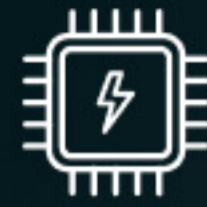


karloskar
powergen



MICROGRID SOLUTION



**LET'S WORK TOGETHER TO BUILD
A SUSTAINABLE ENERGY FUTURE!**

Better power for a

limitless

Tomorrow

Cleaner . Reliable . Flexible





A RICH HERITAGE OF OVER A CENTURY OF ENGINEERING EXCELLENCE.

Kirloskar power generating sets prioritize user experience, delivering exceptional features and benefits. Streamlined installation and enhanced dependability to expedited service, reduced maintenance costs, and optimized performance.

Kirloskar Powergen sets itself apart with groundbreaking engineering that establishes new industry benchmarks.

limitless **POTENTIAL, SUSTAINABLE PRACTICES**

Our state-of-the-art manufacturing facility embodies our commitment to sustainable practices. We partner with nature to power the facility itself, transforming waste into valuable resources.

This focus on sustainability inspires both our workforce and surrounding communities.

It's here, where cutting-edge technology meets exceptional skills, that we engineer solutions to empower limitless possibilities.

Discover our Plant with a
QR Code Scan.



WHAT IS A MICROGRID?

Optimizing Power and Managing Loads Efficiently

A Microgrid is a self-sufficient energy system that integrates multiple power sources, optimizes energy distribution, and ensures seamless operation. Designed for reliability, resilience, and sustainability, it facilitates decentralized energy management, allowing industries and businesses to optimize costs and minimize environmental impact.

Key Features



Smart Local Energy Network

Connects power sources and loads within a unified system for efficient energy management.



Multi-Source Integration

Combines renewable energy, conventional power, and storage systems for continuous supply.



Advanced Load Management

Supports industrial & commercial applications with balanced power distribution.



Intelligent Controllers

Ensures stable power flow, seamless grid synchronization, and resilience against disruptions.



