

Shell's Petrochemical Problem in Pennsylvania:

**Lessons To Learn From Shell's Petrochemical Investment
in Monaca, Pennsylvania**

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Key Findings

Shell's Pennsylvania petrochemical plant faces bleak market prospects, characterized by oversupply, low demand, weak operating rates, and declining margins.

The Monaca project has underperformed, and the \$14 billion capital expenditure for the plant was more than double the original estimate.

Shell's chemical business has persistently underperformed. Its revenue dropped by 43% from 2021 to 2024, raising fundamental questions about its capital allocation strategy.

Shell's chemical business is now a drag on group performance instead of a growth driver. While it once comprised 6% of consolidated revenue, that percentage had dropped by half by 2024.



Executive Summary

Shell's \$14 billion Monaca petrochemical complex in Pennsylvania, originally hailed as a transformative investment, has instead become a cautionary tale of megaproject risk. The project is shaping up to be a financial disappointment. Capital investment cost has doubled, timelines have slipped, and financial performance has fallen well short of expectations. Market conditions also continue to be challenging.

- The current market reality for the Shell Monaca petrochemical plant is unfavorable and uncertain due to oversupply and weak demand, coupled with weak operating rates, trade frictions and policy risks. The problems are exacerbated by weak profit margins due to the unfavorable spread between the prices of ethane feedstock and finished ethylene.
- The petrochemical plant has underperformed to date. Despite Shell's initial guidance suggesting annual EBITDA between \$1 billion and \$1.5 billion, our analysis last year indicated the plant may only generate between \$416 million and \$987 million annually. Shell has begun seeking joint venture partners for Monaca, and the company's CEO has even conceded that Shell is not the "natural owner" of the facility.
- Shell's chemicals division has experienced a marked decline in performance, with revenues falling sharply in recent years. After peaking at \$16.9 billion in 2021 during the post-COVID rebound, segment revenues declined 43% to \$9.6 billion in 2024. The division's share of Shell's consolidated revenue has also contracted, falling from about 6% in 2021 to just 3% in 2024, even as the Monaca plant now accounts for almost 70% of Shell's total global polyethylene output.

The project's substantial underperformance, combined with deteriorating market dynamics and structural challenges in the global petrochemical industry, raises serious questions about the project's long-term viability and Shell's broader chemical business strategy.

Background and Original Expectations for the Project

Announced in 2016 and based on evaluations made in 2012, Shell's Monaca ethane cracker was designed to take advantage of cheap U.S. shale gas and proximity to northeast U.S. markets. The facility aimed to produce ethylene and derivatives such as high-density polyethylene (DPE), linear low-density polyethylene (LLDPE), and polypropylene (PP). Shell may have relied on third-party reports such as IHS Markit, which initially projected EBITDA for Shell's Monaca plant at \$575 million.¹ Subsequently, Shell projected that it would achieve \$1 billion to \$1.5 billion of EBITDA when the plant reached full operational maturity.² This optimism, however, lacked transparency. Notably, Shell's entire chemicals division has not generated \$1.5 billion of adjusted EBITDA in recent years (see Figure 10), underscoring how unrealistic these projections for a single plant appear in hindsight.

Shell shared few details with stakeholders during project development, raising accountability concerns. Yet the red flags were already there. Megaprojects routinely challenge their initial financial expectations—fewer than 3% finish both on time and on cost, with infamous examples such as the Kashagan oil field ballooning from \$10 billion to \$55 billion.³ Independent research by IEEFA has documented similar cost overruns in North America, including the British Columbia LNG project and the Trans Mountain Expansion, both of which spiraled far beyond initial estimates.^{4,5}

Shell's Monaca ethylene cracker complex now stands as another cautionary tale. The development has joined the long list of energy megaprojects that exceeded construction cost estimates and ran behind schedule: Originally projected at roughly \$6 billion, the Shell Monaca project's actual construction tally reached \$14 billion—more than double early estimates.⁶

The Current Market Reality for the Shell Petrochemical Plant Is Unfavorable and Uncertain

Shell's petrochemical bet is colliding with multiple headwinds, and Monaca's economics have been undermined by structural shifts in the petrochemical sector:

- **Oversupply and Weak Demand:** The industry is plagued with the problem of structural oversupply,⁷ and muted demand will suppress margins through at least 2026.⁸ China's

¹ IHS Markit. Shale Crescent USA IHS Executive Summary. March 2018 (Proprietary).

