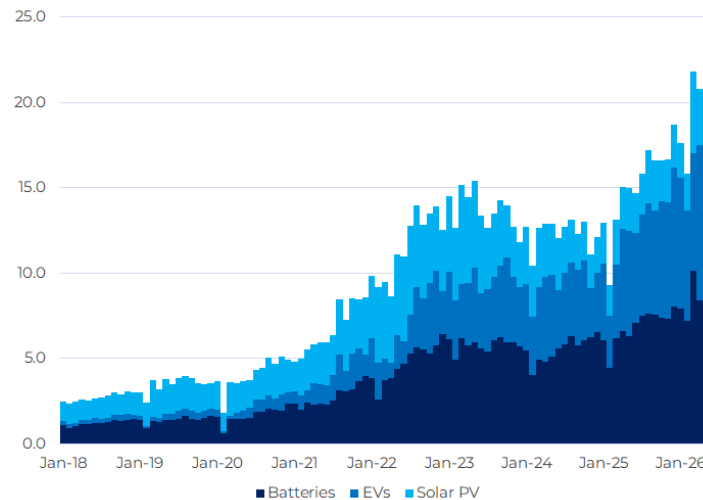


Chart of the Month: CHINA CLEAN-TECH EXPORTS

Higher energy prices following the Middle East supply shock have boosted Chinese clean technology exports, echoing the surge seen after Russia's invasion of Ukraine in early 2022. Exports of batteries, EVs and solar panels have exceeded \$20 billion for three consecutive months since late February, up 45% year-on-year over the same period.

Chinese clean-tech exports (\$'bn)

Source: Guinness Atkinson, Ember, June 2026

News

- More than 100 global businesses, representing around \$1.5 trillion of annual revenue, have called on governments to accelerate electrification, arguing it will improve energy security, reduce exposure to volatile fossil fuel prices and strengthen industrial competitiveness. The coalition urged policymakers to increase grid investment, streamline permitting and provide stable policy frameworks to support deployment. The announcement reflects a broader shift in priorities for businesses as rising electricity demand and the recent Middle Eastern supply shock bring energy security and affordability into focus.
- The UK's National Energy System Operator (NESO) has reaffirmed the need for significant investment in the country's electricity network, estimating that around £89bn of transmission upgrades will be required beyond 2030. The investment is needed to accommodate rising electricity demand from electric vehicles, data centers and industrial electrification, while supporting continued growth in renewable generation. The updated plan includes a substantial increase in offshore transmission infrastructure and more than 900km of upgrades to the existing network, reinforcing the scale of the long-term investment opportunity across grid infrastructure.
- Global electric vehicle (EV) sales rose 3% year-on-year in May to 1.8 million units, according to research house Benchmark Mineral Intelligence. Europe remains the strongest growth market, with sales increasing 23% as supportive government incentives and higher fuel prices continued to encourage EV adoption. China, the world's largest EV market, saw sales decline 9% amid weaker domestic demand following the withdrawal of subsidies, although exports remained robust. North American sales fell 26% following changes to US EV incentives, while the rest of the world continued to deliver strong growth, with sales rising 80% as EV adoption accelerated across a broader range of emerging markets.

- Higher fossil fuel prices following the recent energy shock have reinforced the importance of energy security, driving a renewed acceleration in renewable energy deployment. India installed around 2.7 GW of rooftop solar capacity in the first quarter, more than double the level seen a year earlier, while the US added almost 1.2 GW of residential solar. In the Philippines, imports of rooftop solar panels increased 145% in the three months through May as consumers sought to reduce their reliance on expensive grid electricity. Although the conflict now appears to be easing, we believe the renewed focus on energy security will remain a structural driver of renewable energy adoption.
- Germany continues to make steady progress towards its energy transition goals, awarding support contracts for a further 2.5 GW of onshore wind, bringing the total capacity awarded since 2023 to almost 38 GW. The latest auction was heavily oversubscribed, highlighting continued developer appetite, while successful bid prices fell to their lowest level since 2017, reflecting improving project economics. Germany also added 1.9 GW of new renewable capacity in May, including 1.3 GW of solar and 544 MW of wind, taking wind and solar additions to more than 8 GW in the first five months of the year.

Manager's Comments

Sustainable energy equities performed well in the first half of 2026. The energy shock as a result of the conflict in the Middle East has strengthened the case for the energy transition through the lenses of energy security and energy flexibility. Meanwhile, the underlying secular drivers of rising electricity demand continue to build, creating a greater need for both renewable power and efficiency solutions. After the tariff and tax credit uncertainty of 2025, policy has moved from a source of great uncertainty to relative stability. Against this backdrop, the sector has outperformed markets over the last six months, and we remain optimistic for the second half of the year. In this report, we review macro developments in the first half of 2026 and offer an outlook for the rest of 2026 and beyond.

