



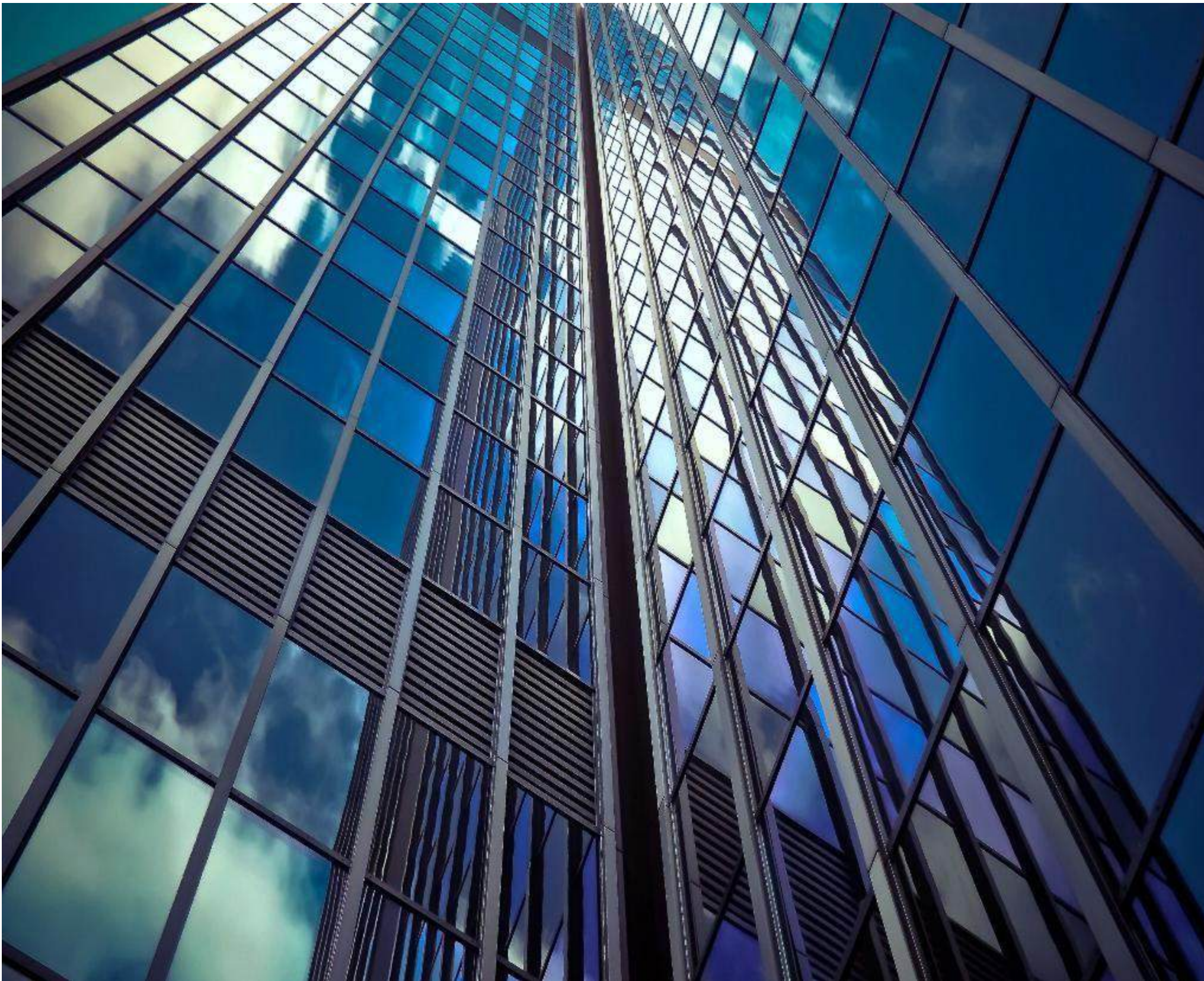
CL⁺ ENERGY
Powering Green Revolution



Company Profile



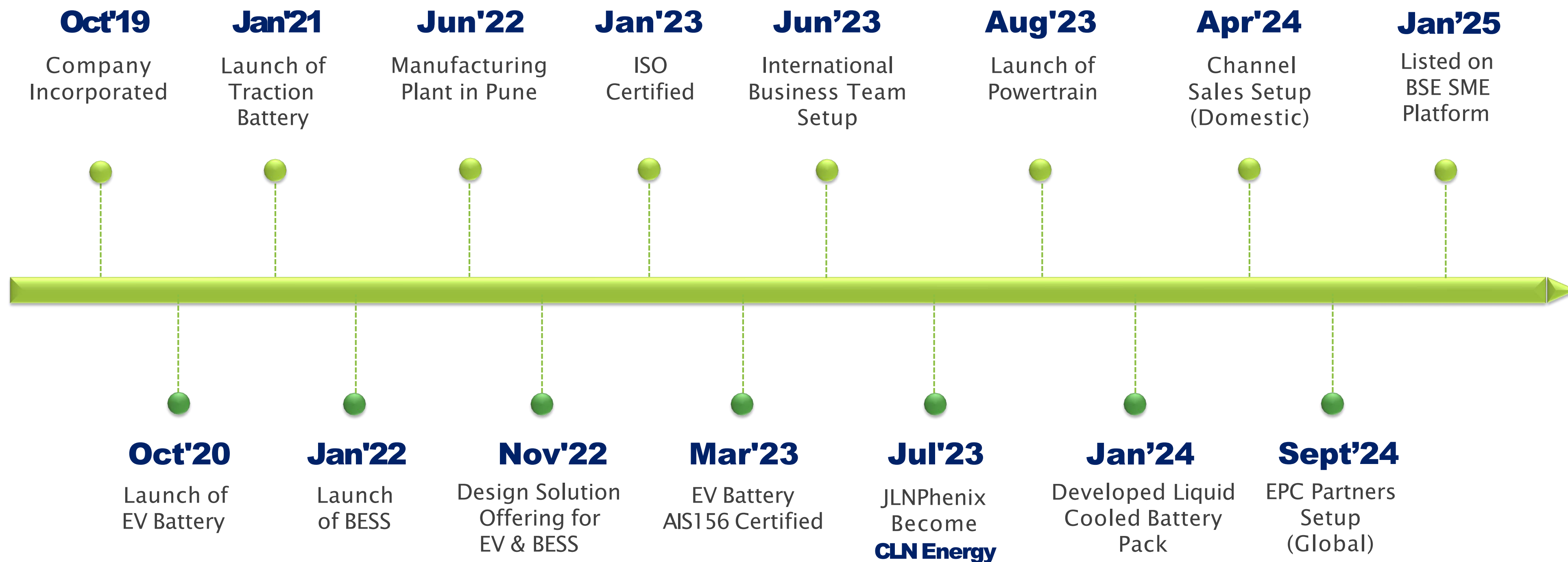
About CLN Energy Ltd.



- Founded in 2019 and headquartered in Singapore, with two state-of-the-art manufacturing plants in India and a growing presence across the Middle East and Africa. Quality assurance and supply chain operations strategically managed across India, China, and Hong Kong
- **Fully Integrated Power System:** On-grid, off-grid and hybrid powered solutions across applications for retail, commercial, industrial, residential, telecom towers, data centres etc.
 - **Lithium-Ion Battery packs:** (Cylindrical, Prismatic, Pouch) for all Mobility and Stationary solutions with LFP and NMC chemistry
 - **Battery Energy Storage Solution (BESS):** complete solution with modular battery design and integrated inverter, SMPS, EMS, UPS, BMS – to seamlessly switch between power sources, remotely controlling energy needs, and intelligent monitoring.
