

PPL Electric Utilities' first-of-its-kind innovation improves reliability, reduces costs

Dynamic Line Rating technology recognized with awards from two industry organizations

ALLENTOWN, Pa., July 11, 2023 /PRNewswire/ -- PPL Electric Utilities is bolstering the reliability of the power it delivers to its more than 1.4 million customers with the use of Dynamic Line Rating (DLR) technology, an innovative and first-of-its-kind technology that is garnering national recognition.

In 2022, PPL Electric became the first U.S. electric utility to integrate DLR technology into real-time and market operations. The technology uses sensors that provide real-time information about conditions such as wind speed and line temperature that affect the performance of transmission lines, which are critical to delivering power to customers. The information from the sensors is used to increase the amount of electricity delivered over transmission lines when needed, decreasing congestion and improving reliability. Since October 2022, PPL Electric has been sending hourly, day-ahead forecasts generated from the DLR system to PJM Interconnection, the regional transmission organization, to help coordinate more efficient generation and ensure reliability.

Award-Winning Technology

PPL Electric's accomplishment hasn't gone unnoticed in the industry. The company was recently recognized by two organizations – Edison Electric Institute (EEI) and Southeastern Electric Exchange (S.E.E.) – for its groundbreaking use of DLR. EEI honored PPL Electric with its 2023 Edison Award, one of the industry's highest honors, which recognizes electric companies for their distinguished leadership, innovation and contribution to the advancement of the electric power industry. Similarly, S.E.E. awarded PPL Electric with an Industry Excellence Award for the transmission line innovation.

"We're honored and delighted to receive these significant honors and we're equally proud to be the first electric company in the U.S to use Dynamic Line Rating in this way," said PPL Electric Utilities President Steph Raymond. "This achievement represents our commitment to explore innovative ways of delivering safe, reliable and affordable power to our customers."

Industry-Changing Technology

The use of DLR represents a significant industry shift. Historically, utility companies have used static line ratings that are calculated based on set assumptions and the type of power-transmitting conductor that is used on the transmission line. Static ratings don't account for changing environmental factors and assume conservative factors to ensure that conductors don't overheat.

While many utilities across the country have installed and piloted DLR sensors and systems, none have previously implemented a full integration with an Energy Management System and fully operated facilities with those ratings in both real-time and market operations.

Dynamic Line Rating allows PPL Electric to get more accurate, real-time ratings that allow it to better monitor and manage congestion. The sensors installed on transmission lines capture data that is used to calculate wind speed, ambient temperature and the temperature of conductors.

The technology has allowed PPL Electric to eliminate or defer transmission line upgrades and additions, which allows PPL Electric to manage costs and invest money on other projects designed to improve system reliability.

"Having real-time measurements allows PPL Electric to optimize performance on transmission lines and make better informed decisions about the need for improvements to those lines," said PPL Electric Utilities Director of Asset Management Joe Lookup. "The end result is lower generation costs and better reliability for customers."

PPL Electric Utilities delivers safe, reliable and affordable electricity to more than 1.4 million homes and businesses in eastern and central Pennsylvania. It regularly ranks among the country's best utility companies

for reliability and customer satisfaction. PPL Electric Utilities is a major employer and an active supporter of the communities it serves. It is a part of the PPL Corporation (NYSE: PPL) family of companies. Visit ppllectric.com or connect on social media via [Facebook](#), [Twitter](#) and [Instagram](#) for energy efficiency tips, bill help information, guidance on shopping for an electricity supplier, storm updates and more.

Edison Electric Institute (EEI) is the association that represents all U.S. investor-owned electric companies. Its members provide electricity for more than 235 million Americans and operate in all 50 states and the District of Columbia. As a whole, the electric power industry supports more than seven million jobs in communities across the United States. In addition to U.S. members, EEI has more than 65 international electric companies, with operations in more than 90 countries, as International Members, and hundreds of industry suppliers and related organizations as Associate Members.

Southeastern Electric Exchange (S.E.E.) is a non-profit, non-political trade association of investor-owned electric utility companies founded in 1933. Its mission is to promote the common interests and growth of its members; develop and enhance the human, operational and technical resources of members companies to the fullest; and provide coordination of storm restoration services to impacted member companies.

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