



Press release

Oncor's advanced grid project provides successful demonstration of how Nexans' Dynamic Line Rating technology can boost the capacity of overhead power lines

Final report has just been published on US Department of Energy (DOE) funded project in Central Texas that focused on the use of Dynamic Line Rating to provide real-time information on conductor temperature - enabling system operators to make fully-informed decisions on how hard they can drive their overhead power lines

Paris, March 5, 2014 – Oncor, a US transmission and distribution utility, successfully completed a Department of Energy (DOE) Smart Grid Demonstration Program (SGDP) showing that the real-time information provided by Nexans' Dynamic Line Rating (DLR) technology can make an important contribution to increasing the power carrying capacity of existing overhead line assets and reducing congestion.

For the core component of the SGDP, Oncor installed the DLR technology on eight 138 kV to 345 kV transmission circuits located in Central Texas, where it enabled power capacity to be increased by up to 14 percent. Oncor is continuously looking for new technology that will bring added value to the Texas market, which is what DLR does. This will help Oncor continue to deliver reliable service to all of its customers and continue to drive the economic growth in the Oncor service territory.

Tip Goodwin, DLR Project Manager at Oncor says, *"Technologies like DLR give transmission owners like Oncor significantly increased visibility and flexibility to operate more reliably and efficiently. That's important not only for our residential customers, but also for the more than 400 communities we serve who are looking to grow existing businesses and attract new businesses. While electricity infrastructure may not receive the headlines that tax incentives do, economic and reliable electricity is at the top of the list of priorities for businesses."*

The Nexans DLR technology employs an algorithm that transforms real-time sensor data into a conductor temperature and calculates the maximum current capacity - the Dynamic Line Rating – which maintains the overhead line sag within safe clearance limits. The DLR is updated every 5-10 minutes, providing operators with much clearer visibility than both traditional Static Line Ratings, which use pre-determined weather assumptions, and Ambient-Adjusted Ratings, which takes into account the ambient air temperature.

The final report notes that *“The SGDP Project has been a complete success, having demonstrated that Dynamic Line Ratings are a practical and efficient tool to increase the capacity of a transmission line, which will enable transmission providers and system operators to mitigate congestion, increase system reliability and redeploy capital to its most efficient uses through a least regrets strategy.”*

DLR was being evaluated as a potential key component of Oncor’s 5-year capital investment program that will average \$1 billion per year. The program’s strategy is to invest in technologies and equipment to improve reliability and efficiency of the company’s infrastructure.

“Our investment program is not about just adding more infrastructure. We want to be able to use our existing assets more efficiently and effectively because that’s a more economical use of our investment dollars. DLR clearly demonstrated that we could improve the efficiency of our existing assets in an economical manner,” said Jim Greer, Oncor Chief Operating Officer. *“Already we are looking at other areas of our grid where we can install this capability for future investments. This is good for Oncor, the state grid and ultimately, all of the customers we serve.”*

The report highlights the following conclusions and breakthroughs:

- **Increased line capacity.** DLR provided up to 14 percent additional capacity above the Ambient Temperature-Adjusted Ratings. The incremental capacity was available from 83.5 to 90.5 percent of the time.
- **Reduced congestion.** The project found that 5 percent additional capacity could relieve congestion by up to 60 percent on the target lines with DLR installed, while 10 percent additional capacity would practically eliminate all congestion on the target lines. Congestion on the Oncor transmission lines in 2011 and 2012 cost more than \$148 million and \$197 million respectively.
- **Market integration.** The integrated Dynamic Line Rating (iDLR) system at Oncor feeds real time conductor ratings to ERCOT, the market operator, who then incorporates the additional capacity into its Security Constrained Economic Dispatch process. With zero operator intervention, DLR capacity is used to increase market efficiency.
- **Transmission planning.** By providing additional capacity on transmission lines where a full upgrade cannot yet be justified, DLR can be utilized in the planning process to enable a least regrets capital strategy.
- **Best practices.** The project authors have developed a guide to assist other transmission owners who are considering DLR technology for their own systems.

Sandy Aivaliotis, Senior VP Operations, Technology and Business Development at The Valley Group, a Nexans company commented, *“The Oncor report really tells how DLR can help a utility find smart, beneficial solutions for its customers and itself.”*

The final report is available for download from the Department of Energy at http://www.smartgrid.gov/sites/default/files/FTR_Final_Oncor_DE-OE0000320.pdf

As evidence of the extensibility of DLR technology, in June 2013 Oncor deployed additional DLR systems in the Odessa-Midland region of Texas in a commercially funded follow-on project.

About Oncor

Oncor Electric Delivery Company LLC (“Oncor”) is a regulated electricity distribution and transmission business that uses superior asset management skills to provide reliable electricity delivery to consumers. Oncor operates the largest distribution and transmission system in Texas, delivering power to more than 3.2 million homes and businesses and operating approximately 119,000 miles of transmission and distribution lines in Texas. While Oncor is owned by a limited number of investors (including majority owner, Energy Future Holdings Corp.), Oncor is managed by its Board of Directors, which is comprised of a majority of independent directors.

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About Nexans

Nexans is the world leader in providing Dynamic Line Rating (DLR) technology. DLR unlocks up to 30 percent of additional transmission capacity over conservative static weather assumptions. Over 100 utilities on 5 continents have used DLR to improve reliability, relieve congestion, avoid stranded investments and increase wind deliverability.

Nexans brings energy to life through an extensive range of cables and cabling solutions that deliver increased performance for our customers worldwide. Nexans’ teams are committed to a partnership approach that supports customers in four main business areas: Power transmission and distribution (submarine and land), Energy resources (Oil & Gas, Mining and Renewables), Transportation (Road, Rail, Air, Sea) and Building (Commercial, Residential and Data Centers). Nexans’ strategy is founded on continuous innovation in products, solutions and services, employee development, customer training and the introduction of safe, low -environmental- impact industrial processes.

In 2013, Nexans became the first cable player to create a Foundation to introduce sustained initiatives for access to energy for disadvantaged communities worldwide.

We have an industrial presence in 40 countries and commercial activities worldwide, employing close to 26,000 people and generating sales in 2013 of nearly 6.7 billion euros. Nexans is listed on NYSE Euronext Paris, compartment A.

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