Going Green

Sustainability is a hot topic in telecom, but what exactly should vendors and operators do? Gartner analyst Bettina Tratz-Ryan explains.

By Jim Hinckley

Thanks to power-hungry equipment such as data centers, the information and communications technology (ICT) industry produces roughly as much carbon as the airline industry. But there's good news. Beyond reducing its own carbon footprint, the ICT industry can help reduce emissions in other economic sectors by five-fold, or 7.8 Giga-tons.

Tellabs is among a growing number of telecom vendors and operators working to reduce the industry's carbon footprint. *Insight* contributing writer Jim Hinckley recently spoke with Gartner analyst Bettina Tratz-Ryan, who tracks the ICT industry's sustainability initiatives.

Jim Hinckley: How do you define "sustainability"?

Bettina Tratz-Ryan: At Gartner, we see it as a business technology, processes or solutions that use resources in the most efficient and resource-mindful way possible.

A growing area of the "sustainability business" is technologies and expertise that help network operators manage power consumption more efficiently.

JH: How does the term "carbon footprint" apply to a "non-smokestack" industry such as ICT?

BTR: Carbon footprint is mainly about an industry's overall energy consumption and how efficient its energy use is. In traditional ICT networks, switches and other components typically are always on. A service provider's carbon footprint also includes its service vehicles and the energy used to heat and cool its buildings and switching centers.

JH: What are the ICT industry's top sustainability priorities?

BTR: Green IT and energy efficiency are top priorities at many ICT companies. Others focus more on incorporating a suite of sustainability best practices into their product lifecycles (for manufacturers) or network lifecycles (service providers). These cycles typically range from 2 to 6 years. That length is why companies increasingly seek ways to build sustainability into their long-range planning.

At the corporate level, innovative service providers such as Telefónica, BT, Deutsche Telekom and AT&T are taking the lead in defining how to achieve a lower-carbon world. Examples include developing broadband infrastructure for "smart cities" and by partnering with vertical industries such as utilities and metering.

Industry groups such as the GreenTouch Consortium also play a role. Launched in January 2010, GreenTouch already has 40 service provider, vendor, academic institution and government members. By 2015, the consortium plans to provide a reference architecture, specifications and demos for a new breed of ICT network that's 1,000 times more energy-efficient than today's networks.

With sustainability becoming a bigger part of CSP product-lifecycle planning, supply-chain management is changing. Vendors must deliver products that are highly energy-efficient, are manufactured as sustainably as possible and use recyclable components and materials when possible. Service providers are imposing these and other requirements because equipment choices have a direct impact on the sustainability metrics that regulators require them to report.

JH: How do service providers' sustainability goals and expectations differ from one region to another?

BTR: It depends mainly on the regulatory environment and stakeholder demands in the given region. Another key factor is the stability of the region's power supply. In Europe, both the EC and individual countries impose regulations on power consumption, materials used in manufacturing and other areas of the ICT business.

JH: What kind of impact can ICT have on sustainability in fast-growing emerging nations?

BTR: Governments in emerging countries are often far more sustainability-focused than you might imagine. In discussions I had 3 years ago with Indian government officials, they emphasized that they don't want India to become a dumping ground for low-quality, end-of-life devices from the West that contain hazardous materials.

CO: Central Office
CSP: Communications Service Provider
RFP: Request for Proposal

JH: Is ICT leading or lagging behind other sectors in terms of sustainability?

BTR: That depends on how you look at it. Service provider networks, their maintenance vehicles and other operations are putting huge carbon and energy-use footprints onto the countries and regions they serve. In Europe, the EC and other regulators have had to push service providers to prove they are reducing these footprints.

On the other hand, in large, emerging countries such as China and India, energy supplies are less plentiful and [less] reliable. Meanwhile, the growth of mobile commerce, subscribers and infrastructure is happening much faster than in the developed world. As a result, providers in these regions want to make their networks and equipment as energy-efficient as possible. In addition to sustainability, they want to ensure they can operate in their limited-energy environment.

JH: Do certain ICT companies stand out as leaders in sustainability?

BTR: Traditionally, RFP requests drive ICT vendors' business. But in the last few years, companies such as Tellabs are innovating around sustainability without waiting for customer requests. For instance, some vendors have decided on their own to buy minerals only from suppliers who do not employ child laborers, even if the vendor can't pass along the higher cost to its customers.

Besides energy efficiency, sustainability leaders also should focus on:

- The product lifecycle and the materials being used.
- Asset-disposal strategies.
- Educating customers to use products in the "right" way.

JH: Do you see optical networks as a key opportunity for service providers to improve their energy efficiency?

BTR: If designed right, optical networks certainly can deliver significant energy savings, and greater reach and density more sustainably. Passive optical nodes use far less power than a CO. It's also much easier to place them exactly where they are needed. That flexibility means networks can be designed more efficiently than before, with even less equipment and infrastructure being put into the field.

Tellabs has the opportunity to work with service providers to create these highly efficient network designs. Beyond that, they can provide network management tools that can help service providers operate them for maximum energy efficiency.

JH: Any thoughts on things Tellabs can do to improve its sustainability efforts?

BTR: The main thing for Tellabs is to educate the market on what they're about environmentally and socially, and share their best practices, especially in working with customers. ■

For more information about Tellabs sustainability efforts, check out www.tellabs.com/sustainability.