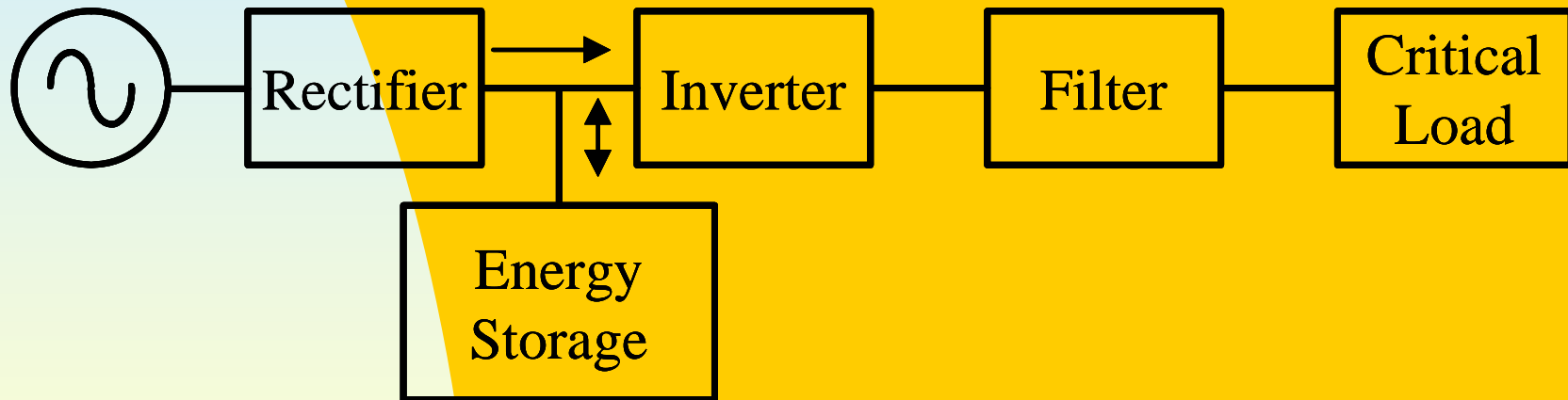


Power Quality Considerations

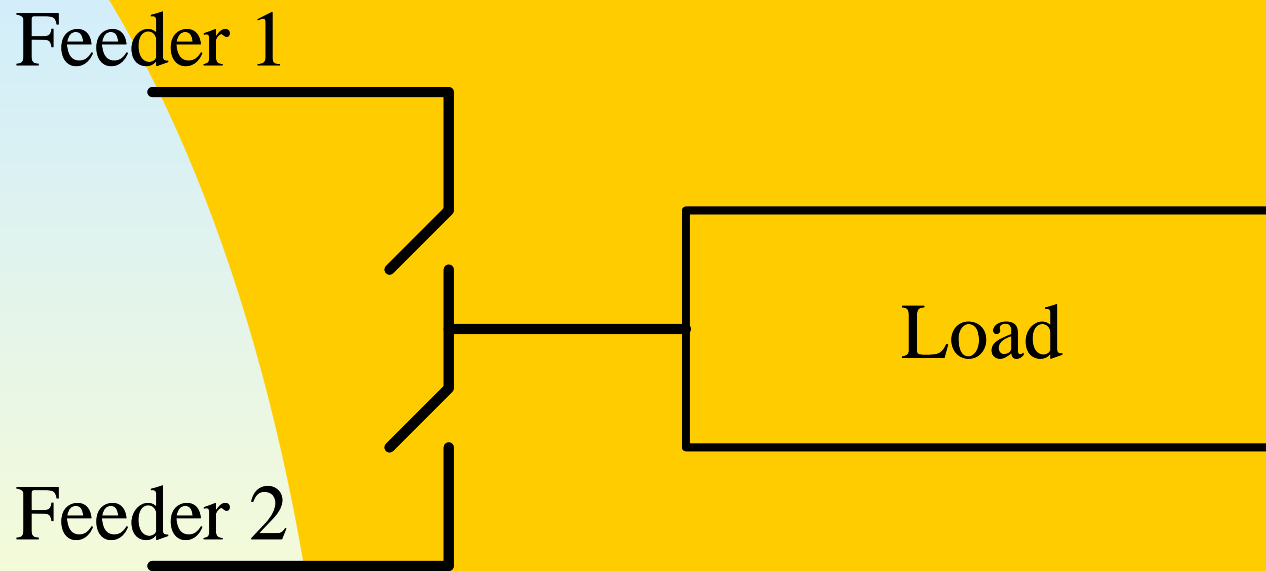
- Continuity of Service
- Magnitude of Voltage
- Voltage Waveform

