GENESAL ENERGY
Pure Energy

Master energy and you'll master your project.

Tailored energy solutions for critical infrastructure

Every project starts with a question

What does this facility need to ensure energy continuity?

Genesal Energy has been **delivering engineering solutions for more than 30 years**. We design, manufacture, validate, commission and maintain **bespoke generator sets** for critical infrastructure where power failure is simply not an option.

By **managing the entire process in-house**, we maintain direct control over the quality, performance and customisation of every unit.

Our experience across **more than 40 countries** enables us to tackle complex projects with a clear methodology: understand first, design second.

+30 years of experience

+40 countries

+20,000 m² of facilities

+200 professionals

Power range from 5 to 5,250 kVA

In-house After-Sales Service 24/7

When it comes to energy, there is no margin for error

When continuity of supply is critical, choosing the right supplier is no longer just a technical decision: it becomes a strategic one.

What does Genesal Energy bring to every project?

A single point of contact

An assigned team coordinates the project from technical definition through to equipment maintenance.

Full control of the process

We design, manufacture, validate and commission every solution using our own in-house resources.

Engineering tailored to each installation

We analyse operational needs, the environment and specific requirements before we design.

Global experience, local response

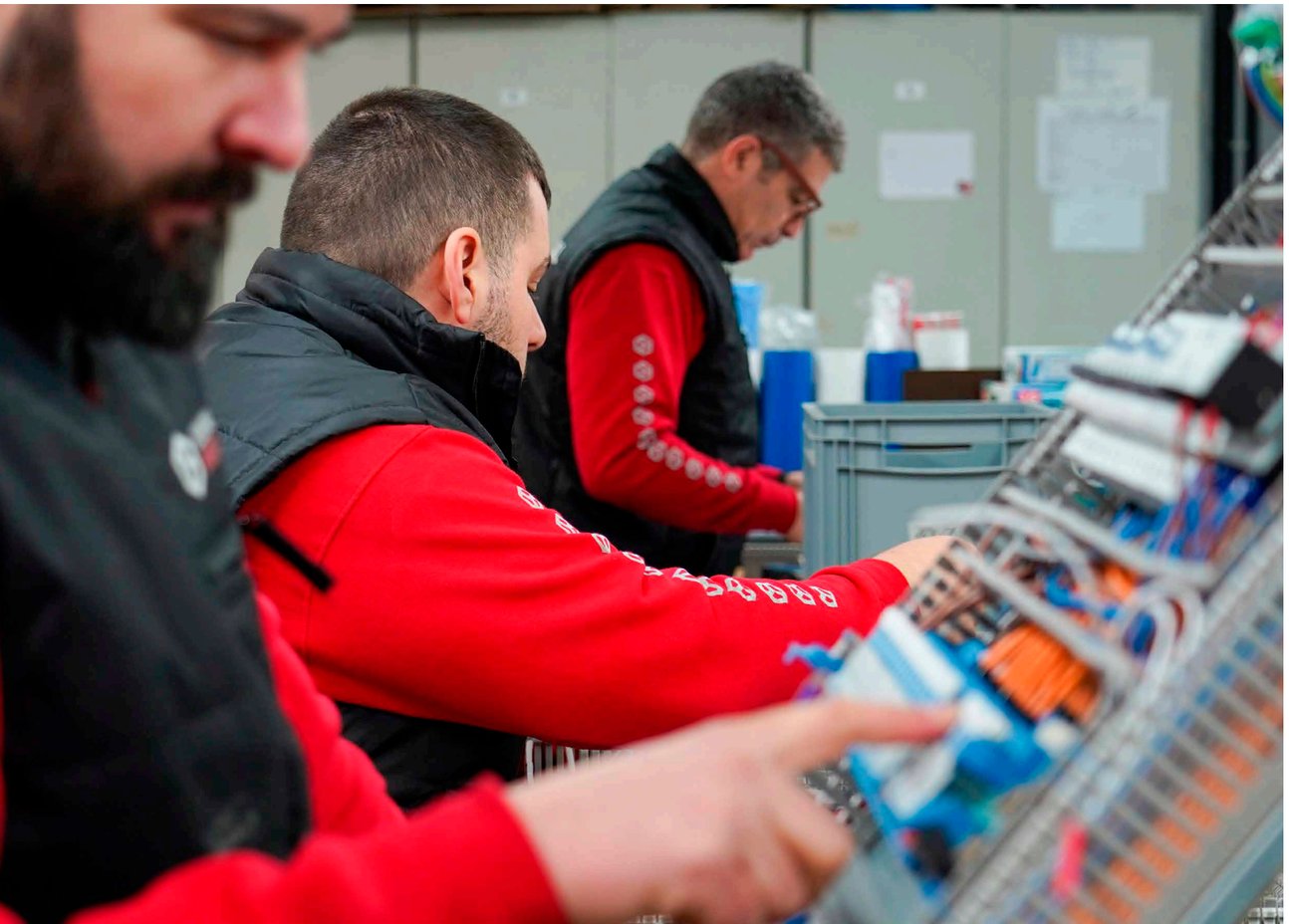
We adapt every solution to the regulations, market and conditions of each destination.

