

## Paul Newman

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**Subject:** Distribution losses - Proposal in letter of 5th November

-----Original Message-----

From: McOmish, Jim [mailto:Jim.McOmish@SPPowerSystems.com]  
Sent: 19 November 2008 18:01  
To: Mark Cox  
Cc: Mathieson, Scott; Hunt, Jeff J; Campbell, Angus; Roberts, Dave A  
Subject: Distribution losses - Proposal in letter of 5th November

Dear Mark

Comments on proposal for meters at all secondary substations for network loss measurement (DPCR5 update letter - 5th November 2008)

SP Energy Networks (SPEN) broadly welcome the decision to investigate this proposal for technical losses measurement, and the recognition that achieving accurate measurement of technical losses is one of the key enablers to an effective losses incentive mechanism.

Whilst there are some cost and implementation challenges, detailed below, we believe that this is a feasible proposal that merits further and more robust investigation / and trailing. We believe that it has the potential to measure a number of technical loss initiatives, whilst increasing theft management abilities in conjunction with the roll out of smart meters, and perhaps playing a role in early preparation / monitoring need for active network management.

The summary of our initial high level assessment for rollout to SP Distribution and SP Manweb is as follows:

Cost: (note there is obviously significant uncertainty associated with these costs)  
Installed equipment costs are estimated at between £15m and £30m (with a 10-15 year operational life) The opex is estimated at - £1m to £3m p.a. although this includes GPRS comms and the cost of this is coming down year on year

The major cost uncertainty and sensitivity is related to the CI/CML impact of installing equipment in substations that require to be isolated to achieve safe working. If prearranged outages were required for around 40% of our ground Mounted substations the CI/CML impact is estimated around £100m.

We recognise that these costs are significant in the context of the loss reduction investments planned for DPCR5, however it should be noted that these are initial assessments based on current technologies and equipment, and there may be scope to reduce costs significantly, for example:

- a) Develop a system for retrofitting to live boards (old and new) without the need for outages (prime sensitivity).
- b) Work collaboratively to develop a cheaper 'meter' - e.g. the meter itself doesn't need to be smart, one way comms would suffice.

We believe that these opportunities to reduce the costs lend themselves to trialling under the current IFI mechanism, which would also allow for more accurate cost assessment and we are keen to understand Ofgem's thoughts and appetite for this.

Accuracy:

The metering class of the existing Maximum Demand Indicator CTs is typically 5% (compared to 1% or better for customer metering) but is probably ok for this purpose (the meters would be operating in the more accurate ranges of operation and could be adjusted with correction factors). Consequently we believe that this could provide a mechanism to accurately record the network losses on > 70% of our network.

Deployment:

A programme of deployment probably could be rolled out over a 3yr period. Our current view is that a 2yr rollout would be extremely challenging.

Baseline / target setting:

It is unclear how this would be done given the step change from current losses reporting, and we think this potentially presents a material risk for customers / companies, but should not be insurmountable.

Alternatives:

Whilst we believe that this merits further investigation, there are a number of alternatives that we believe provide equal or greater confidence for customers benefits.

For example the ENA proposed input based mechanism supplemented with a modelled output/driver flexed by either actual measurement on each project or change in total units distributed, to provide an output based driver for DNO and customers.

It is important to note that that the significant majority of our current technical loss reduction plans for DPCR5 relate to primary and grid transformers which already have load monitoring equipment in place, so would not obtain a significant gain from this proposal. However, the installation of meters at secondary substations could be applied surgically to those areas which we apply other loss reduction initiatives, although this would lose some of the potential the benefits of blanket rollout, including facilitate a wider range of loss reduction techniques and providing an overall network loss measure.

I hope this is helpful to inform the development of your thoughts. Please do not hesitate to contact me should you have any queries.

Regards

Jim McOmish  
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