Grupo neoelectra
pura energía

NeoElectra

Global Energy Partner for Industrials



Industrial cogeneration: the engine of a decarbonised industry

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NeoElectra at a glance

An independent energy partner working inside our clients' plants.

20+
Years of industrial know-how

3
Countries: Spain, Chile and France

19
Plants under own management

157 MW
Electrical capacity installed

+300
Employees

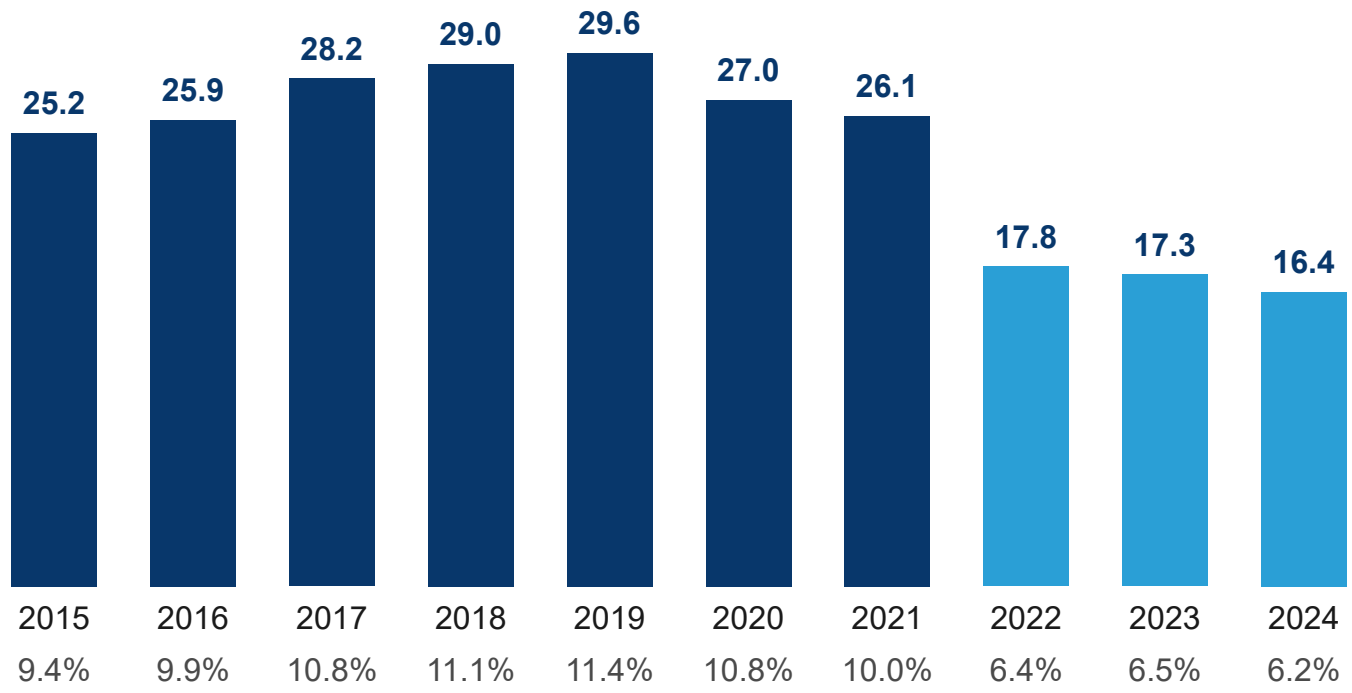
15+
Years of relationship with key clients

Integrated solutions: generation, energy supply, industrial services

CHP in Spain: Evolution in Figures

From a steady 10–11% of Spain's electricity to a sector in transition.

Generation (TWh) and share of national electricity



Light blue: after the 2022 gas crisis (−32% in one year)

~5.7 GW
installed in ~937 facilities

~20%
of Spain's industrial GDP relies on CHP

3.8 GW
CHP target for 2030 (PNIEC)

Sources: REE data (2015–2023 via J.J. Rodríguez Morales, Comillas 2024; 2024 REE); CNMC; ACOGEN; PNIEC 2023–2030

Four Decades of Adapting to Regulation

Every regulatory shift has forced CHP to reinvent itself — and it has.

