

HydrogenOne Capital Growth plc (“HGEN”) – investing in clean hydrogen for a climate-positive impact. Article 9 Fund with an ESG policy integrated in investment decisions and asset monitoring.

Key highlights for the period

- Net Asset Value (“NAV”) per share of the Company 101.4 pence; broadly similar to 30 June 2023 (100.7 pence), and an increase of 5.1% since 30 September 2022. NAV per share includes 0.62 pence reduction for accrual of carry;
- Continued revenue growth delivery from private portfolio companies, delivering an aggregate £63 million in total revenue in the 12 months to September 2023, an increase of 174% compared to the 12 months to September 2022;
- The recent €45 million investment in Elcogen by HD Hyundai and €25 million “Important Projects of Common European Interest” (IPCEI) grant funding underscores HydrogenOne’s valuation and introduces a major industrial strategic investor;
- Sunfire awarded an industry-leading 100 MW electrolyser order, and €169 million IPCEI grant funding;
- Cranfield Aerospace announces a partnership with Dronamics, its second platform for hydrogen flight;
- HH2E and Gen2 Energy progress new hydrogen sales agreements in Germany; and
- Investments in the quarter totalling £1.6 million in two existing portfolio companies; cash and cash equivalents of £6.5 million, and £2.4 million of listed hydrogen companies at the end of the quarter.

Investment Adviser’s commentary on the quarter

The Investment Adviser continues to see significant deal flow for hydrogen supply chain companies and green hydrogen development projects, in response to climate change mitigation, improving air quality and energy security.

Policy makers around the world continue to provide supportive legislation and funding for clean hydrogen, alongside in excess of £8 billion of new capital committed this year by investors.

In the United States, the Biden Administration has detailed \$7 billion of funding for seven ‘hydrogen hubs’ across the country. The Company is seeing demand pull in its supply chain companies into the growing US market, for example in fuel cell and electrolyser suppliers.

The EU has implemented direct capex subsidies such as ‘IPCEI’, as well as support mechanisms that stimulate demand for clean hydrogen, and facilitate its production, such as GHG certificates to incentivise diesel replacement, mandates for renewable fuels, and pipeline and grid connections. Germany, where the Company has 25.6% of its NAV, is a leader in this, and has incorporated the RED III Delegated Act into national law and announced plans for more stringent measures to curb GHG emissions, including plans to blend hydrogen with the natural gas grid. EU clean hydrogen demand includes the transport sector and oil refineries, for example TotalEnergies’ recent call for tenders for 500,000 tonnes per year of green hydrogen for its EU refineries, to offset 5 million tonnes per annum of CO₂ by 2030.

In the United Kingdom, the Government’s decision to slow the pace of replacement of fossil fuels from transport is a set-back for the push to cleaner air and lower GHG emissions, where hydrogen could yet have a key role, in trucks and buses. At the same time, some 20 green hydrogen supply projects remain on the table for Government funding support, potentially by end-2023. Whilst the Company has 54.2% of its NAV invested in the UK, this is mostly invested in businesses that export to global markets, and are not reliant on UK customers.

At the end of September 2023, NAV per share of the Company was 101.4 pence, an increase of 0.7% compared to 30 June 2023 (0.72 pence per share). The increase in NAV was driven by improved valuations across a number of private assets.

Private valuations at the end of the quarter followed IPEV guidelines and used a 13.5% average discount rate, which reduced from 13.7% at second quarter 2023, adding 0.68 pence per share to the 30 September 2023 NAV.

The Company has invested in a diversified portfolio of hydrogen assets, delivering growth for investors across the portfolio. During the 12 months to 30 September 2023, private portfolio companies delivered an aggregate £63 million in revenue, a 174% increase compared to the period ending 30 September 2022, on a pro-forma basis.

We continue to work with our portfolio companies to ensure that these businesses attract high quality investors and have sufficient access to growth capital. During the quarter, the Company made a total of £1.6 million of follow-on investments, into Cranfield Aerospace Solutions Ltd and NanoSUN in the United Kingdom.

Portfolio news during the quarter



19.4%
of NAV

Sunfire GmbH, a leading German industrial electrolyser producer:

- Sunfire has secured a contract to supply a 100 MW pressurized alkaline electrolyser to a European refinery. The purchase order includes ten modules of Sunfire’s highly reliable pressurized alkaline electrolysis technology, each with a capacity of 10 MW, as well as the power supply units. Sunfire will be responsible for supervising the subsequent installation and commissioning of the system, which is due to commence operation in early 2026. This marks Sunfire’s entry into the large-scale electrolysis sector;
- Sunfire received a €169 million grant from IPCEI to support its growth plans. Sunfire is investing in total some around €400 million to establish industrial series production of its technologies, and validating them in Saxony and North Rhine-Westphalia, aiming for GW scale over time; and
- After the end of the quarter, the GET H2 TransHyDE joint project, based in Lingen achieved first hydrogen production, on the site of the RWE gas-fired power plant in Emsland (KEM) using a high-temperature 250 KW solid oxide electrolyser (“SOEC”) from Sunfire.



