

# Formosa's Proposed Petrochemical Complex in Louisiana Faces More Bad News

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## Key Findings

**The Formosa Plastics Corp.'s proposed petrochemical complex in St. James Parish, Louisiana, is a risky and expensive project.**

**Formosa has experienced a significant decline in revenue since 2021. Analyst estimates for the 2025-26 period are bleak. Profitability and stock performance have fallen over the past four years.**

**The outlook for the polyethylene (PE) sector is poor. The industry faces structural changes in the global economy that suggest a secular decline.**

**Market conditions suggest that going forward with the proposed petrochemical complex in Louisiana would be a costly misstep, and the company would be wise to abandon the project.**



## Executive Summary

The Formosa Plastics Corporation (“Formosa”), a petrochemicals corporation headquartered in Taiwan, faces market challenges to its proposed petrochemical complex in St. James Parish, Louisiana—and the conditions are getting worse. In the meantime, as explained in this report, Formosa’s own financial situation appears to be weakening. This is not a good scenario for a costly, risky petrochemical buildout.

IEEFA’s review of the financial and market conditions relevant to the proposed petrochemical complex reveals the following:

- Formosa has experienced a significant decline in revenue since 2021, and analyst estimates for the 2025-26 period are bleak.
- Formosa’s profitability (as measured by pretax income) and stock performance have suffered over the past four years. Also, the company underperformed relative to the Taiwan Index (TAIE), S&P 500, and XLB (Materials Select Sector SPDR Fund).
- Formosa’s rising debt levels have weakened its financial standing and credit agencies have flagged concerns. In January 2025, Moody’s cut Formosa’s credit rating from A3 to Baa1, a significant change given the rating company’s previous expectations for the company’s adjusted debt/EBITDA. Standard and Poor’s in October 2023 downgraded Formosa’s overall credit assessment from stable to negative based on what it termed “weak profitability.”
- The outlook for the polyethylene (PE) sector is poor. The industry faces structural changes in the global economy that suggest a secular decline. Factors putting demand growth at risk include overcapacity in the petrochemical sector, an aging population and slower economic growth in China, slower industrial growth, and shifts toward more sustainable commodities.
- Analysts report the operating rates of ethylene production facilities globally are at historic lows due to large-scale capacity additions and weak demand growth. Even so, more capacity is set to come online in 2025.

Market conditions suggest that going forward with the proposed petrochemical complex in Louisiana would be a costly misstep, and the company would be wise to abandon the project and pursue more viable opportunities that align with market realities.

## Introduction

Formosa Plastics Group (FPG) is a Taiwanese conglomerate with a diverse set of interests in biotechnology, petrochemicals, and electronics. Headquartered in Taipei, it is a holding company for Formosa Plastics Corporation (FPC), Formosa Chemicals and Fiber, Formosa Petrochemicals and NanYa Plastics. FPG and its four subsidiaries, which are highly integrated, had annual revenues of \$6.8 billion in 2019. The four companies are traded on the Taiwan stock exchange (1301.TW). In April 2018, the Formosa Group announced that Formosa Group LA LLC (FG LA LLC, a subsidiary of Formosa Plastics Group) planned to build a new petrochemical manufacturing complex in St. James Parish.<sup>1</sup> The Louisiana project would manufacture several types of plastic resins, using ethane as its primary feedstock.

From the outset, the project has faced economic headwinds. A 2021 IEEFA analysis identified key financial risks, including oversupply, weak petrochemical prices, rising competition, trade restrictions, escalating construction costs, and credit rating pressures, casting doubt on the project's profitability.<sup>2</sup> A 2023 follow-up report underscored further challenges, including worsening macroeconomic conditions, declining polyethylene (PE) markets, and Formosa's weakening revenues.<sup>3</sup> The project has also faced permitting challenges.<sup>4</sup>

The macroeconomic climate for new petrochemical investments in North America has deteriorated since the announcement in 2018 of Formosa's proposed petrochemical Louisiana complex, and the financial status of Formosa is problematic as well.

