Fleet Electrification & Renewable Energy Integration



One integrated plan for energy and fleet investment — designed to reduce costs, strengthen operations and support a lower-carbon future.

Integrated Energy & Fleet Solutions

Integrated energy and fleet solutions

We offer end-to-end fleet electrification and facility energy reduction by seamlessly integrating solar generation, battery storage, intelligent EV charging, and electrical infrastructure. Tailored to our clients' facilities, energy consumption, and operational demands, our custom solutions optimise efficiency from day one. Flexible financing options are available for qualifying clients.



A practical approach to energy and mobility

Business priority	Proposed approach
Reduce energy costs	Optimise electricity consumption, demand and energy procurement.
Increase renewable energy	Generate clean electricity through solar PV and maximise its use across operations.
Strengthen energy security	Integrate battery storage to manage demand and support selected critical loads.
Enable fleet electrification	Develop charging infrastructure around vehicle requirements, operating schedules and site capacity.
Improve operational visibility	Use intelligent control and monitoring to manage energy assets through an integrated platform.



Start with the opportunity, not the equipment

Our approach prioritises our clients' highest-ROI assets first. We begin with a targeted pilot project to prove value and validate the business case before scaling. Every subsequent investment remains strictly guided by operational priorities and measurable returns.

The integrated solution

Bringing energy generation, storage and mobility together

We merge advanced technologies with localized delivery to unite energy generation, storage, charging, and control into a single, seamless energy ecosystem.



Solar PV — Generate your own energy

Rooftop, ground-mounted and solar carport installations supply renewable electricity to buildings and EV charging infrastructure, helping reduce grid consumption. Our system design reflects available space, electricity demand, solar generation potential and grid connection capacity.

Battery Energy Storage — Store and optimise energy

Battery Energy Storage Systems (BESS) can support the following functions:

- Store excess solar generation for use when solar production is low.
- Reduce peak demand and manage electricity costs.
- Optimise energy consumption against applicable electricity tariffs.
- Support selected critical loads during grid interruptions, where specifically designed.
- Provide flexibility as EV charging demand increases.









Intelligent EV Charging — Power Upcoming or existing fleet

The charging infrastructure can include:

- AC charging for vehicles parked for extended periods.
- DC fast charging for vehicles requiring shorter charging windows.
- Smart charging and load management.
- Charging management, access control and monitoring.
- Energy consumption tracking and cost allocation.

Charging infrastructure will be designed around vehicle types, daily mileage, operating schedules, parking arrangements and available electrical capacity.

Electrical Infrastructure

Integrating solar PV, BESS and EV charging may require upgrades to the existing electrical infrastructure. The assessment will identify and coordinate requirements for:

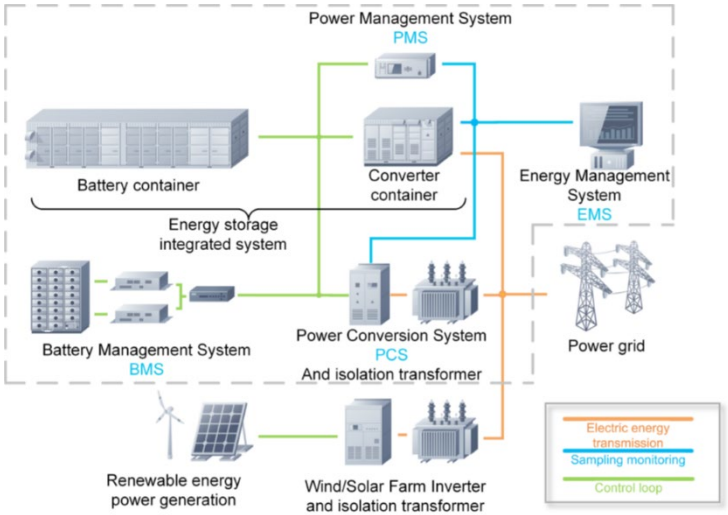
- Transformers and power distribution.
- MV and LV switchgear.
- Electrical protection and cabling.
- Grid connections and capacity upgrades.
- Integration with existing electrical installations.



