June 25, 2024

Dear Fellow Stockholders,

This quarterly update discusses the Company's year-to-date performance, the energy infrastructure markets, and KYN's portfolio. We remain excited about the prospects for the Company's investments and are very pleased with KYN's performance during the first six months of fiscal 2024. As we will discuss in this letter, the midstream industry's outlook for the next five years is very constructive.

As it relates to fiscal Q2:

- KYN's Net Asset Return was 11.1%;[1]
- KYN outpaced the Alerian Midstream Energy Index (AMNA) by 200 basis points (11.1% vs. 9.1%);[2]
- KYN's performance exceeded the broad energy sector (as measured by the XLE) by 200 basis points (11.1% vs. 9.1%);[3] and
- KYN maintained conservative leverage levels with ample downside cushion.[4]

Performance

KYN's midstream investments generated strong returns during the quarter. It was a reasonably quiet quarter from an operational standpoint – midstream companies are performing in-line with expectations and investors are embracing a "boring is good" mantra for the sector. In addition, the market continues to reward companies that are executing on investor-focused return of capital strategies (i.e., increasing dividends and share buybacks). Western Midstream (WES) and Targa Resources (TRGP) each took tangible steps to refine their strategies during the quarter, and both were top performers in fiscal Q2. It is also worth noting that there has been growing interest in how the midstream sector benefits from an improving natural gas backdrop, with expected increases in natural gas demand from reshoring industrial activities and data center development (fueled by AI). KYN's gas-weighted midstream holdings, including Williams Companies (WMB) and Kinder Morgan (KMI), are well positioned for this theme and were also among the top performers. As discussed in prior communications, we expect that the vast majority of KYN's portfolio will be allocated to midstream companies, with the remainder allocated to other energy companies, utilities, and renewable infrastructure companies.

KYN's Net Asset Return[1] has been very strong on a fiscal year-to-date basis (up 15.8%) with the vast majority of the Company's investments performing well. KYN's Market Return, which is based on stock price performance rather than net asset value, is up 21.1% on a fiscal year-to-date basis.[5] This is better than our Net Asset Return as our stock price traded at a 14.7% discount to NAV at fiscal quarter-end compared to a 18.5 % discount at the beginning of the fiscal year. We are encouraged with the progress made thus far in fiscal 2024, but do not believe this "mid-teens" discount is appropriate given KYN's favorable attributes. We continue to believe that consistent performance, a substantial return of cash to stockholders (through attractive quarterly distributions), and strategic actions that are accretive to our stockholders will be rewarded over time in the form of a narrowing discount.

Market Review

The broader financial markets had a strong quarter, with the S&P 500 and the NASDAQ both up 4%. AI continues to capture the market's attention, and there has been an increasing focus on what this trend means for power and natural gas demand. Forecasts for incremental electricity needs for AI and data center load imply significant increases in gas demand, as renewable energy solutions alone are not sufficient to meet this incremental demand as well as the "24 hours a day, 7

Note: Footnotes can be found on page 5.

days a week" needs of these facilities.

Separately, there has been persistent volatility in interest rates as the market reacts to real-time economic data and inflation trends, while trying to assess the Federal Reserve's next steps. Inflation has moderated but is still trending above the Fed's target levels. The outlook for the economy, meanwhile, remains unclear and recent data paints a mixed picture. There is growing concern around consumer optimism and middle-to-lower income spending patterns, but that is in contrast with continued strong employment and improving PMIs. The Fed has remained in a "holding pattern" against this backdrop while waiting on more convincing data points before any potential rate cuts.

Total Returns							
	Equity Market Indices			Energy Indices			
	S&P 500	DJIA	NASDAQ	AMNA[9]	XLU[10]	KRII[11]	XLE[3]
Fiscal Q2[6]	3.9%	-0.3%	4.2%	9.1%	18.1%	14.4%	9.1%
Fiscal 2024 YTD[7]	16.4%	8.6%	18.1%	12.3%	17.9%	6.9%	12.1%
Last Twelve Months[8]	28.2%	20.0%	30.4%	31.7%	15.8%	-3.4%	25.9%

Midstream has been the best performing energy subsector over the last twelve months and has outperformed the major equity market indices over this time period. This performance is particularly notable given commodity price and interest rate volatility since last summer. Operating results have been consistent, and investors are reacting positively to midstream companies' return of capital strategies as increased dividends and share buybacks drive equity prices higher.

In addition, the sector has de-risked its investment profile. Balance sheets are in a very strong position as companies have continued to reduce leverage ratios – benefitting from the combination of modest growth and excess free cash flow (i.e., free cash flow after dividends). Importantly, domestic production volumes and global demand growth – not commodity prices – are what drive cash flows for KYN's midstream investments. Steady cash flow growth coupled with strong credit metrics and minimal (if any) external financing needs results in a very attractive investment profile for midstream equities.