## Formosa's Financial Performance Has Been Declining

Formosa Plastics Corporation (RIC: 1301.TW, BBG: 1301 TT) has experienced a significant decline in revenue since 2021, and is suffering from bleak analyst estimates for 2025 and 2026. Figures 1, 2, 3 and 4 below set forth data and projections regarding the company's revenue, pretax income, and stock performance that illustrate the impact of Formosa's decline in revenue.

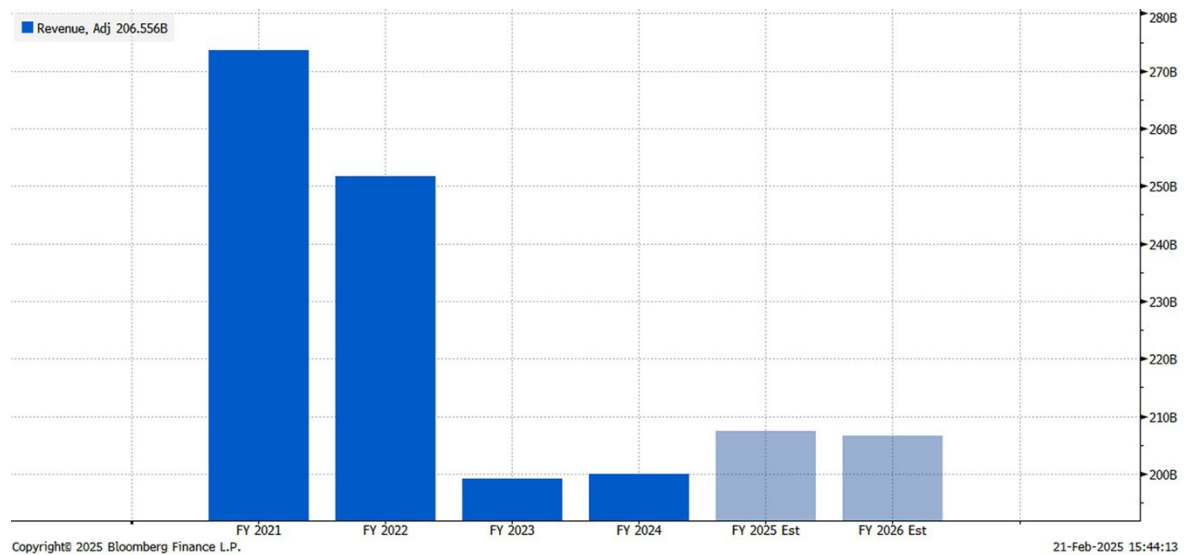
<sup>1</sup> Office of the Governor. [Formosa Selects St. James Parish for \\$9.4 Billion Louisiana Project](#). April 23, 2018.

<sup>2</sup> IEEFA. [Formosa's Louisiana Project: Wrong Products, Wrong Time, Wrong Place, Wrong Finances](#). March 2021.

<sup>3</sup> IEEFA. [Formosa Petrochemical Project Faces Difficult Market and Financial Risk](#). May 2023.

<sup>4</sup> Formosa's air permits, which had been issued by the Louisiana Department of Environmental Quality (LDEQ), are set to expire in 2025. The company submitted applications for the renewal of the permits in mid-2024, which are undergoing review. Louisiana Department of Environmental Quality. [Check permit status - database](#) (project name: FG LA LLC - Sunshine Project Early Works). Accessed February 25, 2025. Also see: The Lens. [Formosa Plastics returns to fight again](#). August 19, 2024.