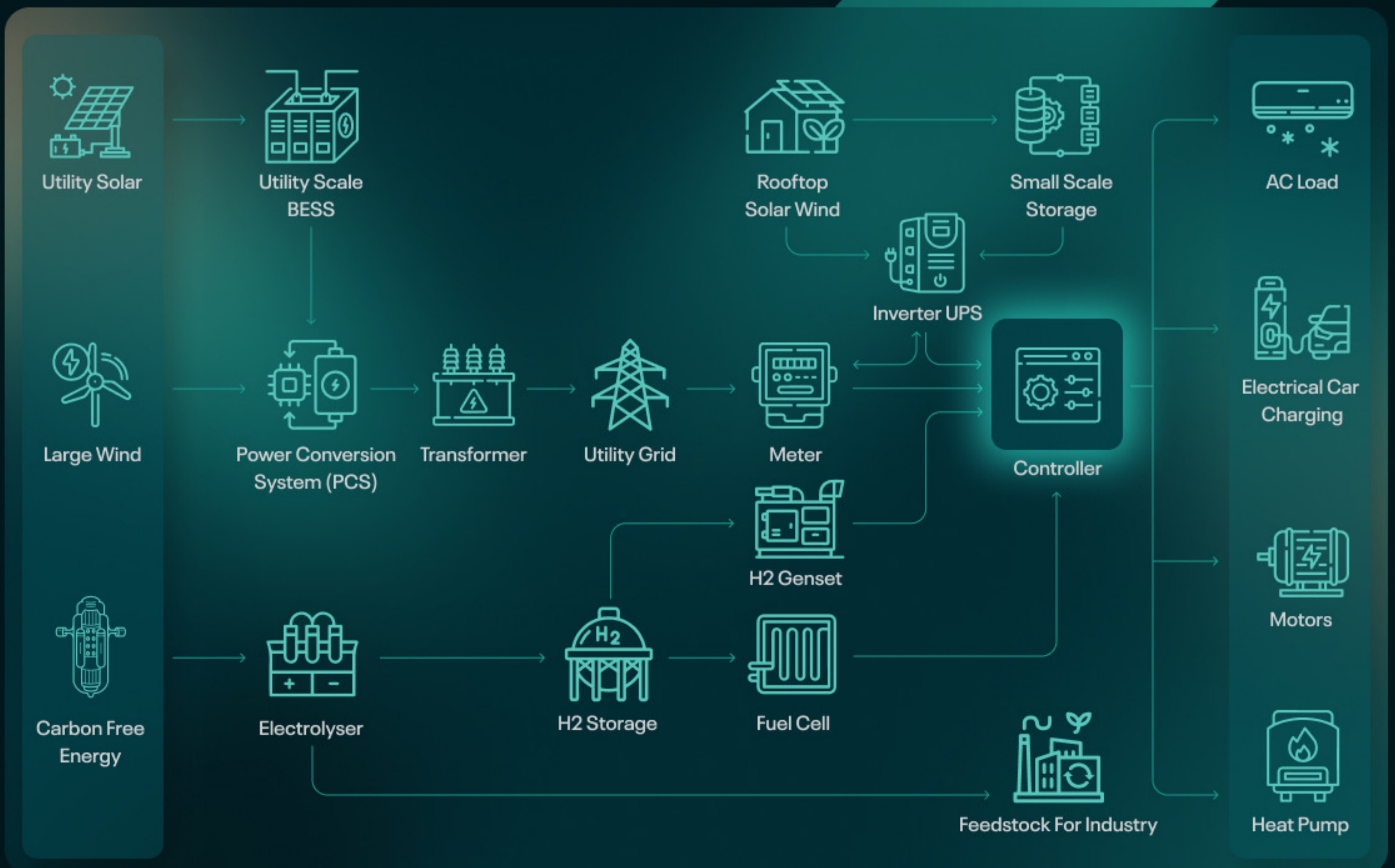
THE ENERGY TRANSFORMATION

The energy landscape is rapidly transforming with the growing adoption of renewable energy, digitalization, and the shift away from centralized power grids. Our latest state-of-the-art **MICROGRID** solution is the perfect response to the rising demand for renewable energy and cleaner power. Our Microgrid solutions, which can operate independently or alongside the main grid, provide flexible and sustainable energy for diverse needs, ranging from remote areas to industrial facilities.

Microgrid integrates energy sources like solar, wind, and biomass with energy storage and intelligent control systems, optimizing power use and reducing reliance on fossil fuels. Kirloskar Powergen leads this revolution by offering complete solutions, including power generators, power storage, and advanced controllers, to help businesses and communities build sustainable Microgrid solutions.

Microgrid systems are revolutionizing energy by creating localized, resilient power systems. These systems combine renewable sources and advanced control technologies, ensuring reliability and reducing transmission losses. They help optimize energy use, even during grid disruptions, and improve overall efficiency.

Our solution plays a crucial role in achieving decarbonisation and sustainability, and the integration of Small Modular Reactors (SMRs) further strengthens its impact. SMRs provide a stable, low-carbon energy source that complements renewable energy systems and enhances energy independence. SMRs not only improve grid reliability by offering a consistent power supply but also contribute significantly to global decarbonisation efforts, supporting the broader transition to clean energy.



BENEFITS

Reliable Power, Sustainable Solutions

Our Microgrid solution offers a range of benefits - Leading the Energy Transition



Unmatched Resilience & Reliability

Ensures uninterrupted power supply, even during grid failures, safeguarding mission-critical operations for industries, hospitals, data centres, and remote locations.



Integration of Renewable Energy

Efficiently integrates solar, wind, and other renewable sources, reducing dependence on fossil fuels while maximizing energy efficiency through advanced smart controls.



Significant Cost Savings

Our solution optimizes energy usage, reducing grid dependency and operational costs. With real-time monitoring and demand-side management, businesses can avoid peak demand charges and maximize efficiency.



Environmental Sustainability

By leveraging renewable energy and reducing carbon footprints, our microgrid solutions support corporate sustainability initiatives, ensuring compliance with global environmental standards.



Scalability & Grid Compatibility

Designed for flexibility, our solutions seamlessly integrate with existing infrastructure, offering scalability for future expansions without disrupting operations.

KIRLOSKAR'S SOLUTION

We collaborate closely with customers to envision and shape microgrid projects. Our process starts with a comprehensive Microgrid Energy Master Plan, meticulously analysing various scenarios to create a multi-year roadmap of capital and operational investments. By delivering a robust business case underpinned by investment-grade engineering, we provide a solid foundation for project planning and financing. We offer end-to-end solutions, from design and implementation to ongoing operations and maintenance.

