perceived higher Risk
  - Can put stakeholders with long term shared agenda at odds over short term objectives
- Numerous messages out there, positioned by different interest groups
  - Factual composition of these messages can vary significantly
- Both utility and telecommunications sectors are undergoing significant change and are moving in different directions
  - Can this be used to deliver a win-win?

SmartGridGB
For an intelligent future

WHAT NEEDS TO BE DONE?

Developing the institutional landscape for energy sector transformation

- Market and regulatory arrangements
  - That can support a diversity of communications technologies should this be needed
- Governance and transparency as to technical needs and requirements
  - Both in the reason for specification and the performance of the technical solution
- Sufficient investment in innovation and innovation capacity over the long term
  - Investment in skills and institutions
  - Innovation should be managed as an on-going and iterative process
- The goal is an environment that will:
  - Ensure the flourishing of a flexible and resilient communication network OR network of networks
  - Support a vibrant communications industry in smart grid

Why the Flexible Resilient Network?

- **Technical**
  - A flexible network offers many potential solutions hence increasing resilience and speed of solution deployment

- **Economic:**
  - Greater dynamism and speed leads to lower costs, which in turn drive more uptake, scale efficiencies lead to lower operational costs

- **Consumer:**
  - Greater dynamism allows for solutions that are easily delivered at a lower risk and is an important part of effectively engaging the consumer with a positive experience
  - Lower operational costs lead to lower consumer bills

- **Environmental:**
  - A highly resilient smart grid is critical to enabling ever increasing renewable penetration

SmartGridGB
For an intelligent future

WHAT ARE WE DOING TO ACHIEVE THIS?

Facilitating learning and knowledge transfer

- Development of learning and knowledge
  - By bringing together industry, academia and other sectors we are helping a nascent value chain come together to help solve major issues
- Sharing and Dissemination of learning and knowledge
  - Our own website, and a far richer environment when our new website launches
- Pressure and Lobbying
  - To ensure that fit for purpose institutions and processes are developed that stimulate innovation and growth in the sector
- Our international outlook means that we are constantly on the lookout for learning from elsewhere

NEXT STEPS

SGGB Communications Paper

- Aims to provide a unique, cross-industry perspective on how Britain can capitalise on its positive start in smart grid development, focusing specifically on how we can get the best communications infrastructure possible for the best possible price.

Objectives

- Written by a broad group of companies
- Aimed at a wide audience of stakeholders and, therefore
- It will publicise and aim to move forward the smart grid communications debate in a way that has so far not been achieved by other reports

SmartGridGB

For an intelligent future

THANK YOU