CRETE PROJECT · EU 2030

CRETE Clean Power & CO_2 Capture Project

Electrification and decarbonisation of remote areas on the island of Crete using modular 1 MW natural gas gensets with CRYOCCS cryogenic CO_2 capture. Three revenue streams – power, liquid CO_2 and CO_2 certificates – deliver outstanding returns with full political and EU-funding alignment.

Start: **2026** | Target: **50 MW installed by 2030** | Location: **Crete, Greece (EU)**

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PILOT PLANT **1 MW** ≈ 8,000 MWh/year gross generation	CO_2 CAPTURED **1,000 t/year** per 1 MW module
PROJECTED ROLL-OUT **50 MW** by 2030 – scalable cluster	EV CHARGE **50 x 500 KW** by 2030 – scalable cluster

Three Revenue Streams – One Platform

The CRETE project combines three cashflows in a single modular infrastructure: power generation, sale of liquid CO_2 and monetisation of CO_2 certificates under the EU ETS. This turns a classical gas engine into a high-yield, climate-positive asset.

1. Electricity sales (primary cashflow)

1 MW pilot unit · gas engine with CRYOCCS

Gross generation: ≈ 8,000 MWh/year

Net after capture power use: ≈ 6,500–7,000 MWh/year

Market power price (Crete 2025): **0.15–0.22 €/kWh**

→ Annual electricity revenues per 1 MW module: **~1.0–1.5 M€**

Main OPEX coverage | 8,000 h/year operation

2. Liquid CO_2 (LCO_2) sales

High-value by-product for local and export markets

Applications: beverages, greenhouses, cooling, welding, water treatment

European LCO_2 prices (2024–2025): **150–280 €/t**

1 MW module captures: ≈ 800–1,400 t CO_2/year

→ LCO_2 revenues per 1 MW module: **~120,000–350,000 €/year**

CO_2 as a product | Industrial off-take

3. CO_2 certificates (EU ETS)

CO_2 that is captured does not need to be paid for

EU ETS price corridor: **55–120 €/t CO_2** (rising towards 2030)

For 1,000 t CO_2 captured: **55,000–120,000 €/year** in avoided or tradable certificates

→ Third cashflow on top: **CO_2 becomes a financial asset**, not a penalty.

Combined impact

SOURCE	1 MW MODULE
Electricity sales	≈ 1.2 M€/year (example)
LCO_2 sales	≈ 0.20–0.25 M€/year
CO_2 certificates	≈ 0.08 M€/year
TOTAL REVENUES	**≈ 1.5 M€/YEAR**

Effective levelised cost of electricity (LCOE) falls to **~0.04–0.07 €/kWh** – competitive with or better than solar, wind and classical gas.

Pilot Financials (1 MW) and Scaling to 50 MW

The CRETE project starts with a 1 MW pilot plant to de-risk technology and regulation, then scales to 50 MW across the island. The core economics remain exceptionally strong at both levels.

Pilot Plant – 1 MW Natural Gas + CRYOCCS

Base case (Europe, gas-fired, 8,000 h/year)

ANNUAL REVENUES (1 MW)	
Electricity (6,800 MWh · 0.18 €/kWh)	≈ 1,224,000 €
LCO_2 sales (1,000 t · 200 €/t)	≈ 200,000 €
CO_2 certificates (1,000 t · 80 €/t)	≈ 80,000 €
TOTAL REVENUES	**≈ 1,504,000 €/YEAR**

ANNUAL OPEX (1 MW)	
Gas / fuel	≈ 650,000 €
Maintenance & spare parts	≈ 90,000 €
Staff / monitoring	≈ 60,000 €
Capture power & LN_2	≈ 70,000 €
Other (logistics, services)	≈ 40,000 € (assumed)
TOTAL OPEX	**≈ 910,000 €/YEAR**

PROFITABILITY (1 MW)	
Net profit (EBITDA approx.)	≈ 594,000 €/year
EBITDA margin	≈ 39 %
CAPEX (pilot 1 MW)	≈ 1.55 M€
Payback period	≈ 2.6 years
ROI (simple)	≈ 38.3 %/year
IRR (10-year)	≈ 29–33 %

Full Roll-out – 50 MW CRETE Cluster

50 × 1 MW modules · with scale economies

ANNUAL REVENUES (50 MW)	
Electricity (50 × 1.224 M€)	≈ 61.2 M€/year
LCO_2 sales (50 × 0.2 M€)	≈ 10.0 M€/year
CO_2 certificates (50 × 0.08 M€)	≈ 4.0 M€/year
TOTAL REVENUES	**≈ 75.2 M€/YEAR**

ANNUAL OPEX (50 MW)	
OPEX with scale efficiencies	≈ 43 M€/year

PROFITABILITY (50 MW)	
Net profit	≈ 32.2 M€/year
CAPEX (cluster)	≈ 68 M€
Payback period	≈ 2.1 years
Annual ROI	≈ 47 %
IRR (10-year)	≈ 36–42 %

These returns are comparable to venture capital – but backed by physical energy infrastructure with regulated revenue streams and EU funding potential.

Electrification Program 2026–2030

Executive view for investors

1 MW pilot: ~0.6 M€/year net profit, payback ≈ 2.6 years. **50 MW roll-out:** ~32 M€/year net profit, payback ≈ 2.1 years, IRR ≈ 36–42 %.
The CRETE project thus offers **multi-MW scale, strong EBITDA margins and robust ESG credentials** – ideal for infrastructure, climate and impact investors.

Business Model & Why Crete

CRETE is the ideal testbed for CO_2-captured gas power: an island grid with high demand for secure supply, strong political support for decarbonisation and access to EU funding instruments.

Who we are

Provider of a modular energy platform combining:

- High-efficiency gas engines
- CRYOCCS cryogenic CO_2 capture
- LN_2 stabilisation and cold management
- Triple revenue: power, liquid CO_2, CO_2 certificates

Our three revenue pillars

- **1. Power sales:** 8,000 h/year, baseload for the island grid.
- **2. LCO_2 sales:** strong European demand, premium product.
- **3. CO_2 certificates:** every captured tonne has monetary value.

Advantage vs. classical gas plants

- Traditional plants **pay** for CO_2 – we **earn** from CO_2.
- They have one cashflow – we have **three**.
- They face rising ETS cost – we are ETS-positive.
- They have limited climate credentials – we are near-zero CO_2 at point of use.

Why Crete?

- Historically unstable grid and high production costs.
- Strong political support for clean, reliable island power.
- Gas access and logistics achievable at port nodes.
- Local demand for CO_2 (industry, agriculture, cooling).
- High eligibility for **EU Green Deal** and innovation funding.

Pilot first – then rapid scale-up

The 1 MW pilot requires < 2 M€ CAPEX, delivers real operating data and can be approved fast. Once demonstrated, the roll-out to 50 MW and beyond becomes a replicable playbook for other Greek islands and remote regions across Europe.

Discuss the CRETE Project with Us

We are currently structuring the pilot financing and EU funding applications for the CRETE project starting in 2026. If you are an infrastructure, climate or impact investor, we will gladly share the detailed model and technical dossier.

Please use our main contact form and mention **"CRETE Project – 50 MW"** in the subject.

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