Report on Technology Enabled Transformation of Power Distribution Released

Prepared by CSTEP and Infosys

Bangalore, India – October 30, 2008: The Minister of State for Commerce and Power, Mr. Jairam Ramesh today released a report titled "Technology: Enabling the Transformation of Power Distribution in India" at Infosys Technologies Ltd (Infosys) in the august presence of Deputy Chairman of the Planning Commission, Dr. Montek Singh Ahluwalia. The Ministry of Power had requested Centre for Study of Science, Technology and Policy, Bangalore (CSTEP) and Infosys to update the 2002 IT Task Force Report prepared under the chairmanship of Mr. Nandan Nilekani.

The report observes that India's power sector, in particular the distribution sector, must undergo a fundamental transformation to serve India's economic growth and societal needs. Power generation will need to grow 4 – 5 times from the current capacity to keep up with the desired economic growth. Further, the threat of climate change introduces new complexities and highlights the need to integrate a large number of distributed and intermittent low-carbon power generators that can harness solar and wind energy. The report explores the impact of this magnitude and complexity of power requirement on the future design, operation and management of power distribution.

The report provides a technology trajectory for distribution, illustrated in three steps:

1. Advanced metering to reduce AT&C (Aggregate Technical and Commercial) losses that are at an unacceptably high-level presently

2. Automation to measure and control the flow of power to/from consumers on a near real-time basis

3. Moving to a smart grid to intelligently manage outages, load, congestion and shortfall

Consumers are an integral part of this entire picture and would help drive this transformation that hinges on a model driven by increased transparency and accountability.

The report describes how each utility should develop its own technology adoption roadmap depending on its priorities and current business and technology maturity level. For this trajectory to be realized, interoperability among systems is critical, similar to the practice in mobile communications, banking and other networked industries. National level standards covering all these aspects have to be established to ensure the success of this transformation.

The report cautions that while technology is a powerful enabler, it is not a solution by itself; business-needs drive choice of technology and not the other way around. People (properly trained and equipped personnel) are the critical players for the successful management of any such system.

To achieve the national vision, the report recommends the establishment of a national institution drawing upon the best available talent to make this transformation happen. This institution should have the authority and clear mandate to coordinate and implement all necessary changes.

Overall, the report observes that while the task sounds daunting, the very lack of an expensive legacy infrastructure and the anticipatory knowledge of future challenges is a great strategic advantage. If executed with planning and foresight, India can develop a high quality, state-of-the-art transmission and distribution (T&D) infrastructure that would serve for the next several decades even as the industry dramatically scales up investments.

The report is available for download at www.infosys.com/newsroom/features/power-sector-report.asp and http://www.cstep.in/Power_Sector_Report.pdf. It would soon be published on the ministry of power website.