



Commercial & Industrial Product Range

Battery Energy Storage System



Continuously Innovating to
**POWER A
SMARTER WORLD**



About us

CLN Energy Limited is a BSE-SME listed company specializing in the design and manufacturing of advanced lithium-ion battery solutions. We power the future of clean energy with high-performance batteries for Electric Vehicles (EVs), Battery Energy Storage Systems (BESS) — including residential, commercial & industrial (C&I), telecom, and data center applications. Headquartered in Singapore, CLN Energy has a global footprint with teams operating across Malaysia and Hong Kong. Our two state-of-the-art manufacturing facilities in India enable us to deliver safe, scalable, and sustainable energy solutions that meet the highest international standards. Driven by innovation, backed by a global team of experts, and committed to environmental stewardship — we're building the foundation for a cleaner and connected tomorrow.

100+
Business Partners

100+
Distributor Network

380+
Workforce



"Switch to Lithium" reflects CLN Energy's commitment to powering a cleaner, smarter future. As the world moves toward sustainable solutions, lithium stands out as the energy source of tomorrow—lightweight, efficient, and eco-friendly. This shift marks a move away from outdated technologies toward reliable, future-ready power systems that align with global energy goals.



Powering Industries Across Globe

**Commercial
& Industrial**

Residential

**Electric
Vehicles**

**Telecom &
Railways**

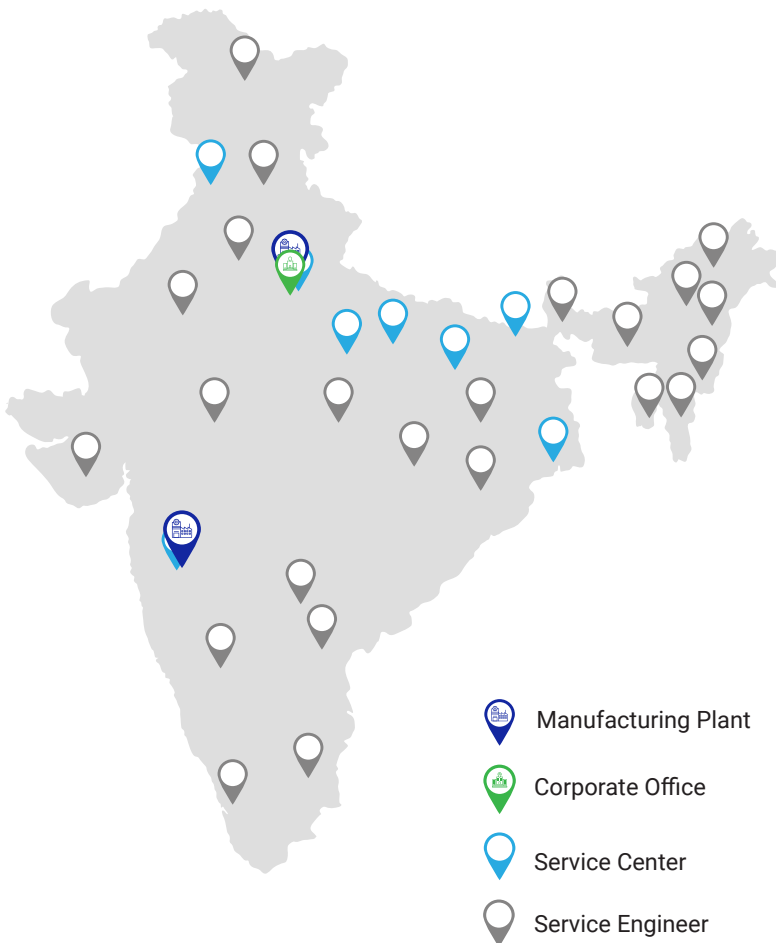
**Grid &
Utility**

Data Center



Pan India Sales and Service

Our extensive sales and service network spans to major cities across India, ensuring timely support wherever you are. With teams strategically positioned nationwide, we offer reliable after-sales service, maintenance, and technical assistance. Our customer-focused sales professionals understand local needs and recommend tailored solutions, while our experienced service team ensures quick response and minimal downtime. Count on us for dependable, personalized support—just a call away