1980–1997

Origins

Rules: Energy Conservation Law 82/1980; RD 2366/1994.

Response: industry starts producing its own heat and power.

1998–2011

Expansion

Rules: "special regime" (Law 54/1997); RD 2818/1998, RD 436/2004, RD 661/2007.

Response: fleet grows to ~6 GW in ~600 industries.

2012–2020

Reform

Rules: 2012 moratorium; Law 24/2013 and RD 413/2014 (Ri + Ro, reasonable return).

Response: efficiency first; output peaks at 29.6 TWh (2019).

2021–2023

Crisis

Rules: gas price shock; RDL 6/2022; gas cap (RDL 10/2022) initially excluded CHP.

Response: >70% of plants stopped; output −32% in 2022.

2024–2026

Reset

Rules: Order TED/526/2024 (quarterly, ex-ante Ro); 1.2 GW auction framework.

Response: >80% of capacity runs flexibly; hybridisation; auction readiness.

From base-load supplier to flexible, market-driven asset: 35% of CHP capacity already trades intraday and 16% provides balancing services.

Sources: BOE; J.J. Rodríguez Morales, "Gestión y transformación de la cogeneración en España", Comillas (2024)

1. Industrial

Energy produced where industry uses it: one fuel, two products, on the factory site.

Why it matters

- Drying, cooking, sterilising and evaporating need **heat and steam 24/7**.
- Full electrification is **not yet technically or economically viable** for many sites.
- We serve **agri-food, dairy, olive oil, chemicals & pharma, wood and paper**.
- For these industries, **energy cost is competitiveness**.

How it works

One fuel: gas, biogas, biomass

↓

CHP on the factory site

↓

Heat & steam
for the process

Electricity
for plant and grid

2. Efficiency

The most efficient unit of energy is the one you don’t waste.

~40%

more efficient than producing heat and electricity separately

≥15%

primary energy savings required in the new CHP auctions[1]

Efficiency is the first and cheapest decarbonisation lever

[1] Plants of 1 MW and above. Source: MITECO, draft Order on high-efficiency CHP auctions (2025)

3. Adaptability

Distributed, available and flexible power for a grid with more and more solar and wind.

Distributed energy

Generated where it is consumed: fewer grid losses and less need for new grid capacity.

High availability

Multiple engines and 24/7 O&M keep heat and power flowing to continuous processes.

Flexible operation

Dispatchable output that follows market signals and complements solar and wind.

Multi-fuel

Natural gas today; biogas, biomass, waste streams and hydrogen blends tomorrow.

Hybrid sites

CHP, solar PV and battery storage sharing the same grid connection.

Proven resilience

Through the 2022 energy crisis and successive regulatory changes.

4. Customer Relationship

From energy supplier to long-term partner in our clients' energy transition.

2002

Producer

Heat and power supplied to the host factory.

2010s

Integrated services

O&M, gas and power supply, efficiency and procurement. Expansion to Chile and France.

Today

Decarbonisation partner

Co-designing each client's path to lower cost and lower emissions.

"Relationships of more than 15 years, built on trust and on operating inside our clients' own processes."

5. Sustainability

Circular economy: turning industrial and farm waste into value.

Waste becomes a resource

- **Agri-food residues:** olive by-products dried and valorised with process heat.
- **Livestock slurry:** pig slurry treated, cutting emissions and pollution of soil and water.
- **Biogas & biomethane:** renewable gas produced from organic waste.
- **Captured CO_2:** high-purity CO_2 recovered and put to industrial use instead of being released.

CO_2 capture in figures

3

capture plants

~60 kt

CO_2 per year, >99.9% purity

6. Decarbonisation

A pathway, not a switch: six levers that turn each site into a low-carbon energy hub.