Why choose Genesal Energy

We bring engineering, manufacturing, validation and technical support together within a single organisation.

This integration enables us to **adapt each solution to the actual conditions of the project** and maintain control throughout its entire life cycle.

These capabilities turn complex requirements into reliable, traceable systems, ready to operate wherever power is critical.



In-house engineering and manufacturing

We develop our electrical and mechanical engineering in-house, manufacture key components and integrate every system under the same technical control.

Individual validation of every unit

We verify the overall performance of each solution through testing configured according to its technical scope, including load testing of up to 110% when required by the project.

Solutions for critical environments

We adapt power output, autonomy, acoustics, emissions, control and auxiliary systems to the actual conditions of each installation.

Applied innovation: Generlab

Our technology centre turns research, digitalisation and new energy models into solutions with industrial applications.

Certified ecodesign

We apply an ecodesign management system certified in accordance with ISO 14006 to reduce environmental impacts throughout the product life cycle.

After-Sales Service throughout the entire service life

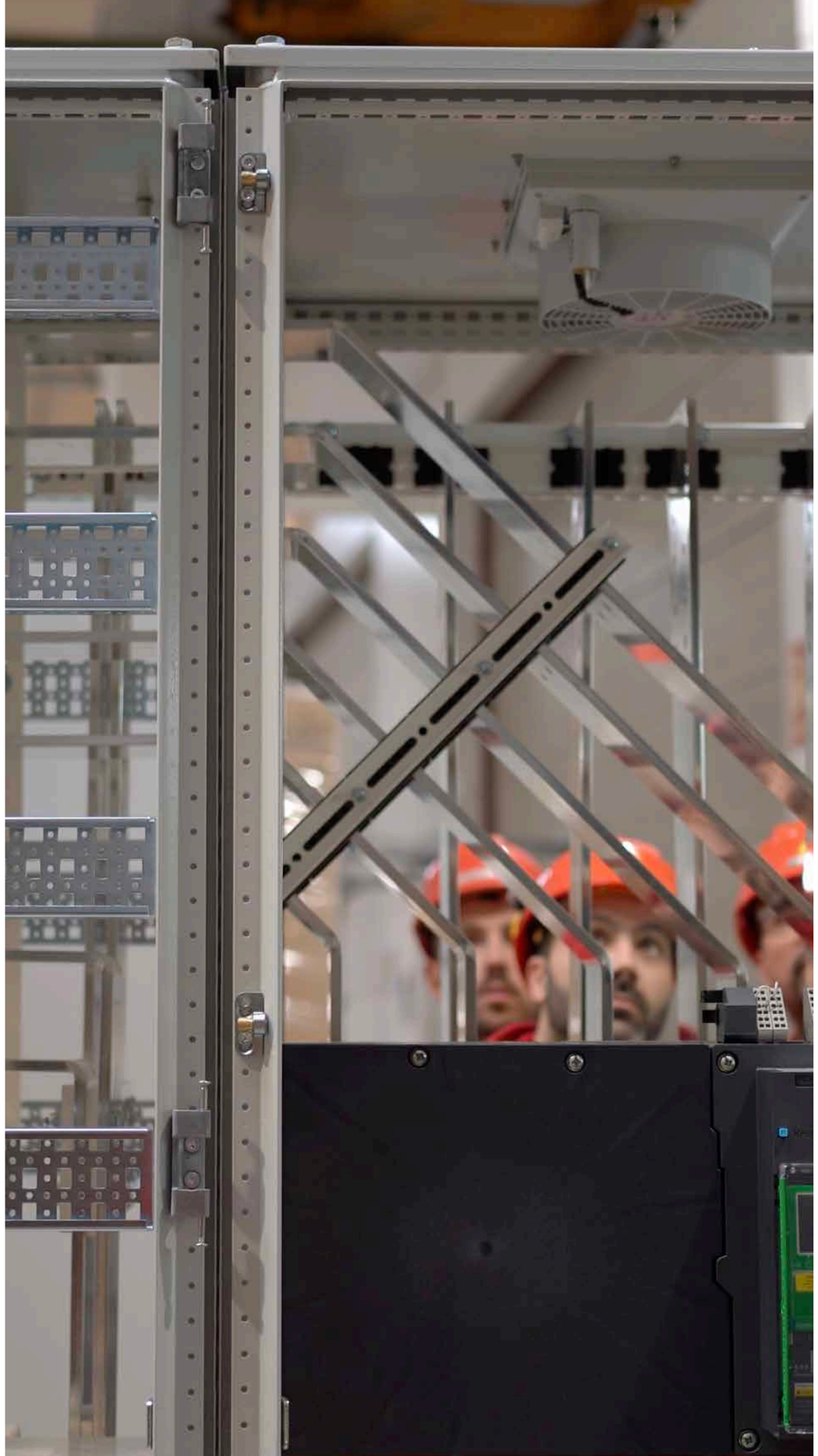
We support every installation with commissioning, multi-brand maintenance, remote management and 24/7 technical assistance.