Operational Facilities

Noida: 42,000 Sqft

Pune: 20,000 Sqft

Annual Production Capacity

2 GWh+ Batteries

Service Center

**Pan India
Service Network**



CLN Energy: Noida Plant

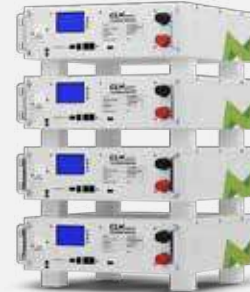


CLN Energy: Pune Plant

Commercial & Industrial BESS Product Range



Standalone Battery ESS



Low Voltage Stackable ESS



Rack Mounted High Voltage ESS



All-in-One ESS Air Cooled



All-in-One ESS Liquid Cooled



1-5 MWh Grid & Utility ESS

COMING SOON



High Voltage Stackable ESS



Continuously
Innovating to
**POWER A
SMARTER
WORLD**

Commercial and Industrial ESS

CLN Energy's offers 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.



Standalone Battery ESS

CLN Energy's Standalone Battery Energy Storage System embodies our commitment to reliable, high-performance, and sustainable energy solutions. Powered by advanced lithium-ion technology, it offers scalable energy storage designed to meet the demands of commercial and industrial applications.

Built for long-term durability and seamless integration. It enhances energy security, reduces dependency on traditional power grids, and supports the global shift toward cleaner, smarter energy infrastructure.



48V100Ah/ 96V100Ah/ 120V100Ah/ 192V100Ah

Applications

Small office

Farm House

Critical Health Care Facilities

Key Features



Safe and Long-lasting

Uses advanced cobalt-free LiFePO4 cells with 3000+ cycles @ 90% DoD



Remote Monitoring

Monitor system performance via Android App or integrated display



Advanced Communication

Equipped with RS485/CAN for inverter and BMS communication



Built-in Battery Protections

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



Plug-and-Play Design

Pre-configured for quick installation and reduced maintenance time



Wide Temperature Range

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



Certified Quality

Compliant with global standards: UN38.3, IEC 62619, IEC 61000, UL 1973



Eco-Friendly Chemistry

Non-toxic, non-hazardous, and fully recyclable LiFePO4 cells

Technical Specification

Battery Specification	Rating			
Battery Configuration	48V100Ah	96V100Ah	120V100Ah	192V100Ah
Battery Capacity (kWh)	4.8	9.6	12	19.2
Battery Type	LFP			
Chemistry	Lifepo4			
Cell Package Type	Prismatic			
Capacity (Ah)	100			
DoD	>80%			
Nominal Voltage (V)	48	96	120	192
Voltage Range (V)	42-54	84-108	106.4-136.8	168-216
Rated Charging Current (Standard)	0.3C			
Peak Charging Current	0.5C			
Rated Discharge Current	1C			
Communication Interface/Protocol	RS485/CAN			
Charging Operating Ambient Temperature (°C)	0 to 55			
Discharging Operating Ambient Temperature (°C)	0 to 60			
Storage Temperature For 6 Months	0 to 35 (50% SOC)			
Cooling	Natural / Forced / HVAC			
Lifecycle @ Ambient 25	3000			
Rack Type	Enclosure / Container			
IP Protection	IP20/IP54			
Electrical Protection	Contactor / Breaker / BMS			
Protection	Over voltage, under-voltage			
	Over-temperature (charge and discharge)			
	Under-temperature (charge and discharge)			
	Over current (charge and discharge)			
	External short circuit detection			

Stackable Battery ESS

CLN Energy's Low Voltage Stackable Battery Energy Storage System is a modular lithium-ion solution designed for C&I backup and solar integration. Supporting up to 4 modules (19.2 kWh), it comes equipped with an integrated Energy Management System (EMS) and optional off-grid inverter compatibility.

With multiple operating modes, smart app-based remote monitoring, and advanced safety protections, it ensures seamless performance. Engineered for effortless installation, long-term reliability, and zero maintenance.