In the first half of 2026 the Guinness Atkinson Alternative Energy Fund delivered a total return (USD) of +15.0%, outperforming the MSCI World Index (net return) at +9.7%. The key events that have affected the energy transition, company profitability and share price performance so far this year are discussed below.

The backdrop to the global energy transition in the first half of 2026 has been constructive as a result of the Iran shock, secular growth and policy stability.

Iran shock

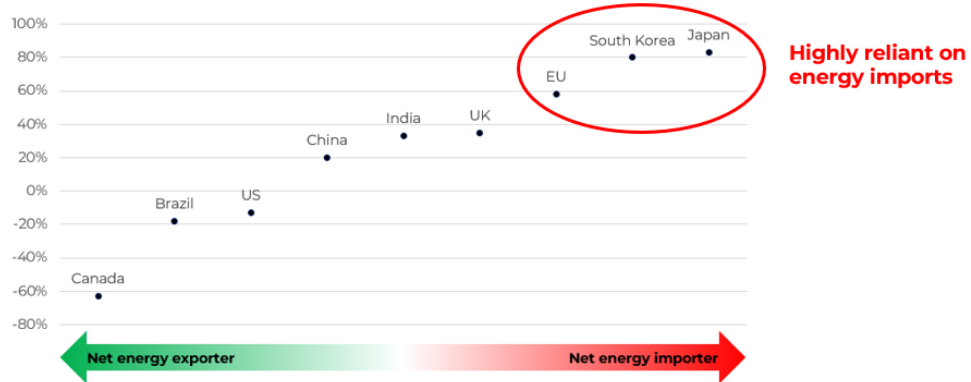
The Middle East crisis triggered a material disruption to global energy markets, removing around 14 million barrels per day of oil and oil products from global supply with no easy alternative route to market. While the peace deal agreed in mid-June has allowed the gradual reopening of the Strait of Hormuz, with vessel transits recovering to pre-conflict levels (about 30/day as of late June), the pace of the recovery remains uncertain. Tankers remain dislocated globally, field restarts must be handled with extreme care, and infrastructure damage in the Gulf, notably to liquefied natural gas facilities, will take time to repair.

By the time oil flows normalize, we estimate that around 2.3bn bls of oil and oil equivalent will have been lost because of the conflict, around a quarter of global inventories. This represents the second global energy shock in just four years, strengthening the case for sustainable energy technologies as a way to improve both energy security and energy flexibility, especially in economies reliant on energy imports such as Europe.

- **Energy security:** reducing reliance on energy imports. This is of particular importance to the EU, which still imports nearly 60% of its energy from outside of the bloc.

- **Energy flexibility:** building a more diverse and adaptable energy system through distributed renewables, storage, and greater interconnectivity of energy assets.

Energy dependence (imports as % of total energy consumption)



Source: BofA Global Investment Strategy, Energy Institute Statistical Review of World Energy, June 2026

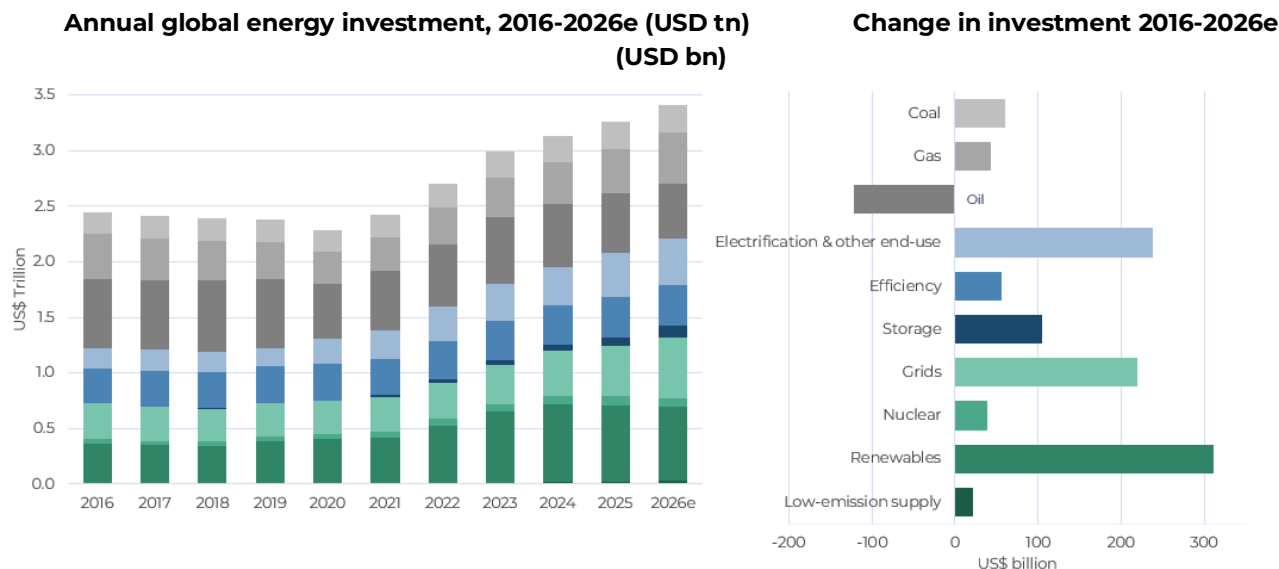
Secular growth: Demand for electricity continues to rise. Having grown at 2.8% per annum over the past decade, global electrification is expected to cause it to accelerate to 3.6% per annum to 2030. According to the International Energy Agency