17.1%
of NAV

Elcogen, a leading innovator and supplier of solid oxide fuel cell and electrolyser components:

- Elcogen was awarded funding from IPCEI for a €25.4 million project to accelerate the deployment of its solid oxide technology, to enable affordable green hydrogen production in Europe; and
- After the end of the quarter, Korea Shipbuilding & Offshore Engineering, a member of HD Hyundai Group, invested €45 million in Elcogen. This investment will be used to expand Elcogen’s manufacturing capacity, with the company’s new factory facility in Tallinn, Estonia, due to begin construction shortly. This facility should add manufacturing capacity of up to 360 MW to meet increasing demand for Elcogen’s products, with 100 MW capacity planned for Phase 1. The investment by HD Hyundai underscores both the Company’s strategy of backing the leading innovators in the hydrogen industry, and its valuation of Elcogen. Following this investment, HD Hyundai and Elcogen intend to further strengthen their collaboration with a focus on marine propulsion systems and stationary power generation, based on Elcogen’s proprietary solid oxide fuel cell technology, with the intent to manufacture products in South Korea.



15.1%
of NAV

Stroh Holding B.V., a Netherlands-based hydrogen pipeline company:

- Stroh successfully installed its first deep-water / high pressure thermoplastic composite pipe (“TCP”) jumper in Guyana at water depths of 1,700m. TCP offers significant greenhouse gas emissions savings compared to traditional solutions, and has significant growth prospects in transporting offshore hydrogen and CO₂.



9.1%
of NAV

Cranfield Aerospace Solutions Ltd (“CAeS”), a UK hydrogen flight innovator:

- CAeS unveiled its newly refurbished hangar and R&D facility for the development of zero emissions aircraft. The facility, leased by CAeS, has undergone major refurbishments as part of Cranfield University’s decarbonisation plan, with significant investment into reducing the building’s carbon footprint;
- CAeS announced a three-party agreement with MONTE Aircraft Leasing (MONTE) and Australian air charter company Torres Strait Air to convert up to ten Britten-Norman Islander aircraft to hydrogen-electric power;
- CAeS has adjusted its strategy, and intends to deploy its innovative hydrogen flight technology across multiple platforms, and at the same time to develop further IP in hydrogen powered flight. The previously-announced plan to merge CAeS and Britten-Norman has been replaced with the intent to further strengthen the strategic co-operation between these two separate parties; and
- After the end of the quarter, CAeS and Dronamics announced a Memorandum of Understanding to further progress the application of the CAeS’s hydrogen-electric propulsion system to the Dronamics Black Swan cargo drone aircraft. This agreement confirms the position of CAeS as the preferred supplier of HFC propulsion systems to Dronamics and includes a letter of intent for the supply of a substantial number of propulsion systems from 2026. This opens a new route to market for its hydrogen-electric propulsion system, alongside existing arrangements with Britten-Norman.



6.5%
of NAV

Bramble Energy is a UK-based fuel cell and portable power solutions company:

- Bramble announced the opening of its new state-of-the-art headquarters in Crawley, West Sussex. The expansive new facility, which includes a world-leading hydrogen innovation and development hub, and builds on the company’s strong growth since launching in 2016.



3.4%
of NAV

HH2E is a green hydrogen project developer with a focus on industrial customers in Germany. HH2E is the operator of the Thierbach green hydrogen development project, in which HGEN has a direct investment (1.4% of NAV):

- HH2E has placed an order with BASF Stationary Energy Storage GmbH (BSES) for 93 MWh of high-capacity Sodium Sulphur batteries (NAS⁺ Batteries). Additionally, HH2E has reserved production capacity for a further 140 MWh of these batteries;
- DHL Group, HH2E, and Sasol announced plans to collaborate to “Propel Germany as a Leader in Decarbonized Aviation”. The intent is for the production of sustainable aviation fuels in Germany, using HH2E-supplied green hydrogen, for an initial capacity of 200,000 tonnes per annum, with potential to scale up to 500,000 tonnes per annum; and
- After the end of the quarter, HH2E announced plans for a supply agreement for green hydrogen with Germany hydrogen refuelling leader H2 Mobility, aimed at the transport sector.