- Our teams have been cultivating regularly in the research, development, and manufacturing the stronger and safer solutions complying with national and international standards



Journey So Far





Business Snapshot



Annual Production Capacity

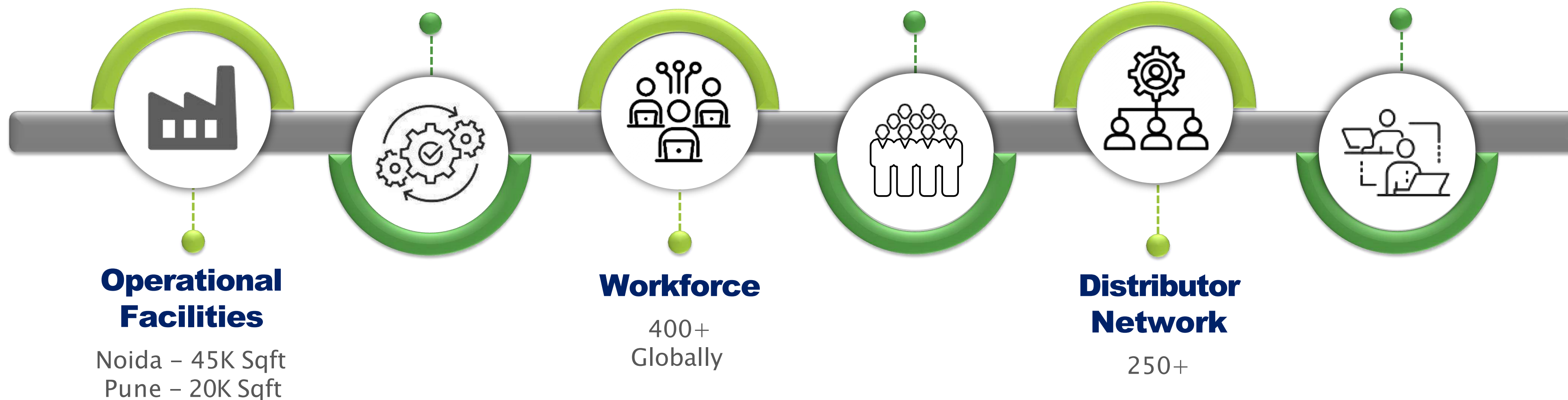
- 1GWh+ Battery Packs

Global Customers & Partners

- 400+ Key Customers
- 150+ Business Partners

Service Center & Partners

- Pan India Service Network
- Global Service Partners
- Global EPC Partners





Our Key Strengths



Extensive Industry Partnership

- Leveraging our extensive industry connections for latest technology and efficiently integrate the most suitable solution with our selected partners
- Local & in-country partnerships for delivery and sales support
- Local and regional partners for services after warranty support and replacements

