Filed by NuStar Energy L.P. Pursuant to Rule 425 under the Securities Act of 1933 and deemed to be filed pursuant to Rule 14a-12 under the Securities Exchange Act of 1934 Subject Company: NuStar Energy L.P. Commission File No.: 001-16417 Date: January 22, 2024

On January 22, 2024, in connection with the announcement of Sunoco LP's proposed acquisition of NuStar Energy L.P. ("NuStar"), NuStar distributed a memo to its employees, in the form set forth below.

I am writing today to share some important news with you before we share it with the public. Shortly, we will be issuing a press release announcing the merger of NuStar Energy L.P. with Sunoco LP. This transaction will provide both companies with increased size and scale and better access to capital while at the same time providing more opportunities for our employees and company to grow.

Background

To better explain the strategic rationale for the transaction, let me take a step back and describe the changes to the midstream landscape that have taken place over the past 10 years. As those of you who have been with the company for many years know, the heyday of new MLP launches was the period from 2001 to 2014. The growth during this period was driven by several factors including healthy contango in the storage market, fracking and the shale boom in the pipeline segment and low interest rates. Since 2015, however, there has been a steady outflow of investor dollars from the space and investment outflows have outpaced inflows in recent years by a significant margin.

NuStar has navigated this shifting landscape well and has responded to changing investor demands as they occurred. Some of you who have attended management meetings will remember the slide where we describe these changing demands as MLP 1.0, MLP 2.0, MLP 3.0, etc. Others have heard me discuss the dramatic and important shift away from distribution growth to free cash flow generation.

The landscape has shifted and we have adapted. So, you might ask, why would we merge with someone now? What has changed?

NuStar has never been for sale and we were not seeking a merger partner when Sunoco approached us. In fact, NuStar has been approached many times by Sunoco and others seeking to merge with us. I believe this is driven in large part because of our outstanding portfolio of midstream assets and our top-tier employees. Even though we have considered and declined every approach, our management team and our board have been aware of the changing dynamics of the midstream sector, and we are well aware of the imperative to grow and generate free cash flow. Thus, when Sunoco approached us this time with a compelling offer and an equally compelling business rationale, we carefully considered their proposal.

As I described above, as the investor base has shrunk, it is more and more difficult for the institutional investors focused on the space to invest in small and mid-sized MLPs. As scale has become important, many investors cannot invest in a mid-sized MLP like NuStar. As a result, access to equity capital markets has been difficult for many years. With limited access to capital, it makes it difficult to fund growth projects. As midstream infrastructure has been built out over the past 20 years, the projects have gotten larger. Large projects, those over \$350 million, require a large and healthy balance sheet and reliable access to capital markets to pursue. NuStar, unlike many mid-sized logistics companies, has growth projects in our future and they center around renewable fuels and ammonia. With the current status of the financial markets, however, it will be difficult to pursue many of those projects without combining with another entity.

Strategic Rationale

The combination of NuStar and Sunoco helps solve several challenges that each company faces. The combined company will have the scale and diversification to attract new investors, will be financially stronger and be better positioned to raise capital and execute on projects. Additionally, the diversification of each company's revenue streams and strength of the combined cash flows, should lead to lower borrowing costs. Also, the combined company will become the 7th largest MLP and should have improved trading liquidity, which will make new investment possible.

Why Sunoco?

As I mentioned above, NuStar has, in the past, been approached by other companies looking to merge with us. Sunoco is more attractive than the others due to several factors. Sunoco is one of the largest refined products distribution companies in the United States. With an enterprise value of almost \$10 billion, Sunoco connects refiners with customers through its extensive wholesale fuel distribution network.

As you may recall, in October 2021 we sold our Eastern U.S. Terminals to Sunoco. Since that time, they have demonstrated their commitment to employees and to the health, safety and environmental culture that is so important to us. Sunoco also presents a unique opportunity because the companies' operations are highly complementary and do not overlap. That means that the new company will need our employees to operate the assets of the legacy NuStar business. Additionally, Sunoco's relationship with Energy Transfer is a positive. As of today, Energy Transfer owns 34% of Sunoco and controls its general partner. As the largest publicly traded partnership with an enterprise value of over \$100 billion, over 12,000 employees and diverse operations throughout the hydrocarbon value chain, Energy Transfer is able to provide material support to the combined entity if and when needed.

What does this mean for your job?

