



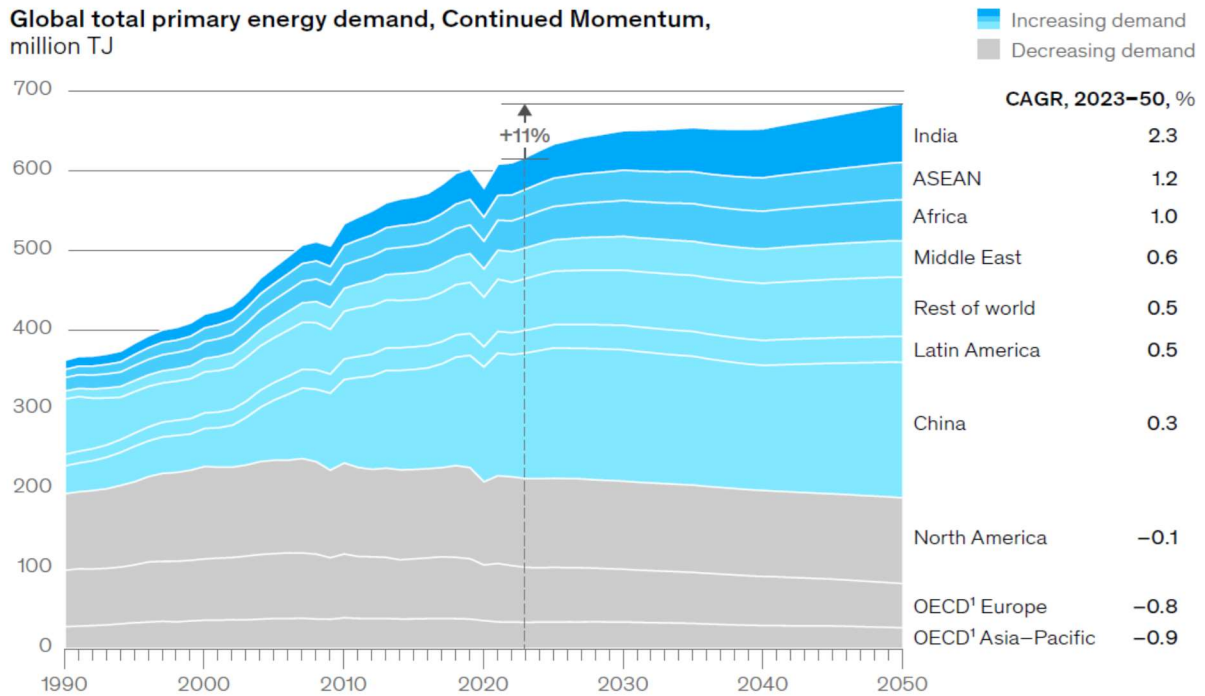
The Unfolding Energy Narrative: Why Hydrocarbons Still Hold a Compelling Hand

Executive Summary

The investment landscape is often painted with broad strokes, and the current narrative around energy is no exception. Conventional wisdom is that oil and gas assets are a relic and the hydrocarbon economy is puffing out its last breath as a wave of “clean” renewable energy sources take over the developed world. The enthusiastic embrace of renewable energy sources has led many to believe that the reign of hydrocarbons is swiftly coming to an end. This perspective often highlights the impressive growth rates of solar and wind power and the increasing urgency to address climate change. However, a closer examination of the data, particularly from reputable sources like the International Energy Agency (IEA) and the U.S. Energy Information Administration (EIA), suggests that this transition will be more of a marathon than a sprint ¹. Despite the growing prominence of renewables, oil and natural gas continue to form the bedrock of the world's energy system, fulfilling critical needs across transportation, industry, power generation, and petrochemicals (plastics, rubbers, asphalt, solvents, detergents, etc). For the astute investor, dismissing hydrocarbons entirely in the near to medium term might be akin to leaving a winning hand on the table, as these traditional energy sources are projected to remain crucial for meeting global energy needs for at least the next 10-15 years ³.