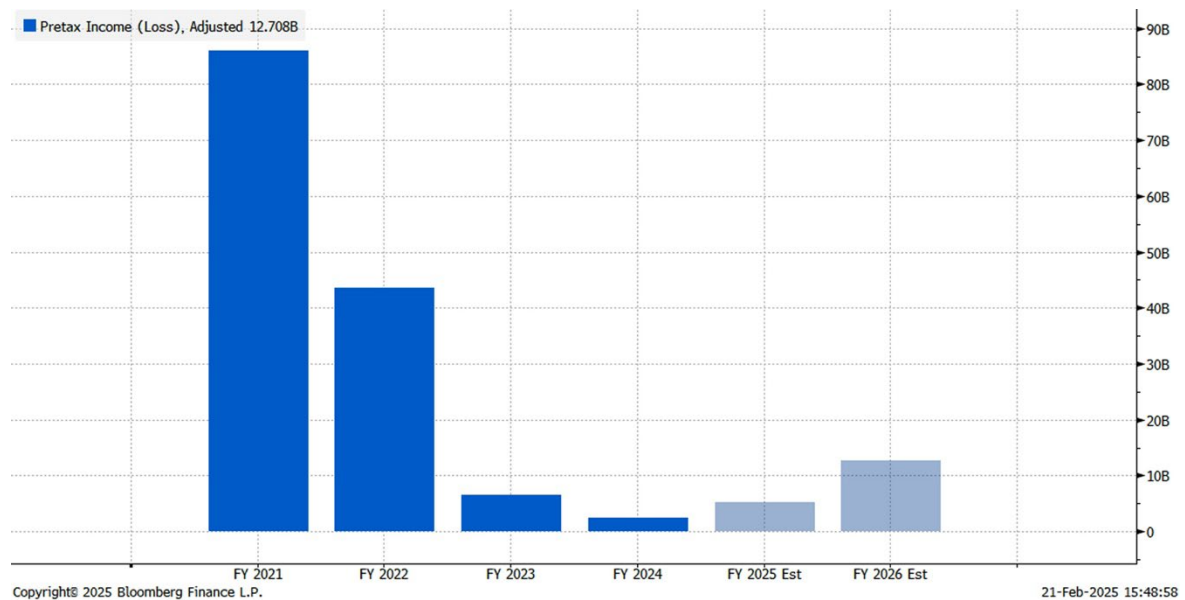
**Figure 1: Formosa's Adjusted Revenue**



Source: Bloomberg Finance

Profitability (as measured by pretax income) and stock performance have similarly suffered over the past four years.

**Figure 2: Formosa's Pretax Income**



Source: Bloomberg Finance

**Figure 3: Formosa's Stock Performance Since 2021**



Source: Bloomberg Finance

The company also has underperformed relative to the Taiwan Index (TAIEX), S&P 500, and the Materials Select Sector SPDR Fund (XLB). In the charts, these are described as TWSE Index, SPX Index, and XLB US Equity, respectively.

**Figure 4: Formosa (BBG 1301 TT) Stock Performance Relative to Taiwan Index (TAIEX), S&P 500 (SPX) and XLB (Materials ETF)**

