Monthly Newsletter

The Cleantech Industry

GRID MODERNIZATION SPARKS MANUFACTURING BOOM AMID RISING ELECTRICITY DEMAND

Our Investment Thesis

Recent developments indicate a surge in domestic manufacturing commitments within the U.S. electrical sector, primarily driven by the rising need to modernize the nation's grid and address anticipated growth in electricity demand. The rapid expansion of data centers, industrial growth, and the widespread adoption of electric vehicles are straining existing infrastructure, prompting major industry players to invest billions in targeted expansions. **General Electric (GE) Vernova** has committed $600 million to expand operations in the U.S., specifically focused on increasing production of components essential for grid modernization, including advanced energy technologies. Simultaneously, **Mitsubishi Electric** is establishing a new facility in Pittsburgh, Pennsylvania, dedicated to the production of vacuum and gas circuit breakers – critical components for managing and protecting electrical systems. **Eaton** is also increasing U.S. production of three-phase transformers with a $340 million investment in a new facility in Jonesville, South Carolina, slated to begin operations in 2027. Notably, the potential for disruptions, as highlighted by events such as the 2021 Texas blackouts, underscores the importance of grid resilience and we believe this is indeed an exciting segment for the investors to look at.

Our Picks This Month

Brookfield Renewable Partners L.P. (NYSE: BEP)

Headquartered in Toronto, Brookfield Renewable operates a diverse renewable energy platform with **~46,000 MW of installed capacity across hydro, wind, solar, and storage assets** globally. The company is expanding into sustainable solutions, including nuclear services, carbon capture, eFuels, and renewable natural gas. BEP benefits from long-term, **inflation-linked PPAs covering ~90% of its capacity**, providing stable revenue. The company's **capital recycling strategy has generated ~$6 billion since 2020 through asset sales**, funding higher-return investments. With a strong balance sheet and a ~$200 billion pipeline, **BEP targets 10%+ FFO per unit** growth, supported by electrification trends and digital infrastructure expansion.

Avangrid Renewables, LLC (Private)

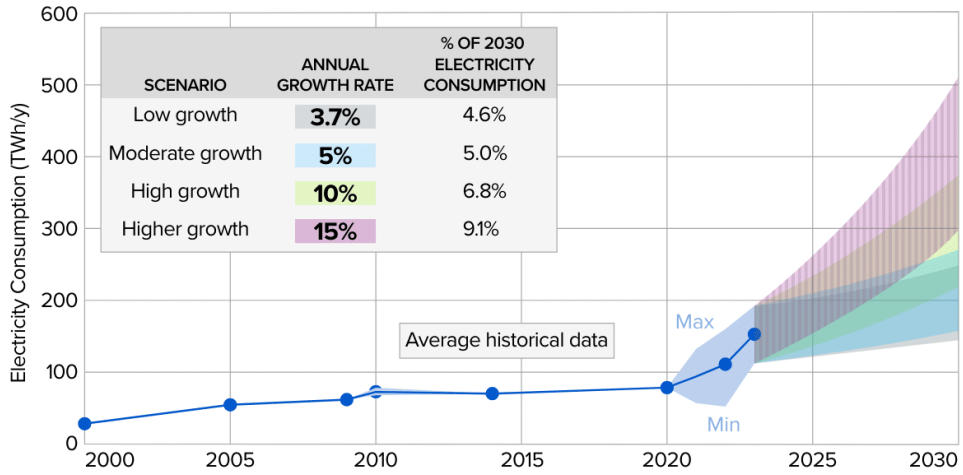
A subsidiary of Iberdrola, Avangrid focuses on modernizing the U.S. electrical grid, with a planned $20 billion investment through 2030. Operating in 23 states with ~$50 billion in assets, it manages both utility networks and a 10.5 GW renewable portfolio, primarily wind, hydro, and solar. Avangrid is expanding offshore wind projects in the Gulf of Maine and developing **800 MW in new power capacity to meet rising data center demand**. The company has secured PPAs with Amazon and Meta and aims for **carbon neutrality by 2035**. With over **25 GW in its project pipeline**, Avangrid is positioning itself as a key player in the renewable energy transition.

U.S. Power Grid Faces Capacity Challenges Amidst Rapid Data Center Expansion

The growing electricity demand, driven by the rapid expansion of AI data centers, is putting significant pressure on the U.S. power grid. Reports show that data center construction is accelerating, leading to record-high energy consumption. Projections indicate that demand could triple in the next three years, further straining the grid. This surge is primarily concentrated within regions like PJM Interconnection, which serves 13 states and the District of Columbia, and notably, Virginia, where ~ 70% of global internet traffic is routed. The Department of Energy's "Queued Up… But in Need of Transmission" report highlights a substantial backlog of energy projects, particularly those focused on renewable energy sources in rural areas, awaiting interconnection to the grid. This delay is compounded by the fragmented nature of the U.S. transmission system, managed by numerous state and local regulators, creating obstacles to coordinated grid modernization efforts. The report estimates that the U.S. may need to expand transmission systems by 60% by 2030 and potentially triple them by 2050 to accommodate the anticipated energy demand.

The U.S. power grid faces additional challenges due to its fragmented regional structure. Existing regulations, developed at local and regional levels, fail to fully support interregional transmission, limiting the efficient flow of electricity across states. This gap makes it harder to maximize renewable energy use. With electricity demand expected to rise by 128 gigawatts over the next five years—far surpassing previous estimates—the strain on the grid is set to intensify. Addressing this requires substantial investment in grid modernization, including the construction of new transmission lines and upgrades to existing systems. The Department of Energy's National Transmission Planning Study, initiated under the Biden administration, aims to provide guidance for state and regional actors in initiating grid modernization projects. This study, intended as a toolkit rather than a comprehensive federal strategy, recognizes the complexities of a fragmented system and the need for collaborative efforts across multiple jurisdictions. The report emphasizes that a meaningful transformation of the U.S. transmission system will necessitate this collaborative, multi-faceted approach.

EPRI U.S. Data Center Load Projections



Source: EPRI, Projections of potential electricity consumption by U.S. data centers: 2023-2030. % of 2030 electricity consumption projections assume that all other (non-data center) load increases at 1% annually, Carbon Credits.com

Grid Modernization Drives Significant Manufacturing Investment in The U.S.

The push to modernize the U.S. electrical grid is driving significant investment in domestic manufacturing. Recent commitments from major industry players exceed $1 billion, targeting the production of essential grid components to support the nation's evolving energy infrastructure. This surge in investment is largely attributable to the anticipated growth in electricity demand, spurred by industrial expansion, the proliferation of data centers, and the increasing

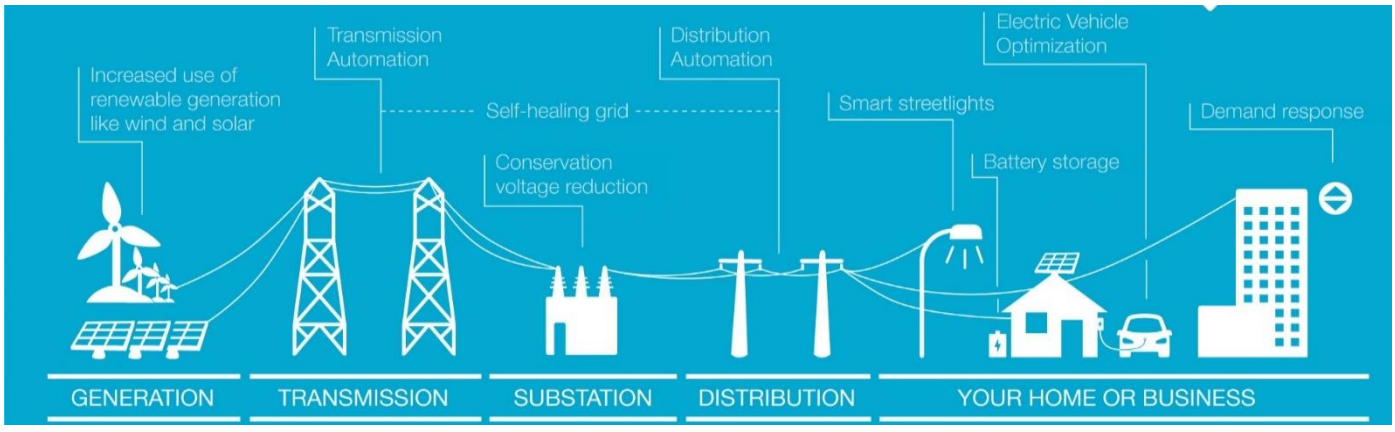
adoption of electric transportation. The grid's existing infrastructure is demonstrably strained, highlighted by recurring brownouts in regions like California and underscored by events such as the 2021 Texas blackouts, which exposed vulnerabilities related to extreme weather events and insufficient transfer capacity. The North American Electric Reliability Corp. (NERC) estimates a requirement for an additional 35 gigawatts of transfer capability across the U.S., equivalent to roughly 35 nuclear power plants, to bolster resilience and mitigate shortfalls during adverse conditions.

Several companies are responding to this demand with targeted investments. GE Vernova, a key player in the power sector, has committed $600 million to expand manufacturing operations in the U.S. This investment is specifically aimed at boosting production of components essential for grid modernization, including advanced energy technologies. Similarly, Mitsubishi Electric is investing $86 million to establish a new facility in Pittsburgh, Pennsylvania, dedicated to the production of vacuum and gas circuit breakers – vital components for managing and protecting electrical systems. Eaton is also increasing U.S. production of three-phase transformers with a $340 million investment in a new facility in Jonesville, South Carolina, slated to begin operations in 2027. These investments reflect a strategic response to the escalating need for robust and reliable electrical infrastructure. The scale of these commitments suggests a recognition of the grid's critical role in supporting broader economic activity and technological advancement.

Current federal initiatives, including incentives for semiconductor manufacturing and support for renewable energy deployment, are contributing significantly to the demand for grid-related equipment. However, potential changes in energy policy could significantly impact the trajectory of these investments. Recent statements from the Trump administration, including warnings of forthcoming tariffs on drug manufacturers and a desire to roll back support for low-carbon energy technologies, introduce a degree of uncertainty. The potential for reduced federal support for renewable energy – specifically battery-powered vehicles, wind power, and solar fields – raises concerns about the long-term viability of investments in related grid components. We believe, the industry's response to these policy shifts will be crucial in determining the future direction of manufacturing activity within the sector.

The magnitude of investments, coupled with the underlying drivers of demand, underscores the strategic importance of a resilient and modern electrical grid. The scale of the commitments – exceeding $1 billion in recent months – demonstrates a proactive approach by industry leaders to address existing vulnerabilities and support anticipated growth. While policy uncertainties represent a potential headwind, the fundamental need for grid modernization remains a significant and sustained driver of investment. The industry's ability to adapt to evolving policy environments and maintain a focus on technological innovation will be key to ensuring continued growth and stability within the sector.

Grid Modernization



Source: Puget Sound Energy

Advancements And Obstacles in The U.S. Clean Energy Transition

The U.S. clean energy sector is expanding rapidly, fueled by rising electricity demand and also a strong push to decarbonize the power grid. In 2024, renewable energy sources, particularly solar and wind, accounted for a growing percentage of electricity generation, reflecting investments in new projects and technological advancements. A key factor in the sector's progress is the expansion of renewable energy generation capacity. Solar photovoltaic (solar PV) and wind energy projects are contributing substantially to the power supply, supported by government incentives and declining technology costs. The industry is also seeing increased adoption of energy storage solutions, primarily battery systems, to address the intermittent nature of solar and wind power. Despite these developments, the pace of growth is constrained by significant logistical and regulatory issues. The interconnection process, which connects new renewable energy facilities to the existing electricity grid, remains a bottleneck. The active capacity in U.S. interconnection queues is twice that of all existing power plants, primarily due to lengthy timelines for project approval and grid upgrades. Further, local opposition to renewable energy projects is a persistent concern, with some communities raising concerns about visual impacts, noise, and potential effects on property values. This opposition has resulted in project delays and, in some instances, outright bans, adding to the complexity of project development.

We note that the rising material costs, supply chain constraints, and tariffs on imported solar components are driving up development expenses and delaying projects. Transformer prices have surged, impacting grid connectivity, while tariffs, aimed at boosting domestic manufacturing, are increasing solar installation costs. Meanwhile, regulatory uncertainty, including pauses in offshore wind leases and funding freezes, adds further challenges to the clean energy transition. The sector is also contending with heightened demand for electricity, a trend driven by increased electrification across various sectors, including transportation and heating. This increased demand is exacerbating the existing challenges related to grid capacity and interconnection timelines. The industry is actively seeking solutions to address these issues, including investments in grid modernization, transmission infrastructure, and advanced technologies. Despite the obstacles, we believe the clean energy sector remains a dynamic and rapidly evolving industry, with significant potential to contribute to the U.S.'s energy security and climate goals. The industry's ability to overcome these challenges will be crucial in determining the pace and scale of the clean energy transition in the years to come.

Company Spotlight: Brookfield Renewable Corporation/Partners. (NYSE: BEP/BEPC)

BEP (*Founded: 1999, HQ: Toronto, Canada*) operates a globally expansive renewable power platform, boasting ~ 46,000 megawatts of installed capacity across hydroelectric, wind, solar, and storage facilities in North America, South America, Europe, and Asia. The company's portfolio extends beyond traditional renewables to include sustainable solutions, encompassing investments in nuclear services via Westinghouse, operations in the Caribbean and Latin America, and a developing capacity for carbon capture and storage, eFuels manufacturing, and agricultural renewable natural gas. This diversified approach represents a significant installed capacity development pipeline of ~200,000 megawatts. Several factors are contributing to the company's current performance, including increased investment in utility infrastructure, driven by the electrification of transportation, industrial transformation, and the expansion of digital infrastructure such as data centers. Goldman Sachs projects global power demand from data centers to increase by 50% by 2027 and 165% by the decade's end, highlighting the significant capital investment required to support this growth.

The company's strategic positioning is bolstered by several key operational elements. Primarily, Brookfield Renewable benefits from long-term power purchase agreements (PPAs) with utilities and corporate customers, ~ 90% of its capacity is contracted with a weighted average remaining term of 13 years. A significant portion of these contracts, accounting for 70% of its revenue, are indexed to inflation, providing a natural hedge against rising costs. Further, the company anticipates additional revenue growth through the expiration of legacy PPAs and the ability to secure new contracts at higher market rates, estimated at $100 million incremental FFO over the next five years. Alongside this, Brookfield is actively developing a substantial project pipeline, currently holding 65 GW of advanced-stage projects, and targeting annual commissioning of 10 GW by 2027. The company's capital recycling strategy, involving the sale of mature assets to fund higher-returning investments, is also a crucial element, with recent transactions including e-fuels maker Infinium and offshore wind farms operated by Orsted. Analysts project Brookfield

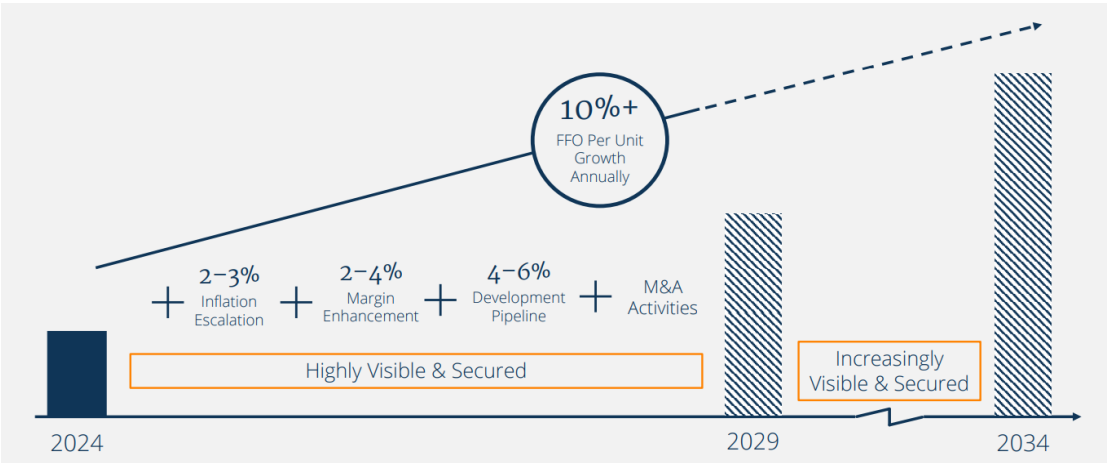
Renewable to achieve 8% to 13% annual Funds from Operations (FFO) per share growth over the next decade, fueled by a combination of inflation-linked revenue, margin enhancement activities, and strategic M&A.

BEP concluded the year with notable financial performance, primarily fueled by strategic asset sales and continued diversification of its portfolio. The company reported a of FFO of $1.2 billion, +10% y/y, reflecting a combination of operational improvements and the monetization of existing assets. This growth was largely attributed to the successful execution of its asset recycling strategy, where the company sold several mature, cash-generating assets generating approximately ~ $6 billion in proceeds since 2020. It included Saeta, one of the publicly traded renewable energy firms in Spain acquired by Brookfield Renewable Partners in 2018 and a 50% interest in Shepherds Flat, one of the largest wind farms in the U.S. This activity contributed significantly to the overall FFO, demonstrating a focus on optimizing capital allocation and enhancing returns. The company's portfolio includes hydroelectric, wind, solar, distributed energy, and emerging technologies like e-fuels, showcasing a deliberate approach to mitigating risk and capitalizing on diverse market opportunities.

The operational performance across BEP's segments was mixed, yet positive. Hydroelectric assets, particularly in Colombia (Isagen), delivered a substantial increase in FFO due to favorable pricing conditions and improved generation output, despite initial challenges in the first half of the year caused by hydrological stress. Notably, **the wind and solar segments experienced a 30% rise in FFO**, largely driven by the full-year contributions from recently acquired assets such as Neoen and Ørsteds UK offshore wind portfolio. The distributed energy, storage, and sustainable solutions segment also saw significant growth, largely due to the performance of Westinghouse, highlighting the company's strategic expansion into emerging technologies. Further, the company's diversified portfolio, including its investment in e-fuels manufacturer Infinium, demonstrates a commitment to exploring innovative solutions within the energy sector. Its balance sheet remained strong, with over **$4.3 billion in available liquidity**, providing flexibility for future investments and strategic acquisitions.

We note that BEP's financial strength is underpinned by a robust funding model, including the successful completion of nearly $27 billion in financings during the year. This included opportunistic debt extensions and refinancing activities, optimizing the company's capital structure and extending average maturities. The company's ability to access capital on favorable terms, coupled with a disciplined approach to capital deployment, has been a key factor in its financial success. Looking forward, BEP's management has articulated a healthy FFO per unit growth, driven by continued asset sales, portfolio diversification, and the execution of new contracts, particularly within its hydroelectric segment. The company's strategic focus on asset recycling, combined with its commitment to innovation and a strong balance sheet, positions it for sustained growth and value creation.

BEP's Better Visibility in Achieving Target FFO Per Unit Growth Over the Next Five Years and Beyond



Source: Brookfield Renewable Partners, Investor Presentation

Company Spotlight: Avangrid Renewables, LLC (Private)

Avangrid, Inc., a subsidiary of the Iberdrola energy group, has outlined a substantial investment strategy focused on expanding and modernizing the U.S. electrical grid. The company announced a planned expenditure of $20 billion through 2030, driven by escalating energy demand fueled by growth in manufacturing and data centers. This initiative aligns with broader efforts to bolster energy infrastructure across the nation. Currently, Avangrid operates in 24 states, managing assets totaling ~ $50 billion. Its core business segments encompass networks, which involve the operation of eight electric and natural gas utilities serving over 3.3 million customers primarily in New York and New England, and a renewables division. The company's generation capacity stands at 10.5 gigawatts, with 92% of this capacity derived from renewable sources, including onshore and offshore wind, hydro, and solar. Recent developments include the securing of two lease areas in the Gulf of Maine for offshore wind projects, alongside the construction of six new power projects with a combined capacity of 800 megawatts, specifically targeted at meeting the needs of the burgeoning data center sector. Avangrid has already established a presence with 1.25 gigawatts of capacity directly supplying data centers, and is actively pursuing additional projects to address anticipated demand increases.

A Map Demonstrating States with Avangrid Energy Generation Assets

Source: Avangrid Website

Avangrid's investment strategy is underscored by its established operational footprint and commitment to renewable energy sources. The company's portfolio includes over 75 energy generation facilities across the U.S., producing more than 9 gigawatts of power. Notably, Avangrid has been actively engaging in PPAs with data center operators, exemplified by recent agreements with Amazon and Meta for renewable energy supply. Further, the company is expanding its presence in key states like Texas, aiming to integrate new solar projects into its generation mix. Avangrid's long-term goals extend beyond immediate capacity additions; the company is committed to achieving Scope 1 and Scope 2 carbon neutrality by 2035, alongside a 35% reduction in Scope 1 greenhouse gas emissions by 2025 compared to a 2015 baseline. This commitment is manifested through ongoing investments in wind and solar projects, solidifying its position as a major player in the renewable energy landscape. **Avangrid's strategic investments are supported by a sizable operational base and a focus on diversification**. The company's operations span 24 states, and it maintains a robust pipeline of over 25 gigawatts of projects. The company's recent ventures, such as the 57-megawatt Camino Solar Project in California, demonstrate a proactive approach to expanding its renewable energy portfolio. We believe, the company's continued expansion and strategic partnerships are intended to contribute to a more resilient and sustainable energy grid for the U.S.

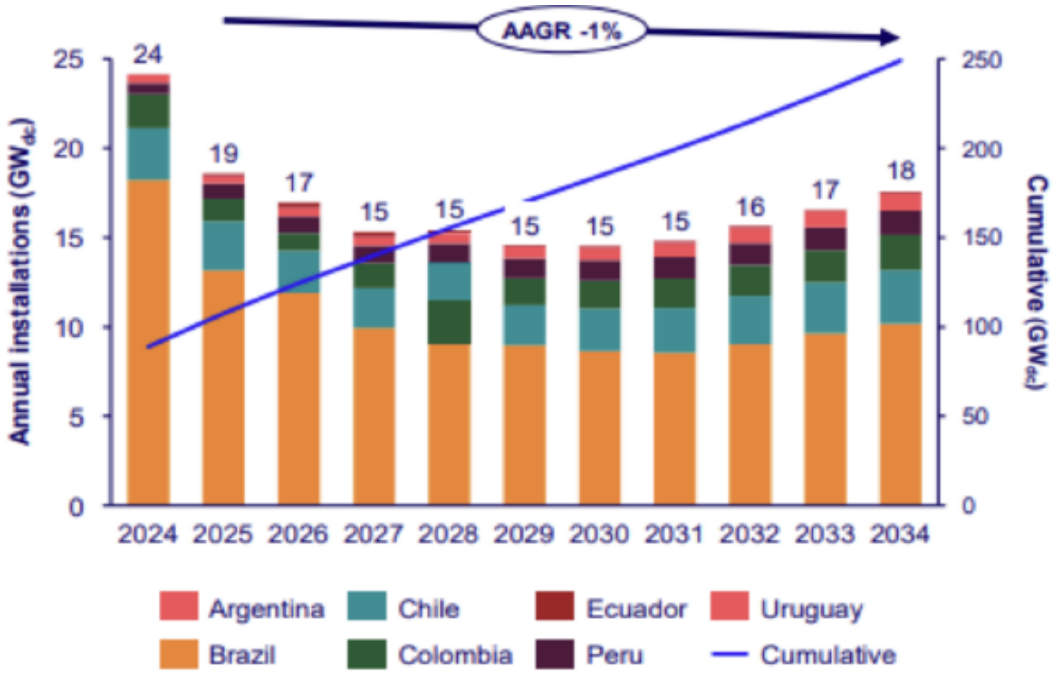
CLEANTECH NEWS

Industry Trends

US installed record 50GW of solar in 2024. In 2024, the U.S. achieved a momentous success, installing a record 50 GW of newly constructed solar energy with 84% driven by solar and storage technologies, a surge surpassing all previous records. This growth represents the largest single-year deployment by any technology in decades and is fueled by a tripling of domestic solar module production, sufficient to meet almost total U.S. demand. Alongside this expansion, solar cell manufacturing returned, bolstering the nation's energy supply chain. Texas topped the charts for new capacity additions, with 21 states establishing record installations, driven by Inflation Reduction Act incentives. However, the report cautioned that sudden changes to federal tax credits or permitting policies could dramatically hinder deployment, potentially causing a $250bn investment loss and threatening the nation's energy security and economic growth. Read more. *(ReNews)*

South America to add 160GWdc by 2034. By 2034, South America—predominantly fueled by diversification needs and increasing energy needs—aiming for approximately 160 GWdc of solar capability. A WoodMac report projects significant growth, with Brazil and Chile contributing 78% of the installations, largely driven by small-scale projects, less than 5MWdc, representing 48% of the buildout. Despite peaking in 2024, solar additions will moderate due to transmission constraints, curtailment, and rising tariffs in mature markets. Project hybridization—combining solar with energy storage—will gain traction, particularly in Brazil and Chile. Improved solar system economics, specifically a 42% reduction in LCOEE by 2035, combined with corporate power Purchase Agreements in Argentina, are expected to bolster growth. Read more. *(ReNews)*

Chart 1: South America Solar PV Capacity Outlook, 2024-2034



Source: PV Magazine

Clean geothermal energy to heat and cool Chicago homes: 'An example for the entire country'. The Blackstone Group's Blacks in Green nonprofit is spearheading a groundbreaking $10.8- million geothermal heating &cooling plan in West Woodlawn, Chicago, aiming to establish a 'sustainable square-mile' focused on neighborhood revitalization. Utilizing Chicago's existing alley spaces, the project involves installing 120 deep plastic pipes – 450 feet deep – to circulate fluid and tap into a consistent 55° F subsurface temp. This system will serve up to 69 buildings, offering residents a 30% reduction in utility bills. Nationwide, this ambitious project is one of five selected for Department of Energy funding, aligning with a growing interest in neighborhood geothermal. Read more. *(Tech Explore)*

Spain under pressure to abort nuclear energy phase-out. Facing growing international shifts, Spain is seeing mounting pressure to revisit its controversial 2035 nuclear energy phased-out target. Despite initially relying heavily on atomic energy – providing 38 percent of power in the 1980's– it now operates just five plants contributing 20% and is set to completely shut them down. However, with surging electricity demand fuelled by electric vehicle sales and AI's expansion, the Nuclear Forum contends the decision is now "completely unnecessary" due to the lack of a viable alternative. Iberdrol's chairman stated nuclear is "Absolutely necessary." Calls for extension are intensified by rising gas prices and a global resurgence of interest in nuclear, mirroring developments in nations like the Netherlands and Sweden. Read more. *(Tech Explore)*

Hydrogen sensor that could pave the way for safer, cleaner energy. A new hydrogen detection sensor designed by the University of Manchester, alongside KAUST researchers, has significant prospects for advancing cleaner energy systems. This sensor boasts exceptional speed and reliability in identifying minute hydrogen quantities – a major hurdle in ensuring hydrogen' safety and widespread adoption. Utilizing "p-doped" organic semiconductors, the device's performance surpasses current commercial detectors in terms of affordability and energy efficiency. It reacts rapidly to hydrogen via oxygen concentration changes, demonstrating a reversible response at room temperature up to 120°C. Thomas Anthopoulos emphasizes its potential to build public confidence in hydrogen technologies, enabling safer deployment across diverse applications including industry, homes, and transportation. Read more. *(Tech Explore)*

Chart 2: Scientists Develop Hydrogen Sensor That Could Pave the Way for Safer, Cleaner Energy