3.0%
of NAV

Gen2 Energy is a Norwegian green hydrogen project developer:

- Gen2 Energy received a general building permit from Vefsn municipality for its proposed hydrogen plant in Mosjøen, Norway and for the associated administrative building. The Nesbruket-1 plant, at this site, is targeting final investment decision in 2024 for a 120 MW green hydrogen facility; and
- After the end of the quarter, Gen2 Energy and SEFE Securing Energy for Europe (“SEFE”), via its subsidiary WINGAS GmbH, signed a Transaction Term Sheet for the delivery of green hydrogen. This defines the terms and conditions for a final Sales and Purchasing Agreement and represents a major step to realize the import of green hydrogen from Norway to Germany.

Key statistics as at 30 September 2023 (unaudited)

Sector	Renewable Energy Infrastructure
Net asset value (NAV)	£130.6m
NAV per share	101.4p
Share price	55.30p
Premium / Discount to NAV	(45.5)%
3-month NAV return	0.7%
Market capitalisation	£71.2m
Capital deployed in low-carbon growth	£112.7m
Number of shares in issue	128,819,999

Investment Adviser

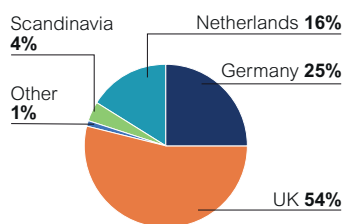


Dr JJ Traynor, Managing Partner
Former senior executive at Shell, BP and Deutsche Bank

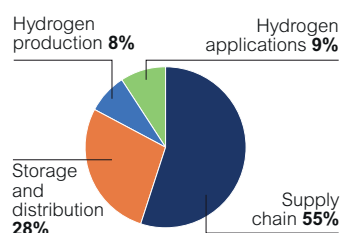


Richard Hulf, Managing Partner
Former Fund Manager at Artemis; senior executive at EY and Exxon

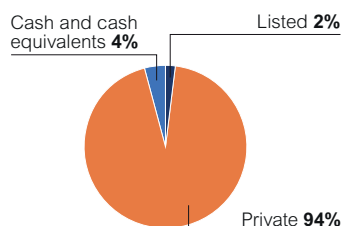
Portfolio segmentation by geography



Portfolio segmentation by theme



Portfolio segmentation by asset class



Note: the charts above show fund portfolio at 30 September 2023. Private Hydrogen Assets are valued in accordance with the valuation methodology at each period end.

Private investments % of NAV

1. Sunfire GmbH <i>Supply Chain (Electrolysers)</i>	19.4%
2. Elcogen Plc <i>Supply Chain (Fuel cells)</i>	17.1%
3. Strohm Holding B.V. <i>Storage & Distribution (Supply services)</i>	15.1%
4. NanoSUN Limited <i>Storage & Distribution (Supply services)</i>	10.5%
5. Cranfield Aerospace Solutions Ltd <i>Hydrogen Applications (Aircraft manufacturer)</i>	9.1%
6. HiiROC Ltd <i>Supply Chain (Electrolysers)</i>	8.5%
7. Bramble <i>Supply Chain (Portable power units)</i>	6.5%
8. HH2E <i>Hydrogen Production (German project developer)</i>	3.4%
9. G2E <i>Hydrogen Production (Norway project developer)</i>	3.0%
10. HH2E Thierbach Phase 1 Project <i>Private Hydrogen Project (Germany)</i>	1.4%

Company information

Listing

London Stock Exchange (ticker: HGEN)

IPO date

30 July 2021

ISIN

GB00BL6K7L04

SEDOL

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Year end

31 December

Release of Annual Report

April

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Barclays Bank PLC

Alternative Investment Fund Manager ("AIFM")

FundRock Management Company (Guernsey) Limited

Public Relations

Buchanan

How to invest

HGEN shares can be traded through any UK stockbroker and most share dealing services, including online platforms that offer investment trusts.

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Investment objective and ESG commitment

- Through investing, directly or indirectly, in a diversified portfolio of hydrogen and complementary hydrogen focused assets, HGEN contributes to climate change mitigation and integrates core ESG principles into its decision making and ownership process;
- At least 90% of the fund will be invested in private equity over time, with the remainder in a focused portfolio of listed hydrogen companies; and
- Strongly orientated to ESG mandates, enabling the avoidance of GHG emissions and exclusion of fossil fuels producers, HGEN is targeting total NAV return of 10-15% per year over time, including proceeds from portfolio divestments*.



* For an investor in HGEN at IPO. The total NAV return target is a target only and not a profit forecast.

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