Key Features



Modular and Scalable : Stack up to 4 modules – from 5.12 kWh to 20.48 kWh total capacity



Safe and Long-lasting : Uses advanced cobalt-free LiFePO4 cells with 3000+ cycles @ 80% DoD



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



Remote Monitoring : Monitor system performance via Android App or integrated display



Advanced Communication : Equipped with RS485/CAN for inverter and BMS communication



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



Plug-and-Play Design : Pre-configured for quick installation and reduced maintenance time



Wide Temperature Range : Reliable operation from 0°C to 60°C with natural/forced/HVAC cooling options



Certified Quality : Compliant with global standards: UN38.3, IEC 62619, IEC 61000, UL 1973



Eco-Friendly Chemistry : Non-toxic, non-hazardous, and fully recyclable LiFePO4 cells

www.clnenergy.in



SB-ESS



COMING SOON

Technical Specification

Battery Specification	Parameter			
Battery Configuration	48V100Ah	48V200Ah	48V300Ah	48V400Ah
Battery Capacity (kWh)	4.8	9.6	14.4	19.2
Battery Type	LFP			
Chemistry	LiFePO4			
Cell Package Type	Prismatic			
Capacity (Ah)	100	200	300	400
DoD	>80%			
Nominal Voltage (V)	48			
Voltage Range (V)	42 – 54			
Rated Charging Current (Standard)	0.3C			
Peak Charging Current	0.5C			
Rated Discharge Current	1C			
Communication Interface/Protocol	RS485/CAN			
Operating Ambient Temperature – Charging (°C)	0 TO 55			
Operating Ambient Temperature – Discharging (°C)	0 to 60			
Storage Temperature For 6 Months (°C)	0 to 35 (50% SOC)			
Cooling	Natural / Forced / HVAC			
Lifecycle @ Ambient 25°C	3000			
IP Protection	IP65			
Electrical Protection	Contractor / Breaker / BMS			
Protection	Over voltage, under-voltage			
	Over-temperature (charge and discharge)			
	Under-temperature (charge and discharge)			
	Over current (charge and discharge)			
	External short circuit detection			

Applications

-
- Hospitality
 - Office
 - Education institute
 - Health Care Facilities
 - Defence Application
 - Railway

Rack Mounted High Voltage ESS

CLN Energy's Rack Mounted High Voltage Energy Storage System is engineered for high-performance, scalable, reliable storage in commercial and industrial environments. Available in IP20 and IP55 protection ratings, it supports indoor and semi-outdoor installations with ease. This vertically compact, rack-mounted solution offers large-capacity storage, robust backup during power outages, and seamless integration into energy management systems. Equipped with an advanced BMS featuring automatic protection, cell balancing, and master-slave functionality, it ensures operational safety and longevity.



100Ah HV Series

Key Features



Scalable & Modular Design : Up to 1000V, 50-500 kWh system with modular and scalable



Advanced BMS : Three-level architecture (BMU+RBMS+GBMS) for enhanced safety and efficiency



Long Lifespan : 10 years life with 6000 cycle life, LFP chemistry for highest safety standards.



Customizable : Flexible configurations to suit different rack voltage ranges and sizes.



Thermal Management : Advanced thermal analysis for enhanced battery safety and performance



Smart BMS : Intelligent control and SOC estimation for optimal performance



Wide Scalability : Modular daisy-chain architecture with configurable master and slave units.



Reliable Warranty : 5+ years warranty for long-term assurance.



Maintenance-free, non-toxic, and cobalt-free LFP chemistry



Compatible with major smart hybrid inverters.



RMHV-ESS

Technical Specification

Battery Specification	Rating				
Battery Configuration	240V100Ah	384V100Ah	480V100Ah	512V100Ah	720V100Ah
Battery Capacity (kWh)	24	38	48	51.2	72
Battery Type	LFP				
Chemistry	LiFePO4				
Cell Package Type	Prismatic				
Capacity (Ah)	100				
DoD	>80%				
Nominal Voltage (V)	240	384	480	512	720
Voltage Range (V)	210-270	336-432	420-540	448-576	630-810
Rated Charging Current (Standard)	0.3C				
Peak Charging Current	0.5C				
Rated Discharge Current	1C				
Communication Interface/Protocol	RS485/CAN				
Charging Operating Ambient	0 to 55				
Temperature (°C)	0 to 60				
Discharging Operating Ambient	0 to 35 (50% SOC)				
Temperature (°C)	Natural / Forced / HVAC				
Storage Temperature For 6 Months (°C)	3000				
Cooling	IP20/IP54				
Lifecycle @ Ambient 25	Contactor / Breaker / BMS				
Ip Protection	Over voltage, under-voltage				
Electrical Protection	Over-temperature (charge and discharge)				
Protection	Under-temperature (charge and discharge)				
	Over current (charge and discharge)				
	External short circuit detection				
	Over current (charge and discharge)				
	External short circuit detection				