Source: The University of Manchester

New method significantly reduces AI energy consumption. Research at the Technische Universität München (TUM) unveils an ingenious new training methodology for neural networks that dramatically slashes energy expenditure. Professor Dietrich's team leverages a probabilistic technique, pinpointing crucial locations within training datasets where rapid adjustments are needed, rather than traditional iterative methods. Their approach, presented at NeurIPS 2024, achieves training speeds 100x faster while matching the accuracy of existing networks. This innovative strategy, targeting dynamic systems like climate models and financial markets, minimizes computation demands, resulting in significantly enhanced energy efficiency. The method's comparable accuracy reduces the need for extensive re-training, offering a pathway to more sustainable and efficient AI development. Read more. *(Tech Explore)*

Innovative molten salt reactor fuel could transform nuclear energy landscape. Idaho National Laboratory researchers are preparing to develop a breakthrough in energy, synthesizing a specially engineered uranium chloride fuel salt designed for a novel molten saline fast-spectrum nuclear reactor. After five years of development, the Molten Chloride Reactor Experiment (MCR) aims to efficiently convert over 90% of metal uranium feedstock into usable fuel salt, a challenge that initially resulted in significant waste. This process, likened to "baking a cake," was perfected through rigorous experimentation, yielding over dozens of pounds of reactor fuel per batch, up from the initial 2-3 ounces. The project utilizes depleted uranium for research, minimizing the use of high-enriched uranium and reducing costs. Operational by 2028, the MCRE will serve as a crucial stepping stone towards larger-scale reactor capabilities, alongside the Laboratory for Operation and Testing in the United States (LOTUS) test bed. Read more. *(Tech Explore)*

Round-the-clock carbon-free electricity can significantly boost advances in new energy technologies. A commitment by businesses toward powering consumption every waking moment with renewable green electricity fosters innovation and accelerates the widespread adoption of advanced clean-power technologies. A recent study fromTUBerlin, Princeton University, and Google, highlights that this "24/7 green electricity" approach goes beyond direct emission reduction. To achieve this, companies must ensure every hour of energy usage is matched with green energy, spurring demand for long-term storage solutions like iron-air batteries, and novel technologies such as the Allam cycle turbine, which utilizes pure oxygen combustion for water and CO2 emission. Read more. *(Tech Explore)*

Renewable energy: Rural areas can be the EU's green powerhouse. The European Union has an enormous, potentially untapped opportunity to harness renewable resources, primarily from its largely underused rural districts. Analysis from the JRC highlights that rural regions already generate 72% of EU renewable electricity from solar photovoltaICS, onshore wind, and hydropower, possessing nearly 80% of suitable land for expansion. This represents a theoretical capacity to produce more than five times the EU's 2023 energy demand—reaching 12,500 terawat hours annually. Spain, Romania, France, Portugal, and Italy hold the greatest combined potential. However, realizing this requires addressing local concerns about impacting agriculture, landscapes, and communities. Read more. *(Tech Explore)*

US energy secretary touts nuclear power as tech sector's thirst for electricity grows. Amidst the technology industry's escalating appetite for electricity fueled by expanding Artificial Intelligence needs, U.S. Energy Secretary Chris Wright emphasized the critical requirement for reliable, affordable energy resources. To secure the nation's "tech race," Wright champions a revival of nuclear energy, highlighting its significant contributions to U.S. electricity generation since 1990 – supplying power to over 70 million homes. Several states, including Arizona and California, are proactively exploring and expanding nuclear capacity, supported by substantial federal funding, such as California's extension of the Diablo Canyon plant's lifespan. Despite challenges related to spent radioactive fuel management and legacy mining concerns, innovative solutions are being explored. Read more. *(Tech Explore)*

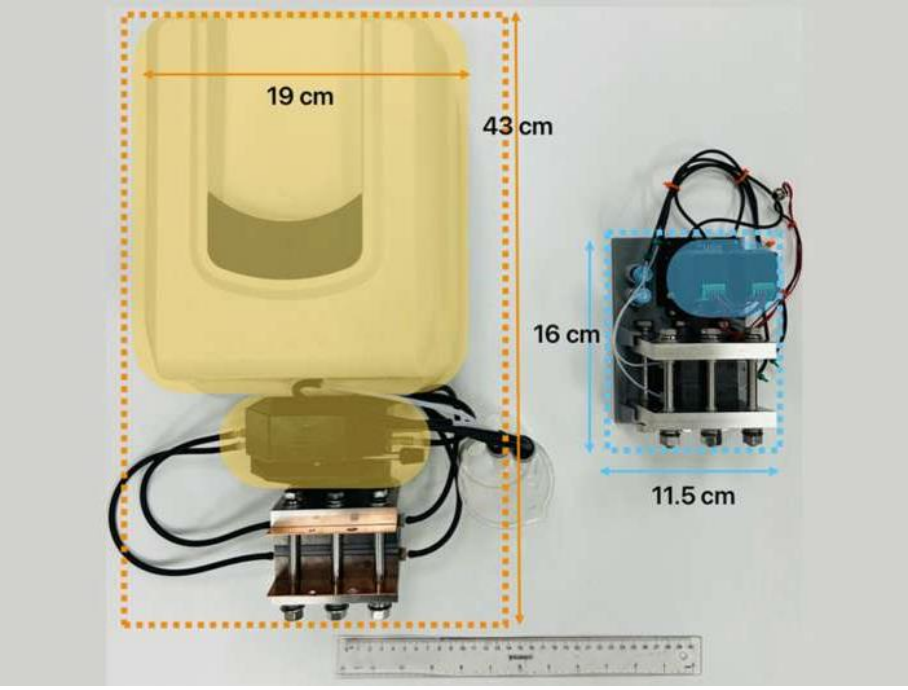
New method enhances power grid reliability assessment. Radboud University engineers have created a revolutionary method utilizing Graph Neural Networks (GNNS) to dramatically enhance power-grid dependability assessments. This significantly faster approach, published в Applied Energy, overcomes existing methods' slowness, achieving speeds a thousandfold greater. The GNN examines entire grids as unified systems, considering cable properties and node data to accurately predict rerouting capabilities under contingencies. Grid operators can quickly determine optimal solutions, as demonstrated by Alliänder's initial implementation on a medium-voltage grid. The

system's average accuracy is 5% higher than traditional calculations, ensuring rapid responses to failures and maintaining stable power distribution. Read more. *(Tech Explore)*

Enhanced geothermal systems promise wider access to clean energy. Advances in enhanced geothermal system (Egs) exploration are poised to vastly increase access to cleaner, sustainable energy. Historically reliant on volcanically active locales, EGs, adapted from oilfield techniques, utilize faster drilling – including horizontal drilling and synthetic diamonds – to tap deep subterranean reservoirs across the globe. Experts forecast EGS could contribute up to 45% of electricity supply in some countries by 2045, significantly expanding beyond the current global 0.5% share. By 2027, EGS may be competitive with electricity prices in the United States, potentially increasing California's geothermal capacity tenfold. To mitigate earthquake risks associated with fracturing deep rocks, operators employ "traffic-light" protocols involving slowed drilling and, critically, creating numerous smaller fractures rather than large ones. Read more. *(Tech Explore)*

Mini flow battery speeds energy storage research. U.S. Department of Energy's Pacific National Laboratory has launched a key advancement in flow battery research via the development of a mini flow cell prototype. Measuring approximately the size of a playing card, this scalable design drastically minimizes the amount of starting material required – down to mere grains of sand— while matching the performance of standard lab-based tests. Spearhead by Soowohan Kim and Ruizhou Feng, the innovation employs expertise in flow battery design, microfluidics, and analytical chemistry. The mini flow cell's purpose is to accelerate the discovery of new grid energy storage technologies by drastically reducing testing resources and time. Read more. *(Tech Explore)*

Chart 3: A New Mini Flow Cell Battery (Right) Is Designed to Speed the Testing of Promising New Flow Battery Technologies



Source: Ruozhu Feng | Pacific Northwest National Laboratory, Tech Explore

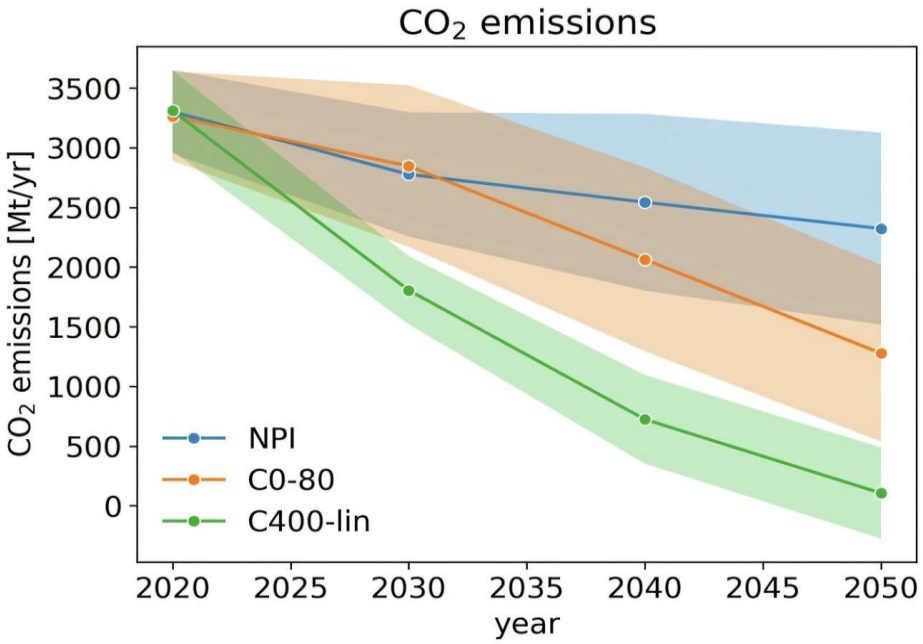
Solar-powered device captures carbon dioxide from air to make sustainable fuel. Researchers at the University of Cambridge have developed a groundbreaking solar-powered device capable of directly extracting carbon dioxide from the atmosphere and transforming it into useful fuel, namely syngasas intermediate for chemical production. This novel reactor, drawing inspiration from photosynthesis, operates independently of traditional power and fossil fuels. Unlike

conventional carbon capture, it avoids energy-intense storage and transportation ofCO2, using sunlight to drive the conversion process. The device employs filters to absorb CO2 at night and mirrors to concentrate sunlight for efficient reactions, producing syngas for applications within the chemical and pharmaceutical sectors. Read more. *(Tech Explore)*

Hybrid battery design: Lithium-hydrogen system offers high energy density. Research led by the University of Science and Technology of China has revealed a novel lithium-hydrogen battery design offering significant advantages over existing technologies. The key innovation utilizes hydrogen – acting as the anode – dramatically increasing the battery's energy density to 2825 Wh/g and maintaining a robust voltage of 3V. The prototype system employs a lithium metal anode, a platinum-coated gas diffusion layer as the hydrogen cathode, and a solid electrolyte for efficient ion transport, achieving a remarkable 99.7% round-trip efficiency. To further enhance cost-effectiveness and scale, the team developed an "anode- free" Li-H battery that deposits lithium from electrolytes. Read more. *(Tech Explore)*

Quantifying the 'hydrogen economy': Study finds relatively small, but critical, role for decarbonization. A new international modeling assessment, appearing in Nature Communications, indicates that electrification will constitute approximately Europe's final energy consumption by 2050, emerging as the more cost-effectively sustainable primary energy source. The study projects a significantly lower, 10% share for direct hydrogen utilization, acknowledging hydrogen's crucial role within specific decarbonization pathways, particularly for heavy industry and transportation. Researchers highlight "sector coupling"—the increasing interdependence between sectors like residential energy and transport—as a critical factor in energy transition modeling. Despite this relatively small direct hydrogen share, the research underscores the need to continue hydrogen development, including applications such as synthetic fuels and sustainable chemical production. Read more. *(Tech Explore)*

Chart 4: CO_2 Emissions Reduction Pathways Across Three Scenarios



Source: Nature Communications (2025)

Next-gen solar cells now fully recyclable with water-based method. A novel water-mediated method developed at Linkóping University overcomes a key challenge in solar energy, enabling the fully and repeatedly recyclably of next-generation perovskitive solar cells, addressing the impending waste of current silicon solar panel technologies. Unlike previous methods utilizing toxic solvents like dimethylformamide, researchers have perfected a water-based solution for dismantling solar cells, allowing for the complete recovery and reuse of components including cover glasses, electrodes,

perovskite layers, and charge transport layers. These addresses growing concerns regarding electronic waste and ensures the high efficiency of perovskite cells is retained through multiple recycling cycles. Read more. *(Tech Explore)*

RV Industry survey gives us a hint about the future of clean technology. Recent RV sales statistics, revealed through a YouTube RV Miles analysis, indicate a significant rise inRV usage– averaging around 50 more days annually– along with a substantial increase in the number of vehicles functioning as permanent homes. The RV industry, wary of regulatory scrutiny classifying RV's as housing, is focusing on improved durability whilst acknowledging the shift. Key opportunities exist for clean-- tech companies, particularly vehicle manufacturers, to capitalize on the growing demand for electric vehicles and plug--in hybrids used for towing, and for companies offering flexible power solutions like portable solar and battery systems. Read more. *(Clean Technica)*

Renewables more cost effective than direct or indirect carbon capture. Professor Mark Jacobson's 2025 research in *Environment Science & Technology*, demonstrates that investments in carbon capture and/or synthetic direct air carbon capture (CCS&DAC) are fundamentally less effective and costly than transitioning entirely to wind-water-solar (WW) sources for electricity and heat. The study, evaluating 149 countries, reveals that WW achieves significant reductions in energy demand (around 54.4%) alongside massive declines in social costs (around 91.8%), energy costs, and air pollution deaths – all at significantly lower expenses than CCS&DAC. Critically, CCS&DAC doesn't reduce overall CO2 levels and instead increases social cost, adding an estimated $60-$80 trillion annually. Switching to renewables eliminates not only emissions but also the inefficiencies of outdated fossil fuel infrastructure. Read more. *(Clean Technica)*

Unleashing American renewable energy dominance. Driven by a surge in renewable energy — including wind, solar, and other clean sectors — the US power grid experienced its highest generation volume in over two decades in 2024. Despite an ambitious "American energy dominane" plan, natural gas only added 2.4GW of new capacity, significantly less than the 71GW contributed by renewables. This shift has further pushed coal's role to a mere 15 percent of the US power mix, a decline accelerated by falling renewable energy prices and increased corporate procurement of renewable energy, up 34 percent year-over-year. Critics worry President Trump's policies, potentially including the elimination of key federal tax credits, will stifle further growth in these sectors, with advocates lobbying for their preservation alongside key SenateDemocrats. Read more. *(Clean Technica)*

Prediction: Solar Energy beats natural gas by a mile in 2025. The Energy Information Agency (EIA) predicts a decisive surge of solar power in 2025, anticipating 63/Gigawatts in new capacity alongside 81% of all new generating capacity additions, significantly surpassing projections for natural gas at a modest 4.4 GW. This trend reflects continued strong growth in the solar industry, driven by factors like the 10% bonus federal tax credit for domestic solar modules, exemplified by deals between ES Foundry and Bila Solar. Texas is poised to lead in solar development with 11.6 GW, followed by California. Despite President Trump's previous support for fossil fuels, the shifting geopolitical landscape – particularly with a newly formed alliance against Ukraine – presents both opportunities and challenges for U.S. exporters. Read more. *(Clean Technica)*

Reflections after covering cleantech industries for 15½ years. In covering clean technology's advancements for over 15 ½ years, a stark reality emerges: While remarkable progress has occurred—with solar and wind energy dominating new capacity additions and electric sales surging globally—this momentum is now severely hindered in the US. Technological breakthroughs, combined with supportive policies like the German feed-in tariff and China's tax credits, fueled this growth, particularly in electric. However, current policy shifts in the US are actively suppressing clean tech development, jeopardizing America's position as a technological leader. The article highlights a concerning trend of slowing progress, emphasizing that market innovation and private sector response will be crucial to maintain a competitive edge, especially as global competitors advance. Read more. *(Clean Technica)*

Manufacturers continue to move to renewable energy-powered production. Recent manufacturing moves indicate a rapid expansion of renewable energies across key industrial US production facilities. Since August 2022, 160+ clean-energy production facilities—with 47 announced alone in 2024—are fueled by tax credits, projecting 100,000 jobs and $500B investment. Notable gains include 50GB of solar module production in 2024 and the reactivation of U.S. silicon

solar cell manufacturing after 2019. Key companies like Enphase Energy, First Solar, and Steel Dynamics are spearheading this transition, displacing significant emissions and employing sustainable practices. Initiatives range from utilizing renewable-source electricity contracts and on- site solar/wind generation to innovative approaches such as Oatly's plant- based milk production. Read more. *(Clean Technica)*

Heads explode as virtual power plants meet self-defending grids. MIT's innovative "EUREICA" research tackles escalating grid stability threats with a reactive, internet-networked system. This local electricity market concept automatically utilizes ratepayers—boasting a combined 1 GW of distributed energy storage—and their IoT devices (smart thermostats, EV's, solar panels, etc.) to combat disruptions like cyber assaults or natural emergencies. During a simulated attack, the system intelligently directs homeowners to either supply supplemental power or reduce energy consumption. This coordinated effort, enabled by a sophisticated algorithm, seeks to restore grid stability and mitigate power losses—as demonstrated across various grid risk scenarios. Read more. *(Clean Technica)*

Debunking the myth: Electrolyzing Hydrogen for energy is wasteful & higher emissions. Electolysis emerges as a significant impediment in achieving a sustainable energy landscape despite its frequent portrayal as a clean hydrogen production method. Analysis reveals substantial inefficiencies, with electrolysis incurring 30-50 % energy losses during production— significantly lower than the 77-90% efficiency of battery-electric vehicles and the 25-35% of hydrogen fuel cell vehicles. Compared to heat pump systems, which deliver 3-5 times the energy they consume, the process is markedly wasteful. Furthermore, electrolysis is prohibitivly costly, with current production expenses exceeding €10/kg, far greater than earlier projections. This inefficiency necessitates a far larger renewable energy capacity – approximately 5,000 Twh annually – to produce enough hydrogen to replace even 10% of global natural gas consumption. Read more. *(Clean Technica)*

Renewables set new records in Texas. In a significant trend, Texas renewables—featuring wind, solar, and energy grid batteries—are smashing historic records as of mid-March, exceeding production levels from two years previous. Despite staunch opposition from certain Texas lawmakers, ERCOT—the state's dominant grid operator—is seeing unprecedented growth, with wind production hitting 28,470MW, solar hitting 24,818MW, and batteries discharging a staggering 4,833 Megawatts. This growth is fueled by the Inflation Reduction Act and a state that's rapidly adding solar and storage capacity—averaging approximately one GW per month—while simultaneously struggling to expand gas-fired plants. Battery usage is increasing dramatically, providing an estimated 10% of ERCOT's demand at 6:15 PM. Republicans are attempting to roll back incentives, but the data reveals renewables are now outshining thermal generation across all use cases. Read more. *(Clean Technica)*

Chart 5: Texas Generated more Power from Solar than Coal - Electricity Generation in March of each Year (TWh)

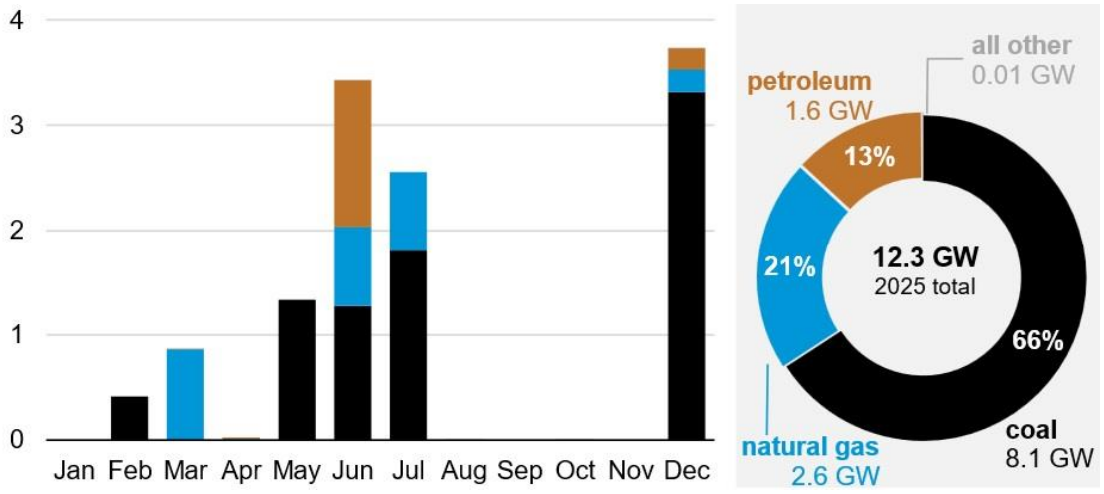
Source: Ember, FT Graphic – John Burn-Murdoch, Financial Times

UK to fast-track grid connection of clean energy projects. Britain is implementing a groundbreaking shift in energy project deployment—accelerating grid connection and infrastructure construction to achieve its ambitious decarbonisation goal by 2030. A new legislation, the "planning and infrastructure bill," will adopt a "first ready, first connected" policy, departing from the current "first come, first served" system. The initiative will fast track approvals for major projects like wind, solar, hydrogen, carbon capture, and nuclear, streamlining the planning process and addressing previous delays. Furthermore, the government anticipates reducing public opposition through bill discounts for residents near new pylons and will modify rules to prevent legal challenges, fostering quicker approvals for crucial clean energy infrastructure. The changes are aimed at significantly boosting the country's energy transmission network and minimizing energy costs for households. Read more. *(Reuters)*

China's solar expansion to slow for first time in six years, industry body says. China\'s robust solar expansion, a trend continuing since 2019, is forecast to cool in 2024 due to a moderated industry growth, as stated by the China Photvoltaic Industry Association. Projected new capacity for 2024 sits between 215GW – 255GW, representing an 8%to 23% decrease from last year's record installation of 277.57GW. The shift towards a market-based pricing model initiated in June is anticipated to introduce complexity and uncertainty for investors. Despite this adjustment, rising demand from sectors like electric vehicles and data centers will maintain the need for solar energy. Local governments are currently clarifying their implementation plans, creating a period of observation before definitive impacts are realized. Read more. *(Reuters)*

Planned US coal-fired power retirements to double in 2025, EIA says. The U.S. Energy Information Agency announced a significant anticipated acceleration of coal-fueled generation retirements, with an estimated 8.1GW set to vanish by year'end, roughly doubling the 4GW retired in 2024. Driven by decreasing demand for coal – now a mere 16 percent of the U.S. electricity supply – and climate change goals, the trend is spurred by cheaper natural gas and renewable alternatives. Planned retirements include major facilities like Intermountain Power Project and several others totaling 12.3 GW, primarily comprised of 66% coal and 21% natural gas plants. Simultaneously, utilities are anticipating a surge in new generation capacity addition of 63 GW in 2025, dominated by solar, battery storage, and wind, marking a 30% increase in capacity installations compared to 2024, the largest since 2002. Read more. *(Reuters)*

Chart 6: U.S. Planned Utility-Scale Electric-Generating Capacity to Increase in 2025



Source: U.S. Energy Information Administration, Preliminary Monthly Electric Generator Inventory, December 2024

US oil, biofuel groups unite to urge new Trump EPA to boost biofuel mandates. U.S. oil and biofuel lobbying coalitions have surprisingly unified in urging the Trump administration's newly-appointed EPA head to elevate renewable fuel obligations. These groups, encompassing entities like the Renewable Fuels Association and Growth Energy, aim to boost biofuel mandates beyond the current levels established for 2023-2025 (20.94b gallons, 21.54b gallons, and 22.33b

gallons respectively). Recognizing a shared threat from increasing electric vehicle adoption, the collaboration seeks multi-year Renewable Fuels Standard (RVO) targets to ensure market certainty and reflect ongoing investments in feedstocks and production capacity. The move represents an unusual alignment prompted by a mutual interest in supporting liquid fuels and combating the rise of electric vehicles, demanding more consistent volumes for biofuels moving into 2026. Read more. *(Reuters)*

Regulatory Updates

Dismantling green finance laws is no solution for EU competitiveness. Amidst efforts to increase EU competitiveness, the European Commission plans to implement its first Omnibus Regulation, focusing on corporate sustainability reporting and accountability. However, concerning reports indicate the commission intends to reconsider existing legislation, potentially dismantling key aspects of the current sustainability finance framework. Despite its promises of "simplifying without deregulation," officials are hinting at alterations aligning with international standards, raising concerns about mobilizing trillions in sustainable investment flows. The EU's sustainable finance agenda critically depends on transparency, a principle enshrined in the "double materiality" requirement. Read more. *(Clean Technica)*

Chevron CEO urges lasting US energy policy, not extreme swings. Chevron CEO Michael Wirth stressed the imperative for lasting and consistent US energy policy, arguing against drastic policy shifts following the Trump administration's rapid changes. He stated that inconsistent regulations are detrimental to long-term investment and operational stability, citing Chevron's decades-allocated capital. Wirth specifically called for policy measures to be implemented through legislation, avoiding potential reversals by future administrations. The company anticipates increasing oil output to 300,000 from 200,000 barrels per day in the Gulf of America and reaching 1,000,000 bpd in the Permian basin, while also planning to plateau shale production and prioritize free cash flow. Wirth acknowledged continued investment prospects in Asia due to a stronger economic outlook compared to Europe. Read more. *(Reuters)*

Capital Markets

Terabase secures $130 million series C from Softbank Vision Fund 2 to accelerate construction of utility-scale Solar. Terabase Energy, a firm revolutionizing utility-solar deployment, concluded a robust Series C round with Soft bank Vision Fund 2 securing $130 million, boosting their total funding to over $200 million. Funds will accelerate the rollout of its digital solutions, including Terafab—a robotics-driven construction line—aiming to dramatically reduce costs and timelines for large solar projects. This investment validates Terabase's mission to achieve terawatts of solar, supported by technologies like PlantPredict and Construct, which have already empowered over 12 GW of projects. Read more. *(Business Wire)*

Aligned Climate Capital raises $85 Million for clean energy venture fund. Aligned CleanTec Capital secured a final closure of investment totaling $85 million for its second venture fund, Aligned Climate Fund 2 LP (ACF2), concentrating on scaling clean energy and decarbonization technologies. This fund targets companies between Seed through Series B rounds—focusing on sectors like clen energy, efficient infrastructure, and electric transportation. Aligned prioritizes rapidly scaling businesses with financeable solutions, actively aiding them with financing and partnerships. 9 companies—including BoxPower, BrightNight, and ChargerHelp! —are within the portfolio, alongside a yet-to-disclose geothermal firm. Read more. *(ESG Today)*

Archer Aviation raises $300 million in BlackRock-backed funding. Archer Aviation, an electric vertical-tookoff-and-landing (eVTOL) air-mobility firm, announced raising an extra $300 million from institutional investors, spearheaded by Blackrock, bolstering its efforts in developing its aircraft platform. This fresh capital, totaling $1 billion in liquidity, will be channeled towards key investments like composite materials and batteries. The funding arrives amid a cash shortfall within the eVTOLA industry, but analysts view Archer positively due to its strong position and anticipated certification.. Read more. *(Reuters)*

Chart 7: Midnight, an All-Electric Aircraft from Archer Aviation

Source: *REUTERS/Carlos Barria/File Photo*

NextEra mulls doubling $20 billion investment in Texas in next few years. NextEra Energy anticipates doubling its $20-billion investment in Texas electricity generating capacity within the next few years, reflecting the state's rapidly increasing power demand. Driven by expansion of data centered and electrification, Texas is witnessing one of the most significant demand growth surges in the US. NextEra is strategically evaluating land—particularly within the Perm Basin—for new development. This expansion is fueled by the state's pivotal role in energy production and the growing needs of major tech companies and industries. Executives from Next Era, Google, and the Public Utilities Commission of Texas discussed the challenges of managing this surge while ensuring a dependable grid. Read more. *(Reuters)*