(IEA), 2024 was the first year in three decades that global electricity demand outpaced GDP growth, and this gap is expected to persist over at least the next five years thanks to three structural drivers.

The first is **regional**. Developed markets are seeing the return of electricity demand growth after nearly 20 years of stagnation. In Europe, electricity demand growth was close to 0% between 2003-2023, but is forecast to average 2.3% growth annually from 2026-2030. The United States faces a similar trajectory; after averaging electricity demand growth below 1% per annum between 2016-2025, power consumption is now expected to grow at closer to 2% per annum to 2030.

The second is **sectoral**. New, durable sources of demand are complementing established ones. Data centres and AI are an important driver, particularly in the United States, where they are expected to account for 50% of incremental demand growth until 2030. However, at a global level they account for little more than 8% – less than the electrification of transport, which accounts for almost 1.5x the growth of data centres over the same period at around 12% of incremental demand growth. Industry and buildings are the largest contributors at 36% and 27% respectively, reflecting the electrification of industrial processes and the greater intensity of electrification within buildings (heating, cooling, internet of things, and automation).

The third is **transitional**, with electricity winning share from hydrocarbons in the global energy mix. Electricity consumption is now projected to grow at least 2.5 times faster than overall energy demand to 2030. This is reflected in investment into sustainable energy technologies now accounting for almost two-thirds of total energy spending in 2026, totalling \$2.2 trillion across clean energy generation, grids and efficiency technologies.



Source: IEA, May 2026

Policy stability

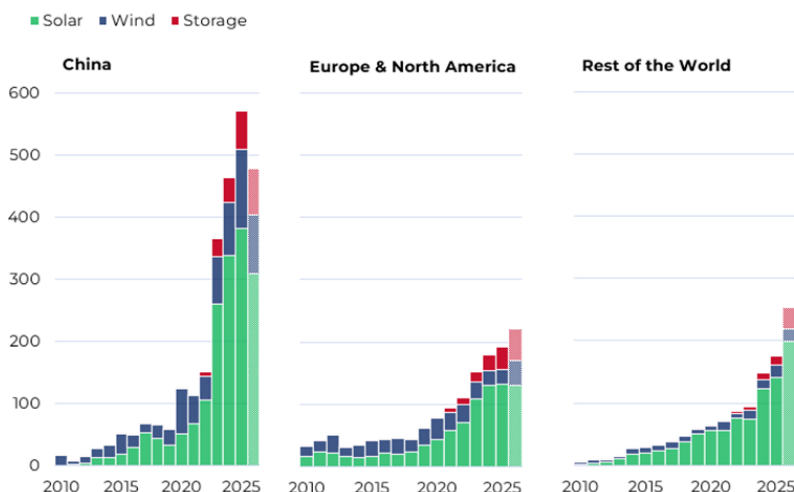
After the tariff and tax credit uncertainty of 2025, policy headwinds in the United States have eased. A year ago, sustainable energy equities faced pressure from both tariffs and the downsizing of the Inflation Reduction Act (IRA) into the One Big Beautiful Bill (OBBB). This year, the threat of structurally higher US tariffs was mitigated by a Supreme Court judgment in February which deemed them to be unlawful under the International Emergency Economic Powers Act. While there are other routes for the executive to impose replacement tariffs, these are much more cumbersome to implement (Section 232 and 301) or are more temporary in nature (Section 122).

The resolution of the OBBB has also provided the industry with much needed clarity. Although the bill is objectively less favorable to clean energy than the IRA (eliminating EV and residential solar tax credits and speeding up the phase-out of utility solar and wind tax credits) the final cuts were not as bad as expected, with support for solar and battery manufacturing even being enhanced. With policy clarity, developers have returned to the market, resulting in strong orders for clean energy equipment names such as Vestas, which reported one of its highest-ever order intakes in North America in the second quarter of 2026.

