

GRID EDGE VOLT VAR CONTROL

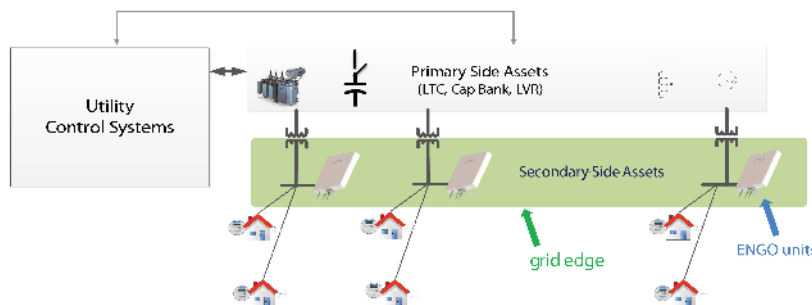
MANAGE GRID VOLTAGE TO MAXIMIZE OPERATIONAL BENEFITS

Problem: Conventional Volt VAR Control only addresses the primary side of an electrical distribution system, and does not account for high voltage volatility seen on the secondary side - thus leaving much of the benefits of VVC on the table.

Key Features

- » Brings Volt VAR Control all the way to the grid edge
- » Superior to slower, primary-side asset control methods
- » Cloud-based software platform with simple SCADA/DMS integration
- » Distributed, autonomous field hardware ENGO devices
- » Provides data analytics and visualization using GEMS software platform

Varentec provides a complete integrated Volt VAR Control solution to optimize both the primary and the secondary side of the grid.



Grid Edge Volt VAR Control provides real-time, granular control of voltage and vars, significantly better than primary-side control.

Benefits

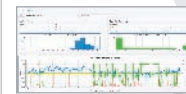
- » Optimize reactive power (var) flow between generation, transmissions and distribution systems
- » Deter the need to invest in new GT&D assets
- » Reduce technical losses & improve substation power factor
- » Improve ability to integrate PV solar energy
- » Up to 6% Peak Demand Reduction and Energy Savings
- » Extend life time of primary asset equipment

Hardware/Software Solution



ENGO V field hardware units

- » Volt var regulators
- » Monitor, diagnostics
- » Clustered behavior



GEMS Software Platform


- » Data traffic control
- » Interface to SCADA/DMS
- » Feeder-level monitor
- » Cloud-based solution

When ENGO/GEMS Solution is deployed, utilities gain a unique capacity to manage leading and lagging vars in real time, wherever needed. It reduced technical losses on distribution feeder, improves grid efficiency and quality of power supply and saves electrical energy.

Grid Edge Control - Utility Integration

SCADA/DMS systems control primary-side assets, but are not designed to manage a high volume of dynamic grid edge devices.

Varentec simplifies the process of integrating Grid Edge Volt VAR Control with existing primary-side VVC systems.

					
Dynamic Voltage Mitigation	Voltage Compliance	PV Solar Integration	Peak Demand Reduction	Energy Savings	Grid Edge Volt VAR Control

Real-Time Distributed Autonomous Volt-VAR Control at the Grid Edge