Company News

US PV firm picks up 121MW of contracts. US construction firm, Louth Call Renewables, recently finalized deals to develop three solar energy projects across Illinois, totaling 121-Megawatt capacity. Managing member, Nicholas Sylvestre, highlights Illinois' dedication to clean energy as a key driver for expansion. These projects aim to deliver resilient and economical renewable energy, alongside creating approximately 400 local jobs during its various phases. The ventures promise long-term tax revenue and land lease payments, bolstering community finances and supporting municipal infrastructure improvements, further cementing Louth Callan Renewables' national growth strategy. Read more. *(ReNews)*

GAF Energy unveils its next-gen nailable solar shingle, now 23% more powerful. Following a successful launch, GAF Energia has officially debuted the Timberlight Solar® ES 2, its next-Generation Solar shingle, designed to revolutionize residential solar adoption. Featuring a 23% boost in power output with each shingle producing 57 watts, coupled with a larger footprint and Enhanced StrikeZone™ technology, the ES 2 builds upon the 2022 Timberline Solar® innovation. These upgrades, alongside broader design compatibility within the GAF Timberline® shingle collection and refined aesthetics including smaller transition boxes, significantly improve installation speed and efficiency for contractors and homeowners. Read more. *(Clean Technica)*

Chart 8: GAF Energy's Next-Gen Timberline Solar® ES 2 Solar Shingle

Source: Clean Technica

RPC picks contractors for Finnish BESS. Renewable Power Capital (RPC) finalised contracts with Sungrow and Suvicio for the Kalanti batteryenergy storage system in Finland, slated to commence construction this November. These 50 MW / 100MWh projects, RPC's inaugural operating BESS, will be delivered with Sungrew's PowerTitan 2.0 liquid-cooled technology and will be completed by 2026. Suvic Oy will handle the civil works, substation, and equipment installation. The project will bolster RPC's renewables portfolio, adding to their existing 170 MW onshore wind assets. It will supply grid services while also participating in wholesale energy trading. RPC believes this project is crucial to leveraging Finland's wind resources and strengthens the company's position in the key market. Read more. *(ReNews)*

Trinasolar begins deliveries for UK solar-BESS. Trinasol's innovative approach to sustainable energy has commenced with deliveries for a combined solar-and-Battery Energy Storage System (BESS) project in Essex, commissioned by Low Carbon. This marks Trinastolar's first integrated project, featuring 49.9 megawatts of solar panel generation capable of powering over 16,500 homes and preventing almost 15,000 tonnes of annual carbon emissions. The project utilizes 80,000 Vertex N dual-glass bifacial solar modules and a 70 MWh Elementa BESS, ensuring compatibility and optimisation. It's one of four Low Carbon sites utilizing Trinastolar's BESS capabilities, totaling 190 M Wh. Both Low Carbon and Trinastolar express excitement about this integrated project's impact and anticipate further collaborations driving the future of solar energy. Read more. *(ReNews)*

Ann Arbor's sustainable energy utility aims to build the electric power grid of the future alongside the old one. Ann Arbor, Michigan is set on pioneering a groundbreaking model for localized electricity with the launch of its sustainable utility (EUS). Voters overwhelmingly supported the creation of this utility, designed to operate alongside the established investor-owned utility, DTE; it won't replace DTE. Residents can still receive power from DTE if needed, but prioritize local clean energy generation through rooftop solar with battery storage, energy efficiency programs, and microgrids. This innovative SEU focuses on providing clean energy through community solar and networked geothermal, particularly for low-income communities. Read more. *(Tech Explore)*

First Solar announces final sale amount of 2024 section 45x advanced manufacturing production tax credits. First Solar, a US-based solar manufacturer, announced the completion of two key tax credit transfer agreements totaling approximately $857-milion related to 2024 production of solar modules within the U.S. via Section 45X Production Tax Credit program. A third party will pay $0.955 per $1.00 of tax credits for a fixed $645 million transaction, already partially settled, alongside a $212 million variable portion expected to conclude by February 28, 2025. This transaction boosts First Solar's balance sheet while supporting domestic manufacturing at its Ohio and Alabama facilities, producing thin-filum solar panels. Read more. *(Clean Technica)*

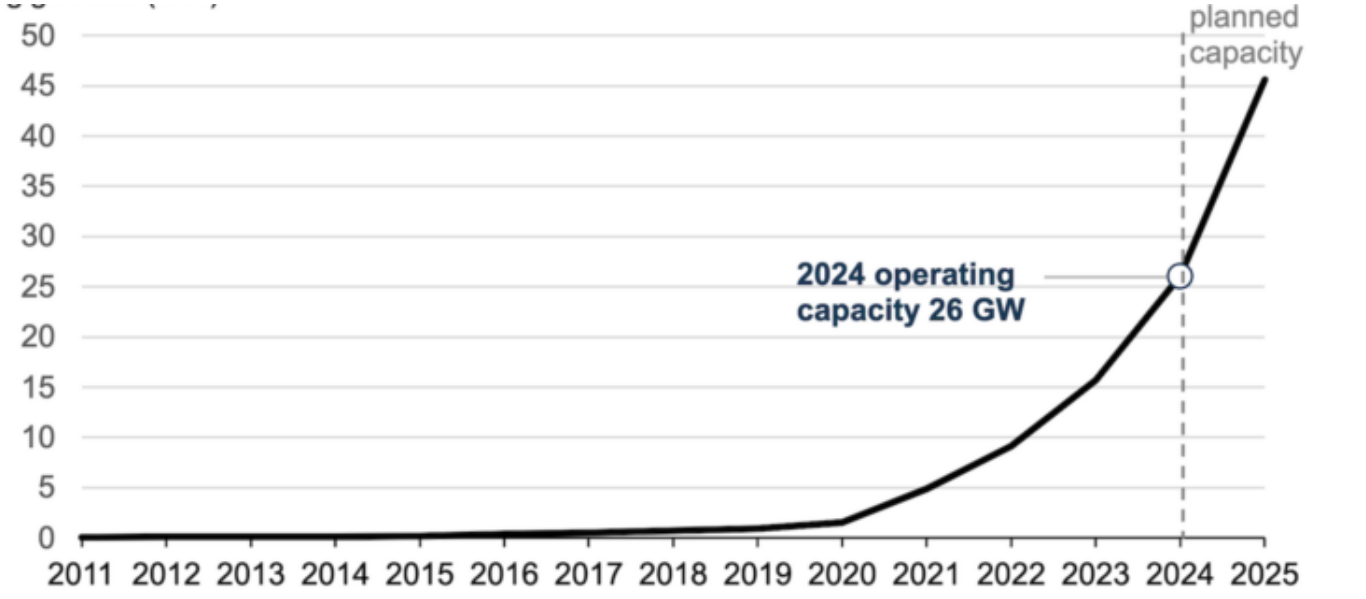
Iberdrola seeks partner for 1 GW renewables portfolio, sources say. Spanish energy group, Iberdrola, is seeking outside capital by pursuing the potential sale of a 1-gigwatt portfolio of renewable assets – codenamed "Romeo 2.0"—encompassing wind and solar projects. Following the successful 2023 sale of the “Romeo” portfolio (1.3GWh) to a sovereign wealth fund for 1.2 Billlion euros, Iberdroda is aiming to finance new investments. Evercore is advising the company during this early-stage process, where the exact asset combination will determine the valuation. The strategy aligns with Iberdrola’s existing asset rotation scheme, mirroring prior partnerships with entities such as Masdar and Kansai Electric Power, and utilizing capital raised to further expand their renewable ventures. Read more. *(Reuters)*

Tech company Corning, US solar manufacturers partner on American-made panel. Corning is partnering with U.S. solar entities Sunivia and Heliene to create America's sole fully American-fabricated solar panel series. This crucial alliance, supported by Corning’s Michigan-grown silicon wafers and polysiccon, addresses the need for domestic production within the solar sector. The new modules boast up to 66% domestic content, exceeding current market standards, and qualify project developers for an additional 10% bonus in domestic content tax credits under Biden's Inflation Reduction Act. Driven by government investments and shifting energy policy, this initiative aims to bolster the U.S. energy supply chain and create domestic jobs, aligning with the broader goal of increasing American energy resources. Read more. *(Reuters)*

GE Vernova signs deal to support Amazon's data center expansion. GE Vernovia has formalized a partnership with Amazon to bolster the company’s data center expansion strategies. This arrangement directly addresses escalating global energy needs while simultaneously enhancing grid security and lowering carbon emissions from power systems. GE Vernova will supply a diverse range of electrification solutions tailored for data centres geographically spanning North America, Europe, and Asia. Pablo Koziner, the firm’s chief commercial officer, highlighted GE Vernova's suitability due to its expansive portfolio. Moreover, AWS will aid GE Vernova’s cloud migration and innovation advancements via cloud services, marking a mutually beneficial strategic alliance focused on sustainable operations. Read more. *(Reuters)*

CLEANTECH CHART OF THE MONTH

Chart 9: Cumulative U.S. Utility-Scale Battery Power Capacity (2011-2025)



Source: U.S. Energy Information Administration, Preliminary Monthly Electric Generator Inventory, January 2025

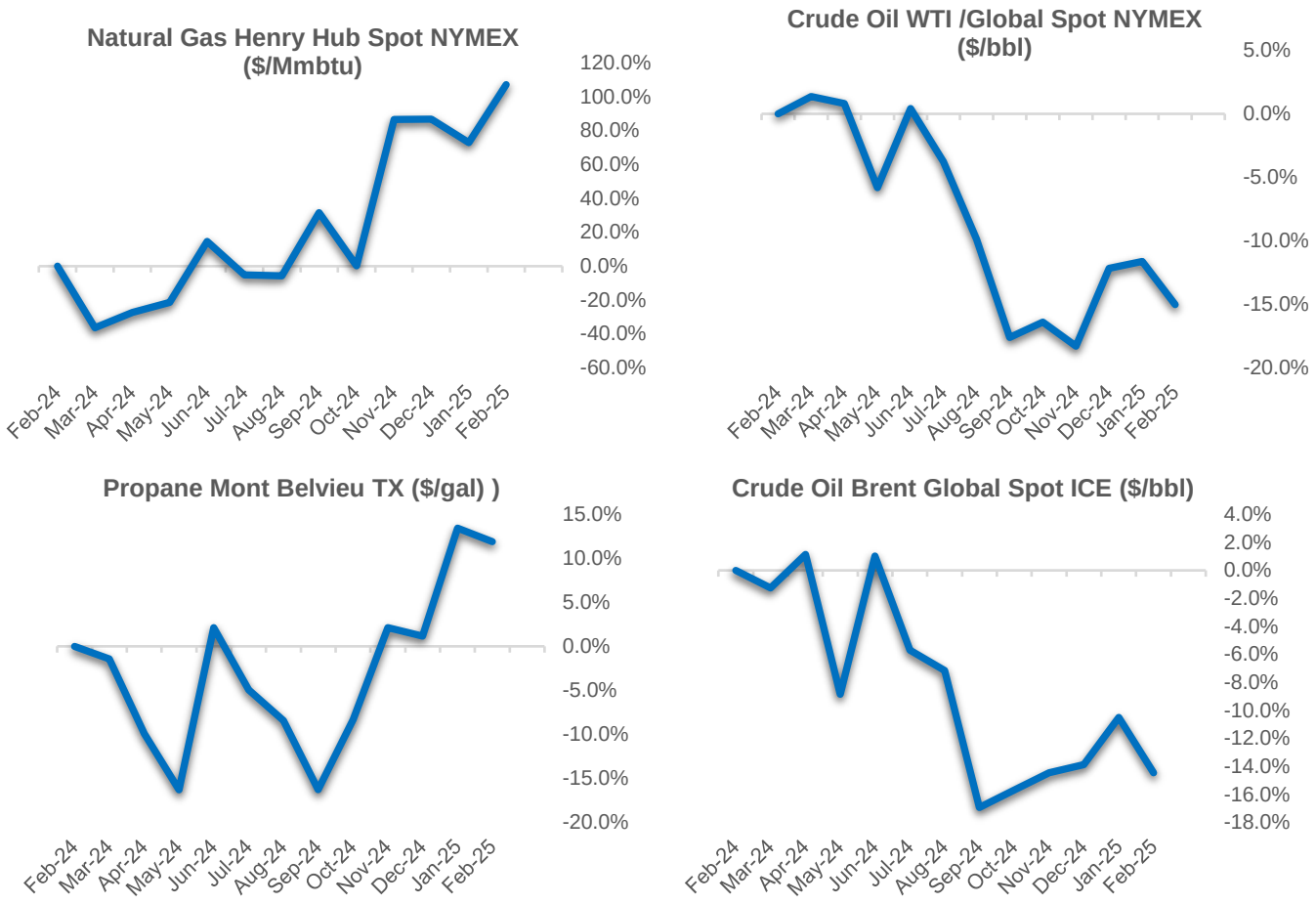
CLEANTECH COMMODITIES

Cleantech Commodities	Price as of 28 Feb 2025	1M	3M	6M	1Y	YTD
Natural Gas and Crude Oil						
Natural Gas Henry Hub Spot NYMEX ($/Mmbtu)	3.93	▲ 34.16%	▲ 15.96%	▲ 103.68%	▲ 62.44%	▲ 103.68%
Crude Oil WTI /Global Spot NYMEX ($/bbl)	70.36	▼ -3.40%	▲ 3.08%	▼ -5.58%	▼ -15.05%	▼ -5.58%
Crude Oil Brent Global Spot ICE ($/bbl)	74.05	▼ -3.97%	▼ -0.15%	▼ -7.67%	▼ -15.14%	▼ -7.67%
Propane Mont Belvieu TX ($/gal)	0.90	▼ -1.53%	▲ 9.48%	▲ 20.29%	▲ 7.90%	▲ 20.29%
Refined Products						
Gasoline Conv Regular NY Harbor ($/gal)	2.10	▼ -1.04%	▲ 3.19%	▼ -5.41%	▼ -16.90%	▼ -5.41%
Diesel No. 2 Low Sulfur NY Harbor ($/gal)	2.46	▲ 0.12%	▲ 13.49%	▲ 11.18%	▼ -1.96%	▲ 11.18%
Heating Oil No. 2 NY Harbor ($/gal)	2.32	▼ -1.98%	▲ 10.51%	▲ 12.00%	▼ -2.39%	▲ 12.00%
Jet Fuel Kerosene-Type U.S. Gulf Coast ($/gal)	2.21	▼ -4.04%	▲ 8.28%	▲ 3.86%	▼ -10.46%	▲ 3.86%
Gasoil Near Term (IFEU $/mt)	690.75	▼ -2.88%	▲ 2.03%	▼ -0.83%	▼ -12.06%	▼ -0.83%
Ethanol Iowa (CRB $/gallon)	1.53	▼ -5.86%	▼ -2.24%	▼ -10.29%	▼ -22.59%	▼ -10.29%
WTI USG 3:2:1 Crack Spread	19.46	▲ 5.00%	▲ 39.41%	▲ 16.82%	▲ 11.62%	▲ 16.82%

Metals	Price as of 28 Feb 2025	1M	3M	6M	1Y	YTD
Copper Cash Official LME ($/mt)	9363.50	▲ 4.63%	▲ 5.46%	▲ 1.61%	▼ -1.19%	▲ 1.61%
Lithium Carbonate 99.2% USGS ($/t)	10525.00	▼ -1.64%	▼ -1.64%	▲ 2.18%	▼ -17.13%	▲ 2.18%
Nickel Cash Official LME ($/mt)	15460.00	▲ 2.79%	▼ -1.81%	▼ -8.09%	▼ -8.84%	▼ -8.09%
Cobalt Cash Official LME ($/mt)	22845.00	▲ 6.31%	▼ -5.99%	▼ -4.81%	▼ -14.69%	▼ -4.81%
Platinum Indust (Engelhard) ($/ozt)	962.00	▼ -1.74%	▲ 2.89%	▲ 1.91%	▼ -5.22%	▲ 1.91%
Uranium Near Term (NYM $/lbs)	64.95	▼ -8.71%	▼ -15.59%	▼ -17.99%	▼ -24.17%	▼ -17.99%

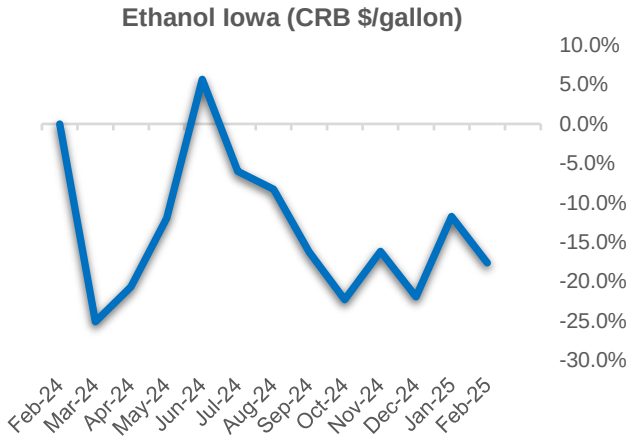
Source: Intro-act, FactSet, Investing.com. Data as of 02/28/25.

Chart 10: Indexed Change in Natural Gas and Crude Oil Prices in Last 12 Months



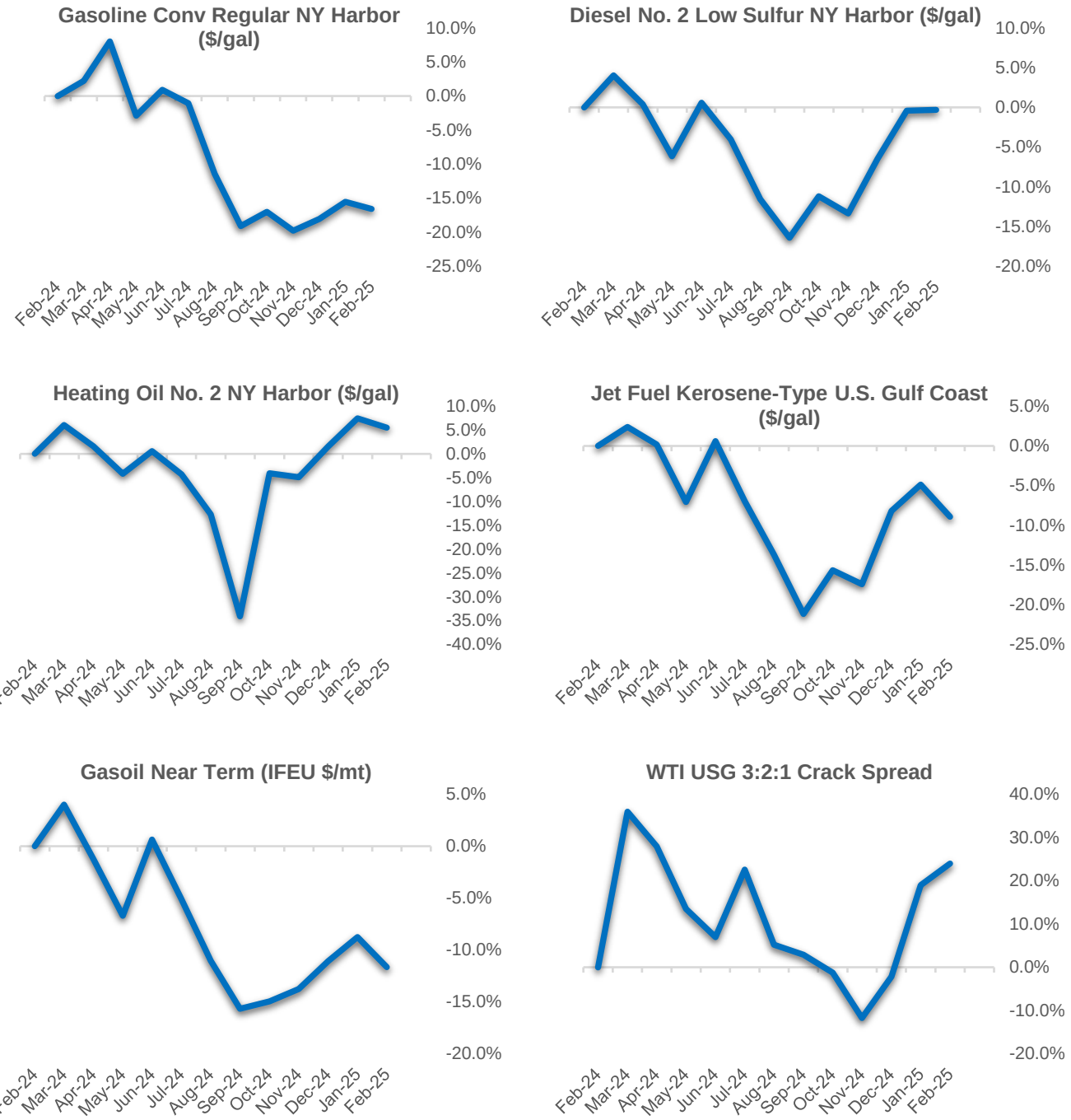
Source: Intro-act, FactSet, Investing.com. Data as of 02/28/25.

Chart 11: Indexed Change in Ethanol Prices in Last 12 Months



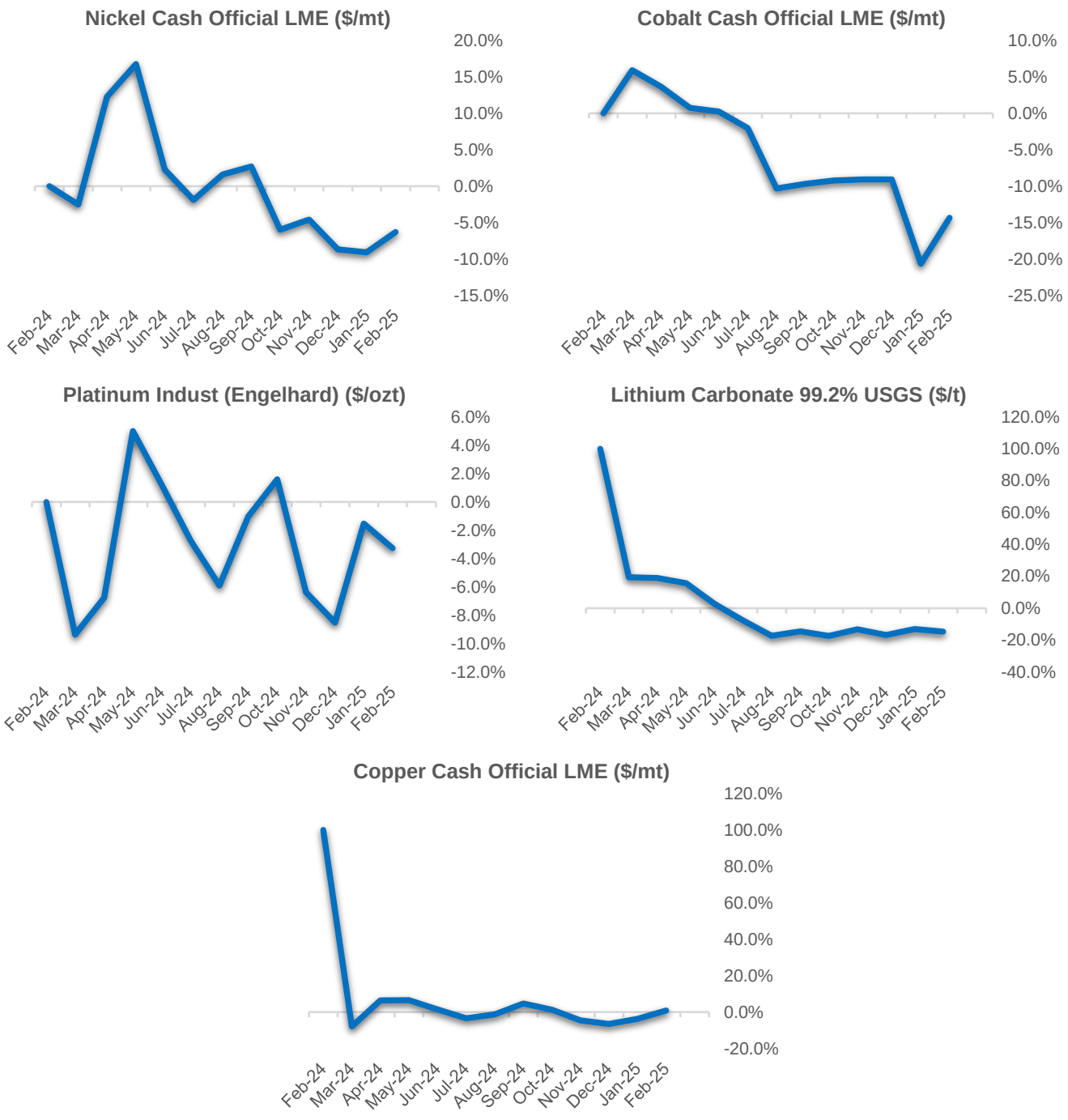
Source: Intro-act, FactSet, Investing.com. Data as of 02/28/25.

Chart 12: Indexed Change in Refined Products in Prices Last 12 Months



Source: Intro-act, FactSet Data as of 02/28/25.

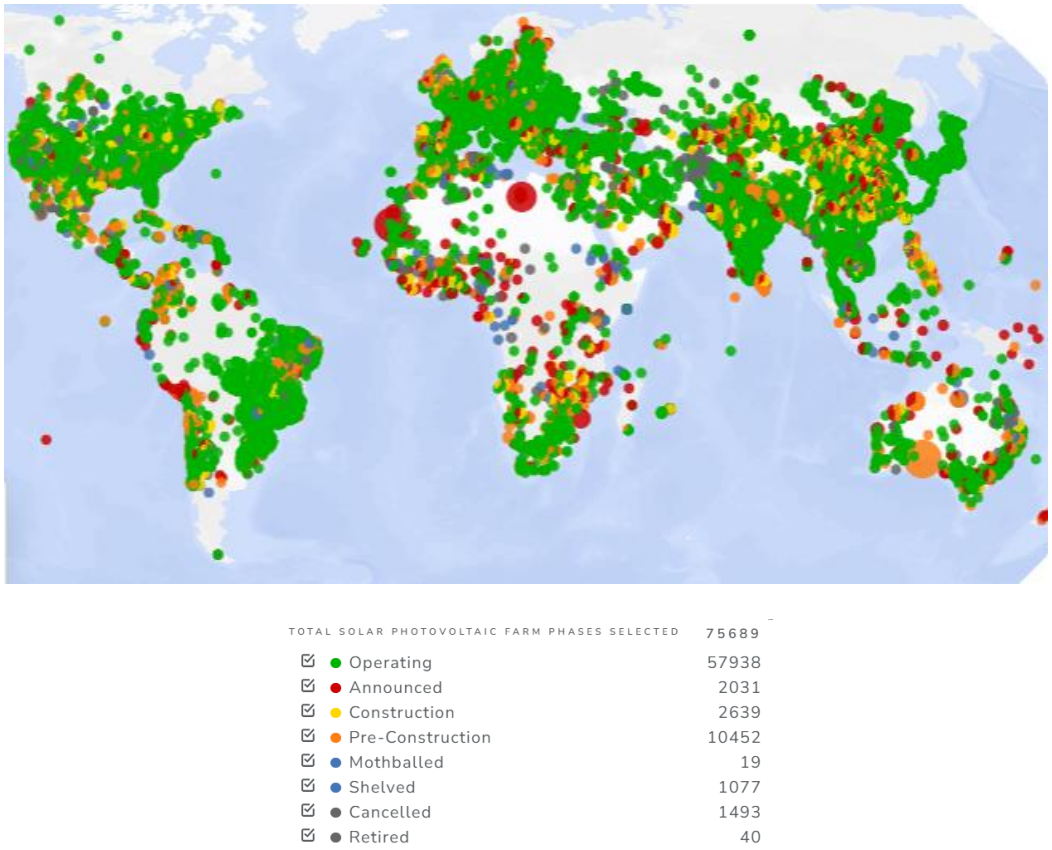
Chart 13: Indexed Change in Cleantech Metal Prices Last 12 Months



Source: Intro-act, FactSet. Data as of 02/28/25.

