

# Energy Smart Metering Update – Opportunities for Water

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**Jason Brogden, Director, Engage Consulting**  
**ERA Smart Metering Programme Manager**

Jason.brogden@engage-consulting.co.uk

+44 7980 297094

ENERGY  
RETAIL  
Association



# Energy Retail Association

The **Energy Retail Association** (ERA), formed in 2003, represents the major electricity and gas suppliers in the domestic market in Great Britain.

[www.energy-retail.org.uk](http://www.energy-retail.org.uk)

Preparation and execution of policy on a wide range of key issues for the sector

Remit: fuel poverty, energy efficiency, customer billing, debt and disconnection, sales practice, switching supplier, smart metering

Members:



# SRSM Project

Starting from September 2006, the SRSM project at the ERA has been at the heart of smart metering developments within Great Britain. Working alongside the ERA members and industry experts, the project team has delivered a series of core products, many of which have been subject to consultation and comment.

Developed framework for smart metering in consultation with key stakeholders

Published Smart Metering Operational Framework Proposals and Options v1 in August 2007 (continuing to refine)

Policy and lobbying for smart meter mandate

Providing input to Government work

ERA work has given the industry a head-start for the work to come

Maintained liaison with water industry

[www.energy-retail.org.uk/SRSM\\_Project](http://www.energy-retail.org.uk/SRSM_Project)



# Smart Metering – what is it and what are the opportunities?

Good question...

Probably better to ask what you want from it

This will highlight some of the potential differences between energy & water

We can then consider how the energy smart metering infrastructure could be used

...and the potential next steps

# Energy Meter Functionality

**Two-way communication** with WAN and Local Devices.

**Remotely configure, monitor and manage** the Metering System

Supports **flexible tariff** structures

Electronic **storage and display of data**

Meter Import/Export to support **microgeneration**

Capability to **enable and disable supply**

- Contactor/in-line switch for all electricity meters
- Valve for all gas meters.
- **switch between credit and debit** (prepayment/PAYG) operation.

Display of **information to customer**

- Key area for flexibility and differentiation

**Network Requirements still outstanding**

# Energy Smart Metering will Deliver

- ✓ Gas and Electricity Smart Meters to every home (and business) by 2020
- ✓ Ubiquitous fixed 2 way communications connection to every metered premises – necessarily scoped and specified for energy requirements (wired and/or wireless –no single carrier solution)
- ✓ Energy meters and solutions will be interoperable – all standards proposed to be open and established
- ✓ Display solutions (LCD device, PC software, Mobile Phone, TV channel) informing customers of consumption levels, tariffs, balances etc. Providing an in-home interface to customers for utilities
- ✓ Support for future ‘smart grid’ applications such as distributed generation, active network management, electric vehicles etc.
- ✓ Potential platform for the delivery of other services using the interoperable energy ‘platform’

# So what does the water industry want?

Is it more about AMR and the 1-way automated retrieval of data?

Is it about supporting more complex tariff structures to incentivise water conservation (particularly in stressed areas)?

Is it all dependent on a higher penetration of water meters to build a business case for more efficient infrastructure?

Probably all to a certain extent, but the requirements and drivers differ dramatically between water companies

Must identify the requirements and the potential users of the system before functional capability is built

# Some Differences between Water and Energy

The water industry differs from the energy sector in that there is no Government mandate driving smart metering and no universal policy/mandate on the horizon

Metering roll-out in the water sector is currently a matter for individual water companies to agree with the regulator and this leads to a fragmented approach.

Energy metering is not a monopoly regulated service – it is procured competitively as a service by energy suppliers

The current market structure is not conducive to a universal adoption of smart metering, largely due to the risk of stranded assets in the competitive market

Therefore to deliver energy smart metering for the benefit of the country as a whole, we require Government legislation

- Government has published a +ve business case for energy smart metering
- Energy Bill facilitates smart metering roll-out
- Statutory Instruments will follow to deliver smart

# Where Energy Smart Metering Policy is...

**I was hoping to give a big update following Government announcement, but...**

October 28<sup>th</sup> 2008 – delivery of gas and electricity smart meters to all households by the end of 2020

Smart Metering Policy Consultation published May 11<sup>th</sup> 2009, closed 3<sup>rd</sup> August with Government Preferred Options for:

- Market Structure
- Metering System Functionality
- Customer display and information
- Preferred arrangements for non-domestic customers

Open Questions on:

- Networks involvement and requirements
- Issues and next steps for industry change programme

Decisions expected this week, with a central programme commencing shortly thereafter to design and deliver the solution and its' implementation

# Is it too late for water to be part of it?

**To be part of the implementation programme?**

almost certainly...

