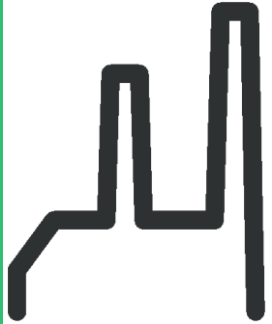
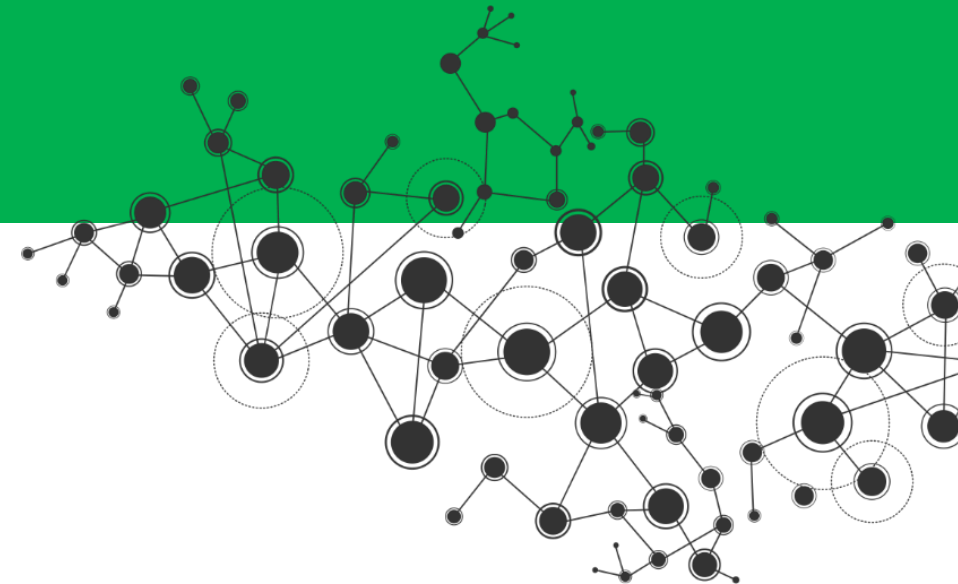