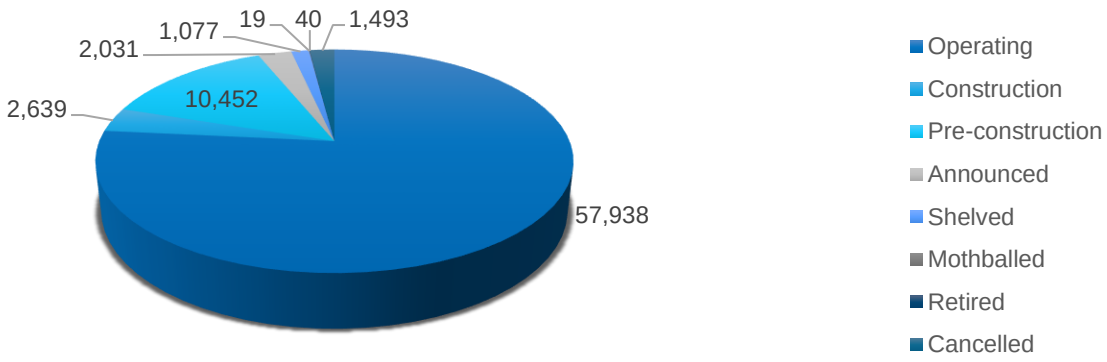
CLEANTECH INSTALLATIONS

Chart 14: Global Solar Power Tracker (As of February 2025)



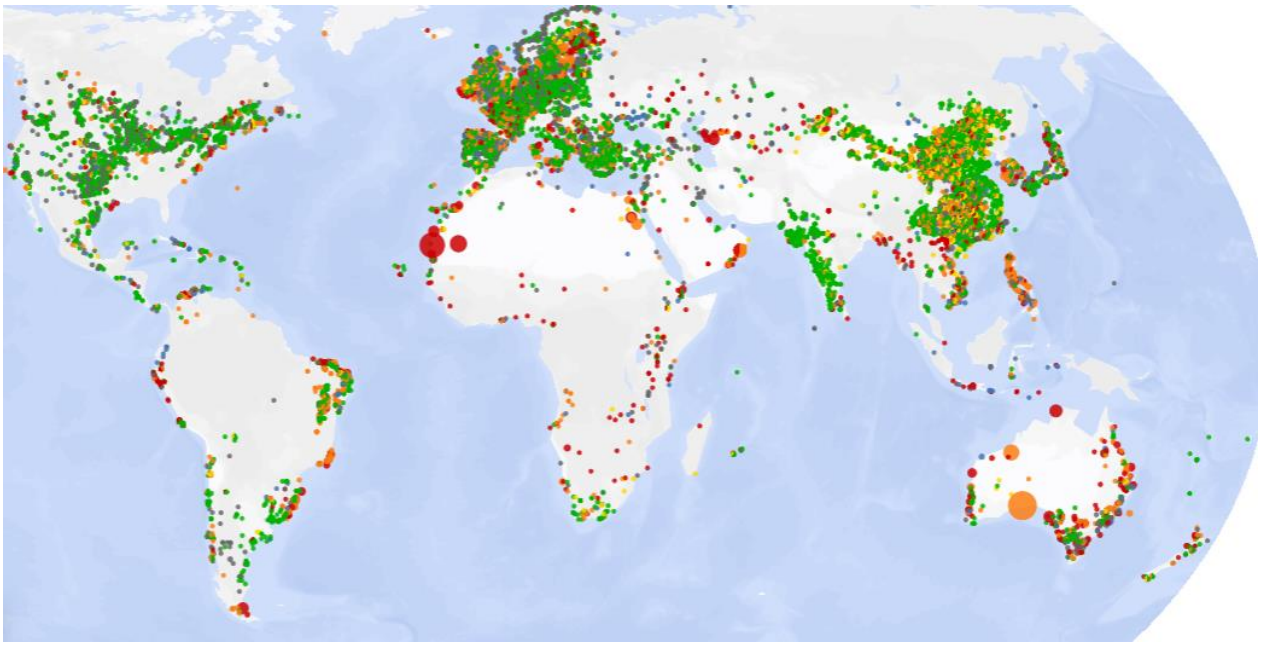
Source: Global Energy Monitor

Chart 15: Worldwide Solar Farm Phases. Total Farms: 75,689 as of February 2025



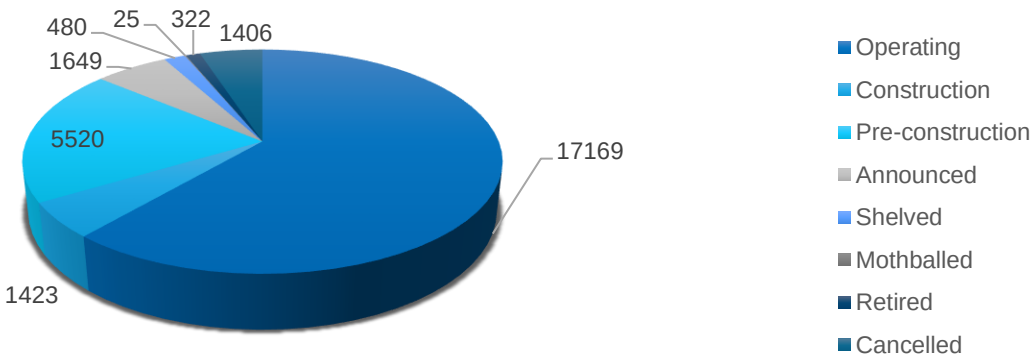
Source: Global Energy Monitor

Chart 16: Global Wind Power Tracker (February 2025)



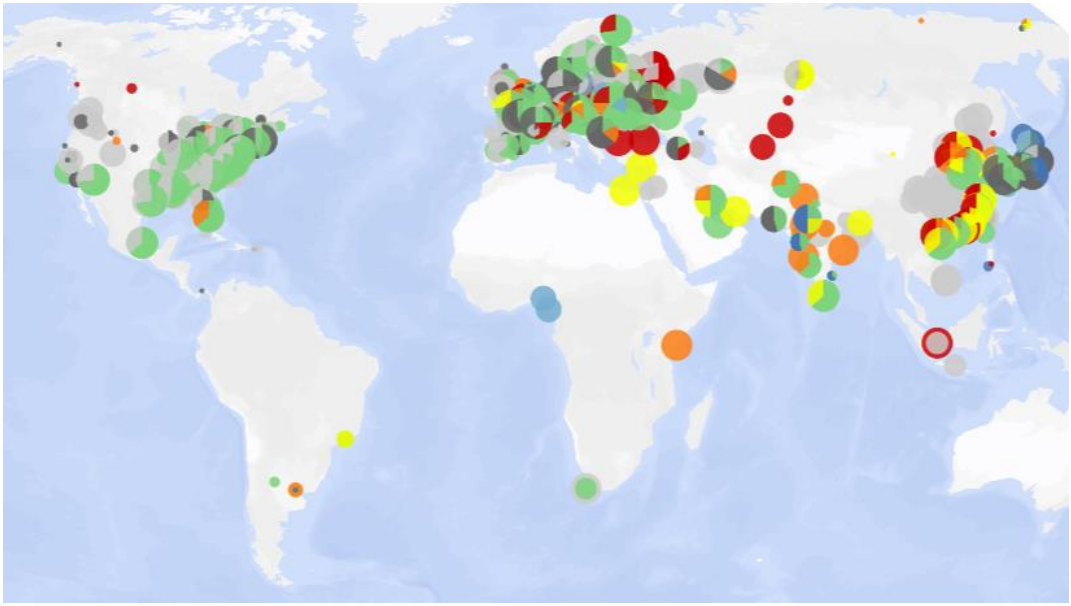
Source: Global Energy Monitor

Chart 17: Worldwide Wind Farm Phases. Total Farms: 27,994 as of February 2025



Source: Global Energy Monitor

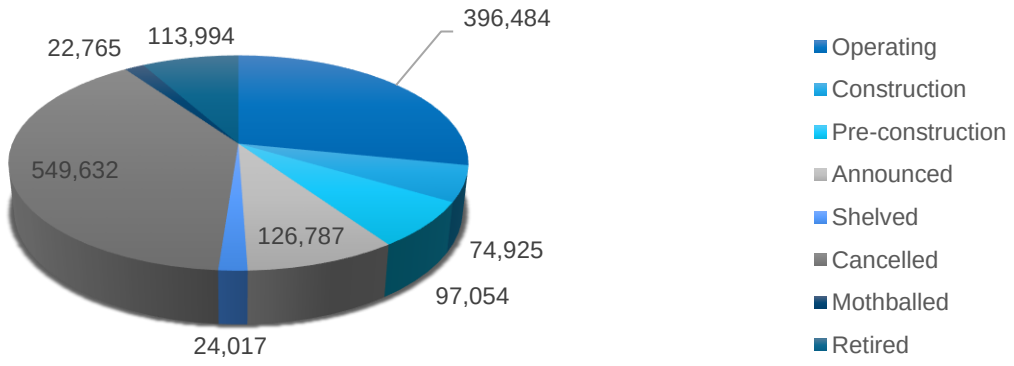
Chart 18: Global Nuclear Power Tracker (July 2024*)



TOTAL NUCLEAR POWER PLANT UNITS SELECTED	1541
Operating	419
Construction	69
Pre-Construction	92
Announced	178
Shelved	18
Mothballed	27
Retired	225
Cancelled	513

*Source: Global Energy Monitor. *The data is available only up to July 2024*

Chart 19: Worldwide Nuclear Power Capacity by Country/Area (MW) - July 2024*

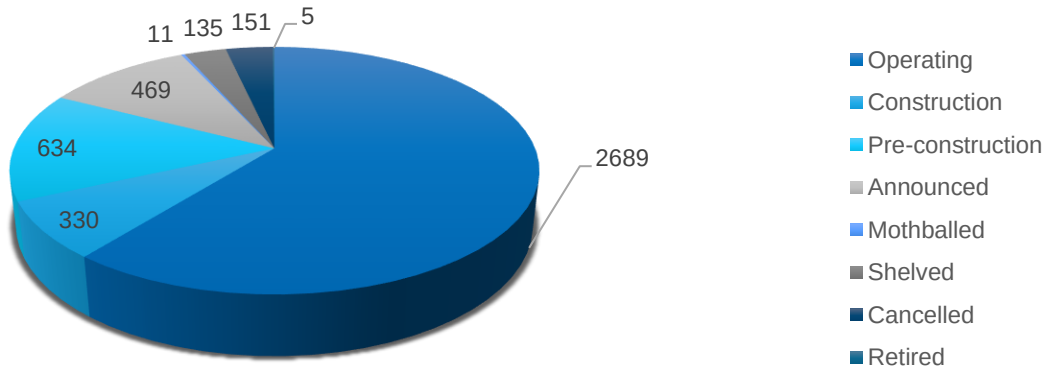


*Source: Global Energy Monitor. *The data is available only up to July 2024*

Chart 20: Global Hydropower Tracker (April 2024*)

*Source: Global Energy Monitor. *The data is available only up to April 2024*

Chart 21: Worldwide Hydropower Plants. Total Farms: 4,424 as of April 2024*

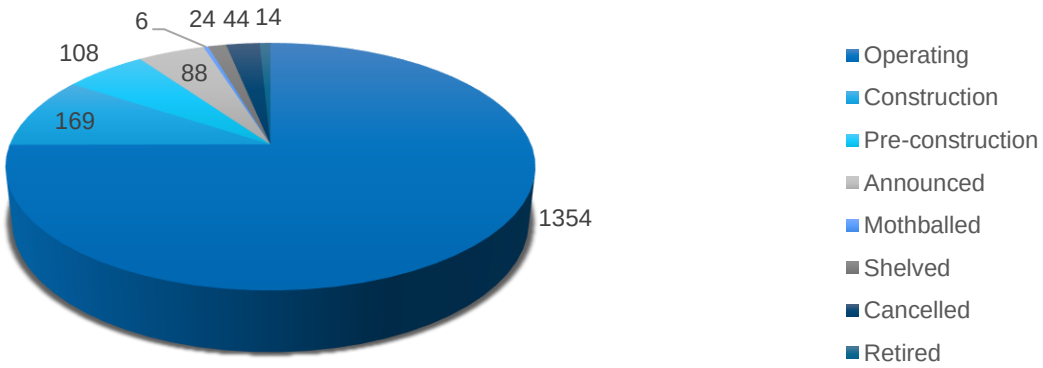


*Source: Global Energy Monitor. *The data is available only up to April 2024*

Chart 22: Global Bioenergy Power Tracker (September 2024*)

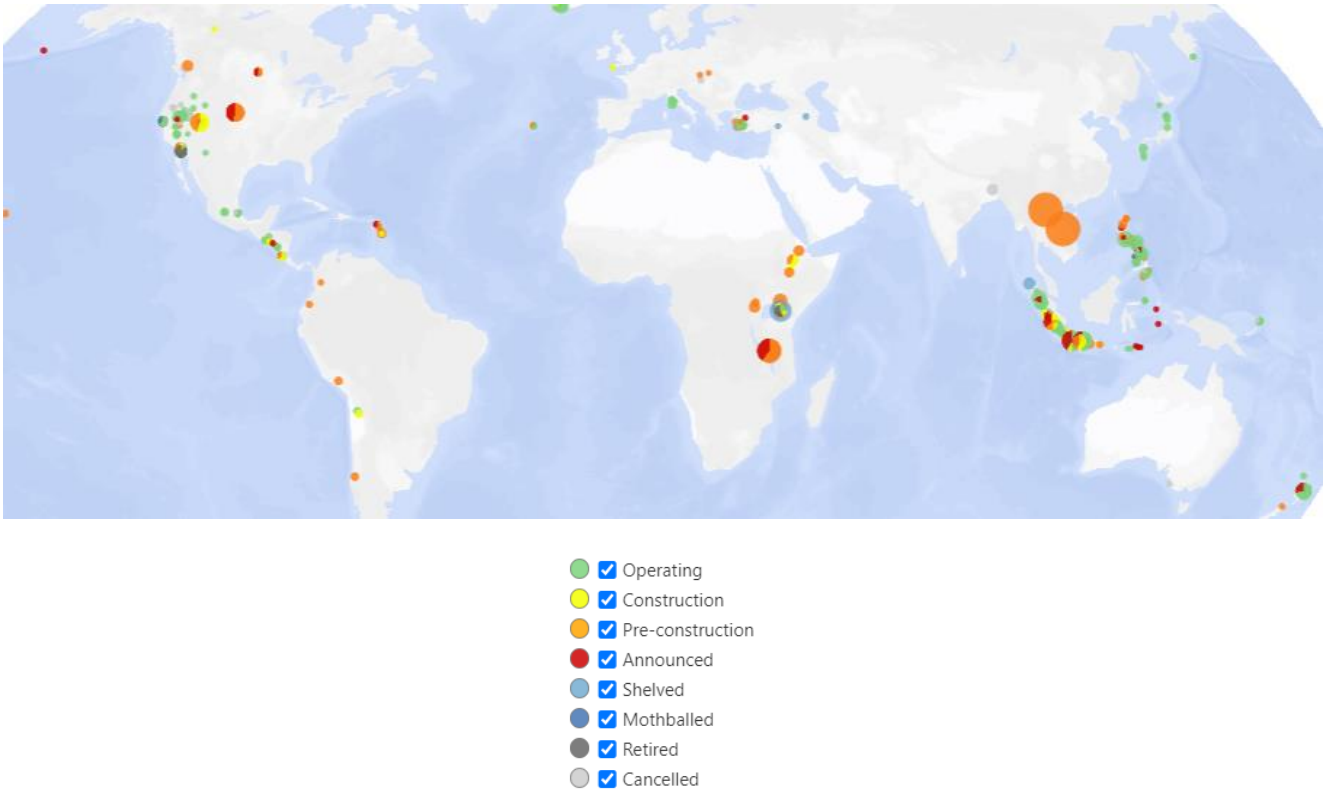
*Source: Global Energy Monitor. *The data is available only up to September 2024*

Chart 23: Worldwide Bioenergy Power Plants. Total Farms: 1,807 as of September 2024*



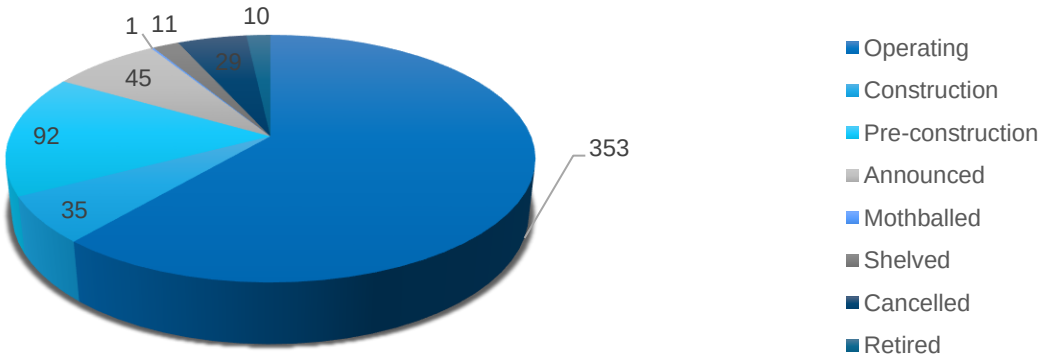
*Source: Global Energy Monitor. *The data is available only up to September 2024*

Chart 24: Global Geothermal Power Tracker (May 2024*)



*Source: Global Energy Monitor. *The data is available only up to May 2024*

Chart 25: Worldwide Geothermal Power Plants. Total Farms: 576 as of May 2024*



*Source: Global Energy Monitor. *The data is available only up to May 2024*

CLEANTECH CAPITAL MARKET ACTION

M&A Activity (Past 1 Month)

Target	Target Country	Acquirer	Transaction Value (MM)	Announced Date
Saturn Power, Inc. /39 MW Renewable & Storage Assets/	Canada	Sitka Power, Inc.; Long Life Capital, Inc.	-	18-Feb-2025
Solar Park in Rhineland	Germany	HIH Invest Real Estate GmbH	-	18-Feb-2025
Studio Rinnovabili	Italy	The Natural Power Consultants Ltd.	-	18-Feb-2025
Salika Group OÜ	Estonia	Averi Finance	-	24-Feb-2025
Windward Offshore GmbH Co. KG	Germany	Marubeni Corp.	-	24-Feb-2025
34 MW Wind Energy Pipeline	Germany	Q-Energy Private Equity SGEIC SA	-	27-Feb-2025
1MW Solar Rooftop Project	Singapore	Peak Energy Development Pte Ltd.	-	28-Feb-2025
Driven Pv 3 LLC /5 Soler Power Plants/	United States	GFA Co., Ltd.	1.36	28-Feb-2025
Kraftfeld Holding GmbH /80mw Solar PV Project/	Romania	MET Group	-	04-Mar-2025
Brookfield Asset Management Ltd. /1.6 GW Renewables Portfolio/	India	Gentari Renewables India Pte Ltd.	-	05-Mar-2025
Lakeside Energy Pvt Ltd.	Pakistan	Lakeside Energy Pvt Ltd. /Private Group/	-	06-Mar-2025
Q Energy Solutions Se /130mw Solar & Wind Project/	France	Velto Renewables, SL	-	10-Mar-2025
BayWa r.e. AG /47 Mwp Solar Park Project /	France	Commerz Real AG	-	11-Mar-2025
Samsung C&T Renewables /220 MW Solar & Battery Project/	United States	Adapture Renewables, Inc.	-	11-Mar-2025
Climate Er Helio Ltd. /72MW Mere Flats Project/	United Kingdom	NextEnergy Capital Ltd.	-	12-Mar-2025
Virya Infrapower Pvt Ltd.	India	JSW Neo Energy Ltd.	0.86	12-Mar-2025
Baywa R E AG /80mw French Solar Project/	France	Octopus Energy Generation Ltd.	-	13-Mar-2025
Inner Mongolia Xinjing Photovoltaic Power Generation Co., Ltd.	China (People's Republic)	Fujin Precision Industry (Jincheng) Co., Ltd.	18.64	13-Mar-2025
Solar Park Lidsø ApS	Denmark	Alight Hedgehog Holding ApS	-	14-Mar-2025

Source: Intro-act, FactSet. As on March 18, 2025

PE/ VC Funding Activity (Past 1 Month)

Company Name	Funding Round	Amount ($M)	Active Investors	Investment Date
Pele Green Energy Pty Ltd.	Private Shares	30.94	E Squared Investments; Nedbank Group Ltd.; Norfund	04-Mar-2025
Thorizon	Series A2	16.78	Ace Innovation Holding BV; EIC Accelerator; Invest-NL NV; KplusV Startgreen Investment Services BV; NV Economische Impuls Zeeland; Positron Ventures	03-Mar-2025
Vema Hydrogen, Inc.	Seed Round	13.00	Extantia Capital Management GmbH; Pace Ventures Enigma GP GmbH; Propeller, Inc.; The Grantham Foundation for the Protection of the Environment; Zero Carbon Capital Ltd.	18-Feb-2025
Phnxx Pte Ltd.	Seed Round	1.13	Engie Factory Chile SpA; Launchvic /Venture Capital/; Pacific Channel Ltd.; Synertec Corp. Ltd.	10-Mar-2025
El Material Solar SL	Series A	0.52	Gestión de Capital Riesgo del País Vasco SGEIC SA; Seed Capital de Bizkaia SGEIC SA	28-Feb-2025
34 MW Wind Energy Pipeline	Private Shares	-	Q-Energy Private Equity SGEIC SA	27-Feb-2025
Climate Er Helio Ltd. /72MW Mere Flats Project/	Private Shares	-	NextEnergy Capital Ltd.	12-Mar-2025
Enpal Green Future Holding GmbH	Private Shares	-	Equitix Investment Management Ltd	28-Feb-2025

Source: Intro-act, FactSet. As on March 18, 2025

CLEANTECH INSTITUTIONAL INVESTOR LEAGUE

Chart 26: Cleantech Institutional Owners League (Current)

Rank	Investor Name	Invested in Cleantech ($M)	Q/Q Change ($M)	Change in Positions (#)	% of Total Sector Inv.
1	The Vanguard Group, Inc.	122,167.99	(11,356.91)	-4	10.9%
2	BlackRock Fund Advisors	67,147.87	(6,835.94)	-6	6.0%
3	SSgA Funds Management, Inc.	46,039.71	(4,993.75)	-6	4.1%
4	Geode Capital Management LLC	27,536.36	(1,884.30)	-9	2.5%
5	Fidelity Management & Research Co. LLC	25,217.02	(4,822.53)	-15	2.3%
6	Capital Research & Management Co. (Global Investors)	17,805.80	(4,918.59)	-1	1.6%
7	Capital Research & Management Co. (International Investors)	17,091.72	(1,132.11)	1	1.5%
8	Norges Bank Investment Management	14,780.53	14,449.50	46	1.3%
9	BlackRock Advisors (UK) Ltd.	13,987.54	(1,706.40)	-6	1.3%
10	T. Rowe Price Associates, Inc. (IM)	12,114.97	(1,985.72)	3	1.1%
11	JPMorgan Investment Management, Inc.	11,503.72	(1,241.36)	-4	1.0%
12	BlackRock Investment Management (UK) Ltd.	10,936.06	(31.44)	1	1.0%
13	Charles Schwab Investment Management, Inc.	10,502.99	(863.56)	-4	0.9%
14	Northern Trust Investments, Inc. (Inv. Mgmt.)	9,937.89	(991.31)	-9	0.9%
15	Dimensional Fund Advisors LP	9,312.47	(776.72)	-4	0.8%
16	Wellington Management Co. LLP	8,624.98	(594.40)	-3	0.8%
17	Capital Research & Management Co. (World Investors)	8,456.48	(4,020.33)	-1	0.8%
18	Invesco Capital Management LLC	7,823.53	(198.29)	-5	0.7%
19	TCI Fund Management Ltd.	7,672.32	(1,413.54)	0	0.7%
20	Morgan Stanley Smith Barney LLC (Inv. Mgmt.)	7,653.12	(627.82)	-5	0.7%
21	Nomura Asset Management Co., Ltd.	6,958.29	(845.34)	-2	0.6%
22	State Farm Investment Management Corp.	6,668.85	(628.10)	0	0.6%
23	RBC Global Asset Management, Inc.	6,557.66	147.71	-4	0.6%
24	Columbia Management Investment Advisers LLC	6,249.13	(70.46)	-4	0.6%
25	Managed Account Advisors LLC	6,208.89	954.48	4	0.6%
26	Vanguard Global Advisers LLC	5,838.27	(375.45)	-6	0.5%
27	Dodge & Cox	5,663.57	(457.73)	1	0.5%
28	Massachusetts Financial Services Co.	5,356.00	(637.86)	1	0.5%
29	National Pension Service of Korea	5,304.42	2,967.41	-3	0.5%
30	Goldman Sachs Asset Management LP	5,213.29	(947.53)	-5	0.5%
	Others	601,721.79	(50,810.62)	724	53.8%
	Total	**1,118,053**	**(86,649)**	**675**	**100.0%**

Source: Intro-act, 13F Filings

Chart 27: Top 25 Cleantech Buyers (Q/Q)

Rank	Investor Name	Invested in Cleantech ($M)	Q/Q Change ($M)	Change in Positions (#)	% of Total Sector Inv.
1	SBI Securities Co., Ltd.	10.69	10.69	95	0.001%
2	Caitong International Asset Management Co., Ltd.	2.59	2.59	58	0.000%
3	KLP Kapitalforvaltning AS	623.08	364.72	50	0.056%
4	Norges Bank Investment Management	14,780.53	14,449.50	46	1.322%
5	Osaic Advisory Services LLC	39.53	38.39	46	0.004%
6	MAI Capital Management LLC	65.61	1.02	39	0.006%
7	Andbank Wealth Management SGIIC SAU	10.83	10.83	38	0.001%
8	R Squared Ltd. (Hong Kong)	2.40	2.40	38	0.000%
9	SpiderRock Advisors LLC	50.94	(3.39)	33	0.005%
10	State Street Global Advisors (Japan) Co. Ltd.	70.65	70.65	32	0.006%
11	Amundi Iberia SGIIC SA	36.65	36.65	31	0.003%
12	Parkworth Wealth Management, Inc.	0.05	0.05	30	0.000%
13	The Millstone Evans Group LLC	2.70	2.70	29	0.000%
14	Aster Capital Management (DIFC) Ltd.	4.78	4.78	28	0.000%
15	Union Bancaire Privee, UBP SA	69.83	34.64	26	0.006%
16	Transce3nd LLC	1.00	1.00	26	0.000%
17	Renta 4 Gestora SGIIC SA	21.14	21.14	25	0.002%
18	Raiffeisen Kapitalanlage-Gesellschaft mbH	345.42	159.20	24	0.031%
19	Nomura Securities International, Inc.	49.22	27.21	24	0.004%
20	Global Financial Private Client LLC	4.09	1.24	24	0.000%
21	Golden State Wealth Management LLC	3.06	3.06	24	0.000%
22	WealthTrak Capital Management LLC	0.15	0.15	24	0.000%
23	Universal-Investment-Gesellschaft mbH (Inv. Mgmt)	787.57	749.70	23	0.070%
24	WhippleWood Advisors LLC	1.04	1.04	23	0.000%
25	The Ameriflex Group, Inc.	0.89	0.89	23	0.000%

Source: Intro-act, 13F Filings

Chart 28: Top 25 Cleantech Sellers (Q/Q)

Rank	Investor Name	Invested in Cleantech ($M)	Q/Q Change ($M)	Change in Positions (#)	% of Total Sector Inv.
1	RBC Dominion Securities, Inc.	0.00	(4.13)	-67	0.000%
2	Capital Performance Advisors LLP	0.45	(0.79)	-63	0.000%
3	State Board of Administration of Florida Retirement System	829.99	(513.02)	-54	0.074%
4	Banque Cantonale Vaudoise (Investment Management)	6.02	(87.01)	-51	0.001%
5	Russell Investments Canada Ltd.	45.15	(22.95)	-49	0.004%
6	Acadian Asset Management LLC	418.07	(64.83)	-34	0.037%
7	Millburn Ridgefield Corp.	0.25	(1.10)	-34	0.000%
8	MultiConcept Fund Management SA	1.61	(103.82)	-31	0.000%
9	Mediolanum International Funds Ltd.	129.54	(306.05)	-30	0.012%
10	Healthcare of Ontario Pension Plan	531.70	14.66	-29	0.048%
11	BOCI-Prudential Asset Management Ltd.	17.90	(98.88)	-28	0.002%
12	Sparkasse Oberosterreich Kapitalanlagegesellschaft m.bH.	12.85	(15.15)	-28	0.001%
13	Ashton Thomas Securities LLC	3.87	(0.90)	-28	0.000%
14	abrdn Investment Management Ltd.	1,011.13	(1,146.12)	-27	0.090%
15	Catalyst Funds Management Pty Ltd.	1.15	(4.50)	-27	0.000%
16	Jennison Associates LLC	3,026.20	(160.17)	-26	0.271%
17	Eagle Asset Management, Inc.	115.05	(308.61)	-25	0.010%
18	Thrivent Trust Co.	11.03	(4.71)	-25	0.001%
19	abrdn Alternative Investments Ltd.	1.91	(60.89)	-25	0.000%
20	Consultinvest Asset Management SGR SpA	1.59	(6.92)	-24	0.000%
21	Jyske Bank A/S (Investment Management)	112.24	(59.10)	-22	0.010%
22	International Assets Investment Management LLC	19.05	(57.52)	-22	0.002%
23	GTS Securities LLC	7.34	(52.90)	-22	0.001%
24	Carne Global Fund Managers (Luxembourg) SA	4.79	(2.54)	-22	0.000%
25	ClariVest Asset Management LLC	3.39	(18.76)	-21	0.000%

Source: Intro-act, 13F Filings

ETF SPOTLIGHT

Global X Cleantech ETF (CTEC)

Closing Price ($)	CUSIP	Expense Ratio	Inception
6.5	37954Y228	0.5	27/10/2020

AUM ($ million)	Shares Outstanding (#)	Fund Flows (1M, $)	Fund Flows (YTD, $)
28.11	4 MM	-566 K	-1 MM

Fund Description

The CTEC Fund is an environmentally focused investment opportunity, designed to mirror a global index of companies driving technological advancements that mitigate environmental harm. This fund commits at least 80% of its assets to securities within the underlying index, in addition to American Depositary Receipts (ADRs) and Global Depositary Receipts (GDRs) linked to those securities. The underlying index comprises businesses primarily dedicated to Cleantech, including renewable energy, energy efficiency, smart grid solutions, lithium-ion batteries, fuel cells, and pollution prevention. These companies are carefully selected based on their generation of at least 50% of revenues from Cleantech-related activities and must meet specific market capitalization and liquidity criteria. The fund aims to harness the growth potential of Cleantech, and any modifications to the 80% investment policy necessitate a 60-day prior notice to shareholders. With eligibility spanning countries such as the United States, Japan, China, the United Kingdom, and others, this fund offers diversification for eco-conscious investors seeking Cleantech exposure.

