



Dynamic Line Ratings Designated as a Key Enabling Technology for the Smart Grid by the U.S. Department of Energy

The U.S. Department of Energy has designated Dynamic Line Rating technology, offered by Nexans through its subsidiary The Valley Group, as a key Smart Grid T&D Infrastructure Metric in its Smart Grid System Report. This report is generated as a result of the Energy Independence and Security Act of 2007 and is prepared by the Office of Electricity Delivery and Energy Reliability.

Dynamic Line Rating technology is one of eight identified Smart Grid T&D infrastructure metrics in Section 3.6.3, *Delivery Infrastructure*. Specifically, the report identifies Dynamic Line Ratings as a way to “improve the ability to respond resiliently and adapt to system events.” The report encourages an “increase in the penetration of dynamic line ratings” as a way to know the “status of the deployment” of the smart grid.

The report continues, saying “The deployment of dynamic line rating technology is also expected to increase asset utilization and operating efficiency” (page vii), one of the six recognized characteristics of the smart grid. Specifically, “A smart grid applies the latest technologies to optimize the use of its assets. For example, optimized capacity can be attainable with dynamic [line] ratings, which allow assets to be used at greater loads by continuously sensing and rating their capacities” (page 10).

In “Challenges to Smart Grid Deployments,” the report acknowledges the importance of “ensuring interoperability of smart-grid standards.” Nexans’ Dynamic Line Rating technology offers the advantage of full interoperability and will continue to evolve according to the National Institute of Standards and Technology (NIST) Interoperability Standards Development Road Map. In addition to helping the transmission grid operate more efficiently in real time, reliable Dynamic Line Ratings are also recognized as a way for the smart grid to operate “resiliently to disturbances, attacks, and natural disasters” (page 11).

The Valley Group has been closely involved in and has been a contributor to numerous industry activities related to the evolution of the Smart Grid. Recent participation has included a presentation and a panel discussion on Grid Reliability at the Grid Week 2009 Conference. In addition, Nexans is actively participating in the North American Synchro Phasor Initiative (NASPI), is represented on North American Electric Reliability Corporation’s (NERC) Smart Grid Task Force, and is supporting NIST Smart Grid Standards development efforts.

“We are very happy that The Department of Energy has recognized Dynamic Line Ratings as an important component of the T&D Smart Grid framework” says Sandy Aivaliotis, Senior Vice President of The Valley Group, a Nexans Company. “Wide deployment of reliable Dynamic Line Ratings will help optimize asset utilization of today’s transmission grid and also enhance overall Wide Area Situational Awareness whose primary goal is to help render the transmission grid of tomorrow more reliable. This recognition,” continued Aivaliotis, “is key for our technology.”

Link to complete report:

http://www.oe.energy.gov/DocumentsandMedia/SGSRMain_090707_lowres.pdf



About Nexans

With energy as the basis of its development, Nexans, the worldwide leader in the cable industry, offers an extensive range of cables and cabling systems. The Group is a global player in the infrastructure, industry, building and Local Area Network markets. Nexans addresses a series of market segments from energy, transport and telecom networks to shipbuilding, oil and gas, nuclear power, automotive, electronics, aeronautics, handling and automation. With an industrial presence in 39 countries and commercial activities worldwide, Nexans employs 22,400 people and had sales in 2008 of 6.8 billion euros. Nexans is listed on NYSE Euronext Paris, compartment A. More information on www.nexans.com.

About The Valley Group

The Valley Group is the leader in Dynamic Line Rating (DLR) systems for overhead transmission lines. The CAT-1 DLR system allows utilities to know the true capacity of transmission lines in real time. Benefits include improved network reliability and visibility, congestion relief, accelerated integration of renewable energy (wind) into the existing network, and improved grid efficiency. The CAT-1 system's unique, patented technology is able to account for the spatial variability of weather along transmission lines. Since weather is the chief factor affecting OHL capacity, the ability to accurately gauge the impact of changing weather conditions is critical to delivering a dynamic measurement of the line's capacity. The Valley Group, a Nexans Company, is the established industry leader in developing dynamic line rating technologies, software, and applications, having provided dynamic line ratings to over 60 utilities on 5 continents. DLR is a recognized enabling technology for the Smart Grid, as noted by the U.S. Department of Energy in its Smart Grid System Report of 2009. We are adapting the application of proven dynamic line rating technologies to the evolving Smart Grid environment. For more information, visit our website at www.cat-1.com