² Seeking Alpha. [Shell Q3 2023 Earnings call transcript](#). Nov 02, 2023.

³ Oilprice.com. [Energy Megaprojects That Blew Past Their Budgets](#). July 15, 2025.

⁴ IEEFA. [British Columbia LNG Project Costs Rising Again](#). February 2023.

⁵ IEEFA. [Trans Mountain expansion could never return the expected \\$26.1 billion spent by taxpayers](#). March 09, 2022.

⁶ Shell. [Q4 2023 Earnings Call](#). February 1, 2024 (hereafter, [Shell Q4 2023 Earnings Call](#)). Also see: IEEFA. [Shell acknowledges \\$14 billion price tag for petrochemical plant, more than double street estimates](#). February 8, 2024.

⁷ Structural oversupply implies prolonged period of oversupply.

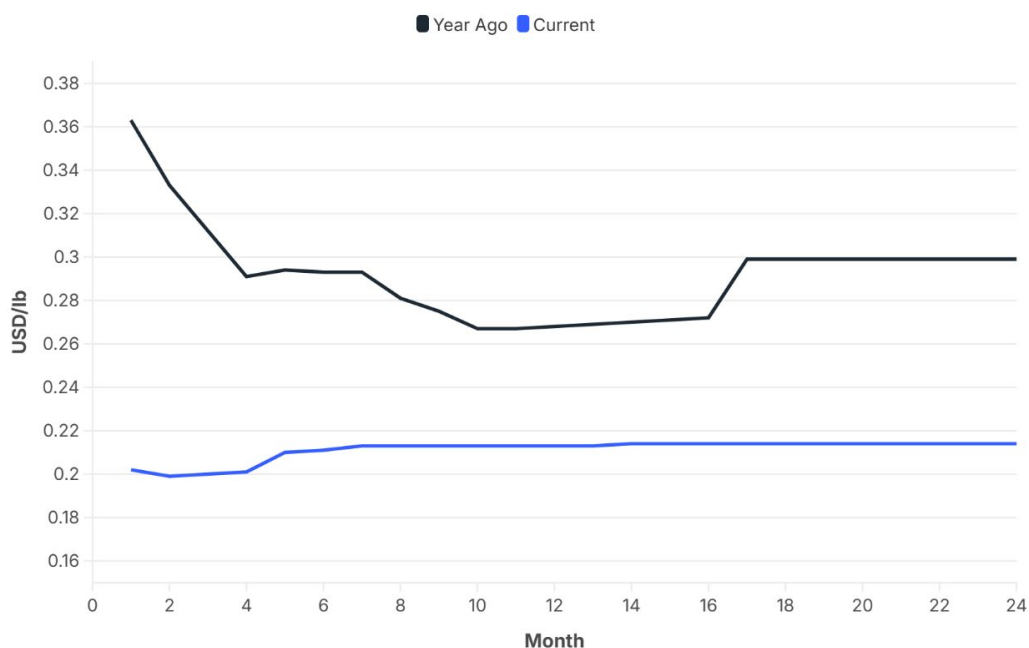
⁸ Moody's Ratings. Oversupply, muted demand and low margins signal continuing credit stress. April 29, 2025 (Proprietary).

massive capacity buildout and its transition to net exporter status have compounded a global glut.⁹

