

Voltage Optimization for Manufacturing Plant

CUSTOMER PROFILE

Flex, Shenzhen – Fuyong

- High volume electronics manufacturing
- Multi-building equipment-heavy campus
- 0.75 initial baseline power factor

CHALLENGE

Flex Fuyong faced recurring issues tied to energy stability and quality across its manufacturing operations. Key issues included:

- **Voltage fluctuations** affecting sensitive electronics manufacturing processes
- **Inconsistent energy quality** leading to resets or downtime
- **Lack of granular visibility** into voltage conditions across a large-scale site
- **Pressure to improve operational efficiency** while maintaining high production throughput

SOLUTION & RESULTS

Edge Zero deployed a targeted voltage monitoring and regulation solution to address operational inefficiencies:

- **Increased power factor** from 0.75 to 0.99
- **Annual savings** of \$80,000 (AUD)
- **Optimized voltage** across key production circuits helped reduce energy wastage
- **Improved voltage stability** to protect equipment and maintain process continuity
- **Enabled real-time monitoring** to manage energy performance proactively
- **Delivered measurable improvements** in equipment uptime and energy reliability

AT A GLANCE

Challenges

- Voltage Fluctuations
- Downtime Due to Inconsistent Energy Quality
- Lack of Visibility
- Pressure to Improve Operational Efficiency
- High, Voltage-Based Electricity Pricing

Benefits

- Increased Power Factor From 0.75 to 0.99
- Payback Period of 2.9 Years
- Achieved Annual Savings of \$80,000 (AUD)

Visibility is the first step towards being able to control electricity usage.

Commercial electricity bills often have charges based on factors beyond energy usage. Being able to measure and control these factors is a significant advantage. This can lead to decreased spend on electricity and help mitigate downtime due to power quality issues.