

Market Insights:

*Affordable &
Clean Energy*

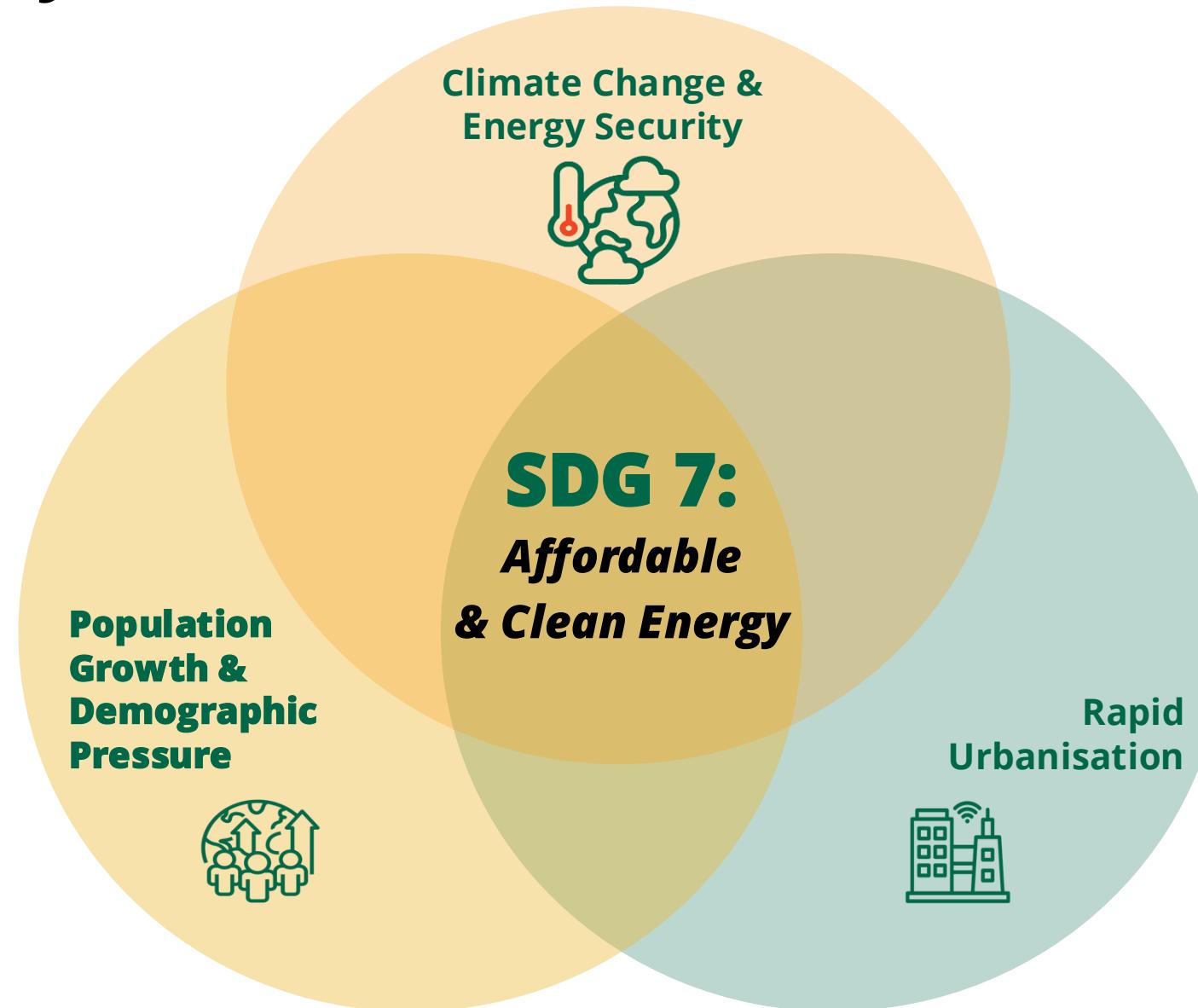
January 2026



Executive Summary

The global energy system is undergoing its fastest transformation in history as electrification, renewables, and efficiency become central to economic resilience and climate mitigation. SDG 7—Affordable and Clean Energy—captures the shift toward secure, low-carbon, and decentralised energy systems driven by policy targets, technological breakthroughs, and cost declines.

Key Macro Drivers



The Global Energy Crunch

- **685m** people still lack electricity access.
- $\frac{1}{3}$ of the world relies on unsafe or polluting cooking fuels.
- Electricity demand growth significantly outpacing population growth
- Ageing grids cause **~\$200bn/year** in losses.
- Energy volatility threatens economic stability.