- **Weak Operating Rates:** Olefin (basic petrochemical building blocks, mainly ethylene and propylene) production operating rates globally are forecast to stay below 80% for the remainder of the decade, indicating prolonged underutilization.¹⁰ Shell's chemical plants are already reflecting this pressure, with utilization in the second quarter of 2025 falling to just 72%.
- **Trade Frictions and Policy Risks:** Volatile U.S. trade policies, particularly additional tariffs on China, create uncertainty for global trade flows, further depressing margins for polyethylene and other derivatives.
- **Declining Margins:** The structurally unfavorable spread between the prices of ethane feedstock and finished ethylene indicate compression in ethylene-to-ethane margins, undermining the Monaca plant's cost advantage and eroding profitability.

The forward curves clearly show that U.S. ethylene prices remain under sustained pressure, with the current strip (forward curve of futures prices) more than 20% below levels seen a year ago (see Figure 1). At the same time, ethane—the key feedstock for Monaca—is trending higher across the curve, reversing last year's relative softness (see Figure 2).

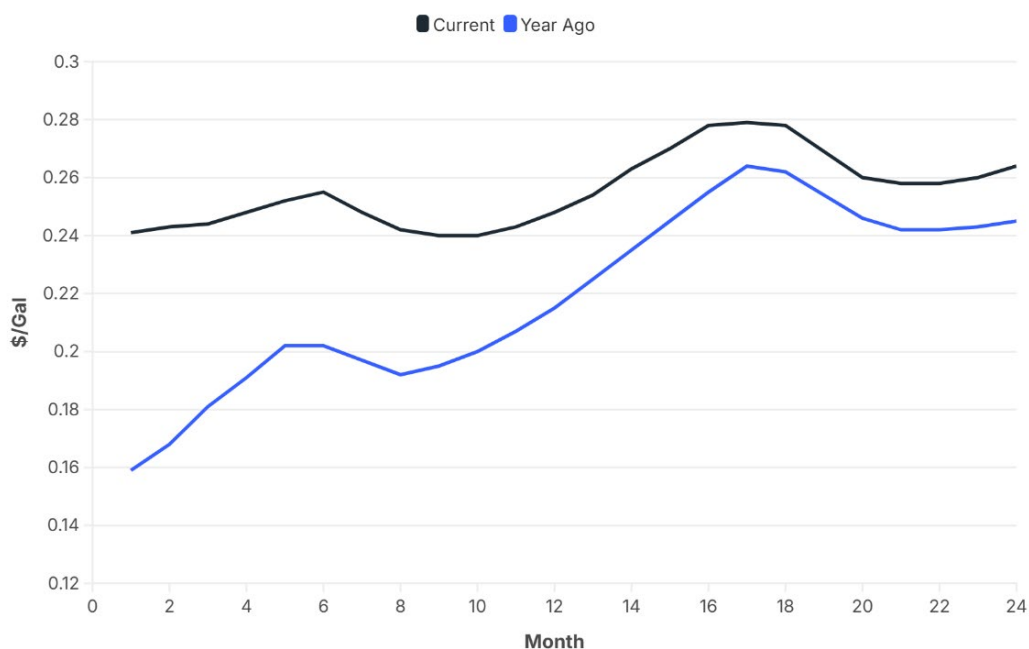
Figure 1: U.S. Ethylene Future Curve



Source: Bloomberg, IEEFA

⁹ ICIS. [Chemical market overcapacity and weakening demand: a perfect storm](#). Last accessed August 22, 2025.

