

BlueGreen Voltage Management

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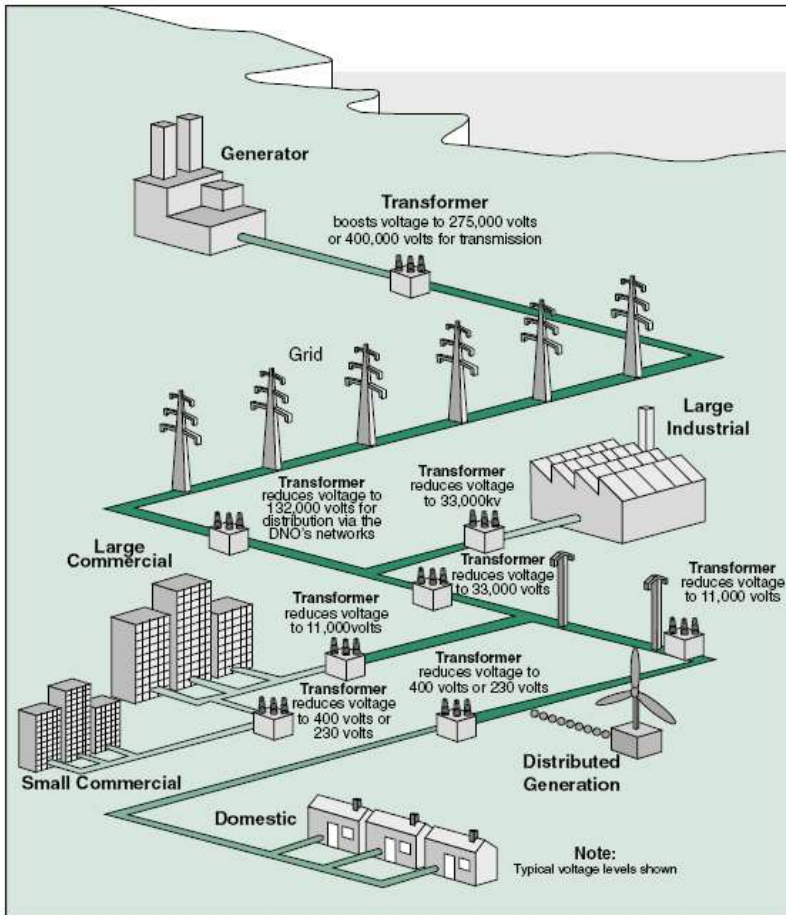
Why Manage Voltage?



- Reduce electricity consumption
- Save money
- Save the planet
- Protect appliances
- Monitor electricity use



Distribution Networks



Voltage supplied to customers varies over time in response to changing loads.

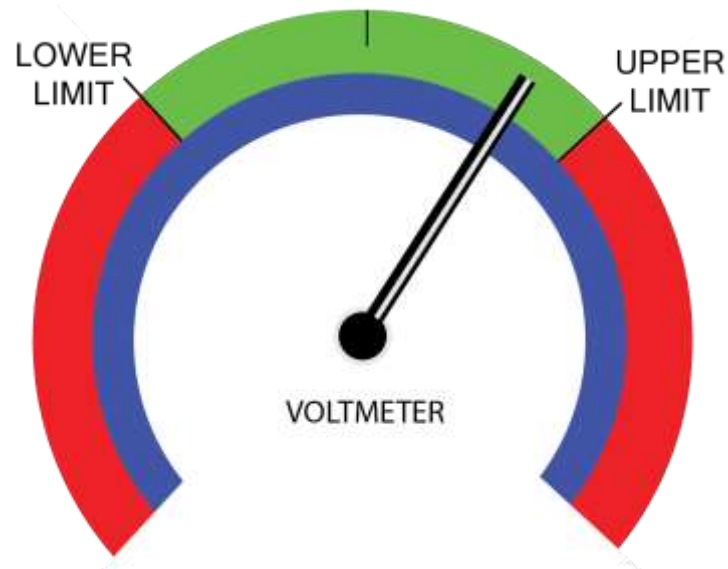
Network operators must ensure that supplies are kept within the legislated voltage range.

