

Welcome to CONNECT22

Since our first Awards event in 2009, Connect has been a way for us to provide a platform for CEOs in sustainability to come together, exchange ideas, and meet new and old acquaintances from the investment community.

The variety of technologies is growing rapidly as is the amount of capital earmarked for sustainability goals. The quality of the companies and the expertise of investors has also risen dramatically since 2009 and is evidenced by the multitude of exits and increase in valuations in the last several years.

We are honoured to have so many of you with us to celebrate the successes of our industry. Long may it continue!

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Andre Shortell

Graeme Bayley

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brownrudnick







HEIDRICK & STRUGGLES

Nagami

Zaha Hadid Architects



18:45 Reception

19:30 Welcome

19:40 Keynote

20:00 Dinner

21:15 *Awards*

22:00 Networking

22:30 Carriages

PANTOKRATOR

clients



PANTOKRATOR

team



Graeme Bayley



Andre Shortell



Andrea Campion



Chris Parsons



Christian Lagerling



Alex Moody



Victor Ghitescu



Louis Barrowcliff



Carrie Rowney-Pratt



Brandon Zhanda



Since our last Connect Awards event, in 2019 we successfully spun out as an independent business to create a financial advisory service solely dedicated to companies in Sustainability. We have been active in the Sustainability space since 2009 and are as excited today as we were then to be serving this rapidly evolving sector. We are now 10 professionals, based in London, and continue to grow alongside our clients.

Hosting Connect has been a core part of our strategy to be a catalyst for positive development in the sector at large. Connect this year has been made all the more possible by the valued contribution of our esteemed Judges. Championing high potential companies, making introductions, being the protagonist or idea generator and bringing together thought leaders we see as fundamental to growing our own business in corporate finance and that of our clients and the wider community.

The focus now includes AgTech, Circularity, E-mobility, Enertech and H2/Long duration energy storage (LDES), a clear indication that **the world of sustainable technologies has broadened to include most aspects of our lives.** There are now several thousand companies rather than barely 100. This is very evident in the piece written by Richard Youngman of the Cleantech Group.

We already have many of the technologies required to achieve a good portion of our net zero carbon goals. What we need is to scale these solutions to an industrial and global level. The incumbents need to deploy these technologies, or new leaders will overtake them. In the US the boost from the **Inflation Reduction Act will assist companies in Europe.** This is very clear from the message from Jigar Shah, who was a previous keynote speaker and Judge at Connect and is now the Director of the US Department of Energy Loan Programs Office. We need to work to ensure that this impact is positive for European businesses.

In the past three years we have witnessed a building interest in H2 as a critical link forward to decarbonising industrial processes and energy storage. **We are seeing the vital need for establishing long duration energy storage (LDES)** on a multi terawatt hour scale as renewables become a 50%+ contributor to the grid. The solutions are many, and many may succeed, and we need them to, as the market is vast and fast approaching. Some of the tech is ready but much is still in development. Julia Souder, Executive Director of the LDES Council, is a Judge for Connect22 and has shared with us the work that they are doing.

The impending recession is creating headwinds. It is acknowledged that investing to achieve net zero will cost less than the cost of doing nothing and will provide attractive returns. The compelling propositions of the technologies and businesses represented here present a great opportunity for growth. They also represent the start of the greatest transfers of wealth creation ever seen.

To make this happen, it will be down to the quality of the C-suites that the companies have and can attract. We are seeing new leaders enter the space, not only because it contributes to a better environment but because of the promise of better business prospects. At the end of the day, it's the quality of the human talent that will make the change happen and in a way that is enduring. Another of our Judges, Claire Skinner from Heidrick and Struggles, has shared her valuable insights with us.

In 2021, we bid farewell to a very dear friend and long-time supporter of Connect, Ian Jenkins who many of you know. He was a pioneer in the space and will be remembered for his unwavering dedication and contribution.

Change is coming. It will come more rapidly than many of us expect. Several of our previous awards winners have already reached the billionaire status, and we believe we will see many more. Some of whom are here at Connect22.

Thank you

Andre and Graeme November 2022







Marion Bernard



Tyler Christie

BlackRock.