Life Is On

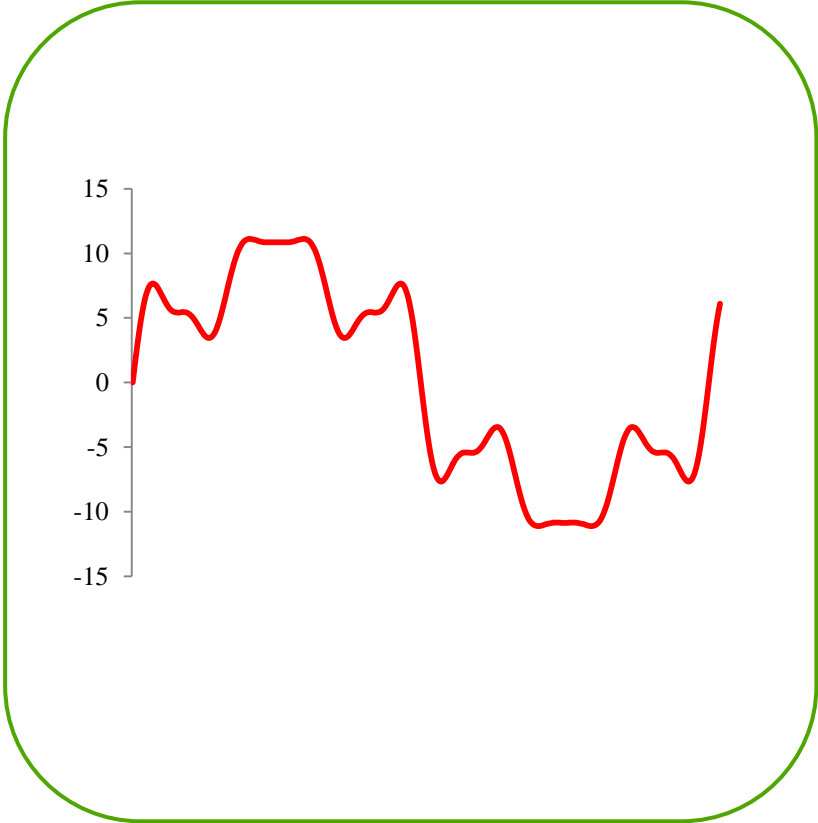


Power Quality – Challenges & consequences on Utilities

M.R.Srinivas
Edison Expert – PQ Solutions



PQ – Challenges & Consequences



Electricity Supply Companies feeds power to:

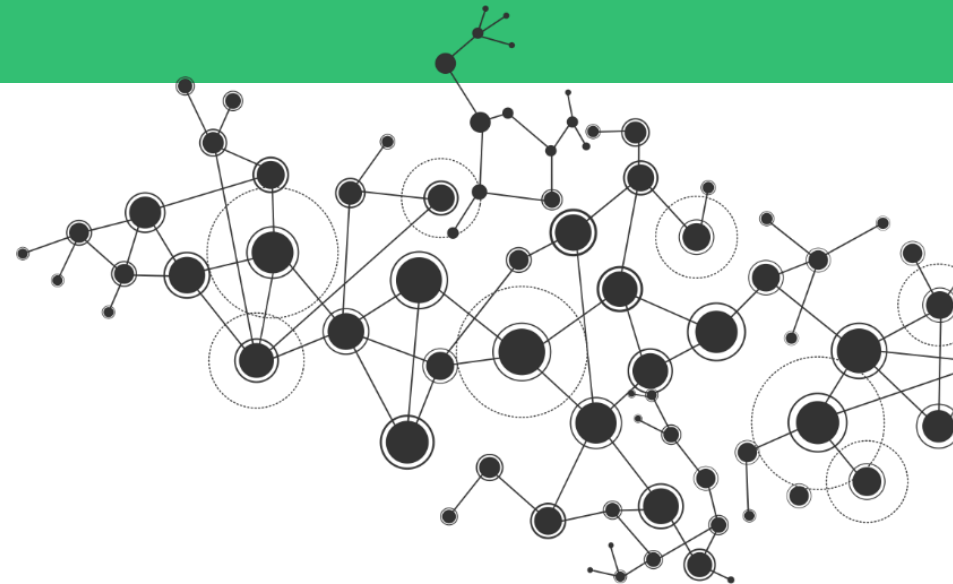


Consumers are inter connected to Substation or impedance

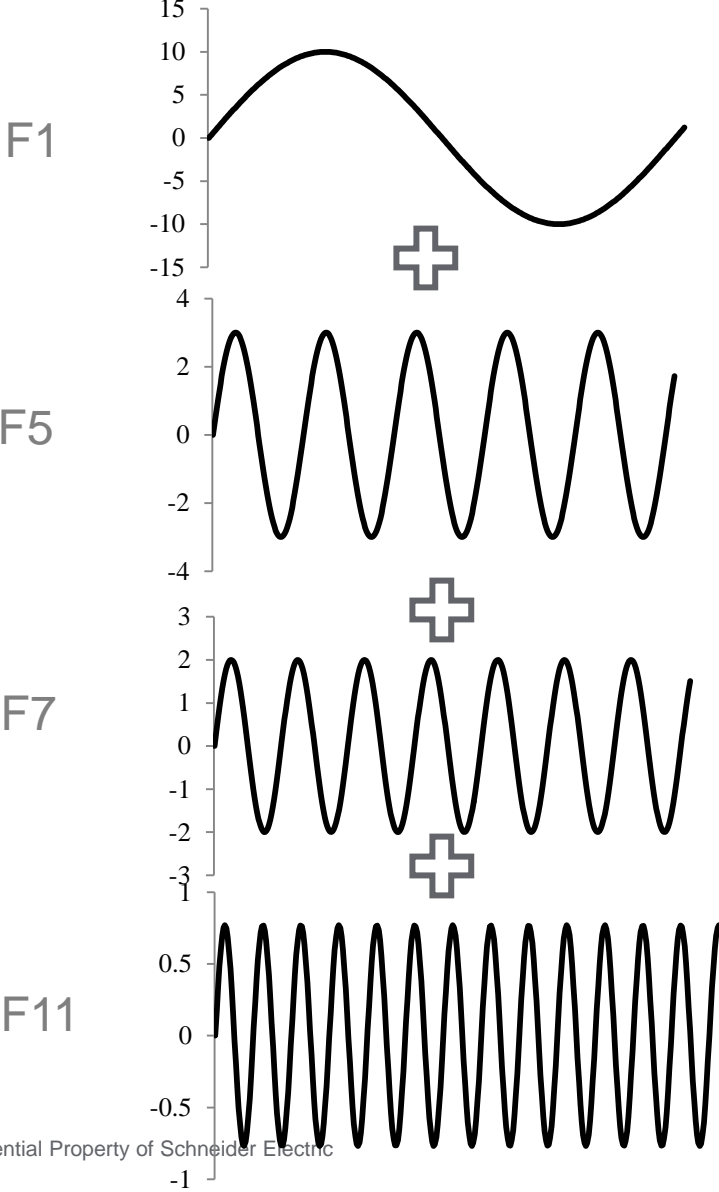
Source



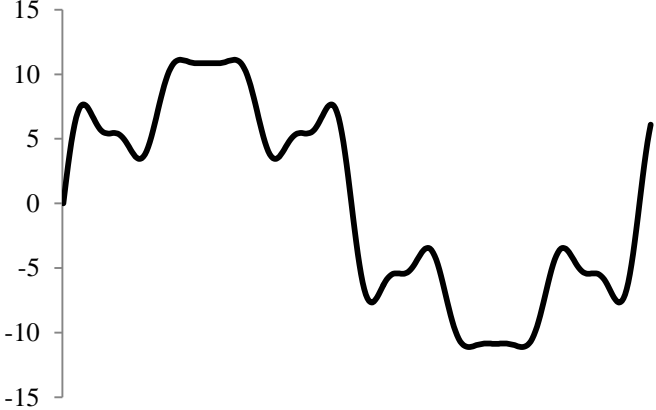
PQ – Case 1: Harmonic import through Utility