Too much to be done to gather requirements, deliver those requirements into industry design and get the supply chain ready to install smart water meters in the period 2013-2020

**To use the infrastructure that will be built for water?**

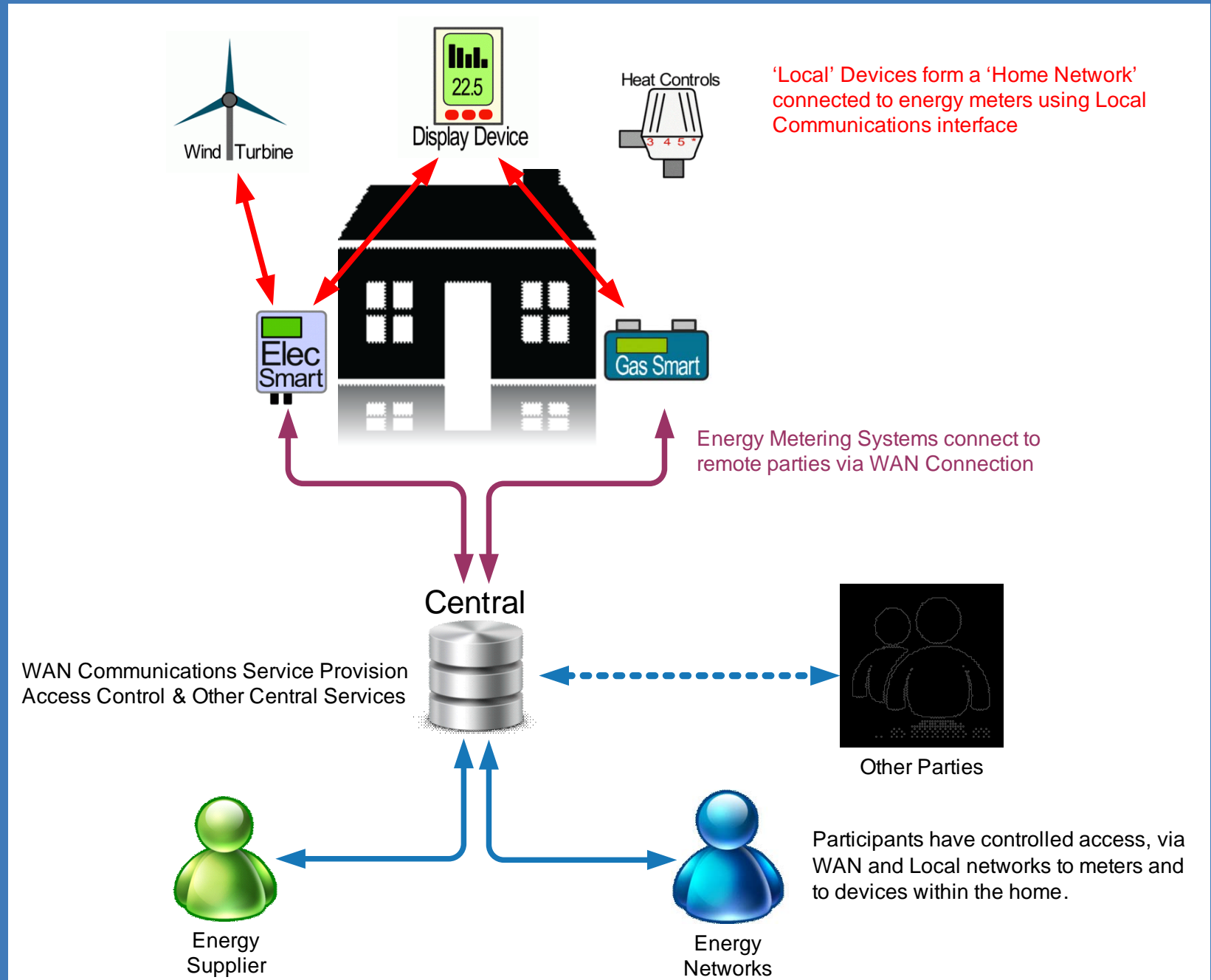
probably not...

But there is much to be done to make that happen

Some of the suggestions from the Walker Review will help:

Ofwat led smart metering group could influence decisions on approach and potential roll-out of smart meters

# Every Home, by 2020



# What will it deliver?

A fixed communications network with the potential for other applications to connect, for example:

- water, heat metering, telecare

Infrastructure will be built to deliver a “Utility Spine”