Neil Foster

brownrudnick







Michael O'Neill









Patrick Schumacher Zaha Hadid Architects

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CONNECT22 judges



Nilay Shah Imperial College London



Patrick Sheehan





Andre Shortell

PANTOKRATOR



Claire Skinner

HEIDRICK & STRUGGLES















CONNECT22 awards

Innovation in: Agtech, Circularity, E-mobility, Enertech, H2 & LDES

Fastest Growing Larger Company Fastest Growing Smaller Company One to Watch Deal of the Year Outstanding Leadership Judges' Award





CONNECT22 finalists





Andre Shortell is Co-founder of Pantokrator and has focused on Sustainability since 2007. Andre also spent 25 years at Citibank in roles including Head of Autos, MD of India and CEEMEA, New Issues Head for Fixed Income and CEO of Merchant Acquiring. He chose the name Pantokrator from a family property in Greece and also meaning the holding and maintaining of our creation. He is dedicated to supporting those entrepreneurs that improve the quality of our lives and that of our planet.



Andrea has been a part of Pantokrator since September 2020, where she has led the marketing and branding efforts following the business' successful spin-out in January 2020. Prior to this she focussed her career on the fine arts and charity sectors, with an emphasis on event planning and fundraising, organising and overseeing key functions across both sectors. In 2018 Andrea gained an MSc from the LSE's acclaimed Cities Programme, where her research specialised in community-minded urban and environmental design. Andrea recently relocated to West Dorset, a move which reflects her burgeoning interests in environmentally-conscious living and organic permaculture.



Gillian Harrison

Gillian Harrison has been CEO of Whitefox Technologies since 2009, having joined Whitefox in 2007 as Head of South American Business Development as well as General Counsel.

Under Gillian's leadership, Whitefox has become an industry-leading membrane solution business for the biofuels sector. She successfully led Whitefox's market entry strategy into the US ethanol production market and has built the team and expertise to enable it to create new ground-breaking solutions to further improve the overall efficiency and carbon footprint of ethanol and other industrial processes.

Before joining Whitefox, Gillian spent 10 years at global law firm Clifford Chance, where she had a successful legal career working in their London, Madrid and Sao Paulo offices. Gillian gained a broad experience in large scale oil & gas projects, international corporate finance, restructuring and M&A, often leading high-pressure, multi-jurisdictional transactions.





E-mobility



PANTOKRATOR research

Hydrogen



Circularity



Looking Back, Looking Ahead: so much progress, yet so much more to make

Richard Youngman

The cleantech innovation theme has never been in better shape in its twenty-year journey since Cleantech Group coined that term in 2002.

Step back and consider the big shifts that have occurred since in the last 5 years. The bench-strength, quality and variety of the entrepreneurial cadre in global cleantech innovation today has moved up many gears. Solutions are increasingly coming from everywhere; we live in a multi-polar innovation world, not one in which all the big players are coming from one strip of California.

The interest and availability of capital to fund climate-related solutions and solutions of impact has markedly changed (especially over the last 2-3 years) – evident at the venture innovation level but also in the 82 cleantech-relevant companies who have gone public via SPACs over the last two years.

Both of the above shifts can be seen in the numbers - the increase in deal numbers and dollars deployed, as per figure 1, and the fact that North America's share of the global deal count has fallen below 50% and continues to fall, as per figure 2. More than just the numbers, the portfolio has diversified and is now representing the full spectrum of what was imagined when the cleantech term was first given a taxonomy in 2003 - from Ag and Food to Transport and Logistics, from Water to Waste. Energy was only ever a minority part of the overall problem-set that needed decarbonizing.

And within the overall portfolio, we have made a massive shift from an over-dominance of capital-light, software-related solutions getting funding in the 2010s to now, a time where the greater increases are coming from some of the hardest to abate areas - alternative proteins, carbon capture, green steel, lower carbon cement, aviation and shipping fuels, for example. Associated to that has been the emergence of a nascent carbon economy where GHG emissions are a key unit of measurement, albeit we have so far to go, to do that in a credible and trusted fashion. Such will be needed for the full net zero transformation to take place.

