QUINTET
PRIVATE BANK

CLEAN ENERGY

POWERING A SUSTAINABLE FUTURE

THEMATIC INVESTING

INTRODUCTION

Imagine a world where cities run on solar and wind power, where smart infrastructure optimise energy consumption, and where innovation drives both environmental progress and economic resilience. The investment in clean energy is not just a matter of environmental responsibility, it's an enabler of technological advancements, economic growth, and national security.

In today's fragmented geopolitical landscape, clean energy offers countries a path to greater energy independence, reducing reliance on traditional fossil fuels and unreliable energy providers. It's also essential for powering the digital economy, including energy-intensive sectors like AI.

But how can these opportunities translate into tangible investment outcomes?

Investing in clean energy

The clean energy theme spans a wide spectrum, from generation (solar, wind, hydro, geothermal) to low-carbon alternatives (nuclear, green hydrogen), and from smart grids and storage to the supply chains that support them. For investors, this presents a diverse and resilient opportunity set aligned with long-term structural trends.

With global electricity demand rising sharply, clean energy is scaling to meet it. The market is projected to reach $2 trillion by 2035, growing at nearly 10% annually. This growth is driven by a convergence of factors:

- **Environmental urgency**: Clean energy is central to climate mitigation and pollution reduction.
- **Technological innovation**: Advances in solar, wind, hydrogen, and energy storage are making renewables more competitive than fossil fuels.
- **Policy support:** Governments are backing clean energy through incentives, infrastructure investment, and regulatory frameworks.
- **Cross-sector impact:** From transport and construction to industry and digital services, clean energy is transforming how economies operate.

[1] IEA estimations

[2] Press remarks by President von der Leyen on the occasion of the adoption of the European Green Deal Communication, 11th December 2019

> "**Europe's 'man on the moon' moment[2]**".
>
> Ursula von der Leyen, European Commission President, in reference to Europe's Green Deal.

WHY INVEST IN THE CLEAN ENERGY THEME

A policy-driven growth story

Clean energy is no longer a fringe solution; it is central to global policy agendas. Governments and institutions are responding to climate imperatives with decisive action, embedding clean energy into long-term economic strategies.

In the spring of 2026, the EU launched a series of initiatives to accelerate the clean energy transition. This includes the Clean Energy Investment Strategy which will be enabled by a €75 billion of financing by the European Investment Bank over the next 3 years to support the objectives of energy transition.A similar surge in investment is also expected in the US as it is vital for meeting America's growing electricity needs, especially as the majority of the world's data centres are based on US soil and require substantial, reliable power supplies.

Responding to shifts in geopolitics

This policy momentum is not just about environmental stewardship; it's about economic resilience, industrial competitiveness, and national security.

The global energy landscape is undergoing rapid transformation. Events like Russia's invasion of Ukraine and the ongoing conflict in the Middle East have accelerated what BlackRock calls "energy pragmatism"; a practical approach that prioritises security, affordability, reliability, and decarbonisation.

Dependence on fossil fuels from unstable regions has exposed economies to price volatility and supply disruptions. In response, countries are investing heavily in domestically produced clean energy. The EU has pledged €100 billion to support clean manufacturing, while Germany has committed an additional €100 billion through its Climate and Transformation Fund[3].

