THE MONTHLY DOSE OF CLIMATE SOLUTIONS

APRIL 2022

A SEA OF RED

April was a dramatic month.

Uncertainty on the macroeconomic front persists, views on the energy transition remain polarised. In this newsletter we share our views, showcase the magnitude of the sell off in our green names and highlight some noteworthy company developments.

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OUT WITH THE NEW, IN WITH THE OLD

Quantitative tightening adds to long term aversion, distracts from long term solutions and reignites interest in the excess short term cash flows of fossil fuel.

With inflation spikes, recession fears, China back in lockdown mode, upcoming further interest rate hikes and no signs of a resolution in Ukraine, April was a sea of red.
The S&P500 was down 8.8%, Nasdaq had its worst month since 2008 and was down by 13.3%, the Shanghai Composite Index – impacted by further lockdowns in China - was down 7.2%. The iClima Decarbonization Enablers Index was down 10.93% while the iClima Distributed Renewable Energy Index was down 7.02%. The Fed meet on May 3rd and 4th and approved the next of several interest rate increases, with the target overnight federal funds rate increasing by half a percentage point. Moreover, markets also expect the Fed to start Quantitative Tightening (QT), followed by Central Banks in the G7 countries.

Bloomberg Economics estimates that G7 countries will start trimming their balance sheets by $410 billion until the end of the year, beginning to reverse the $8 trillion of Quantitative Easing that took place since the Covid outbreak began. QT reducing liquidity and higher interest rates are triggering fears of recession. The US economy contracted for the first time since 2020, with US GDP down 1.4% in annualized terms in 1Q22. The earnings season has been marked by several companies issuing cautious guidance (wind equipment providers as an example, more on that below). As economies slow down, inflation puts pressure on margins and supply chain issues challenge production output.

The transition is inevitable, but it is not going to be orderly and it is currently discounted:
Beyond all the macroeconomic headwinds afflicting economies globally, the invasion of Ukraine and the energy crisis that Europe is facing gave rise to a very polarized market. Some analysts suggested that "Putin solves climate change", as economies like Germany accelerate the energy transition to move away from volatile hydrocarbons; other analysts forecast new E&P investments in the US, with shale gas and LNG receiving great attention, with a negative impact on climate change mitigation.

A wide range of views from no transition to slow transition are being priced in. A fast transition seems to be discounted and in the midst of such turbulent times, investors are attracted to the excess cash flows that E&P companies are generating out of the triple digit crude and high NatGas prices. For example, the SPDR S&P Oil & Gas E&P ETF is up 38.21% YTD. We expect "brown value" (trap) to remain top of mind until central banks demonstrate that they are succeeding in combating inflation, the war ends, no further interest rates are expected, and supply chain issues subside - in some concrete combination.

Less risk aversion would allow a rotation back to growth, and we expect "green growth" to be the beneficiary, as it becomes clear that demand destruction prompted by the same fossil fuel high prices that are momentarily generating excess cash flows for E&P companies will also provoke the substitution of ICEs for BEVs, retail utility bills for solar rooftop panels, and prompt users to embrace energy efficiency.
The companies providing the climate change solutions are to be the real beneficiaries of the energy crisis and the acceleration of the energy transition. Current valuation levels are at a huge discrepancy vis-à-vis the unprecedented growth opportunities we expect the true climate leader to benefit from.

Germany's "Easter Package" is presented: a massive concrete step in the unprecedented acceleration away from Russian coal, oil and gas and towards a fully renewable grid:
After only five months from the formation of Germany's new government, the new Minister of Energy & Economy, Robert Habeck, presented his 600-page "Easter Package", targeting a grid with electricity produced from wind, solar and biomass, fully replacing nuclear, gas and coal. This headline moment came early in the month, as Germany followed up on its promise to bring forward the goal of a fully renewable grid to 2035.