There is majority and active support in the global population for the idea that the climate crisis is not only real, but is upon us; and for acting upon it. The US Congress has passed some key legislation, large enough to begin the enormous scaling of existing technologies that needs to take place in the 2020s, and large enough to prompt other economies to now be concerned about their 2030 competitiveness in the industries of the future. In short, we have moved in the six years since the last Connect event from a time in which the innovation community hoped it could find solutions to the full problem-set to one where there are actual and credible innovation pathways to solve all the challenges, albeit plenty of those are still more at the lab stage than ready for mass deployment.

Our ability to develop technology and innovation responses and grow entrepreneurial companies to provide the solutions no longer feels like a limiter. The inconvenient part of the equation is that will not be enough, and no one can do this alone. Not enough else has happened in those six years for us to feel we are in anyway yet "on track".

Yes, corporates have made net zero pledges (but only a small minority in global terms) and many governments have set 2050 net zero targets. But with Climate Action Tracker it is clear that, even if all the pledges made to date were delivered, we'd still end well above 2 degrees warmer than pre-industrial times, and all the chaotic destruction that would cause.

Innovation is needed now, everywhere and in everything, especially of the non-technological variety. Speed of decisionmaking and risk management responses in changing the tool-kit and the governance structures, in policy-making, in boardrooms, and in investment and credit committees is needed to be enablers of a journey to net zero together.

Figure 1



Global Venture and Growth Capital Investment in Cleantech – 2017-2022 (ytd)

Source: Cleantech Group, Quarterly Investment Insights





Global Venture and Growth Capital Investment in Cleantech – geographical share, by number of deals, 2017-2022 (ytd)



Meantime, we will have to continue to innovate, operate and make dramatic progress through what is certain to be a very messy few years coming up, a messy period in which geopolitics will be sensitized by repairing Covid-ravaged economies and weening economies off 10+ years of historically unprecedented low interest rates, present near-term headwinds for sure.

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Activism will only be disappointed and further enraged by the near-term metrics (which will not show the progress needed). Expect legal action and civil disobedience to increase, pressure on companies' licences to operate, and on governments to deliver. The need for adaptation solutions to live with the warming climate will grow. Attention and capital will start to flow in increasing numbers to such, while we will still have to progress and scale the mitigation portfolio at unprecedented speed. This is not a doom and gloom message but a rallying cry versus the realities we face. The innovation community has made great strides, so much progress has been made, but so much more has to be made too.

The time is now for hyper-focus on treating the problem with the intensity and urgency it requires, and for hyper-collaboration between groups not used to working together, to achieve that. The innovators and entrepreneurs stand ready to deliver in such an environment.



Richard Youngman CEO, Cleantech group



PANTOKRATOR alignment

Our clients address 12 of the 17 UN Sustainable Development Goals





Jigar Shah

Jigar Shah is the director of the U.S. Department of Energy Loan Programs Office. He gained prominence as an American clean energy entrepreneur, author, and podcast host. Shah is known for working to create market-driven solutions to climate change. He most recently served as president of Generate Capital, where he focused on helping entrepreneurs to accelerate decarbonization solutions through the use of low-cost infrastructure-as-a service financing.

Real barriers to virtual power plants Jigar Shah

In recent decades, the United States has made unprecedented technical advancements in a broad array of clean energy solutions with the potential to decarbonize the grid while making it more equitable and resilient. We now find ourselves in a new stage of the clean energy revolution and on the cusp of a dramatic transformation of the electricity sector.

The speed at which this transformation occurs will be determined not by the pace of technical innovation, but by the availability of debt financing for unfamiliar technologies and the ability of innovative grid-scale solutions to tap into viable business models. This is particularly true for virtual power plants (VPPs). As we view it at the US Department of Energy's Loan Programs Office (LPO), a VPP is a virtual aggregation of distributed energy resources (DERs) like PV, energy storage, EV chargers and demand-responsive devices (such as water heaters, thermostats, and appliances). VPPs do more than provide decarbonization and grid services – they increasingly give grid operators a large-scale and utility-grade alternative to new generation and system buildout through automated efficiency, capacity support, and non-wire alternatives. By deploying grid assets more efficiently, an aggregation of distributed resources lowers the cost of power for everybody, especially VPP participants.

