



PRESS RELEASE

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What has the ICT industry done since SMART 2020?

Monday, 14 December 2009, London – The Climate Group, BT and the Digital Energy Solutions Campaign (DESC) today launched 'SMART 2020: Pathways to scale' – a website that will track progress made by the information and communications technology (ICT) industry in tackling climate change. Case studies already hosted on SMART2020.org show that progress has been made but there is much more to be done, highlights winning strategies, and makes some key recommendations that the industry should work towards.

The opportunity for the global ICT industry to reduce global emissions by 15% in 2020, saving global businesses over \$500 billion EUR, was outlined in The Climate Group's 2008 report, *SMART 2020: enabling the low carbon economy in the information age*.

The SMART 2020: Pathways to Scale case studies reveal both winning strategies and gaps where action by the industry required:

- **Partnerships:** When companies with different skills sets or assets work together to find a holistic energy efficiency solution the results are much more impressive than the sum of individual parts.
- **Cross-sector implementation:** Most existing products still only play to one or two market segments (e.g. buildings or logistics). Different energy efficiency products have largely not been integrated to provide an end-to-end solution.
- **Optimisation, not only behaviour change.** Large scale behaviour change on the part of the consumer is required but is not happening at present. We need to look at ways of optimizing the energy savings and linking these to real cost savings to create the financial incentives for the consumer.
- **Policies beyond a carbon price:** Policy barriers have arisen in unexpected places, for example anti-competitiveness laws have in some cases prevented companies working together. A carbon price alone will not be sufficient to drive the green revolution.

"Pathways to Scale shows that we still have some way to go to achieving the SMART 2020 goal. But the lessons learnt are very useful," said Molly Webb, Director of Strategic Engagement, The Climate Group.

Recommendations coming out of the Pathways to Scale analysis say that what is needed to scale up 'smart' solutions are:

- **Real-time energy information for all** – from consumers, to businesses to national governments this is the only way to ensure we measure and manage what we use.
- **Policies to encourage 40% energy efficiency across sectors (appliances, buildings, transport)** – we know this is achievable but need the policy incentives to encourage action.
- **Pilots with a focus on the urban level** – to test the application of new technologies, as well as the new policies and financial models required for scale up.
- **A smart grid (from power generation to appliance)** – with standards that allow anything and everything to become part of it

“User-generated content drove Web 2.0, and user-generated energy information and ‘the internet of things’ is our future. With a strong global agreement to tackle climate change, ICT infrastructure will be a key enabler in the short term of carbon efficiency on a global scale,” added Webb.

Chris Tuppen, Chief Sustainability Officer at BT, said, “The SMART 2020 report showed that ICT could play a very significant role in helping tackle climate change. This latest research highlights the need to link a number of ICT solutions to deliver the level of transformational change needed to establish the low carbon economy. This will mostly happen through innovative public/private partnerships.”

Stephen Harper, Global Director of Environment and Energy Policy at Intel Corporation and Co-Chairman of DESC, said, “ICT has a significant role to play in improving the energy efficiency and reducing the climate footprint of virtually every sector of the global economy. The Pathways project takes this work another step by documenting some of the specific ICT projects and applications that are being implemented to make this potential a reality.”

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Examples of SMART 2020 Pathways case studies:

Google PowerMeter and AlertMe

AlertMe started as a home security system and has found new life as a control system for home energy use. When a home in Cambridgeshire in the UK was fitted with an AlertMe Energy kit, the residents found that using the service they could nearly halve their energy consumption, and their bills. AlertMe kit was easy to install: several 'smart' plugs go into the wall sockets where you want to track energy consumption from appliances, and a home energy hub sits in the home wirelessly connected to the appliances, reading their consumption. Either using the AlertMe web interface or a mobile phone, you can turn off appliances even when you're not at home. Over 8 months, the residents saved £500 pounds or around 40% of their electricity bill.

Boulder Smart Grid City

The grid was built and remains to this day a one-way system, starting with generation of power through transmission and distribution. In its progress from generation to consumption, anywhere from 10-30% of the generated power can be lost, depending on the distance and efficiency of the system.

Xcel Energy's SmartGridCity Consortium has made Boulder, Colorado, the United States' first fully integrated Smart Grid City, a pilot project to understand the potential impacts of a range of 'smart grid' technologies, from the power plant to the home.

CURRENT Group, one of the members of the consortium, using their OpenGrid software, sensors and 2 way communications on the grid, were able to reduce voltage problems by 90%, achieving 3-5% reduction in overall power requirements in the city of 100,000 people. They were able to achieve this without needing to rely on the consumer to change behaviour.

The potential for system optimization on a national or global scale is significant. For example, a 3% reduction in U.S. baseline generation would mean 123 million metric tons of carbon wouldn't be released into the atmosphere every year - the equivalent to eliminating the need for approximately 22 coal plants or taking 15% of cars off the road.

Empire State Building

Built during the Great Depression, the Empire State Building symbolizes America's limitless potential. Today the building is undergoing a major sustainability retrofit to become a leading example of economic and environmental revitalization.