On the 6th of April, the coalition government, comprised of the Social Democrats (SPD), Greens and Free Democrats (FDP) passed a raft of policy measures to support the headline announcement. This new legislation encompasses a Renewable Energy Act, an offshore wind law, an energy industry law and new rules to expedite the development of the transmission grid. The package is being sent to parliament and could be adopted before the summer. The core item in the "Easter Package" is the principle that the use of renewables is of 'overriding public interest', and thus takes priority over other matters until carbon neutrality is achieved. It is hoped that this will remove hurdles such as local opposition, lengthy planning procedures, or conflicts with other strategic goals. In a similar vein, the package includes changes to grid rules which allow for a faster permitting process.

More specifically, the plan is to dedicate 2% of land area to renewables, including an annual increase of 10 GW of onshore wind (reaching a total of 115 GW by 2030), and 22 GW of solar (totalling 215 GW by 2030). For offshore wind, the government set new targets of 30 GW of capacity by 2030, rising to 40 GW by 2025 and 70 GW by 2035. Once again, the targets will be supported by a heavily streamlined permitting process. Regulation has even reached the level of standardising procedure for birds killed by wind turbines, a remarkably significant obstacle to new construction. All signs so far point to the package being a model for other countries to follow.

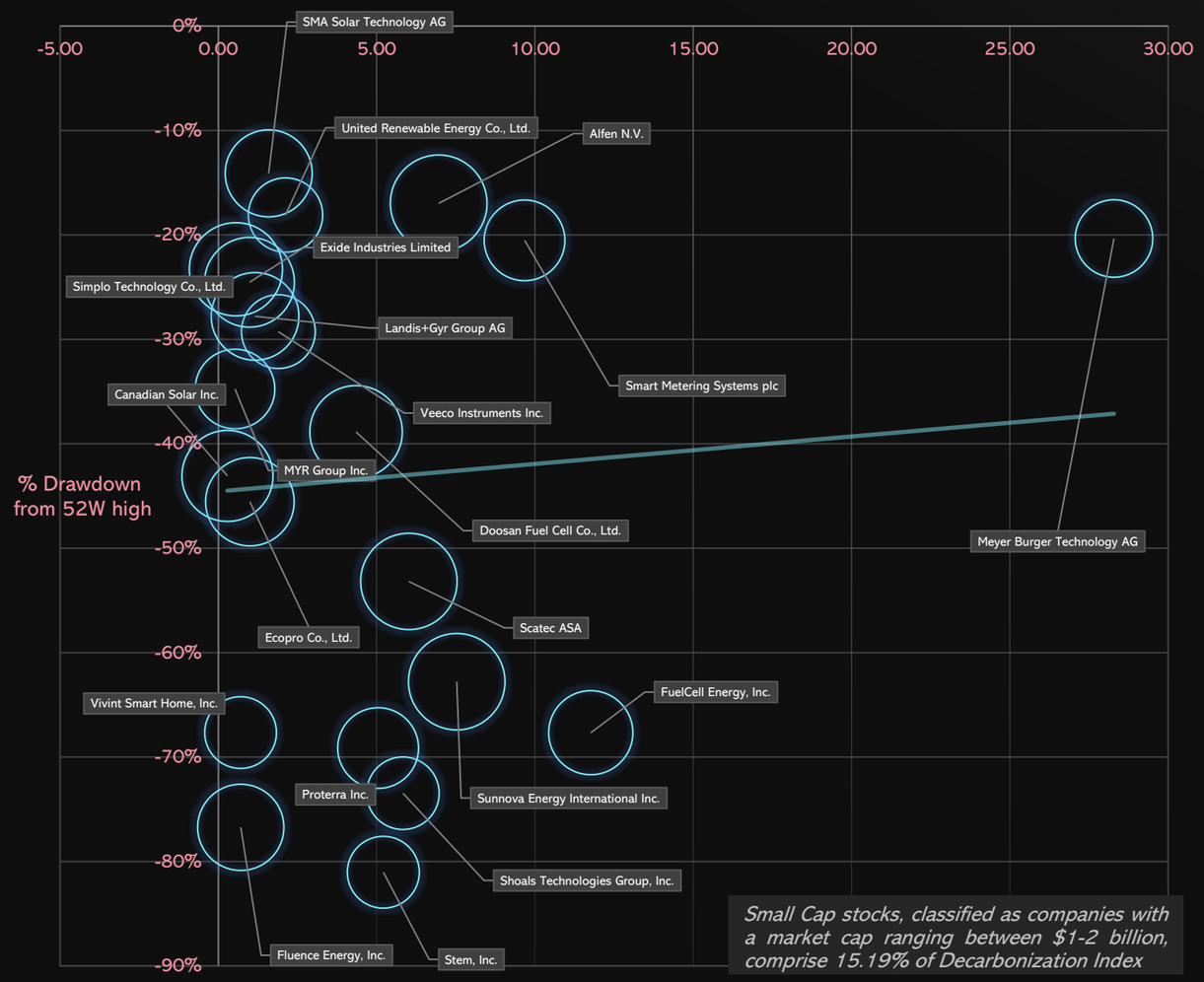
DRAWDOWN LEVELS

Drawdown Levels Showcase the Dramatic Correction in the Shares of the Companies Behind the Most Relevant Climate Change Solutions

Below we share the 52-week drawdown levels for small, mid and large cap companies (excluding Tesla as a mega cap name) and current Price to Sales multiples, as well as EV/EBITDA multiples for the large cap names.

SMALL CAP

(minus Li-Cycle Holding Corporation and Ceres Powers Holdings plc)