In **Europe**, policy remains supportive. In late April, the European Commission published AccelerateEU, its response to the energy crisis, building on the existing REPowerEU and Clean Industrial Deal frameworks. Of its five pillars, three directly support the energy transition: 'more homegrown clean energy', 'stepping up our energy system', and 'boosting investment'. The plan reaffirms existing EU ambitions, including installing around 100 GW of renewable capacity annually and increasing economy-wide electrification to 32% by 2030, up from 23% today, with more detail to come from the Electrification Action Plan due later this summer. AccelerateEU also introduces a new objective to expand installed energy storage capacity from around 55 GW to 200 GW by 2030.

In **China**, June saw the release of the Energy Sector's 15th Five-Year Plan (FYP), setting out national targets including reaching 50% non-fossil electricity generation (renewables, biomass, hydro, nuclear) by 2030, compared with just over 40% today with energy security stated as the plan's primary objective. On the demand side, electricity's share of final consumption is targeted to rise from 30% to 35% by 2030, alongside a 30% increase in transmission and distribution spending. The new targets sit alongside China's ongoing 'anti-involution' drive to replace years of destructive price competition with more stable industry structures, supportive for both the size and profitability of its clean energy industry.

Annual renewable capacity additions by region 2000-2026E (GW)

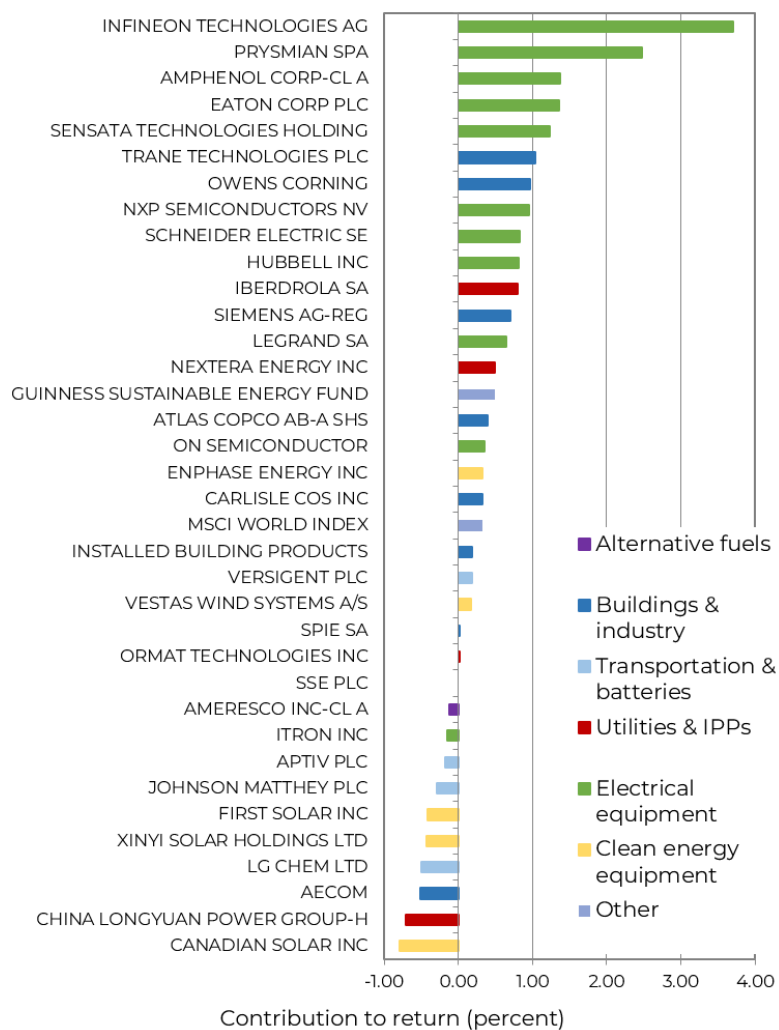


Source: BNEF; Guinness Atkinson; June 2026

The Guinness Atkinson Alternative Energy Fund delivered a return of +14.96% during the first half of the year, outperforming the MSCI World Index (+9.69%). Within our portfolio, while the majority of our top performers have benefited from rising data center spending during the period, we are encouraged by the diversity of business models which they represent, spanning chip makers, electrical equipment manufacturers, and building product names. Key discussion points were as follows:

- Our power electronics names (**Infineon**, **NXP**, **Amphenol**, **Sensata**) performed well on account of substantial growth in their AI data center offerings and order intake, supplemented by recovering automotive and industrial end markets. Over the last 12 months, top performer Infineon has emerged as a key AI beneficiary with AI and data centre revenues expected to grow from approximately €700m in 2025 to €2.5bn in 2027.
- The electrical infrastructure companies all performed well, driven by an acceleration in global electrification activity, grid spending and, in certain cases (such as Schneider and Legrand), exposure to the data center sub-sector. Top contributor **Prysmian** saw a data center-driven recovery in its telecom fiber business and announced three contract awards for large subsea high-voltage cables.
- Buildings names demonstrated resilience in the half, in spite of new build activity in the US and Europe remaining subdued. **Trane Technologies** continued to demonstrate strong order intake for its efficient commercial cooling solutions in the US, while **Owens Corning** rallied sharply after receiving a \$10bn takeover offer from fellow portfolio holding **Carlisle** to create a 'one-stop shop' for commercial and residential roofing and insulation products.
- Poorer contributors covered various themes and end markets. Chinese clean energy names (**Canadian Solar**, **Xinyi Solar**, **China Longyuan**) continue to suffer the aftereffects of China's transition from fixed feed-in tariffs to market pricing mechanisms for renewables, putting downward pressure on generator margins and reducing demand for equipment. **AECOM** (added in April) has performed poorly year-to-date despite record margins and strong bookings due to fears that its use of AI tools might interfere with its current business model based on billable hours.

1H 2026 contribution for the Guinness Atkinson Alternative Energy Fund

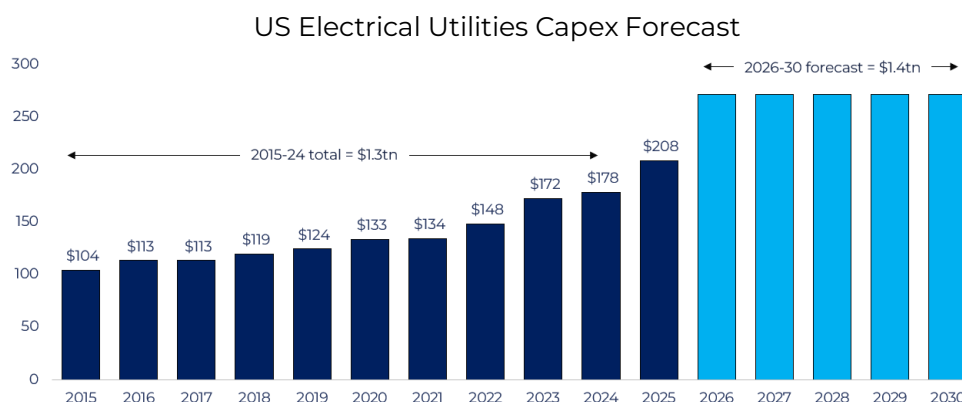


Source: Bloomberg, Guinness Atkinson estimates net of fees; June 30 2026

Outlook

Looking to the remainder of 2026 and beyond, we expect momentum to continue for energy transition equities, with macro and market conditions supportive of robust longer-term growth:

- **Renewable power generation** is expected to grow by around 1,000 TWh per annum through 2030 with solar PV representing around 60% of incremental output. This translates into clean energy production growth of 8% per year out to 2030 with renewables and nuclear expected to account for around half of global power supply by 2030.
- **Grid** investment will increase to support this growth in renewables globally, driven by both corporates and governments alike. In the US, whilst utility capex growth is expected to revert back to its long run average of 7% per annum in 2026 after a material step up in 2025, the quantum of spending is substantially higher. Utilities are expected to spend as much in the next five years (\$1.4tn) as they did in the preceding decade, with distribution and transmission now making up 50% of the budget, up from 45% a decade ago.



Source: Power Lines, Edison Electrical Institute, April 2026

- **Building efficiency and electrification** spending is expected to rise 5% from around \$370bn last year to over \$390bn in 2026, marking a return to growth following a year of weak construction activity in 2025. Europe remains the largest market for building efficiency spending, making up 30% of global demand. Here, we continue to see encouraging signs of growth, with heat pump sales increasing by 17% year-on-year in the first quarter of 2026.
- **Electric vehicle** sales are expected to grow by around 11% to 23 million units, with EV penetration reaching 27% globally despite the removal of purchase tax credits in the US and scrappage schemes in China. After a material slowdown in Chinese vehicle purchasing in late 2025, early 2026 data shows signs of stabilization with a return to growth expected in 2H 2026. Longer-term, we see global EV penetration continuing to increase, reaching 45% by 2030.

- **Battery** prices remain supportive to our electric vehicle forecasts, with average pack prices expected to fall 3% in 2026 to \$105/kWh – just above the \$100/kWh threshold at which electric vehicles become cost competitive with internal combustion engines – continuing on a journey to \$70-80/kWh by 2030.
- **Solar** installations are expected to fall for the first time on record as the Chinese market, responsible for just under 60% of demand, transitions from feed-in-tariffs to a market-based pricing system for generators. Despite weakness in China, we continue to see growth in North America, the Middle East and in Africa with stronger module prices supported by higher raw material costs (e.g. silver) and China's anti-involution efforts to curb excess supply. Beyond 2026, we expect solar PV's positioning at the bottom of the cost curve to drive continued share gain in the energy mix, with BNEF forecasting solar energy to grow from 11% of global power supply in 2026 to 21% by 2032 (Economic Transition Scenario), overtaking coal as the largest source of electricity supply in the world.
- The global **wind** industry is on track to deliver about 154 GW of installations in 2026. While headline installations are set to contract by around 10%, this is primarily driven by China, where installations are expected to fall by around a quarter this year. This follows a surge in Chinese deployments in 2025 to lock in more favorable power price guarantees under the previous regime. European wind installations are set to rise by around 60% in 2026, reaching a new record high of over 27 GW. We expect similarly strong growth in North America as developers return to the market following the passing of the OBBB.