Climate Change Is Amplifying the Risk

- More frequent heatwaves, cold spells, and storms threaten grid reliability.
- Rising temperatures drive cooling demand.
- Droughts reduce hydro output.
- Data centres, AI, and EVs add unprecedented load.

Regulation & Policy Acceleration

- **IRA (US)** unlocking massive investment in renewables, storage, and hydrogen.
- **Fit-for-55 & REPowerEU** accelerating decarbonisation and grid reform.
- **UK 2035** Clean Power target boosting investment in wind, storage, and SMRs.
- Global push for storage, energy efficiency, and renewable targets.

Sources: IEA, IRENA, IPCC, UN, World Bank

Market Overview

\$1.35tn
Global Clean Energy
Investment 2025
↑ ~8% YoY

\$2.0tn
Projected Annual
Investment by 2030
~12.0% CAGR

\$400.0bn
Grid & Storage
Investment 2035
~15% CAGR

Subsectors

Renewable Power Generation



Solar PV, wind, geothermal, hydro

Grid Infrastructure & Transmission



Smart grids, HVDC lines, grid strengthening

Energy Storage Technologies



Lithium-ion, long-duration storage, flow batteries

Distributed Energy & Microgrids



Rooftop solar, mini-grids, community energy systems

Hydrogen & Clean Fuels



Green hydrogen, electrolyzers, synthetic fuels

Energy Efficiency & Buildings Tech



Smart meters, heat pumps, BEMS, building optimisation

Digital Energy & AI Systems



Grid analytics, forecasting, digital twins, VPPs

Market Trends

Sustainability and Policy Tailwinds

- Global decarbonisation targets accelerating renewable deployment.
- Major policy packages (IRA, Fit-for-55, REPowerEU) supporting clean energy investment.
- Growing regulatory focus on energy efficiency, storage, and grid modernisation.

AI-Driven Predictive & Autonomous Ops

- AI enabling real-time grid optimisation, forecasting, and demand response.
- Virtual power plants (VPPs) aggregating distributed energy resources at scale.
- Digital twins improving reliability, outage prediction, and operational efficiency.