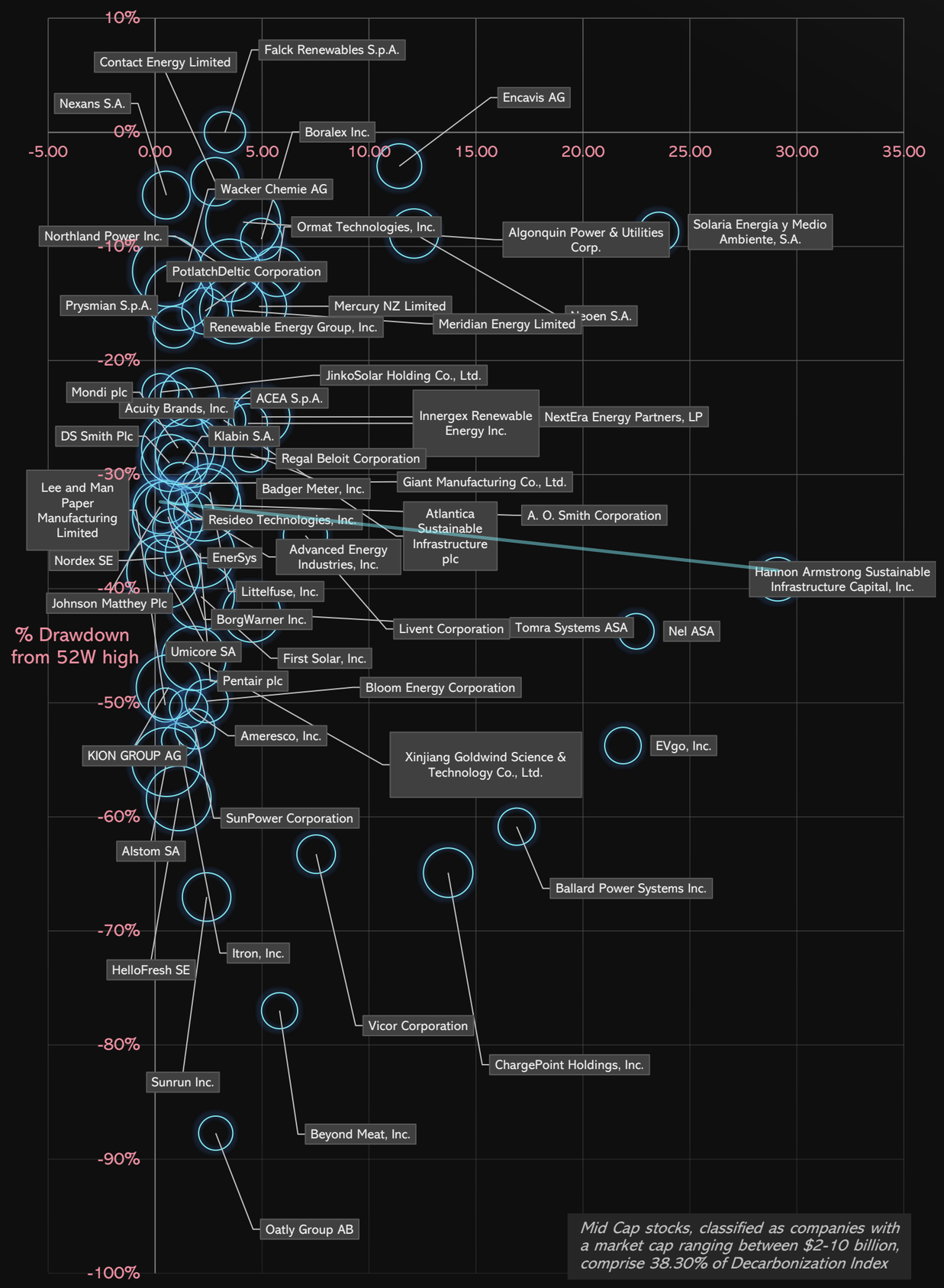


Small Cap stocks, classified as companies with a market cap ranging between $1-2 billion, comprise 15.19% of Decarbonization Index

MID CAP

(minus ITM Power plc)