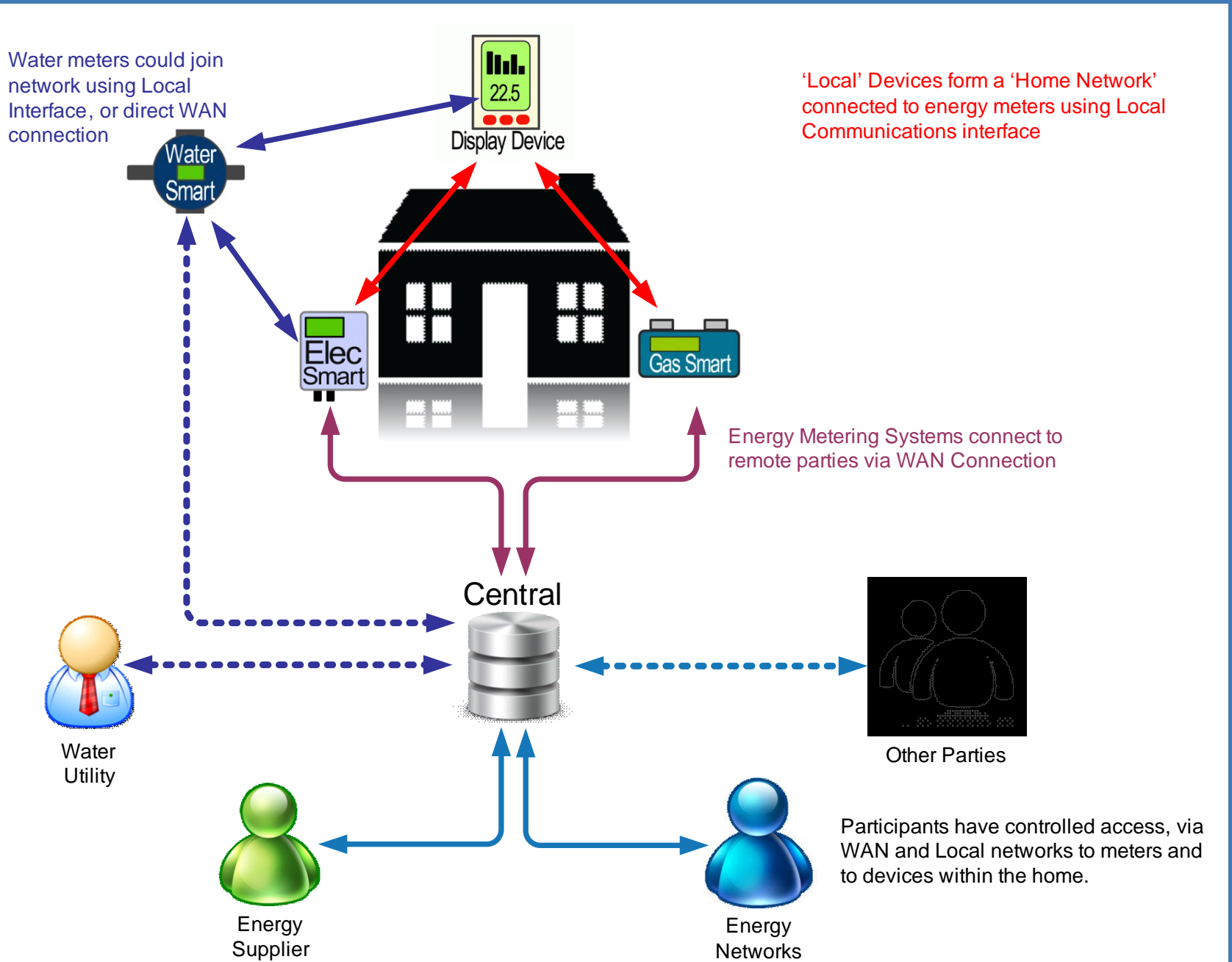
Will need to be impact assessed for support to other applications :

- From a technology solution perspective
- Commercially for taxonomy
- To ensure overall incremental cost benefit to Great Britain

The communications infrastructure will be there

The question is then whether other applications want to use it, how they get access to it and how their requirements are embedded into the infrastructure

# “Just Add Water....”



# Who will want to make use of it for Water

Individual water companies:

To provide a fixed communications network for meter reading and the potential to use smart meter functionality

It could give another option to assess for meter reading solutions:

manual meter reading, drive by/AMR, use energy smart communications

It could provide information to the customer on water consumption

Is there a case for GB plc for the industry as a whole?

Is there the potential for a Government mandate/ central policy

For water requirements to be built into energy smart metering infrastructure, then the incremental cost benefit case will need to be made

# To deliver for Water

Technically it should be able to be done...

Do you identify requirements now and assess the incremental cost benefit for GB now?  
or

Wait for the infrastructure to be delivered for energy and hope water requirements can be embedded later?

Need to identify requirements so that they can be built in through the End2End process chain:

- Requirements captured so that data exchange formats are built to support water metering data flows
- Or, at least make them capable of being supported in the future

Need to identify commercial requirements:

- Who to contract with and how to pay for network

# The European Standards Angle



Earlier this year, the Commission passed a mandate (M/441) to the European Standards Organisations – CEN, CENELEC & ETSI – to develop an open architecture for utility meters, requiring interoperable functionality and communications protocols

This covers gas, electricity, water and heat metering

Work has started in earnest within the Technical Committees and Steering Groups to deliver solutions for:

- Communications protocols within 9 months
- Additional Functionality (i.e. over and above MID functionality) within 30 months

Presence from Water (and Heat) on the committees is currently minimal

# Next Steps

Government Announcement and more certainty on energy smart metering landscape

Options for water industry to consider use of energy smart metering, e.g. Walker Report recommendation:

“Ofwat sets up a smart meter group, including the Environment Agency and water companies, to determine the costs and benefits of smart meters to inform any decisions on approach and potential roll-out of smart meters”.

Potential for industry as a whole, or individual water companies, to get involved early as a stakeholder in the Ofgem energy smart metering central programme

**Thank You for Listening**

**Jason Brogden**

**[jason.brogden@engage-consulting.co.uk](mailto:jason.brogden@engage-consulting.co.uk)**

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