Applications

- Hospitality
- Industries
- Education institute
- Defence Application
- Health Care Facilities

314Ah HV SeriesAh HV Series



Key Features



Scalable & Modular Design : Up to 1000V, 50-500 kWh system with modular and scalable



Advanced BMS : Three-level architecture (BMU+RBMS+GBMS) for enhanced safety and efficiency



Long Lifespan : 10 years life with 6000 cycle life, LFP chemistry for highest safety standards.



Customizable : Flexible configurations to suit different rack voltage ranges and sizes.



Thermal Management : Advanced thermal analysis for enhanced battery safety and performance



Smart BMS : Intelligent control and SOC estimation for optimal performance



Wide Scalability : Modular daisy-chain architecture with configurable master and slave units.



Reliable Warranty : 5+ years warranty for long-term assurance.



Maintenance-free, non-toxic, and cobalt-free LFP chemistry



Compatible with major smart hybrid inverters.



RMHV-ESS

Technical Specification

Battery Specification	Rating				
Battery Configuration	240V314Ah	384V314Ah	480V314Ah	512V314Ah	720V100Ah
Battery Capacity (kWh)	75.36	120.57	150.72	160.76	226.08
Battery Type	LFP				
Chemistry	LiFePO4				
Cell Package Type	Prismatic				
Capacity (Ah)	100				
DoD	>80%				
Nominal Voltage (V)	240	384	480	512	720
Voltage Range (V)	210-270	336-432	420-540	448-576	630-810
Rated Charging Current (Standard)	0.3C				
Peak Charging Current	0.5C				
Rated Discharge Current	1C				
Communication Interface/Protocol	RS485/CAN				
Charging Operating Ambient	0 to 55				
Temperature (°C)	0 to 60				
Discharging Operating Ambient	0 to 35 (50% SOC)				
Temperature (°C)	Natural / Forced / HVAC				
Storage Temperature For 6 Months (°C)	3000				
Cooling	IP20/IP54				
Lifecycle @ Ambient 25	Contactor / Breaker / BMS				
Ip Protection	Over voltage, under-voltage				
Electrical Protection	Over-temperature (charge and discharge)				
Protection	Under-temperature (charge and discharge)				
	Over current (charge and discharge)				
	External short circuit detection				
	Over current (charge and discharge)				
	External short circuit detection				

All-in-One Solution

CLN Energy's All-in-One Air-Cooled Energy Storage Cabinet integrates advanced energy storage and power management into a single, compact solution. It houses a long-life lithium battery, bidirectional-balancing BMS, high-performance PCS, intelligent power distribution, active safety features, and a built-in HVAC system—all designed for optimal performance and thermal stability.

With AC-side parallel connectivity, the system allows for flexible capacity expansion and fast deployment of ESS power stations. Engineered for safety, stability, and long-term reliability, it's ideal for commercial and industrial energy storage applications.



All-in-One Air Cooled ESS

Key Features



Flexible expansion, one machine multi-effect matching a variety of application scenarios.



Multiple Protection Systems.



Highly integrated design AC and DC integrated.



Fingertip monitoring cloud maintenance.