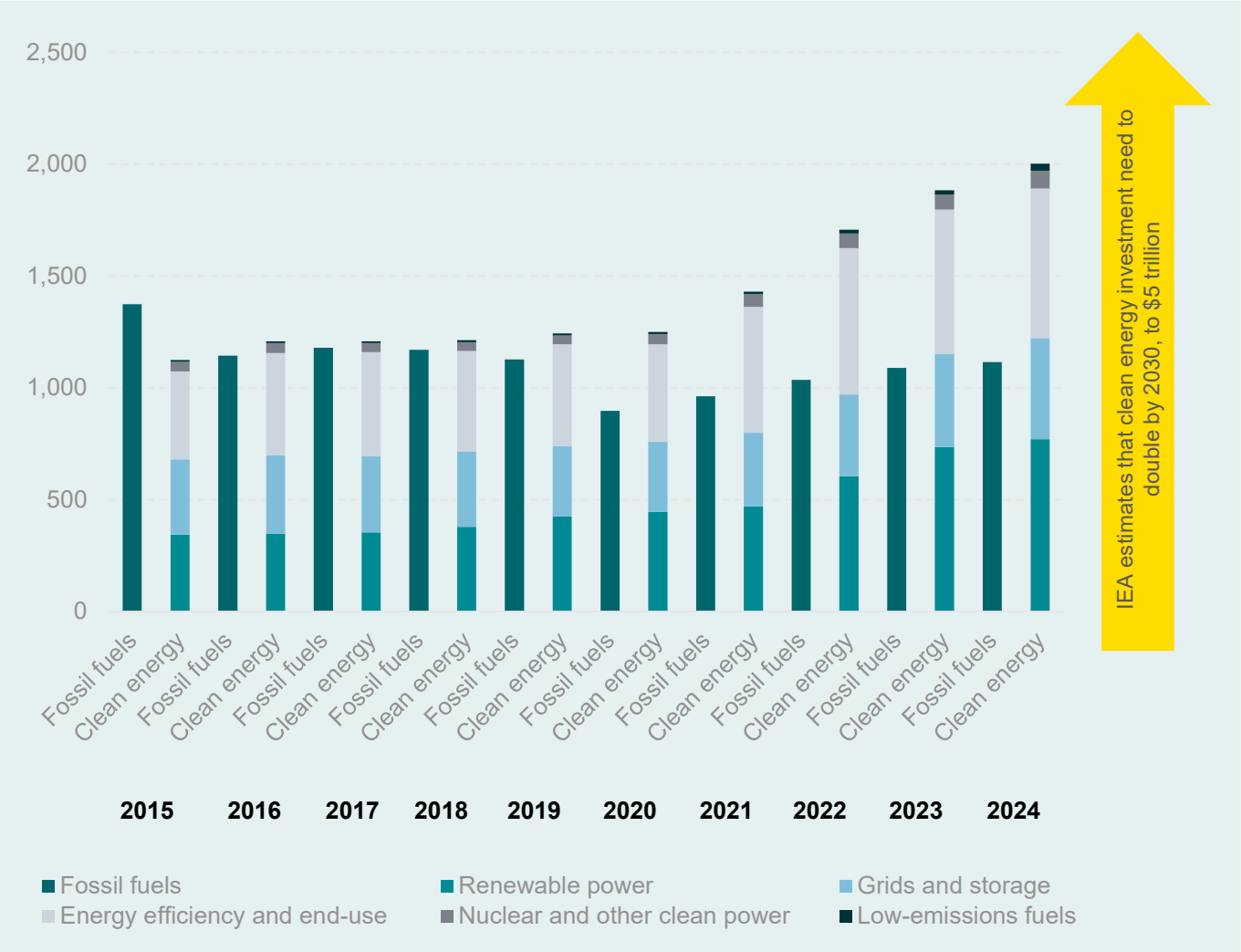


Figure 1: Global investments in clean energy and fossil fuels (in billion, USD), 2015-2024 | Source: IEA

[3] European Commission, 26th February 2025; EuroNews, March 18, 2025

Economic tailwinds for clean energy

In addition to the government policy shift, the clean energy sector is benefitting from powerful economic trends, too.

- **Rising demand:** Energy use is accelerating, driven by AI, digital infrastructure, and reshoring of manufacturing.
- **Cost competitiveness:** Once prohibitively expensive, renewables are now the cheapest source of new power in many regions. For example, solar costs are now 29% lower than the cheapest fossil fuel option - down from 710% higher in 2010 (IRENA, 2023). Clean energy is no longer a cost burden; it's a competitive advantage.
- **Infrastructure investment:** Governments currently rely on a combination of traditional and clean energy to meet rising demand. While fossil fuels still account for the largest portion of total energy consumption, governments are ramping up spending on grid modernisation, storage, and transmission to support the transition.