YOUR INPUTS



- Load Profile
- Existing Energy Resources
- Expansion Plans
- Desired Microgrid Outcomes



OUR SOLUTIONS



LET'S WORK TOGETHER TO BUILD
A SUSTAINABLE ENERGY FUTURE!

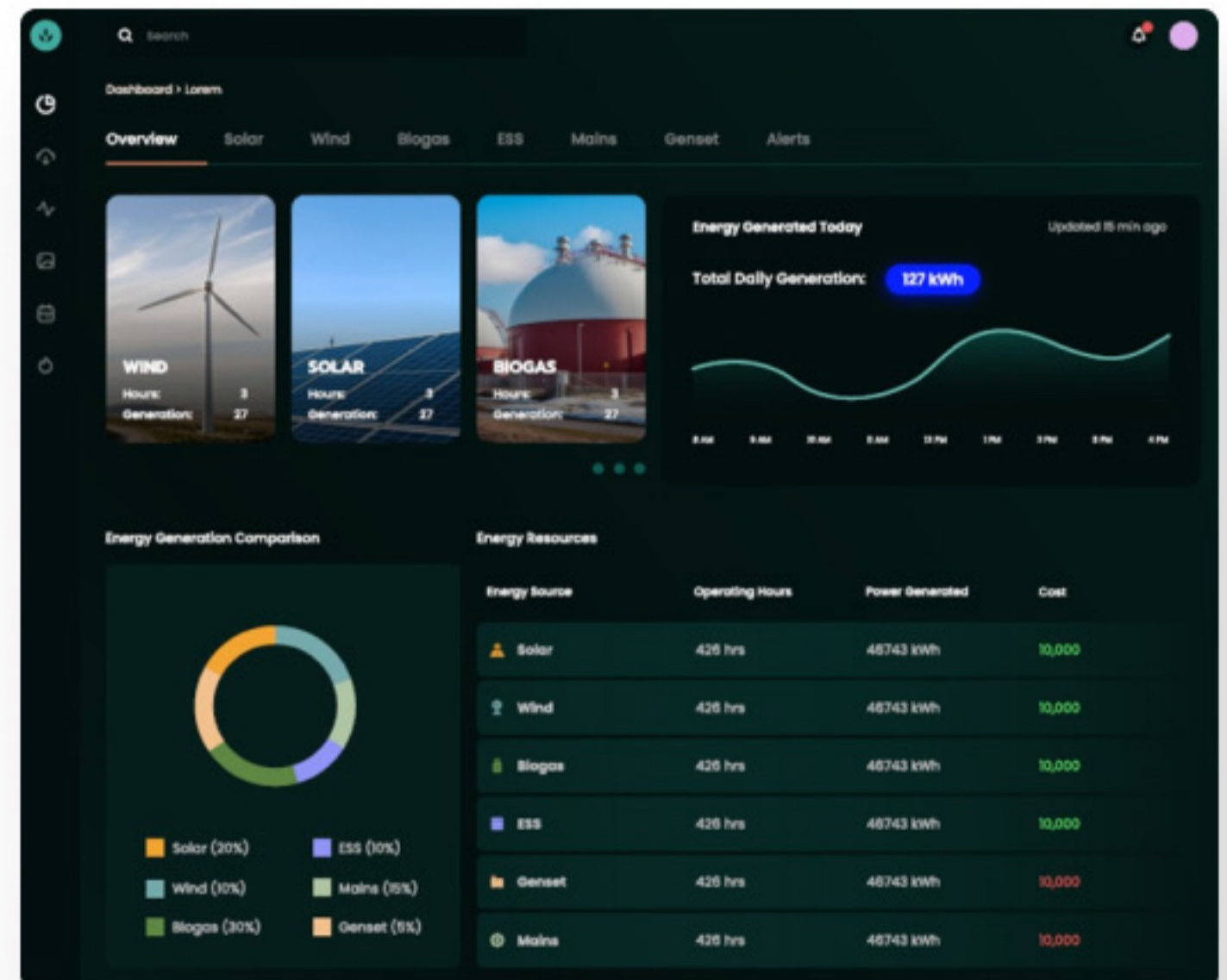
Decarbonisation Pathways for a Greener Tomorrow

Custom-Tailored Solutions designed to meet unique energy demands.

Multi source Integration ensuring compatibility with existing infrastructure.