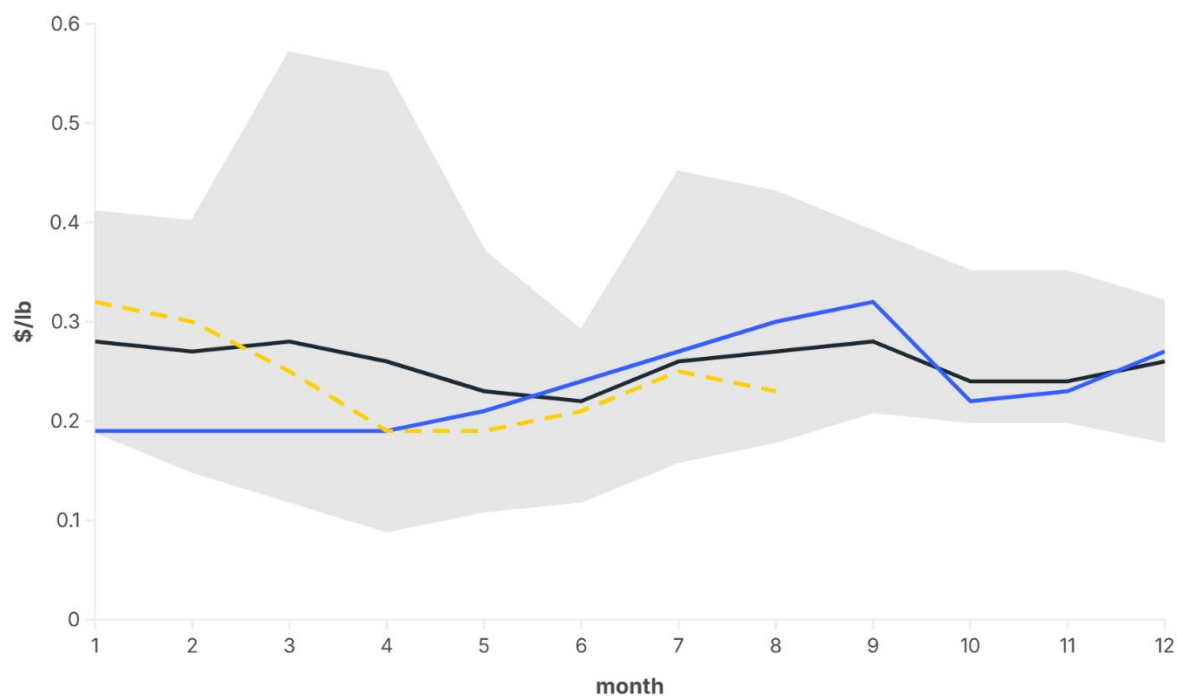
¹⁰ CMA. 2025 World Analysis - Ethylene - Report. January 15, 2025. (Proprietary).