> **"Power grids are among the unsung heroes of the energy transition, but they need massive investment. While much attention goes to solar panels and electric vehicles, it is grids that connect everything together[4]."** Dr Fatih Birol, IEA Executive Director

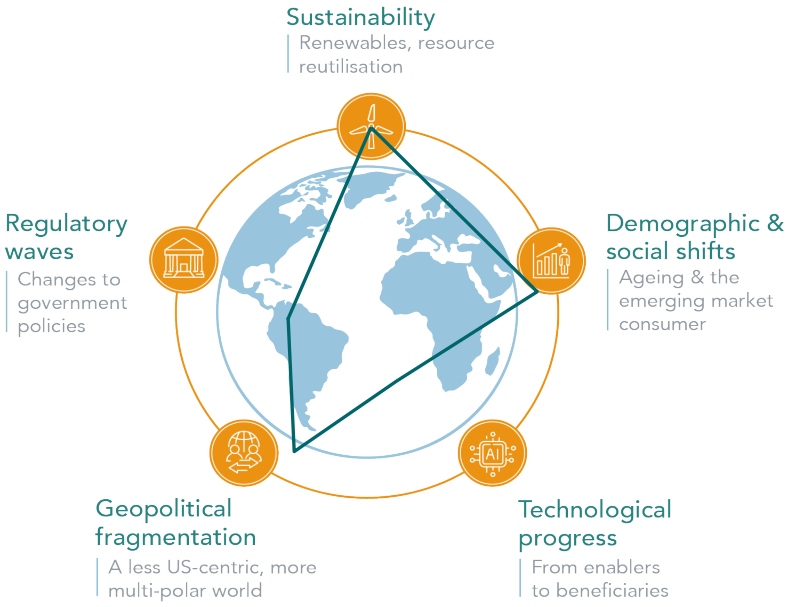
THE ROLE OF CLEAN ENERGY IN OUR THEMATIC PORTFOLIO

We aim to capture key secular trends in our thematic investments, including sustainability, demographic and social shifts, as well as geopolitical fragmentation. Investing in clean energy performs strongly across these areas, providing both diversification and stability to a traditional equity or bond portfolio.

- **Sustainability:** As the world moves toward net zero, clean energy is central to reducing emissions and building a resilient, low-carbon economy. It drives innovation across renewables, storage, and grid technologies, making it a key pillar of sustainable growth.

Demographic and social change: Rising populations and an explaining middle class are Increasing energy demand. As electrified homes and connected lifestyles become the norm, the need for sustainable power intensifies. Younger generations, increasingly eco-conscious and technology-driven, are accelerating the adoption of clean energy solutions, making them essential to reshaping modern society.

Geopolitical fragmentation: By accelerating the shift to renewables, countries can strengthen their energy independence and reduce vulnerability to global supply shocks.



[4] "Power system digitalisation is crucial for clean energy transitions and security in developing markets, but investment is lagging", IEA, 6th June 2023

CASE STUDY #1

AI AND CLEAN ENERGY NEED EACH OTHER

The International Energy Agency (IEA, Energy and AI) makes it clear: “there is no AI without energy, specifically electricity” (IEA Report, “Energy & AI”). The future of artificial intelligence is woven into the future of the power sector. Renewable sources like solar, wind, and hydropower are set to provide nearly half of the extra electricity needed for booming data centre growth by 2035. Integrating clean energy isn’t just about supply. It demands bold investment in grid infrastructure, energy storage, and adaptable, demand-side solutions

Artificial intelligence itself is poised to revolutionise grid operations: optimising flows, unlocking new transmission capacity, and helping renewables take centre stage. While emissions from data centres continue to climb, the IEA finds that widespread use of AI for energy optimisation could reduce more emissions than these facilities produce, provided clean energy remains a priority.

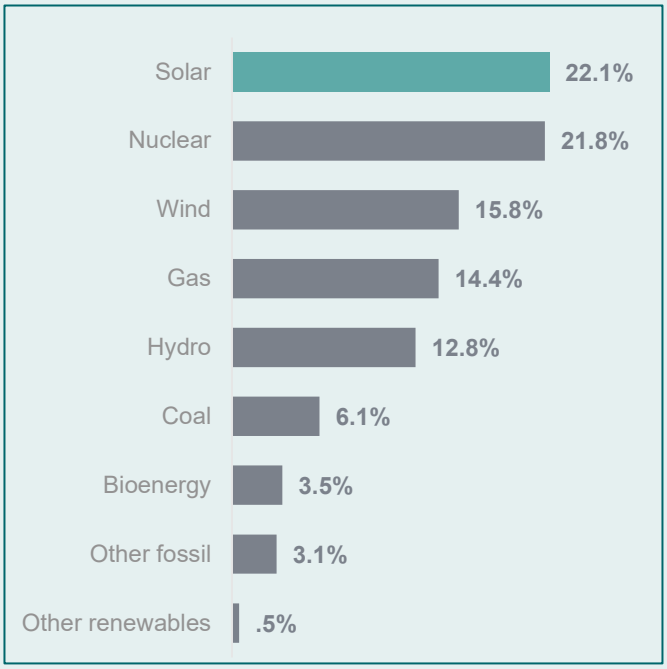


Figure 2: Ranked: Share of electricity generation in the EU, June 2025 | Source: Ember Energy