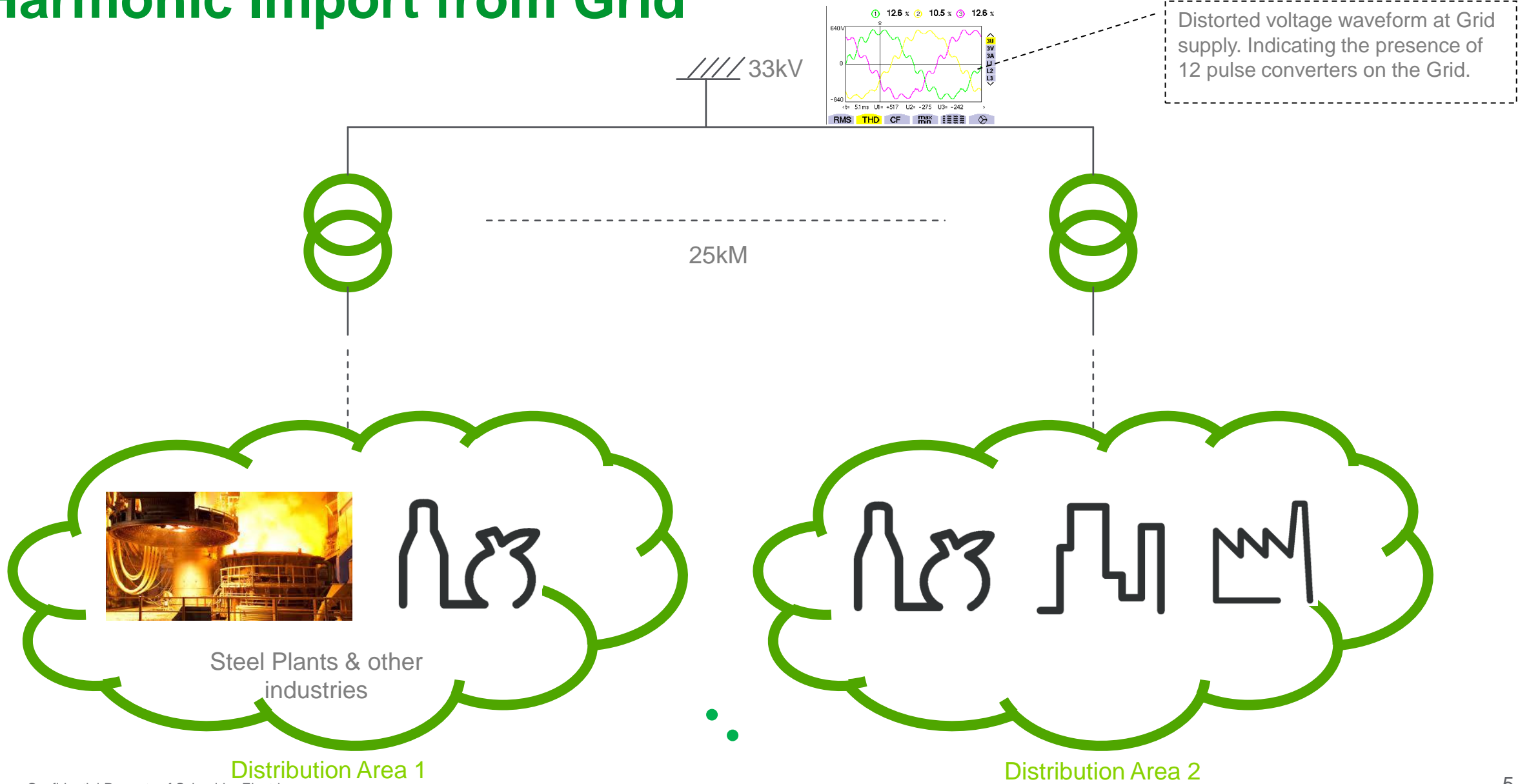
Harmonic Recap



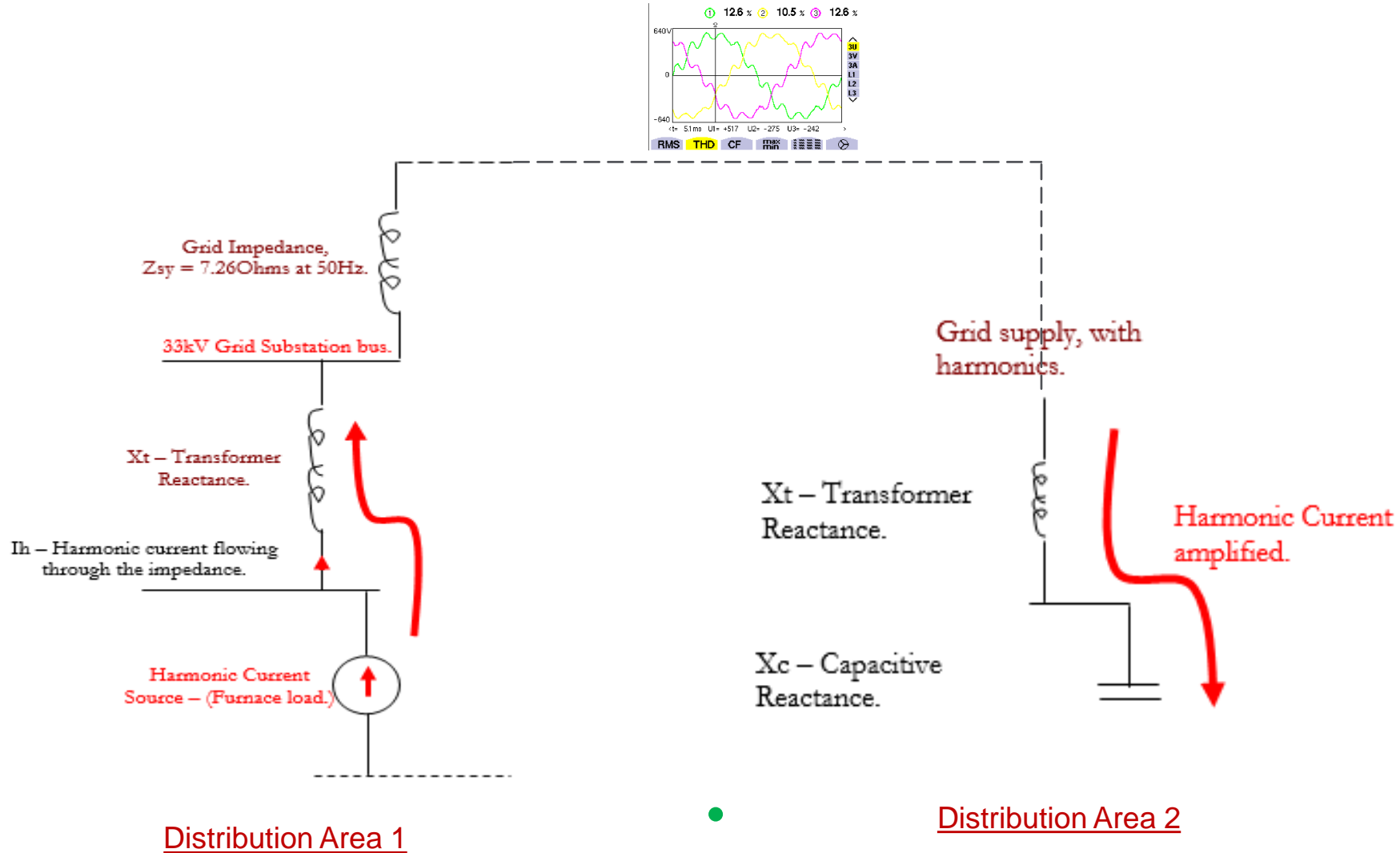
≡



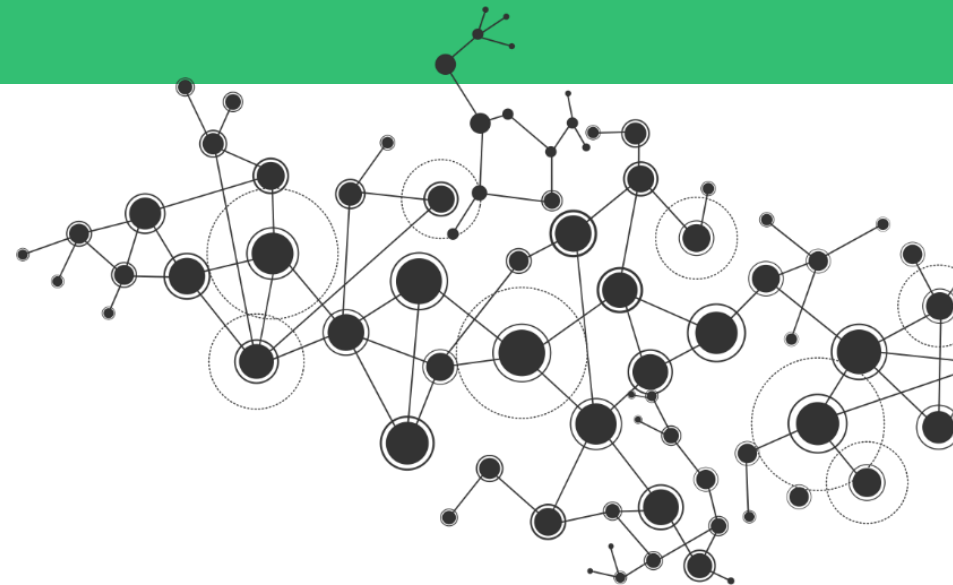
Harmonic Import from Grid