ETF Returns Annualized (As of 02/28/2025)

1 Year	3 Year	5 Year	Since Inception
-28.79%	-26.11%	-15.78%	-17.40%

ETF Returns Cumulative (As of 02/28/2025)

1 Month	3 Month	YTD	Since Inception
-6.71%	-12.63%	-6.71%	-56.41%

Top 10 Holdings (updated as of 03/17/25)

Ticker	Name	% of Net Assets	Market Value ($M)
BE	BLOOM ENERGY CORP- A	10.86	3.07
NXT	NEXTRACKER INC-CL A	8.66	2.45
NDX1 GR	NORDEX SE	7.79	2.20
968 HK	XINYI SOLAR HOLDINGS LTD	6.00	1.69
257 HK	EB ENVIRONMENT	5.13	1.45
VWS DC	VESTAS WIND SYSTEMS A/S	4.76	1.35
JMAT LN	JOHNSON MATTHEY PLC	4.61	1.30
6121 TT	SIMPLO TECHNOLOGY CO LTD	4.38	1.24
FSLR	FIRST SOLAR INC	3.94	1.11
QS	QUANTUMSCAPE CORP	3.84	1.09

Source: Intro-act

For more information on CTEC visit: https://www.globalxetfs.com/funds/ctec/

iShares Global Clean Energy ETF (ICLN)

Closing Price ($)	CUSIP	Expense Ratio	Inception
11.49	464288224	0.41	24/06/2008

AUM ($ Billion)	Shares Outstanding (#)	Fund Flows (1M, $)	Fund Flows (YTD, $)
1.29	115 MM	-34 MM	-113 MM

Fund Description

The ICLN Fund offers investors exposure to a carefully curated selection of global companies at the forefront of the clean energy sector. This fund seeks to replicate the performance of the S&P Global Clean Energy IndexTM, comprising approximately 100 clean energy-related companies. To be eligible for inclusion in this index, companies must meet specific criteria, including a minimum total market capitalization of $300 million, float-adjusted market capitalization of $100 million, and a median daily value traded of $3 million over six months, all on developed market exchanges. The index construction process involves rigorous screening, utilizing classifications such as the Global Industry Classification Standard (GICS) and FactSets Revere Business Industry Classification System (RBICS), along with environmental, social, and governance (ESG) considerations. Clean energy exposure scores are assigned based on a company's primary business, with additional evaluation of carbon-to-revenue footprint to ensure alignment with sustainable and environmentally responsible practices. The result is a diversified fund that offers investors an opportunity to participate in the global clean energy revolution while adhering to stringent ESG criteria.

ETF Returns Annualized (As of 02/28/2025)

1 Year	3 Year	5 Year	Since Inception
-18.63%	-17.60%	-1.03%	-6.9%

ETF Returns Cumulative (As of 02/28/2025)

YTD	1 Month	3 Months	Since Inception
-2.27%	-2.05%	-9.14%	-69.66%

Top 10 Holdings (updated as of 03/14/25)

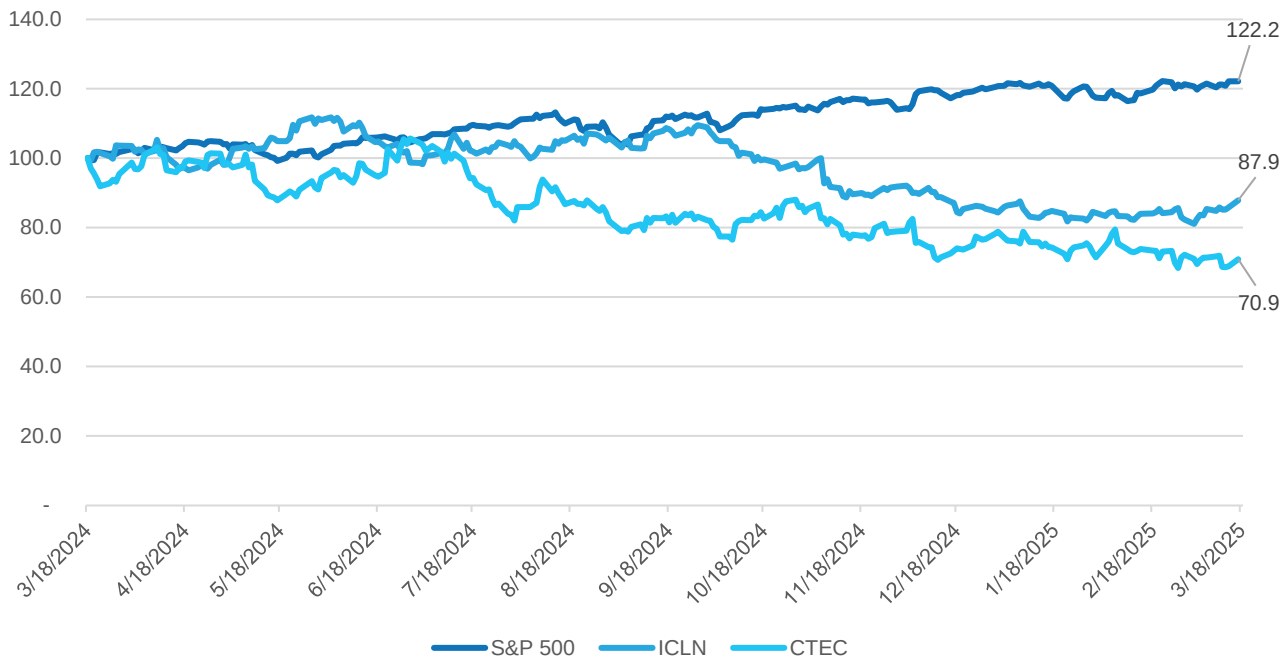
Ticker	Name	% of Net Assets	Market Value ($)
VWS	VESTAS WIND SYSTEMS	6.43	85.30
IBE	IBERDROLA SA	6.40	84.88
SSE	SSE PLC	6.04	80.14
FSLR	FIRST SOLAR INC	5.51	73.02
ENPH	ENPHASE ENERGY INC	4.68	62.02
600900	CHINA YANGTZE POWER LTD A	4.41	58.48
NXT	NEXTRACKER INC CLASS A	3.79	50.27
EDP	EDP ENERGIAS DE PORTUGAL SA	3.58	47.50
ORSTED	ORSTED	3.44	45.60
9502	CHUBU ELECTRIC POWER INC	3.29	43.61

Source: Intro-act, FactSet

For more information on ICLN visit: https://www.ishares.com/us/products/239738/ishares-global-clean-energy-etf

ETF Performance vs. S&P 500

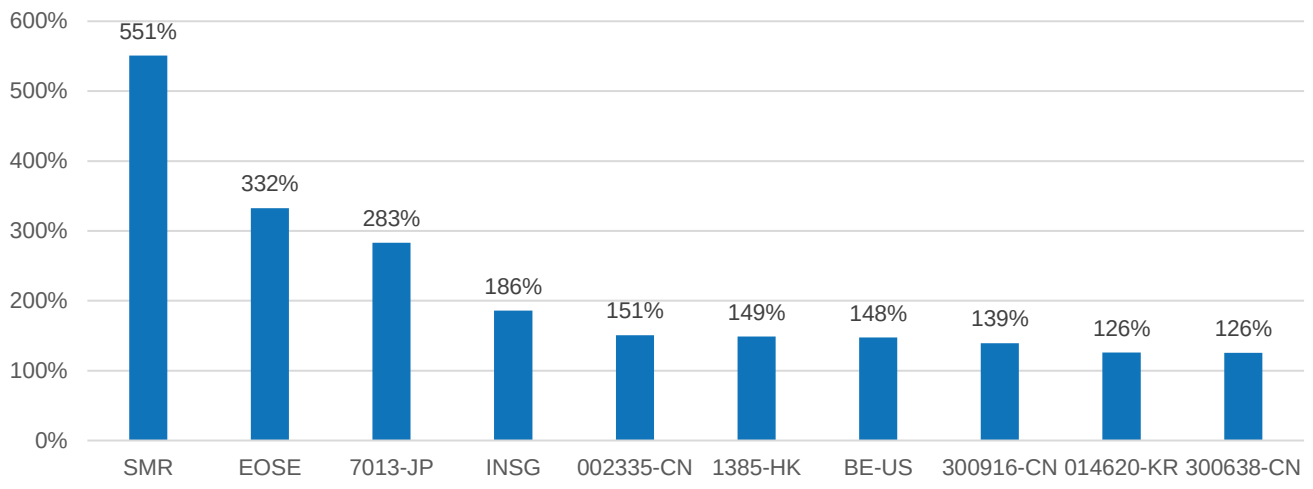
Chart 29: 12-month Indexed Returns of ICLN and CTEC vs. S&P 500



Source: Intro-act, FactSet, Data as of 03/18/2025.

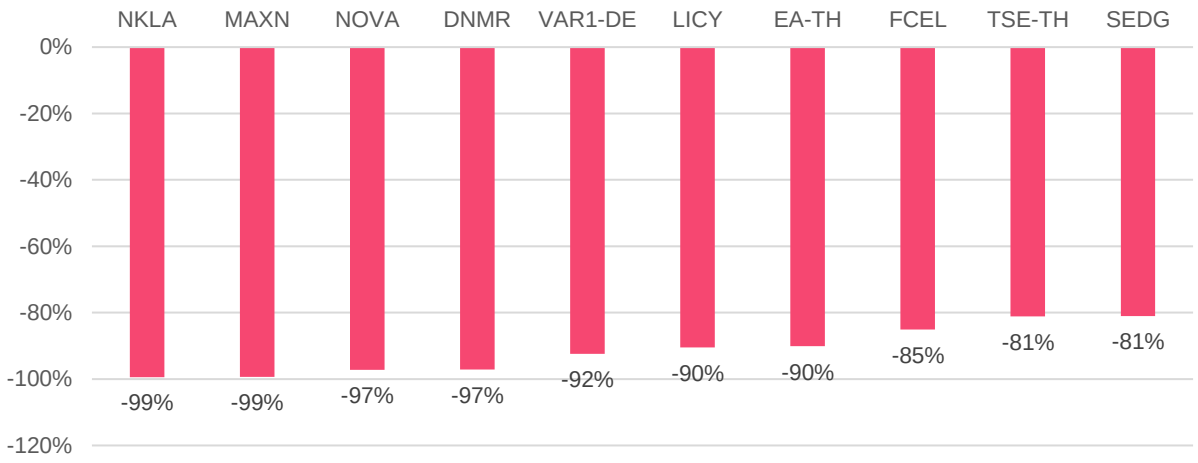
GAINERS AND LOSERS – CLEANTECH STOCKS

Chart 30: Top 10 M/M Cleantech Gainers



Source: Intro-act, FactSet, Data as on March 17, 2025.

Chart 31: Top 10 M/M Cleantech Losers



Source: Intro-act, FactSet, Data as on March 17, 2025.

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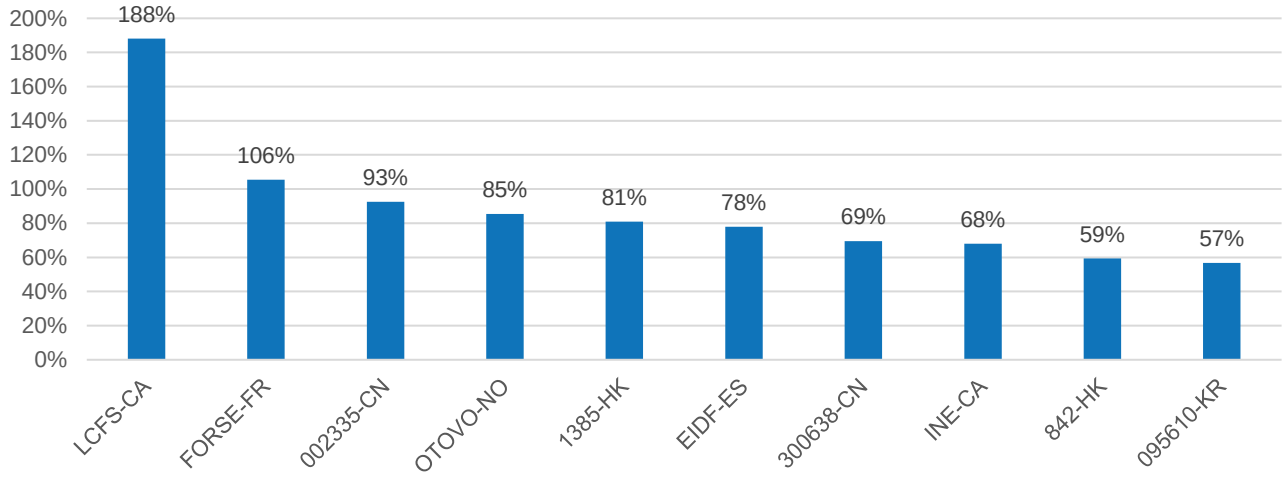
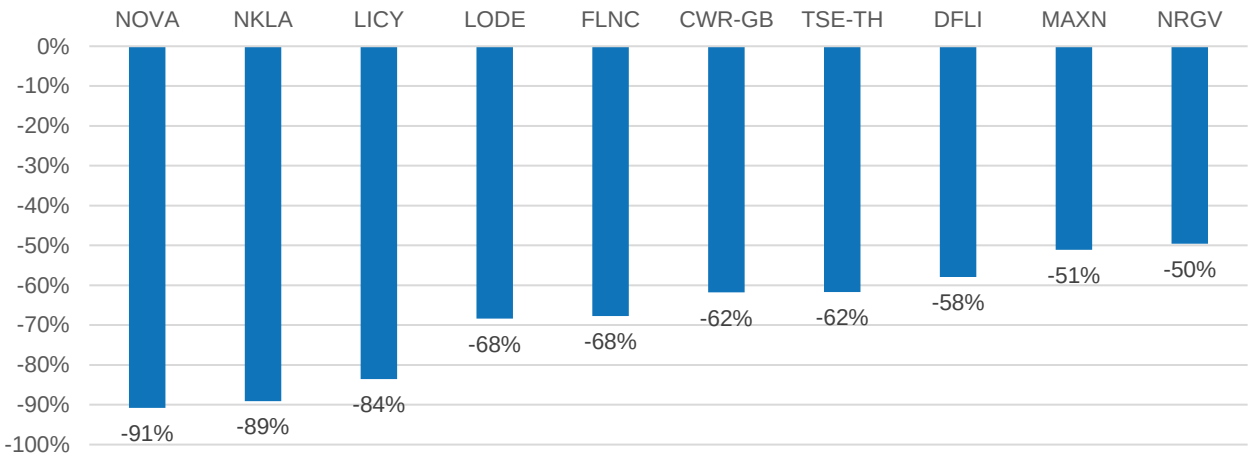
Chart 32: Top 10 YTD Cleantech Gainers



Source: Intro-act, FactSet. Data as on March 17, 2025.

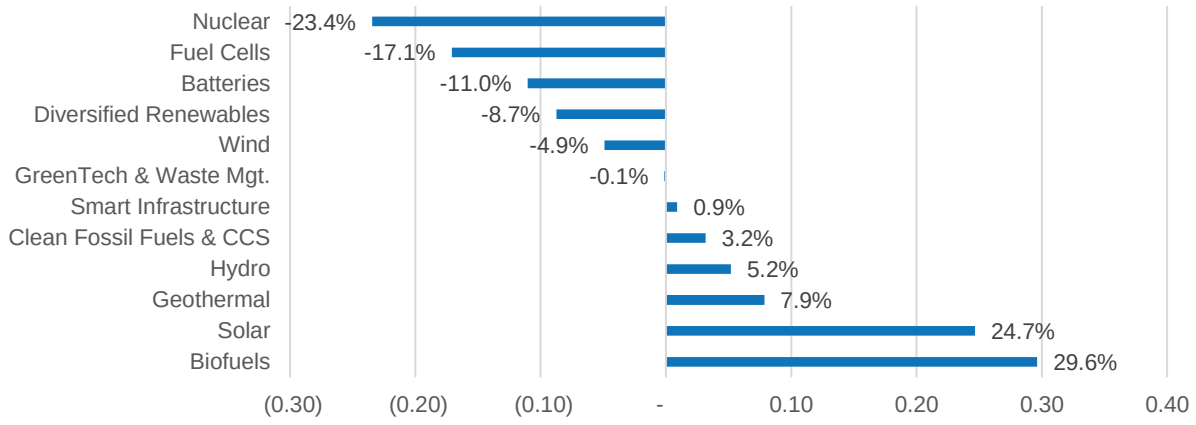
Chart 33: Top 10 YTD Cleantech Losers



Source: Intro-act, FactSet. Data as on March 17, 2025.

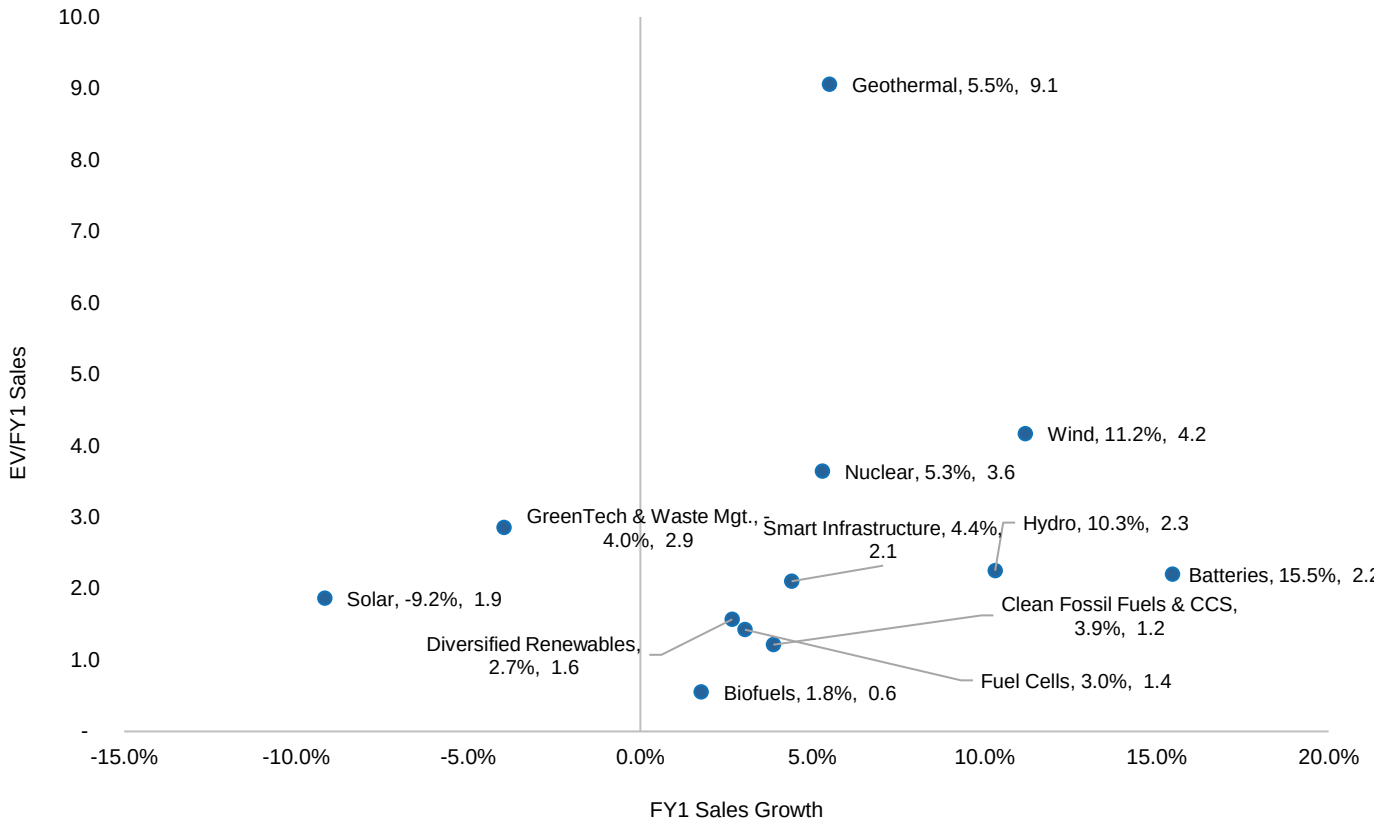
SEGMENT RETURN AND VALUATION

Chart 34: YTD Stock Price Returns by Segment



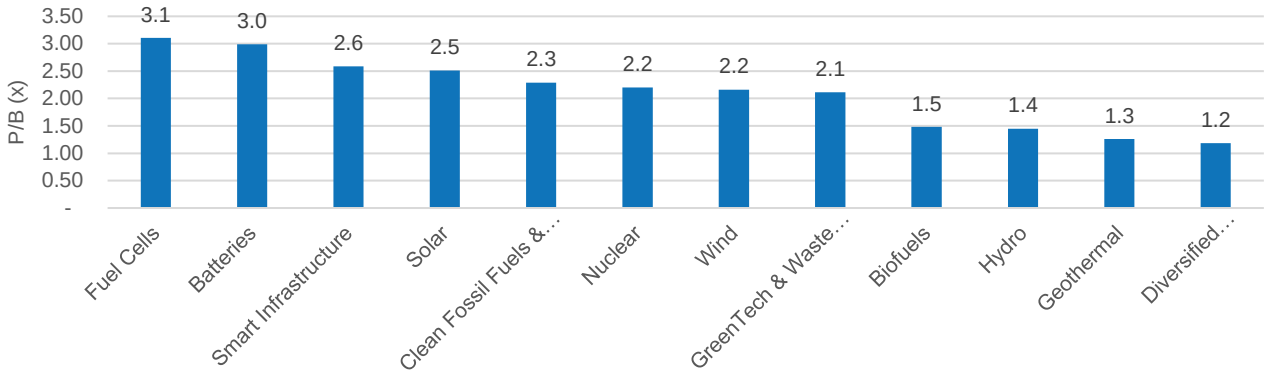
Source: Intro-act, FactSet. YTD Data as on March 17, 2025.

Chart 35: Cleantech Industry Growth and Valuation by Segment



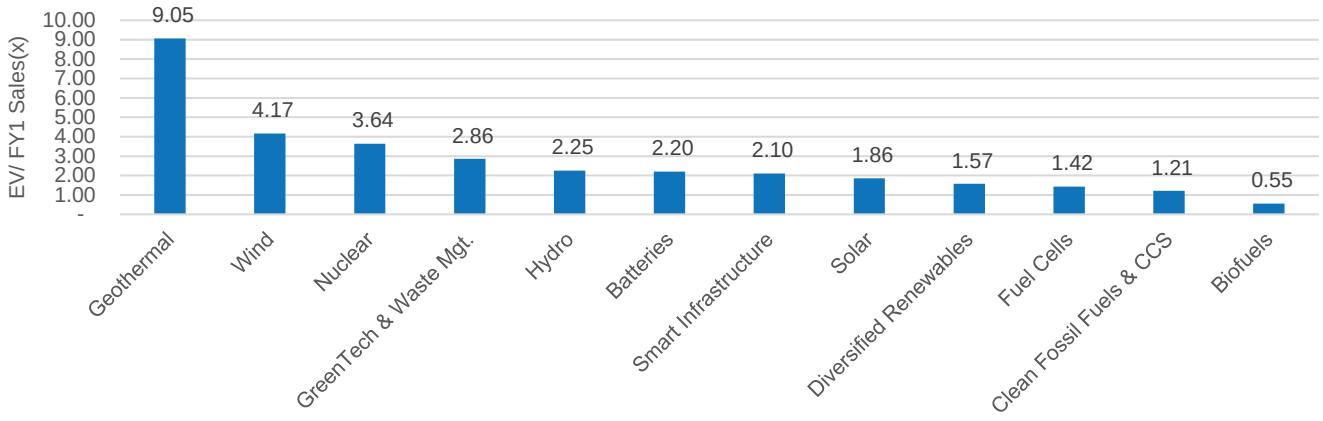
Source: Intro-act, FactSet, Data as on March 17, 2025. FY1 data is the first unreported financial year.