Continuity of Service:

Uninterruptible Power Supplies (UPS)

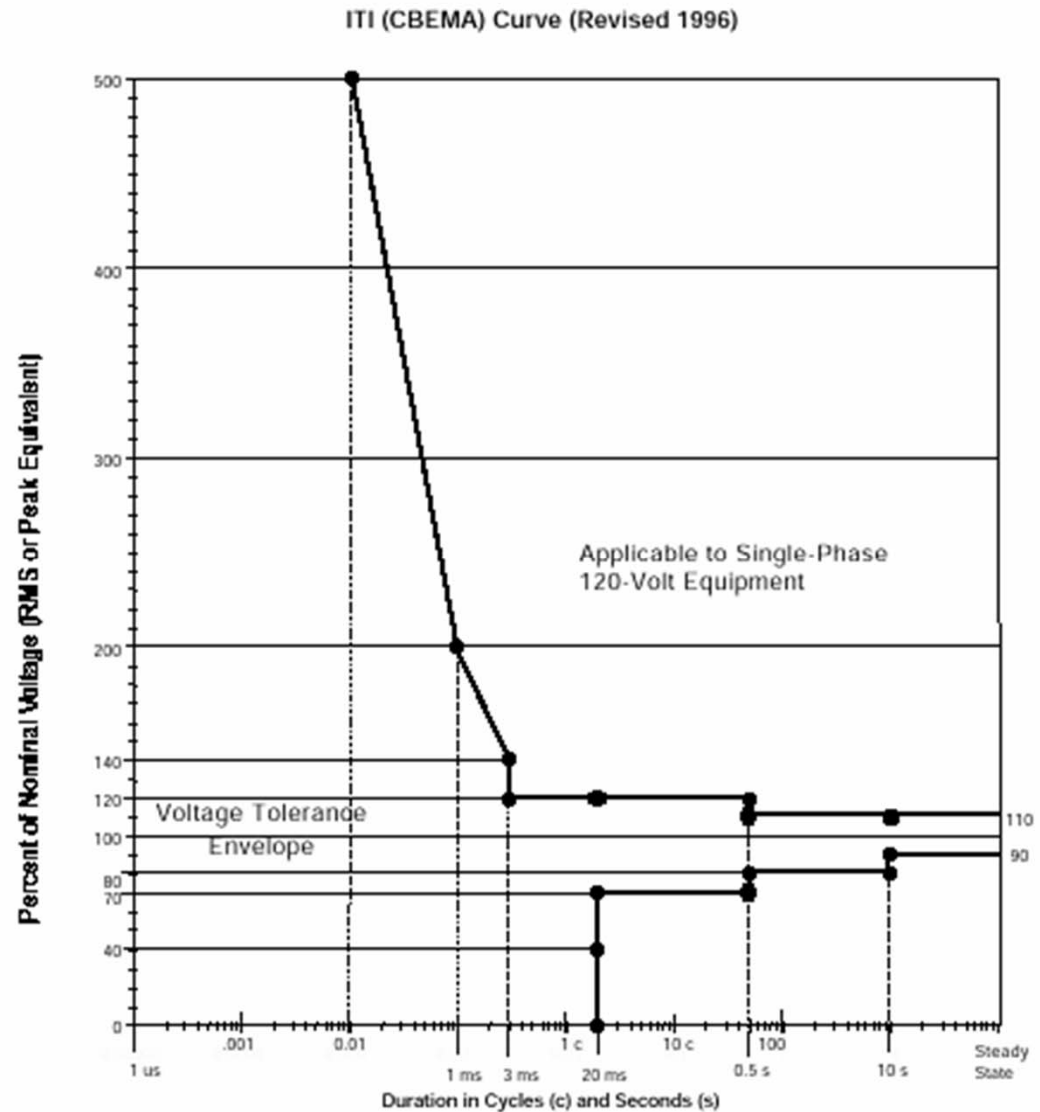


Static Power-Transfer Switch



Voltage Magnitude

CBEMA Curve Showing Acceptable Voltage-Time Region



Dynamic Voltage Restorer (DVR)