In September 2020, FERC Order 2222 opened the door for VPPs in the United States. Nearly two years later, VPPs are just beginning to compete in organized capacity, energy, and ancillary services markets at a meaningful scale at the regional level. To truly unlock VPPs' potential, wide reaching deployment at the national scale is needed. At the state and retail level, utilities have an important role to play in scaling up DER integration and automated demand response. Equally important will be the ability of VPP aggregators to secure revenue contracts that can underpin a successful business endeavor.

To unleash the capital that makes ratepayer and wholesale power cost reductions possible, incumbent financiers need to see lower customer acquisition costs and consistent revenues for the critical services provided. These and other challenges are far from intractable, and well-worth the cascade of benefits we expect to unlock if we come together to solve them.Consumer advocates, local government, established utilities, and other partners that have earned the public's trust across income strata can be important allies for aggregators looking to lower customer acquisition costs. Separately, open-source standards and packages like OpenADR, EcoPort, or other measures that enable intersystem transferability will be important tools to empower consumers by enabling them to switch aggregators.

As director of LPO, I lead the provision of public debt capital for technology projects in the US that are large-scale, innovative, and clean when private lenders cannot or will not lean in. Bridging this gap while protecting the taxpayer interest is a challenge only surmountable with vast expertise across financial, technical, utility, and clean energy fields that comes together at a place like the Department of Energy. From this vantage point, my goal is to educate the audience on the essential nature of VPPs - there is simply no other cost-effective way to integrate electric vehicles and heat pumps at scale.

In pursuit of this educational role, I have surveyed the technical components of VPPs – from hard assets like PV, energy storage, and grid-interactive efficient buildings and appliances, to the core role of the software and control applications. I have looked at the importance of interoperability between VPPs and existing grid control systems, but also among software and the diversely sourced hardware of a VPP itself. One conclusion I have reached is that the technology has been available for decades but integrating and compensating these technologies remains elusive within utility planning.

To explore these challenges further, I will be looking at VPPs with a fresh lens. I'll sit down with guests from around the US with real-world VPP experience as customers, operators, and regulators. We'll talk about the benefits of VPPs in terms of resilience, equity, and decarbonization - as well as the growing pains they've witnessed as pioneers. We'll look at what's working, what needs improvement, and how we can help one another to realize the benefits of the technology's progress.



LDES Council: A Catalyst

Julia Souder

The LDES Council brings together leading long duration energy storage (LDES) technology innovators, energy users and investors from around the world who have the common mission of accelerating the deployment of LDES solutions in support of a net-zero carbon power system.

The Council provides fact-based guidance to governments, grid operators and major electricity users to support the most cost-effective adoption of long duration energy storage to replace the use of fossil fuels.

LDES is an essential technology to enable renewable energy to power our grids, provide clean heat and accelerate carbon neutrality. It enables surplus energy to be stored from wind, solar and other clean sources to be available when needed. Through LDES we can transition towards renewable energy in an affordable, reliable, and sustainable way. Wind, solar and other renewables have become the lowest cost forms of generation but need long duration energy storage to match supply with demand.



Current Membership of the LDES Council

Consumer demand means that peaks in the morning and evening need to be met by extra supply. Today we meet the imbalance in supply and demand by burning fossil fuels; tomorrow we must use flexible LDES to ensure that we can reach our net-zero grid by 2040.

According to research conducted by The LDES Council in collaboration with McKinsey & Co, to achieve net carbon neutrality, the world's electricity grids will need to deploy 85-140 TWh of long duration energy storage by 2040 with an investment of USD 1.5 to 3 trillion. LDES technologies are currently available on the market and are ready to support our grid make this transition. However, the current regulatory system, and hence market, does not sufficiently support the uptake of LDES technologies.

The Council is a global, executive-led organization that strives to accelerate decarbonization of the energy system at lowest cost to society by driving innovation and deployment of LDES and comprises over 61 companies in 19 countries, with 60% of those members located in Europe. Our members include leading technology providers, industry and services customers, capital providers, equipment manufacturers, low-carbon energy system integrators and developers. The Council covers a wide range of LDES technologies, and its members span a wide spectrum of innovation, including mechanical, thermal, electrochemical and chemical solutions.