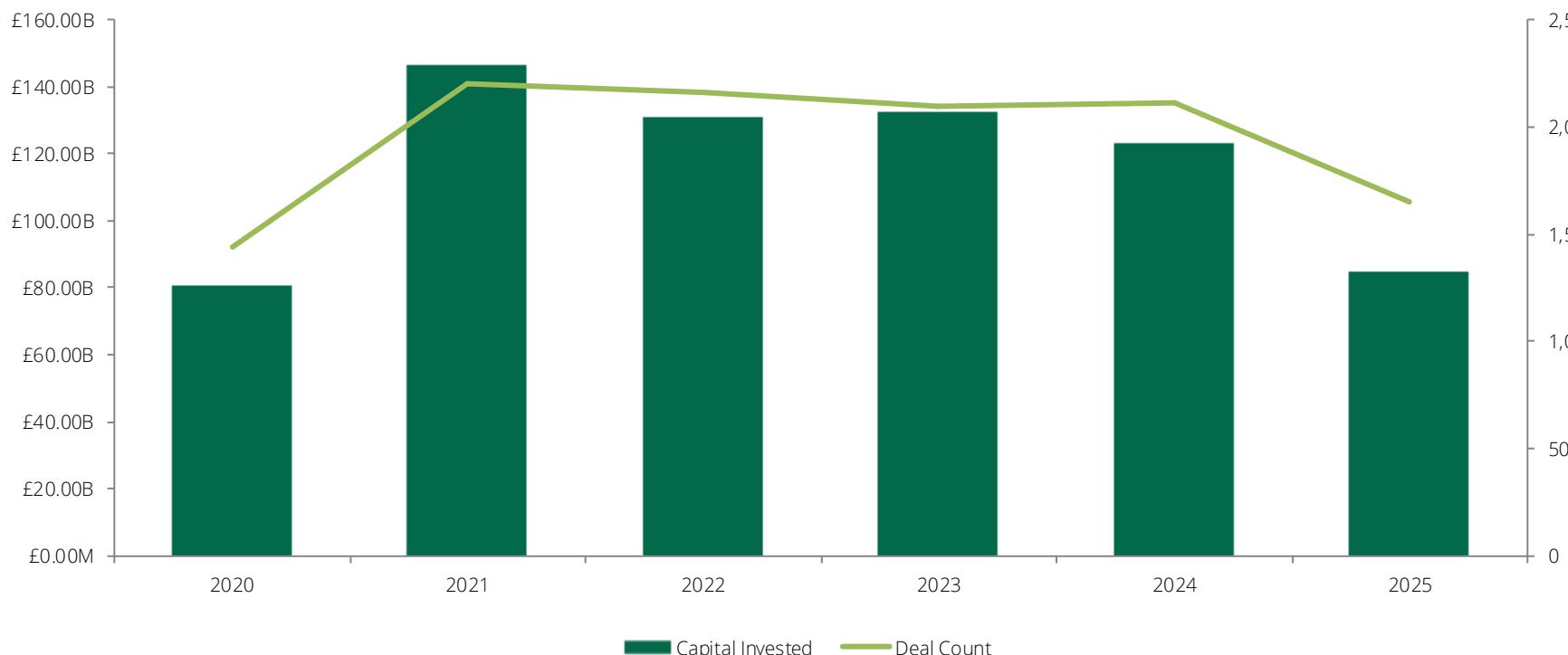
UK Industrial Strategy

- Governments prioritising domestic clean energy manufacturing and resilience.
- Large-scale commitments to offshore wind, solar, hydrogen, and storage.
- Major grid modernisation programmes launched across the UK, EU & US.

Landmark Transactions – M&A

| Target | Buyer | Date | Deal Value | Description |
|----------------------------|----------------------------------|------|------------|--|
| NEOEN (France) | Brookfield (Canada) | 2024 | ~£5.2bn | Brookfield's take-private acquisition of Neoen is one of the largest clean energy M&A transactions of 2024, consolidating a scaled global platform across wind, solar and battery storage. |
| VSB (Germany) | TotalEnergies (France) | 2024 | ~£1.3bn | TotalEnergies' acquisition of VSB strengthens its integrated power strategy through the purchase of a European renewable platform spanning wind, solar and storage. |
| good energy (UK) | esyasoft (UAE) | 2025 | ~£99.4M | The acquisition of Good Energy highlights strategic interest in customer-facing clean energy businesses combining renewable supply with energy services and digital capabilities. |

M&A and Buyouts



Active Buyers



A global energy and infrastructure operator actively acquiring renewable generation, flexibility assets, and energy-services platforms to support electrification and decarbonisation across key markets.



RWE is a leading European utility rapidly expanding in renewables. Its US\$6.8bn acquisition of Con Edison Clean Energy Businesses created RWE Clean Energy and almost doubled its US renewable portfolio, underlining its role as a major strategic buyer of wind and solar platforms.



An integrated energy major building a global electricity business through acquisitions of renewable generation, storage, and power platforms, supporting its transition toward a multi-energy model.



NextEra Energy and its affiliate NextEra Energy Partners are among the largest owners of wind and solar globally. Through recurring acquisitions of contracted renewables portfolios in North America, they have become key strategic buyers in utility-scale clean power and storage.



The renewables arm of EDF, scaling its wind, solar, and storage portfolio through platform acquisitions and development-led M&A across Europe and North America.

Landmark Transactions – Infrastructure

| Target | Buyer | Date | Deal Value | Description |
|--------------------------------------|-----------------------|------|------------|---|
| nationalgrid (UK) | MACQUARIE (Australia) | 2024 | ~£3.6bn | Macquarie's acquisition of National Grid's UK electricity distribution assets highlights strong investor demand for stable, regulated grid infrastructure supporting electrification and decarbonisation. |
| Ørsted (USA) | Brookfield (Canada) | 2024 | ~£2.3bn | Brookfield's acquisition of operational US wind and solar assets from Ørsted reflects continued capital rotation by developers and sustained appetite for large-scale, contracted renewable infrastructure in mature markets. |
| IBERDROLA MÉXICO Generación (Mexico) | COX energy (Spain) | 2025 | ~£4.5bn | Iberdrola's divestment of its Mexican generation infrastructure is one of the largest recent clean energy infrastructure transactions, reflecting ongoing consolidation and capital recycling in utility-scale power assets. |

Active Buyers



Brookfield Renewable is a leading global owner and operator of hydro, wind, solar and storage assets. Through a series of platform acquisitions in distributed generation and its majority stake in Westinghouse, it has become one of the most active consolidators in clean power and energy security globally.