Increased Global Energy Demand

The global appetite for energy continues its relentless expansion, fueled by a growing global population and the aspirations of developing economies striving for higher living standards ⁴. Projections from reputable sources consistently indicate an upward trend in overall energy demand for at least the next 10-15 years ⁶. The EIA, for instance, projected a 28% increase in world energy consumption between 2015 and 2040 in their 2017 outlook ⁷. More recently, their projections still show increasing energy demand through 2050 ⁹ with the Organization for Economic Cooperation and Development projecting an 11% increase in demand from now until 2050 (see chart on the following page). Similarly, the IEA's World Energy Outlook 2024 highlights a significant rise in electricity demand, a key component of overall energy consumption ¹. This increasing demand forms the foundation of our thesis. Even as renewable sources capture a larger share of this growing pie, the sheer size of the pie itself ensures that the slices allocated to traditional energy sources remain substantial, and in some cases, even grow in absolute terms ⁴.

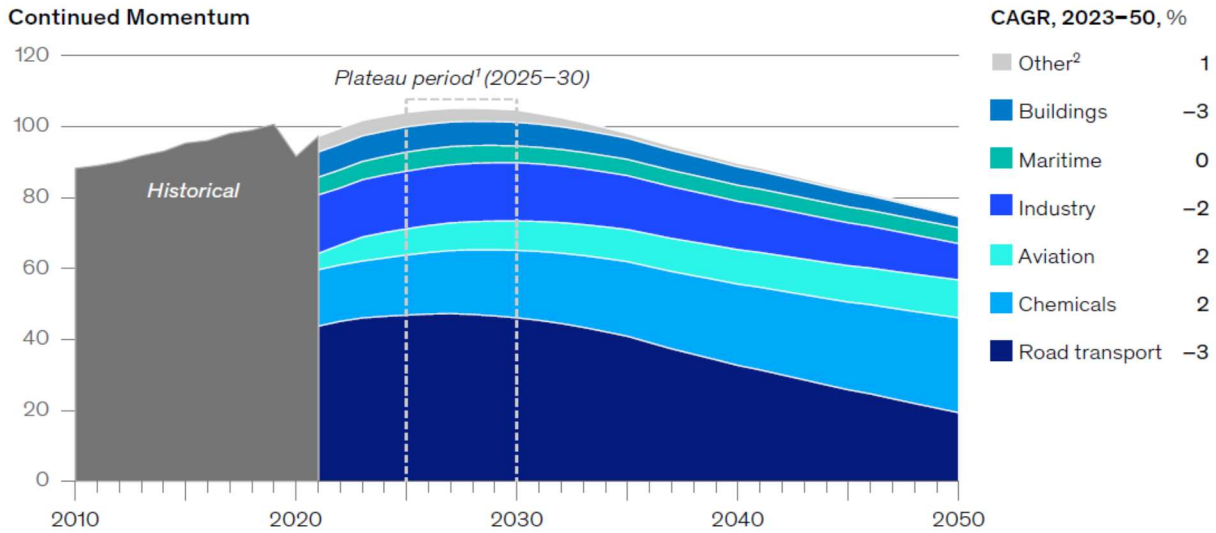


¹The Organization for Economic Cooperation and Development.

Within this broader energy landscape, electricity demand is experiencing particularly robust growth ⁴. This surge is driven by factors such as expanding industrial production, the increasing need for cooling in warmer climates, the electrification of various sectors like transportation, and the burgeoning demand from data centers powering the digital age. Renewable energy sources, particularly solar and wind, are indeed making significant strides in meeting this escalating demand for electricity. Forecasts suggest that renewables could potentially supply close to half of the global electricity demand by the end of this decade. The IEA's Renewables 2024 report indicates that the share of renewables in the power generation mix worldwide is set to rise from 29% to 35% by 2025.

