

...THE GREEN AND  
COST-EFFECTIVE  
SOLUTION FOR  
SMART UTILITIES

The **RTVVC™** VAR/Volt Control solution from DC Systems enables utilities to cut costs by lowering substation voltage, while maintaining prescribed end-of-line voltage.

The **RTVVC** solution controls load tap changers, capacitor banks, and line voltage regulators to flatten the voltage profile along distribution lines. In addition, the system improves the power factor through intelligent VAR management.

## DISTRIBUTION AUTOMATION



RTVVC solution

### APPLICATIONS

- Voltage and VAR optimization
- Power factor correction and automation
- Capacitor bank control and automation
- Remote feeder monitoring and control
- Peak demand reduction, energy conservation, and voltage reduction

### INCREASED SYSTEM EFFICIENCY

To minimize voltage drops along distribution feeders, utilities generally boost substation voltage or use capacitor banks to maintain prescribed end-of-line voltage. Neither of these solutions is optimal: raising substation voltage requires the generation of more electricity, and capacitor control can be inexact and inefficient. The **RTVVC** VAR/Volt Control system responds to the real-time requirements of the ever-changing grid environment—providing round-the-clock voltage conservation to save power and money.

### DYNAMIC END-OF-LINE DETECTION, MULTIPLE CONTROL MODES

As utilities perform routine switching, feeder end points may change. **RTVVC** software continually calculates the end of line and reduces or increases voltage at the substation in real time, precisely as required. VAR and voltage can be controlled in manual, scheduled, pre-programmed, or automatic modes. The **RTVVC** system can also monitor current, power factor, temperature, dynamic feeder configuration, and more.

### OPEN, SCALABLE PLATFORM

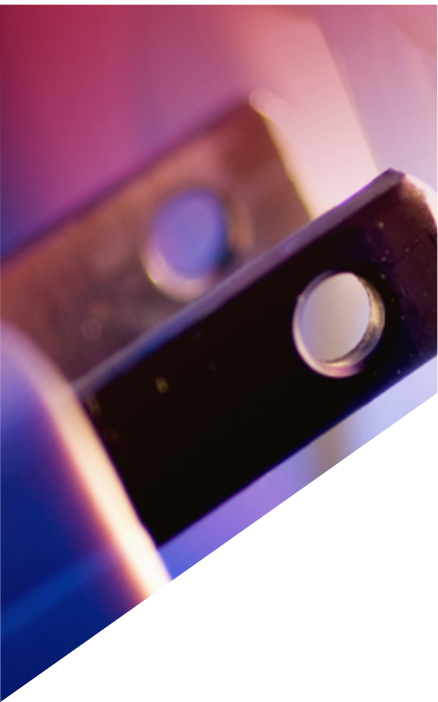
The **RTVVC** system is certified to work with products from multiple manufacturers, so capacitor banks, transformers, switches, meters, and other equipment from different vendors can be blended in one network. The system is also highly flexible and scalable as business grows and requirements change.

### CENTRAL MONITORING, BUILT-IN HISTORIAN

**RTVVC** software enables set-up, monitoring, administration, and control from one centralized location. A built-in historian allows easy access to database information, events, and alarms.



DC SYSTEMS



## RT<sub>vvc</sub> VAR/Volt Control

### CONTROL WHERE IT'S NEEDED

**RT<sub>vvc</sub>** software puts decision-making directly at the point of control. It continually acquires real-time voltage data from multiple points on each feeder, either directly or via an AMI system. It provides control for multiple feeders, automatically accounting for the effects of tap change settings on all circuits fed from the substation.

### REDUCE SOURCE VOLTAGE, CUT COSTS, GO GREEN

#### Lower generation costs

Save money by reducing peak energy demand through more precise control of power needs.

#### Better environmental stewardship

Conserve energy by lowering power requirements at the substation.

#### Control for multiple feeders

Automatically account for the effects of tap change settings on all circuits fed from the substation.

#### Real-time voltage data

Acquire real-time voltage data from multiple points on each feeder, either directly or via an AMI system.

#### Improved power factor

Automatically optimize the power factor with intelligent VAR management.

#### External access

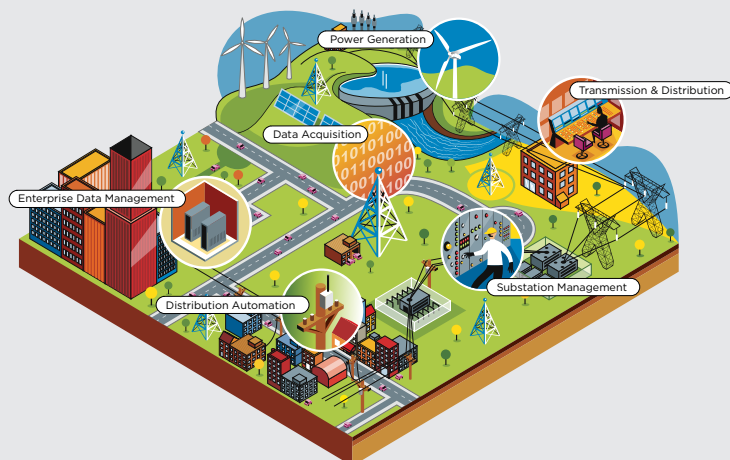
Easily access all data and controls through external systems.

### THE COMPLETE RT<sub>scada</sub>™ SOLUTION

**RT<sub>vvc</sub>** software is a member of the **RT<sub>scada</sub>™** product family from DC Systems, a leading developer of smart grid software for utilities and large energy users.

Our products combine the power of distributed intelligence with centralized data management—putting intelligence where you need it, while centralizing configuration, administration, and monitoring at the enterprise level. **RT<sub>scada</sub>** products interoperate throughout the Smart Grid—from field devices, to substations, to control centers, to the enterprise—giving you greater flexibility, control, and responsiveness.

### LET US TURN YOUR DATA INTO SMART DATA.



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**WE PUT THE INTELLIGENCE IN THE SMART GRID.**