The wave of M&A activity in the midstream sector continued during Q2 and we would highlight a few noteworthy transactions. First, Kinetik Holdings (KNTK) announced the sale of its interest in the Gulf Coast Express natural gas pipeline and the acquisition of Durango Midstream. In addition, Phillips 66 (PSX) announced the acquisition of Pinnacle Midstream and Energy Transfer (ET) announced the acquisition of WTG Midstream. These deals are consistent with the M&A trends we have seen over the last couple of years – monetizing non-core assets (with the proceeds used to reduce leverage or reinvest in assets more strategic to the business) while executing on "bolt on" acquisitions that strengthen core operating areas. Overall, we expect an increasingly active M&A market (particularly for asset deals) through the second half of the year.

In early June, OPEC+ extended group cuts through 2025 and announced plans to gradually phase out the latest voluntary cuts starting in October. This announcement was relatively in-line with expectations, but it does highlight the potential for those supply additions to weigh on 2025 balances. Slight weakness in oil prices followed this announcement, but the overall backdrop remains constructive as long as OPEC+ remains coordinated and incentivized to support prices (a reasonable assumption in our view). U.S. oil and gas production continues to trend as expected, with more modest growth in 2024 relative to 2023. Despite weakness in refining margins during the quarter, global oil demand has also trended in-line with expectations, and global oil demand was up 1.4 million b/d in Q2 on a year-over-year basis.

Domestic natural gas prices remain challenged, but with prices back above $2.00/mmbtu, we appear to be through the trough. Natural gas prices have recently recovered as a result of stronger power and liquefied natural gas ("LNG") demand, combined with the impact of producer curtailments and activity reductions (which has resulted in a year-to-date reduction

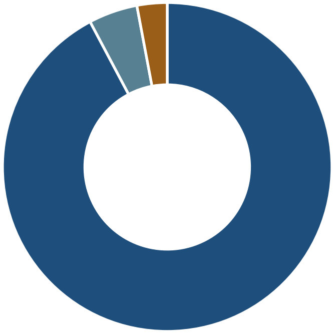
Note: Footnotes can be found on page 5.

in production levels). Meanwhile, the setup for 2025 continues to look constructive as the market works off excess supply in the short-term. The domestic gas market is also positioned to benefit from incremental LNG demand as new facilities come online in the next two to three years, as well as incremental domestic demand to power data centers.

Portfolio

KYN's portfolio is comprised of 27 investments (94% in publicly traded securities and 6% in privately held investments). Approximately 95% of the portfolio is invested in common equity with the remainder invested in convertible preferred equity. The overwhelming majority of KYN's portfolio is invested in publicly traded midstream companies. The remainder is a mix of investments in other energy subsectors and privately held midstream companies. We remain overweight large-cap midstream companies with integrated suites of assets that we believe are well positioned to benefit from growing domestic production and increased exports. We are also well positioned to benefit from growing natural gas demand driven by the reshoring of industrial activities and buildout of additional data centers.

KYN's Exposure by Subsector as of May 31, 2024



Midstream Companies: 92%

Other Energy: 5%

Utilities & Renewable Infrastructure: 3%

Distribution & Outlook

We announced a quarterly distribution of 22 cents per share in June, flat quarter-over-quarter and up 5% vs. fiscal Q2 2023.[12] This represents an 8.9% distribution rate based on KYN's stock price as of May 31st.[13] We understand how important distributions are to our investors, and our goal is to steadily increase KYN's distribution over time as supported by the Company's operating results.

The strong performance seen in the second quarter for KYN's portfolio investments was supported more by growing cash flows at these companies than by trading multiples trending higher (i.e., higher valuation levels). We still have conviction in mid-teens returns for the midstream sector without the benefit of multiple expansion. This expectation is, in our opinion, well supported by mid-single digit dividend growth and mid-single digit cash flow growth for our midstream investments. These metrics appear to be durable and underpin our bullish outlook for the next five years.

Notwithstanding this optimism, there are plenty of reasons to exercise caution – most notably an unsettled geopolitical backdrop stemming from factors including but not limited to (i) potential escalation to a more regional conflict in the Middle East, (ii) political turmoil in Europe, (iii) the ongoing Russia / Ukraine conflict, (iv) rising tensions in the South China Sea and (v) potential for volatility in the financial markets this fall as a result of the presidential election. However, we have conviction that the energy sector is well positioned to navigate this markedly uncertain backdrop, and our near-term conservative bias with respect to portfolio positioning and leverage takes these factors into account.