However, it is crucial to recognize that global energy consumption extends far beyond just electricity. Significant portions are dedicated to heating our homes and powering industrial processes, and a substantial amount fuels transportation, particularly heavy-duty trucking, shipping, and aviation. While the growth rate of renewable energy in the electricity sector is undeniably impressive, their penetration into these other crucial sectors faces more significant hurdles in the immediate future ⁴. Sectors like heavy-duty trucks, shipping, aviation, iron and steel, and chemicals and petrochemicals, collectively representing a quarter of the world's energy consumption and a fifth of total CO₂ emissions, are considered "hard to abate" due to the limitations of current renewable technologies. Oil demand alone is anticipated to be as high as 75 MMB/d in 2050 (see chart below).

Global oil demand (including biofuels and synfuel), MMb/d



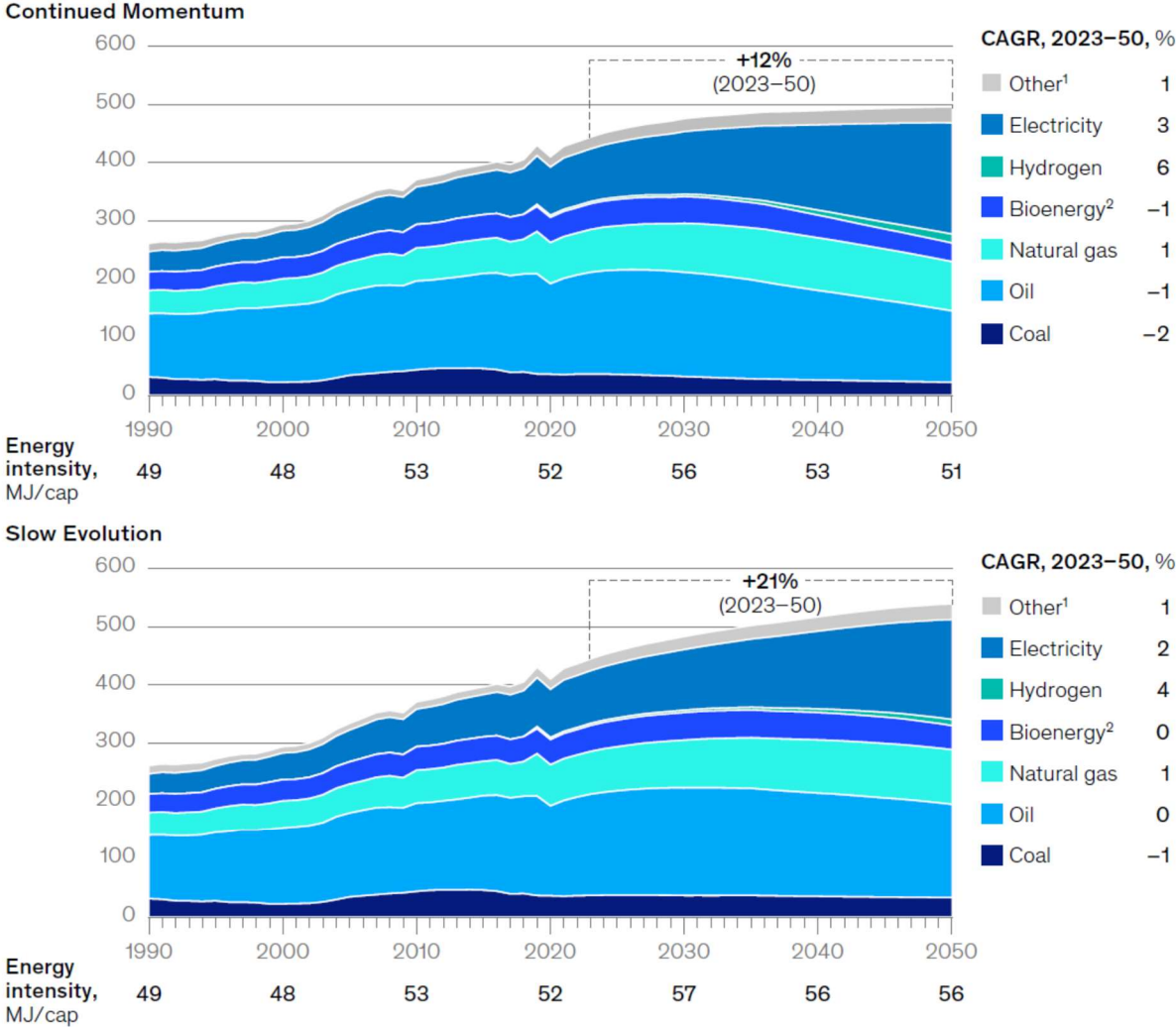
¹Plateau defined as ± 1 MMb/d range around peak.
²Includes power, rail, oil and gas own use, etc.