CLNCIA100kW/200kWh

Technical Specification

Parameters/ Model	CLNCIA100kW/200kWh
Max Voltage (V)	950
Max Current (A)	171
Voltage Range (V)	650~950
Max. Apparent Output (kVA)	115.5
Max. Input Active Power (kW)	105
Nominal Voltage	400Vac, 3P3W+PE/3P4W+PE
Max. Input Current (A)	167
Nominal Input Frequency (Hz)	50/60
Nominal Voltage	400Vac, 3P3W+PE/3P4W+PE
Max Output Current (A)	167
Nominal Frequency (Hz)	50/60
Battery Chemistry	LFP
Capacity (kWh)	224
Nominal Voltage (V)	748.8
Voltage Range (V)	655.2~819
C Rate	≤0.5C
HMI	7-inch LCD touch screen
Fire Safety	Aerosol fire fighting
Cooling Method	Air cooling
Operating Temp. (°C)	-20~55
IP Degree	IP54
Dimension(WxDxH) mm	<1600x1100x2200
Weight (kg)	<2700
MPPT (kW)	100 (Optional)
STS (kW)	200 (Optional)

Applications

- Hospitality
- Health Care Facilities
- DG Replacement in industries and society
- Defence
- Office (Large range)

All-in-One Solution

CLN Energy's All-in-One Liquid-Cooled Energy Storage Cabinet is designed for high-efficiency thermal management and long-lasting performance. Featuring an advanced cabinet-level liquid cooling system and precision temperature balancing, it maintains a cell temperature variance of less than 3°C—ensuring uniform heat distribution and extended battery life.

Its modular architecture supports flexible parallel configurations while delivering higher energy density. This improves cost-efficiency, enhances operational safety, and simplifies deployment for commercial and industrial-scale ESS installations.



All-in-One Liquid Cooled ESS

Key Features



Flexible expansion, one machine multi-effect matching a variety of application scenarios.



Multiple Protection Systems.



Highly integrated design AC and DC integrated.



Fingertip monitoring cloud maintenance.



CLNCIA100kW/200kWh



CLNCIL 250kW/464kWh

Technical Specification

Parameters/ Model	CLNCIA100kW/200kWh	CLNCIL 250kW/464kWh
Max Voltage (V)	950	
Max Current (A)	165	340
Voltage Range (V)	650~950	
Max. Apparent Output (kVA)	110	110
Max. Input Active Power (kW)	100	100
Nominal Voltage	220/380V, 3P4W+PE	220/380V, 3P4W+PE
Max. Input Current (A)	167	167
Nominal Input Frequency (Hz)	50	50
Nominal Voltage	220/380V, 3P4W+PE	220/380V, 3P4W+PE
Max Output Current (A)	152	152
Nominal Frequency (Hz)	50	50
Battery Chemistry	LFP	
Capacity (kWh)	215	464
Nominal Voltage (V)	768	832
Voltage Range (V)	672~840	728~910
C Rate	≤0.5C	
HMI	8-inch LCD touch screen	7-inch LCD touch screen
Fire Safety	Aerosol fire fighting	Perfluoro hexane fire protection/aerosol
Cooling Method	Intelligent Liquid Cooling	Liquid Cooling
Operating Temp. (°C)	0~55	-20~55
IP Degree	IP54	
Dimension(WxDxH) mm	<1400x1100x2350mm	2400x1400x2300mm
Weight (kg)	<2600	<4500

Applications

- Hospitality
- Health Care Facilities
- DG Replacement in industries and society
- Defence
- Office (Large range)

Grid & Utility

CLN Energy's 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.



1-5 MWh BESS Solutions

1 MWh BESS Solution

Key Features



Modular Standard Design



Intelligent Operation and Maintenance.



Multiple Protection System



High Energy Density for Flexible Layout and Expansion 1 MWh BESS Solution.



Efficient Installation and Commissioning of AC/DC Integrated System

Technical Specification

Parameters/ Model		BESS-1045-0.5C
Battery module	Cell Capacity (Ah)	314
	Battery Pack	1P525
	Module Voltage (V)	166.4
	Module Power (kWh)	52.2496
	IP Class	IP67
Battery Rack	Nos. of Modules	4
	Cluster Nominal Voltage (V)	665.6
	Voltage Range (V)	582.4-748.8
	Single Battery Rack Power (kWh)	208.99
Battery Container	Nos. of Battery Clusters (pcs)	5
	Battery system energy (kWh)	1045
	Battery Cabin Dimension (WxDxH)	6058x2438x2896
	Cooling Method (mm)	Liquid cooling
	IP Class	IP54
Compliant with Standards	Battery	IEC62619 UL1973 UL9540A UN38.3