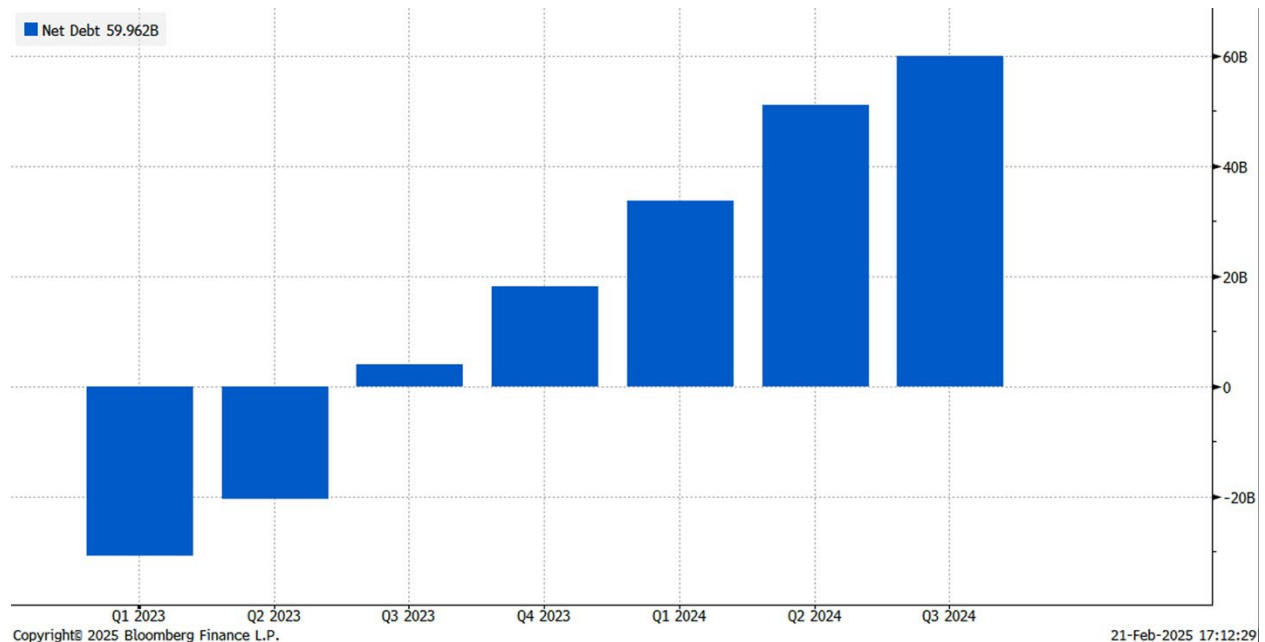


Source: Bloomberg Finance

## Formosa Faces a Debt Problem

Formosa's rising debt levels have weakened its financial standing, and credit agencies have flagged concerns.

**Figure 5: Formosa's Net Debt Has Been Rising Over the Last 2 Years**



Source: Bloomberg Finance

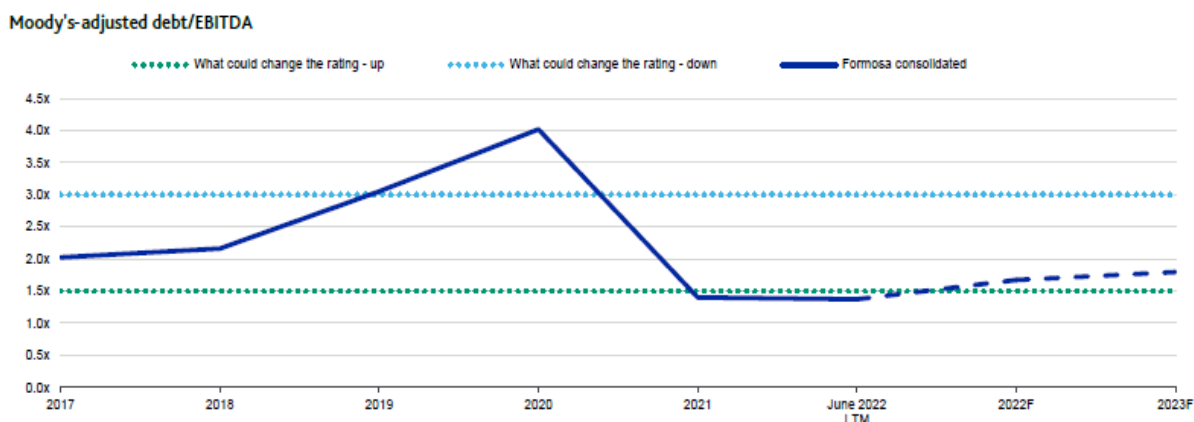
Moody's warned that a sustained adjusted debt/EBITDA ratio above 2.5-3.0x could trigger a rating downgrade.<sup>5</sup> In November 2022, Moody's had been expecting Formosa's adjusted debt/EBITDA to slightly rise from 1.5x in 2022 to 2.0x in 2023 (see Figure 6).<sup>6</sup>

<sup>5</sup> Moody's Ratings. Update to credit analysis. November 8, 2022.

<sup>6</sup> *Ibid.*



**Figure 6: Moody's Expectations for Formosa's Debt Leverage in 2022**



Source: Moody's Financial Metrics™ and Moody's Investors Service estimates

But in its report on Formosa dated Jan. 24, 2025, Moody's expectations for the company's adjusted debt/EBITDA drastically changed. In response to deteriorating fundamentals, Moody's cut Formosa's rating from A3 to Baa1.

The higher leverage as shown in Figure 7 runs counter to Moody's previous expectation of a recovery shown in Figure 6.

