GRID EDGE SUPPORT & EFFICIENCY
IMPROVE GRID INTEGRATION OF DISTRIBUTED PV SOLAR

**Problem:** Feeder voltage volatility and violation of voltage limits can be caused by today’s PV solar systems.
**Solution:** Distributed, dynamic autonomous Grid Edge Volt-VAR Control enables integration of PV solar on the electrical distribution system.

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**Key Features**

» Fast acting, sub-cycle dynamic response to counter cloud impact
» Stabilizes PV solar voltage variations at local node and feeder level
» Coordinates with and reduces operation of utility primary assets
» Utility volt-var objectives maintained with high PV solar

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Varentec’s Grid Edge Volt-VAR Control addresses voltage variability due to intermittent and peak solar energy, by stabilizing voltage at key points along a feeder.

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**Benefits**

» Enable better integration of PV solar onto a grid network
» Bring high voltage and low voltage to a nominal / desired level
» Lower cost compared to other stand-alone regulator solutions
» Preserve VVO/VVC investments where there is high PV solar penetration
» Improve grid efficiency and reduce carbon emissions
» Extend lifetime of primary assets

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**Grid Integration of PV Solar**

Primary-side assets are too slow, and not sufficiently distributed to solve for PV solar dynamics at a network level. ENGO™ units dynamically balance volts and VARs to maintain a flat voltage profile allowing full VVC benefits while increasing PV solar hosting capability on a feeder.

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

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