Will the Rise of Renewables Rapidly Replace Hydrocarbons?

The narrative of a swift and complete takeover by renewables often overlooks the fundamental realities of energy systems. As the Manhattan Institute points out, hydrocarbons possess a remarkable combination of low-cost, high-energy density, stability, safety, and portability that has yet to be matched by renewable alternatives⁴. While the percentage growth of renewables is high, their current contribution to the overall energy mix is still considerably smaller than that of hydrocarbons. In 2023, renewables accounted for about 13% of final energy consumption, with a forecast to increase to nearly 20% by 2030¹⁸. Therefore, even with continued rapid expansion, the absolute increase in energy supplied by renewables might not be sufficient to meet the entirety of the *growth* global energy demand within the next 10-15 years, to say nothing of the total energy demand. This necessitates a continued, and potentially increasing, contribution from other energy sources, most notably hydrocarbons⁴.

Data from the U.S. Energy Information Administration (EIA) suggests that demand for oil and natural gas is projected to *increase* in the coming decades alongside the overall growth in global energy demand⁹. Even the International Energy Agency (IEA), while emphasizing the growth of clean energy, acknowledges that under current policies, demand for each fossil fuel – coal, gas, and oil – will not peak until at least 2030 (and natural gas may not peak until 2050 or beyond)²⁰. However, a peak does not signify an immediate and precipitous decline. Given the projected overall increase in energy consumption, a plateau or even a modest rise in the absolute volume of hydrocarbons consumed is a plausible scenario for the next 10-15 years⁴. This is particularly relevant when considering that the share of fossil fuels in the global energy supply is projected to remain substantial, even if it edges

downwards, reaching 73% by 2030 according to the IEA ²⁰ and may still be as high as 61% in 2050 (see chart on the following page). Furthermore, an analysis of the IEA's projections indicates a potential oversupply of oil and liquefied natural gas (LNG) in the latter half of the 2020s, which could lead to competitive pricing and sustained demand ¹⁶.



¹Includes heat, geothermal, and solar thermal.
²Includes synthetic fuels, biofuels, and other biomass.

One of the key reasons for the continued relevance of hydrocarbons lies in sectors where renewable energy currently lacks the scale or efficiency for full replacement. Heavy transportation, encompassing aviation, shipping, and long-haul trucking, presents a significant challenge for electrification due to the high energy density requirements that current battery technology struggles to meet. While biofuels are emerging as a potential solution, their widespread adoption faces challenges in terms of scalability and cost-effectiveness. Similarly, many industrial processes, such as the production of steel, cement, and certain chemicals, rely on the unique chemical properties and high temperatures achievable with hydrocarbons as both energy sources and crucial

feedstocks. The vast infrastructure supporting the production of plastics, fertilizers, and other essential chemicals is also deeply intertwined with hydrocarbon supply chains²³. While innovation in areas like carbon capture and green hydrogen holds long-term promise for decarbonizing these sectors, widespread adoption at the scale required is unlikely to occur within the 10–15 year investment horizon we are considering²⁴.