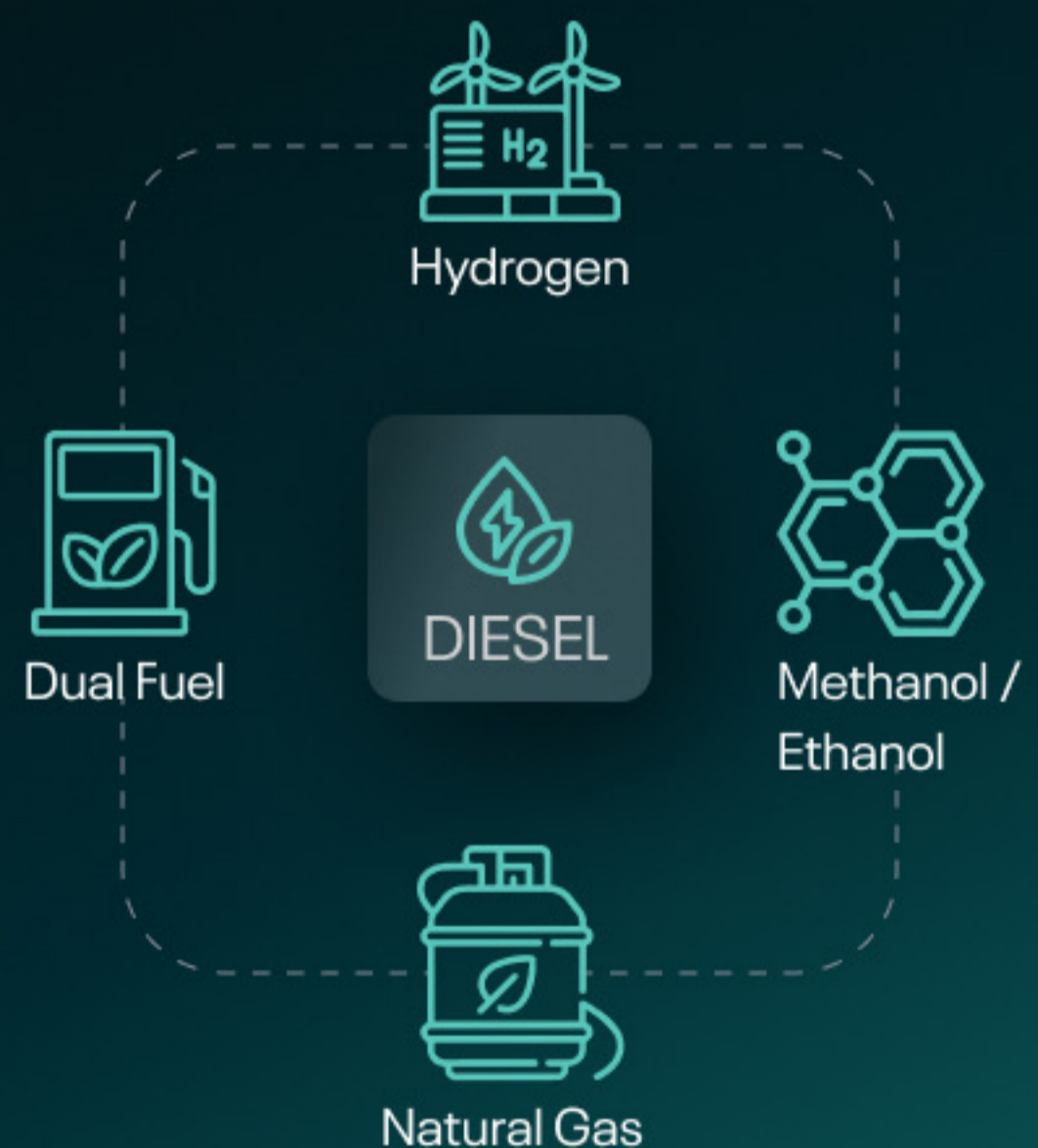
Real-Time Monitoring with advanced analytics and alerts for optimal performance.

One-Window Solution for comprehensive service from design to maintenance.