The outlook we summarize here is broadly consistent with current government activity and observable investment plans. To be clear, however, the growth described falls well short of the energy transition activity needed to achieve a **net zero/1.5 degree scenario** in 2050, as targeted by the Intergovernmental Panel on Climate Change and reiterated at COP28. In a net zero scenario, the deployment of renewable generation capacity, penetration of EVs and battery storage, use of alternative fuels and implementation of energy efficiency measures will need to accelerate markedly.

Portfolio company **NextEra Energy** is an example of durability, having in the first quarter reaffirmed its long-term earnings growth outlook of 8% and above annually through 2032 and 2035, underpinned by management's confidence in a "golden age of power demand" in the US. This inflection in the US power market is undoubtedly a contributing factor to the record pace of US power and utilities M&A: deal value in the first five months of 2026 alone already exceeded \$200bn – surpassing the whole of 2025 (\$143bn) in under half the time, itself already nearly four times the 2017–23 average. NextEra announced its own move to join the acquisition spree with a \$67bn offer to acquire Dominion Energy, expanding the company's regulated utility footprint while bolstering its exposure to data center-driven demand growth.

Following almost two years of de-rating, the 12-month forward price-to-earnings (P/E) of the Fund has now re-rated to trade at a small premium to the MSCI World Index, reflecting improving policy clarity in the United States, the structural inflection in electricity demand, and the demonstrated improvement in sector profitability.

Catalysts for the rest of the year include potential funding announcements related to AccelerateEU. The sector would also be a beneficiary of looser monetary policy, lower inflation and lower US Treasury yields, while any disruption to the normalization of energy flows in the Middle East and the higher fossil fuel prices that may accompany it would further improve the relative economics of renewable technologies. Further, the sector continues to benefit from the deployment of data centres and further AI capex announcements, which add to the electricity demand pool.

Portfolio holdings as at the end of June 2026

Our portfolio is typically allocated across 30 broadly equally weighted equities, providing exposure across the value chain of sustainable energy.

Buys/Sells

We purchased **SSE**, a leading UK integrated utility offering exposure to the UK electricity network build-out and broader electrification. The company has a fully funded multi-year investment plan that is driving rapid, inflation linked growth in its regulated asset base and providing strong earnings visibility. We believe the market underappreciates the scale and duration of the UK transmission investment opportunity, allowing us to acquire a high-quality business with an attractive growth for quality profile.

A key theme in the portfolio, at about 40% weight, is that of electrical equipment (covering both grid equipment and electrical equipment classifications), where we own a number of companies that facilitate the electrification of energy demand and the build-out of the electrical grid. Holdings such as Eaton, Schneider Electric, Amphenol and Legrand participate in various niches in the design, manufacturing and servicing of electrical products across low, medium and high-voltage applications, for a wide range of end markets. Hubbell holds a particular specialism in high-voltage grid equipment, especially in the United States, while Prysmian manufactures the cable used in high-voltage interconnectors and connections to new supply sources. Lastly, Itron has a heritage in manufacturing smart meters and is increasingly providing services and consulting to utilities around this installed base to enable more efficient utilization of the grid.

The electrification and efficiency of buildings, industrial activities, and transportation represent a total weight of about 29% and are split as follows:

- In terms of **transportation** exposure, the portfolio holds five names in the electric vehicle sub-category, giving it exposure to companies that provide semiconductors, electronics, components and software/services to the growing EV and autonomous vehicle industry. Infineon and NXP Semi are providers of power semiconductors and microcontrollers that are a necessity for higher-voltage electric vehicles to become competitive with ICE (internal combustion engine) vehicles, while Aptiv and Sensata are component manufacturers and service providers that should benefit from the ever-increasing amount of electronics present in electric vehicles. We hold one lithium-ion battery manufacturer, LG Chem, which is a Korean chemicals company and one of the largest lithium-ion battery manufacturers in the world.
- Our **buildings** exposure comes via pure-play quality exposure to heating and cooling industries (via commercial HVAC manufacturer Trane Technologies) as well as high-quality roofing manufacturer Carlisle Companies. We also own Owens Corning, a manufacturer of insulation (and associated products). Our final holdings here are SPIE, a French electrical engineering company that provides services for building maintenance predominantly in France and Germany, and AECOM, a US-focused design & engineering business with exposure to building efficiency and the renewable energy build-out.
- Our **industrial** efficiency and electrification exposure comes from two positions, in Siemens and Atlas Copco. Siemens provides us with exposure to efficiency and electrification across a wide range of end markets, while Atlas Copco offers exposure to the efficient use of air (often referred to as the fourth utility) in manufacturing processes, via compressors and vacuum technology.

