The future of power generation is responding to the fundamental shift in how consumers use power and how utilities provide it. These shifts in generation and consumption mean utilities must work to modernize operations. Those who embrace new technologies and connected devices stand to see efficiency gains and improved profitability.

New system components often introduce unforeseen compatibility and management issues. So utilities not only need modern solutions – they need modern solutions that work with what they’ve already got. With a firm grasp on power and the challenges ahead, Eaton has leveraged its long-standing experience with step-voltage regulators and controls combined with an industry-proven tap changer platform to establish an efficient and flexible voltage regulating solution for your substation. Although the benefits may seem countless, here’s our top five:

1. **Increased reliability**
   Eaton’s EVER-Tap voltage regulator utilizes the Reinhausen RMV-II vacuum interrupting tap changer, rated for an industry-leading 1,000,000 operations. Inherent to the vacuum interrupting design, material and gas byproducts from tap changing are removed from the dielectric fluid, providing a clean operating environment, prolonging tap changer contact and coil winding life.

2. **Improved cost-savings**
   Make phase unbalance an issue of the past and achieve your cost-saving goals by improving your CVR with single-phase voltage regulation in your substation. Don’t allow your voltage regulating devices to be overtaxed with the ever-increasing amount of DERs on the system by utilizing the proprietary algorithms in Eaton’s Cooper Power series CL-7 single- and multi-phase controls, reducing the amount of operations by up to 70% in high PV penetration applications while avoiding voltage violations.

3. **Enhanced flexibility**
   A bank of EVER-Tap voltage regulators with three separate single-phase CL-7 controls or one multi-phase CL-7 control can handle substation applications with power transformers up to 46 mVA, 150 kV BIL. By utilizing the ever-expanding features of the CL-7 voltage regulator controls, users can monitor and adjust each phase independently or as a three-phase ganged operation, simulating an OLTC transformer.

4. **Simplified maintenance**
   Line drop compensation, load profiles and many other parameters can be set for each individual phase. With the CL-7 control’s new analog input card, a variety of inputs can be monitored such as oil temperature, pressure/vacuum or fan control, providing real-time health status and saving money by avoiding costly site visits. The CL-7 control is available in a single-phase or multi-phase configuration where one controller is used to monitor and operate three separate single-phase step voltage regulators, saving time and money on installation and commissioning costs.

5. **Robust Cybersecurity**
   CL-7 controls offer cybersecurity features meeting the latest standards with two new firmware releases every year.