**Figure 7: Moody's Expectations for Formosa's Debt Leverage in 2025**



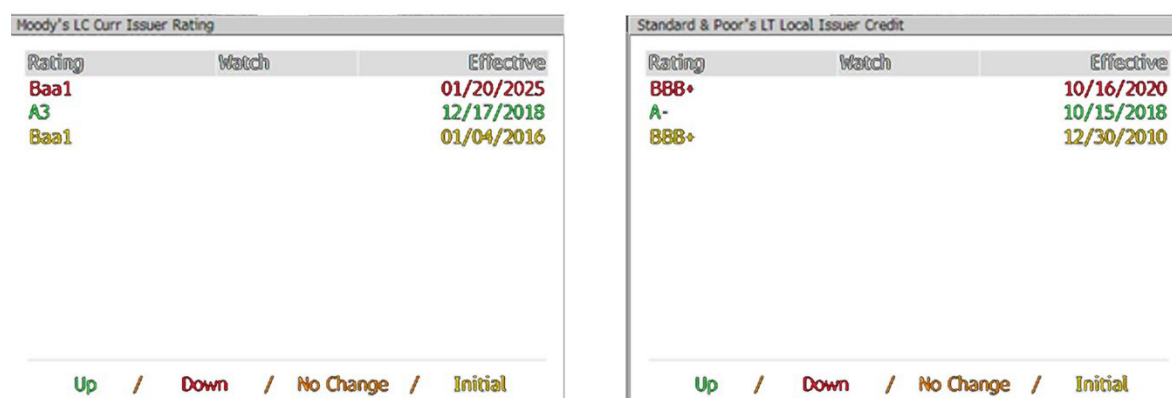
All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology. Moody's forecasts are Moody's opinion and do not represent the views of the issuer.

Source: Moody's Financial Metrics™ and Moody's Ratings forecasts

In October 2023, Standard and Poor's—which had noted in 2021 the potential risks to Formosa's debt-to-EBITDA ratio posed by the plan to build the Louisiana petrochemical project<sup>7</sup>—downgraded its overall credit assessment of the company from stable to negative “on weak profitability.” The credit opinion reported that its Formosa debt projection for 2024-25 did not include spending on large chemical complexes—including the Louisiana project—explaining, “This is due to a currently unfavorable political and market environment.” S&P cautioned that certain scenarios could lead to a downgrade, including “more aggressive cash dividend payouts, capex, or other investments that are substantially above our base case.”<sup>8</sup>

The charts below show the historical credit rating changes by Moody's and S&P for Formosa over time.

**Figure 8: Moody's and S&P's Domestic Currency Issuer Rating Changes**



Source: Bloomberg Finance

Taiwan Ratings Corporation similarly maintains a negative long-term outlook on Formosa, signaling further challenges for the company.

<sup>7</sup> S&P Global. [Ratings on Formosa Plastics Corp. and Three associated Companies affirmed at 'BBB+' on low debt leverage; outlook stable](#). October 7, 2021, p. 3. Proprietary. In addition to permit hurdles, public opposition, and then-existing labor shortages due to the COVID-19 pandemic, the credit agency noted “sharply higher construction costs due to high inflation in material prices and wages” and “hefty tariffs on imported equipment from China.”

<sup>8</sup> S&P Global. [Formosa Plastics Companies Outlook Revised To Negative From Stable On Weak Profitability; 'BBB+' Ratings Affirmed](#). October 30, 2023.

Figure 9 below shows negative outlook ratings for Formosa by Moody's, Standard & Poor's and the Taiwan Ratings Corporation.

**Figure 9: Formosa's Credit Ratings**

**Formosa Plastics Corp**

Group By **Rating Agency**

● Security ● Issuer ● All

Credit Rating Agencies ?

Moody's		
1) Outlook	NEG	01/20/25
2) Long Term Rating	Baa1	01/20/25
3) LC Curr Issuer Rating	Baa1	01/20/25
4) FC Curr Issuer Rating	Baa1	01/20/25
Standard & Poor's		
5) Outlook	NEG	10/30/23
6) LT Foreign Issuer Credit	BBB+	10/16/20
7) LT Local Issuer Credit	BBB+	10/16/20
Taiwan Ratings Corporation		
8) FORMPC 1.92 05/21/26	twAA	10/07/21
9) Outlook	NEG	10/30/23
10) Long Term	twAA	10/07/21
11) Short Term	twA-1+	06/07/07

Source: Bloomberg Finance

## Industry Outlook: A Grim Future for Petrochemicals

Formosa plans to include two ethane crackers and facilities for high-density polyethylene (HDPE), low-linear-density polyethylene (LLDPE), polypropylene (PP), ethylene glycol (EG), and propane dehydrogenation (PDH) in its Louisiana petrochemical complex.