International Certifications

- ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 certified plants
- AIS156 Phase II Amend 3 certification for various Li-ion Batteries
- UL1642, IEC62619, UL1973 for BESS Application
- IS16046, IS16047 for Solar Application
- TEC 67030:2024, IEC 62619 , IEC 62133, IEC 61000, IS16047 for Telecom Application

State of Art Manufacturing Facilities

- Noida: Annual capacity – 800 MWh in 42K+ sqft area
- Pune: Annual capacity – 200 MWh in 20K+ sqft area

Strong Supply Chain

- Exclusive agreements with cell manufacturers globally
- Quality Check assurance by our engineers in India, China and Hong Kong

In-house R&D

- Unyielding focus on research for constantly evolving technology, applications & landscapes



Our Solutions

Our Solutions



Stationary



- Telecom
- Residential
- Commercial & Industrial
- Data Center
- Grid & Utility

Mobility



- 2-Wheeler (L2)
- 3-Wheeler (L3): E-Rickshaw
- E-Auto (L5)
- Underground Mining Vehicle
- Golf Cart
- Material Handling Equipment
- Chargers

System Design and Solution Development



- BESS
- EV Charging Stations
- E-Scooters

EV Powertrain



- Motor & Controller (L2 & L3)
- EV Components (L2 & L3)

Stationary: Telecom

- Our 48V battery pack for telecom is designed with a 100 Ah & 50Ah capacity battery cell of lithium-ion iron phosphate chemistry, providing larger capacity in the compact size of a 19" rack-mounted 3U battery module
- Ideal for On-grid, off-grid and hybrid solutions
- Customized solutions designed for various load requirements
- Comes with built-in BMS with automatic protection, cell balancing and master slave function for higher capacity to offer safe and highly efficient operation to customers.
- Efficient and greener replacement of Lead-Acid (VRLA) batteries

Key Performance Factors

Smart BMS

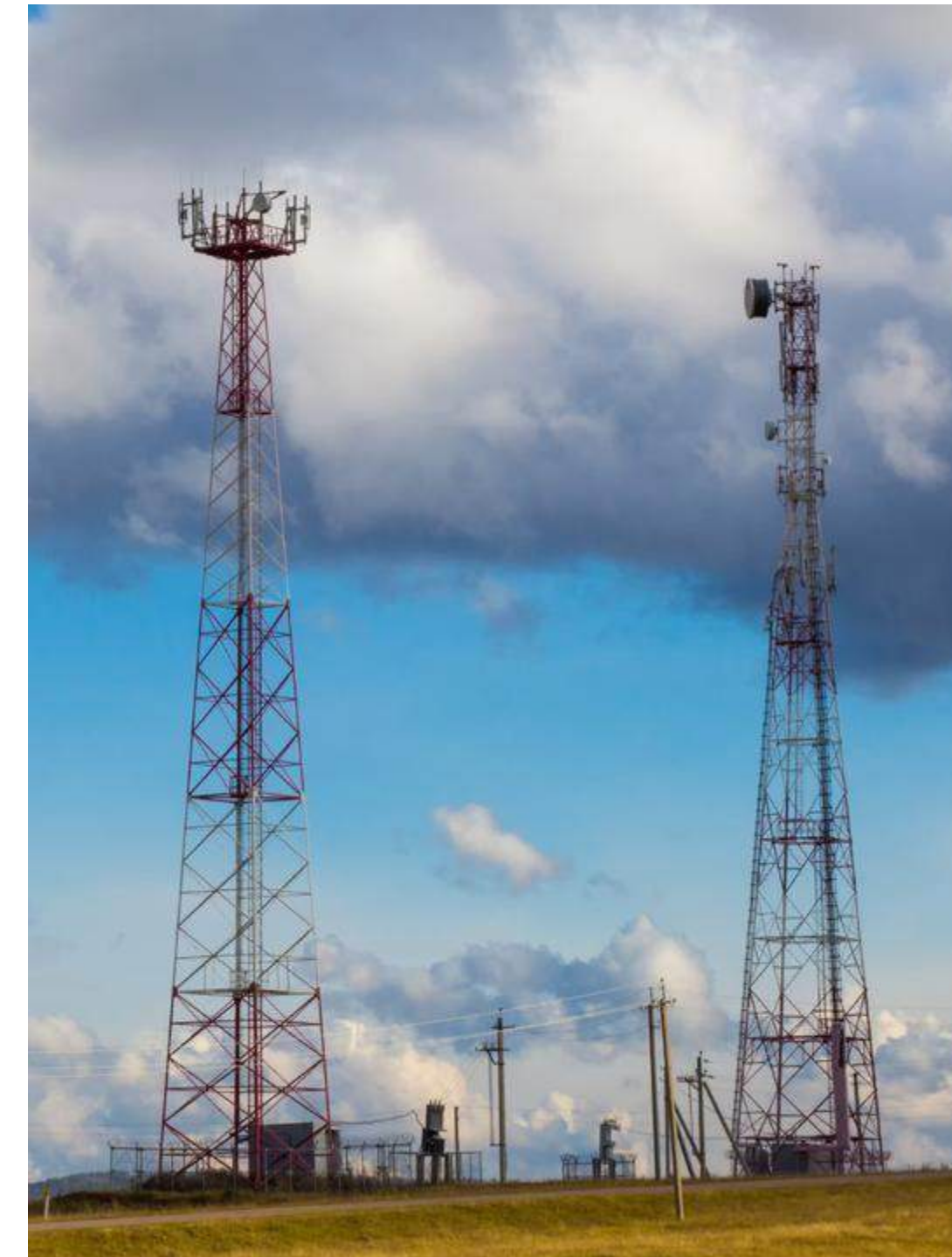
- Active monitoring: temperature, voltage and current
- Real-time adjustments to operate within optimal conditions