Advanced Energy Management & Control

An integrated control platform can coordinate solar generation, battery storage, grid consumption and EV charging. Depending on project requirements, the platform may provide:

- Centralised system monitoring and control.
- Solar generation and BESS performance monitoring.
- Intelligent charging schedules and load management.
- Demand management and energy optimisation.
- Energy reporting and performance analysis.
- Optional comprehensive billing platform for multi-site, tenant, fleet or departmental cost allocation.



Delivery partners

Partner	Proposed role	Scope and responsibilities
Freetech Africa	Energy Solutions & Technology Integration	Brings together tier one international technology, equipment supply, engineering coordination and lifecycle support. Scope includes energy assessments, system design, technology selection, equipment supply coordination, project development, monitoring and after-sales support.
Star Charge	EV Charging Technology Partner	Provides EV charging technology and infrastructure for commercial vehicle fleets, workplaces, wider charging applications and access to EV vehicle manufacturers.
EV Mobility Africa (EVMA)	Electric Vehicle & Fleet Electrification Solutions Partner	Provides electric motorcycles, pickups, panel vans and trucks suited to commercial, logistics and industrial applications. Assesses existing fleets, routes, payloads and operating requirements; recommends suitable electric vehicle replacements; supports vehicle sourcing, pilot deployments, total cost of ownership evaluations and fleet transition planning in coordination with charging and energy infrastructure partners.
Lepharo	EPC & Localisation Coordinator	Coordinate project implementation and local participation, including qualified local engineering and construction resources, local contractors and suppliers, skills development and localisation initiatives.

Together, our partnership aims to combine **international technology, local execution and long-term operational support.**

A practical roadmap to implementation

Start focused. Prove value. Scale with confidence.

The roadmap begins with the client's actual fleet and energy requirements—not predetermined equipment or system sizes.

Phase 1 — Discovery & Opportunity Assessment

Understand the business, fleet and energy requirements.

We typically offer a discovery workshop with the client's fleet, facilities, operations and finance teams.

Key areas we investigate are:

- Current vehicle fleet: pickups, panel vans and trucks; evaluate suitable electric vehicle replacements based on vehicle usage, routes, payload requirements and operational feasibility.
- Typical routes, daily mileage and operating schedules.
- Fuel consumption, maintenance costs and vehicle replacement plans.
- Existing electricity consumption and tariffs.
- Available roof space and land for solar installations.
- Existing electrical infrastructure and grid capacity.
- Current and future energy requirements.



Objective: Identify the most cost effective or highest return assets and priority sites.

Phase 2 — Technical & Financial Assessment



Develop a preliminary technical concept and business case covering, where applicable:

- EV charging requirements and preliminary charger selection.
- Solar PV capacity assessment.
- BESS sizing and operating strategy.
- Electrical infrastructure assessment.
- Energy management and control requirements.
- Estimated capital investment and operating savings.
- Assessment of suitable commercial and financing structures.

Objective: Establish technical feasibility, investment requirements and potential financial benefits.