This clean energy movement is about transforming both supply (through renewables, nuclear, and advanced storage) and demand (with AI-driven efficiency, flexibility, and emissions reductions). Electrification in sectors like transport, heating, and industry is accelerating, with solar and wind now the main drivers. Notably, June 2025 marked a milestone: for the first time ever, solar became the EU’s largest power source, as heatwaves briefly paused nuclear production and wind generation soared while coal use hit record lows. These shifts are fuelling technological innovation and reshaping energy markets.

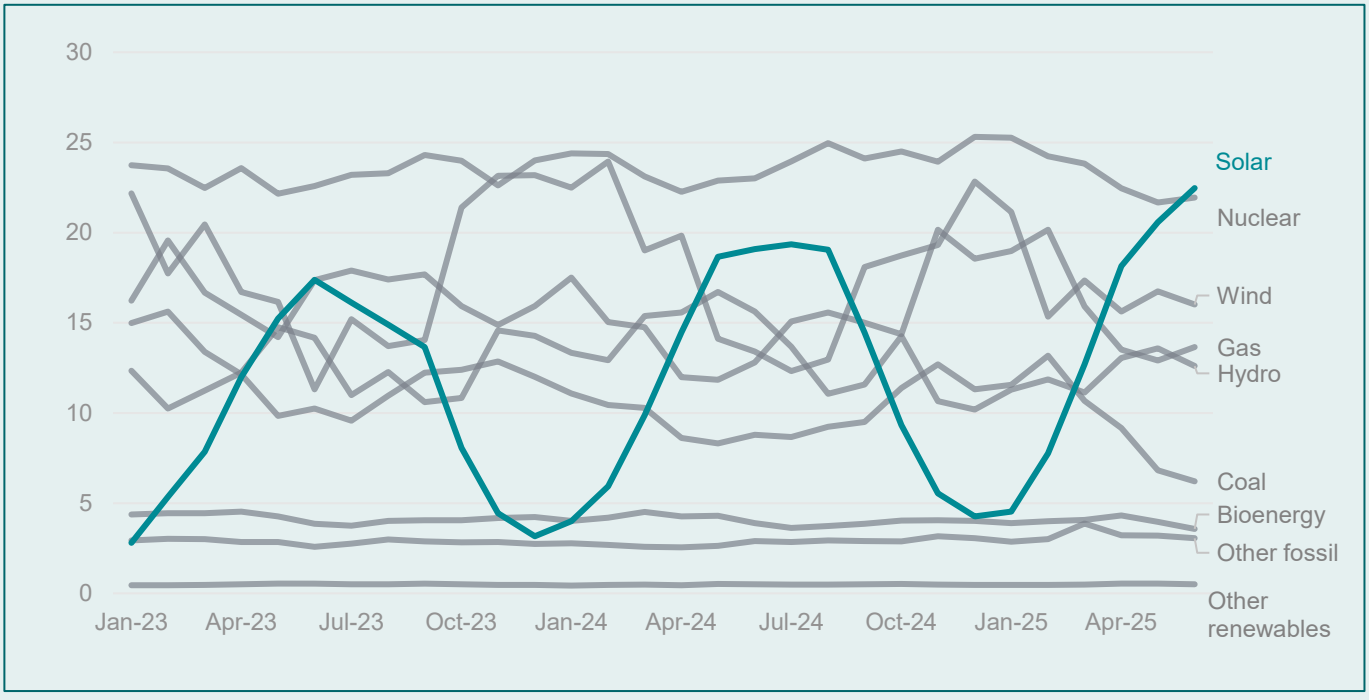


Figure 3: Share of electricity generation in the EU (in %), June 2025 | Source: Ember Energy

CASE STUDY #2

GERMANY'S ENERGY TRANSITION DRIVEN BY GEOPOLITICAL NEEDS

Geopolitical shifts, such as Russia's invasion of Ukraine in early 2022, have dramatically changed Germany's energy landscape. Prior to the conflict, Germany relied on Russia for 65% of its natural gas, making it especially susceptible to disruptions from sanctions. This dependency was a consequence of the country's decision to phase out nuclear power, a process set in motion after the Fukushima disaster in 2011. The last of its nuclear reactors were shut down in spring 2023, with a brief delay prompted by the energy crisis.