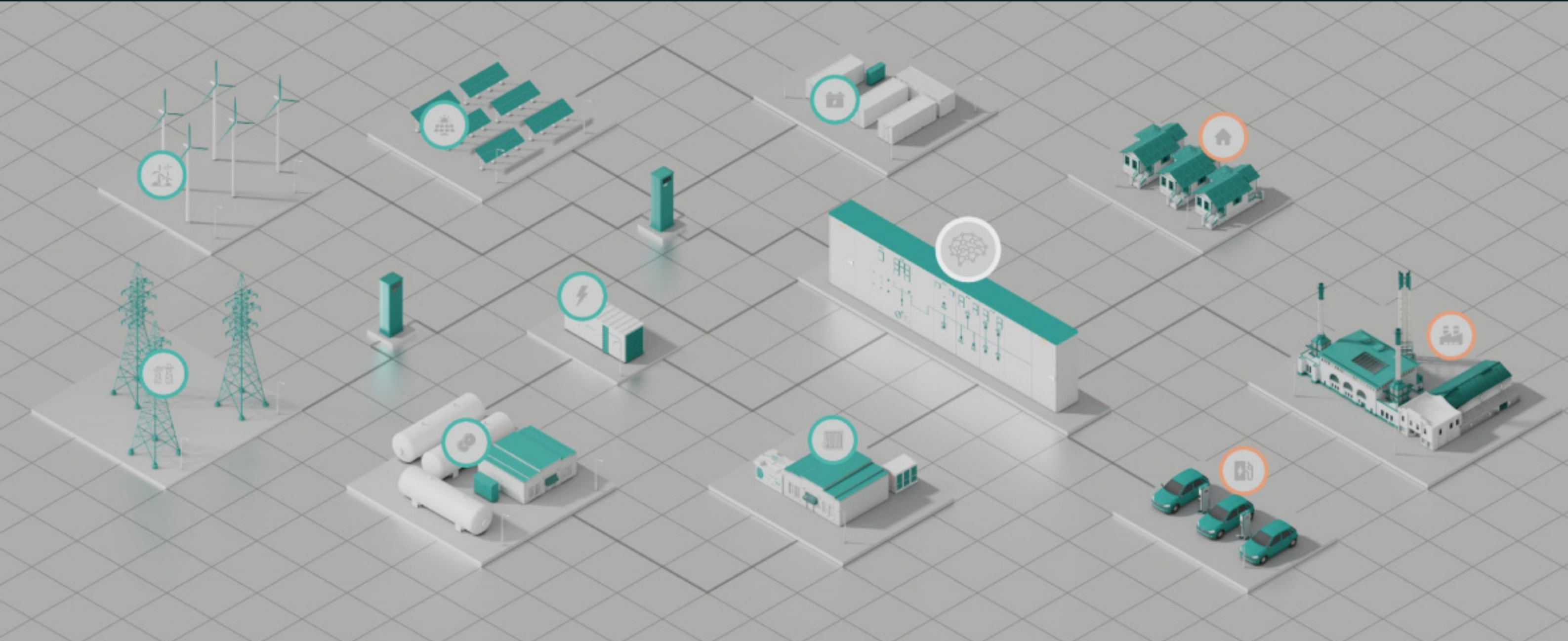
FUEL AGNOSTICS

We offer 4 de-carbonization pathways designed to empower our customers on their journey toward a sustainable, low carbon future. These tailored solutions provide a clear roadmap to reducing emissions, optimizing energy usage, and embracing cleaner technologies, ensuring that your de-carbonization goals are met efficiently and effectively.



ELECTROLYZERS & FUEL CELLS





KIRLOSKAR KAGAL PLANT MICROGRID

Anchored By Kirloskar Powergen

MICROGRID SOLUTION

Power Source

- Installed base (Solar) 40 kWp
- Installed base (Wind) 36 kWe
- Mains Rating 40 kWe
- Battery Storage Rating 40 kWh
- Power generator Rating 25 kVA