Figure 2: Ethane Futures Curve

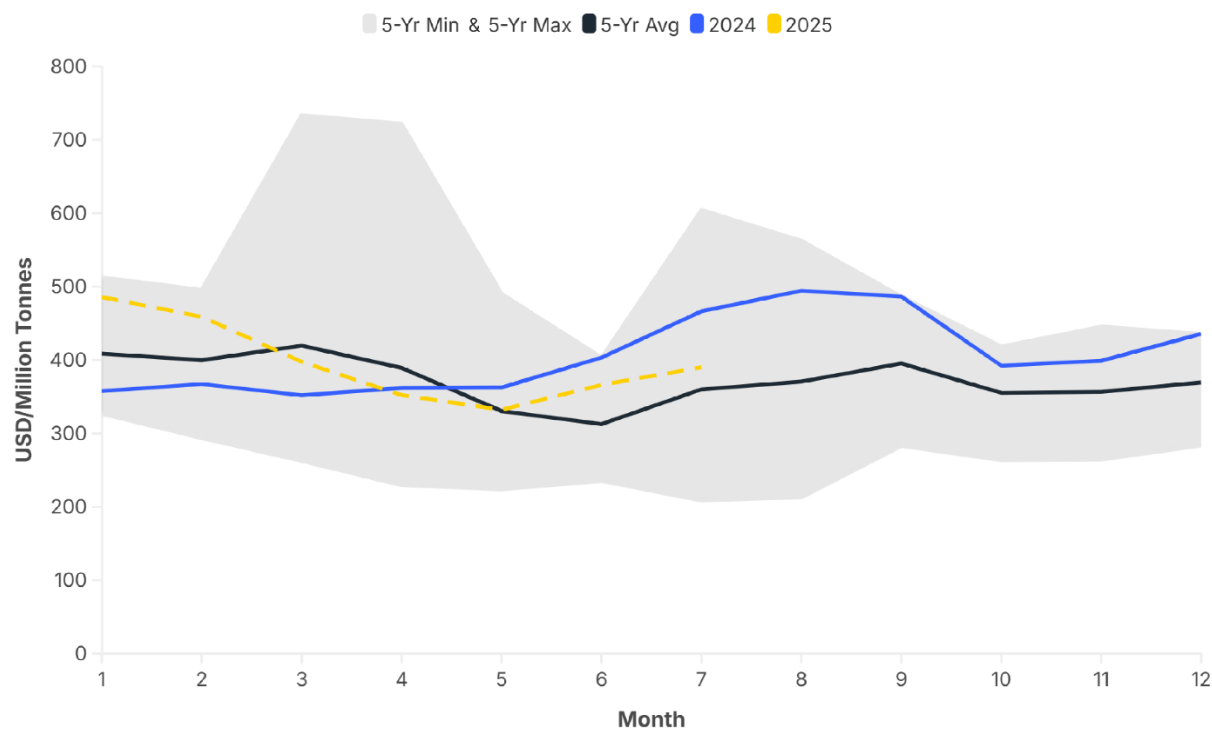
Source: Bloomberg, IEEFA

For context, Figure 3 illustrates how low ethylene prices have been in the past couple years, compared with the range of prices over the past five years. The low prices have compressed cash margins (Figure 4) in the United States. The chart shows that U.S. ethylene cash margins in 2025 (yellow line) are trending below both the five-year historical average and the 2024 levels, remaining close to the lower bound of the historical range. This highlights the sustained margin compression in the sector and reflects the structural headwinds facing U.S. producers, with profitability struggling to recover even during periods that have historically shown seasonal strength.

Unless downstream polyethylene margins improve meaningfully, the widening disconnect between weak ethylene price realizations and firmer feedstock costs poses a structural challenge to the Monaca plant's economics.