The outlook for the polyethylene (PE) sector, however, remains poor. The long-term outlook suggests the demand growth for petrochemicals may be far weaker than may have appeared in 2018 when the project was first proposed due to structural changes in the global economy. Such changes include overcapacity in the petrochemical sector, an aging population and slower economic growth in China (a dominant factor in the market for export), slower industrial growth, and shifts toward more sustainable commodities.

The altered conditions imply that the challenges Formosa faces are not merely cyclical but secular. IEEFA's 2024 analysis of the petrochemical sector identified signs of a secular decline in the industry.<sup>9</sup> The global financial services firm UBS, for example, remains bearish on the outlook for

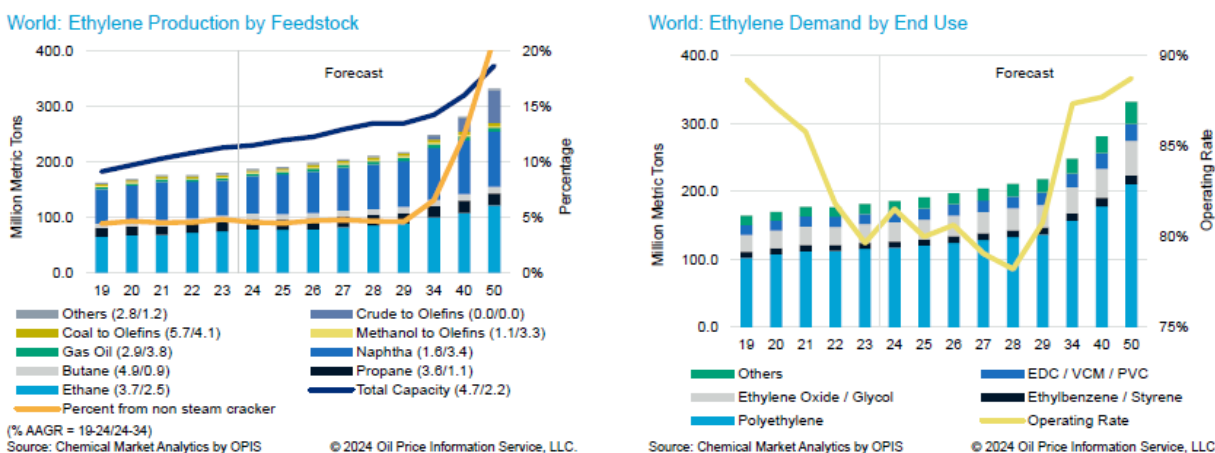
<sup>9</sup> IEEFA. [Petrochemicals: Rising Signs of a Secular Decline](#). October 2024.

most petrochemicals in 2025 and forecasts slower economic growth in China and the US in 2025 compared to 2024.<sup>10</sup> Its position is consistent with the findings of IEEFA research.

This does not bode well for Formosa. UBS recently slashed its 2025-26 earnings estimates for Formosa by 82% and 69%, citing bearish outlook for petrochemicals, slower economic growth in U.S. and China, weak sector utilization (expected at 75% to 80%) and limited margin upside.<sup>11</sup>

Observers of industry-wide trends reinforce this bleak outlook. Chemical Market Analytics, for example, finds that ethylene markets are experiencing a prolonged downturn, with operating rates down 10% over the past six years. China, India, the Middle East, North America, and Russia are expected to add 54 million metric tons of ethylene capacity by 2034, further straining margins.<sup>12</sup>