Load

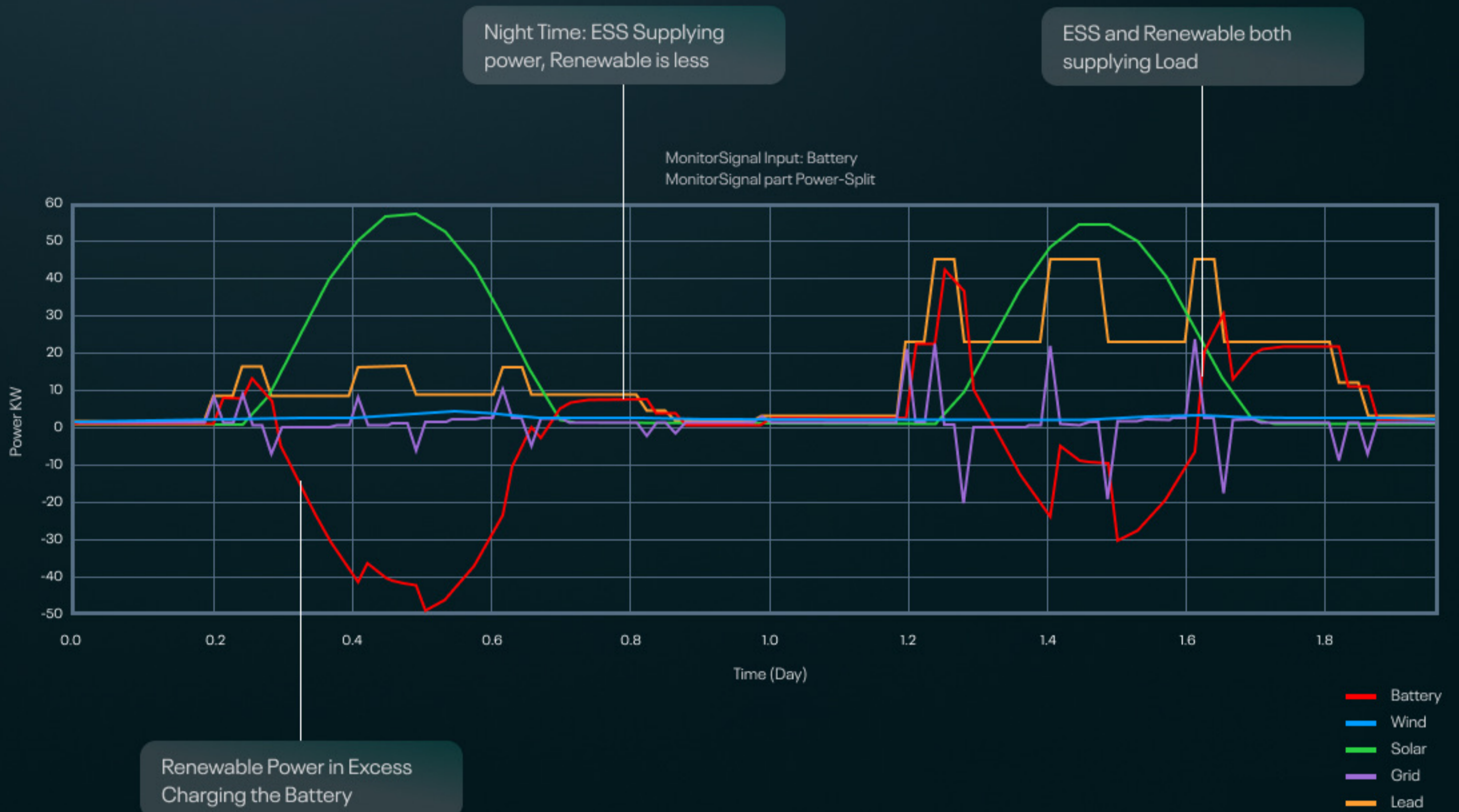
- Critical Load 24 kWe
- Non Critical Load 6 kWe



Location: Kirloskar Manufacturing Plant.
Kagal, Maharashtra
Solution: Microgrid

KIRLOSKAR KAGAL PLANT

CANTEEN MICROGRID GENERATION AND CONSUMPTION ANALYSIS



SMART ENERGY SAVINGS WITH MICROGRID SYSTEM

Our Central Kitchen achieved a 42% Reduction in Electricity Consumption averaging 5,473 units saved per month. After installing the advanced Microgrid System at our Central Kitchen, we have achieved remarkable energy savings and efficiency.

The Microgrid Panel with Energy Storage System (E.S.S.) efficiently integrates and manages multiple energy sources for the Central Kitchen Building, including:

- 40 kW Solar Power
- 30 kW Wind Energy
- Diesel Generator (DG) Set
- State Electricity Board Supply

Power Consumption Before & After Microgrid Installation

Before:

13,319 kWh

(Avg. over 3 months)

After:

7,846 kWh

(Avg. over 3 months)

INTEGRATED ENERGY SOURCES OF OUR MICROGRID



ENERGY STORAGE SYSTEM

The energy storage system captures surplus energy, storing it when generation exceeds demand and releasing it during peak consumption periods. Our advanced battery storage system has 40 kWh capacity



On-Site Renewable Energy – Solar

Harnessing the power of the sun, our system utilizes photovoltaic (PV) panels to generate clean and renewable energy. This eco-friendly approach supports sustainability and has an installed capacity of 40 kWp.