From engineering to manufacturing

We have over 20,000 m² of facilities, bringing together our manufacturing, integration and validation capabilities.

This infrastructure enables us to undertake projects of varying scales and levels of complexity, tailor each solution to its technical requirements, and integrate systems and technologies under a single technical framework.

Over 20,000 m² of facilities



B28 — 3,000 m²
Special projects and R&D&I
Project manufacturing
Open generator sets

B27 — 1,000 m²
After-Sales Service and Spare Parts

B40 — 17,000 m²
High-power solutions
Containerised solutions
Soundproofed generator sets

Engineering without borders

Global capabilities to deliver in every market

From our headquarters in Northern Spain, we develop energy solutions in **more than 40 countries**. An international network of distributors, technology partners and approved service providers gives us local expertise and responsive support.

We adapt our engineering, documentation, logistics and technical support to the requirements of each market. This structure enables us to coordinate every **project from a global perspective** while responding to the specific operating conditions of each destination.

Europe

We combine our own industrial capabilities with a specialised commercial network and technical support to meet demanding regulations, extreme climates and the requirements of critical infrastructure across European markets.

Asia

Projects delivered in markets such as Taiwan and the Philippines demonstrate our ability to operate in complex industrial environments and meet the specific requirements of each market.

Latin America

Our subsidiary in Peru provides local expertise and technical, commercial and logistics capabilities. More than fifteen years of activity in the country, together with projects such as the expansion of the Talara Refinery, underpin our experience in the Latin American market.

Africa

We develop turnkey solutions for industrial and energy projects in countries such as Angola, Tanzania, Cameroon and South Africa. The experience gained in complex environments has made Africa one of the markets with the greatest strategic potential for Genesal Energy.

Middle East

Our experience in Qatar, combined with collaboration with local partners, enables us to undertake large-scale projects and adapt each solution to the technical and operational conditions of the Middle East.

Generlab

Innovation applied to industry.

Generlab is Genesal Energy's technology centre specialising in distributed energy. At Generlab, **we develop, validate and apply new technologies to our products**, industrial processes and energy management systems.

Its work connects research with industry and is structured around four key areas:

Technology development

New generation, control and energy management systems for industrial applications and critical infrastructure.

Testing and validation

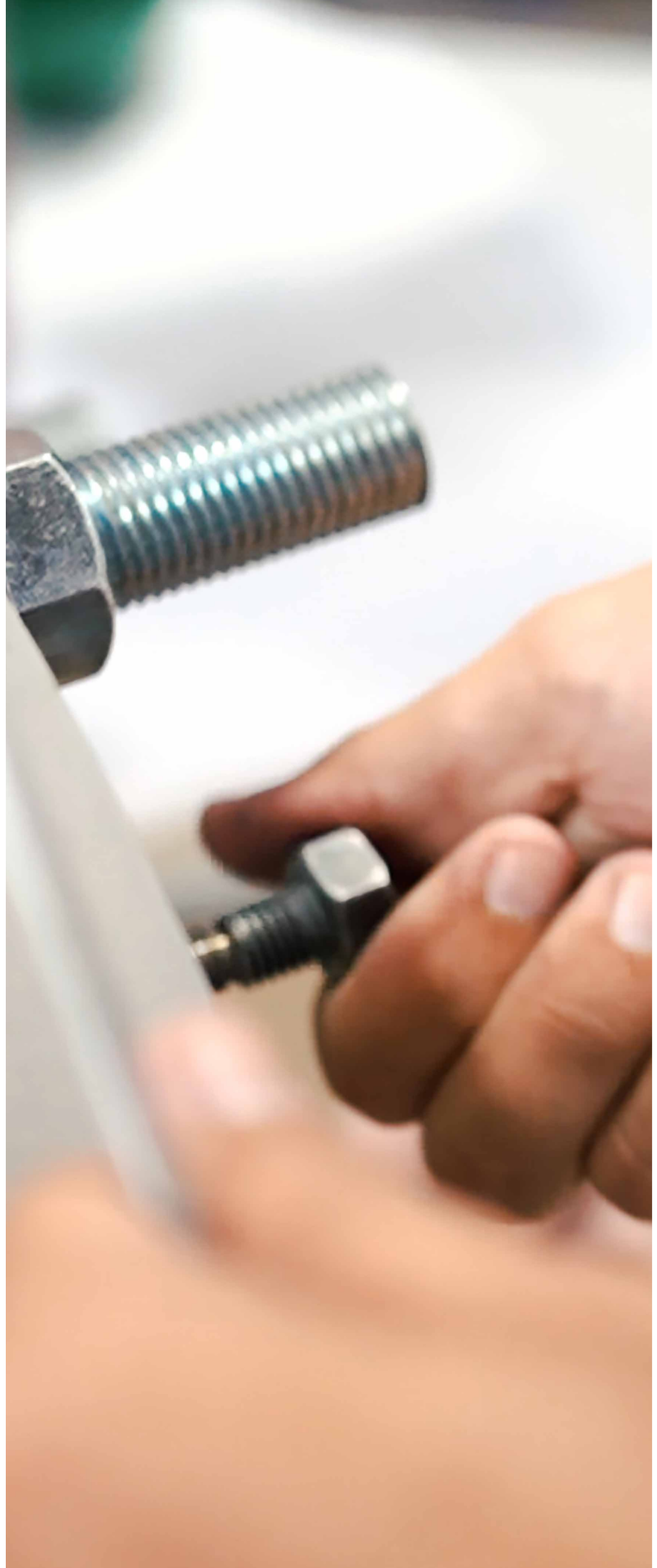
Technical testing to verify the performance and feasibility of each development before industrial application.

