



‘CLEVER’ Technology Strategy Board project creates platform to predict UK smart meter data traffic and system performance

Collaboration between BT, EDF, PassivSystems, University of Bristol and 3C Research will de-risk multi-billion pound smart meter investment

19 October – [Closing the Loop for Everybody’s Energy Resources](#) (CLEVER), a [Technology Strategy Board](#) funded project, has recently completed, with the participants creating a platform capable of simulating smart metering transactions for the UK and predicting the data traffic and performance for the different smart meter communication infrastructure options.

CLEVER is offered to be used by the wider energy community to de-risk the UK smart meter rollout of 51 million gas and electricity meters, which has been estimated to cost between £7bn and £11bn.

The three-year project involved [3C Research](#), [BT](#), [EDF Energy](#), [PassivSystems](#) and [University of Bristol](#), and sought to address the many uncertainties around the smart meter roll-out, such as how large volumes of data traffic will impact the network and how alternative technology choices can meet the documented GB SMIP requirements.

It did this by building a computer simulation platform that represents and models the smart metering information systems, communications networks and infrastructure, from the enterprise management systems through to the metering equipment elements (and connected devices such as displays and appliances) within the home.

“The UK smart meter roll-out programme is one of the most ambitious undertakings the country has seen,” said Ash Pocock, project participant and Head of Industry, Regulation and External Affairs at EDF Energy. “But with such a project no one really knows how the performance of the complex communications and meter data management systems and dynamic traffic volumes will take effect. We need to understand these issues as early in the process as possible and CLEVER enables us to do exactly that.”

Models for CLEVER were built by University of Bristol (the project’s overall technical lead) and EDF Energy using communications network topologies proposed by BT and metering transaction scenarios (such as ‘take a meter reading’, ‘install a new meter’, ‘pay as you go top up’, “tariff update”) developed by EDF Energy which cover a wide range of possible system implementation scenarios in millions of homes.

It is currently being used to analyse system performance in a set of questions prepared by the project partners, but could be adapted for use in modelling a wider set of metering transactions and communications technologies scenarios defined by the whole smart metering stakeholder community.

“CLEVER’s real value will be as an industry-wide tool and we are in talks with DECC and OFGEM to use it to de-risk the entire UK smart meter programme.” said project leader, Geraint Jones, 3C Research. “The ability to provide a large scale simulator to answer questions based upon a wider

variety of complex scenarios, strategies, traffic patterns, volume of installed meters and network architectures will be invaluable to the smart meter rollout programme and all its stakeholders.”

The Technology Strategy Board is the UK’s national innovation agency, established by the Government in 2007 to stimulate technology-enabled innovation in the areas which offer the greatest scope for boosting UK growth and productivity. The CLEVER project was a key Technology Strategy Board investment and finished in May 2011.

The project also created a set of [visual demonstration](#) sequences that could be used as a consumer education programme on smart metering. The impact of smart meters without consumer engagement has been shown to be minimal in a number of trials conducted.

Connected home technology firm PassivSystems acted as a consultant on the CLEVER project, with a remit to focus on understanding the role of smart metering and consumer behaviour, something it feels is key to the success of any smart meter roll-out.

“The smart metering programme is an opportunity for the UK to show the world best practice in advanced management of the energy supply to the home and in changing people’s behaviour on energy usage,” said Colin Calder, CEO, PassivSystems. “Smart metering is a launch point for automation of energy in the home and a key stage in the development of a smart grid in the UK, both of which are incredibly important in managing the demand and supply of energy.”

-ends-

About PassivSystems: www.passivsystems.com

PassivSystems Ltd was established in 2008 to develop smart-home technology for the mass market. Beginning with energy, and continuing with security, assisted-living and other lifestyle services, PassivSystems creates simple, human-centred products that deliver effective solutions to some of today's most pressing global problems.

The company and its first product PassivEnergy have been widely commended by industry and media. The PassivEnergy home energy management product was cited as one of the top five gadgets at CES 2010 and PassivSystems was recognised as one of Europe’s leading privately owned companies in the Red Herring 100 Europe 2010.

Further recognition followed with PassivSystems named as both a 2010 Global Cleantech 100 and Tech Media Invest 100 company and the latest commendation was as a Red Herring Global 100 company. This was awarded in January 2011 and recognises the world’s most promising private technology businesses.

About the Technology Strategy Board

The **Technology Strategy Board** is a business-led government body which works to create economic growth by ensuring that the UK is a global leader in innovation. Sponsored by the Department for Business, Innovation and Skills (BIS), the Technology Strategy Board brings together business, research and the public sector, supporting and accelerating the development of innovative products and services to meet market needs, tackle major societal challenges and help build the future economy. For more information please visit www.innovateuk.org

For media enquiries:

Paul Allen, Rise PR

07515 199 487

paul@risepr.co.uk

For technical enquires:

Dr. Dritan Kaleshi, University of Bristol

Tel: +44 117 954 5196

Email: dritan.kaleshi@bristol.ac.uk