

Going Green and Global for a Golden Future?

by Tariq S. Durrani

Tuesday, September 18th, 2012

3:30 - 5:00 p.m.

Colleagues Room (Sierra Center, 2nd Floor)



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The present Information Revolution may appear unique, without precedent. However, using a historical perspective, the talk will chart out the development of past industrial revolutions – steam coal and iron, steel and heavy engineering, railways, and automobiles to illustrate trends and similarities. There is a resemblance between railways, canals and the Internet, in that they are all ‘Connection technologies’. They connect places, they connect businesses. Building on this analogy, the talk will establish that the current economic depression, at least in the West, is a phase in the development of the Internet revolution and that investment in green technologies and low carbon infrastructure will lead to new opportunities.

It is worth noting that The Low Carbon and Environmental Goods and Services (LCEGS) sector which includes traditional environmental activities, as well as activities in the renewable energy and emerging low carbon market, had an estimated value of \$5 trillion globally in 2007/08. Almost half of this market value stems from activities in the wider supply and value chain including green communications. The sector grew by approximately 4% in 2008/09, and is forecast to grow at a similar pace over the next decade.

Thus, transitioning to low carbon economies and green communications will support the agenda of economic growth and success. Starting with the premise of current consumption, a case will be made that networking, smart grid architectures, and in particular base station power optimization and greener access technologies need to be developed to support future developments.

ICT corporations are developing advanced products to meet the green markets, research labs and university groups are exploring new avenues for research programmes in green communications technologies. There is an expectation of growth in green jobs. If the value chain is considered then there is a need for skills developments to meet the demand. Hence an opportunity exists for the development of training programmes or postgraduate courses. To this effect, structures for such programmes will be discussed at the presentation.

In the context of green technologies, the future of green communications will provide electrical engineers with new opportunities to innovate in a field which is - technically sophisticated and demanding; of great social impact, competitive and offers high potential for economical rewards and lead to the golden age of the future.