On-Site Renewable Energy – Wind

Wind energy is efficiently harnessed through strategically placed wind turbines, contributing to a diversified and resilient power mix. Our system is designed to optimize energy capture, and has installed capacity of 36 kWp.



Power Generator

Our microgrid includes a diesel generator rated at 25 kVA, serving as a backup power source. It ensures uninterrupted electricity supply during outages or peak demand periods. The system is also compatible with various energy sources, including biogas, methanol, ethanol, hydrogen, and petrol.



MAINS

To ensure seamless operation, our microgrid is connected to the larger electricity grid, serving as an essential backup power source. Our system features a mains connection with a capacity of 40 kWe, ensuring continuous and stable energy access.

KIRLOSKAR POWERGEN PRODUCT PORTFOLIO

3 kW - 10 MW / 12500 kVA

Kirloskar Powergen Advanced Manufactured Gensets

kVA	Fuel	Emission Norms
MOBILE & STATIONARY		
3 kW	Petrol	CPCBIV+
4 kW	Petrol	CPCBIV+
5 kW	Petrol	CPCBIV+
3.5 kVA	Diesel	CPCBIV+
5 kVA	Diesel	CPCBIV+
7.5kVA	Diesel	CPCBIV+
10 kVA	Diesel	CPCBIV+
15 kVA	Diesel	CPCBIV+
15 kVA	Ethanol	CPCBIV+
12.5 kVA	PNG	CPCBIV+
15 kVA	PNG	CPCBIV+

kVA	Fuel	Emission Norms
NATURAL GAS		
25/30 kVA	PNG	CPCBIV+
62.5 kVA	PNG	CPCBIV+
82.5 kVA	PNG	CPCBIV+
125 kVA	PNG	CPCBIV+
250 kVA	PNG	CPCBIV+
320 kVA	PNG	CPCBIV+
500 kVA	PNG	CPCBIV+

kVA	Fuel	Emission Norms	Model No.
HHP, OPTIPRIME & CUSTOM SOLUTIONS			
125 kVA	Diesel	CPCBIV+	Dual Core 4R810
250 kVA	Diesel	CPCBIV+	Dual Core 4K1080
320 kVA	Diesel	CPCBIV+	Dual Core 6K1080
400 kVA	Diesel	CPCBIV+	Dual Core 6K1080
500 kVA	Diesel	CPCBIV+	Dual Core 6K1080
500 kVA HD	Diesel	CPCBIV+	Dual Core SL90
500 kVA HD	Diesel	CPCBIV+	Quad Core 4K1080
640 kVA	Diesel	CPCBIV+	Dual Core SL90
700 kVA	Diesel	CPCBIV+	Dual Core SL90
1000/1010 kVA	Diesel	CPCBIV+/Stack	Dual Core PV6
1000/1010 kVA	Diesel	CPCBIV+/Stack	Quad Core 6K
1000/1010 kVA	PNG	CPCBIV+/Stack	Dual Core DV12
1000/1010 kVA	PNG	CPCBIV+/Stack	Quad Core DV8
2000 kVA	PNG	CPCBIV+/Stack	Quad Core DV12
1250 kVA	Diesel	CPCBIV+/Stack	Dual Core DV10
1250 kVA	Diesel	CPCBIV+/Stack	Quad Core SL90
1400 kVA	Diesel	CPCBIV+/Stack	Quad Core SL90
1500 kVA	Diesel	CPCBIV+/Stack	Dual Core DV12
2000 kVA	Diesel	CPCBIV+/Stack	Dual Core DV16
2000 kVA	Diesel	CPCBIV+/Stack	Quad Core PV6

kVA	Fuel	Emission Norms	Model No.
UHHP, OPTIPRIME & CUSTOM SOLUTIONS			
2500 kVA	Diesel	Stack	Dual Core DV16
2500 kVA	Diesel	Stack	Dual Core K12
2500 kVA	Diesel	CPCBIV+/Stack	Quad Core DV10
3000/3300 kVA	Diesel	Stack	Dual Core K12
3000 kVA	Diesel	CPCBIV+/Stack	Quad Core DV12
4000 kVA	Diesel	CPCBIV+/Stack	Octacore PV6
4000 kVA	Diesel	CPCBIV+/Stack	Octacore DV8
4000 kVA	Diesel	Stack	Quad Core DV16
5000 kVA	Diesel	Stack	Quad Core DV16
5000 kVA	Diesel	Stack	Quad Core K12
6000 / 6600 kVA	Diesel	Stack	Quad Core K12
8000 kVA	Diesel	Stack	Quad Core K12 (2026)
10000 kVA	Diesel	Stack	Quad Core K16 (2027)