Figure 3: U.S. Ethylene Spot Price

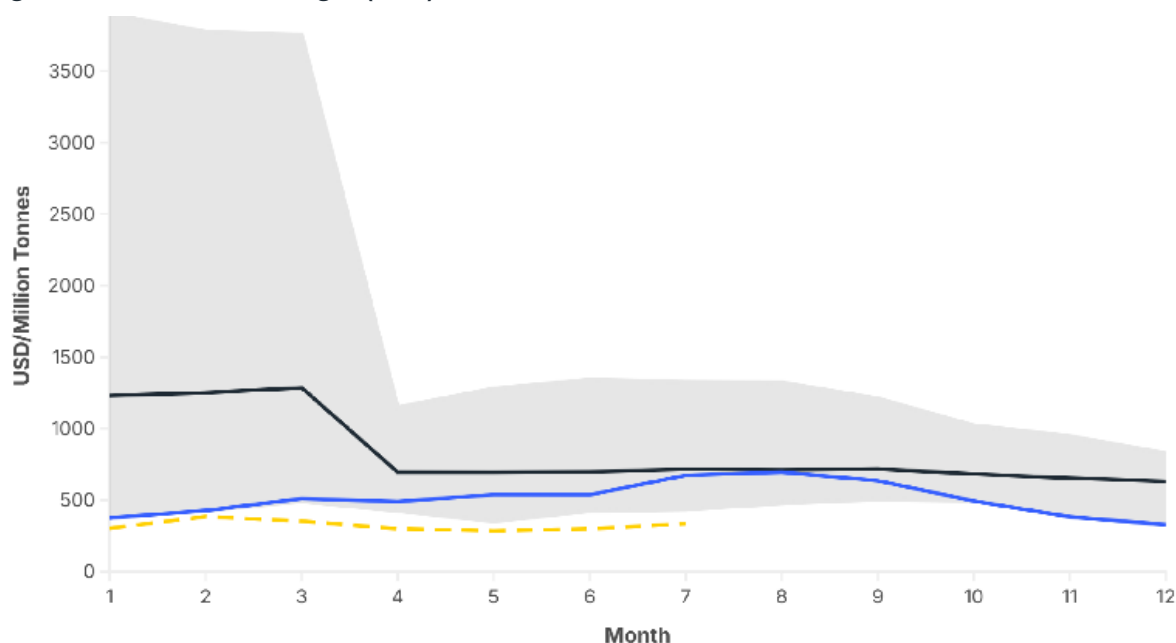
Source: Bloomberg, IEEFA

Figure 4: U.S. Ethylene Cash Margin

Source: Bloomberg, IEEFA

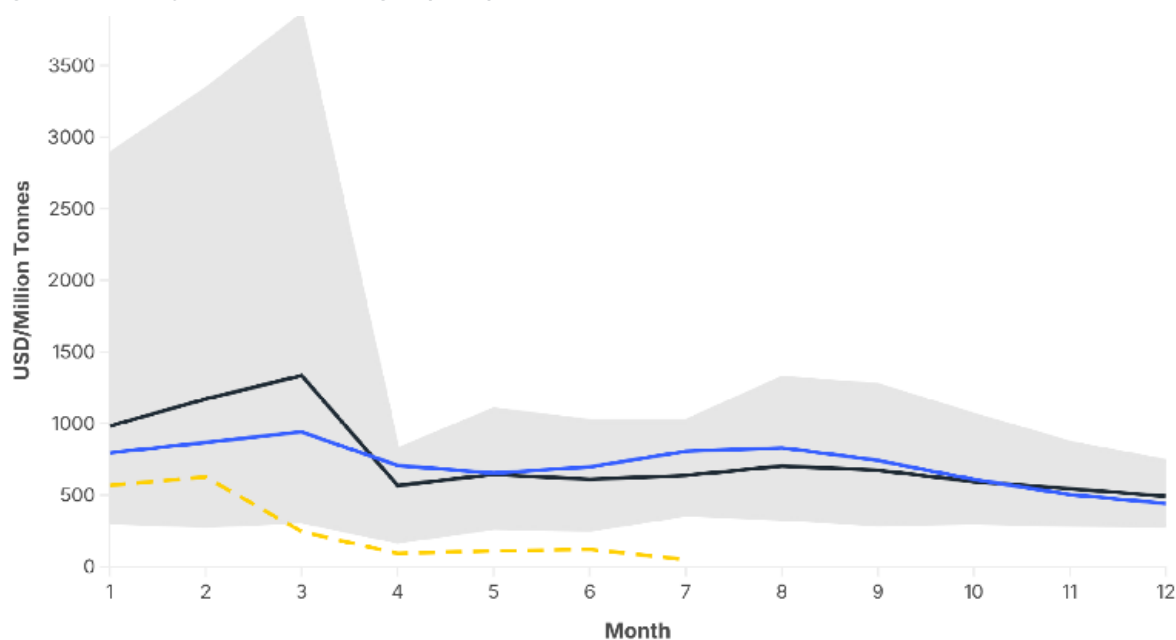
Figures 5 and 6 highlight the persistently depressed margins in HDPE and PP, two of the key derivatives produced at Shell's Monaca facility. The charts show that current profitability levels are hovering near the bottom of the historical five-year range, underscoring the structural challenges facing the plant's product slate.

Figure 5: HDPE Cash Margin (U.S.)



Source: Bloomberg, IEEFA

Figure 6: Propylene Cash Margin (U.S.)