Phase 3 — Pilot Project & Implementation

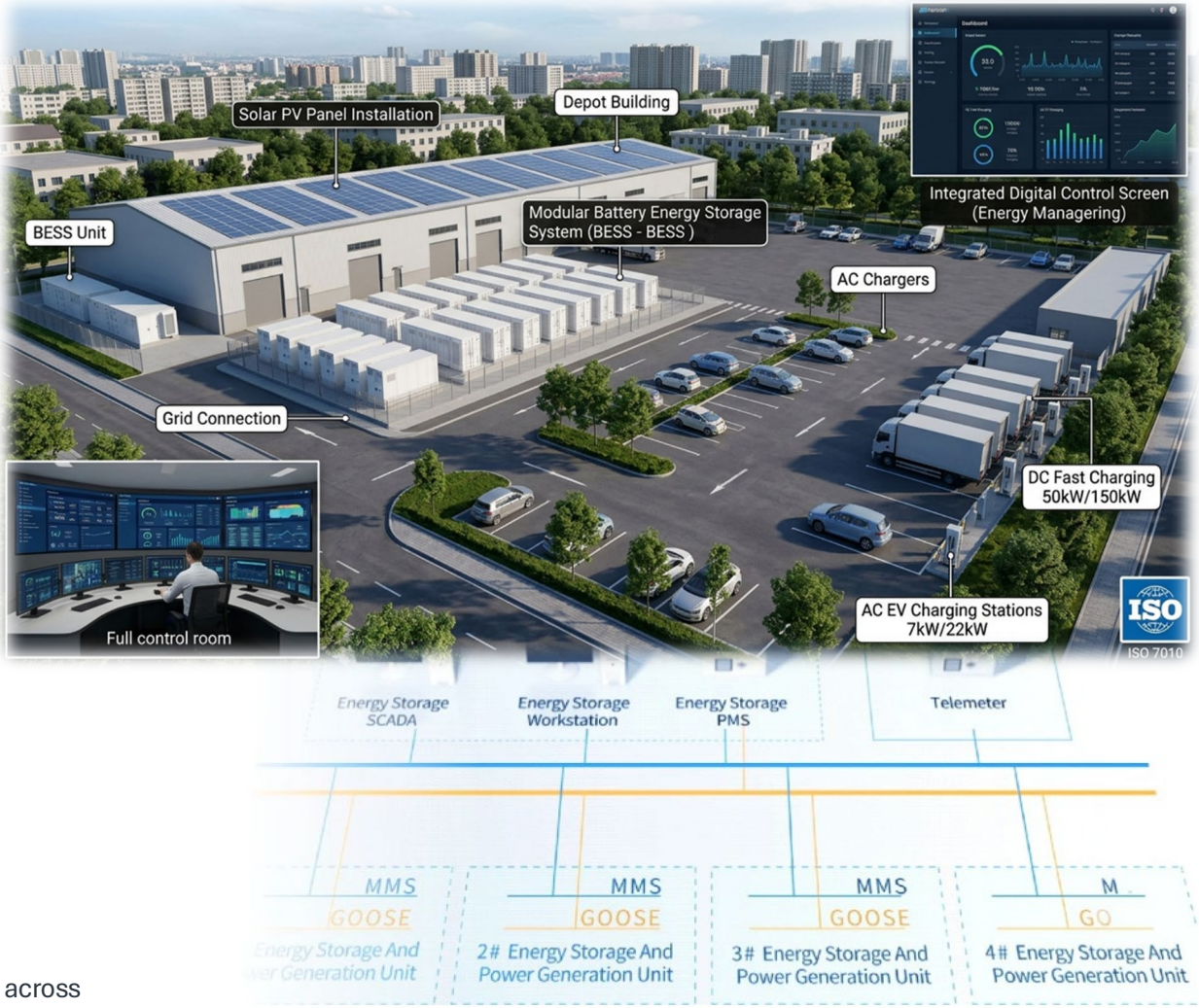
Select a suitable site or group of vehicles for an initial implementation.

The pilot could combine:

- Solar PV installation.
- Battery energy storage.
- AC and/or DC EV charging infrastructure.
- Electrical infrastructure upgrades.
- Integrated energy management and monitoring.

We will coordinate the agreed implementation scope, EPC responsibilities, procurement, installation, commissioning and training.

Objective: Demonstrate the solution under actual operating conditions and validate the business case.



Phase 4 — Monitor, Optimise & Expand

Evaluate pilot performance against the agreed objectives and initial business case.

Assess:

- Energy generated and consumed.
- Renewable energy utilisation.
- Charging performance and vehicle availability.
- Peak-demand reduction.
- Operating cost savings.
- System reliability and performance.

Use the findings to optimise the solution and plan phased expansion across additional properties and fleet vehicles.

Objective: Build a scalable energy and fleet electrification strategy

What we typically need from our clients to get started

To support the initial assessment, we typically need the following information where available:

1. Fleet register showing vehicle types, quantities and replacement schedules.
2. Typical vehicle routes, mileage and daily operating hours.
3. Current fuel and vehicle maintenance costs.
4. Electricity bills, tariffs and consumption information.
5. Details of priority properties and available solar installation areas.
6. Existing electrical drawings and information on transformers and grid capacity.
7. Future fleet electrification plans and anticipated vehicle requirements.
8. Preferred investment approach, including outright purchase, leasing, PPA or other financing options.

Additional measurements and site assessments would be undertaken by our teams to address any information gaps.

To identify the right starting point

We typically begin with a discovery workshop to select priority properties and vehicle groups for assessment.
The first deliverable will be a prioritised opportunity assessment outlining recommended starting points, preliminary technical solutions and indicative financial benefits.

The goal is more than installing chargers, solar panels or batteries. It is an integrated energy strategy that supports our clients' operations today and prepares their business for electric mobility.

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