Sunoco understands that NuStar's employees are our number one asset. That is why most jobs throughout the company will not change and Sunoco has committed to offer every employee a job at the same salary and bonus level or provide one year's severance. Additionally, if an employee is terminated without cause (or is required to move more than 50 miles) during the second year after closing, the employee will receive a severance equal to two weeks' pay for every year of service (with employees receiving full credit for years of service at NuStar) up to 26 weeks. Also, employees of the combined company will have the opportunity to post for jobs and transfer to any open position within the Sunoco/Energy Transfer family throughout their career.

What does this mean for the community?

Sunoco is a good corporate citizen and an important partner in the communities in which they operate. That is why they have committed to continue to support the United Way and Haven for Hope as well as many of the other charities that we support in San Antonio and across the company.

What happens to the San Antonio Headquarters?

NuStar has a 20-year lease on the San Antonio Headquarters building and Sunoco has committed to keeping the SAHQ open for at least two years.

What about Benefits?

If the merger closes before October 1, NuStar employees will transition to Sunoco's health care plans on Day 1 after closing. Sunoco plans to give everyone credit for deductibles already paid in 2024.

If closing occurs after October 1, NuStar health plans will continue in place and NuStar employees will transition to Sunoco's health plans beginning in 2025.

NuStar employees will also automatically be enrolled in Sunoco's 401(k) and, where applicable, its profit-sharing plan.

Also, for those employees who have long term incentives (LTI), your LTI will fully vest at closing.

Timeline

A transaction of this size requires us to make certain regulatory filings and to obtain majority approval of NuStar common unitholders. To that end, we will be preparing the necessary filings, and scheduling a common unitholder vote to approve the transaction. Based on those activities, I would expect closing to be in the second quarter of 2024. Until closing, we will continue operating as separate companies, and it is business as usual. I ask that we all remain focused on our day-to-day responsibilities, continue executing on the various projects and safely perform our jobs well.

I know there are a lot of details that are not covered in this memo and I'm sure some of you have additional questions. Please direct your questions to NuStar HR at hr@nustarnergy.com. They will collect them, and we will prepare an employee FAQ in consultation with Sunoco that we will be able to share with you in the coming weeks. Additionally, I, and other members of senior management, will be having round tables and calls with all of you throughout the week.

No Offer or Solicitation

This communication does not constitute an offer to sell or the solicitation of an offer to buy any securities or a solicitation of any vote or approval, nor shall there be any sale of securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. No offer of securities shall be made except by means of a prospectus meeting the requirements of Section 10 of the Securities Act of 1933, as amended.

Additional Information about the Merger and Where to Find It

In connection with the potential transaction between Sunoco LP ("Sunoco") and NuStar Energy L.P. ("NuStar"), Sunoco expects to file a registration statement on Form S-4 with the U.S. Securities and Exchange Commission ("SEC") containing a preliminary prospectus of Sunoco that also constitutes a preliminary proxy statement of NuStar. After the registration statement is declared effective, NuStar will mail a definitive proxy statement/prospectus to its common unitholders. This communication is not a substitute for the proxy statement/prospectus or registration statement or for any other document that Sunoco or NuStar may file with the SEC and send to NuStar's common unitholders in connection with the potential transaction. INVESTORS AND SECURITY HOLDERS OF SUNOCO AND NUSTAR ARE URGED TO READ THE PROXY STATEMENT/PROSPECTUS AND OTHER DOCUMENTS FILED WITH THE SEC CAREFULLY AND IN THEIR ENTIRETY WHEN THEY BECOME AVAILABLE BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION ABOUT THE PROPOSED TRANSACTION AND RELATED MATTERS. Investors and security holders will be able to obtain free copies of the proxy statement/prospectus (when available) and other documents filed with the SEC by Sunoco or NuStar through the website maintained by the SEC at http://www.sec.gov. Copies of the documents filed with the SEC by Sunoco will be available free of charge on Sunoco's website at https://www.sunocolp.com/investors and copies of the documents filed with the SEC by NuStar will be available free of charge on NuStar's website at https://investor.nustarenergy.com/.