Mathematical modelling

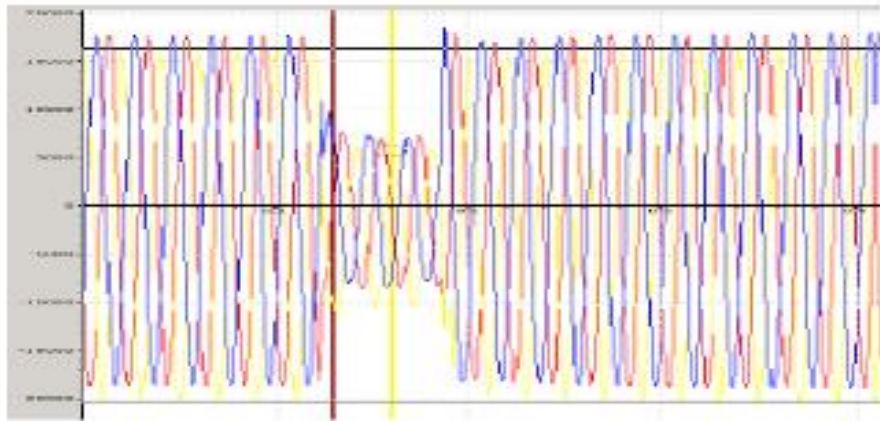


PQ – Case 2: Voltage SAG

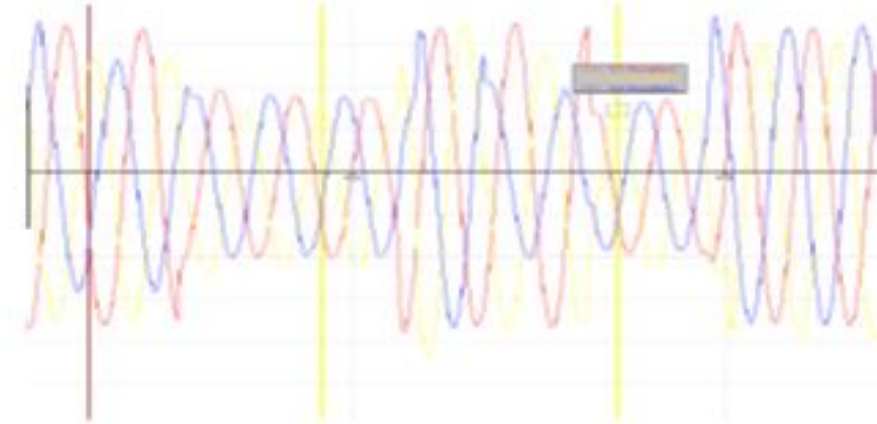


Voltage SAG From Grid

- ✓ One of the Auto mobile plant suffering from Voltage SAG from incoming 22kV supply.
- ✓ The Voltage SAG is causing frequent tripping of ACB connected to Paint Shop.
- ✓ Production outage approx. 6 cars per tripping