Energy storage form	Technology	Market readiness	Max deployment size, MW	Max nominal duration, Hours	Average RTE ¹ %
Mechanical	Novel pumped hydro (PSH)	Commercial	10–100	0–15	50-80
	Gravity-based	Pilot	20–1,000	0–15	70–90
	Compressed air (CAES)	Commercial	200–500	6–24	40–70
	Liquid air (LAES)	Pilot (commercial announced)	50-100	10–25	40–70
	Liquid CO ₂	Pilot	10–500	4–24	70–80
Thermal	Sensible heat (eg, molten salts, rock material, concrete)	R&D/pilot	10–500	200	55–90
	Latent heat (eg, aluminum alloy)	Commercial	10–100	25–100	20–50
	Thermochemical heat (eg, zeolites, silica gel)	R&D	na	na	na
Chemical	Power-to-gas-(incl. hydrogen, syngas)-to-power	Pilot (commercial announced)	10–100	500-1,000	40–70
Electrochemical	Aqueous electrolyte flow batteries	Pilot/commercial	10–100	25–100	50-80
	Metal anode batteries	R&D/pilot	10–100	50–200	40–70
	Hybrid flow battery, with liquid electrolyte and metal anode	Commercial	>100	25–50	55–75

Key LDES storage types and parameters

1. Power-to-power only. RTEs of systems discharging other forms of energies such as heat can be significantly higher.

The Council focuses on fact-based research, building global partnerships, and establishing one voice for the LDES industry. The Council's industry experts provide guidance to governments and grid operators in the deployment of LDES to help achieve Net-Zero in the electricity system by 2040, as requirement that has been outlined by the International Energy Agency (IEA).

LDES provides system flexibility-the ability to absorb and manage fluctuations in demand and supply by storing energy at times of surplus and releasing it when needed.



Julia Souder

Executive Director, LDES Council



LFP	LithiumWerks New Grange, New World		Iron		Form
Thermal		MALTA		RONDO	Bromine @ elestor
Nickel		SAFT	Calcium PAmi	bri een evergy	Manganese ⊕∋ RFCPOWER
Mechani			avitricity gree	enko	Highview Power* Storejectric
Sodium	ENLIGHTEN	f. far	adion 🚯 L	i Na Energy	Natron Energy
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			Duration		

LDES Technology Duration Landscape

Duration (4-100 hours)

LDES technology developments



Indicative Time to Multi-MW Commercialisation

ESG through leadership and talent *Claire Skinner*

At last, a groundswell of people across the world are waking up to the climate emergency, and our political leaders, investors, CEOs and corporate boards are recognising the need to accelerate global decarbonisation. In a survey of board members conducted by Heidrick & Struggles and the INSEAD Corporate Governance Centre before COP26, 60% said their board was very or entirely aligned on the importance of climate change and what to do about it, while 72% were confident their company would reach their climate change goals.

The pressing requirement to generate solutions that address the climate crisis is reflected in initiatives such as Connect22, and its celebration of innovation within the European sustainability sector. Heidrick & Struggles is delighted to be part of the Connect22 Awards, and we are both inspired and excited by the calibre and capability of the nominees. Their achievements come at a critical time, when governments and businesses are reaching out for the solutions to deliver on ambitious net-zero goals.

But despite our research showing climate change is a firm fixture on board agendas, it also revealed a worrying disconnect between intention and action. Nearly half (43%) of respondents said their companies did not yet have clear targets for reducing carbon emissions - or didn't know if they did. And 49% said that climate change was not at all or only slightly integrated into the company's investment decisions. Never has the need been greater for the talent of the sustainability sector to stand up and show other businesses what is possible when they embrace low-carbon, sustainable business models.

I have had the privilege of advising clients on decarbonisation and sustainability for over 20 years, and I believe passionately that our industry has an unprecedented opportunity to make an impact on the way business is done. Our time has come, but we must not be complacent – at the very point where momentum should be building in the battle to slow climate change, external factors are holding businesses back. I hear worrying reports that some companies are using the current global economic turbulence to tone down their climate ambitions, pursuing a narrative that sustainability is important, but we can't afford to invest in it now.

The reality is, we cannot afford not to. To do so, we need leaders who will champion the sustainability agenda, ensuring it is at the forefront of board priorities, rather than an afterthought. During the Covid pandemic, we witnessed first-hand the power and value of great leadership; we saw the contrasting outcomes driven by those leaders who navigated uncertainty with clear purpose and led their businesses and institutions through the crisis – and those that did not. Our sector now needs to engage and retain the best leaders from every industry and every geography if we are to overcome the global climate emergency.