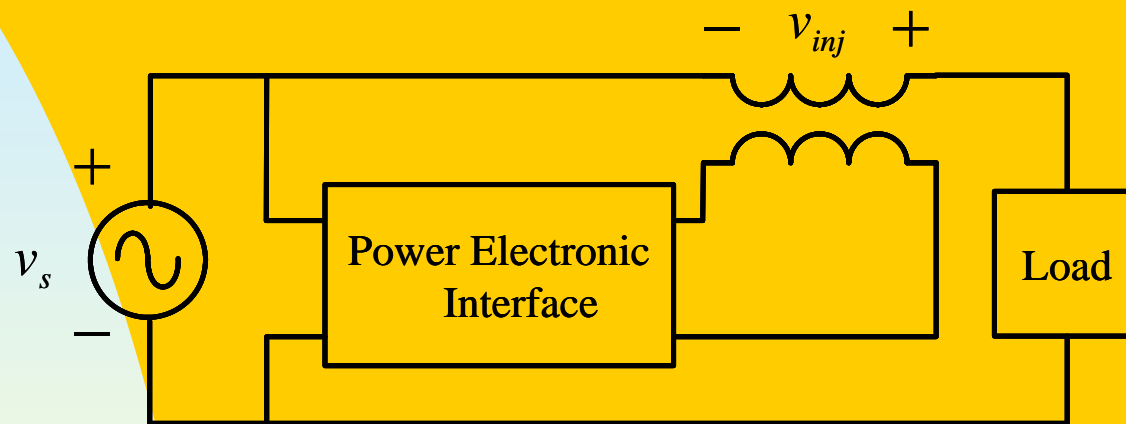


Fig. 8-11 Dynamic Voltage Restorer (DVR).

Voltage Regulating Transformers



Fig. 8-12 Three-Phase Voltage Regulator (Courtesy of Siemens) [5].

STATCOM

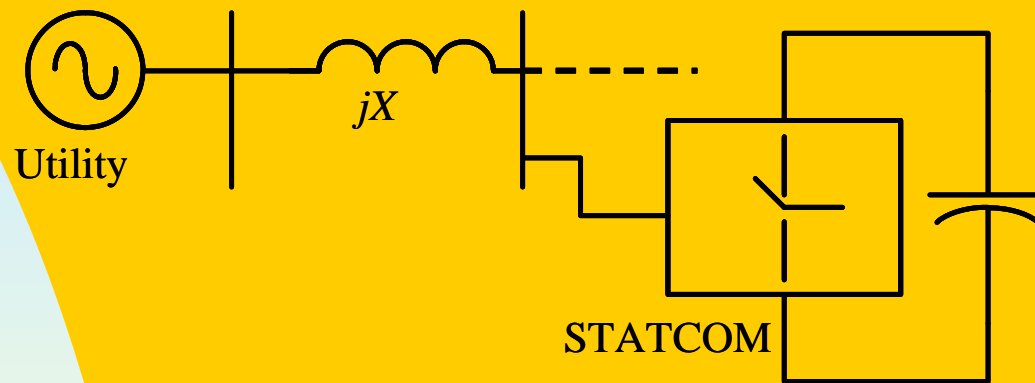


Fig. 8-13 STATCOM [4].

