29th November 2006

Ronke Adenuga
Ofgem
9 Millbank
London SW1P 3GE

Re: IFI Development Programme, open letter.

Dear Ronke,

Kelman supplies electronic measurement and control equipment to the electrical power market. It is based in Lisburn, N Ireland with sales offices and subsidiary operations in 14 countries. It has approximately 150 employees which will expand to 250 during 2007. Part of this growth will be in China with the opening of a new manufacturing operation in Shanghai in Jan 2007.

The 3 sectors that make up our business are; Low Voltage Distribution, Railway Automation, and Transformer Monitoring. Both the LV and Railway business are heavily focussed upon the UK and European markets, while the transformer market is global in nature.

The privatisation of the electricity sector in the UK resulted in a dramatic restructuring of the operating companies, which in turn, led to significant reductions in overheads and massive de-manning programmes.

One of the results of this was that there was a need for a new generation of equipment designed to help keep the system running and meet the demands of the customer and the Regulator. Kelman was set up in 1994 to provide such new and innovative products and several such as the Rezap and Fusemate, have subsequently become very widely used, almost to the point of being standard issue throughout the UK. There was an element of innovation within the Utilities at that stage, but our impression was that the relevant people were not seen as core to the line management teams and were often close to retirement.

During this period Kelman developed, specifically for the UK market, a range of medium voltage switchgear as well as low voltage instrumentation. The switchgear included overhead line reclosers, retrofit modules for withdrawable 11kv switchgear, ring main units designed for automation and a new generation of 11kv substation switchgear.

The instrumentation included equipment for the cable network and a new generation of distribution protection. However it became apparent that there was not a real commitment to adopt this new technology in areas other than those which were immediately affected by the current distribution price review and therefore Kelman was forced to divert much of the technology into other markets. We found ourselves in a position of providing 'technology push' but with no corresponding 'technology pull' from the network companies.

All of our medium voltage and protection engineering was transferred to Russia and adapted for both the Russian and Chinese markets and further developments for instrumentation that could be used on the UK cable system were deferred. Kelman then concentrated its design work on the electrified railway and power transformer markets and re-structured its sales infrastructure for the international power markets.

One rather surprising application for some of this technology has been found in the railway industry with the Signet system. This is a system that uses the same principles of high speed vacuum switching and local intelligent protection (first conceived for the electrical distribution system) and has applied them to the problem of providing reliable power distribution to the signalling systems on the West Coast Route Modernisation project. This system replaces the old, and inherently unreliable, 650Vac system with a fully automated system that will detect any faults, automatically isolate the faulted section and restore supply from an alternate source, and then communicate the results to a central location. It consists of a network of over 700 LV reclosers complete with an integrated database of protection and operation information. It has proved a great success in operation and has greatly reduced the train delays due to signal failure where installed. One can only speculate that it would have similar benefits on the MV distribution system had it been implemented there as intended.

However the situation has changed dramatically with the introduction of the IFI programme. The electricity companies have now adopted a fresh and energetic approach to innovation that has encouraged Kelman to make a significant investment of engineering resources back into the UK market. To illustrate this point; around 6 years ago approximately 90% of our engineering research and development man-hours were engaged in work for the UK distribution networks but that had fallen to perhaps 30% before IFI – indicating the relative lack of ‘pull’ from the industry in general. Subsequently we have almost doubled our R&D commitments in this area.

There is now a new breed of talented line managers that have emerged within the industry who are motivated to deal with the new challenges facing the electricity supply sector. This seems to be contributing to a genuine commitment to producing real equipment that can be developed and brought to commercial service as opposed to merely doing development work for its own sake. From our point of view it is vital that the R&D efforts result in a commercial product and we would welcome additional incentives to encourage the industry to roll-out new technical solutions once they have been developed. This may well require a longer term view of the evaluation of benefits and incentives than is currently in place.

Kelman has been able to work with United Utilities and more recently with EDF on a number of projects and the first products of this collaboration are almost ready to test. We also have several new and exciting projects currently under examination, which show the promise of helping to make the network much more reliable.

The IFI programme has also encouraged us to examine several longer term developments related to distributed generation and renewable resources and we hope to be in a position to begin work on these very shortly.

There is no doubt that the introduction of the IFI programme has been the catalyst that has created this dramatic change and hopefully it will be extended to the Transmission sector where it could have the same effect. We would encourage Ofgem to extend the IFI incentive into the next Price Control period. It is our view that this will not only bring added value benefits to the sector and to electricity customers but is an essential element in ensuring that the industry is ready to face the challenges of the next decades

In summary.

- The IFI scheme has been a great success in stimulating creative technical thinking in the industry and should not only be extended into the next Price Control Period but expanded as outlined below.
- Additional incentives to implement practical systems resulting from IFI sponsored R&D.
- Extend the scheme to cover the transmission systems in addition to the distribution network.
- Examine how the scheme may be revised to reflect the mid to long term benefits to the electrical system to be gained by the implementation of new technology.
- Consider including benefits of improved equipment reliability and asset life extension in IFI incentives since these topics will become of critical importance in the next decade as the system ages.

If you have questions regarding any part of the information stated above please feel free to contact me. I look forward to the development of this programme and would be delighted to be involved in any further discussions in the future.

Yours sincerely,

John Cunningham
Managing Director