The great news is that we are attracting the necessary talent, in greater numbers, with more diversity of capability and from broader backgrounds than previously. Sustainability is chiming with leaders across all sectors who want to initiate positive change for the world, as well as creating long-term value for their stakeholders. For their part, governments, customers, employees and shareholders are holding companies to account on their climate change strategies. They want to see them mitigating risks, but also seizing the opportunities available to those at the forefront of environmentally conscious capitalism.

One of those opportunities lies in securing climate change finance. We see investors making bigger bets on ESG issues, deploying capital to sustainable programmes faster and in larger sums than we could have dreamed of two decades ago. But it takes more than smart new ideas to attract investment in sustainability. History has taught us that the right technological solution alone does not guarantee success; investors are not only looking for ground-break-ing inventions, but also to back outstanding leaders who can build world-class teams capable of disrupting markets, navigating complexity, structuring the right partnerships, innovating, and scaling up at a rate fast enough to meet the evolving challenges of climate change.

Investors are valuing the impact of great leaders in sustainability technology more highly – and putting their finance where their focus is. Alongside technical and market due diligence, they are demanding executive assessments as a condition of investment, and thereafter are prioritising talent development, team acceleration and succession planning, so as not to lose time, momentum and value.

But despite these investor demands, 69% of respondents to our pre-COP26 research said climate knowledge was not a formal requirement for joining their board, and 65% that it was not a requirement in CEO selection. This needs to change. We must recruit, train and deliver leaders who understand the implications of climate change, and how to address them.

The opportunity cost is too great for us as a sector not to step up to this challenge. The hour is now, and we need to deploy our talents to lead the world into a sustainable future.



Claire Skinner Regional leader

Europe & Africa

HEIDRICK& Struggles





A Gift of Light

The Connect22 Judges have elected to make a donation this year of solar based lighting systems to families in need in the Democratic Republic of Congo where 90% of people do not have access to electricity.

The systems donated will provide seven families with light to support education and power for mobile phones. The lighting systems will be donated through the charity La Différence that has been actively supporting families and entrepreneurs since 2014.

Installations will be managed by Altech Group which was founded in 2013 by two Congolese entrepreneurs who grew up in eastern Congo without power or light. They have made it their mission to end energy poverty in the DRC by 2030. By the end of 2022 they will have distributed 1 million lighting systems impacting five million lives and creating 2,000 jobs.

For further information please visit www.la-difference.com and www.altech-rdc.com

Thank you to La Différence and Altech for the wonderful impact you are making.

CONNECT22 Judges



Washikala Malango Co-Founder and Co-CEO



longwa Mashangao Co-Founder and Co-CEO



CEO: **Michaela Kendall** Founded: **1996**







CEO: **Geoge May** Founded: **2013** Investors: **Gresham, Telos Impact**

Adelan is the leading global microtubular SOFC developer, for clean, portable, off-grid systems.

Biobean is the world's largest recycler of coffee waste. The UK-based company upcycles spent coffee grounds into valuable consumer and industrial products.



CEO: **Alex Bamberg** Founded: **2021** Investors: **Founder backed**



AQUA Superpower is a developer and operator of fast chargers for electric boats in the commercial and leisure segments globally.



CEO: Liv Andersson Founded: 2021 Investors: Zero Carbon Capital, Carbon13

Specialist ClimateTech business combining BioTech and scalable industrial processes to produce carbon negative construction materials in the form of zero carbon cement.



CEO: **Paul Marples** Founded: **2013** Investors: **Mercia**





CEO: **Daniel Davey** Founded: **2021** Investors: **MEEF, Amber, PTK**



Authenticate is a collaborative software and data platform that provides ESG data to food & retail businesses.

Breathe provides an electric car subscription service that is driving the change towards a zero emissions ride hailing fleet in the UK.





CEO: Christopher Kong Founded: 2018 Investors: Ascension Ventures, Seedrs

By leveraging proprietary tempeh fermentation technologies, Better Nature is one of the UK's fastest growing meat alternative startups.





CellCube is a battery storage manufacturing company, focusing on vanadium redox flow batteries to meet pressing LDES demand.