$380V \pm 6\%$

$220V \pm 6\%$

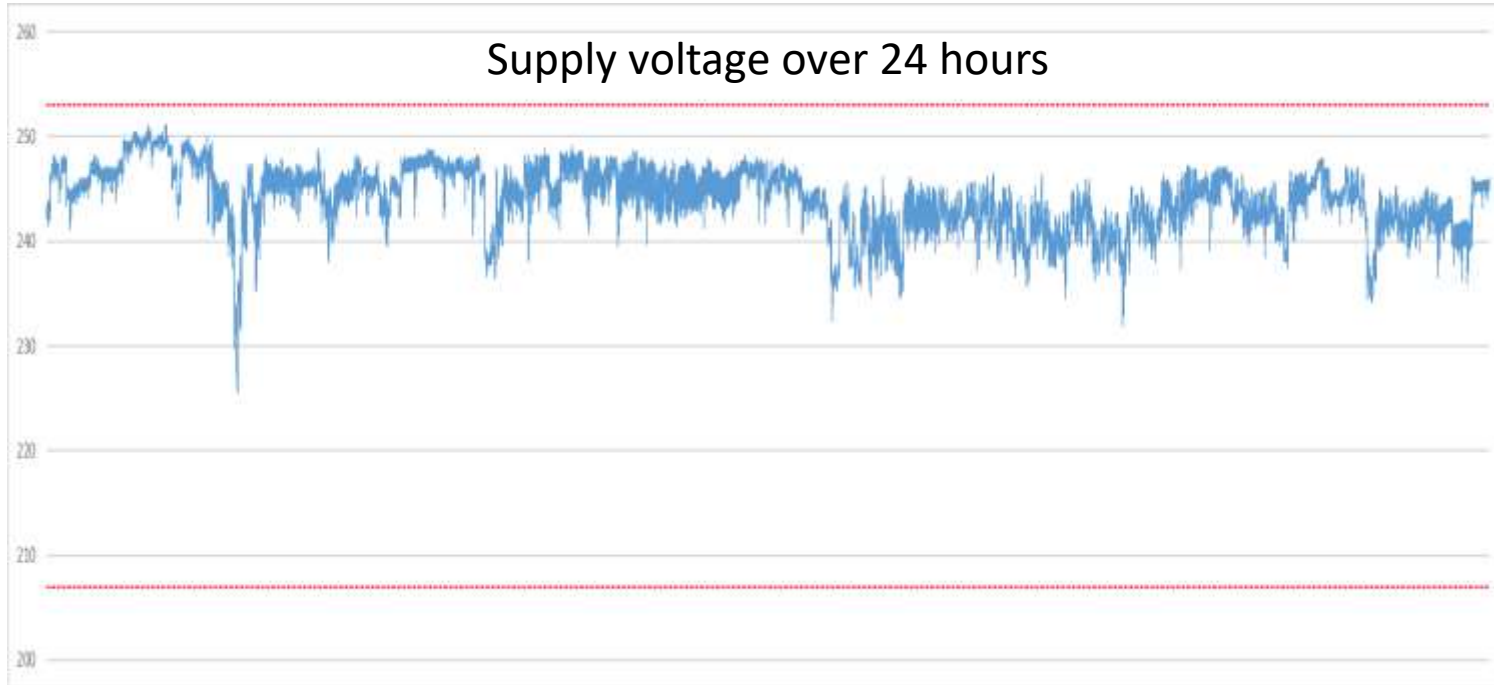


Voltage Variance



- Electricity supplies are not normally at the nominal voltage
- Higher voltage produces higher consumption and reduced appliance life
- Voltage below the minimum can cause brownout and damage to appliances

About Supply Voltages



Supply voltages are typically at the upper end of the range to allow for increased loads.



What Do Our Products Do?



- BlueGreen products maintain a constant voltage in the home and workplace
 - reducing consumption and bills
 - protecting appliances from damaging voltages
 - extending appliance life
 - providing consumption and savings data



See How Much You Are Saving!