Chart 36: Price-to-Book Multiple by Segment



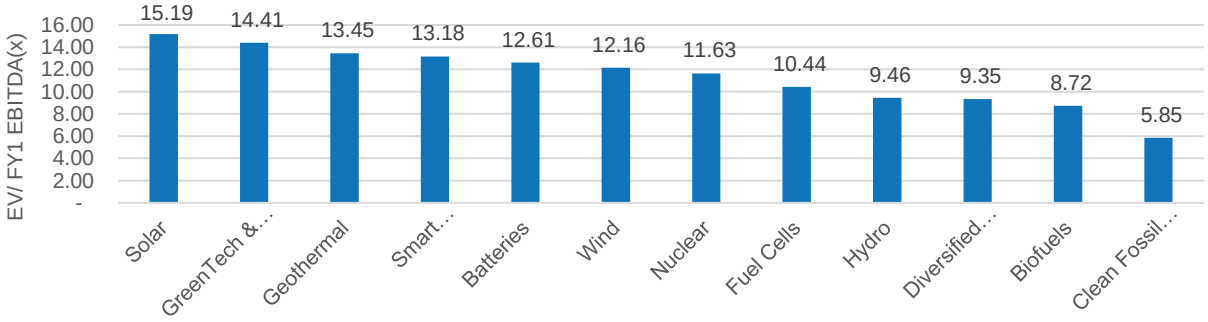
Source: Intro-act, FactSet. Data as on March 17, 2025

Chart 37: EV to FY1 Sales Multiple by Segment



Source: Intro-act, FactSet. Data as March 17, 2025. FY1 data is the first unreported financial year.

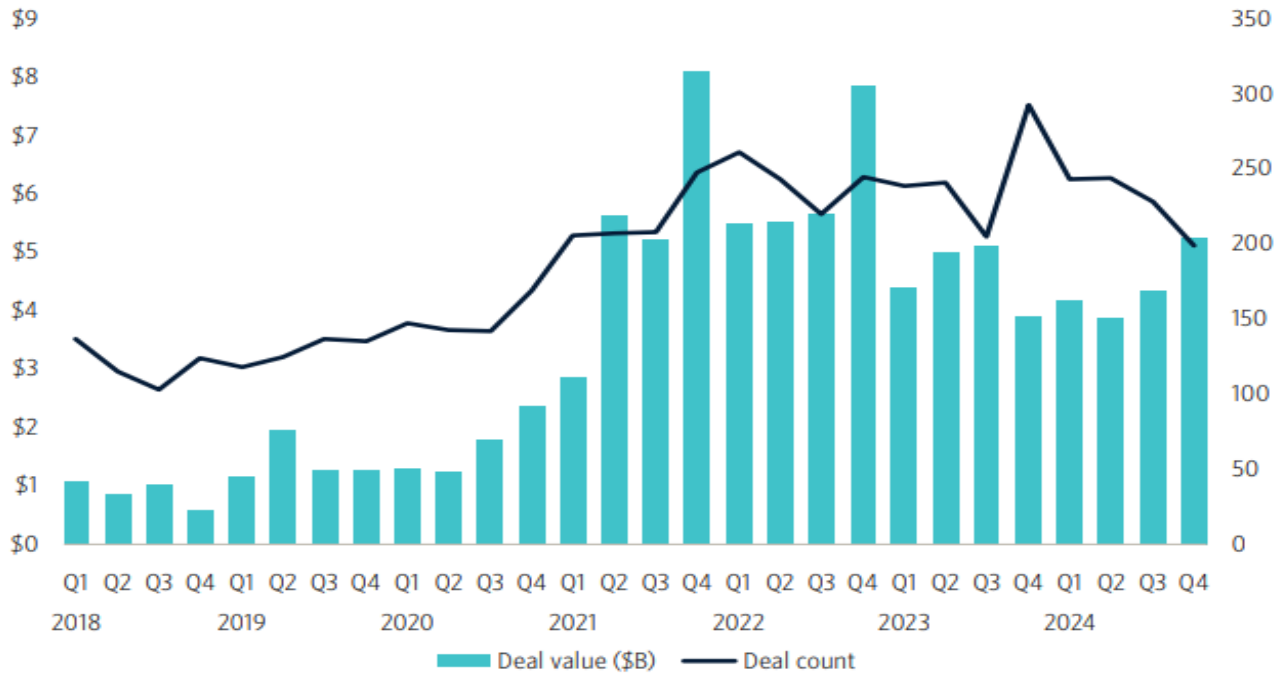
Chart 38: EV to FY1 EBITDA Multiple by Segment



Source: Intro-act, FactSet. Data as on March 17, 2025. FY1 data is the first unreported financial year.

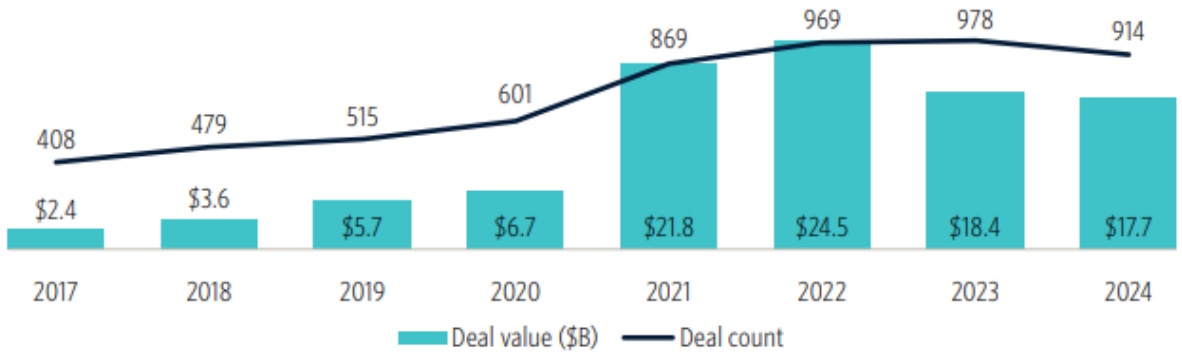
CLEANTECH CAPITAL MARKET TRENDS

Chart 39: Clean Energy VC Deal Activity by Quarter



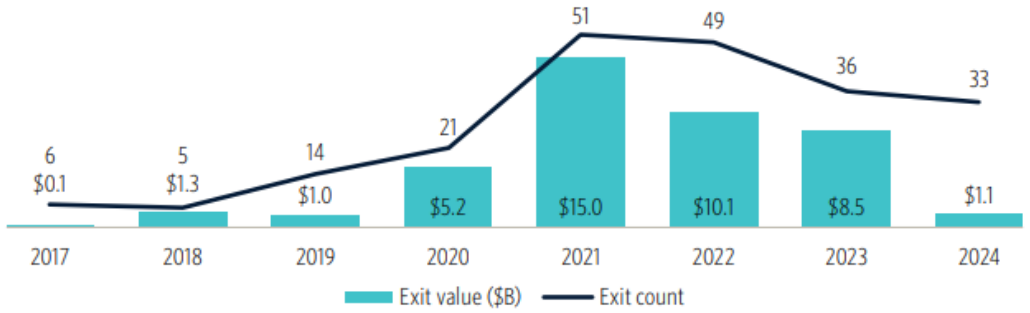
Source: Pitchbook. Data as of December 31, 2024.

Chart 40: Clean Energy VC Deal Activity



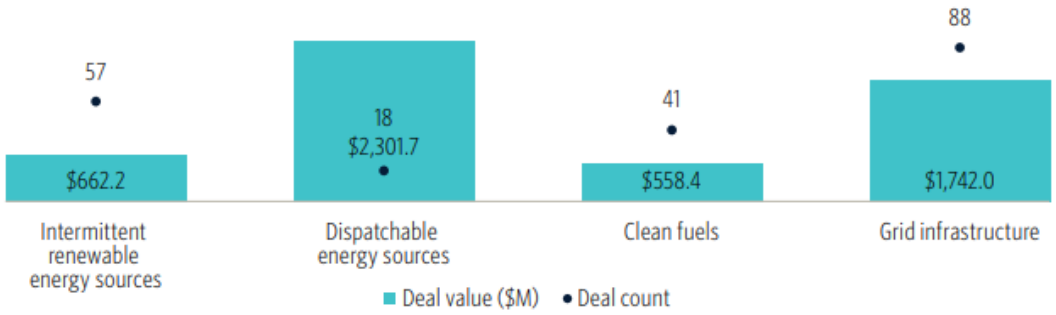
Source: Pitchbook. Data as of December 31, 2024.

Chart 41: Clean Energy VC Exit Activity



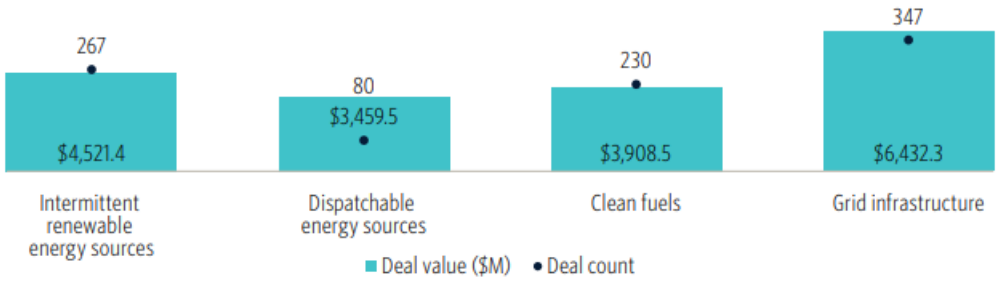
Source: Pitchbook. Data as of December 31, 2024.

Chart 42: Q424 Clean Energy VC Deal Activity by Segment



Source: Pitchbook. Data as of December 31, 2024

Chart 43: Trailing 12-Month Clean Energy VC Deal Activity by Segment



Source: Pitchbook. Data as of December 31, 2024

Chart 44: Top-10 Clean Energy VC Deals in 4Q24

Company	Close date	Category	Deal Value ($M)
Fervo Energy	19-Dec-24	Geothermal	499
ANYbotics	12-Dec-24	Analytics & Grid Management	111.3
Radiant	14-Nov-24	Nuclear Fission	100
GCL Perovskite	9-Dec-24	Solar PV	69
Sunly	5-Dec-24	Solar PV	63.5
PowerX	5-Nov-24	Battery Storage	63
Forge Nano	16-Oct-24	Battery Storage	60.7
EIKTO	1-Nov-24	Battery Storage	56.4
Polarium	1-Oct-24	Battery Storage	48.9
Liquid Wind	20-Nov-24	Clean Conventional Fuels	47.3

Source: Pitchbook. Data as of December 31, 2024.

Chart 45: Top VC-backed Clean Energy Companies by Total VC Raised to Date*

Company	VC ($M) Raised to Date	Category
SVOLT	3231.3	Battery storage
Commonwealth Fusion Systems	1999	Nuclear fusion
Form Energy	1383	Battery storage
TAE	1314.7	Nuclear fusion
Sila	1308.5	Battery storage
China Hydrogen Energy Technology	1000	Hydrogen
SPIC Hydrogen Energy	950.9	Hydrogen
Sinoma Lithium Battery Separator	912.4	Battery storage
Hithium	909.5	Battery storage
Enerkem	901.6	Waste to energy/fuel

Source: Pitchbook. Data as of December 31, 2024.

CLEANTECH SPAC ACTION

Chart 46: Searching SPACs

Sr.	SPAC Name	Ticker	Trust Value ($M)	IPO Date	Estimated Completion Date
1	Spring Valley Acquisition Corp. II	SVII	230	10/12/2022	10/17/2025
2	Global Lights Acquisition Corp	GLAC	69	11/14/2023	5/14/2025
3	Legato Merger Corp. III	LEGT	201	2/6/2024	5/6/2026
4	EQV Ventures Acquisition Corp	EQV	350	8/6/2024	8/6/2026
5	CO2 Energy Transition Corp.	NOEM	69	11/20/2024	11/20/2026
6	Hennessy Capital Investment Corp VII	HVII	190	1/16/2025	1/16/2027
7	Tavia Acquisition Corp	TAVI	115	12/4/2024	6/4/2026

Source: Intro-act, Boardroom Alpha

Chart 47: Business Combination Agreement Announced

Sr.	SPAC Name	Ticker	Target Company	EV ($M)	MA Date	Close Date
1	Portage Fintech Acquisition Corp.	PFTA	Rbio Energy	350	2/7/2024	2Q25
2	Focus Impact BH3 Acquisition Company	BHAC	XCF Global Capital	1,840	3/12/2024	1Q25
3	Aquaron Acquisition Corp.	AQU	Huture	1000	7/12/2024	2Q25
4	Inflection Point Acquisition Corp. II	IPXX	USA Rare Earth, LLC	870	8/22/2024	3Q25
5	Compass Digital Acquisition Corp.	CDAQ	EEW Renewables Ltd	386	9/6/2024	2Q25
6	Athena Technology Acquisition Corp. II	ATEK	Ace Green Recycling, Inc.	2500	12/4/2024	4Q24

Source: Intro-act, Boardroom Alpha

Chart 48: De-SPACs

Sr.	SPAC Name	SPAC Ticker	DE-SPAC Company Name	De-SPAC Ticker	EV	Closing Date
1	Nubia Brand International Corp.	NUBI	Honeycomb Battery Co.	STI	700	5-Feb-24
2	ESGEN Acquisition Corp	ESAC	Sunergy	ZEO	475	14-Mar-24
3	Power Digital Infrastructure Acquisition II Corp.	XPDB	Montana Technologies	AIRJ	500	15-Mar-24
4	Keyarch Acquisition Corp	KYCH	ZOOZ Power Ltd.	ZOOZ	100	5-Apr-24
5	AltC Acquisition Corp.	ALCC	Oklo	OKLO	850	10-May-24
6	Global Partner Acquisition Corp II	GPAC	Stardust Power, Inc.	SDST	493	9-Jul-24
7	Project Energy Reimagined Acquisition Corp.	PEGR	Heramba Electric	PITA	450	30-Jul-24
8	TMT Acquisition Corp.	TMTC	eLong Power Holding Limited	ELPW	450	22-Nov-24
9	Roth CH Acquisition V Co.	ROCL	New Era Helium Corporation	NEHC	90	7-Dec-24
10	Swiftmerge Acquisition Corp.	IVCP	AleAnna Energy, LLC	ANNA	186	16-Dec-24

Source: Intro-act, Boardroom Alpha

CLEANTECH EVENTS CALENDAR

Sr.	Event	Place	Dates
1	Direct Air Capture Live Event	San Francisco, California, USA	March 20, 2025
2	UNC Cleantech Summit	Chapel Hill, NC, USA	March 24, 2025
3	2025 Cleantech Conference: Advancing Europe's Clean Industrial Transformation	Brussels, Belgium	April 8, 2025
4	Energy Tech Summit 2025	Bilbao, Spain	April 9, 2025
5	Every Drop Counts: Navigating Water Challenges in Manufacturing and Data Centers	Palo Alto, California, USA	April 10, 2025
6	Innovation Zero World Congress	London, United Kingdom	April 29, 2025

Source: Intro-act, Multiple web sources

CLEANTECH COMP TABLE

		3/17/2025	Price Performance						Sales			EBITDA			Book Value	
			Share Price	Mkt Cap ($ Mns)	EV ($M)	% to High	% to Low	% YTD	FY0	FY1	EV/Sales	FY0	FY1	EV/ EBITDA	Book/ Share	P/ Book
Biofuels		**Ticker**	**623.4**	**162,465**	**251,915**			**30%**	**447,539**	**455,445**	**0.6 x**	**28,417**	**28,883**	**8.7 x**	**420.5**	**1.5 x**
1	VALERO ENERGY CORP	VLO	163.7	54,427	63,842	13%	-29%	41%	129,881	119,129	0.5 x	6,528	6,279	10.2 x	77.85	2.1 x
2	ARCHER DANIELS MIDLAND CO	ADM	59.3	30,239	34,965	11%	-24%	25%	85,530	88,300	0.4 x	4,176	4,038	8.7 x	46.38	1.3 x
3	WILMAR INTERL LTD	F34-SG	2.5	16,224	40,904	5%	-14%	14%	67,379	72,665	0.6 x	3,506	3,904	10.5 x	3.22	0.8 x
4	BUNGE GLOBAL SA	BG	95.6	13,705	17,879	20%	-29%	32%	53,108	58,705	0.3 x	2,478	2,314	7.7 x	74.00	1.3 x
5	DARLING INGREDIENTS INC	DAR	44.4	7,093	11,688	9%	-39%	33%	5,715	5,950	2.0 x	1,080	1,299	9.0 x	27.55	1.6 x
6	ENERGY ABSOLUTE PC	EA-TH	0.7	3,701	5,582	3%	-91%	329%	530	559	10.0 x	-	-	-	0.25	2.8 x
7	COSAN SA	CSAN3-BR	3.3	6,160	21,498	4%	-64%	151%	27,520	30,224	0.7 x	3,629	4,052	5.3 x	1.00	3.3 x
8	SD GUTHRIE BERHAD	5285-MY	0.9	6,380	7,976	28%	-4%	-17%	4,462	4,485	1.8 x	944	911	8.8 x	0.55	1.7 x
9	VALMET OYJ	VALMT-FI	27.3	5,031	6,162	23%	-18%	13%	5,591	5,837	1.1 x	727	807	7.6 x	14.72	1.9 x
10	VERBIO SE	VBK-DE	18.2	1,157	1,241	40%	-53%	48%	1,847	1,781	0.7 x	136	74	16.8 x	14.71	1.2 x
11	SAO MARTINHO SA	SMTO3-BR	5.5	1,962	3,549	15%	-36%	59%	1,306	1,298	2.7 x	586	662	5.4 x	3.36	1.6 x
12	GREEN PLAINS INC	GPRE	20.3	1,302	1,650	19%	-76%	112%	2,459	2,520	0.7 x	18	58	28.3 x	13.37	1.5 x
13	FIRST RESOURCES	EB5-SG	1.0	1,563	1,717	31%	0%	-9%	1,039	1,085	1.6 x	378	432	4.0 x	0.90	1.1 x
14	COFCO BIOTECH	000930-CN	0.8	1,562	1,941	10%	-26%	10%	2,812	-	-	6	-	-	0.78	1.1 x
15	ANDERSONS INC	ANDE	53.4	1,806	2,081	15%	-26%	30%	11,258	11,696	0.2 x	363	369	5.6 x	40.17	1.3 x
16	MONTAUK RENEWABLES	MNTK	4.3	616	603	45%	-52%	8%	176	181	3.3 x	43	49	12.3 x	1.80	2.4 x
17	ADECOAGRO S A	AGRO	10.0	1,063	1,981	20%	-13%	8%	1,416	1,527	1.3 x	523	451	4.4 x	13.85	0.7 x
18	RAIZEN SA	RAIZ4-BR	0.7	941	16,062	5%	-60%	102%	42,446	42,941	0.4 x	3,028	2,703	5.9 x	0.33	2.1 x
19	GREENVOLT ENERGI	GVOLT-PT	8.9	1,233	2,336	6%	-5%	4%	-	-	-	-	-	-		-
20	CROPENERGIES AG	CE2-DE	12.7	1,106	1,045	19%	-3%	-10%	-	-	-	-	-	-	9.21	1.4 x
21	LONGYAN ZHUOYUE	688196-CN	3.8	453	449	83%	-32%	-18%	388	541	0.8 x	18	34	13.2 x	3.12	1.2 x
22	SHANDONG MINHE ANI	002234-CN	1.5	507	586	11%	-30%	19%	288	312	1.9 x	(31)	(12)	-	0.81	1.8 x
23	REX AMERICAN RES	REX	44.4	777	530	37%	-20%	6%	833	636	0.8 x	-	92	5.8 x	32.13	1.4 x
24	AUDAX RENOVABLES	ADX-ES	1.5	665	1,001	44%	-6%	-8%	2,142	2,453	0.4 x	123	134	7.5 x	0.49	3.1 x
25	JALLES MACHADO SA	JALL3-BR	1.5	465	1,062	5%	-56%	107%	352	416	2.6 x	234	261	4.1 x	1.14	1.3 x
26	HENAN BCCY ENVIRON	300614-CN	1.9	299	351	4%	-42%	44%	-	-	-	-	-	-	1.29	1.5 x
27	DALMIA BHARAT	500097-IN	4.3	350	321	60%	-23%	2%	347	411	0.8 x	49	51	6.3 x	4.29	1.0 x

28	CAMLIN FINE	532834-IN	1.2	203	273	70%	-21%	-28%	194	197	1.4 x	14	20	13.9 x	0.46	2.6 x
29	GEVO INC	GEVO	0.7	161	(144)	405 %	-28%	-68%	13	196	-0.7 x	(69)	2	-71.3 x	2.11	0.3 x
30	TUNAS BARU LAMPUNG	TBLA-ID	0.0	252	1,067	7%	-25%	12%	-	-	-	-	-	-	0.08	0.5 x
31	ALTO INGREDIENTS	ALTO	2.0	150	210	21%	-40%	25%	965	946	0.2 x	(9)	12	17.4 x	2.94	0.7 x
32	DHAMPUR SUGAR MILL	500119-IN	2.6	172	203	16%	-50%	40%	261	-	-	32	-	-	1.90	1.4 x
33	AEMETIS INC	AMTX	3.1	122	541	127 %	-52%	-11%	268	359	1.5 x	(19)	16	33.0 x	(5.41)	-0.6 x
34	DHAMPUR BIO	543593-IN	1.5	99	123	31%	-55%	12%	-	-	-	-	-	-	1.67	0.9 x
35	CODEXIS INC	CDXS	3.3	234	190	83%	-26%	-41%	59	66	2.9 x	(46)	(47)	-	0.82	4.1 x
36	LGI LIMITED	LGI-AU	1.7	150	156	24%	-7%	-9%	23	24	6.6 x	10	11	14.4 x	0.38	4.5 x
37	AGRIA GROUP	AGH-BG	10.9	74	254	22%	-8%	4%	-	-	-	-	-	-	25.67	0.4 x
38	COMSTOCK INC	LODE	3.9	46	34	157 %	-68%	-78%	3	4	8.5 x	-	-	-	2.54	1.5 x
39	GREENLANE	GRN-CA	0.1	14	6	24%	-53%	44%	43	-	-	(8)	-	-	0.10	0.9 x
Clean Fossil Fuels & CCS		**Ticker**	**339.9**	**139,874**	**173,800**			**3%**	**137,872**	**143,201**	**1.2 x**	**30,888**	**29,697**	**5.9 x**	**148.6**	**2.3 x**
40	AIR PRODS & CHEMS	APD	244.6	54,382	66,146	39%	-7%	-16%	12,101	12,148	5.4 x	5,042	5,210	12.7 x	75.03	3.3 x
41	ENI SPA	ENI-IT	15.8	53,320	75,836	8%	-18%	23%	92,464	96,335	0.8 x	19,294	18,827	4.0 x	16.68	0.9 x
42	SHANXI LU'AN ENVIR	601699-CN	3.3	9,802	6,753	5%	-50%	67%	5,958	4,907	1.4 x	1,999	1,094	6.2 x	2.15	1.5 x
43	HENAN SHENHUO COAL	000933-CN	2.7	6,011	8,222	31%	-31%	16%	5,212	5,441	1.5 x	1,488	1,124	7.3 x	1.33	2.0 x
44	CNOOC ENERGY	600968-CN	0.5	4,718	3,799	52%	-3%	-21%	6,811	7,525	0.5 x	820	910	4.2 x	0.35	1.3 x
45	CALIFORNIA RES	CRC	54.0	3,739	3,822	12%	-30%	-21%	3,198	3,397	1.1 x	1,002	1,183	3.2 x	38.84	1.4 x
46	KEDA INDUSTRIAL GR	600499-CN	1.6	3,127	3,559	2%	-43%	55%	1,343	1,573	2.3 x	350	297	12.0 x	0.83	1.9 x
47	AKER SOLUTIONS ASA	AKSO-NO	3.5	1,726	899	46%	-26%	32%	4,742	5,031	0.2 x	410	434	2.1 x	3.73	0.9 x
48	GUIZHOU PANJIANG R	600395-CN	0.9	1,861	3,578	9%	-25%	24%	1,298	1,197	3.0 x	232	297	12.1 x	0.71	1.2 x
49	TECNICAS REUNIDAS	TRE-ES	8.0	640	476	119 %	-5%	-30%	4,629	5,384	0.1 x	225	276	1.7 x	5.18	1.5 x
50	AKER CARBON CA	ACC-NO	0.7	394	289	22%	-60%	17%	44	0	36,219.7 x	(7)	(7)	-	0.81	0.8 x
51	TIDEWATER	LCFS-CA	4.4	154	421	48%	-91%	651%	72	264	1.6 x	34	53	8.0 x	2.99	1.5 x
Diversified Renewables		**Ticker**	**555.7**	**350,610**	**684,880**			**-9%**	**425,394**	**436,742**	**1.6 x**	**71,924**	**73,274**	**9.3 x**	**469.0**	**1.2 x**
52	ENBRIDGE INC	ENB-CA	35.5	75,495	140,551	29%	-7%	-18%	37,743	30,017	4.7 x	13,143	13,908	10.1 x	18.83	1.9 x
53	HITACHI	6501-JP	16.7	77,430	84,727	76%	-1%	-32%	62,089	65,280	1.3 x	7,735	9,332	9.1 x	8.48	2.0 x
54	ENGIE	ENGI-FR	16.7	40,781	83,626	13%	-17%	6%	76,860	82,902	1.0 x	16,244	15,383	5.4 x	13.08	1.3 x
55	NIDEC CORPORATION	6594-JP	18.6	22,178	25,081	38%	-12%	6%	15,148	17,410	1.4 x	1,904	2,532	9.9 x	10.35	1.8 x
56	RWE AG	RWE-DE	33.8	25,115	25,777	17%	-15%	13%	31,103	28,385	0.9 x	9,122	6,012	4.3 x	46.34	0.7 x

