

Conservation Voltage Reduction

Conservation Voltage Reduction (CVR) is a strategic grid management technique that reduces voltage on distribution networks to decrease energy consumption without impacting service quality. Edge Zero's real time, transformer-level monitoring provides utilities with the precision and control necessary to optimize CVR, ensuring effective energy savings, improved grid efficiency and enhanced load management.

Precision Voltage Control for Optimized Grid Efficiency and Savings

Real Data in Real Time

Rather than relying on generalized voltage reductions, Edge Zero provides real time transformer-level monitoring to enable precise voltage control.

Improved System Balance

Transformer-level data allows utilities to balance loads across the network. This is beneficial during system peaks, when precise control can alleviate locational strain.

Optimized Energy Savings

With Edge Zero's granular data, utilities can monitor the effectiveness of voltage reductions in real time, making adjustments as needed to maximize energy savings.

Deferred Capital Investment

Edge Zero provides continuous insights into transformer health and load distribution, allowing utilities to defer transformer replacements by maximizing the use of current infrastructure.



Edge Zero supports utilities in achieving energy efficiency and operational savings through CVR, **reducing energy use by 0.5%–1% per 1% voltage reduction**. With transformer-level visibility, Edge Zero enhances ROI by optimizing loads, **extending asset life by 10–15%** and **enabling savings within 1–3 years**. This makes Edge Zero an essential partner for utilities looking to maximize efficiency while minimizing costs.

A Bundled Hardware and Software Solution



EdgeSensor (600 Series)

Grid Edge Power Quality Monitor – Grid and Transformer Monitoring Unit

The EdgeSensor (600 Series) is a compact intelligent grid power quality monitor designed to support CVR strategies by delivering real time low voltage network data. Equipped with advanced software-driven capabilities, it provides live transformer monitoring, power quality insights and status alarms, enabling utilities to achieve precise voltage control and improve efficiency while maintaining reliability.

EdgeConnected™

Low Voltage Monitoring Platform

EdgeConnected™ empowers grid operators and utilities to optimize their CVR programs by leveraging real time data from the cost-effective EdgeSensor product line. This platform delivers actionable insights for maintaining power quality, managing grid assets and designing effective CVR programs, ensuring utilities can meet the demands of evolving technologies and electrification with confidence.



Edge Zero is Essential for Effective CVR

Precision in Voltage Management:

Edge Zero provides accurate voltage measurements down to each transformer, ensuring CVR settings are finely tuned to each area's needs.

Scalable Across High-DER Environments:

As DER penetration grows, maintaining consistent voltage becomes more challenging. Edge Zero's real time monitoring ensures CVR programs remain effective even with high DER levels.

Improved Customer Satisfaction:

By carefully monitoring voltage levels to enhance CVR, Edge Zero helps utilities avoid undervoltage issues, which can negatively impact appliances and decrease customer satisfaction.

Operational Cost Savings:

Reduced energy losses and deferred capital investment contribute to measurable cost savings for utilities, making CVR with Edge Zero both a financial and operational asset.