Product and process innovation

Development and application of new technologies to improve products, industrial processes and energy systems.

Collaboration and knowledge transfer

Joint projects, knowledge transfer and technical training with universities, research centres, companies and public authorities.



R&D&I applied to new energy models

Generlab's projects translate R&D&I into real-world applications, **developing and validating new technologies** in power generation, alternative fuels and energy management.

OGGY

Our proprietary energy management system coordinates generation, consumption and storage to improve the efficiency of our facilities.

ENEDAR

Development and validation of a generator set capable of using biogas produced from sewage sludge to generate energy within the facilities themselves.

H2OG

Development of a green hydrogen production system based on electrolysis, designed to integrate with OGGY and move towards greater energy autonomy in industrial facilities.

H2GEN

Development of generator sets capable of using hydrogen as a fuel, aimed at progressively reducing fossil fuel consumption in distributed generation.

A range for every energy need

From compact units to bespoke high-power solutions.

We offer a range of generator sets from **5 to 5,250 kVA**, suitable for prime or emergency power applications depending on the characteristics and requirements of each installation.

Our portfolio includes diesel generator sets, ecodesigned solutions and Stage V units, alongside HVO-compatible configurations.

Diesel

Open, soundproofed or fully customised configurations.

Ecodesign

Solutions developed under an ecodesign management system certified in accordance with ISO 14006.

Stage V

Units designed to meet European emissions requirements for non-road mobile machinery.

HVO

HVO-compatible solutions, validated for operation with HVO to reduce reliance on fossil diesel while maintaining equipment performance.

Diesel generator sets

Wide power range for different requirements

XS Power | 5-22 kVA

Compact units for homes, offices, small businesses and auxiliary services. Suitable for emergency power supply and applications with low energy demand.

S Power | 23-110 kVA

Solutions for retail premises, professional facilities, small industries and emergency applications. They offer a range of configuration and autonomy options in an easy-to-integrate format.

M Power | 111-385 kVA

Generator sets for industrial facilities, construction, logistics, telecommunications and service operators. They can be configured for emergency power supply or operation as a primary power source.

L Power | 386-825 kVA

Units for healthcare facilities, large installations and industrial processes with high energy demand. They support synchronisation, parallel operation and integration with advanced control systems.

XL Power | From 826 kVA

High-power solutions for data centres, power plants, heavy industry and strategic infrastructure. They are developed through bespoke engineering to meet complex configurations and demanding availability requirements.

Engines and alternators from leading manufacturers

Bespoke engineering

Each project involves **different requirements** in terms of power, autonomy, control, acoustics, emissions and integration. Our engineering team analyses these conditions and develops a **bespoke solution** to ensure performance, safety and operational continuity.

Pure energy.
Made to measure.

We don’t adapt standard solutions. We design every project around its actual requirements.

Stages of a bespoke solution

01. Technical analysis

We analyse the loads, operating environment, applicable regulations, duty cycle and critical requirements of the installation.

02. Bespoke engineering

We develop the mechanical and electrical design using 3D drawings, calculations, simulations and schematics. The customer validates the solution before it enters production.

03. Components and in-house manufacturing

We select components from leading manufacturers and produce key elements in-house, including chassis, enclosures, tanks and other essential components.

04. Assembly and integration

We integrate the required electrical, mechanical, control, cooling, ventilation, soundproofing and protection systems.

05. Testing and validation

We verify overall performance through tests tailored to the technical scope, including load testing of up to 110% when required by the application.

06. Logistics and ongoing support

We coordinate transport, documentation and commissioning. After delivery, we provide training, maintenance and technical support.

Projects Department

Support throughout the entire process. How do we do it?

We design and manufacture bespoke energy solutions, tailored to meet our customers' specific requirements across a wide range of sectors.

Every project has its own requirements. Our engineering provides the right solution for each one.

01

Receipt and analysis of specifications.

02

Review by the Sales and Projects Departments.

03

Definition of the best solution for your project.

04

Preparation of the technical proposal.