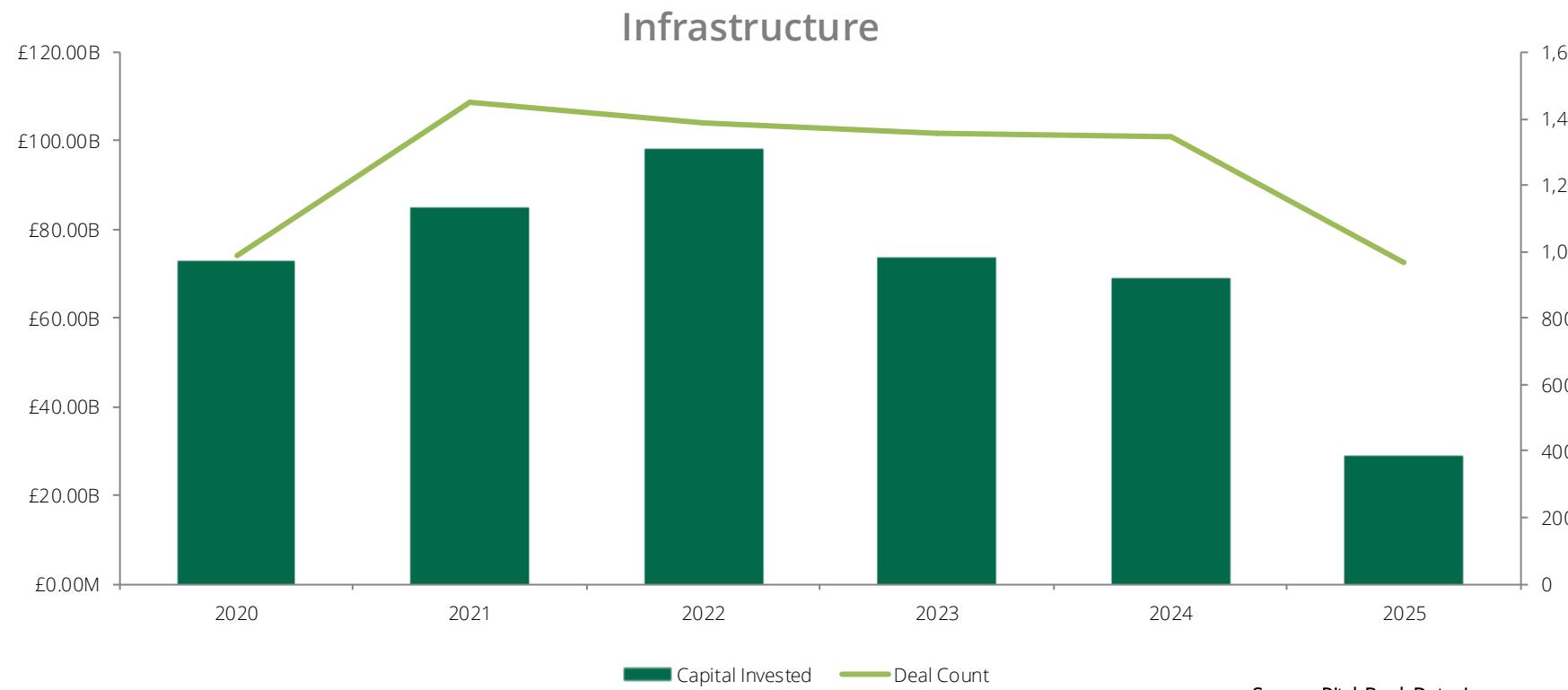
A specialist energy infrastructure investor focused on large-scale renewables, offshore wind, and Power-to-X assets. CIP manages multiple flagship funds dedicated to utility-scale energy transition infrastructure across Europe, North America, and APAC.



CPP Investments is an active global investor in energy transition infrastructure. The US\$6.1bn acquisition of Pattern Energy created a global renewables IPP platform, and CPP has since backed multi-GW pipelines including the landmark SunZia wind and transmission project.



A development finance institution supporting utility-scale renewable energy and grid infrastructure, particularly in emerging markets. IFC plays a catalytic role by crowding in private capital and de-risking clean-energy infrastructure investments.

