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OPSI Annual Meeting Panel Session:

What Strategies Can Help Maintain Reliability and Improve the Efficiency of the Grid?

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Leveraging Technologies

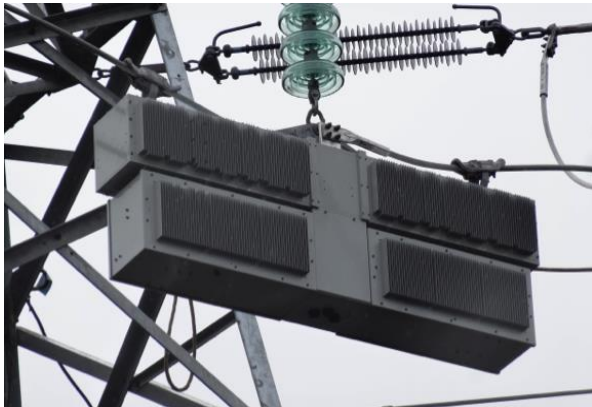
Transmission Owners proactively identify, monitor, and evaluate emerging technologies to determine the appropriate cost-effective applications to implement the technology and safely maximize the operation and capacity of the transmission system.

Evaluation of new technology relies on expert judgment and technical knowledge to determine the appropriate applications, recognizing deployment is often beneficial in some instances but not others.



Dynamic Line Ratings

- Dynamic Line Ratings (DLR) technology doesn't modify the line characteristics, but constantly calculates the varying line rating due to the changes in real-time weather conditions.
- Applications may provide operational benefits.
- Implementation of DLR must ensure that new hazards are not created and be tempered with consideration for other system limitations and the potential for unintended consequences.



Variable Impedance Devices

- Variable Impedance Devices modify the line characteristics (impedance) to provide power push/pull. These devices can potentially increase transfer capacity by balancing flows.
- We have considered the use of variable impedance devices in project proposals.



Advanced Conductor Technology

- Conductors that generally exhibit improved performance (e.g., lower weight, higher capacity, low sag at high temperatures, etc.).
- TOs, such as Exelon, employed advanced conductors across our system over many years and continues to evaluate these technologies for projects that install new conductor or upgrade existing lines.
- For example, Exelon has piloted E3X conductor coating to evaluate the benefits of the technology and proposed the use of this technology in recent project proposals.