05

Technical meetings with the customer.

06

Technical clarifications with the customer's engineering team.

07

Project coordination with the Production Department.

08

Manufacture of the equipment within the agreed timeframe.

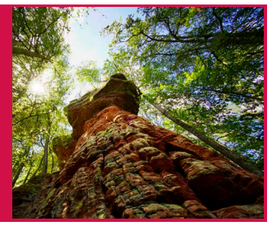
Ecodesigned generator sets

Environmental impact is addressed from the very first stage of the project.

Ecodesign **incorporates environmental criteria into product development** to identify and reduce impacts throughout the entire life cycle: material selection, manufacturing, transport, use, maintenance and end of life.

Genesal Energy pioneered the development of a range of generator sets under an **ecodesign management system certified** in accordance with ISO 14006.

Discover more about ecodesign



Environmental criteria integrated from the design stage, without compromising technical performance.

Ecodesign applied throughout the entire life cycle

Material selection

We prioritise recyclable, recycled or lower-impact materials wherever technical, safety and equipment reliability requirements allow.

Compatibility with sustainable fuels

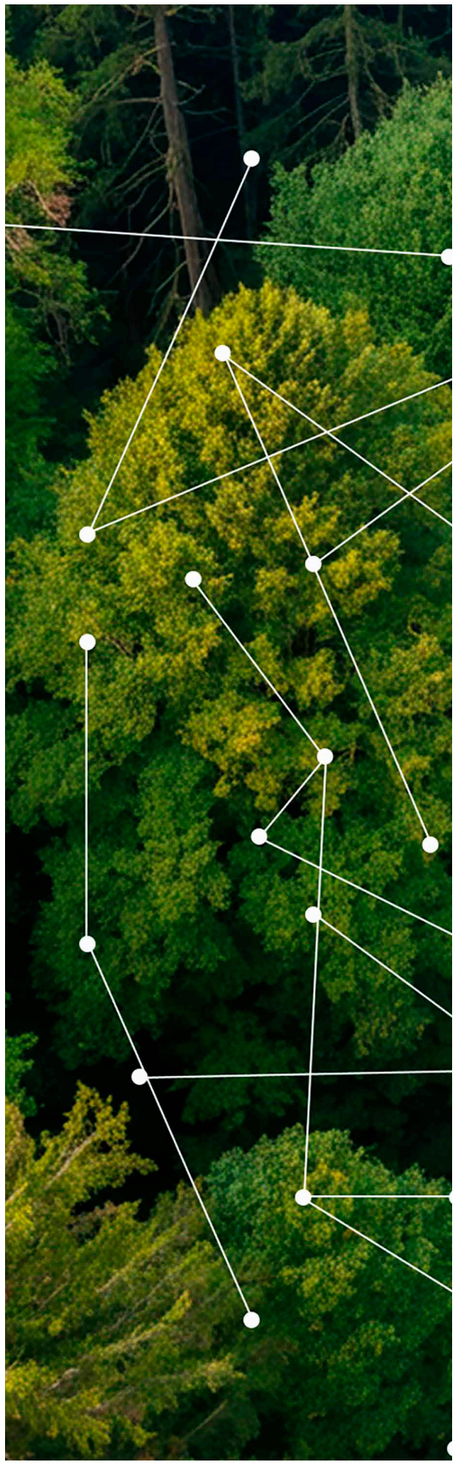
We validate HVO performance under real operating conditions to develop units ready for alternative fuels without compromising performance or reliability.

Design, manufacturing and repairability

We apply modularity, component optimisation and additive manufacturing criteria to reduce resource use, facilitate maintenance and extend equipment service life.

Life Cycle Assessment and environmental transparency

We apply Life Cycle Assessment methodologies to identify the main impacts of each solution. The results provide the basis for preparing third-party verified Environmental Product Declarations, with objective, traceable and comparable information.



Stage V generator sets

The Stage V range features engines type-approved in accordance with **Regulation (EU) 2016/1628**, applicable to non-road mobile machinery.

Emission control technologies are integrated from the design stage to deliver **compact, accessible units tailored** to the power, autonomy, acoustic performance, control and maintenance access requirements of each application.

Watch the Stage V video

Lower emissions with a configuration tailored to each application.

Stage V rental

Heavy-duty units for rental and construction applications, with a sturdy soundproofed enclosure and reinforced skid base. Their design facilitates transport, operation and maintenance in intensive-use applications.

Stage V industrial

Open or soundproofed versions for industrial applications requiring Stage V technology. Each unit is configured according to its power, autonomy, acoustic performance, control and maintenance access requirements.

Emission control technologies

DOC — Diesel Oxidation Catalyst

Reduces carbon monoxide and hydrocarbons present in exhaust gases.

DPF — Diesel Particulate Filter

A filter that traps particulate matter present in exhaust gases.

SCR — Selective Catalytic Reduction

Reduces nitrogen oxide emissions through a selective catalytic reduction process.