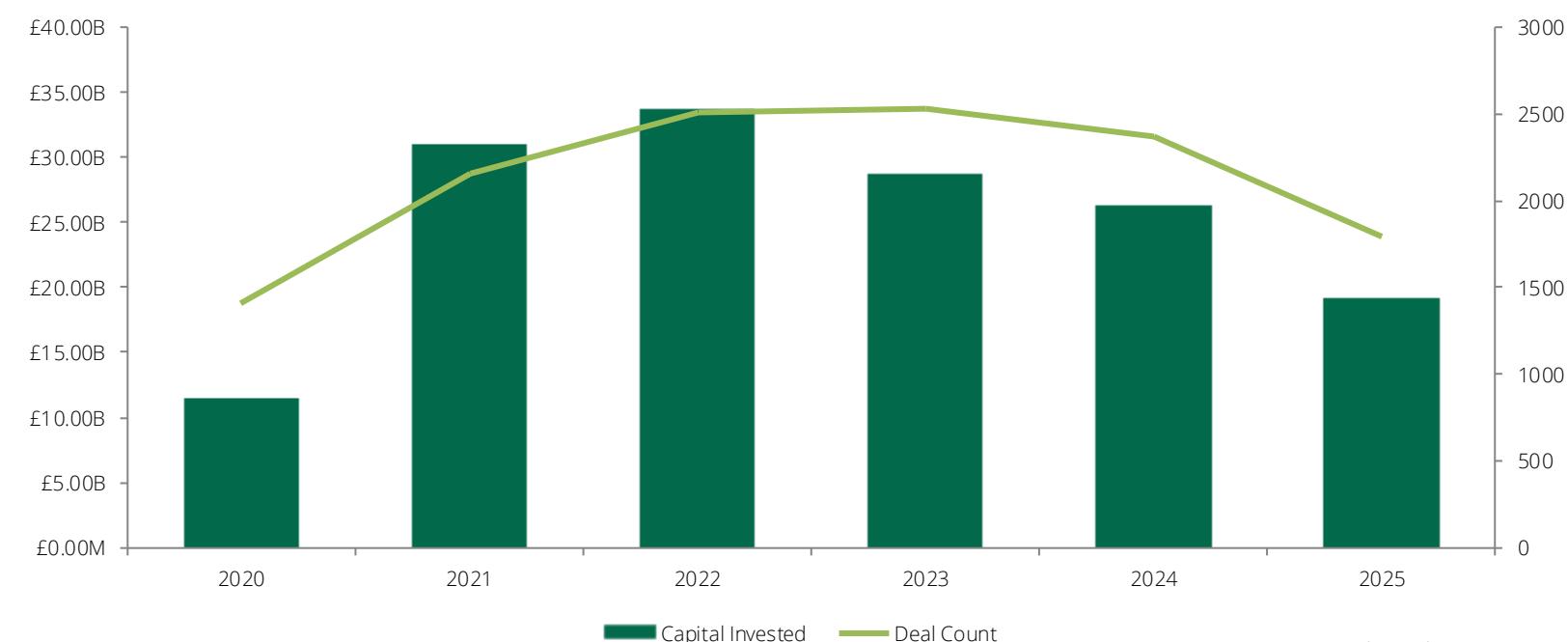


Landmark Transactions – VC & Growth Equity

Active Players

| Company | Stage | Date | Deal Value | Description |
|--|---------------|------|------------|--|
|  Fervo Energy (USA) | Series D | 2024 | ~£199mn | Next-gen geothermal developer; Series D led by Breakthrough Energy Ventures and Capricorn to scale 24/7 clean baseload power. |
|  Rondo (USA) | Series B | 2024 | ~£44mn | Zero-carbon heat battery provider; backed by Breakthrough Energy Ventures and Energy Impact Partners to electrify industrial heat. |
|  sunfire (Germany) | Series E | 2023 | ~£168mn | Industrial electrolyser manufacturer; Lightrock and Planet A funding to scale green hydrogen systems for heavy industry. |
|  octopusenergy (UK) | Growth Equity | 2023 | ~£625mn | Digital energy and flexibility platform; growth equity from Generation IM and Octopus Group to support global expansion. |

VC & Growth Equity



Source: PitchBook Data, Inc.



Breakthrough Energy is a global climate-focused investment platform backing breakthrough technologies across clean power, energy storage, hydrogen, grid infrastructure, and industrial decarbonisation. Supported by Bill Gates and leading global investors, the fund focuses on science-led solutions with the potential to deliver gigaton-scale emissions reductions.



Energy Impact Partners (EIP) is a strategic climate and energy transition investor backed by a global coalition of utilities and energy companies. EIP invests in software, digital grid technologies, electrification, and clean energy platforms that support utility modernisation, decarbonisation, and system resilience.



Antler is a global early-stage VC investing from day zero across climate, energy, deep tech, and software. The firm has backed founders in clean energy, grid digitalisation, industrial decarbonisation and battery innovation across 27 locations worldwide, supporting scalable solutions from inception to growth.



