

A REVOLUTIONARY VVO/IVVC METHOD USING DISTRIBUTION AUTOMATION CONTROLLERS

DA Controllers traditionally operate in silos:

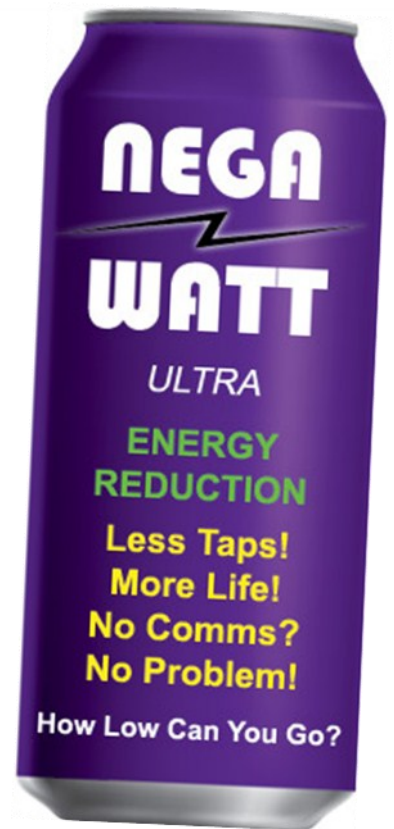
- LTC Transformer and Regulator Controls are deployed to maintain voltage using R and X_L line drop compensation.
- Capacitor Controls are deployed to minimize losses by dispatching VARs.

Two silos with two goals. Until now.

NEGAWATT ULTRA unifies LTC Transformer, Regulator and Capacitor Control

The LTC Transformer, Regulator and Capacitor Control is unified by measuring VAR flow and using the voltage regulating devices to modify their control action, properly coaxing voltage controlled capacitors on or off to optimize power factor and voltage profile.

Energy reduction optimization 24x7.



LESS IS THE NEW MORE

The **NEGAWATT Ultra** Story

NEGAWATT Ultra can be applied in stand-alone DA Control based schemes, part of a centralized DMS application, or a hybrid of the two.

NEGAWATT Ultra is Beckwith Electric's methodology for implementing IVVC/VVO during demand reduction (CVR) and normal operating (non-CVR) periods.

NEGAWATT Ultra is able to accomplish the IVVC/VVO regardless of loading, load mix (constant Z, PQ), and, if Autodaptive® capacitor controls are used, changing line configuration.

NEGAWATT Ultra employs unique VAR biasing in LTC and regulator controls to adjust their voltage centerbands in response to VAR flow and effectively control voltage-based capacitor controls resulting in unity/near-unity power factor under normal operating conditions, and slight leading power factor during CVR periods.

NEGAWATT Ultra does not require communications to control capacitors. The VAR biasing effect used in the LTC/regulator controls encourage or discourage the capacitors to switch, and the resultant VAR and voltage feedback to the LTC/regulators is used in adaptive schemes for CVR and normal operation. The transition between the two modes is enhanced by selective manipulation of the LTC/regulator voltage centerbands and band edges.

