

### **Télécommunications pour les réseaux intelligents : Enjeux & Solutions**

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The impact of smart grid on utilities is to enforce a radical rework of how energy is produced and delivered to the world's consumers. The industry agrees that this will be achieved only through harnessing the capabilities of Information and Communications Technologies (ICT) to introduce flexibility to a rigid infrastructure of copper and steel and to improve transmission efficiency and asset utilization, without sacrificing either safety or reliability.

Consequently, utilities will need to put in place the new technologies and processes that will enable the measurement and control of energy flow throughout their networks, knowing that today such tools and processes are generally restricted to the high voltage networks.

For this to be effective, a robust, IP-based, always-on communications infrastructure is mandatory to support utilities in maintaining their key operational processes: protection, outage management, system management (balancing supply and demand), production dispatch and asset management (fault and problem management), and so on.

This being said, the move to smart grids cannot occur overnight: energy assets have lifetimes of 40 to 60 years and cost billions of dollars to manufacture and deploy. This means that the concept of radical change has to be turned into an evolution, enabling utilities to manage their assets lifecycles efficiently and pragmatically.