2 MWh BESS Solution

Technical Specification

Parameters/ Model		BESS-1045-0.5C
DC side parameters	Cell capacity (Ah)	100
	Module structure	3P18S
	Module quantity in single cluster	20pcs
	Nos. of battery clusters	6pcs
	Battery system power (kWh)	2073
	Voltage range (V)	1008~1278
AC side parameters	Rated grid voltage (kW)	6*200
	Wiring mode (V)	690
	Rated grid frequency	3W+PE
	Rated AC power (Hz)	50/60
	Solation mode	No isolation transformer
System level parameters	Operating temperature (°C)	-30~55
	Ambient humidity	0~95% (no condensation)
	Working altitude (m)	2000
	Communication method	Ethernet, RS485, optional 4G/5G mobile communication
	Protection level	IP54
	Cooling method	Liquid cooling
	Noise (dB)	≤65
	Fire protection system	Heptafluoropropane/Perfluorohexanone compartment level/Aerosol ten water fire protection + combustible gas detection + explosion-proof ventilation system
	Size (WxDxH) (mm)	6058x2438x2896
	Weight (T)	24
	Cluster	IEC62619, UL1973, UL9540A, UN38.3
	PCS	UL1741, EN50549, VDE4110, GB/T34120, GB/T36547

3 MWh BESS Solution

Technical Specification

Parameters/ Model		BESS-1045-0.5C
DC side parameters	Cell capacity (Ah)	314
	Module structure	1PS2S
	Module quantity in single cluster	8pcs
	Nos. of battery clusters	8pcs
	Battery system power (kWh)	3340
	Voltage range (V)	1164.8~1476.8
AC side parameters	Rated grid voltage (kW)	8*200
	Wiring mode (V)	690
	Rated grid frequency	3W+PE
	Rated AC power (Hz)	50/60
	Solation mode	No isolation transformer
System level parameters	Operating temperature (°C)	-30~55
	Ambient humidity	0~95% (no condensation)
	Working altitude (m)	2000
	Communication method	Ethernet, RS485, optional 4G/5G mobile communication
	Protection level	IP54
	Cooling method	Liquid cooling
	Noise (dB)	≤65
	Fire protection system	Heptafluoropropane/Perfluorohexanone compartment level/Aerosol ten water fire protection + combustible gas detection + explosion-proof ventilation system
	Size (WxDxH) (mm)	6058x2438x2896
	Weight (T)	30
	Cluster	IEC62619, UL1973, UL9540A, UN38.3
	PCS	UL1741, EN50549, VDE4110, GB/T34120, GB/T36547

5 MWh BESS Solution

Technical Specification

Parameters/ Model		BESS-5015-0.5C
Battery module	Cell Capacity (Ah)	314
	Battery Pack	1P52S
	Module Voltage (V)	166.4
	Module Power (kWh)	52.2496
	IP Class	IP67
Battery Rack	Nos. of Modules (pcs)	8
	Cluster Nominal Voltage (V)	1331.2
	Voltage Range (V)	1164.8-1476.8
	Single Battery Rack Power (kWh)	417.997
Battery Container	Nos. of Battery Clusters (pcs)	12
	Battery system energy (kWh)	5015
	Battery Cabin Dimension (WxDxH) mm	6058x2438x2896
	Weight (T)	≤43
	Cooling Method	Liquid cooling
	IP Class	IP54
Compliant with Standards	Battery	TEC62619 UL1973 UL9540A UN38.3

Applications

- Grid stabilization
- Mini/Micro-grid Application
- Peak sharing & load balancing



CLN Energy Ltd.



Head Office
Plot No.18, Sector 140, Phase II, Noida,
Uttar Pradesh-201305.



Manufacturing Plant
Gate No. 375/1 and 376, Koregaon Bhima, Taluka
Shirur, Pune, Maharashtra-412216.



Phone Number
1800 313 6541



Email
info@clnenergy.in



Service & Support
service@clnenergy.in

Follow us for more innovations