CEO: Phil Caldwell Founded: 2001 Investors: Bosch, Weichai, AIM listed

Ceres is a leading developer of clean technology, leveraging a licencing approach for solid oxide power and electrolysis.





CEO: Wayne Zakers Founded: 1970 Investors: Grosvenor Estate, Altro Group, Ball family, HNWIs

Construction services group with over five decades of experience in concrete. Primary products include Cemfree (low carbon cement) and Pudlo (concrete waterproofing).





MD: Helen Edwards Founded: 2008 Investors: Management Team and Family Funds

Gas shipping service for biomethane & small scale producers.





CEO: Stephen Edkins Founded: 2020 Investors: Wavemaker Partners, Fujitsu

Digital online marketplace improving food security and the physical trading of agricultural commodities globally such as rice, fertiliser and grains.





CEO: Chris Pateman Jones CTO: George Donoghue Founded: 2017 Investors: Aviva

Connected Kerb provides electric vehicle charging solutions.





CFO: **Paul Morton** Founded: **2014** Investors: **Eleven Ventures, Founders Factory**

DRONAMICS develops unmanned aerial systems for shipping commercial and special cargo applications.





Convion Ltd. is a leading fuel cell system developer commercializing solid oxide fuel cell systems for distributed power generation and hydrogen production.





ECONIC's technology turns waste CO2 into a valuable raw material to improve the performance and cost of essential polymers



CEO: **Julien, Tchernia** Founded: **2015** Investors: **Aster, BNP Paribas**

Ekwateur is a supplier of 100% renewable electricity in France as well as supporting energy consumers in the energy and ecological transitions.





Elestor has introduced an innovative electricity storage technology for large scale stationary applications, based on the flow battery principle.



MD: Michel Funfschilling Founded: 2014 Investors: Telos Impact, Credit Agricole

Gaiago accelerates the regenerative agriculture transition by leveraging soil and crops biology. Company commercialises a wide range of soil bio-stimulants, probiotics and prebiotics.



CEO: Michael Cassau Founded: 2015 Investors: Energy Impact Partners



Provider of a subscription-based online platform for short and long-term tech rental.





CEO: Kaushal Shah Founded: 2015 Investors: Crowdcube, Founders Factory

envoPAP makes high-quality paper and packaging products using discarded agricultural fibres.





CEO: Marcus Whately Founded: 2013 Investors: Ignite Social Enterprise, Co2Sense, Generate Capital

Vertical farming company decoupling the price of energy and food by leveraging biomass CHP plants.





Exec VP: Hege Marie Norheim Founded: 2018 Investors: NYSE listed, Sylebra Capital, Koch Industries

Producer of clean battery solutions, developing lithium-ion based battery cell gigafactories in Norway.





CEO: **Tim Walder** Founded: **2021** Investors: **Founder backed**

Commercialising British military technology to transform waste into low-cost green hydrogen and carbon black via plasma electrolysis.





CEO: Enass Abo-Hamed Founded: 2014







CEO: Stavros Papadopoulos Founded: 2018 Investors: Circularity Capital, HV Capital, Keen Venture Partners

German-based provider of hybrid work equipment solutions, such as modular furniture and electronic devices, supplied on a rental basis.



CEO: **Ross Forder** Founded: **2017** Investors: **Crowdcube**



Halo Burger is plant-based meat fast-food chain accelerating the transition to sustainable food.

Developer of smart solid-state hydrogen storage

systems, combining hardware and software to

efficiently store and dispense hydrogen.



CEO: Charlie Guy Founded: 2015 Investors: Longwall Venture Partners



LettUs Grow designs aeroponic technology and farm management software for indoor and vertical farms.





CEO: David Craig Founded: 2012 Investors: ABC Impact, BPC, nVent, Northern Gritstone

Provider of immersion liquid-cooling technology for the data centre ecosystem.



CEO: Alexander Giles Founded: 2018 Investors: Crowdcube



Farming and technology company creating fully-controlled indoor vertical farming systems.

IMPRESSIONTECHNOLOGIES



CEO: **Jonathan Watkins** Founded: **2013** Investors: **Mercia, IP Group**

Producer of sustainable ultra-high strength and lightweight aluminium frames for electric vehicles, aircraft and other structural components.