Given this backdrop, the investment landscape of major hydrocarbon companies warrants attention. Recent years have seen significant profitability in the oil and gas sector, driven by strong demand and, at times, higher prices. These companies have also demonstrated a commitment to returning value to shareholders through attractive dividend yields and share buyback programs. Globally, the oil and gas industry distributed nearly US\$213 billion in dividends and US\$136 billion in buybacks between January 2024 and mid-November 2024²⁶. While these companies are increasingly allocating capital towards lower-carbon initiatives, their core business of supplying hydrocarbons continues to receive substantial investment to meet projected demand. In 2023, investment in unabated fossil fuel supply was set to rise by more than 6%, reaching USD 950 billion. This strategic allocation of capital, coupled with a focus on cost efficiency, positions these companies to potentially generate strong returns in the coming years²⁷. Growth is always enviable but is not a requisite for solid returns *assuming an advantageous entry price*. As of December 31, 2024, the following were the average EBITDA multiples for companies in the energy complex:

Sector	EBITDA Multiple
Coal	3.48
Oil & Gas	6.10
Renewables	11.4

Furthermore, the extensive existing infrastructure for hydrocarbon production, transportation, and refining represents a considerable embedded investment that cannot be easily or quickly replaced²⁸. Continued investment in maintaining and selectively expanding this infrastructure, particularly for natural gas to support electricity generation and LNG exports, signals a long-term expectation of its utilization⁶. The growing demand for natural gas from new sectors like artificial intelligence and data centers further reinforces the importance of this infrastructure²⁸. The IEA forecasts that global data center electricity usage may double by 2026, underscoring the amount of power demand growth that natural gas can help meet²⁹.

It’s not just us that sees the world through this lens: the insights from leading energy analysts also support this perspective. McKinsey’s Global Energy Perspective 2024 suggests that fossil fuels will continue to play a significant role in meeting global energy demand through 2050, accounting for a substantial portion of the energy mix. Their analysis indicates that investment in fossil fuels will likely continue for at least the next decade to ensure energy system reliability. Similarly, the Manhattan Institute article "The New Energy Economy: An Exercise in Magical Thinking" presents a compelling

argument for the continued importance of hydrocarbons based on their high energy density, the sheer scale of current consumption, the physical limitations of renewables (which doesn't get nearly enough attention and may be the subject of a future whitepaper), and the challenges associated with energy storage⁴. The article highlights that hydrocarbons currently supply 84% of global energy, a scale that is difficult to replace rapidly⁴.

Conclusion

The enthusiasm surrounding the renewable energy transition is understandable and well-founded. However, we follow the data and not sentiment in making our capital allocation decisions. The data and analysis suggest that the complete displacement of hydrocarbons is a more distant prospect than current market sentiment might imply, and wishing it wasn't so on environmental grounds doesn't change the reality of our energy-addicted world. The continued and unabated growth in overall energy demand, the inherent challenges in rapidly transitioning certain key sectors, and the financial strength of hydrocarbon companies all point towards a continued significant role for oil, natural gas, and even coal in the global energy mix for the foreseeable future. While the IEA projects that demand for fossil fuels will peak by 2030, this peak is expected to be a plateau rather than a sharp decline in the near term and almost all credible sources expect that hydrocarbons will make up and appreciable part of our energy mix for at least another 40-50 years.

Therefore, while a long-term investment strategy should undoubtedly include a growing allocation to renewable energy, prematurely dismissing the investment potential within the hydrocarbon sector could be a costly oversight. We seek to invest where values provide compelling returns, and our 26% compounded returns in energy investments since investing in the space in 2019 indicate that appreciable returns are possible. A balanced approach, recognizing the evolving energy landscape while acknowledging the enduring realities of current energy consumption patterns, is likely to be the most prudent path for investors seeking attractive returns in the coming decade. Sometimes, the most compelling investments lie not in dazzling new technologies, but in the established players adapting to a changing world while still meeting fundamental global needs.

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