Consulting, design, and construction partners Clinton Climate Initiative (CCI), Johnson Controls Inc. (JCI), Jones Lang LaSalle (JLL), and Rocky Mountain Institute (RMI), recently completed an 8 month modeling and analysis project which will save up to 38 percent of the building's energy and \$4.4 million annually. Johnson controls will monitor the energy savings using the standard international performance measurement and verification protocol (IPMVP), and they will split the energy saving benefits with the Empire State Building over a 15 year period.

This retrofit will put the Empire State building in the top 10% of efficient buildings in the US.

Shiplly.com

Logistics and transportation account for a growing share of the world's carbon footprint as our globalised economies feed consumer needs in industrialised countries and emerging economies. In both personal and commercial transport, the key drivers of emissions reduction are achieved in shifting modes of transport effectively, say from road to rail, and keeping transport vehicles full more of the time.

On the commercial side, with logistics emissions projected to account for 18% of Europe's emissions in 2020, every kilometre travelled has a clear fuel cost, and saving carbon is directly linked to saving petrol. But because the logistics market is fragmented with some hauling companies owning just a few vehicles, it is also inefficient. In addition to modal shift, much can be done to reduce fuel costs such as giving drivers feedback on how efficiently they are consuming petrol or optimising inventory management for energy efficiency.

Efficiency can be achieved through re-thinking these markets, not only optimising for one company's operations. Shiplly.com is an online transport marketplace that replaces the traditional subscription-based business model of the freight exchange.

Over 16 months, Shiplly's service has saved **2,095,210 kg** of CO₂ by allowing lorries to be filled more often on return trips when they are usually empty. Savings equate to flying from London to New York **3,446 times**.

As innovation and environmental objectives become more interlinked, scaling solutions will not only rely on a price for carbon. New business models like Shiplly's achieve initial success in the market, but may run up against unforeseen challenges as they grow. For example, Shiplly has just launched in Germany and will face new regulatory challenges as cross-border trips become increasingly requested. 'Cabotage' rules prevent the exchange of goods between countries.

Notes to Editors:

About The Climate Group

The Climate Group (www.theclimategroup.org) is an independent, not-for-profit organisation working internationally with government and business leaders to advance smart policies and technologies to cut global emissions and accelerate a low carbon economy. Its global coalition of companies, states, regions and cities around the world recognise the economic and environmental imperatives of taking decisive action now. The Climate Group was founded in 2004 and has operations in Australia, China, Europe, India and North America.

About BT

BT is one of the world's leading providers of communications solutions and services operating in 170 countries. Its principal activities include the provision of networked IT services globally; local, national and international telecommunications services to our customers for use at home, at work and on the move; broadband and internet products and services and converged fixed/mobile products and services. BT consists principally of four lines of business: BT Global Services, Openreach, BT Retail and BT Wholesale.

In the year ended March 31, 2009, BT Group's revenue was £21,390 million.

British Telecommunications plc (BT) is a wholly-owned subsidiary of BT Group plc and encompasses virtually all businesses and assets of the BT Group. BT Group plc is listed on stock exchanges in London and New York.

For more information, visit www.bt.com/aboutbt

About DESC (Digital Energy Solutions Campaign)

Membership. Technology leaders AT&T, Dell, EMC, HP, Infineon Technologies, Intel, Johnson Controls, Microsoft, National Semiconductor, Nokia, Opto 22, Sony, Sun Microsystems, Telvent, Texas Instruments and Verizon are the current members. Non-governmental organization affiliates include the Alliance to Save Energy, the American Council on an Energy-Efficient Economy (ACEEE), the Energy Future Coalition, The Climate Group, the GridWise Alliance, the Intelligent Transportation Society of America (ITSA), the Technology CEO Council, the Telework Coalition and the World Wildlife Fund. Additional affiliates include the Information Technology Industry Coalition (ITIC), the Semiconductor Industry Association, and TechNet.

Mission Statement. Expand policymakers' understanding of the role of ICT in improving the energy efficiency of the broader economy. The coalition is committed to advancing public policies that promote the use of ICT solutions as a means toward solving our nation's energy challenge, spur innovation and economic opportunity, and contribute to practical strategies for mitigating climate change. By "ICT solutions," DESC means the full suite of hardware, software, and broadband technologies that can increase the energy efficiency of society.

Objectives. Over the next 24 months, DESC aims to raise the profile of the energy and climate ICT "macro story" to the same level of policymaker recognition, acceptance, and action in the U.S., China, and India that it enjoys in the EU and Japan. The focus on efforts in China and India, specifically, are essential given both countries' increasing emphasis on finding solutions to their own growing energy needs. Given the global integration of all our economies, collaboration and finding solutions bring obvious benefits to all involved.

Metrics of success of this initiative will include:

- Identification of energy ICT research and implementation as a national priority by the new U.S. Administration.
- Release of federal studies demonstrating how broadband and other ICT approaches can drive energy efficiency improvements.
- Completion of policy hearings in U.S. and Europe focused on the role of ICT in improving energy efficiency.
- Introduction in priority geographies legislation and other programs aimed at promoting the use of ICT to increase national energy efficiency in sectors throughout the economy.
- Climate change legislation that explicitly recognizes and enables the role of ICT in climate mitigation.
- Emergence of collaborative efforts between private industry and government to share information and results and develop energy ICT "best practices"
- Creation of new government programs that "lead by example," utilizing energy efficient technologies and smart ICT solutions to drive further efficiencies.