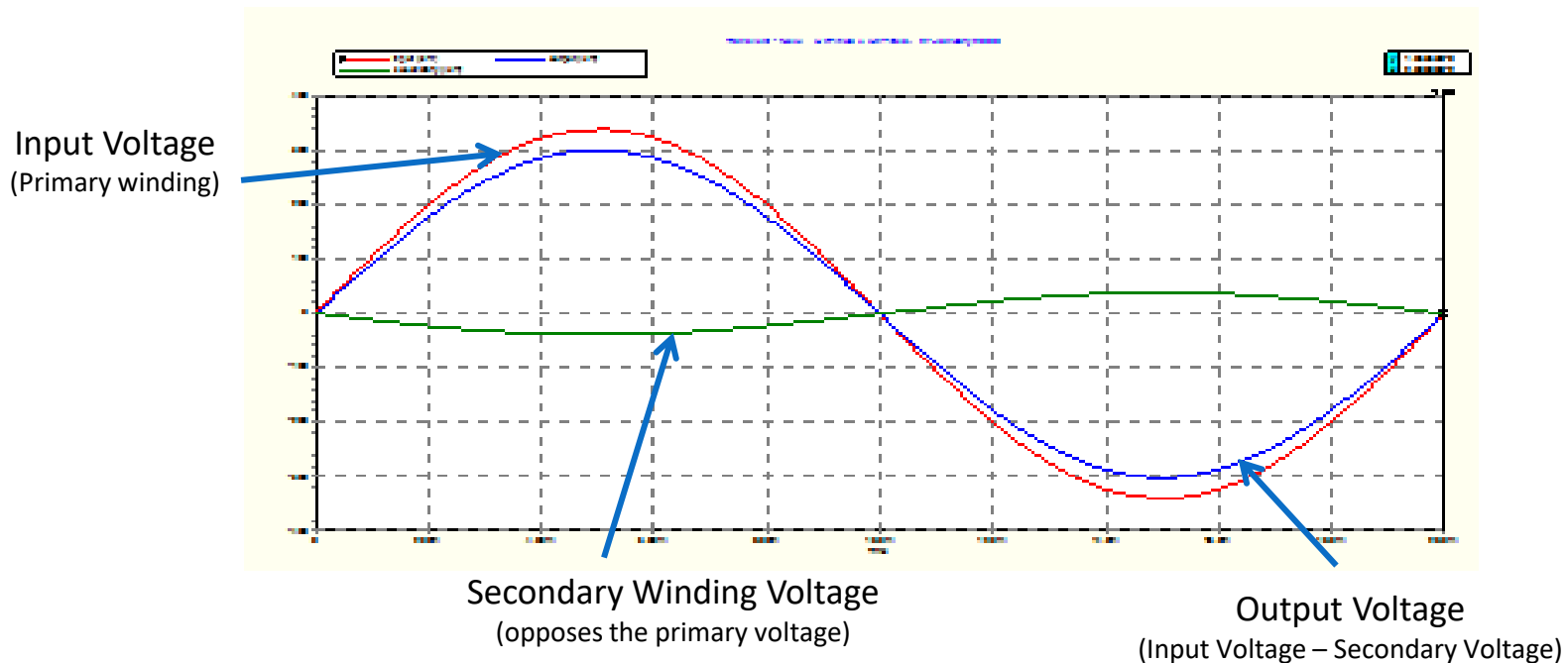
- App is available on iOS and Android
- Reports live and historic data
- Next: Aggregated data for landlords and commercial applications