Powergen HHP & Integrated Project Solutions			
2 MW / 2500 kVA	Diesel	Stack	Industrial Power Systems
4 MW / 5000 kVA	Diesel	Stack	Industrial Power Systems
6 MW / 7500 kVA	Diesel	Stack	Industrial Power Systems
8 MW / 10000 kVA	Diesel	Stack	Industrial Power Systems
10 MW / 12500 kVA	Diesel	Stack	Industrial Power Systems

KIRLOSKAR POWERGEN PRODUCT PORTFOLIO

3 kW - 10 MW / 12500 kVA

Kirloskar Powergen Advanced Manufactured Gensets

kVA	Fuel	Emission Norms	kVA	Fuel	Emission Norms
HYBRID GENSETS			ALTERNATE FUEL		
10 kVA + 4 kW	Diesel+Solar+Battery	CPCBIV+	62.5 kVA	H2: CNG	CPCBIV+
20 kVA + 8 kW	Diesel+Solar+Battery	CPCBIV+	62.5 kVA	Ethanol	CPCBIV+
30 kVA + 12 kW	Diesel+Solar+Battery	CPCBIV+	62.5 kVA	H2: Diesel	CPCBIV+
40 kVA + 16 kW	Diesel+Solar+Battery	CPCBIV+	125 kVA	H2: CNG	CPCBIV+

Kirloskar Powergen Gensets

kVA	Fuel	Emission Norms	kVA	Fuel	Emission Norms
LHP			MHP		
7.5 kVA	Diesel	CPCBIV+	320 kVA	Diesel	CPCBIV+
10 kVA	Diesel	CPCBIV+	320 kVA HD	Diesel	CPCBIV+
15 kVA	Diesel	CPCBIV+	400 kVA	Diesel	CPCBIV+
20 kVA	Diesel	CPCBIV+	500 kVA	Diesel	CPCBIV+
25 kVA	Diesel	CPCBIV+	500 kVA HD	Diesel	CPCBIV+
30 kVA	Diesel	CPCBIV+	625 kVA	Diesel	CPCBIV+
40 kVA	Diesel	CPCBIV+	625 kVA HD	Diesel	CPCBIV+
58.5 kVA	Diesel	CPCBIV+	750 kVA	Diesel	CPCBIV+
82 kVA	Diesel	CPCBIV+	HHP		
125 kVA	Diesel	CPCBIV+	1010 kVA	Diesel	Stack
160 kVA	Diesel	CPCBIV+	1250 kVA	Diesel	Stack
200 kVA	Diesel	CPCBIV+	1250 kVA	Diesel	Stack
200 kVA HD	Diesel	CPCBIV+	1500/1650 kVA	Diesel	Stack
250 kVA	Diesel	CPCBIV+	2000 kVA	Diesel	Stack
			2500 kVA	Diesel	Stack

^ Tolerances Apply: # With 0.845 Specific Gravity of diesel (5% Tolerance) || \$ These weight are for handling & transportation only, ±5% tolerance apply || * Efficiency of Alternator as per standards IEC 60034-1 || ** For operation of outgoing breaker higher version of Synchronization controller is required || For Site Conditions other than standard operating conditions consult Kirloskar Oil Engines Ltd. || For Site specific layout consult Kirloskar Oil Engines Ltd to ammend the Genset alignment/configuration



SHAPING THE FUTURE.
DELIVERING POWER TO OVER 50+ COUNTRIES.

INGENIOUS DESIGN.
UNMATCHED PERFORMANCE.

KIRLOSKAR OIL ENGINES LIMITED

A Kirloskar Group Company

Regd. Office: 13, Laxmanrao Kirloskar Road,
Khadki, Pune, Maharashtra 411 003
INDIA



BETTER POWER
FOR A

limitless

T O M O R R O W



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