

Phil McDermott  
says 2011 will  
be the year that  
smart meters  
come of age, not  
just in the UK  
but throughout  
Europe

**Follow the leader: Russia and Asia  
are watching Europe closely to  
assess the benefits of smart metering**



# Start the

**S**mart meters have long been under discussion, but this year actions will speak louder than words as implementation gathers momentum across the European Union. A quarter of the way in, 2011 is really looking like the year of the smart meter.

The push for automated meter reading (AMR) is being driven by an EU mandate, which demands that all states run a cost-benefit analysis by the end of 2012. Where the results are positive, the country is required to implement electricity smart metering by 2020 (no fixed deadline has been established for gas). On top of that, rising energy prices are encouraging commercial consumers to want to understand their usage better and to find ways to reduce costs.

Looking ahead, smart metering is destined to be a £200 billion global market. Investment in smart metering in the EU is expected to be more than £45 billion, with potential financial benefits ranging from £12 billion to £59 billion.

Although the overall objective is the same – implement smart metering by 2020 – we have found through our activities across Europe that the practicalities are different in each mar-

ket. Regulatory frameworks differ; some markets are much further ahead than others (Scandinavia, and Sweden, in particular, are leading the way); and different organisations will lead the rollout in different countries. Moreover, smaller countries will usually find the rollout easier than larger ones, because the market is likely to be simpler, with fewer stakeholders that need to be engaged.

As well as the differences between EU countries, suppliers are also pursuing different routes to market. Broadly speaking, by the end of 2011 we should see the deployment of three supply models. First, suppliers can sell smart metering solutions directly to customers, providing the requisite technology and systems for their installation and use. Second, they can provide systems to transporters who can use their own in-house metering expertise, GSM data-carrying experience and IT infrastructure to efficiently roll them out to customers (this is one of the models that Gazprom Global Energy Solutions has adopted outside of the UK).

There is also a third option – the DIY approach. Again this involves selling the smart meter directly to customers, but only providing the

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# meter

hardware and protocol, and leaving out the associated systems and support. For obvious reasons, this only works with organisations that have the necessary technical expertise in-house, and in such cases can provide a cheaper alternative.

Energy savings – estimated at between 10 and 15 per cent of consumption by the Carbon Trust – will tend to be front-loaded, because AMR

can quickly identify inefficiencies in processes or behaviours and deliver significant wins fast. But this year will also see technological changes that will open up further savings.

One key trend will be cheaper ways to transmit data. In the past, each smart meter had its own GSM mobile phone technology to send information to suppliers. However, we are now moving towards a cheaper hybrid system, where meters use a radio-based transmitter to deliver consumption data to a GSM or internet-enabled data concentrating hub, each with a data collection range of up to 1km. This solution reduces the cost of each meter, and adds further weight to the cost-benefit analysis.

However, pitfalls will also be revealed this year. While business customers are usually already well-versed on the benefits of smart metering, residential customers will need a more educative approach. The sheer scale of the project means hurdles of resourcing and skills will need to be overcome. And because AMR solutions are relatively new, 2011 will see the market constantly refine the implementation process through trial and error.

As we head into 2012, we will also see the rest of the world begin to follow the EU. Russia and eastern Europe are looking carefully at the benefits the EU is achieving through AMR, and are on the cusp of their own programmes, potentially leap-frogging the dumb metering stage altogether. Asia will also become an important market soon. From our experience in the region, we predict it will be the largest importer of smart meters by 2014. ●

*Phil McDermott is head of Gazprom Global Energy Solutions.*

**The sheer scale of the project in the UK means hurdles of resourcing and skills will need to be overcome**

## **Delivering the goods: how British Gas is managing the logistics of its accelerated rollout**

The logistical and infrastructure challenges of rolling out smart meters to each of Britain's 26 million homes by 2020 are huge. The whole smart meter lifecycle needs to be taken into account, from construction to product maintenance, to recycling and waste management. Robust operational systems and processes are required to effectively manage the flow of assets across complicated supply chains.

British Gas is working in partnership with DHL Supply Chain to deliver a national supply chain using a regional network. This will manage meter assets including smart meters, in-house displays and associated ancillary items from British Gas's national warehouse to DHL's national distribution network of collection points. Contingency stocks have also been put in place in secure locations, ensuring that emergency reserves of items such as meter kits are readily available for deployment.

The advantage of such a multi-site solution is that each site is, in effect, a ready-made sister site should a problem occur at one of the locations. This makes it easier to ensure business continuity and provide a reliable service, as well as improving productivity for engineers.

The regional model also provides the flexibility to manage short and long-term volume fluctuations. DHL is fully integrated with British Gas systems and can track metering assets at serial number level in real time, at all points throughout the supply chain.

DHL will also manage the return of meters from collection points to the relevant asset owners. It already operates waste management processes for British Gas's housing refurbishment projects. Minimising waste streams in a sustainable and responsible way to deliver the national smart-meter rollout is an important consideration.

**by Paul Quinn, commercial and strategic development director, DHL Supply Chain**