EGR — Exhaust Gas Recirculation

Recirculates part of the exhaust gases to limit the formation of nitrogen oxides.

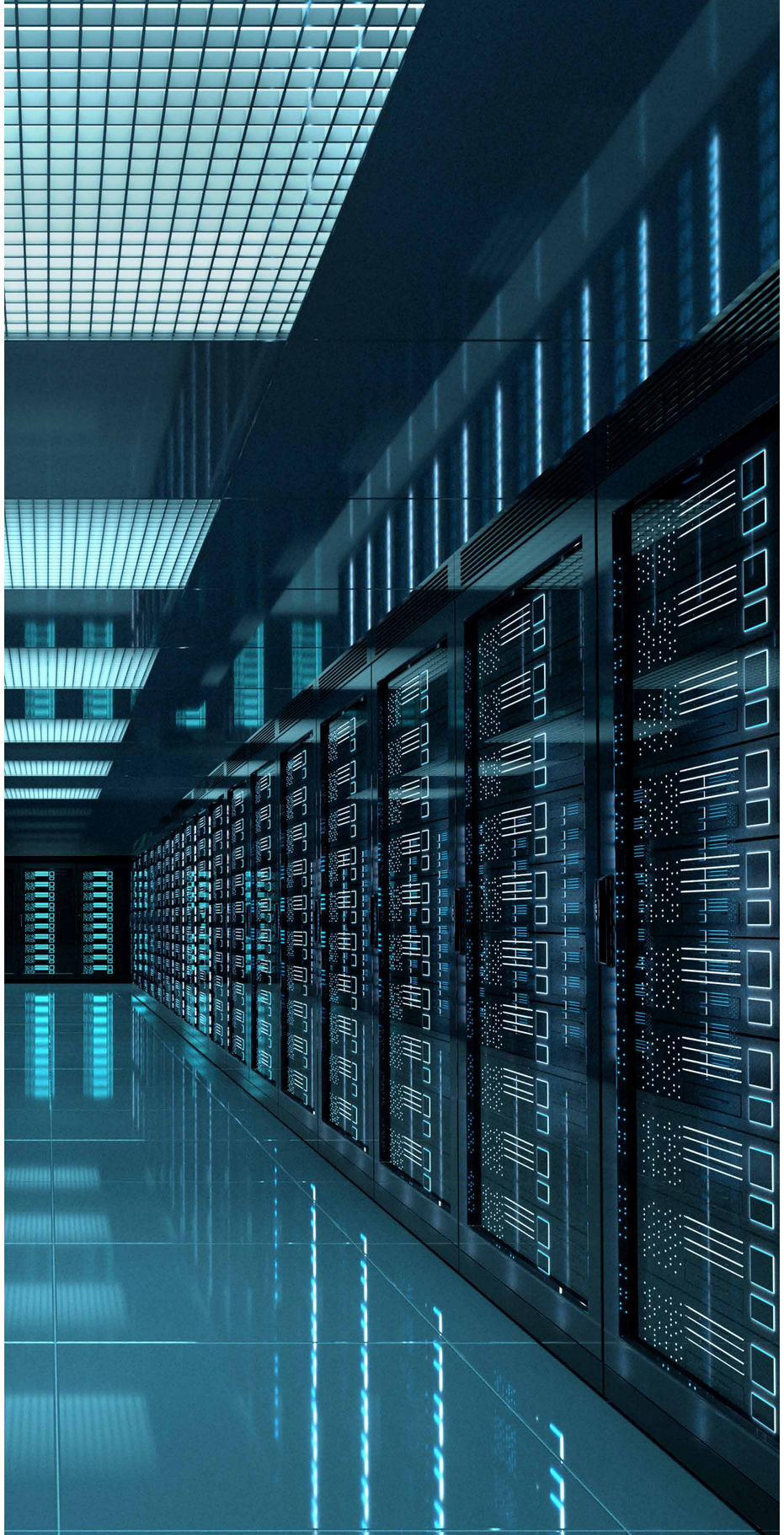
The combination of technologies depends on the characteristics and type approval of each engine.

Solutions for sectors where power is critical

The same engineering expertise for different operational challenges.

Each application combines availability, power, autonomy, acoustic performance, emissions, control and integration requirements in a different way.

Our **experience in critical infrastructure** enables us to turn those operating conditions into a technical solution tailored to each installation.



Infrastructure and transport

Units for airports, stations, tunnels and other transport infrastructure, adapted to site conditions, applicable regulations, ventilation, acoustics and available space.

Hospitals and healthcare facilities

Rapid-start generator sets with redundant systems and acoustic attenuation to keep the facility's critical loads powered.

Defence

Robust, configurable solutions for demanding operating conditions, developed under strict confidentiality protocols and in accordance with the technical requirements of each project.

Data centres

High-power solutions for high-availability architectures, with rapid start-up, redundancy, parallel operation and integration with the installation's control systems.

Power plants

Backup systems integrated with SCADA and plant control systems, for both new installations and modernisation projects.