Price/Sales Apr 2022

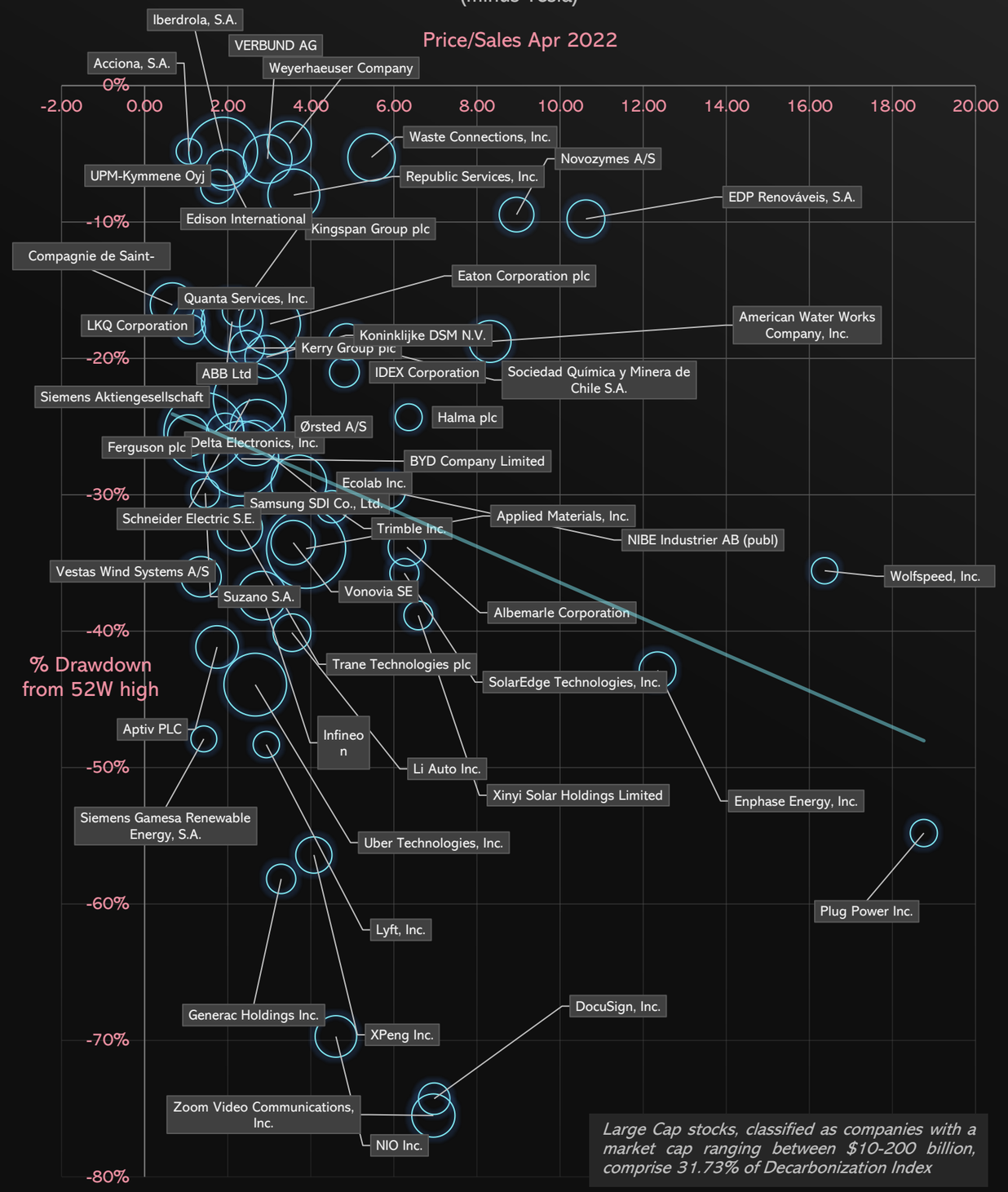


Mid Cap stocks, classified as companies with a market cap ranging between $2-10 billion, comprise 38.30% of Decarbonization Index

LARGE CAP

(minus Tesla)

Price/Sales Apr 2022



Large Cap stocks, classified as companies with a market cap ranging between $10-200 billion, comprise 31.73% of Decarbonization Index

Most shares in the iClima Decarbonization universe are trading below P/S of 5. As risk aversion dominates markets, investors trade off future growth for shorter term cash flow, often found in larger and mature tech names. Microsoft (not in our universe) currently trades at 11.4x P/S and Alphabet at 6x.

COMPANY NEWS

Short term Headwinds in Overwhelming Long-term Tailwinds

NOTEWORTHY NEWS IN THE iCLIMA GLOBAL DECARBONIZATION ENABLERS

Tesla (TSLA, down 19.19% in April, down 17.6% YTD) had a prominent month in the media due to Musk's acquisition of Twitter, which displeased many investors. Tesla itself, however, announced a barnstorming quarter, described by Jim Cramer, CNBCs acclaimed TV anchor as a 'tour de force'. The company beat analyst forecasts of $17.8 billion in revenues and $2.26 of earnings per share, with a staggering revenue of $18.76 billion and shares of $2.86. The major driving force behind the growth was Tesla's automotive segment, which returned a 32.9% GAAP Automotive gross margin despite ongoing supply chain issues. Musk cautioned that these complications, which include the ongoing effects of the Covid-19 pandemic in China as well as Russia's invasion of Ukraine, could continue to cause disruption over the coming year. He also warned customers buying now that they could face a long wait for their deliveries.

Bloom Energy and Ballard Power Systems were two of the worst hydrogen stock performances of the month. **Bloom Energy** (BE, down 23.15% in April and down 15.37% YTD) and **Ballard Power Systems** (BLDP, down 26.67% in April and down 32.85% YTD) had a difficult month. Ballard will report 1Q21 numbers in the second week of May. Concerned investors expect to see lower than predicted demand in China, who's ambitious hydrogen policies could now take longer to convert into equipment procurement than expected. Total revenue in 2021 was $104.5 million, flat versus 2020, but Ballard closed the year with $1.1 billion in cash reserves (current market cap is $2.5 billion). Bloom has faced similar supply chain obstacles, but reported revenue of $972.2 million in 2021, a ca. 22% increase over the $794.2 million booked in 2020. Bloom closed the year with a cash position of $615.1 million and will soon be releasing 1Q22 results. With annual sales close to the $1 billion milestone the company is trading at ca. 3.3x P/S.