In terms of the **generation** of sustainable energy, we hold a about 17% weight to utilities and independent power producers. China Longyuan is a pure-play Chinese wind power producer and represents one of our two independent power producer (IPP) holdings. The remaining exposure comes in the form of geothermal via Ormat, the world's only integrated producer and equipment manufacturer for geothermal projects. We also have broad-based wind/solar

renewable energy generation through NextEra Energy (the largest producer of renewable energy in the world), and utility exposure through Iberdrola and SSE, with a particular focus on electricity networks.

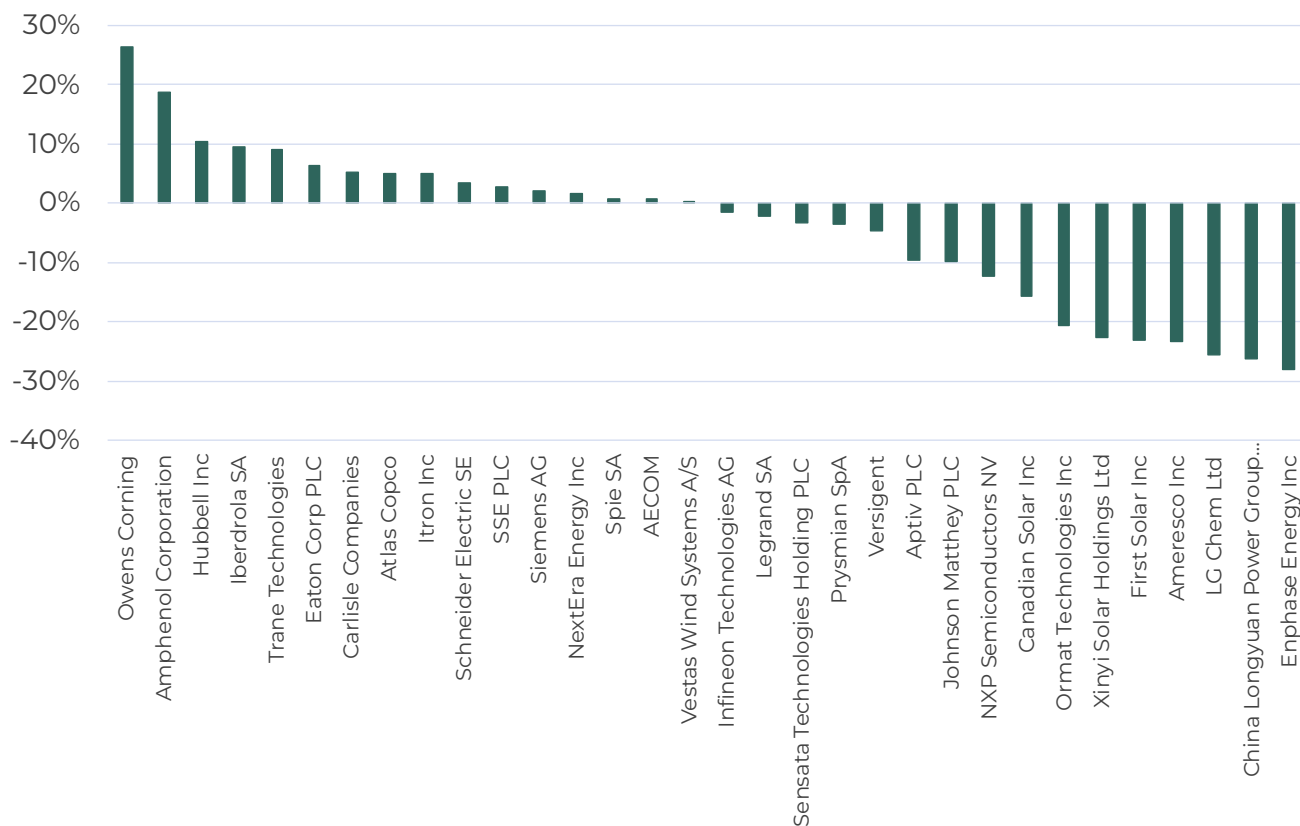
We hold exposure to the solar and wind equipment and manufacturing value chains. Xinyi Solar is the world's largest supplier of the glass used in solar cell modules, and Enphase manufactures the inverters required to convert direct current (DC) solar power into consumable alternating current (AC) electricity. Canadian Solar and First Solar give integrated exposure to the solar cell and module manufacturing process, covering both the standard polysilicon manufacturing process (via Canadian Solar) as well as the specialist cadmium telluride process used by First Solar. Wind turbine manufacturer Vestas provides broad exposure to the strong growth that we expect in the onshore and offshore wind markets. Lastly, we have some exposure to bioenergy (and a broader range of energy efficiency projects) via Ameresco, a US-listed clean energy project developer.