Lowercarbon Capital backs breakthrough climate technologies across energy, carbon removal, storage, materials and industrial decarbonisation. The firm has invested in high-impact energy startups such as Zeta, Fervo, and Rondo, focusing on solutions with gigaton-scale emissions reduction potential.



Plug and Play operates one of the world's largest innovation platforms, investing in and accelerating energy and sustainability startups globally. With dedicated programs for energy, hydrogen, storage, and smart cities, Plug and Play partners with utilities, OEMs, and industrials to scale emerging clean-energy technologies.

Buyer Landscape – Strategic and Infrastructure Buyers

Ideal Target Profile

Scalable & Defensible Business Model



- Proprietary clean-energy, storage, or grid-optimisation technology with proven performance across utility, commercial, or industrial settings.
- Addresses key challenges in energy security, decarbonisation, and system flexibility.

Repeatable Performance



- Generates predictable revenue through PPAs, long-term service agreements, subscriptions, or energy-as-a-service models.
- Offers SaaS-enabled grid management, forecasting, or optimisation tools that enhance reliability and reduce operational costs.
- Long-life, contracted or regulated cash flows suitable for infrastructure ownership.

Measurable Sustainability Impact



- Measurable emissions or efficiency improvements.
- Compliant with net-zero and clean-energy regulations.

What Buyers are Doing

Consolidation & Scaling

- Rolling up distributed solar, storage, and digital energy platforms.
- Building integrated clean-power portfolios combining generation, storage, and software.

ESG-Linked Value Creation

- Embedding decarbonisation, electrification, and circular-energy principles across portfolios.
- Targeting assets aligned with net-zero pathways and energy-transition tax incentives.

Operational Acceleration

- Investing in AI-enabled grid optimisation, predictive maintenance, and real-time monitoring.
- Using digital twins and VPPs to improve system flexibility and maximise distributed assets.

Buyer Profiles

Strategic Corporate Buyers

Large utilities and industrials expanding into clean generation, storage, and electrification solutions.



Sustainability & Impact Funds



Investors aligning energy strategy with net-zero, electrification, and energy-efficiency mandates.



Corporate Venture Capital

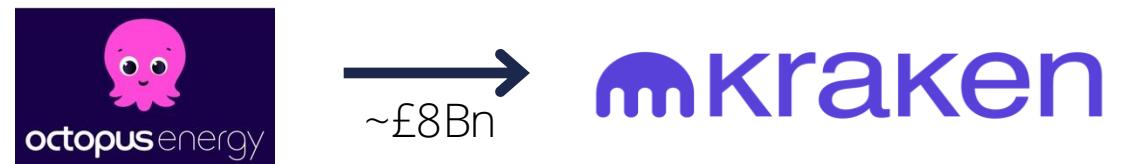


RWE's acquisition of Con Edison Clean Energy Businesses (2023)



This acquisition nearly doubled RWE's renewable capacity in the US to c.8GW and created RWE Clean Energy, one of the largest renewable power operators in the country.

Octopus Energy – Proposed spin-off of Kraken (expected 2026)



This proposed spin-off is expected to establish Kraken as a standalone global energy technology platform, enabling Octopus Energy to unlock value from its proprietary operating system while supporting Kraken's continued international expansion.

Fundraising Investment Landscape

Investor Appetite & Thesis

Infrastructure-Grade Assets

- Proven renewable power, storage, or grid-modernisation platforms with multi-sector applicability.
- Solves challenges in energy security, decarbonisation, and system resilience.

Technology-Enabled Solutions

- Digital and smart-grid tools using AI, IoT, and predictive analytics for forecasting, load balancing, and optimisation.
- Scalable, proprietary energy-efficiency, hydrogen, or storage technologies with strong IP and fast ROI.

Measurable Sustainability Impact

- Demonstrated emissions reduction, energy savings, or system-efficiency gains with measurable impact.
- Aligned with net-zero targets and emerging clean-energy and storage regulations.

Capital Deployment Strategies

Growth Equity & Late-Stage VC

- Backs commercial-stage clean energy and electrification technologies scaling across markets.
- Typical investment size: \$20m–\$150m for late-stage growth and industrial expansion.

Early-Stage VC

- Seed-Series A investments in high-impact energy innovations (storage, grid optimisation, clean fuels).
- Focus on breakthrough tech with 5–10 year commercialisation horizons.

Impact & Blended Finance

- Concessional or first-loss capital to de-risk clean-energy projects in emerging markets.
- Focus on distributed energy access, mini-grids, and climate-aligned infrastructure with measurable community impact.