To fill the gap, Germany has diversified its energy imports, securing pipeline gas from Norway and liquefied natural gas from the US and Qatar. Swift action, driven by public-private partnerships, enabled the rapid deployment of floating storage and regasification units.

During this crisis, Germany had to temporarily increase coal usage. Today, coal consumption in Germany has reached its lowest point in over 50 years. In 2023, renewable energy and hydropower supplied more than half of the country's electricity for the first time. Germany remains committed to closing all coal-fired power stations by 2038, steadily replacing coal with renewables.

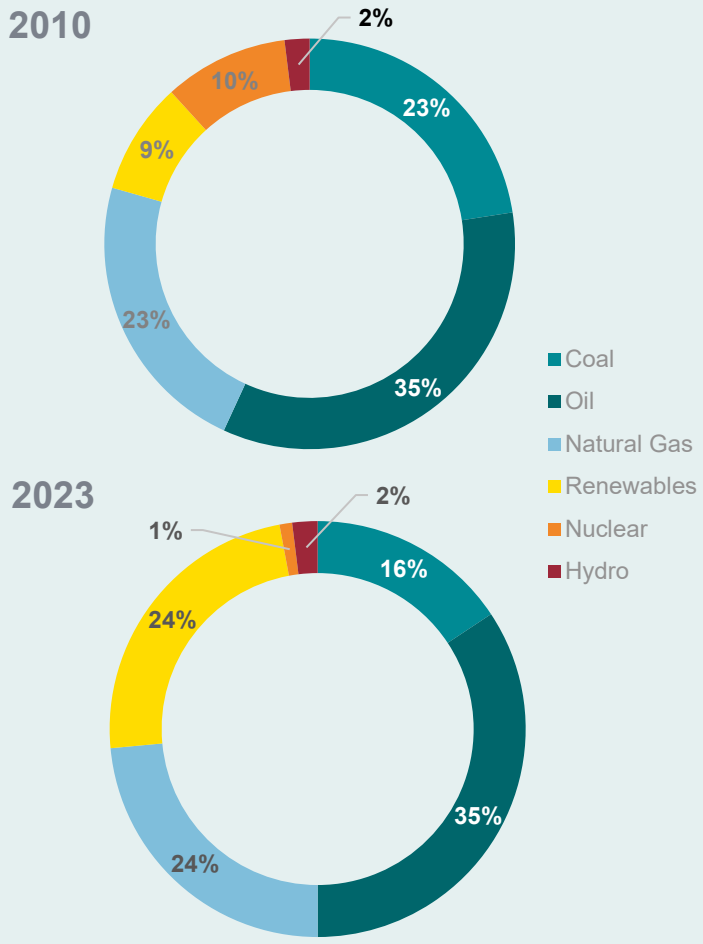


Figure 4: % of total primary energy consumtion in Germany, 2010 vs 2023 | Source: Energy Institute, 2024 Statistical Review of World Energy

CHALLENGES TO CLEAN ENERGY

Despite strong long-term growth drivers, the clean energy sector has faced notable short-term volatility in recent years. Oversupply in the solar market has compressed profit margins, while a series of high-profile corporate missteps may have contributed to a sense of scepticism among investors. The industry also contends with geopolitical risks linked to supply chain dependencies, as well as regulatory uncertainties leading to delays, and bottlenecks within the grid infrastructure, all of which can slow the pace of deployment of clean energy solutions.

In response to these challenges, it is essential for governments and institutions to expedite the processes of permitting grid modernisation and large-scale clean energy rollout. This will help prevent critical bottlenecks and ensure that the rise of artificial intelligence aligns with climate objectives. Forward-thinking approaches, including robust clean energy procurement strategies, efficiency mandates, and continued innovation in energy technologies, comprise an effective policy toolkit to support a climate-aligned transition.

