

October 13, 2011

While much of the attention in the smart grid industry has been focused on the U.S. market, developing countries experiencing rapid economic growth, like India, China and Brazil, are also looking to make their power grids smarter.

For these countries there are some similar, and some very different, reasons to make the grid smarter compared to the developed world.

According to research from the Bangalore-based nonprofit Center for Study of Science, Technology and Policy (CSTEP), these are five reasons why developing countries need, and want, smart grids.

- Stopping power theft: Not such a problem in developed countries, but in India, with little oversight of the grid and higher poverty rates, power theft is quite common. Rahul Tongia writes in his white paper for CSTEP that just basic grid accounting – knowing where the power is flowing when – will be a “strong driver” to cut down theft.
- Higher quality/reliability of power: If homes in developing countries are connected to the grid, often times the connection is poor, and users can only access electricity during certain times of the day. Grid load balancing and distribution automation services can help keep power flowing more continuously and alert utilities to blackouts.
- Leapfrog to smart grid: In many developing countries, power grids have not been fully built out – in Tanzania 80 percent of the population lives within 5 km of a transmission line but only 10 percent has access to electricity. But smart grid technology can “represent an opportunity for developing countries to leapfrog in the growth of their power sector to more manageable, reliable, and scalable designs,” writes Tongia. Basically skip the older systems, and start with the newer IT-based ones. Many have speculated that developing countries could do the same thing with renewable power.
- Growth justifies the cost: Some developing nations like China, which will double its energy needs in a decade, are growing at such a rapid pace that the addition of smart grid technologies can be justified to utilities by the growth of power consumers. The hardest part for utilities in the U.S. is making the economics of smart grids work, but in China the addition of many new customers can help with the return on investment.
- Renewable power needs smart grid: If developing countries are more successful in adding distributed clean power than developed countries, utilities will need a smart grid to manage problems caused by intermittency (sun and wind only happen during certain times of the day) and distributed power. Tongia writes that distributed clean power will “fundamentally change the design of the grid, beyond any policy or regulatory changes distributed end-user generation entails.”

Meet Rahul Tongia at the [Smart Energy International India](#) conference and exhibition taking place on November 14-16, 2011 in New Delhi.

Due to unprecedented demand, we have put together a site visit that will offer international companies the opportunity to gain valuable insight into India’s justification for implementing advanced metering and smart grid technologies. This tour will take you to market leading utilities across India to experience

what large scale metering and grid operations are all about for emerging economies. For more information, download the [Smart Energy International India program brochure](#).

<http://www.metering.com/node/20174>