**Figure 10: Ethylene Global Supply and Demand<sup>13</sup>**



Source: Chemical Market Analytics

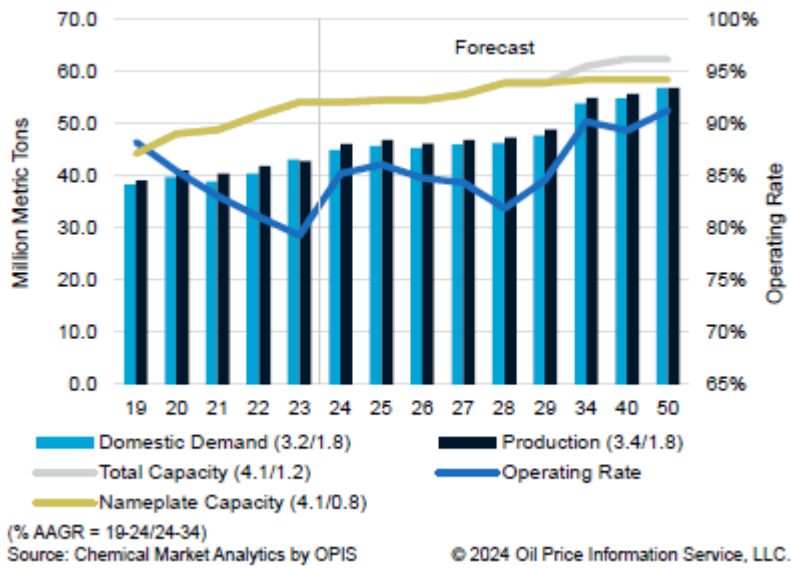
<sup>10</sup> UBS. Trough profitability to continue. January 28, 2025.

<sup>11</sup> *Ibid.*

<sup>12</sup> Chemical Market Analytics. 2025 World Analysis-Ethylene-Report. January 15, 2025. Proprietary.

<sup>13</sup> *Ibid.*, p. 6.

Figure 11: Ethylene North America Supply and Demand<sup>14</sup>



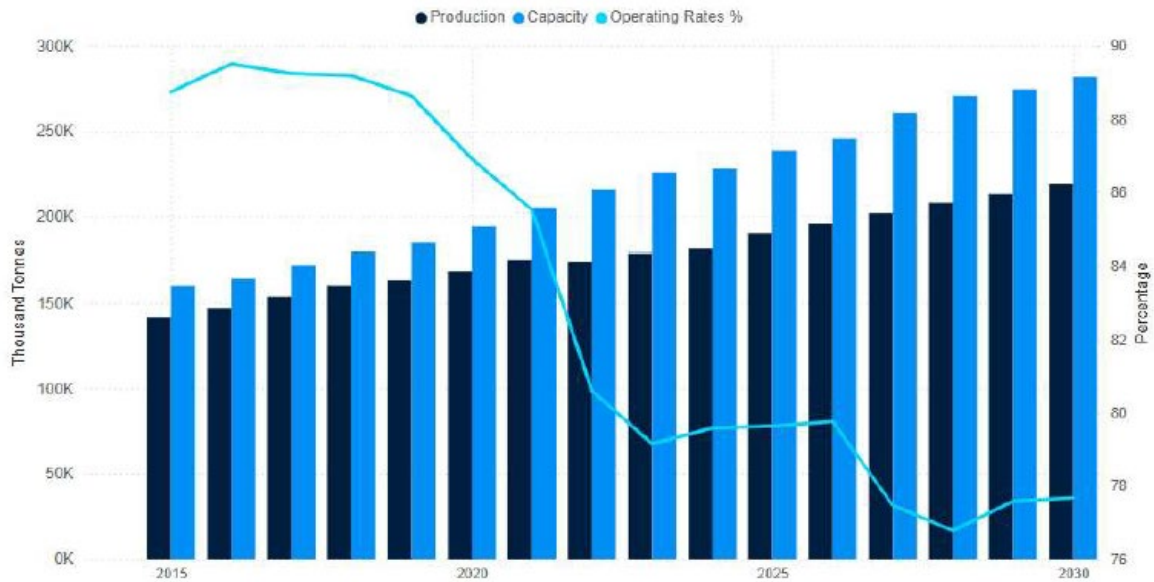
Source: Chemical Market Analytics

ICIS reports global ethylene operating rates remain at historic lows due to large-scale capacity additions and weak demand growth. Between 2020 and 2024, ethylene capacity expanded at twice the rate seen from 2010-19.<sup>15</sup>

<sup>14</sup> *Ibid.*

<sup>15</sup> *Ibid.*, p. 16.

