MAINETTI INDIA PVT. LTD.

(Sriperumbudur Unit)

CASE STUDY
AUGUST 2019

Mainetti India, Sriperumbudur unit is the first manufacturing facility to become PEER Platinum certified under the PEER v2 rating system in India.

"Mainetti has always been a forerunner in sustainability initiatives. Achieving PEER Platinum certification is a testament to the strong policy measures implemented at Mainetti India. This milestone will raise the bar further and will make us more committed to minimize the environmental impact of our operations and enhance our power system performance."

- Mr. Sundeep Chauhan, Country Head, Mainetti India Pvt. Ltd.

Mainetti India is a wholly owned subsidiary of the Mainetti Group, the largest manufacturers and suppliers of hangers in the world, which employs more than 5,000 people across 49 countries. Mainetti's largest manufacturing facility in India, located in Sriperumbudur, Chennai, houses a product distribution center as well as a well-stocked hanger library. This facility can produce up to 300 million hangers a year. In addition to hangers, they also provide additional products for the fashion industry, including luxury handmade bags, garment covers, presentation boxes, seals and security tags.

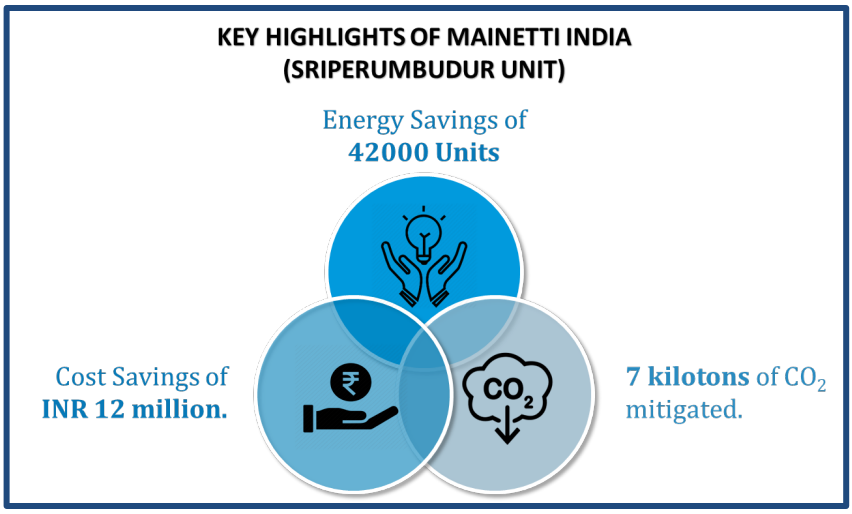

Figure 1. Efficiency highlights from the project

Mainetti India (Sriperumbudur unit) is committed to providing their customers with safely produced products that help reduce their impact on the environment through a focus on energy efficiency and emissions reduction. Mainetti India's (Sriperumbudur unit) strong commitment to sustainability has helped them achieve the Green Chariot Award for environmental protection. To continue their efforts, the organization assessed their electrical infrastructure with global standards achieved PEER Platinum after undergoing a rigorous certification and review process through the PEER v2 rating system.

CLEAN & SUSTAINABLE GRID INFRASTRUCTURE

In alignment with PEER's standards, the facility meets 86% of its power requirement from offsite renewable power. Additionally, the project has installed a rooftop solar PV capacity of 50 kW. All these measures have helped the project in a cost savings of INR 12 million ($182,273) and mitigating 7 kilotons of CO_2 emissions.

Figure 2. Percentage of renewable energy

To avoid loss of material and machinery breakdown, the unit receives an uninterrupted power supply from diesel generators (DG) and battery storage systems. In the event of a power interruption, the standard operating procedure at Mainetti is to immediately switch on their 60 KVA batteries, primarily to maintain the temperature in the heating process. If the interruption persists for more than 5 minutes, then the diesel generator (DG) banks of 1,500 KVA will be used as the main backup power option.