01 Efficiency

Repowering with modern, more efficient engines.

02 Renewable gas

Biogas and biomethane replacing natural gas.

03 Hydrogen-ready

Engines and gas connections prepared for H_2 blends.

04 Solar PV

On-site renewables behind the same grid connection.

05 Storage

Batteries that shift energy and support the grid.

06 CO_2 capture

Biogenic and industrial CO_2 captured and reused.

New Opportunities for CHP

The energy transition opens a new role for industrial cogeneration.

Fleet renewal

1.2 GW of auctions as ~54% of regulated capacity reaches end of regulatory life by 2030.

Firm power

Dispatchable backup for an 81% renewable power mix by 2030, as coal and nuclear exit.

Renewable gases

Biogas target of 10.4 TWh/year by 2030; plants ready for biomethane and H_2 blends.

Hybridisation

Solar PV, batteries, electric boilers and heat pumps working alongside CHP.

Flexibility markets

15-minute prices, intraday trading and balancing services reward fast response.

Circular economy

Biomethane from waste and captured CO_2 turned into products.

Sources: PNIEC 2023–2030; MITECO; J.J. Rodríguez Morales, Comillas (2024)

Data Centres: the Next Industrial Partner

24/7, critical and energy-intensive: exactly the load cogeneration was built for.

The challenge

- **Scarce grid connection points:** long queues and saturated nodes delay new capacity for years.
- **Grid operation uncertainty:** a low-inertia, highly renewable system — the April 2025 Iberian blackout showed the risk.
- **Fast-growing demand:** AI and cloud loads need firm power and large-scale cooling.

What CHP and trigeneration offer

Power on site

Faster time-to-power, less dependence on new grid capacity.

Cooling from heat

Absorption chillers turn engine heat into cooling.

Resilience

Island-mode operation instead of idle diesel backup.

Existing sites

CHP plants already hold grid connections, gas supply and permits.

A clear decarbonisation path too: biomethane and H_2-ready engines, with surplus heat reused by neighbouring industry.

Best Case: El Grado (Huesca)

From a CHP plant to a multi-client industrial energy hub.



Image: Google Earth

> *One existing connection point serving industry, renewables, storage and digital infrastructure — no new grid capacity needed.*

TODAY · Operating

CHP supplying 2 industrial clients

2.5 MW solar PV on the same connection

24.9 MW grid access at 66 kV, ring-fed from 2 substations

NEXT · In development

+3.25 MW solar PV extension

Battery storage 2.25 MW / 10 MWh

CHP renewal through the auctions, H_2-ready

READY · Data centre

Up to 20 MW

Behind the meter: firm CHP power, PV, storage and a resilient grid link

The CHP Auctions

The auctions will renew Spain's cogeneration fleet — in exactly this direction.

1,200 MW
In three rounds of 400 MW

≥10% H_2
Green hydrogen blend capability for gas plants

≥30%
Of output self-consumed by the industry

≥15%
Primary energy savings (1 MW and above)

~8.4 Mt
CO_2 avoided over the regulatory life

OMIE
Runs the auction; CNMC supervises

Source: MITECO, impact report on the draft Order for high-efficiency CHP auctions (February 2025)

Key Takeaways

Let’s decarbonise industry together, one site at a time.

1

Efficient

Cogeneration saves energy that would otherwise be lost.

2

Adaptable

Flexible for the grid, multi-fuel and ready for renewable gases.

3

Partnered

Long-term relationships inside our clients’ processes.

The CHP auctions are the opportunity to renew the fleet for 2030

Three Questions for the Sector

1. How do we keep **industrial heat competitive** while full electrification is not yet viable?

2. How can **existing CHP grid connections** unlock new industrial and data-centre demand without waiting years for new capacity?

3. What **stable, long-term framework** will give industry the confidence to invest in the auctions and renewable gases?

Spain needs Industry.
Industry needs Cogeneration.

Thank you!

Spain needs Industry. Industry needs Cogeneration.

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