Fund Profiles

Cleantech & Climate Funds

Technology-driven clean-energy, storage, and electrification investors.



Impact Funds

Investors backing energy access, sustainable infrastructure, and climate resilience.



Development Finance Institutions

Emerging-market energy access, storage, and grid-modernisation finance.



Temasek's Growth Funding in Form Energy (April 2024)

TEMASEK → £350mn



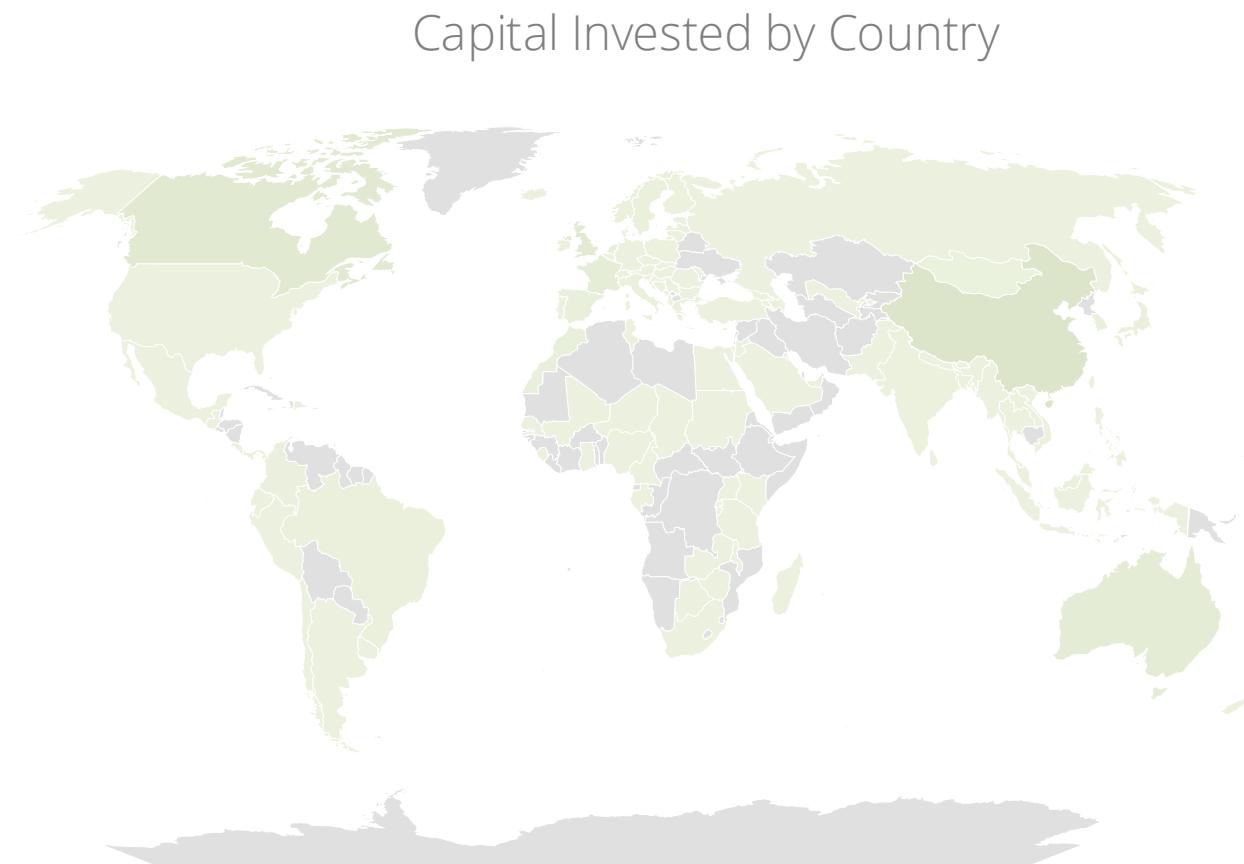
This investment accelerates Form Energy's commercial rollout of long-duration iron-air batteries, expanding US manufacturing capacity and supporting grid-scale storage for clean, firm power.