57	CHUBU ELEC POWER	9502-JP	13.6	10,315	30,332	4%	-28%	30%	23,042	24,113	1.3 x	3,402	2,819	10.8 x	23.97	0.6 x
58	ZHEJIANG ZHENENG	600023-CN	0.8	11,179	17,308	30%	-17%	8%	13,244	13,413	1.3 x	2,302	2,578	6.7 x	0.74	1.1 x
59	BROOKFIELD RENEW	BEP	22.7	6,522	61,358	30%	-12%	0%	3,246	6,605	9.3 x	2,351	2,511	24.4 x	12.64	1.8 x
60	TOKYO ELEC POWER	9501-JP	6.5	10,411	53,426	11%	-62%	115%	43,883	46,146	1.2 x	-	4,565	11.7 x	15.63	0.4 x
61	FUJI ELECTRIC CO.	6504-JP	63.0	9,400	9,854	10%	-32%	21%	7,014	7,572	1.3 x	993	1,158	8.5 x	29.64	2.1 x
62	MERCURY NZ LTD	MCY-NZ	4.1	5,650	6,876	7%	-22%	23%	2,106	2,044	3.4 x	539	473	14.5 x	1.88	2.2 x
63	BHARAT HEAVY ELECT	500103-IN	2.6	9,103	9,526	54%	-23%	-2%	2,871	3,508	2.7 x	50	183	52.0 x	0.79	3.3 x
64	SOJITZ CORPORATION	2768-JP	26.2	5,887	11,379	9%	-27%	34%	15,316	16,937	0.7 x	835	984	11.6 x	29.86	0.9 x
65	ULTRAPAR	UGPA3-BR	5.7	6,363	7,780	2%	-56%	130%	22,847	24,147	0.3 x	991	1,032	7.5 x	2.39	2.4 x
66	HUBEI ENERGY GR	000883-CN	0.7	4,594	11,107	23%	-12%	4%	2,576	2,812	4.0 x	797	1,025	10.8 x	0.73	1.0 x
67	IHI CORPORATION	7013-JP	23.4	3,626	7,698	245 %	-6%	-60%	8,501	10,923	0.7 x	(12)	1,495	5.1 x	19.68	1.2 x
68	CIA ENERG MG-CEMIG	CMIG4-BR	1.8	3,353	6,673	26%	-4%	-1%	7,011	6,314	1.1 x	1,578	1,644	4.1 x	1.67	1.1 x
69	ELEC POWER DEV	9513-JP	15.8	2,895	14,270	13%	-6%	-3%	8,070	8,630	1.7 x	1,438	1,594	8.9 x	46.57	0.3 x
70	ENCAVIS AG	ECV-DE	18.3	2,946	5,058	6%	-7%	1%	505	502	10.1 x	353	332	15.2 x	6.02	3.0 x
71	CENTRAIS ELET BRAS	ELET6-BR	9.5	2,662	30,434	4%	-37%	61%	6,880	6,628	4.6 x	3,847	4,078	7.5 x	8.72	1.1 x
72	TERNA ENERGY SA	TENERGY-GR	19.4	2,295	3,254	15%	-7%	-6%	351	-	-	189	-	-	3.97	4.9 x
73	TAURON POLSKA	TPE-PL	0.8	1,366	5,529	61%	-12%	-15%	11,740	9,166	0.6 x	1,452	1,456	3.8 x	2.51	0.3 x
74	ROMANDE ENERGIE	REHN-CH	63.4	1,806	1,780	3%	-27%	48%	998	971	1.8 x	220	129	13.8 x	92.36	0.7 x
75	RENEW ENERGY	RNW	6.2	1,574	9,069	21%	-17%	-10%	1,158	1,117	8.1 x	831	854	10.6 x	3.37	1.8 x
76	GEK TERNA S.A	GEKTERNA-GR	18.1	1,867	4,002	14%	-10%	-2%	3,749	3,358	1.2 x	628	502	8.0 x	11.70	1.5 x
77	FIRST GEN	FGEN-PH	0.4	1,288	2,146	2%	-24%	28%	2,542	-	-	820	-	-	0.90	0.4 x
78	KEPCO PLANT	051600-KR	28.0	1,262	1,225	25%	-15%	-6%	1,072	1,105	1.1 x	184	190	6.5 x	20.18	1.4 x
79	BCPG PCL	BCPG-TH	0.2	607	1,525	18%	-30%	24%	128	111	13.7 x	129	103	14.8 x	0.30	0.7 x
80	SHANGHAI ELECTRIC	2727-HK	0.2	598	8,929	175 %	-10%	-44%	15,883	15,965	0.6 x	735	847	10.5 x	0.49	0.4 x
81	ABO WIND AG	AB9-DE	59.4	548	733	11%	-42%	59%	326	352	2.1 x	64	64	11.5 x	22.45	2.6 x
82	PETROVIETNAM	NT2-VN	1.0	292	255	1%	-29%	24%	234	271	0.9 x	30	33	7.7 x	0.57	1.8 x
83	AKER HORIZONS	AKH-NO	0.3	227	1,709	12%	-61%	58%	-	-	-	-	-	-	0.48	0.7 x
84	ENER INNOV	EIDF-ES	6.7	395	430	104 %	-54%	109%	-	-	-	-	-	-	0.47	14.0 x
85	RENEWABLE JAPAN	9522-JP	6.7	201	1,024	26%	-51%	-17%	122	-	-	-	-	-	2.78	2.4 x
86	ALTIUS RENEWABLE	ARR-CA	6.6	204	116	32%	-10%	-	8	-	-	4	-	-	6.24	1.1 x
87	CLEARVISE AG	ABO-DE	2.3	175	316	3%	-28%	35%	48	39	8.0 x	35	24	12.9 x	2.22	1.0 x

	Batteries	Ticker	1397	297,882	342,184			-11%	134,624	155,438	2.2 x	20,531	27,146	12.6 x	465.4	3.0 x
88	CATL	300750-CN	25.2	110,640	105,290	70%	-8%	-31%	50,056	61,965	1.7 x	11,461	13,953	7.5 x	7.41	3.4 x
89	LG ENERGY SOLUTION	373220-KR	299.5	70,083	77,825	10%	-25%	27%	17,891	19,014	4.1 x	2,444	3,797	20.5 x	61.69	4.9 x
90	ORSTED A/S	ORSTED-DK	50.9	21,396	31,614	33%	-31%	13%	10,018	11,594	2.7 x	4,442	4,221	7.5 x	20.62	2.5 x
91	LUCID GROUP INC	LCID	2.7	6,210	4,775	64%	-29%	-32%	808	1,472	3.2 x	(2,438)	(2,280)	-	1.28	2.1 x
92	SOLAREDGE TECH.	SEDG	61.6	3,517	3,392	20%	-83%	340%	901	1,090	3.1 x	(1,200)	(166)	-	11.35	5.4 x
93	GENERAC	GNRC	111.9	6,743	8,186	75%	-1%	-27%	4,296	4,513	1.8 x	789	844	9.7 x	41.84	2.7 x
94	LITTELFUSE INC	LFUS	231.7	5,773	6,151	19%	-13%	-1%	2,191	2,286	2.7 x	414	448	13.7 x	97.23	2.4 x
95	WUXI LEAD INTELLIG	300450-CN	3.2	4,999	5,212	22%	-43%	17%	2,292	1,844	2.8 x	341	212	24.6 x	1.06	3.0 x
96	CHINA SHIPBUILDI.G	600482-CN	2.8	6,041	5,699	43%	-10%	-20%	6,224	7,134	0.8 x	286	1,304	4.4 x	2.37	1.2 x
97	CNGR ADVANCED	300919-CN	5.4	5,039	8,273	27%	-31%	10%	4,730	5,468	1.5 x	538	560	14.8 x	2.97	1.8 x
98	ENERSYS	ENS	91.2	3,686	4,267	23%	-3%	1%	3,582	3,615	1.2 x	516	586	7.3 x	46.79	1.9 x
99	SHENZHEN KEDALI	002850-CN	11.2	3,033	3,283	83%	-15%	-16%	1,452	1,700	1.9 x	305	327	10.1 x	5.67	2.0 x
100	GOTION HIGH-TECH	002074-CN	2.8	3,703	9,097	29%	-15%	-25%	4,363	5,132	1.8 x	401	551	16.5 x	1.95	1.4 x
101	VOLTRONIC POWER	6409-TW	56.6	4,965	4,813	32%	-22%	0%	694	784	6.1 x	166	178	27.0 x	3.46	16.4 x
102	WUXI AUTOWELL	688516-CN	10.5	3,285	3,481	11%	-56%	76%	873	1,355	2.6 x	222	304	11.5 x	1.95	5.4 x
103	FARASIS ENERGY	688567-CN	1.8	2,184	2,081	29%	-35%	12%	2,270	1,817	1.1 x	(91)	66	31.4 x	1.13	1.6 x
104	FLUENCE ENERGY INC	FLNC	14.1	1,793	1,516	85%	-66%	-13%	2,699	3,301	0.5 x	78	76	19.9 x	3.15	4.5 x
105	ZHUHAI COSMX	688772-CN	2.0	2,237	2,846	46%	-21%	-9%	1,582	1,632	1.7 x	293	206	13.8 x	0.86	2.3 x
106	BEIJING EASPRING	300073-CN	4.9	2,395	1,866	61%	-23%	-11%	2,093	1,086	1.7 x	322	123	15.1 x	3.57	1.4 x
107	HUNAN CHANGYUAN	688779-CN	0.8	1,619	1,855	18%	-31%	15%	1,481	-	-	15	-	-	0.53	1.6 x
108	ZHEJIANG HANGKE	688006-CN	3.1	1,901	1,590	7%	-39%	29%	553	491	3.2 x	129	92	17.3 x	1.20	2.6 x
109	GUANGZHOU GREAT	300438-CN	3.6	1,829	2,217	53%	-37%	-5%	957	1,058	2.1 x	87	145	15.3 x	1.48	2.5 x
110	SHENZHEN SENIOR	300568-CN	1.7	2,052	2,503	7%	-44%	28%	416	516	4.8 x	167	177	14.1 x	1.01	1.7 x
111	KEHUA DATA CO	002335-CN	4.0	1,827	2,238	109 %	-41%	0%	1,123	1,099	2.0 x	186	136	16.4 x	1.37	2.9 x
112	ZHEJIANG NARADA	300068-CN	1.7	1,426	2,562	107 %	-41%	-21%	2,024	-	-	109	-	-	0.87	2.0 x
113	ANKER INNOVATIONS	300866-CN	8.9	1,750	4,272	88%	-22%	-56%	2,416	3,312	1.3 x	286	324	13.2 x	2.14	4.2 x
114	SUNNOVA ENERGY	NOVA	4.5	548	8,409	191 %	-94%	28%	840	1,000	8.4 x	669	677	12.4 x	14.65	0.3 x
115	W-SCOPE CHUNGJU	393890-KR	30.1	1,013	1,146	8%	-81%	297%	228	242	4.7 x	72	17	66.8 x	20.28	1.5 x
116	V-GUARD INDUSTRIES	532953-IN	3.8	1,670	1,698	79%	-11%	-22%	575	636	2.7 x	51	60	28.2 x	0.51	7.6 x
117	SINENG ELECTRIC CO	300827-CN	3.9	1,398	1,504	92%	-28%	-35%	681	908	1.7 x	65	94	16.1 x	0.78	5.0 x
118	GUIZHOU ZHENHUA E-	688707-CN	2.0	1,042	1,186	5%	-46%	37%	950	265	4.5 x	57	(27)	-	1.25	1.6 x

119	PEOPLE AND TECH.	137400-KR	32.4	737	801	100 %	-23%	23%	404	694	1.2 x	62	110	7.3 x	15.69	2.1 x
120	NIKOLA CORP	NKLA	19.3	860	675	79%	-99%	755%	36	105	6.5 x	(540)	(445)	-	6.86	2.8 x
121	VARTA AG	VAR1-DE	15.0	638	1,258	9%	-95%	836%	887	904	1.4 x	23	66	19.1 x	4.28	3.5 x
122	FREYR BATTERY	FREY	1.4	200	(52)	135 %	-36%	-45%	3	983	-0.1 x	(95)	64	-0.8 x	3.83	0.4 x
123	SHENZHEN CLICK	002782-CN	1.7	818	843	26%	-22%	-3%	-	-	-	-	-	-	0.54	3.1 x
124	ENCHEM CO LTD	348370-KR	173.6	3,182	3,078	68%	-67%	66%	-	-	-	-	-	-	19.11	9.1 x
125	LI-CYCLE	LICY	6.1	137	407	152 %	-97%	116%	18	29	14.0 x	(149)	(88)	-	12.73	0.5 x
126	HNAC TECHNOLOGY	300490-CN	1.3	522	616	18%	-36%	23%	-	-	-	-	-	-	0.92	1.4 x
127	GOGORO INC	GGR	1.4	351	618	41%	-74%	138%	311	297	2.1 x	43	39	15.8 x	0.91	1.6 x
128	MICROVAST	MVST	0.6	174	291	421 %	-73%	-74%	307	358	0.8 x	(20)	(21)	-	1.58	0.3 x
129	ZHEJIANG POWER	688184-CN	2.6	152	426	2%	-40%	-19%	-	-	-	-	-	-	2.17	1.2 x
130	CALB GROUP CO LTD.	3931-HK	1.7	458	7,510	49%	-18%	-55%	3,736	4,386	1.7 x	379	501	15.0 x	2.72	0.6 x
131	FUJIAN NEBULA	300648-CN	2.8	418	549	61%	-24%	-10%	-	-	-	-	-	-	0.76	3.7 x
132	ENERGY VAULT	NRGV	1.6	241	97	64%	-52%	-30%	52	262	0.4 x	(60)	(21)	-	1.18	1.4 x
133	W-SCOPE CO	6619-JP	3.9	214	780	31%	-61%	120%	209	67	11.6 x	-	17	46.3 x	6.00	0.6 x
134	EOS ENERGY	EOSE	1.0	202	334	567 %	-39%	-82%	16	165	2.0 x	(158)	(57)	-	(4.83)	-0.2 x
135	ALLIS ELECTRIC	1514-TW	3.3	855	892	68%	-19%	5%	269	314	2.8 x	-	35	25.7 x	0.66	5.0 x
136	VITZROCELL CO LTD	082920-KR	13.8	311	240	51%	-15%	-3%	131	142	1.7 x	36	46	5.3 x	8.03	1.7 x
137	VULCAN ENERGY	VUL-AU	2.2	385	303	145 %	-27%	-47%	7	9	34.2 x	(38)	(41)	-	1.53	1.5 x
138	NHOA	NHOA-FR	0.7	183	100	112 %	-16%	-	295	-	-	(18)	-	-	0.90	0.7 x
139	LEOCH INTL	842-HK	0.2	241	553	95%	-13%	-13%	1,864	-	-	-	-	-	0.45	0.4 x
140	FORSEE POWER	FORSE-FR	1.8	130	174	7%	-80%	318%	183	165	1.1 x	(7)	1	246.6 x	0.82	2.2 x
141	LARGO INC	LGO-CA	1.8	113	153	60%	-22%	1%	199	143	1.1 x	5	(6)	-	2.83	0.6 x
142	FDK CORPORATION	6955-JP	4.5	157	238	15%	-39%	34%	403	-	-	-	-	-	3.24	1.4 x
143	MPLUS CORP	259630-KR	8.5	104	82	26%	-44%	65%	-	71	1.1 x	-	9	8.7 x	4.47	1.9 x
144	NIPPON DENKAI LTD	5759-JP	9.1	83	157	9%	-100%	64327 %	107	-	-	-	-	-	1.67	5.5 x
145	FLUX PWR HLDGS	FLUX	4.0	66	80	37%	-71%	149%	61	59	1.4 x	(4)	(3)	-	0.01	341.4 x
146	PIONEER PWR	PPSI	5.5	55	52	27%	-46%	20%	41	23	2.3 x	1	(2)	-	1.34	4.1 x
147	IDEAL PWR INC	IPWR	11.7	69	62	7%	-61%	13%	0	-	-	-	-	-	2.48	4.7 x
148	GELION UK LTD	GELN-GB	0.2	29	20	92%	-34%	-7%	3	4	5.5 x	(7)	(7)	-	0.11	2.0 x

	Fuel Cells	Ticker	436.7	48,675	54,708			-17%	37,283	38,416	1.4 x	5,129	5,241	10.4 x	140.7	3.1 x
149	CUMMINS INC	CMI	274.8	38,988	44,493	41%	-5%	-19%	34,102	34,641	1.3 x	6,326	5,763	7.7 x	74.75	3.7 x
150	PLUG POWER INC	PLUG	3.3	2,279	2,636	47%	-59%	16%	629	759	3.5 x	(893)	(429)	-	1.90	1.8 x
151	BLOOM ENERGY	BE	9.3	2,083	2,843	222 %	-5%	-59%	1,474	1,724	1.6 x	161	211	13.5 x	2.45	3.8 x
152	NEL ASA	NEL-NO	0.5	775	467	78%	-61%	95%	135	96	4.8 x	(20)	(28)	-	0.26	1.8 x
153	BALLARD PWR SYS	BLDP-CA	2.8	835	100	21%	-61%	68%	70	97	1.0 x	(185)	(113)	-	2.25	1.2 x
154	DOOSAN FUEL CELL	336260-KR	14.9	974	1,476	35%	-32%	37%	285	371	4.0 x	13	28	53.5 x	4.16	3.6 x
155	SHINRY TECH.	300745-CN	2.8	470	383	18%	-38%	30%	-	257	1.5 x	-	2	197.8 x	1.95	1.4 x
156	CERES POWER	CWR-GB	1.9	371	195	113 %	-61%	-11%	28	73	2.7 x	(63)	(30)	-	1.10	1.7 x
157	FUELCELL ENERGY	FCEL	33.0	497	345	13%	-84%	160%	112	157	2.2 x	(101)	(64)	-	30.04	1.1 x
158	NANOFILM TECH.	MZH-SG	0.6	367	354	34%	-21%	0%	153	173	2.0 x	37	44	8.0 x	0.44	1.2 x
159	SFC ENERGY AG	F3C-DE	19.0	330	282	43%	-12%	6%	128	157	1.8 x	16	23	12.2 x	8.27	2.3 x
160	POWERCELL SWEDEN	PCELL-SE	2.9	150	149	71%	-28%	-19%	31	41	3.7 x	(3)	(1)	-	0.67	4.3 x
161	HYZON MOTORS INC	HYZN	36.8	180	75	22%	-99%	2103%	0	11	6.8 x	(131)	(141)	-	2.35	15.7 x
162	BUMHAN FUEL CELL	382900-KR	13.9	122	95	56%	-43%	63%	23	25	3.9 x	(2)	13	7.2 x	8.36	1.7 x
163	BEIJING SINOHYTEC	2402-HK	3.0	108	661	52%	-22%	13%	111	87	7.6 x	(19)	(32)	-	1.72	1.7 x
164	TECO 2030 ASA	TECO-NO	0.3	43	64	0%	-96%	310%	7	-	-	(9)	-	-	0.02	12.1 x
165	S-FUELCELL	288620-KR	11.5	80	66	34%	-54%	90%	-	-	-	-	-	-	6.78	1.7 x
166	ADVENT TECH.	ADN	5.4	14	21	62%	-69%	7%	5	-	-	-	-	-	(6.86)	-0.8 x
	Geothermal	Ticker	73.9	7,833	13,079			8%	1,369	1,444	9.1 x	942	972	13.5 x	58.7	1.3 x
167	ORMAT TECH.	ORA	63.8	3,852	5,816	32%	-7%	-6%	880	953	6.1 x	550	578	10.1 x	40.18	1.6 x
168	PERTAMINA GEOTHERM	PGEO-ID	0.1	3,139	3,185	14%	-39%	30%	414	408	7.8 x	336	336	9.5 x	0.04	1.7 x
169	FIRST PHILIPPINE	FPH-PH	1.2	543	3,652	1%	-15%	15%	-	-	-	-	-	-	5.95	0.2 x
170	POLARIS RENEWABLE	PIF-CA	8.3	174	310	23%	-4%	-11%	76	84	3.7 x	55	59	5.3 x	12.32	0.7 x
171	ENVIRONMENT FRIEND	3777-JP	0.3	76	68	15%	-48%	29%	114	-	-	-	-	-	0.07	3.7 x
172	BLUESTONE RES	BSR-CA	0.3	49	49	92%	-51%	45%	-	-	-	-	-	-	0.14	2.3 x
	GreenTech & Waste Mgt.	Ticker	758.6	116,298	159,390			0%	58,112	55,812	2.9 x	10,531	11,063	14.4 x	358.9	2.1 x
173	WASTE CONNECTIONS	WCN	170.9	44,045	50,995	14%	-6%	-1%	8,920	9,527	5.4 x	2,902	3,163	16.1 x	30.46	5.6 x
174	XYLEM INC	XYL	127.3	30,770	32,389	15%	-11%	9%	8,562	8,730	3.7 x	1,763	1,879	17.2 x	43.80	2.9 x
175	GFL ENVIRONMENTAL	GFL	33.8	12,139	19,631	45%	-10%	-29%	5,500	4,544	4.3 x	1,574	1,349	14.6 x	12.33	2.7 x
176	CASELLA WASTE	CWST	96.1	5,477	6,469	21%	-10%	-17%	1,557	1,789	3.6 x	361	419	15.4 x	24.48	3.9 x
177	STERICYCLE INC	SRCL	52.3	4,841	6,570	19%	-16%	-	2,659	-	-	417	-	-	27.53	1.9 x

178	ACEA SPA	ACE-IT	16.8	3,585	9,960	19%	-6%	-13%	4,643	4,644	2.1 x	1,630	1,586	6.3 x	12.05	1.4 x
179	KEPPEL INFRA.	A7RU-SG	0.4	2,081	4,698	1%	-15%	4%	1,643	1,668	2.8 x	323	351	13.4 x	0.11	3.5 x
180	SIMS LTD	SMSMY	7.8	1,498	1,964	19%	-18%	5%	5,776	4,666	0.4 x	211	271	7.3 x	8.79	0.9 x
181	CHINA TIANYING INC	000035-CN	0.6	1,529	2,705	34%	-9%	-3%	735	816	3.3 x	220	238	11.4 x	0.63	1.0 x
182	ENERGY RECOVERY	ERII	14.8	846	748	37%	-17%	5%	145	159	4.7 x	41	46	16.3 x	3.83	3.9 x
183	SHANGHAI ENV.	601200-CN	1.0	1,412	2,982	25%	-9%	-6%	883	-	-	242	-	-	1.13	0.9 x
184	PURECYCLE TECH.	PCT	5.3	878	1,270	192 %	-16%	-52%	0	52	24.4 x	(108)	(33)	-	1.10	4.9 x
185	MONTROSE ENV	MEG	37.6	1,142	1,475	33%	-60%	79%	696	759	1.9 x	96	105	14.1 x	13.01	2.9 x
186	GS ENGINEERING	006360-KR	11.6	990	3,675	41%	-12%	-1%	8,905	8,635	0.4 x	314	408	9.0 x	35.80	0.3 x
187	ENVIRI CORP	NVRI	8.0	640	2,097	59%	-29%	4%	2,340	2,303	0.9 x	319	312	6.7 x	5.13	1.6 x
188	NGL ENERGY	NGL	6.0	794	4,443	3%	-36%	20%	6,957	5,648	0.8 x	610	617	7.2 x	(1.17)	-5.1 x
189	CECO ENVIRONMENTAL	CECE	21.3	743	848	65%	-6%	-30%	558	701	1.2 x	63	92	9.3 x	7.08	3.0 x
190	WELLE ENV.	300190-CN	0.5	375	785	30%	-24%	4%	305	-	-	35	-	-	0.65	0.7 x
191	TSUKISHIMA HOLDING	6332-JP	9.5	432	566	22%	-18%	8%	797	-	-	-	-	-	13.71	0.7 x
192	VERTEX ENERGY INC	VTNR	1.2	115	530	42%	-100%	3414%	3,177	-	-	17	-	-	1.34	0.9 x
193	VA TECH WABAG	533269-IN	8.5	527	521	171 %	-7%	-56%	343	369	1.4 x	45	47	11.2 x	3.61	2.3 x
194	GREENTECH ENV.	688466-CN	1.9	231	222	34%	-23%	2%	79	-	-	18	-	-	1.28	1.5 x
195	EKOPAK NV	EKOP-BE	19.4	288	322	6%	-56%	33%	59	97	3.3 x	1	14	22.3 x	3.64	5.3 x
196	CSD WATER SERVICE	603903-CN	1.2	239	483	6%	-37%	34%	-	-	-	-	-	-	0.87	1.4 x
197	DANIMER SCIENTIFIC	DNMR	54.0	138	488	14%	-98%	1968%	47	46	10.6 x	(39)	(35)	-	70.08	0.8 x
198	DYNAGREEN ENV.	1330-HK	0.3	139	2,086	40%	-7%	-26%	547	474	4.4 x	205	235	8.9 x	0.83	0.4 x
199	GREEN IMPACT	GIP-CA	1.9	40	80	94%	-5%	-13%	118	102	0.8 x	(0)	(2)	-	2.87	0.7 x
200	ASCENT INDUSTRIES	ACNT	10.8	109	139	18%	-24%	-3%	178	-	-	-	-	-	9.29	1.2 x
201	TACMINA CORP	6322-JP	12.9	100	71	18%	-17%	34%	71	-	-	-	-	-	9.58	1.4 x
202	NAGAOKA INTL	6239-JP	8.9	63	51	41%	-27%	18%	64	-	-	-	-	-	6.68	1.3 x
203	EVERGEN INFRA.	EVGN-CA	1.8	25	45	11%	-73%	78%	6	10	4.4 x	0	3	17.7 x	2.66	0.7 x
204	PUEQU CO LTD	9264-JP	14.2	66	82	13%	-52%	60%	56	74	1.1 x	-	-	-	5.71	2.5 x
Hydro		**Ticker**	**580.2**	**239,178**	**432,830**			**5%**	**174,330**	**192,302**	**2.3 x**	**43,053**	**45,767**	**9.5 x**	**400.7**	**1.4 x**
205	VINCI	DG-FR	127.4	75,039	95,683	2%	-22%	29%	74,090	80,621	1.2 x	13,065	14,498	6.6 x	55.38	2.3 x
206	CEZ	CEZ-CZ	37.7	20,308	27,117	24%	-7%	-4%	14,950	14,255	1.9 x	5,964	5,255	5.2 x	18.31	2.1 x
207	ENDESA SA	ELE-ES	17.8	18,813	31,853	35%	-2%	-17%	22,187	26,742	1.2 x	5,519	5,884	5.4 x	7.97	2.2 x
208	HUANENG LANCANG	600025-CN	1.3	23,736	42,016	34%	-12%	1%	3,238	3,485	12.1 x	2,300	2,516	16.7 x	0.44	3.0 x

209	S.P.E.E.H. HIDRO	H2O-RO	27.6	12,422	11,446	9%	-11%	8%	1,996	2,387	4.8 x	1,283	1,557	7.4 x	10.34	2.7 x
210	TATA POWER CO	500400-IN	4.6	14,674	20,381	29%	-18%	0%	7,364	7,670	2.7 x	1,296	1,503	13.6 x	1.20	3.8 x
211	MERIDIAN ENERGY	MEL-NZ	3.4	8,749	9,509	24%	-10%	1%	3,035	2,785	3.4 x	566	431	22.1 x	1.69	2.0 x
212	ORKLA ASA	ORK-NO	7.1	7,157	9,224	43%	-9%	-17%	6,310	6,703	1.4 x	938	979	9.4 x	4.12	1.7 x
213	BROOKFIELD RENEWABLE	BEP.UT-CA	22.8	6,536	61,372	30%	-12%	1%	3,246	6,605	9.3 x	2,351	2,511	24.4 x	12.62	1.8 x
214	NHPC LTD	533098-IN	1.0	10,055	13,854	42%	-19%	6%	1,141	1,261	11.0 x	585	694	20.0 x	0.46	2.2 x
215	BROOKFIELD RENEW.	BEPC	23.8	4,283	44,683	47%	-10%	7%	4,571	5,600	8.0 x	2,408	2,302	19.4 x	5.16	4.6 x
216	IDACORP INC	IDA	90.8	4,597	7,101	33%	-2%	-22%	1,815	1,947	3.6 x	589	665	10.7 x	61.73	1.5 x
217	PORTLAND GEN	POR	41.1	4,158	8,610	21%	-3%	-13%	3,440	3,480	2.5 x	1,037	1,152	7.5 x	34.70	1.2 x
218	CHINA SOUTHERN	600995-CN	1.4	4,472	6,866	21%	-13%	1%	779	884	7.8 x	498	559	12.3 x	0.92	1.5 x
219	SJVN LTD	533206-IN	1.5	5,917	7,497	27%	-39%	23%	314	358	20.9 x	229	275	27.2 x	0.42	3.5 x
220	COLBUN S.A.	COLBUN-CL	0.1	2,344	3,559	11%	-12%	8%	1,569	1,694	2.1 x	640	661	5.4 x	0.18	0.7 x
221	BORALEX INC	BLX-CA	21.3	2,186	4,851	27%	-21%	7%	567	663	7.3 x	465	497	9.8 x	10.81	2.0 x
222	WEBUILD SPA	WBD-IT	2.6	2,608	2,244	52%	-20%	-11%	12,802	13,787	0.2 x	1,050	1,180	1.9 x	1.61	1.6 x
223	INNERGEX	INE-CA	6.2	1,261	6,271	53%	-22%	11%	738	856	7.3 x	500	588	10.7 x	3.42	1.8 x
224	AKSA ENERJI	AKSEN.E-TR	1.1	1,399	1,896	34%	-19%	3%	752	941	2.0 x	206	295	6.4 x	0.91	1.3 x
225	TANGSHAN JIDONG	000401-CN	0.8	1,234	4,507	11%	-31%	10%	3,907	3,679	1.2 x	351	556	8.1 x	1.46	0.5 x
226	BESTWAY MARINE	300008-CN	0.5	934	923	67%	-14%	-16%	498	-	-	35	-	-	0.16	3.4 x
227	SCATEC ASA	SCATC-NO	6.4	1,015	3,517	36%	-5%	-9%	585	573	6.1 x	459	392	9.0 x	5.71	1.1 x
228	MANAWA ENERGY	MNW-NZ	2.6	816	1,108	32%	-11%	-17%	289	241	4.6 x	88	56	19.9 x	2.03	1.3 x
229	CK POWER PUBLIC	CKP-TH	0.1	891	1,858	11%	-31%	17%	303	311	6.0 x	133	128	14.5 x	0.10	1.1 x
230	MEIDENSHA CORP	6508-JP	18.7	849	1,124	78%	-6%	-33%	1,846	2,061	0.5 x	152	209	5.4 x	18.77	1.0 x
231	NAFCO CO LTD	2790-JP	16.9	504	316	19%	-31%	40%	1,226	-	-	-	-	-	39.39	0.4 x
232	TORISHIMA PUMP	6363-JP	17.8	516	507	25%	-22%	26%	522	593	0.9 x	55	-	-	13.27	1.3 x
233	NORTHWEST PIPE	NWPX	33.8	335	497	71%	-8%	-30%	493	495	1.0 x	69	70	7.0 x	37.71	0.9 x
234	TOKYO ENERGY	1945-JP	8.2	288	329	19%	-21%	22%	569	-	-	-	-	-	13.24	0.6 x
235	LITHIUM IONIC	LTH-CA	0.7	81	82	32%	-54%	-4%	-	0	-	-	(21)	-	(0.00)	-916.0 x
236	GIA LAI ELECTRIC.	GEG-VN	0.5	180	662	28%	-18%	7%	93	100	6.6 x	67	74	8.9 x	0.41	1.2 x
237	INDIAN HUME PIPE	504741-IN	3.3	176	241	119 %	-15%	-21%	166	171	1.4 x	21	20	12.1 x	1.88	1.8 x
238	DAIDO METAL	7245-JP	4.6	218	523	6%	-35%	39%	823	896	0.6 x	100	108	4.8 x	9.81	0.5 x
239	DAT PHUONG	DPG-VN	1.7	106	165	46%	-4%	-6%	140	181	0.9 x	23	28	6.0 x	1.22	1.4 x
240	REACH SUBSEA	REACH-NO	0.5	138	219	95%	-3%	-39%	243	265	0.8 x	105	125	1.8 x	0.34	1.5 x