Remote Monitoring System

- Fault diagnostics
- Optimized site performance
- Autonomous site control
- Faults management
- Direct access by users

Greater Safety

- Fire-resistant casing to prevent explosions
- Higher thermal stability to prevent overheating or short circuit





Stationary: Telecom – Product Range



Single Module Capacity

Voltage	Capacity	Maximum Charge Current (A)	Maximum Discharge Current (A)	U-height	No. of cycles (25°C, 80% DOD, 0.5C/0.5C)	Weight (kg)
48V	50Ah	25	50	3U	4,000	32
48V	100Ah	50	100	3U	6,000	52
48V	150Ah	75	150	3U	6,000	55
48V	200Ah	100	200	4U	6,000	82



Stationary: Residential

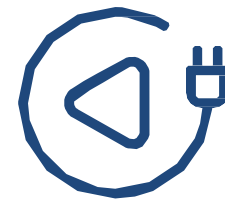


- Advanced solution – suited for wide range of applications, including on-grid home power, backup power, smart energy systems, and solar energy integration.
- Seamlessly connects with the grid, generators, and solar panels, enabling efficient and flexible energy management.
- Engineered with durability and cutting-edge technology, offering ideal solution for homeowners seeking to enhance energy efficiency and ensure reliable power.
- Lower total cost of ownership



Integrated solution

All-in-one design with hybrid inverter and modular battery storage



Plug-and-Play

Pre-configured for quick installation and reduced maintenance time



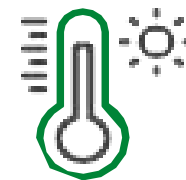
Built-in Battery Protections

Automatic safety features: over/under voltage, temperature, current, and short-circuit protection



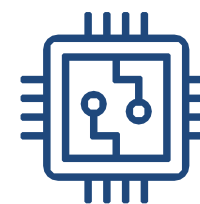
Remote Monitoring

Monitor system performance via Mobile App or integrated display



Wide Temperature Range

Reliable operation from 0°C to 60°C with natural / forced / HVAC cooling options



Smart Energy Management

Integrated EMS supports multiple operation modes: PV priority, grid priority, or inverter priority



Stationary: Residential – Product Range



All-in-one Table Top

- Battery:
 - 100Ah
 - 25.6V
- MPPT Charger
- Solar Inverter
- Grid Charger



All-in-one Wall Mount

- Battery:
 - 100Ah
 - 12.8V ~ 25.6V
- MPPT Charger
- Solar Inverter
- Grid Charger



Inverter Battery Table Top

- Battery:
 - 105Ah ~ 150Ah
 - 51.2V ~ 64V



Inverter Battery Wall Mount

- Battery:
 - 100Ah
 - 48V ~ 51.2V



Stackable Solution

- Battery:
 - 100Ah ~ 400Ah
 - 48V ~ 51.2V

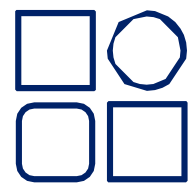


Grid Tie Inverter

- PV
 - 1.3kW ~ 7.5kW
 - 550~600 Vdc
- MPPT
 - 70~500 Vdc
 - 360V ~ 420V

Stationary: Commercial & Industrial

- Offering advanced Energy Storage Solutions tailored for industrial, commercial complexes, and remote energy applications. Our energy storage systems are designed to support energy efficiency, stabilize renewable power, reduce peak demand, and ensure continuous power supply.
- Whether it's managing energy loads in large-scale commercial buildings, supporting EV infrastructure, enabling off-grid microgrids, or integrating with solar PV systems in industrial zones, CLN'S solutions deliver flexibility, intelligence, and reliability.