Portfolio themes as at end June 2026

Theme	Example holdings	Weighting (%)
1 Electrification of energy demand	 	25.6%
2 Modernising the power grid	 	10.8%
3 Rise of the electric vehicle and auto efficiency	 	10.5%
4 Power semiconductors	 	7.8%
5 Wind & solar equipment manufacturing	 	8.4%
6 Low carbon power generation: regulated producers	 	12.3%
7 Low carbon power generation: independent producers	 	6.4%
8 Building and industrial efficiency	 	14.5%
9 Other (inc cash)		3.7%

Within the Fund, the strongest performers were Owens Corning, Amphenol Corporation, Hubbell Inc, Iberdrola SA and Trane Technologies while the weakest performers were Enphase Energy Inc, China Longyan Power Group Corp Ltd, LG Chem Ltd, Ameresco Inc and First Solar Inc.

Stock by Stock performance over the month, in USD

Source: Bloomberg. As of June 30th 2026

Performance

As of 06/30/2026	YTD	1 Year	3 Years	5 Years	10 Years
GAAEX	14.96%	29.85%	5.01%	2.31%	10.81%
MSCI World Index NR	9.69%	21.34%	19.22%	11.47%	13.13%

All returns after 1 year annualized.

Inception 03.31.2006 Expense ratio* 1.11% (net); 1.89% (gross)

Performance data quoted represents past performance; past performance does not guarantee future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance of the Fund may be lower or higher than the performance quoted. Performance data current to the most recent month end may be obtained by visiting www.gafunds.com or calling 800-915-6566.

* The Advisor has contractually agreed to reduce its fees and/or pay Fund expenses (excluding Acquired Fund Fees and Expenses, interest, taxes, dividends on short positions and extraordinary expenses) in order to limit the Fund's Total Annual Operating Expenses to 1.10% through June 30, 2029. To the extent that the Advisor absorbs expenses to satisfy this cap, it may recoup a portion or all of such amounts absorbed at any time within three fiscal years after the fiscal year in which such amounts were waived or absorbed, subject to the expense cap in place at the time recoupment is sought, which cannot exceed the expense cap at the time of the waiver. The expense limitation agreement may be terminated by the Board of the Fund at any time without penalty upon 60 days' notice.

Top 10 Fund Holdings as of 6/30/26:

1. Amphenol Corp Legrand SA	5.17%
2. Iberdrola SA	4.87%
3. Eaton Corp PLC	4.53%
4. Schneider Electric SE	4.41%
5. Hubbell Inc	4.38%
6. Prysmian SpA	4.34%
7. Trane Technologies PLC	4.30%
8. Infineon Technologies AG	4.30%
9. Siemens AG	4.27%
10. Legrand SA	4.26%

MSCI World Index captures large and mid cap representation across 23 Developed Markets countries. With 1,546 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

The MSCI World Index (Net Return) measures the performance of large and mid-sized companies across 23 Developed Markets countries. It reflects both share price movements and dividends, with dividends reinvested after accounting for local withholding taxes.

Capital expenditure (capex) are funds used by a company to acquire, upgrade, and maintain physical assets such as property, plants, buildings, technology, or equipment.

Fund holdings and/or sector allocations are subject to change at any time and are not recommendations to buy or sell any security.

The price-to-earnings (P/E) ratio compares a company's share price with its earnings per share (EPS). Analysts and investors use this to determine the relative value of a company's shares in side-by-side comparisons.

One cannot invest directly in an index.

Earnings Growth is not a measure of future performance.

Opinions expressed are subject to change, are not guaranteed and should not be considered investment advice.

The Guinness Atkinson Alternative Energy Fund's investment objectives, risks, charges and expenses must be considered carefully before investing. The statutory and summary prospectuses contain this and other important information and can be obtained by calling 800- 915-6565 or visiting www.gafunds.com. Read and consider it carefully before investing.

The Fund invests in foreign securities which will involve greater volatility and political, economic and currency risks and difference in accounting methods. The risks are greater for investments in emerging markets. The Fund also invests in smaller and mid-cap companies, which will involve additional risks such as limited liquidity and greater volatility than larger companies. The Fund's focus on the energy sector to the exclusion of other sectors

GAAEX

Guinness Atkinson Alternative Energy Fund
July 2026 Update

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exposes the Fund to greater market risk and potential monetary losses than if the Fund's assets were diversified among various sectors.

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