Figure 12: Ethylene Global Installed Capacity and Operating Rates<sup>16</sup>

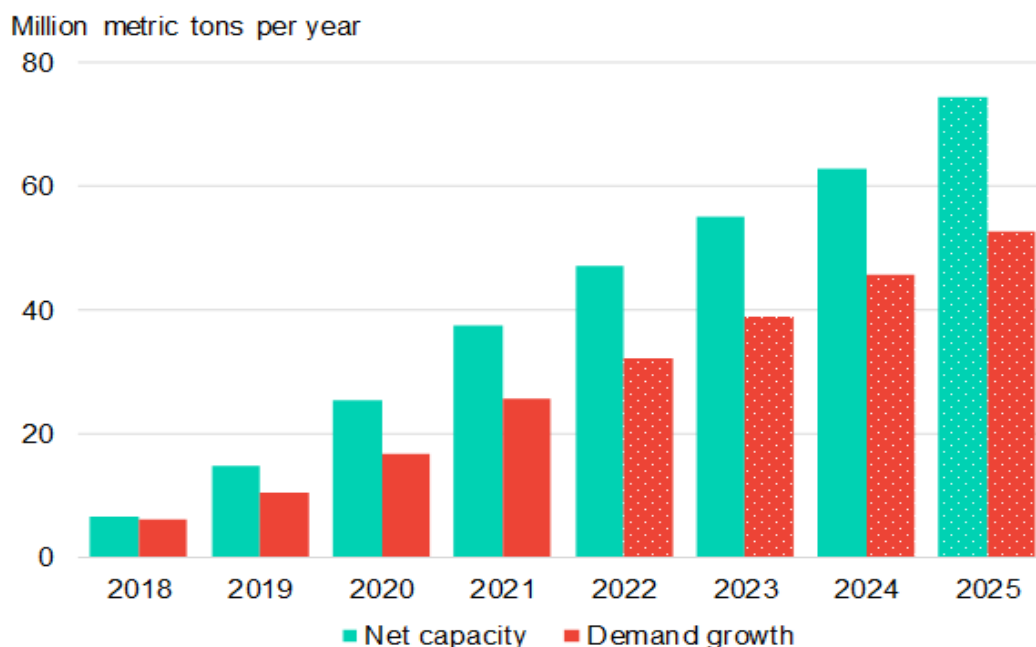


Source: ICIS

BloombergNEF observes that the petrochemical industry is grappling with oversupply, and yet, as illustrated in Figure 13 below, record-breaking ethylene and propylene capacity additions are expected in 2025.<sup>17</sup>

<sup>16</sup> Commentary on Forecast Balances-Ethylene Market. December 2024, p. 7.

<sup>17</sup> BloombergNEF. [Petrochemical Projects to Watch in 2025: Supply glut continues](#). January 16, 2024.

**Figure 13: Cumulative Ethylene Capacity and Demand Growth<sup>18</sup>**

Source: BloombergNEF

## Conclusion

The macroeconomic environment for North American petrochemical projects has worsened significantly since 2018. Formosa's plan to construct the petrochemical complex in Louisiana exposes it to competition from an already oversupplied market that has negatively affected its financials.

Such market conditions suggest that going forward with the project would be a costly misstep. Given the unfavorable backdrop, we believe Formosa would be wise to abandon its plans for the new plant.

Instead of throwing good money after bad, Formosa should cut its losses and pursue more viable opportunities that align with market realities and shareholder interests.

<sup>18</sup> *Ibid.*

## About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. [www.ieefa.org](http://www.ieefa.org)

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Abhishek Sinha is an energy finance analyst at IEEFA. He analyzes petrochemical industry trends, regulations and company data. Abhishek covered the energy and chemicals sectors at Thrivent Asset Management for five years. He has a mechanical engineering degree from Bangalore University, a master's in management information systems from Texas Tech University and an MBA from Columbia University.

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