Voltage Waveform

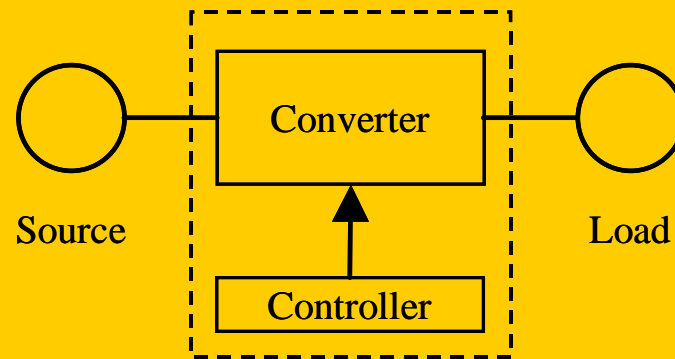


Figure 5-1 Block diagram of power electronic systems.

- Distortion in Voltage and Current Waveforms
- Displacement Power Factor
- THD
- Power Factor
- Deleterious Effects

Types of Rectifier Front-Ends

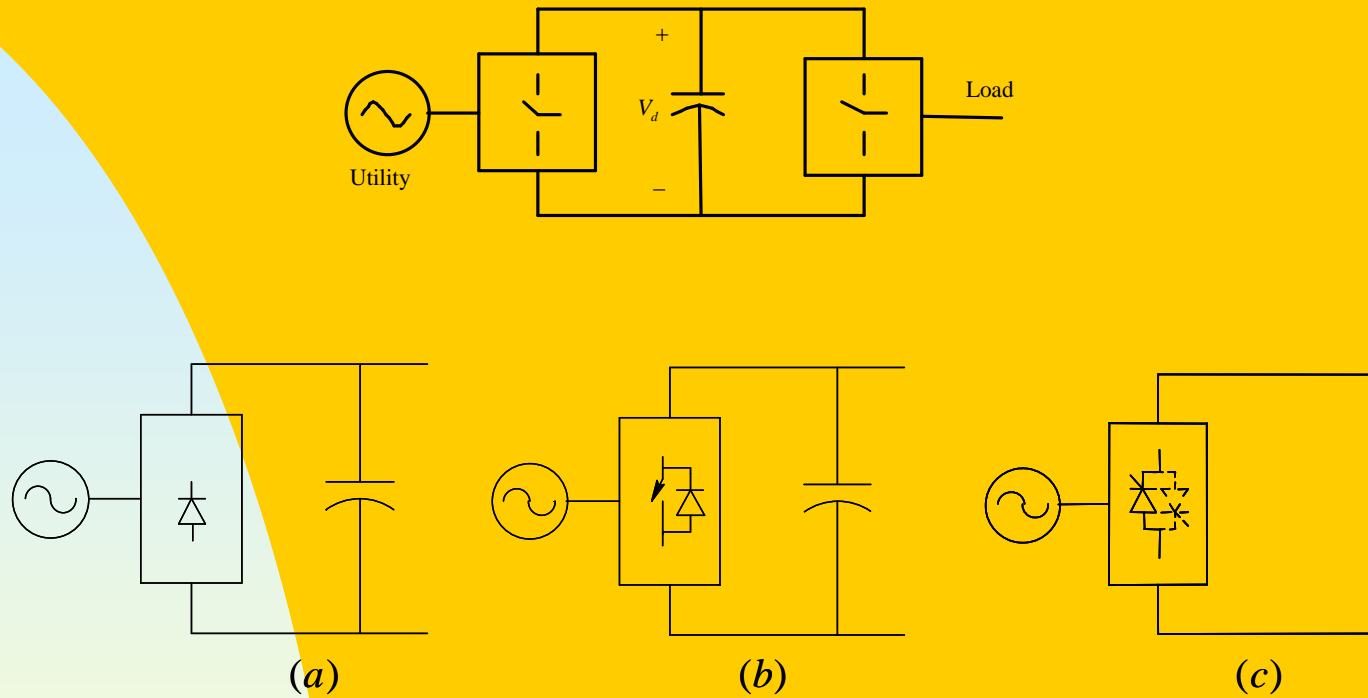


Figure 5-7 Front-end of power electronics equipment.

- Diode-bridge rectifiers
- Switch-mode converters
- Thyristor converter