Lina is developing a solid state sodium battery for the BESS sector.

Nagami



CEO: **Manuel Jiménez García** Founded: **2016** Investors: **Self-funded**

Nagami creates aesthetically and functionally superior furnishing and interior design elements that are unique, sustainable and affordable to the masses.

Naked Energy.



CEO: Christophe Williams Founded: 2009 Investors: Barclays Ventures, Earthworm Group

Naked Energy has developed an innovative hybrid solar technology generating combined heat and power.





PHOTANOL CEO: Véronique de Bruijn Founded: 2014 Investors: Icos Capital, UvA Ventures, Regional Development Agencies

Photanol is a biotech scale-up, developing a highly efficient technology platform for carbon utilization by converting CO2 into valuable circular chemicals for industrial applications.

PLASTECO WOOD



Management: **Simon Duncan, Henning von Spreckelsen** Founded: **2008** Investors: **Founder backed**

UK-based company upcycling all forms of plastic packaging waste into plastic lumber and assembled products, and 2021 winner of the Santander X Global Environmental Challenge.





CEO: Dean O'Connor Founded: 2017 Investors: Hydrogen One Growth Capital; Grounded GmbH

Best in class low cost mobile hydrogen refuelling infrastructure.





CEO: **David Amos** Founded: **2018**

H2 enabled businesses, providing low-cost electrolysis in Outer Hebrides and portable power to replace diesel generators. Supplied clean power at COP26, working with Serious Stages to decarbonise the events & film industries.





Management: Margaux Deguerre Founded: 2014 Investors: Sky Ocean Ventures, Crowdcube, Doen Foundation, Torch Capital, Horizon Ventures, Astanor, Lupa Systems

Developer of sustainable and fully biodegradable packaging productions from seaweed, and shortlisted for the 2022 Earthshot Prize.





CEO: Piotr Lipnicki Founded: 2014 Investors: ICOS Capital, EEC Magenta, PG NiG Ventures, Tange7 Perecent, Crowdcube

Predictive maintenance platform leveraging client sensors and AI to identify failures in real time and optimise operation processes.





CEO: Tim Von Werne Founded: 2017 Investors: IP Group (Kiko Ventures), **Ceres Power Holdings**

RFC is developing a unique low cost, long duration energy storage technology to enable the transition to a zero carbon energy system.





CEO: Matt Candy Founded: 2014

Steamology provide zero emissions power, embracing the hydrogen economy to eliminate emissions and replace fossil fuel engines.



CEO: Rob van Straten Founded: 2014 Investors: F4SE, Startupbootcamp

Through the use of decentralized Direct Air Capture, Skytree offers one of the world's smallest and simplest carbon capture & reuse processes.



IR: Vincent Bithell Founded: 2013 Investors: 350 PPM



Developer of green and hydrogen energy storage systems, utilising underground salt caverns for large-scale compressed air energy storage.





CEO: Ben Scott Robinson Founded: 2017 Investors: 7 Perecent, Crowdcube

Small Robot Company provides per plant intelligence and a new model for regenerative farming by leveraging a modular robotics system and AI technology.







CEO: Asher Bennett Founded: 2012 Investors: AFC Investors, Bharat Forge

Tevva is a leading electric truck manufacturer, best known for its zero-emission electric trucks and hydrogen fuel cell range extenders.



CEO: Chris Bowden Founded: 2016 Investors: Angel investors

Squeaky Clean Energy is a B2B energy marketplace that enables organisations to contract directly with renewable electricity generators and aggregators.





Management: James Gibson Founded: 2014 Investors: SABIC Ventures, **Capricorn Partners, Kimberly-Clark**

Material science company developing higher performance plastics with lower environmental footprint and increased recyclability.





Management: Gillian Harrison, Trond Heggenhougen Founded: 2000 Investors: Private investors and HNWIs

Whitefox provides innovative membrane solutions to achieve efficient separations which significantly reduce energy and water requirements.





CEO: Sam Ryan Founded: 2016 Investors: ETF Partners, InMotion Ventures

Zeelo is the first smart bus platform for organizations that provides flexible turn-key, plug-in and SaaS transportation programmes.





unlimited resources infinite needs