Hy24, Altair & GIC's Equity Raise in H2 Green Steel (September 2023)

HY24 → **ALTOR** → **GIC** → **H2 green steel** £1.25bn

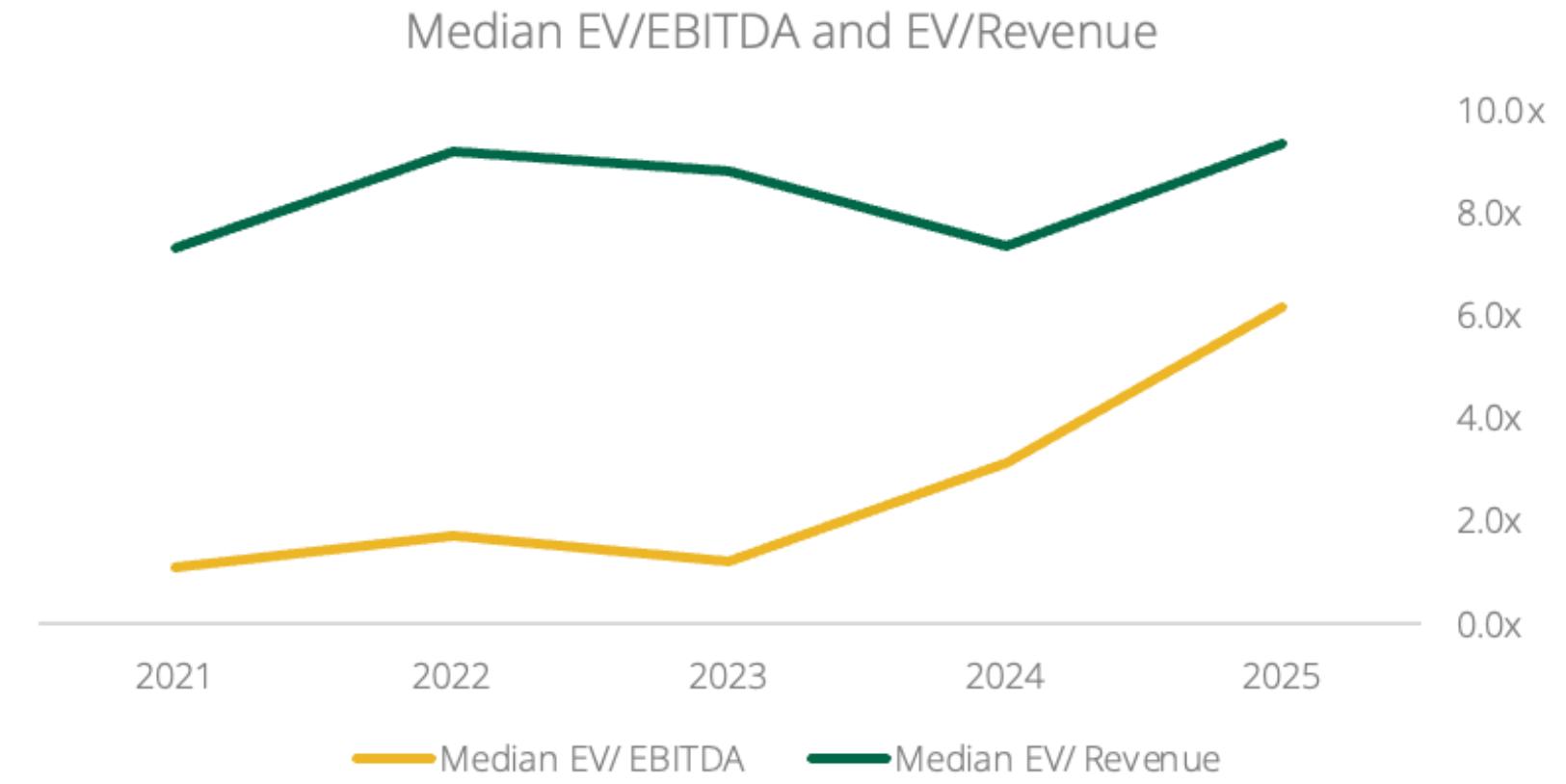
The round scales Europe's first large-scale green hydrogen-based steel plant, enabling deep industrial decarbonisation and driving demand for clean-energy inputs across the value chain.

Global Regions



Source: Pitchbook

Sector Valuations



Source: Pitchbook

Outlook

- The clean energy sector is entering a new phase driven by electrification, grid modernisation, and the scaling of renewables, storage, and digital energy technologies across global markets.
- Capital is increasingly concentrated in regions with strong policy support, mature capital markets, and accelerating deployment of renewable generation, grid infrastructure, and energy storage.

- Valuations reflect a post-2022 reset, with renewed investor focus on profitability, capital efficiency, and scalable business models across both infrastructure-led and technology-enabled energy platforms.
- Governments and regulators continue to accelerate energy transition agendas through incentives, grid reform, and net-zero commitments, supporting sustained investment and consolidation across the sector.



RESEARCH

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