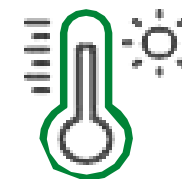
Scalable and Modular Design

Modular and scalable design enabling multiple rated power and capacity



Built-in Battery Protections

Automatic safety features: over/under voltage, temperature, current, and short-circuit protection



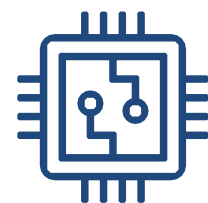
Wide Temperature Range

Reliable operation from 0°C to 60°C with natural / forced / HVAC cooling options



Plug-and-Play

Pre-configured for quick installation and reduced maintenance time



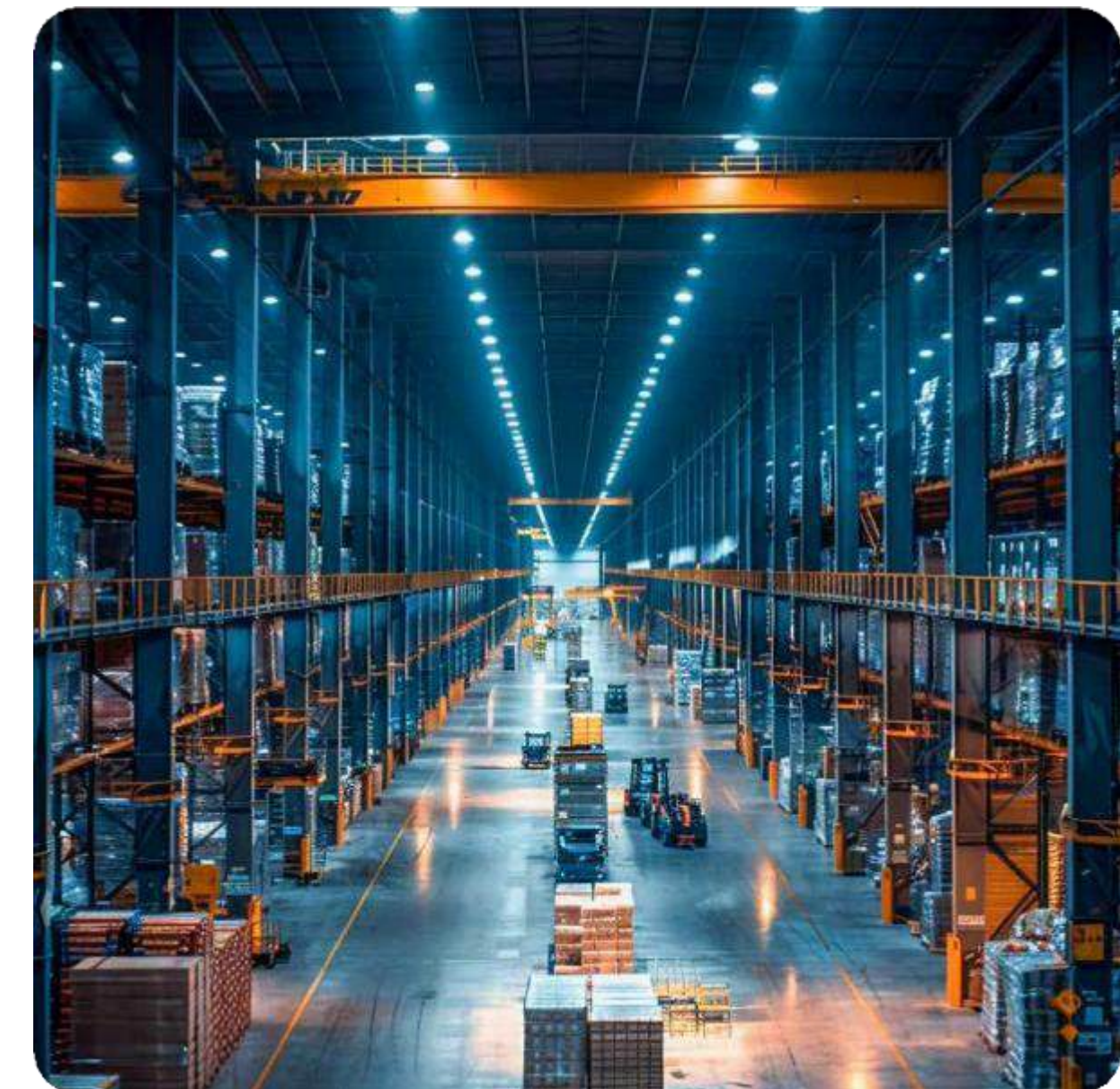
Smart Energy Management

Integrated EMS supports multiple operation modes: PV priority, grid priority, or inverter priority



Remote Monitoring

Monitor system performance via Mobile or integrated display



Stationary: Commercial & Industrial – Product Range



Standalone Battery ESS

- **Battery:**
 - 48V100Ah
 - 96V100Ah
 - 120V100Ah
 - 192V100Ah
- **Application:**
Small Office, Farm House, Critical Health Care Facilities



Stackable Battery ESS

- **Battery:**
 - 48V100Ah
 - 48V200Ah
 - 48V300Ah
 - 48V400Ah
- **Application:**
Hospitality, Office, Education institute, Health Care Facilities, Defense Application, Railway



Rack Mounted ESS HV Series 100Ah HV Series 314Ah HV Series

- | | |
|---|---|
| ▪ Battery: <ul style="list-style-type: none">○ 240V100Ah○ 384V100Ah○ 480V100Ah○ 512V100Ah○ 720V100Ah | ▪ Battery: <ul style="list-style-type: none">○ 240V314Ah○ 384V314Ah○ 480V314Ah○ 512V314Ah○ 720V314Ah |
| ▪ Application:
Hospitality, Industries, Education institute, Defense, Health Care Facilities | ▪ Application:
Hospitality, Industries, Education institute, Defense, Health Care Facilities |