241	INIZIATIVE	IB-IT	15.7	82	198	7%	-10%	4%	-	-	-	-	-	-	14.55	1.1 x
242	IMAGINEER CO	4644-JP	6.7	72	(4)	12%	-9%	16%	38	-	-	-	-	-	8.27	0.8 x
243	SYNERTEC CORP	SOP-AU	0.1	30	27	19%	-70%	68%	13	12	2.3 x	(4)	(2)	-	0.01	7.2 x
	Nuclear	**Ticker**	**601.8**	**178,581**	**350,458**			**-23%**	**91,407**	**96,242**	**3.6 x**	**27,784**	**30,138**	**11.6 x**	**273.4**	**2.2 x**
244	CONSTELLATION	CEG	165.5	52,415	61,638	113 %	-6%	-25%	23,568	24,043	2.6 x	4,987	5,129	12.0 x	42.06	3.9 x
245	PUBLIC SVC	PEG	63.8	31,800	52,133	49%	-1%	-25%	10,290	10,800	4.8 x	3,932	4,672	11.2 x	32.36	2.0 x
246	ENTERGY CORP NEW	ETR	51.0	21,742	48,452	73%	-2%	-33%	12,257	13,208	3.7 x	5,101	5,515	8.8 x	35.11	1.5 x
247	CHINA NATL NUCLE.P	601985-CN	1.2	22,435	78,488	45%	-1%	-24%	10,333	10,661	7.4 x	6,122	6,466	12.1 x	0.70	1.7 x
248	CAMECO CORP	CCJ	41.1	17,849	18,779	52%	-14%	-20%	2,210	2,388	7.9 x	1,027	1,117	16.8 x	10.17	4.0 x
249	BWX TECHNOLOGIES	BWXT	99.5	9,081	10,254	37%	-13%	-11%	2,704	3,032	3.4 x	499	555	18.5 x	11.82	8.4 x
250	CHINA NUCLEAR ENGI	601611-CN	1.0	2,986	13,560	39%	-5%	-20%	15,105	16,134	0.8 x	1,104	1,341	10.1 x	0.93	1.1 x
251	CGN POWER CO LTD	1816-HK	0.3	3,411	49,723	53%	-6%	-17%	11,422	11,977	4.2 x	4,911	5,156	9.6 x	0.33	0.9 x
252	NEXGEN ENERGY LTD	NXE	7.4	4,009	3,804	21%	-40%	7%	15	2	2,465.0 x	(43)	(42)	-	1.44	5.2 x
253	URANIUM ENERGY	UEC	6.3	2,538	2,468	42%	-35%	-12%	0	93	26.7 x	(41)	(11)	-	2.05	3.1 x
254	LANZHOU LS HEAVY	603169-CN	0.8	1,015	1,613	12%	-27%	4%	713	824	2.0 x	63	73	22.2 x	0.34	2.3 x
255	DENISON MINES	DNN	1.9	1,675	1,568	31%	-32%	4%	3	9	174.5 x	(56)	(47)	-	0.44	4.3 x
256	ENERGY FUELS INC	UUUU	6.0	988	797	24%	-38%	-8%	78	74	10.8 x	(43)	(11)	-	2.66	2.3 x
257	SINOSEAL HOLDING	300470-CN	4.8	998	854	32%	-16%	-5%	189	213	4.0 x	60	68	12.6 x	1.72	2.8 x
258	BEIJER ALMA AB	BEIA.B-SE	17.1	919	1,265	28%	-19%	15%	660	758	1.7 x	123	138	9.1 x	7.01	2.4 x
259	JIANGSU SHENTONG	002438-CN	1.5	774	857	34%	-14%	-9%	294	326	2.6 x	68	75	11.4 x	0.93	1.6 x
260	CENTRUS ENERGY	LEU	38.3	572	575	221 %	-12%	-46%	442	446	1.3 x	68	66	8.7 x	9.63	4.0 x
261	EAGLE INDUSTRY	6486-JP	12.2	607	694	22%	-8%	2%	1,068	-	-	-	-	-	16.94	0.7 x
262	TAIHEI DENGYO	1968-JP	29.5	601	398	35%	-8%	-9%	830	889	0.4 x	-	-	-	35.44	0.8 x
263	NUSCALE PWR	SMR	7.9	627	517	311 %	-52%	-73%	37	58	8.9 x	(121)	(126)	-	5.04	1.6 x
264	FISSION URANIUM	FCUUF	0.7	543	496	40%	-31%	-	0	0	-	(9)	-	-	0.47	1.5 x
265	UR-ENERGY INC	URG	1.5	414	345	29%	-50%	-1%	18	32	10.9 x	(16)	(49)	-	0.42	3.5 x
266	SUNG KWANG BEND	014620-KR	8.2	235	146	173 %	-12%	-43%	157	184	0.8 x	33	41	3.5 x	13.20	0.6 x
267	WOOJIN INC	105840-KR	6.6	133	112	25%	-40%	56%	-	-	-	-	-	-	6.56	1.0 x
268	STUDSVIK	SVIK-SE	12.9	106	112	6%	-20%	21%	82	92	1.2 x	6	11	10.2 x	4.57	2.8 x
269	CHINA NUCLEAR	611-HK	0.0	73	803	82%	-6%	-12%	-	-	-	-	-	-	0.12	0.3 x
270	TVE CO LTD	6466-JP	14.9	37	7	25%	-13%	5%	72	-	-	-	-	-	30.98	0.5 x

	Smart Infrastructure	Ticker	1409	396,918	472,603			1%	215,434	224,904	2.1 x	33,761	35,869	13.2 x	543.5	2.6 x
271	SIEMENS AG	SIE-DE	201.4	161,108	206,994	32%	-18%	5%	80,304	86,624	2.4 x	14,181	15,587	13.3 x	78.71	2.6 x
272	ABB LTD	ABB	48.0	90,304	92,027	24%	-5%	-9%	32,850	34,242	2.7 x	6,188	6,746	13.6 x	7.64	6.3 x
273	STMICROELECTRONICS	STMPA-FR	45.1	40,694	37,907	6%	-53%	82%	13,269	11,561	3.3 x	3,427	2,569	14.8 x	19.51	2.3 x
274	SIEMENS INDIA LTD	500550-IN	57.6	20,527	19,630	68%	-9%	-25%	2,637	2,815	7.0 x	357	385	51.0 x	4.93	11.7 x
275	EVE ENERGY	300014-CN	5.7	10,547	14,358	45%	-24%	-11%	6,736	6,919	2.1 x	853	1,018	14.1 x	2.46	2.3 x
276	WESCO INTL INC	WCC	160.1	8,159	13,741	35%	-11%	-8%	21,819	22,328	0.6 x	1,509	1,537	8.9 x	101.88	1.6 x
277	SENSATA TECH.	ST	35.6	5,352	8,294	21%	-30%	31%	3,933	3,639	2.3 x	885	844	9.8 x	19.33	1.8 x
278	ACUITY BRANDS INC	AYI	258.5	7,967	8,061	34%	-16%	-12%	3,841	4,391	1.8 x	675	800	10.1 x	79.46	3.3 x
279	AGL ENERGY	AGL-AU	5.7	3,805	5,543	49%	-5%	-19%	8,993	8,764	0.6 x	1,467	1,325	4.2 x	4.87	1.2 x
280	ADVANCED ENERGY	AEIS	95.8	3,574	3,551	38%	-7%	-18%	1,482	1,622	2.2 x	193	263	13.5 x	31.91	3.0 x
281	SHARP CORP	6753-JP	5.4	3,526	6,495	32%	-8%	-13%	14,949	15,442	0.4 x	354	460	14.1 x	1.50	3.6 x
282	HYUNDAI AUTOEVER	307950-KR	108.6	2,978	2,496	21%	-22%	27%	2,532	2,807	0.9 x	247	264	9.5 x	41.51	2.6 x
283	ITRON INC	ITRI	87.0	3,964	4,179	44%	-1%	-19%	2,441	2,468	1.7 x	324	343	12.2 x	30.81	2.8 x
284	VERRA MOBILITY	VRRM	23.6	3,915	4,862	32%	-17%	1%	879	931	5.2 x	402	416	11.7 x	1.66	14.2 x
285	BEIJING E-HUALU	300212-CN	3.8	2,774	3,507	29%	-49%	20%	106	116	30.1 x	(157)	60	58.6 x	0.57	6.7 x
286	IREN SPA	IRE-IT	2.1	2,747	7,948	13%	-14%	7%	6,988	7,383	1.1 x	1,293	1,358	5.9 x	2.29	0.9 x
287	HANNON ARMSTRONG	HASI	24.5	2,749	6,950	50%	-2%	-14%	384	402	17.3 x	223	327	21.2 x	19.64	1.2 x
288	FIBOCOM WIRELESS	300638-CN	2.4	1,820	1,890	158%	-40%	-14%	1,065	1,139	1.7 x	137	124	15.2 x	0.63	3.7 x
289	KEC INTERNATIONAL	532714-IN	8.0	2,064	2,624	93%	-8%	-45%	2,384	2,556	1.0 x	146	177	14.8 x	2.17	3.7 x
290	TKH GROUP NV	TWEKA-NL	40.0	1,690	2,207	21%	-21%	23%	1,805	1,960	1.1 x	268	327	6.8 x	23.03	1.7 x
291	HEXING ELECTRICAL	603556-CN	5.3	2,604	2,021	44%	-21%	6%	580	710	2.8 x	147	189	10.7 x	1.94	2.7 x
292	NV5 GLOBAL INC	NVEE	24.3	1,547	1,754	8%	-31%	26%	941	1,025	1.7 x	144	163	10.8 x	12.79	1.9 x
293	TAIWAN SECOM CO	9917-TW	3.8	1,733	1,767	21%	-5%	4%	-	-	-	-	-	-	0.89	4.3 x
294	TOPCON CORPORATION	7732-JP	11.7	1,267	1,622	69%	-29%	-33%	1,388	1,462	1.1 x	143	144	11.3 x	6.48	1.8 x
295	ALFEN NV	ALFEN-NL	50.8	1,105	1,165	8%	-78%	308%	510	541	2.2 x	30	44	26.3 x	7.28	7.0 x
296	COSCO SHIPPING	002401-CN	2.5	932	685	8%	-32%	16%	245	-	-	-	-	-	0.63	4.0 x
297	KAZAKHSTAN ELEC.	KEGC-KZ	3.3	857	1,146	5%	-15%	7%	-	-	-	-	-	-	5.18	0.6 x
298	PENTAMASTER CORP	7160-MY	0.9	654	590	25%	-39%	3%	141	160	3.7 x	28	33	17.8 x	0.24	3.8 x
299	SHANGHAI FUDAN	1385-HK	1.7	471	1,518	144%	-29%	-15%	491	497	3.1 x	143	121	12.5 x	0.99	1.7 x
300	JIAYUAN SCIENCE	301117-CN	5.4	497	422	6%	-45%	28%	31	40	10.6 x	(1)	4	94.1 x	1.92	2.8 x
301	HANGZHOU EZVIZ	688475-CN	4.6	1,869	3,054	32%	-26%	11%	669	757	4.0 x	98	82	37.3 x	0.94	4.9 x

302	SHENZHEN LONGTECH	300916-CN	2.7	384	268	95%	-7%	-35%	-	-	-	-	-	-	1.22	2.2 x
303	SHIJIAZHUANG KELIN	603050-CN	2.4	665	817	72%	-4%	-14%	-	-	-	-	-	-	0.84	2.9 x
304	FARO TECHNOLOGIES	FARO	20.1	381	374	65%	-33%	-21%	342	348	1.1 x	40	45	8.4 x	13.17	1.5 x
305	AMERICAN SUPERCOND.	AMSC	14.1	508	415	171 %	-19%	-48%	146	216	1.9 x	(4)	8	52.6 x	4.83	2.9 x
306	JIANGSU TONGXIN.	301339-CN	2.3	277	504	61%	-13%	-12%	103	124	4.1 x	38	40	12.5 x	0.90	2.6 x
307	BILLION ELECTRONIC	3027-TW	1.3	155	139	16%	-39%	51%	-	-	-	-	-	-	0.56	2.4 x
308	ENERGY S.P.A	ENY-IT	2.0	110	131	5%	-65%	103%	69	-	-	11	-	-	1.10	1.9 x
309	DRAGONFLY ENERGY	DFLI	4.8	31	42	177 %	-78%	56%	64	52	0.8 x	(17)	(20)	-	(0.04)	-111.6 x
310	INVINITY ENERGY SY	IES-GB	0.3	58	54	19%	-66%	-34%	28	6	8.5 x	(27)	(28)	-	0.44	0.7 x
311	POWERFLEET INC	PWFL	3.6	135	224	140 %	-1%	-85%	134	361	0.6 x	7	74	3.0 x	3.46	1.0 x
312	CEPTON INC	CPTN	2.4	39	92	57%	-2%	-26%	13	-	-	(41)	-	-	(3.24)	-0.7 x
313	INSEEGO CORP	INSG	2.9	34	197	623 %	-22%	-78%	191	192	1.0 x	20	23	8.7 x	(0.86)	-3.3 x
314	ARQ INC	ADES	5.7	188	174	46%	-29%	-41%	109	132	1.3 x	7	17	10.3 x	5.17	1.1 x
315	ORION ENERGY SYS	OESX	0.9	29	37	70%	-24%	11%	91	80	0.5 x	(7)	(3)	-	0.44	2.0 x
316	MERUS POWER OYJ	MERUS-FI	4.9	38	39	30%	-35%	27%	38	49	0.8 x	(1)	2	18.4 x	1.29	3.8 x
317	FERROAMP AB	FERRO-SE	1.1	33	28	28%	-75%	50%	-	-	-	-	-	-	0.28	3.8 x
318	TANTALUS SYSTEMS	GRID-CA	1.2	53	61	39%	-26%	-18%	42	44	1.4 x	(0)	0	549.7 x	0.12	10.0 x
Solar		**Ticker**	**992.3**	**98,474**	**127,661**			**25%**	**75,473**	**68,549**	**1.9 x**	**7,100**	**8,406**	**15.2 x**	**394.9**	**2.5 x**
319	FIRST SOLAR INC	FSLR	147.4	15,778	14,265	108 %	-15%	-16%	4,206	5,481	2.6 x	1,827	2,578	5.5 x	74.51	2.0 x
320	ENPHASE ENERGY	ENPH	107.7	14,625	14,244	31%	-52%	61%	1,330	1,559	9.1 x	389	523	27.2 x	6.29	17.1 x
321	JA SOLAR TECH.	002459-CN	2.7	8,886	12,047	4%	-53%	44%	11,262	10,440	1.2 x	1,691	738	16.3 x	1.33	2.0 x
322	XINJIANG DAQO	688303-CN	4.1	8,703	5,905	33%	-42%	23%	2,259	1,064	5.5 x	1,051	(16)	-	2.70	1.5 x
323	TRINA SOLAR	688599-CN	3.7	7,977	11,721	14%	-43%	40%	15,649	12,091	1.0 x	1,352	676	17.3 x	1.85	2.0 x
324	SUZHOU MAXWELL	300751-CN	16.4	3,165	4,382	24%	-41%	14%	1,116	1,526	2.9 x	136	182	24.0 x	3.67	4.5 x
325	ARRAY TECH.	ARRY	11.7	1,775	2,584	31%	-58%	93%	916	1,095	2.4 x	174	191	13.5 x	(0.78)	-15.1 x
326	HENGDIAN GROUP	002056-CN	2.1	3,346	2,920	10%	-25%	19%	2,562	3,407	0.9 x	392	498	5.9 x	0.78	2.7 x
327	SUNRUN INC	RUN	9.9	2,172	14,042	125 %	-40%	4%	2,038	2,204	6.4 x	(2,904)	243	57.8 x	11.32	0.9 x
328	SHOALS TECH.	SHLS	12.1	2,054	2,214	8%	-78%	122%	399	431	5.1 x	99	105	21.2 x	3.34	3.6 x
329	RISEN ENERGY	300118-CN	2.2	2,563	4,571	3%	-45%	39%	-	-	-	-	-	-	1.62	1.4 x
330	DAQO NEW ENERGY	DQ	26.7	1,754	392	16%	-49%	37%	1,029	854	0.5 x	(350)	(23)	-	71.62	0.4 x
331	CECEP SOLAR ENERGY	000591-CN	0.8	2,788	5,391	3%	-28%	19%	1,318	-	-	-	-	-	0.83	0.9 x

332	NEXTRACKER INC	NXT	59.5	8,123	7,340	5%	-48%	55%	2,500	2,864	2.6 x	521	716	10.2 x	9.79	6.1 x
333	WUHAN DR LASER	300776-CN	6.6	1,795	1,510	89%	-17%	-24%	223	293	5.2 x	72	90	16.8 x	1.60	4.1 x
334	CANADIAN SOLAR	CSIQ	19.4	1,257	3,969	8%	-53%	71%	7,614	6,149	0.6 x	719	565	7.0 x	43.43	0.4 x
335	JINKOSOLAR HLDG	JKS	26.4	1,360	7,381	42%	-37%	6%	16,716	13,280	0.6 x	1,626	1,004	7.3 x	55.60	0.5 x
336	JOLYWOOD	300393-CN	1.3	1,410	2,299	3%	-46%	51%	-	890	2.6 x	-	(65)	-	0.50	2.6 x
337	JIANGSU SHUANGXING	002585-CN	0.9	1,084	1,364	5%	-39%	30%	698	824	1.7 x	53	82	16.6 x	1.09	0.9 x
338	BRAVIDA HOLDING AB	BRAV-SE	9.0	1,845	2,066	2%	-34%	24%	2,728	2,946	0.7 x	202	248	8.3 x	4.01	2.3 x
339	DAEJOO ELECTRONIC	078600-KR	68.0	1,053	1,147	75%	-29%	38%	138	153	7.5 x	11	30	38.4 x	7.73	8.8 x
340	WONIK IPS CO LTD	240810-KR	25.6	1,258	1,177	29%	-44%	70%	522	643	1.8 x	39	89	13.2 x	12.06	2.1 x
341	UNITED RENEWABLE	3576-TW	0.4	600	856	28%	-26%	20%	176	213	4.0 x	-	-	-	0.22	1.7 x
342	MAXEON SOLAR	MAXN	324.0	171	421	27%	-99%	48%	1,125	739	0.6 x	4	(126)	-	(13.87)	-23.4 x
343	HUBEI HUITIAN NEW	300041-CN	1.3	710	920	20%	-24%	4%	539	-	-	63	-	-	0.74	1.7 x
344	ABALANCE CORP	3856-JP	18.9	330	636	14%	-80%	294%	1,402	-	-	-	-	-	9.07	2.1 x
345	JIANGSU YUXING	300305-CN	1.0	377	410	29%	-37%	38%	233	-	-	23	-	-	0.93	1.1 x
346	TES CO LTD	095610-KR	14.5	286	154	64%	-37%	55%	-	-	-	-	-	-	12.14	1.2 x
347	OTOVO ASA	OTOVO-NO	0.1	40	7	119%	-52%	80%	51	58	0.1 x	(29)	(5)	-	0.18	0.8 x
348	CHUGAI RO CO LTD	1964-JP	19.5	152	145	33%	-22%	-7%	186	-	-	-	-	-	23.79	0.8 x
349	SUZHOU DELPHI	688170-CN	4.3	290	366	9%	-39%	19%	80	103	3.6 x	6	(2)	-	1.66	2.6 x
350	NPC INC.	6255-JP	5.3	117	82	74%	-10%	-4%	72	81	1.0 x	18	20	4.2 x	2.98	1.8 x
351	INTEVAC INC	IVAC	3.8	101	39	16%	-35%	9%	64	53	0.7 x	-	-	-	2.96	1.3 x
352	GANTAN BEAUTY	5935-JP	12.9	50	54	9%	-27%	0%	92	-	-	-	-	-	10.50	1.2 x
353	SOLARMAX TECH.	SMXT	8.3	373	414	92%	-93%	408%	-	-	-	-	-	-	(0.24)	-34.3 x
354	SUPER TOOL	5990-JP	13.8	33	22	5%	-13%	14%	37	-	-	-	-	-	28.94	0.5 x
Wind		**Ticker**	**658.2**	**496,963**	**771,527**			**-5%**	**166,552**	**185,187**	**4.2 x**	**56,540**	**63,427**	**12.2 x**	**304.3**	**2.2 x**
355	NEXTERA ENERGY	NEE	60.1	123,310	205,758	43%	-2%	-16%	24,753	28,731	7.2 x	13,933	17,892	11.5 x	24.36	2.5 x
356	GE AEROSPACE	GE	168.9	184,642	185,289	26%	-21%	3%	35,121	39,334	4.7 x	8,554	9,394	19.7 x	18.01	9.4 x
357	IBERDROLA SA	IBDRY	47.8	76,790	143,695	30%	-1%	-11%	46,587	50,746	2.8 x	17,285	17,117	8.4 x	31.60	1.5 x
358	DOMINION ENERGY	D	47.8	40,063	86,511	30%	-3%	-13%	14,459	15,881	5.4 x	7,016	7,788	11.1 x	30.82	1.6 x
359	EVERSOURCE ENERGY	ES	58.9	20,604	47,577	17%	-7%	-2%	11,901	13,175	3.6 x	4,314	4,752	10.0 x	41.02	1.4 x
360	AVANGRID INC	AGR	35.6	13,777	26,966	6%	-2%	-	8,309	-	-	2,222	-	-	51.06	0.7 x
361	NORTHLAND POWER	NPI-CA	16.7	4,239	9,576	9%	-33%	30%	1,626	1,686	5.7 x	875	928	10.3 x	10.79	1.5 x
362	MING YANG SMART	601615-CN	1.4	3,226	5,617	46%	-20%	-11%	3,844	4,366	1.3 x	138	336	16.7 x	1.76	0.8 x

363	NEOEN SA	NEOEN-FR	27.4	4,169	7,504	60%	-3%	-34%	568	637	11.8 x	514	532	14.1 x	18.65	1.5 x
364	SUZLON ENERGY	532667-IN	0.5	6,413	6,332	117 %	-9%	-35%	785	1,311	4.8 x	125	211	30.0 x	0.04	11.5 x
365	TITAN WIND ENERGY	002531-CN	1.5	2,712	4,165	5%	-41%	39%	1,066	696	6.0 x	268	250	16.6 x	0.69	2.2 x
366	CECEP WIND-POWER	601016-CN	0.4	2,753	5,659	21%	-14%	-2%	708	753	7.5 x	610	598	9.5 x	0.37	1.1 x
367	NORDEX SE	NDX1-DE	12.4	2,935	2,439	51%	-12%	6%	7,569	8,370	0.3 x	304	517	4.7 x	4.36	2.8 x
368	CLEARWAY ENERGY	CWEN	21.1	1,734	12,977	47%	-2%	-19%	1,371	1,512	8.6 x	1,146	1,223	10.6 x	17.57	1.2 x
369	CS WIND CORP	112610-KR	37.4	1,575	2,154	47%	-36%	34%	2,117	2,127	1.0 x	266	285	7.5 x	17.83	2.1 x
370	QINGDAO TIANNENG	300569-CN	0.8	773	1,423	18%	-30%	11%	-	-	-	-	-	-	0.76	1.0 x
371	INOX WIND LTD	539083-IN	1.4	1,840	2,195	122 %	-8%	-33%	209	463	4.7 x	32	89	24.7 x	0.23	6.0 x
372	WINDEY ENERGY	300772-CN	1.3	912	1,703	71%	-10%	-28%	2,586	2,961	0.6 x	27	28	60.1 x	1.07	1.2 x
373	ALIMAK GROUP	ALIG-SE	9.6	1,030	1,322	45%	-13%	-8%	658	718	1.8 x	136	158	8.4 x	6.58	1.5 x
374	VRL LOGISTICS	539118-IN	6.6	578	685	13%	-25%	12%	347	368	1.9 x	47	62	11.0 x	1.30	5.1 x
375	JIANGSU HAILI WIND	301155-CN	7.8	689	1,764	37%	-36%	6%	233	213	8.3 x	17	17	101.8 x	3.45	2.2 x
376	FICONT INDUSTRY	605305-CN	3.9	819	373	22%	-26%	-1%	153	199	1.9 x	33	55	6.8 x	1.62	2.4 x
377	EUROGROUP	EGLA-IT	3.9	364	853	34%	-37%	41%	902	961	0.9 x	173	125	6.8 x	2.71	1.4 x
378	GURIT HOLDING AG	GURN-CH	73.6	344	416	5%	-84%	339%	481	420	1.0 x	36	38	11.0 x	19.38	3.8 x
379	GOLDWIND SCI&TECH	2208-HK	0.4	310	7,712	152 %	-10%	-52%	6,952	7,878	1.0 x	714	949	8.1 x	1.19	0.3 x
380	CS BEARING CO LTD	297090-KR	5.8	159	174	14%	-57%	96%	73	80	2.2 x	3	10	18.1 x	2.21	2.6 x
381	TPI COMPOSITES INC	TPIC	2.7	127	577	115 %	-64%	41%	1,334	1,443	0.4 x	(39)	56	10.3 x	(7.84)	-0.3 x
382	BROADWIND INC	BWEN	2.2	48	82	109 %	-35%	14%	143	150	0.5 x	13	14	5.9 x	2.66	0.8 x
383	WINDAR PHOTONICS	WPHO-GB	0.4	29	31	88%	-10%	-60%	5	7	4.3 x	0	1	40.3 x	0.06	6.6 x

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