Oatly and Tattooed Chef (OTLY, down 28.94% in April, down 55.28% YTD and TATT, down 36.49% in the month and 48.58% in the year) had another difficult month. Despite the success of the wider milk alternative industry, Oatly stock has been on a consistent downtrend since June last year. Supply chain issues are continually highlighted; indeed the company has struggled to keep up with growing demand. A key issue for the company is rooted in its early success: it is seeing increasing levels of competition. Planet Oat, a marginally cheaper alternative now makes up 37% of the US market versus Oatly's 22%. As well as market share, emerging companies are stealing Oatly's contract manufacturing base, further stressing an already struggling supply chain. Tattooed chef has experienced similarly disappointing share performance, despite reporting a 43.7% total revenue jump in 2021 versus 2020, sales reaching $213.4 million in the year. More remarkably, their branded product revenue increased 56.7% in FY 2021, to a record $132.5 million (which equates to 63% of total revenue). Management guidance is for a FY2022 revenue in the $280 to $285 million range.

Vestas, Siemens Gamesa and Nordex had a bad month despite the tailwinds, as did Chinese rival Xinjiang Goldwind Science & Technology. Vestas (VWS, down 8.48% in April and down 8.59% YTD), Siemens Gamesa (SGRE, down 4.07% in April and down 27.27% YTD) and Nordex (NDX1, down 12.17% in April and up 0.14% YTD) were emblematic of problems across the wind sector. Bloomberg ran an in-depth piece on the issues, highlighting that blooming demand is failing to translate into profits. The current situation, they argue, is caused by a combination of supply chain issues (particularly high raw materials and logistics costs), long term cut backs in clean power subsidies, and a high price-pressure environment. They cite the 'arms race' to larger turbines which has driven down electricity prices as a major contributing factor to this instability, arguing that it hasn't given manufacturers time to build standardisation into their operations. Elsewhere, Wind Europe argue that an outdated permitting process is causing debilitating bottlenecks which undermine potential investment. Xinjiang Goldwind was also down 14.01% in the month and is down 31.45% YTD.

NOTEWORTHY NEWS IN THE iCLIMA GLOBAL DECARBONIZATION ENABLERS

Nuvve announced a partnership with Swell, in fantastic news for the emerging vehicle-to-grid (V2G) sector. Nuvve Holdings Corp (NVVE, down 9.38% in April, down 46.32% until end of April) announced a joint venture with the Californian energy storage and aggregation specialist Swell. Swell work to implement local smart grids which they, like us, term virtual-power-plants (VPPs). These networks are comprised of multiple local clean energy generation assets linked together to function in place of a traditional power plant. The partnership allows for the integration of electric vehicles (EVs) into this system. IRENA estimates that the batteries inside EVs will represent up to 69% of total storage capacity by 2030, meaning their integration into VPPs provides huge extra storage capability as well as flexibility. The company also announced it signed a Memorandum of Understanding with the US Department of Energy to work with government agencies, utilities, and electrification industry leaders to accelerate the incorporation of V2G, V2H, V2B and VGI technologies. Nuvve will report 1Q22 results on May 12th.

Enphase and SolarEdge are the leading producers of inverters, a market with great growth prospects as solar energy accelerates. Enphase (ENPH, down 20% in April and down 11.77% in the year) and SolarEdge (SEDG, down 22.32% in April and down 10.75% in the year) have nonetheless been very volatile stocks too. Both companies have strong fundamentals and have much backing on Wall Street and recently reported strong results. On the 26th April, Enphase announced strong 1Q22 earnings, revenues in the quarter reached $441.3 million, gross margins of 40.1% and net income of $51.8 million. Enphase's CEO is promising a rapid European expansion. SolarEdge also just posted 1Q22 results, record revenues of $655.1 million, gross margins at 27.3% and net income of $33.1 million. Revenue in 1Q22 was 19% higher than in the previous quarter and 62% higher than 1Q21.