To make their grid infrastructure more resilient and reliable during natural disasters, the project has implemented power system hardening measures. 100% of their power cables are laid underground, and all power equipment is protected from external threats to ensure the plant's operation is uninterrupted.

The Sriperumbudur unit also has standard operational policies and procedures that help fulfill the PEER requirements across risk assessment, emergency response planning procedures, safety review protocols, and predictive approaches.

PEER Platinum certification demonstrates that Mainetti India's Spriperumbudur Unit has set a global benchmark compared to their peers around the world through their clean, reliable and resilient grid.

DEMAND SIDE MANAGEMENT (DSM) & ENERGY MONITORING

PEER emphasizes implementing comprehensive energy efficiency programs through the Demand Side Management (DSM) credit. Energy conservation offers long-term benefits includes cost savings, capacity savings, and greenhouse gas reductions.

For example: By replacing CFL-based light fixtures with LEDs in their Injection Molding Machine (IMM), Mainetti India (Sriperumbudur unit) realized an overall annual energy savings of 41,000 units, as well as cost savings of INR 3.3 lakhs ($4,790).

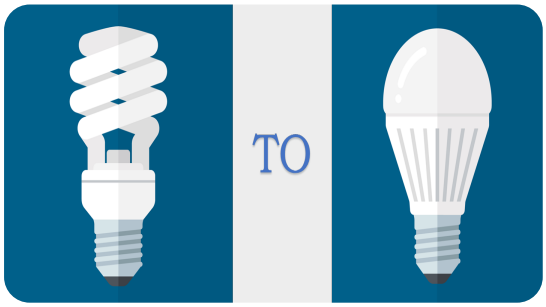

Figure 3. CFL-based light fixtures vs.LEDs

Effective grid operation is all about balancing generation and demand. By monitoring power infrastructure in real-time, facilities can avoid system instability, power quality issues, brownouts and blackouts. Presently Mainetti India (Sriperumbudur unit) has 17 sub-meters and 3 advanced energy meters to monitor the energy infrastructure at their site.

They currently use a custom-made software to monitor energy use and power quality data at the facility. This software gives real-time updates on the load factor, connected load and the different power quality aspects of all the main loads in the facility. Real-time monitoring of energy infrastructure benefits every manufacturing facility in identifying ways to boost their efficiency, reducing the chances of penalties and saving huge costs.

PEER CERTIFICATION

PEER, or Performance Excellence in Electricity Renewal, is the first certification program to measure and improve power system performance. PEER is scalable to any power system or electrical infrastructure, and PEER certified projects have a competitive advantage by differentiating their performance, documenting the value produced and demonstrating meaningful outcomes. The PEER Rating System consists of six credit categories:

- Reliability and Resiliency (RR)
- Energy Efficiency and Environment (EE)
- Operations, Management and Safety (OP)
- Grid Services (GS)
- Innovations (IN)
- Regional Priority (RP)

PEER Certification for Campus Projects

Certified August 2019

Total Points Achieved	**80**
Reliability and Resiliency	19
Energy Efficiency & Environment	23
Operations, Management & Safety	17
Grid Services	13
Innovations & Regional Priority	08
Total Possible Points	110

Mainetti India (Sriperumbudur unit) has earned 80 out of a possible 110 points, achieving PEER PLATINUM rating under version 2 of the rating system as a Campus project. Additionally, the project has met all the prerequisites including reliability performance monitoring, environmental performance disclosure, system energy efficiency coefficient disclosure, triple-bottom-line analysis, and load survey.

As part of the process, Mainetti India (Sriperumbudur unit) identified opportunities for continuous improvements, such as:

- Installation of monitoring systems to assess and reduce their interruption
- Implementation of a master controller and energy management system
- Implementation of policies and measures, e.g. Protection from security breaches through the Cybersecurity policy
- Evaluation of their environmental consequences related to their grid installations and operation through the Environmental Impact Assessment