All-in-One ESS Air Cooled

- **Model:**
 - 100kW 200kWh
- **Capacity:** 224kWh
- **Nominal Voltage:** 748.8V
- **STS & MPPT** - *optional*
- **Application:**
Hospitality, Health Care Facilities, DG Replacement in industries and society, Defense, Office (Large range)



All-in-One ESS Liquid Cooled

- **Model:**
 - 100kW 200kWh
 - 250kW 464kWh
- **Capacity:**
215kWh ~ 464kWh
- **Nominal Voltage:**
768V ~ 832V
- **Application:**
Hospitality, Health Care Facilities, DG Replacement in industries and society, Defense, Office (Large range)

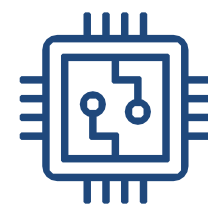
Stationary: Data Center

- Our ESS solution is well-suited for deployment in data center projects, providing power stability, reliable backup, and scalable capacity to support future growth.
- From assessing your energy needs to system design, installation, and maintenance, our solution will ensure your data center remains efficient, cost-effective, and resilient.
- Our solutions are scalable to meet the growing energy demands of data centers, while being easily integrated with existing infrastructure



Advanced BMS

Three-level BMS management, multi-level protection, automatic isolation in the event of anomalies, to ensure normal power supply to the system



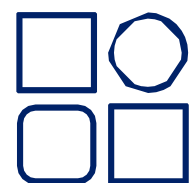
Rapid Deployment

Pre-installed battery system, modular standard design, rapid deployment on site, easy operation and maintenance



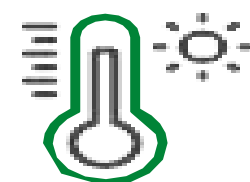
Extreme Safety

Higher safety and stability lithium iron phosphate battery, no fire caused by thermal runaway



Parallel Support System

Support multiple groups in parallel, and support uninterrupted power maintenance when multiple clusters are used in parallel



Energy Saving

Natural heat dissipation design, saving energy



High Energy Density

High energy density, saving 70% compared to lead-acid battery





Stationary: Data Center – Product Range

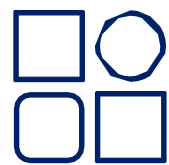


Nominal Voltage	Rated Charging Voltage	Nominal Capacity	Operating Temperature	Size(W*D*H)
5-15min Data Center Energy Storage Series				
240Vdc	262.5Vdc	50Ah/12kWh	15-45°C	600*800*1400mm
480Vdc	525Vdc	50Ah/24kWh	15-45°C	600*800*2000mm
486.4Vdc	532Vdc	100Ah/48.64kWh	15-45°C	600*800*2200mm
512Vdc	560Vdc	100Ah/51.2kWh	15-45°C	600*800*2200mm
30-60min Data Center Energy Storage Series				
224Vdc	245Vdc	50Ah/11.2kWh	15-45°C	600*800*1200mm
192Vdc	210Vdc	100Ah/19.2kWh	15-45°C	600*800*1200mm
224Vdc	245Vdc	100Ah/22.4kWh	15-45°C	600*800*1400mm
384Vdc	420Vdc	100Ah/38.4kWh	15-45°C	600*800*2000mm
480Vdc	525Vdc	100Ah/48kWh	15-45°C	600*800*2000mm
512Vdc	560Vdc	100Ah/51.2kWh	15-45°C	600*800*2000mm



Stationary: Grid & Utility

- Our Microgrid Solution integrates local power generation, energy storage, photo voltaic (PV) systems, and smart load control into a unified, self-reliant power network.
- Designed for flexibility, it can operate independently or with the main grid.
- Ideal for remote areas, islands, and off-grid locations, these (1–5 MWh) Battery Energy Storage System (BESS) delivers high-capacity, stable, and scalable power, ensuring energy availability, reducing fossil fuel reliance, and enabling sustainable, grid-independent operations.



Scalable and Modular Design

Flexible configuration, easy transportation, installation, and integration into existing grids



High Energy Density

High Energy Density for Flexible Layout and Expansion



Intelligent Operation & Maintenance

Intelligent operation and maintenance, reducing operation and maintenance costs



Efficient Installation

Efficient Installation and Commissioning of AC/DC Integrated Systems



Extreme Safety

Multiple layers safety protection design to guarantee safe operation



Boost Renewable Energy Utilization Rate

Enhances the utilization rate of new energy generation





Stationary: Grid & Utility – Product Range



Parameters	1MWh BESS	2 MWh BESS	3 MWh BESS	5 MWh BESS
Voltage	665V	1164V	1164V	1164V
Capacity	~1500Ah	~1500 to 2500 Ah	~1500 to 2500 Ah	~4000Ah
Battery System Power	1045 kWh	2073 kWh	3340 kWh	5015 kWh
Dimension	20ft Container	20ft Container	20ft Container	40ft Container





System Design and Solution Development – EV & BESS



EV & BESS

- Design and Development of EV Charging Station
- Design and Development of BESS
- Design and Development of E-Scooter

EPC of Large Containerized BESS

- Design and Development for BESS applications
- Design and Development for Containerized solution