Fluence (FLNC, down 30.05% in April and down 74.21% in the year) had another perplexing month. A key player in the fast-growing clean energy storage and long duration storage segments, Fluence reported results for their first quarter, which ended on December 31st. Total revenues were $175 million, up 50% from the same quarter last year. Management reiterated revenue guidance for the year of $1.1 to $1.3 billion. Current market cap at $1.7 billion translates into a forward P/S of 1.3, while the company has a solid cash position of $632 million. Moreover, the company secured headline deals with Centrica in Belgium, the Taiwan Power Company and software-as-a-service specialist Nispera. The company seems to be doing all the right things. Despite this, analysts from JPMorgan to Citigroup have dropped their price targets for the storage company as shares fell below $20. We believe that Fluence is the perfect example of markets not accurately pricing for the energy transition and all the geopolitical weight that is falling behind it. The podcast we suggest below with Fluence's MD and battery guru Marek Kubik showcase the company's unique clean storage solutions and growth prospects.

PODCASTS

MAREK KUBIK
ON CLEAN ENERGY STORAGE
Battery Expert, MD at Fluence.

Marek Kubik is an energy storage aficionado and a big believer in the power of technology to fundamentally improve our living standards. He is a doctor in Engineering and was named a 2017 Forbes 30 Under 30 honouree. He was also invited by the United Nations to be an industry contributor to "The group of experts on cleaner electricity systems", a subsidiary body of the Committee on Sustainable Energy. He is Managing Director and a founding member at Fluence, a joint venture between AES and Siemens. Marek gave iClima an exclusive interview in 2020, and we now recommend a recent podcast where Marek talks about Fluence's strategy, Virtual Transmission, how to solve renewable energy intermittency, the Irish grid and much more.

Apple Google Spotify

You can find Marek on:

ROB WEST
ON THE ENERGY CRISIS & ENERGY TRANSITION
CEO of Thunder Said Energy

Apple Google Spotify

Rob West is the CEO of Thunder Said Energy, a London based research consultancy working on the energy transition. Rob does deep research on different energy technologies, their economics, technical readiness, and the players in the space. In this podcast he elaborates on the trilemma that preoccupies all governments: balancing decarbonization with energy security and affordability. Listen to hear more about the short-term solutions vis-à-vis long term goals.

You can find Rob on:

SMART ENERGY

IS RESHAPING OUR DATED, FOSSIL FUEL BASED, CENTRALIZED ELECTRICITY GRID

What is Smart Energy?

IT IS DECENTRALIZED

Electricity being produced at the point of consumption. It means local energy, solar rooftops & associated batteries epitomize the solution.

IT IS DIGITAL

AI, 5G and IoT make possible the optimization and management of these decentralized & distributed renewable assets like we have never been able to do before.

IT DECARBONISES

Renewable energy is at the core of Smart Energy, underpinning both the generation of local electricity as well as in the storage of it.

Why is Smart Energy taking off?

IT IS DEFLATIONARY

Because solar & batteries are not fuels, they are technologies. They have benefited from economies of volume and are now at a price point that makes "local solar" price competitive vis-à-vis utility supplied electricity.

What companies are in GLDGENER that make it so unique?

THE DISRUPTORS

GLDGENER is unique in many ways. No other ETF represents the companies making Vehicles to Grid (V2G), Virtual Power Plants (VPPs), EV Charging Network, Microgrids and Local Solar a reality.

EVgo · TESLA · BYD · SUNRUN · PROTERRA · CLEANSPARK · chargepoint · NUVVE · MEYER BURGER · ENPHASE · stem · blink · volta · FLUENCE

DeFi (Decentralized Finance) is an emerging digital financial infrastructure, removing central financial institutions from transactions.

Similarly, DeGen (**De**centralized Renewable **Gen**eration) is disrupting the dated power grid.

GLDGENER represents the convergence of deflationary, decarbonizing technologies. Consumers of electricity are becoming 'ProSumers'.

The current energy crisis will persist. Energy efficiency and local solar & battery are the only short term solutions.