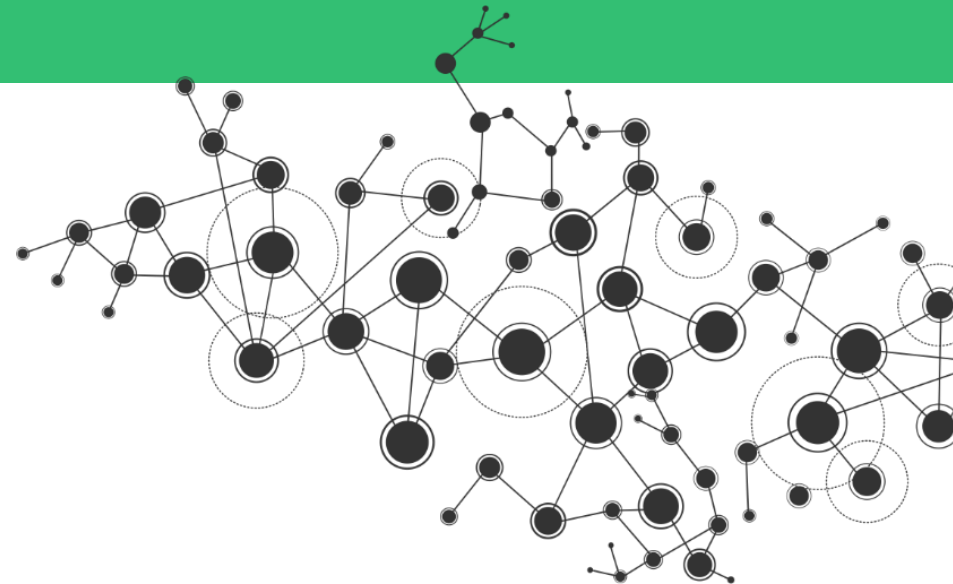


↑
Event 1



↑
Event 2

Effect on Utilities & Consumers

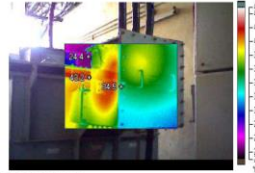


Effect on Utility & Consumers

Utility

Effects on Assets

- ✓ Transformers.
- ✓ Instrument Transformers.
- ✓ Relays
- ✓ HT Cables / Transmission lines etc
- ✓ Higher kVA Demand



- ✓ Reputation.
- ✓ Consumer court
- ✓ Consumer to shift the Utility

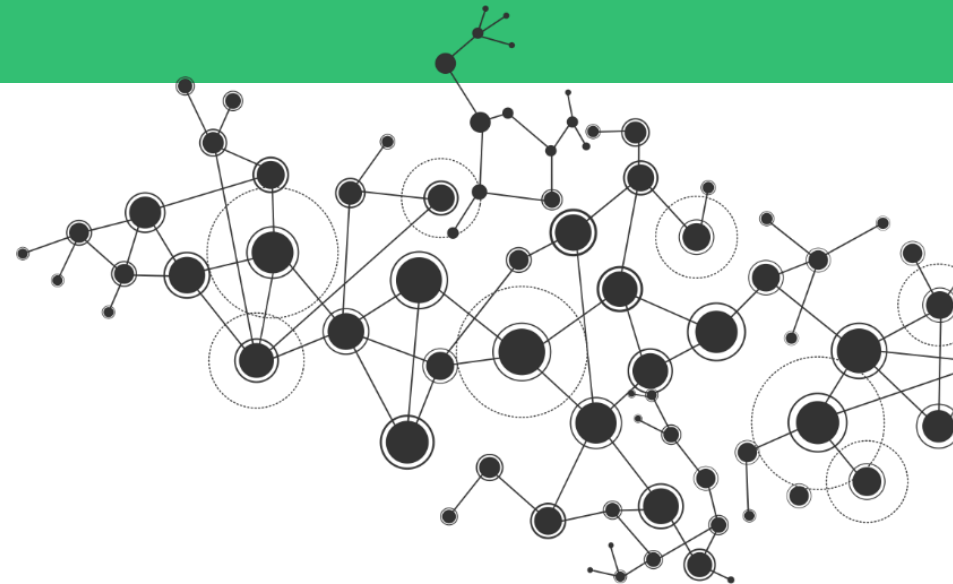


Consumers

- ✓ Transformers failure.
- ✓ Capacitor bursting.
- ✓ Failures of electronic devices.
- ✓ Nuisance tripping of breakers etc
- ✓ Revenue loss due to production outage.
- ✓ Higher usage of DG.
- ✓ Increased Maximum Demand



How Schneider can Help?



How Schneider Can help?

- ✓ Global Expert in Power Quality
- ✓ Working experience with many utilities Globally.
- ✓ Problem identification till solution implementation.
- ✓ Dedicated Team of Experts for Power Quality solutions.
- ✓ World class products to resolve PQ issues (completely type tested).



VArSet APFC Panels



AccuSine+ Active Harmonic filter



Voltage SAG/Swell Fighter

Life Is On

Schneider
Electric

Life Is On