Testing, Validation and Certification of EV and BESS

- AIS156, AIS038, R100 for EV Application
- UL1642, IEC62619, UL1973 for BESS Application
- IS16046, IS16047 for Solar Application
- TEC 67030:2024, IEC 62619, IEC 62133, IEC 61000, IS16047 for Telecom Application



Projects Deployed



Project Deployed - Telecom



Customer: BSNL

Location: PAN India

Our Solution:

- Lead-Acid battery replacement with Li-Ion Battery in BSNL's locations

Scope of Supply:

- 22,864 units of 100 AH/48V Li-ion Batteries Module – Capacities 400 AH & 800 AH – with BMS, CBMS and associated accessories, for use in providing 48 V DC power for equipment in BSNL Telecom Network
- 5-Year warranty
- 5-year AMC for Li-ion battery sets after warranty period of 5 years.

Application : NOC, Data Center, Telecom Towers





Project Deployed – Microgrid Solar Farm



Customer: Hamara Grid

Location: Nagaland, India

Our Solution:

- Microgrid solution to provide 24*7 power to 6 villages, enterprises & essential services (Phase 1)

Scope of Supply:

- Supply of Li-Ion Batteries, BMS, EMS, PCS & PVs
- Logistics + Ground works + Manpower on-site

Application : Solar Farm, Microgrid, Telecom Tower





Project Deployed – Data Center



Customer: Integrated Command Control Center, RailTel Corporation

Location: Pondicherry, India

Our Solution:

- Provide a comprehensive backup solution for critical data center loads

System Configuration

- Power System (UPS) : 100 KW
- Battery Rating : 180 kWh Backup
- Duration : 2 hours Installation
- Year : 2024

Application:

- Designed to support critical data center infrastructure, ensuring uninterrupted operation during power outages





Project Deployed – Plant Power Backup



Customer: BHP Design & Build Sdn. Bhd.

Location: Sarawak, Malaysia

Our Solution:

- Provide BESS solution to a greenfield plantation site with 48-hour battery back-up
- Battery Rating : 153.6 kWh

Scope of Supply:

- 26 x Battery Modules 48V 100Ah + GBMS + 42U Cabinet HMI LCD + Cables + Accessories
- 2 x 6KW Hybrid Inverter, WIFI, LV
- 26 x SPV Mono PERC 550W + Structures + Accessories
- Logistics + Ground works + Manpower on-site

Application : Plant Power Backup, Telecom Tower





Project Deployed - Railways



Customer: Indian Railways

Location: Chennai, Tamil Nadu

Our Solution:

- Provide a comprehensive backup solution for critical southern railways loads

System Configuration

- Power Plant (SMPS): 10 KW
- Battery Rating: 14.4 kWh
- Backup Duration: 7 hours
- Load capacity: 2 kWh
- Installation Year: 2025

Application : Designed to support critical southern railways automatic block signaling, ensuring uninterrupted operation during power outages





Project Deployed – UP NEDA



Customer: Jaipuria School

Location: Ballia, Uttar Pradesh India

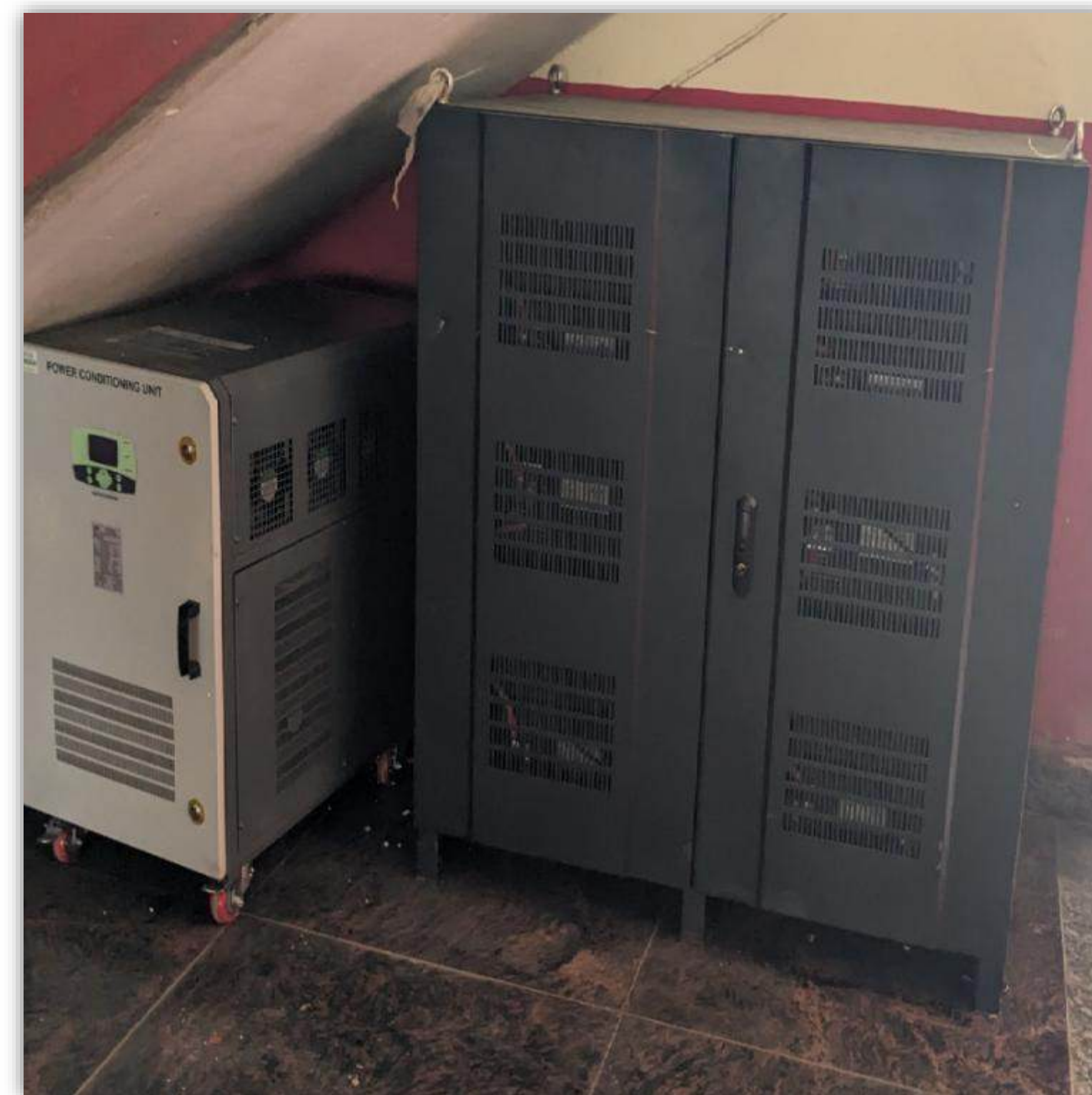
Our Solution:

- Provide a comprehensive backup solution for critical government school loads

System Configuration

- Hybrid Inverter : 20 KW
- Battery Rating : 69 kWh
- Backup Duration : 4.5 hours
- Load capacity : 15 kWh
- Installation Year : 2023

Application : Designed to support critical infrastructure with low maintenance requirements – ideal for government institutions, ensuring uninterrupted operation during power outages.





Project Deployed – SME



Customer: Hex Business Innovations LLP

Location: Faridabad, Haryana

Our Solution:

- Provide a comprehensive backup solution for critical industrial loads

System Configuration

- Hybrid Inverter : 10KW
- Battery Rating : 19.2 kWh
- Backup Duration : 3.6 hours
- Load capacity : 5 kWh
- Installation Year : 2025

Application:

- Designed to support critical industrial load
- Integrated with a solar PV system to reduce energy bills and ensuring uninterrupted operation during power outages.





Project Deployed – Residential



Customer: Private residential units

Location: Gangani, Haryana

Our Solution:

- Provide a comprehensive backup solution for household loads

System Configuration

- Hybrid Inverter : 10KW
- Battery Rating : 9.6 kWh
- Backup Duration : 2.2 hours
- Load capacity : 4 kWh
- Installation Year : 2025

Application:

- Designed to support critical household load
- Provide backup during grid failures ensuring uninterrupted operation during power outages..





Project Deployed – Hybrid Power Battery Generator



Customer : Greaves

Location : Multiple Locations

Our Solution:

- 241kWh/120kW Integrated solution for DC and AC side

System Configuration

- 15 Battery modules of 51.2V 314Ah, 2 RBMS, System Canopy, HMI LCD, Cables, Electrical Accessories
- 2x 60KW Hybrid Inverter, WIFI, LV
- ACDB, DCDB, Junction isolator
- Logistics + Ground works + Manpower on-site
- 5-Year warranty

Application : Commercial and industrial battery solution



C&I Projects Deployed List

Sr. No.	Customer	Battery Specifications	Qty.	Capacity, MWh
1	BSNL	48V 100Ah	22864	110
2	Advit Ventures Pvt. Ltd.	51.2V 1000Ah / 51.2V 1000Ah / 614.4V 100Ah / 307V 314Ah	6	0.40
3	Jakson Limited	720V 200Ah / 480V 100/200Ah / 384V 100/200Ah / 499.2V 200Ah / 576V 100/200Ah	12	0.90
4	Switching AVO Electro Power Ltd.	432V 400Ah	2	0.35
5	Servotech Power System Ltd	256V 300Ah / 121.6V 300Ah / 240V 100Ah / 96V 300Ah / 240V 258 Ah / 256V 600Ah	54	3.0
6	Statcon Energea	240V 100Ah / 256V 314Ah / 256V 400Ah	15	0.70
7	Techtronix Power Systems	240V 105Ah	2	0.05
8	Indexel Engineering Pvt. Ltd.	460.8V 206Ah / 51.2V 600Ah	3	0.16
9	Kirloskar Oil Engines	480V 105Ah	1	0.05
10	KLK	115.2V 258Ah / 121.6V 300Ah / 230.4V 300Ah / 240V 200Ah	45	2.47
11	Watthut Electronics Pvt. Ltd.	480V 100Ah	4	0.19
12	Best Power Equipments	48V 1000Ah / 240V 100Ah / 384V 100Ah	15	0.54

Get In Touch With Us



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