Consumers of electricity want security of supply and predictable cost. Producing electricity at point of consumption is now price competitive, and the technologies are deflationary.
The grid of the future is here.

GLDGENER INDEX

Proudly brought to you by iClima Earth

Over 50 names, equal weight. Calculated and published by Solactive
Theoretical annualized USD returns of 18.18% in 2021, 134.24% in 2020 and 77.66% in 2019

iCLIMA DECARBONISATION ENABLERS

A MUCH NEEDED SHIFT IN CLIMATE CHANGE INDEX NARRATIVE. FOCUSING ON THE SOLUTIONS: THE PRODUCTS AND SERVICES THAT PRECLUDE DAMAGING CO_2E EMISSIONS FROM EVER TAKING PLACE

What is GLCLIMUN's purpose?

To represent the companies that are leading climate change mitigation. We can move our economies away from BAU high emission transportation, energy, food, and heat. GLCLIMUN is in line with innovations that are reshaping our world.

The BEST WAY to reduce carbon in the atmosphere is by NOT EMITTING in the first place

What are GLCLIMUN's key metrics?

Green revenue and Potential Avoided Emissions, in Gigatons of CO_2e. The delta between high emissions BAU and the lower emissions in the GLCLIMUN set of solutions.

RULES based, DATA driven

What makes GLCLIMUN so robust?

A portfolio approach, a 'one stop shop' of owning the relevant solutions. GLCLIMUN has over 160 companies in a modified equal weight. It is not only about gases. GLCLIMUN incorporates S and G indicators when screening companies.

It is BALANCED | It is COMPREHENSIVE | It is HOLISTIC ESG

TELEPRESENCE | HEAT PUMPS | SMART METERS | SMART THERMOSTATS | FUEL CELLS | PLANT BASED DIET
ELECTRIC MICRO-TRANSPORTATION | EV CHARGERS | RIDE SHARING | ELECTROLYSERS | RECYCLING SOLUTIONS
WIND GENERATION | SOLAR GENERATION | RENEWABLE EQUIPMENT | LONG DURATION ENERGY STORAGE
GREEN HYDROGEN | BATTERY RECYCLING | BUILDING INSULATION | ENERGY EFFICIENCY | SMART GRID | LOCAL SOLAR | GREEN FINANCE | VEHICLES 2 GRID | VIRTUAL POWER PLANTS | WATER EFFICIENCY | POLLUTION CONTROL

EVgo · volta · PROTERRA · NUVVE · stem · FLUENCE · BYD · sunrun · ENPHASE · NIO · XPENG · ARCIMOTO · WORKHORSE · ALSTOM · Vestas · NORDEX · BEYOND MEAT · OATLY! · zoom · BALLARD · Bloomenergy · DOOSAN · POWERCELL · blink · MEYER BURGER · RENOVA · CanadianSolar · edp renováveis · GENERAC · Li-Cycle · umicore · novozymes · Tattooed Chef · TRANE TECHNOLOGIES · TOMRA · ECOLAB · CARBIOS · SAMSUNG · SAMSUNG SDI · SMS · ALBEMARLE · NIBE · ALFEN

What CLMA is not?

No ESG black box scorecards | No usual FAANG/MAMAA and banks | No lack of clear key metrics

GLCLIMUN is a refreshing & transparent approach

Climate change is the biggest problem the world faces, but mitigating it is also the biggest investment opportunity of our lifetime - GLCLIMUN represents the companies in line with this unprecedented value creation.

iClima has a unique stewardship vision. GLCLIMUN will VOTE & ENGAGE with companies to work towards a future where, for example, solar panels are made of solar energy and are fully recycled.

The Transition towards NetZero is accelerating.
We are reshaping our economy towards sustainability & low emissions.
Be part of the world reimagined.

GLCLIMUN INDEX

Proudly brought to you by iClima Earth

Over 160 names, modified equal weight. Calculated and published by Solactive.
Theoretical annualized USD returns of 7.33% in 2021, 83.51% in 2020 and 31.91% in 2019

iCLIMA EARTH