Industry and construction

Units for prime or emergency power supply, with tailored autonomy, modular configurations and Stage V options.

Water treatment

Solutions designed to withstand humid and corrosive environments, integrated with plant control systems to ensure process continuity.

Telecommunications

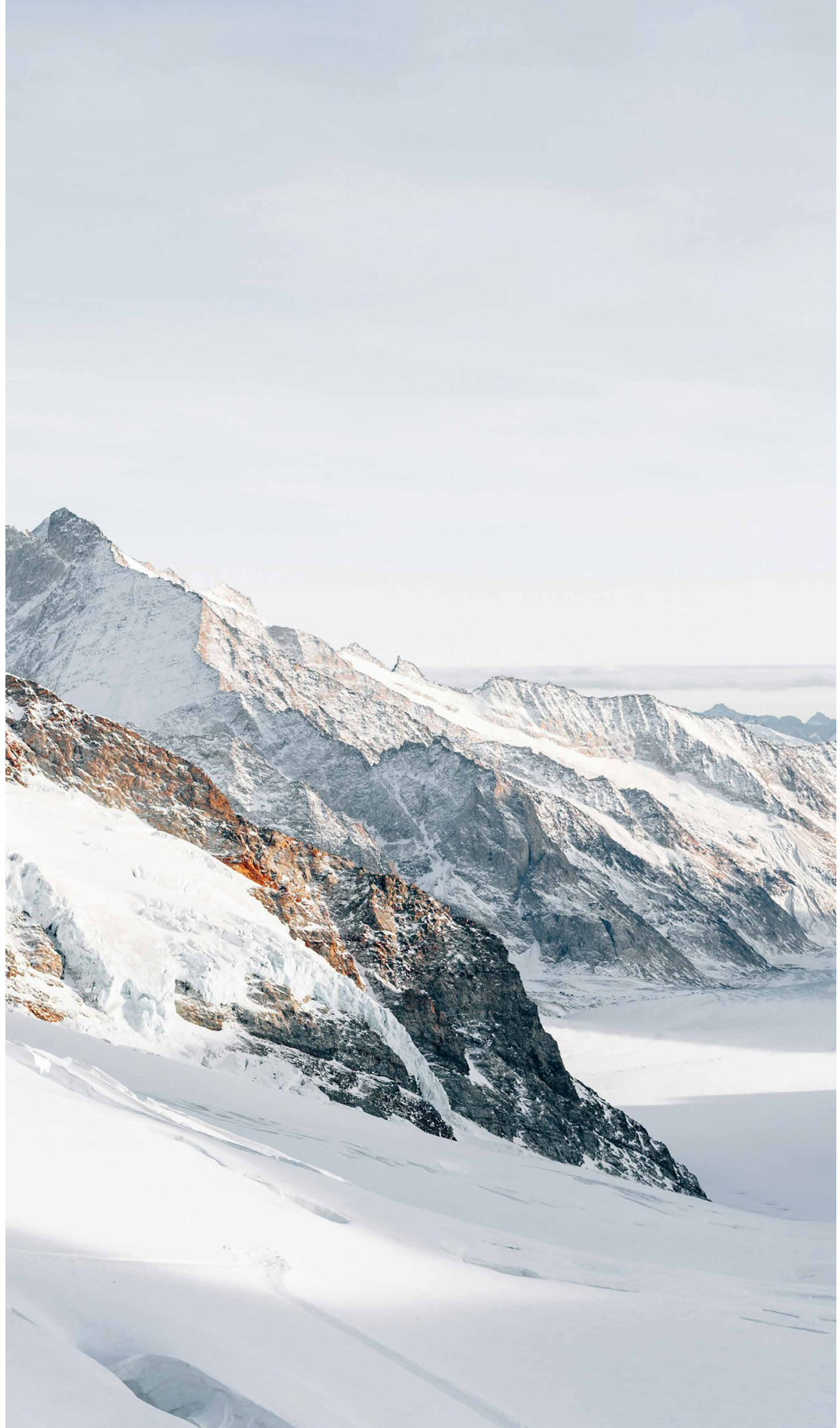
Backup power solutions for telecommunications networks and nodes, with tailored autonomy, remote monitoring and configurations designed for distributed sites.

Solutions for special conditions

Solutions tailored to the most demanding environments and requirements.

Some projects require **solutions that go beyond** a conventional configuration: extreme environments, stringent acoustic requirements, seismic risk, different electrical standards or medium-voltage integration.

Our engineering team adapts every unit to the **actual operating conditions, applicable regulations and infrastructure of the destination.**



Marine and offshore environments

Units adapted to high humidity, salt spray and corrosion for vessels, ports and offshore platforms.

Extreme environmental conditions

Solutions for extreme temperatures, high altitude, dust or humidity, with specific cooling, heating, ventilation and protection systems.

Soundproofing

Enclosures, silencers and anti-vibration systems designed to meet the required acoustic levels in noise-sensitive environments.