Participants in the Solicitation

Sunoco and NuStar and certain of Sunoco GP's and NuStar GP's respective directors and their respective executive officers and other members of management and employees may be considered participants in the solicitation of proxies with respect to the potential transaction under the rules of the SEC. Information about the directors and executive officers of Sunoco GP is set forth in Sunoco's Annual Report on Form 10-K for the year ended December 31, 2022 under the headings "Item 10. Directors, Executive Officers and Corporate Governance" and "Item 11. Executive Compensation" and "Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Unitholder Matters", which was filed with the SEC on February 17, 2023 and is available at https://www.sec.gov/ix?doc=/Archives/edgar/data/1552275/000155227523000010/sun-20221231.htm. Information about the directors and executive officers of NuStar GP is set forth in NuStar's proxy statement for its 2023 annual meeting under the headings "Information About Our Executive Officers", "Compensation Discussion and Analysis", "Summary Compensation Table", "Pay Ratio", "Grants of Plan-Based Awards During the Year Ended December 31, 2022", "Outstanding Equity Awards at December 31, 2022", "Option Exercises and Units Vested During the Year Ended December 31, 2022", "Potential Payments Upon Termination or Change of Control", "Pay Versus Performance", "Director Compensation", "Certain Relationships and Related Party Transactions" and "Security Ownership", which was filed with the SEC on March 9, 2023 and is available at https://www.sec.gov/ix?doc=/Archives/edgar/data/110805/00011/080523000017/ns-2023039.htm. These documents can be obtained free of charge from the sources indicated above. Additional information regarding the interests of such participants in the

Cautionary Statement Regarding Forward-Looking Statements

This communication contains "forward-looking statements" as defined by federal securities law. These forward-looking statements generally include statements regarding the potential transaction between Sunoco and NuStar, including any statements regarding the expected timetable for completing the potential transaction, the ability to complete the potential transaction, the expected benefits of the potential transaction, projected financial information, future opportunities, and any other statements regarding Sunoco's and NuStar's future expectations, beliefs, plans, strategies, objectives, estimates, predictions, projections, assumptions, intentions, resources, results of operations, financial condition and cash flows, future events or performance and the future impact of economic activity and the actions by oil-producing nations on their respective businesses. These forward-looking statements can generally be identified by the words such as "anticipates," "believes," "expects," "intends," "plans," "targets," "forecasts," "projects," "believes," "seeks," "schedules," "estimates," "positions," "pursues," "may," "could," "should," "will," "budgets," "outlook," "trends," "guidance," "focus," " schedule," "on track," "is slated," "goals," "objectives," "strategies," "opportunities," "poised," "potential" and similar expressions. While these "on forward-looking statements, and any assumptions upon which they are based, are made in good faith and reflect the current judgment of Sunoco's and NuStar's management regarding the direction of their respective businesses, actual results will almost always vary, sometimes materially, from any estimates, predictions, projections, assumptions or other future performance suggested in this communication. Key factors that could cause actual results to differ materially from those projected in the forward-looking statements include the ability to obtain the requisite NuStar unitholder approval; uncertainties as to the timing to consummate the potential transaction; the risk that a condition to closing the potential transaction may not be satisfied; the risk that regulatory approvals are not obtained or are obtained subject to conditions that are not anticipated by the parties; the effects of disruption to Sunoco's or NuStar's respective businesses; the effect of the potential transaction on the parties' unit prices; the effects of industry, market, economic, political or regulatory conditions outside of the parties' control; transaction costs; Sunoco's ability to achieve the benefits from the proposed transaction, Sunoco's ability to promptly, efficiently and effectively integrate acquired operations into its own operations; unknown liabilities; and the diversion of management time on transaction-related issues. Other important factors that could cause actual results to differ materially from those in the forwardlooking statements include those described in the "Risk Factors" section of NuStar's most recent Annual Report on Form 10-K, as it may be updated from time to time by quarterly reports on Form 10-Q and current reports on Form 8-K all of which are available on NuStar's website at https://investor.nustarenergy.com/sec-filings and on the SEC's website at http://www.sec.gov, and in the "Risk Factors" section of Sunoco's most recent Annual Report on Form 10-K, as it may be updated from time to time by quarterly reports on Form 10-Q and current reports on Form 8-K, all of which are available on Sunoco's website at https://www.sunocolp.com/investors/sec-filings and on the SEC's website at https://www.sec.gov. Those disclosures are incorporated by reference in this communication. If one or more of these risks or uncertainties materialize, or if the underlying assumptions prove incorrect, the actual results may vary materially from those described in any forward-looking statement. Other unknown or unpredictable factors could also have material adverse effects on future results. Readers are cautioned not to place undue reliance on this forward-looking information, which is as of the date of this communication. Sunoco and NuStar do not intend to update these statements unless required by the securities laws to do so, and Sunoco and NuStar undertake no obligation to publicly release the result of any revisions to any such forward-looking statements that may be made to reflect events or circumstances after the date of this report or to reflect the occurrence of unanticipated events.