HOW TO INVEST IN THE THEME

Our dedicated funds solution team has identified a strategy that targets the broader sustainable energy ecosystem, focusing on three high-potential sub-themes:

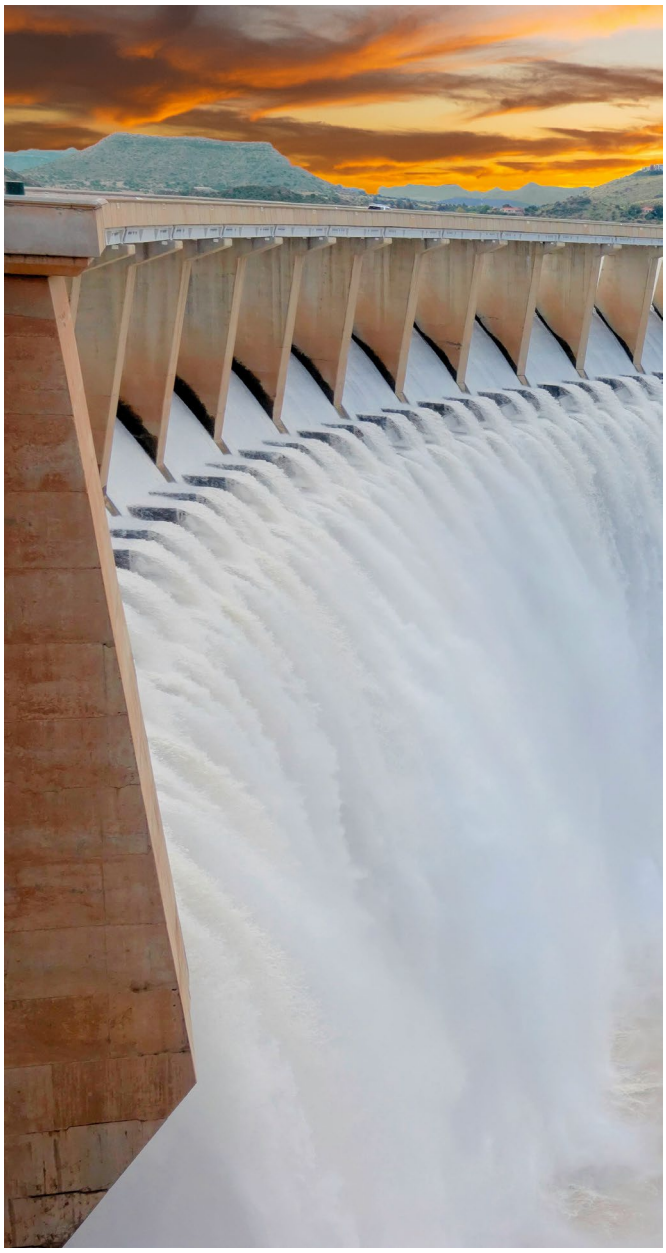
- Clean energy generation
- Energy efficiency technologies
- Clean transportation infrastructure

These areas offer long-term growth prospects that remain undervalued by the market, providing diversified exposure across the value chain.

CONCLUSION

The clean energy theme is not just an environmental imperative, it's an economic, innovative and strategic transformation shaping the future of global energy. While recent years have seen some turbulence, the long-term drivers remain intact and compelling: improving cost competitiveness, rising regulatory pressure, and the global need for energy security.

Investors who take a diversified, long-term approach can tap into opportunities across the value chain, from generation and infrastructure to materials to innovation, thereby supporting the world's transition toward a cleaner, safer, and more sustainable future.



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Methodology

The thematic investment process offers a comprehensive and dynamic approach by combining both strategic and tactical elements to capture long-term and short-term opportunities.

Firstly, quantitative analysis is conducted to identify which themes have historically added the most alpha beyond systematic drivers of return. This is followed by qualitative analysis, where forward-looking views for each theme are created, supported by BlackRock group of thematic research.

Next, a strategic portfolio is built through optimization. To ensure the portfolio remains relevant, short-term signals such as momentum, sentiment, analyst revisions, and valuations are constantly monitored, allowing for tactical tilts.

Finally, the portfolio is dynamically rebalanced to exploit tactical opportunities while capturing the long-term equity premium from strategic positions.

This process ensures a more comprehensive and dynamic investment approach, balancing strategic and tactical considerations.
If you need any further information, feel free to reach out to your local advisor.

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