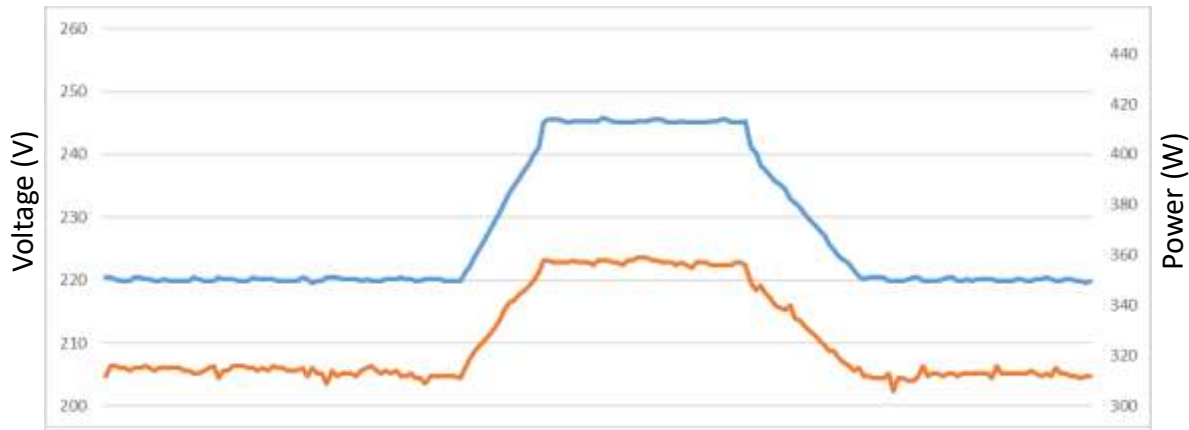
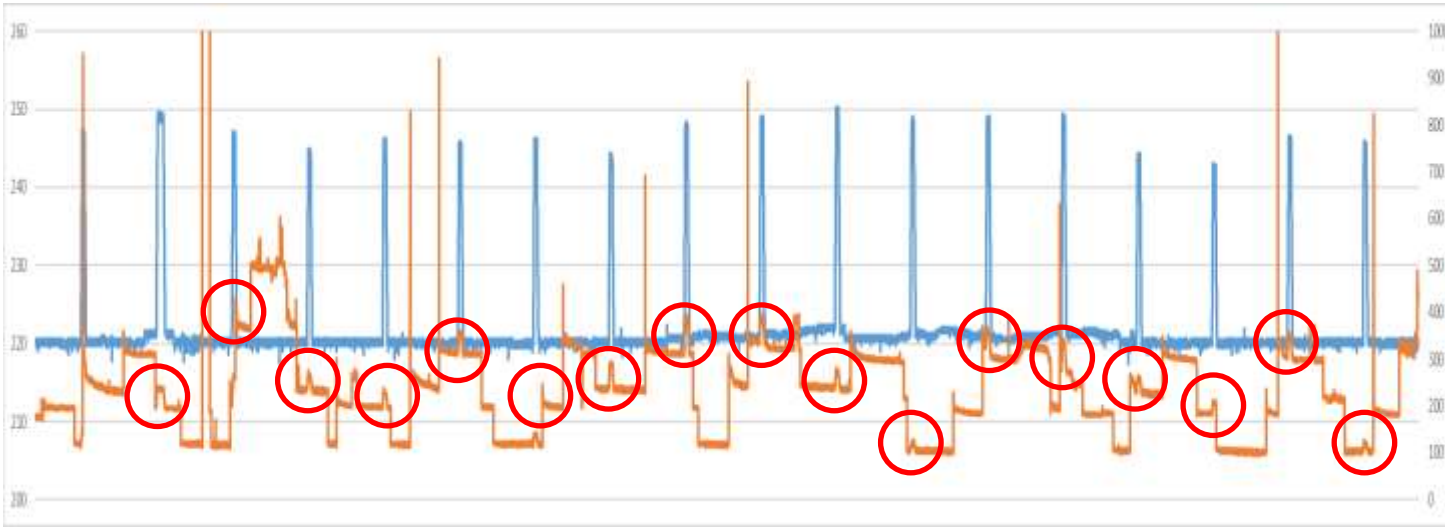
BlueGreen Technology Concept

The BlueGreen drives the transformer primary with a signal whose magnitude is continuously adjusted to create the required waveform on the secondary.

This induced secondary voltage is added to or subtracted from the supply to create the desired load voltage.



