

A world-leading beverage company
boosts operational

EFFICIENCY

with EConversion through
Galaxy Series UPS

An American Fortune 50 organisation drives
efficiency by up to 99% with EConversion through
Galaxy Series UPS by Schneider Electric.

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Life Is On

Schneider
Electric



The Background

A unit of a Fortune **50 Global Company**, which is a world-leading consumer brand and leader in non-alcoholic beverage, started this bottling plant in 1999 and is a green field plant based out of **Odisha, India** that operates across a wide area of 38 acres.

The mega plant witnesses a turnover of over **\$100M** and is a market leader in soft beverage drinks in India.

Goal

To maximise efficiency and reduce energy expenses in a unit of a global beverage organisation that holds **60%** of market share

As a manufacturing unit with such a large market share, the organisation required productivity of its six line plant to be at its peak along with a reliable source of energy that would both minimise downtime and save operational expenses.

The bottling plant consists of 6 lines to produce around **100,000** packs per day

Managed by over 400 employees, this plant has the capacity to produce over **2500 bottles per minute**.

The Challenge

The challenge was to minimise downtime, save operational expenses and maintain operational efficiency in this large scale Greenfield project that was over 20 years old.

One of the key concerns of the unit which was already equipped with a mix of **Rotary and Static** UPS was a steep increase in energy bills due to losses incurred in the UPS itself.

The plant experienced extreme load variations in their UPS systems.

Witnessed a load varying from **5% to 90%**

Some of the other challenges that this unit faced was loss of space, energy, and integration with the existing SCADA systems.



Challenge

Steep increase in energy bills due to the losses incurred by the existing UPS systems

The Solution

Schneider Electric deployed the Galaxy VX 1000 kW UPS, with a patented EConversion online mode of operation, and monitored it against other UPS systems through SCADA to determine the input and output parameters along with the per day losses/kWh of the UPS itself. As per the data captured it was observed that a 1000 kW Galaxy Series UPS had even less energy loss per day as compared to an existing UPS system of 400 kVA.



The EConversion helped the plant gain **99% efficiency** while the combination of Rotary and other static UPS only provided up to 94% cumulative efficiency.



Moreover, the unit saved over **\$ 23,500 per annum**

when compared to the 94% efficiency made available by combination of Rotary and other static UPS at site.

The HVAC consumption also reduced considerably as the UPS continuously operated in High Efficiency EConversion mode showcasing Harmonic Mitigation and Power Factor Correction while the Long-life Lithium-Ion Batteries occupied lesser footprint and was compatible with existing SCADA systems.

Improve Energy Efficiency With EConversion By Schneider Electric

Schneider Electric developed a new mode of operation which combines the benefits of Eco Mode (higher efficiency) and Double Conversion (Reliable Power quality) called EConversion mode. In EConversion mode the inverter is always ON performing a power quality improvement as well as charging the batteries.

EConversion mode stops short of doing the full double conversion when it's not warranted, but because the converter is always running, it can kick in immediately when there's a power disruption; there's no delay that can impact the load. And in EConversion mode the load is never exposed directly to unconditioned utility power, as is the case with standard eco-mode.

Hence, EConversion fully addresses the reliability and availability issues that have long hampered traditional UPS eco-mode while also delivering increased efficiency.

While standard, bypass eco-mode usually delivers efficiency of **98% to 99%** (compared to base UPS efficiency of 94% to 97%) EConversion will deliver efficiency that may drop below 99% depending on the connected load, but it's a small price to pay for the increased reliability.



Result

- **99%** increase in efficiency at average 40% load
- Over **23,500 USD** savings on energy bills per annum
- Reduction of HVAC consumption

EConversion is a patented technology by Schneider Electric which provides maximum availability at the highest efficiency for critical IT as well as Industrial loads. EConversion is certified by UL and maintains the power quality within the CBEMA curve recommended for IT equipment.



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