50/60 Hz configurations

Units adapted to different frequencies and voltages for rental applications, testing and projects subject to different electrical standards.

Medium voltage

Power generation solutions up to 15 kV, configured according to the electrical, protection and control requirements of each project.

Seismic solutions

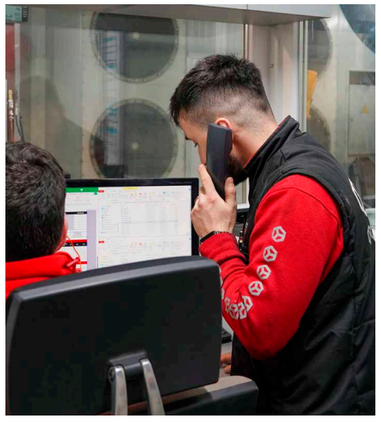
Reinforced structures, base frames and anchoring systems, designed according to the seismic conditions of the site.

Service and operational continuity

Trust does not end with commissioning.

Manufacturing a generator set is only the beginning. Once the unit enters operation, its **reliability depends on maintenance,** monitoring and the response capability behind it.

Genesal Energy's After-Sales Service supports every installation throughout its entire service life, combining on-site assistance, remote support and direct access to our engineering team to **anticipate issues and maintain operational continuity.**



What makes our After-Sales Service unique

Engineering support for After-Sales Service

Direct access to our electrical, mechanical, control and testing engineering departments enables us to handle complex diagnostics, repairs and modifications.

Multi-brand maintenance

We service equipment from different manufacturers, power ranges and configurations, from individual units to large fleets.

National and international technical network

We coordinate service from Northern Spain, with branches in Madrid and Bilbao, more than 15 approved service points across Spain and an international network of service and maintenance partners.

24/7 availability

24-hour support, 365 days a year, with remote or on-site assistance whenever the situation requires it.

Main services

Commissioning

We check the installation, integration and operation of the equipment at its final location before it enters service.

Tailored maintenance

We design maintenance plans according to the duty cycle, operating hours and criticality of each installation.

- Preventive: scheduled inspections to detect anomalies and reduce the risk of failure.
- Corrective: fault diagnosis and repair to restore operation.
- Predictive: analysis of equipment behaviour to anticipate deviations and plan interventions.

Remote assistance and management

Real-time monitoring, alarm management, remote diagnostics and trend analysis to reduce response times and anticipate incidents.

Upgrades and modernisation

We update control systems, alarms, communications, tanks and auxiliary equipment to adapt installations to new requirements and extend their service life.

Spare parts and warranties

We manage genuine spare parts and direct access to manufacturers to reduce lead times and streamline warranty management.

Technical training

We train personnel responsible for operation and maintenance, as well as in-house technicians and service network partners.

Sustainability from within

We apply the same principles of efficiency, control and continuous improvement to our own facilities that we incorporate into our solutions.

Sustainability is also part of how we operate. We integrate renewable generation, intelligent energy management and environmental control of our processes to reduce impacts and continuously improve the environmental performance of our facilities.

Renewable energy and intelligent management

OGGY coordinates energy generation, storage and consumption across our facilities. The system integrates photovoltaic generation and also enables us to make use of the energy produced during generator set testing.

Responsible production

We monitor resource consumption, waste generation, production-related emissions and material traceability to identify opportunities for improvement.

Measurement and continuous improvement

We calculate our carbon footprint and monitor key environmental indicators to define reduction measures and assess progress over time.

Renewable energy generation at our facilities

57.3 kWp rooftop photovoltaic system

13.1 kWp in photovoltaic façades

93 photovoltaic glass panels integrated into the building

70,000 kWh/year of estimated renewable energy generation across our facilities

Certifications underpinning every project

Quality, sustainability, safety and innovation integrated into a single way of working.

Genesal Energy operates under an **Integrated Management System** encompassing quality, sustainability, safety and innovation. This framework ensures traceability, control, compliance and continuous improvement throughout every project.

ISO 9001:2015
Quality management
Controlled processes, performance assessment and continuous improvement.

ISO 14006:2020
Ecodesign management
Integration of environmental criteria into the design and development of our products.

ISO 14001:2015
Environmental management
Identification, control and reduction of the environmental impacts associated with our activities.

ISO 56001:2024
Innovation management
Planning, development, assessment and improvement of innovation activities.

ISO 45001:2018
Occupational health and safety
Risk prevention and continuous improvement of health and safety conditions.

MITECO Carbon Footprint Register
Registration of our corporate carbon footprint to measure emissions and guide reduction measures.

Because every story is unique

Continuity cannot be improvised. It must be designed, validated and maintained.

No two installations are the same. Every project presents technical, operational and regulatory conditions that must be understood before the solution is defined.

Genesal Energy combines **in-house engineering, industrial capabilities and more than 30 years of experience** to develop energy systems tailored to each challenge and support them throughout their entire service life.

GENESAL ENERGY
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