Power Reduction Demonstration



Liverpool John Moores University Testing



- Tests sought to establish benefits of BlueGreen technology
- Testing completed in February 2018

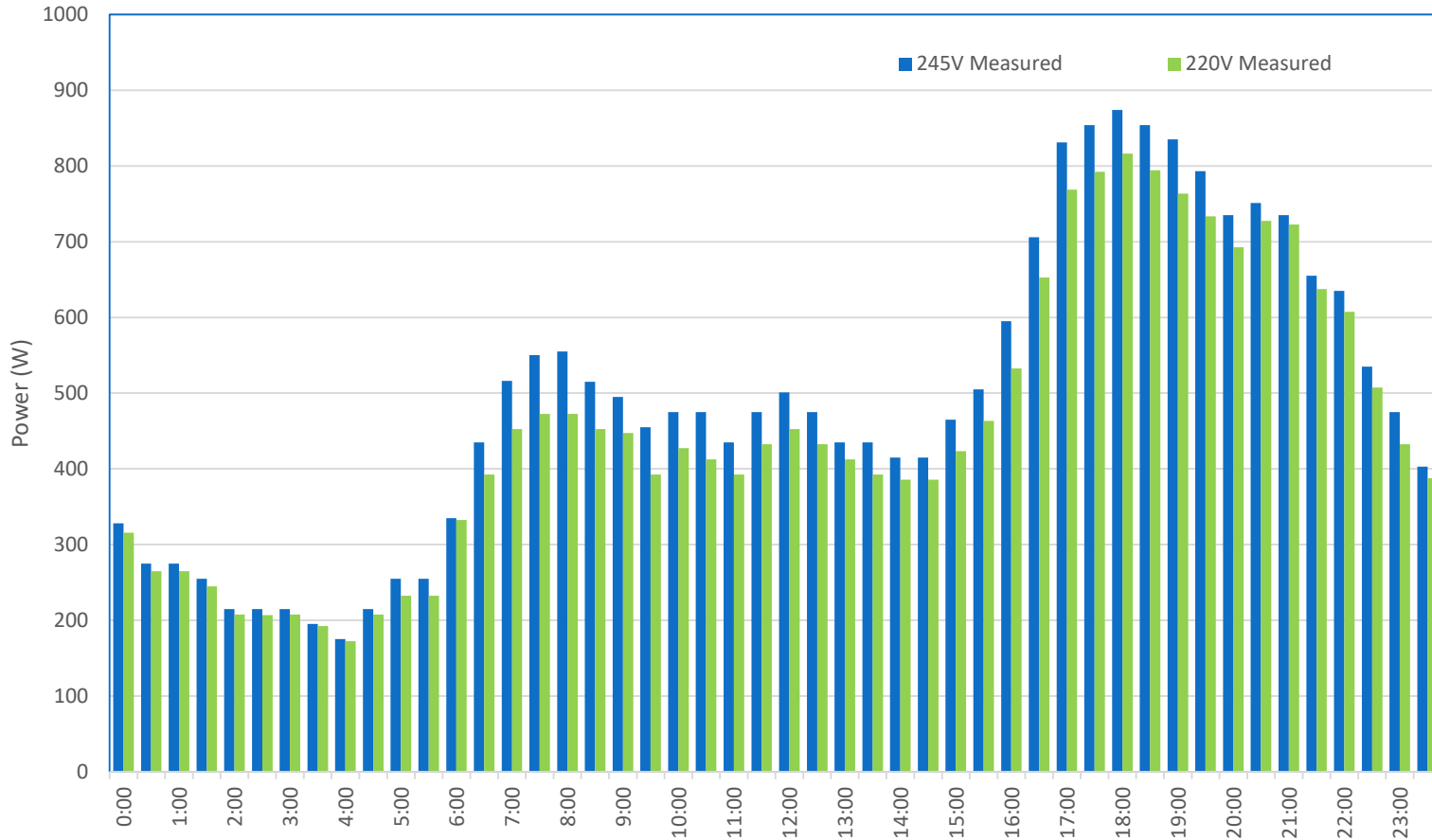


Description of Tests



- Each appliance was operated at average UK voltage and then at regulated voltage
- Aggregated load was tested over a 24-hour period

Test Results



7.5% Energy Reduction



BlueGreen in India



- We have units deployed in Europe, Australia, Uruguay and Argentina
- We seek commercial traction in India



BlueGreen Products



Residential Products



Commercial Products



Distribution
Network Management



Polyphase Products