We believe KYN – with its flexible investment mandate, permanent capital base, and expertise providing capital solutions to both public and private companies – provides very attractive exposure to the North American energy infrastructure

Note: Footnotes can be found on page 5.

sector in an income-producing vehicle. The Company provides this exposure in an easy-to-own structure – daily liquidity via its NYSE listing, an attractive quarterly distribution, and the tax simplicity of a single Form 1099. Lastly, conservative leverage and active portfolio and risk management from an experienced portfolio management team set the stage for a successful 2024 and beyond.

We encourage investors to visit our website at kaynefunds.com for more information about the Company, including the commentary posted on the "Insights" page that discusses key industry trends and other noteworthy topics.

We appreciate your investment in KYN and look forward to executing on our investment objective of achieving high after-tax total returns. Please do not hesitate to contact us with any questions or comments.

Sincerely,

James C. Baker, Jr.
Chairman of the Board
President and Chief Executive Officer

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[1]Net Asset Return is defined as the change in net asset value per share plus cash distributions paid during the period (assuming reinvestment through our dividend reinvestment plan).

[2]Relative performance commentary based on the difference between the Company's Net Asset Return and the total return of the Alerian Midstream Energy Index (AMNA).

[3]The benchmark for the broad U.S. energy sector is the Energy Select Sector SPDR Fund (XLE), which is an exchange-traded fund ("ETF") linked to the Energy Select Sector Index (IXE), a subset of the S&P 500.

[4]Downside cushion reflects the decrease in total asset value that could be sustained while maintaining compliance with leverage levels under the Investment Company Act of 1940, as amended, and KYN's financial covenants.

[5]Market Return is defined as the change in share price plus cash distributions paid during the period (assuming reinvestment through our dividend reinvestment program).

[6]Fiscal Q2 2024 (3/1/24 – 5/31/24).

[7]Fiscal 2024 YTD (12/1/23 – 5/31/24).

[8]Last Twelve Months (6/1/23 – 5/31/24)

[9]The benchmark for the midstream sector is the AMNA.

[10]The benchmark for the U.S. utility sector is the Utilities Select Sector SPDR Fund (XLU), which is an ETF linked to the Utilities Select Sector Index (IXU), a subset of the S&P 500.

[11]The benchmark for the renewable infrastructure sector is the Kayne Anderson Renewable Infrastructure Index (KRII), a market-cap weighted index of 35 domestic and international renewable infrastructure companies with individual constituents capped at a 5% weighting.

[12]Based on KYN's $0.22/share distribution payable July 8, 2024 compared to $0.21/share distribution paid July 5, 2023.

[13]Based on KYN's annualized $0.22/share distribution ($0.88/share) and KYN's stock price of $9.90/share as of May 31, 2024.

All investments involve risk, including possible loss of principal. An investment in the fund could suffer loss.

Kayne Anderson Energy Infrastructure Fund, Inc. (NYSE: KYN) is a non-diversified, closed-end management investment company registered under the Investment Company Act of 1940, as amended, whose common stock is traded on the NYSE. The Company's investment objective is to provide a high after-tax total return with an emphasis on making cash distributions to stockholders. KYN intends to achieve this objective by investing at least 80% of its total assets in securities of Energy Infrastructure Companies. See Glossary of Key Terms in the Company's most recent quarterly report for a description of these investment categories and the meaning of capitalized terms.

This communication contains statements reflecting assumptions, expectations, projections, intentions, or beliefs about future events. These and other statements not relating strictly to historical or current facts constitute forward-looking statements as defined under the U.S. federal securities laws. Forward-looking statements involve a variety of risks and uncertainties. These risks include, but are not limited to, changes in economic and political conditions; regulatory and legal changes; energy industry risk; leverage risk; valuation risk; interest rate risk; tax risk; and other risks discussed in detail in the Company's filings with the Securities and Exchange Commission ("SEC"), available at www.kaynefunds.com or www.sec.gov. Actual events could differ materially from these statements or from our present expectations or projections. You should not place undue reliance on forward-looking statements, which speak only as of the date they are made. Kayne Anderson undertakes no obligation to publicly update or revise any forward-looking statements made herein. There is no assurance that the Company's investment objectives will be attained.

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Past performance is no guarantee of future results. Closed-end funds, unlike open-end funds, are not continuously offered. After the initial public offering, shares are sold on the open market through a stock exchange. As with any other stock, total return and market value will fluctuate so that an investment, when sold, may be worth more or less than its original cost. Shares of closed-end funds frequently trade at a market price that is below their net asset value.