Source: Bloomberg, IEEFA

The Monaca Project Has Underperformed to Date

Shell's final investment decision (FID), made in 2016, envisioned the plant coming online early in this decade at a cost of roughly \$6 billion.¹¹ The actual capital expenditure of over \$14 billion more than doubled the original estimate, making Monaca one of the most expensive petrochemical investments in North America. Despite the level of investment, however, the project has been beset by operational problems.

Shell's Monaca petrochemical complex finally entered operations in late 2022, later than first indicated and well over its projected construction cost.¹² What was intended to be a marquee U.S. chemicals investment instead stumbled out of the gate, with a troubled initial ramp-up phase. Shell's 2024 annual report states:

"Our Pennsylvania chemical project, Shell Polymers Monaca, which commenced operations in November 2022, was not fully functional during 2023 due to operational and start-up challenges. The facility has since ramped up operations since the first quarter of 2024."¹³

The facility, with a nameplate capacity of 1.5 million tons per annum of ethylene and approximately 1.6 million tons per annum of polyethylene, did not successfully ramp up to full operation until the first quarter of 2024.¹⁴ The operational achievement, however, came after years of costly delays, and was marred by a high-profile furnace fire in mid-2025.¹⁵

Operational issues at the facility have included environmental problems. The Pennsylvania Department of Environmental Protection (DEP) issued multiple violations under the state's air quality laws for activity that occurred during construction and temporary operations.¹⁶ After the facility opened, the Pennsylvania DEP issued more violations for pollution problems, and the company shut down part of the plant in late March 2023 to make repairs.¹⁷ In May 2023, Shell agreed to pay a fine to settle the violations.¹⁸ A public interest lawsuit, filed in 2023 by the Clean Air Council with the assistance of the Environmental Integrity Project, seeking penalties and injunctive relief to redress ongoing violations and prevent future violations of the facility's air quality permit and the Clean Air

¹¹ Shell. [Shell takes final investment decision to build a new petrochemicals complex in Pennsylvania, US](#). June 6, 2016.

¹² Shell. [Shell starts main construction on Pennsylvania petrochemicals complex](#). November 08, 2017.

¹³ Shell. [Shell Annual Report 2024](#). March 25, 2025.

¹⁴ Seeking Alpha. [1Q 2024 Earnings call](#). May 2, 2024.

¹⁵ Reuters. [Shell reports June 4 fire at ethylene cracker plant in Pennsylvania](#). June 6, 2025.

¹⁶ Pennsylvania DEP. [Notice of Violation](#) (issued to Shell Chemical Appalachia LLC). December 14, 2022. Also see: PA Environment Digest. [DEP Issues Notice Of Violation To Shell Petrochemical Plant In Beaver County For Air Quality Violations In Sept. - Oct.](#) December 19, 2022.

¹⁷ The (Beaver County) Times. [Shell: Expect 'continuous' flaring at cracker plant during maintenance](#). March 28, 2023. Also see: NBC News. [Months after residents sound the alarm, Pennsylvania 'cracks' down on Shell plant](#). May 25, 2023.

¹⁸ [Consent Agreement](#), Matter of Shell Chemical Appalachia (violations of Air Pollution Control Act and regulations), May 24, 2023. Also see: Pennsylvania DEP. [Shapiro administration secures \\$10 million payment from Shell, including \\$6.2 million for local community, to resolve air quality violations](#). May 24, 2023.

Act, remains before a federal district court in Pennsylvania.¹⁹ Also, a local organization recently called on the DEP to ensure more timely notifications of the community when specific air pollution incidents occur.²⁰

IEEFA has long questioned the project's economics. In an October 2024 report, IEEFA concluded that Shell's investor guidance of \$1 billion to \$1.5 billion in annual EBITDA from the Monaca plant was overly optimistic. Our analysis suggested a far more realistic range of \$416 million to \$987 million, given prevailing market conditions.²¹ On a \$14 billion investment base, this implies a meager return of between 4% and 7%, and an extended payback period of 14 to 34 years—well beyond Shell's own minimum acceptable rate of return, or hurdle rate, of 10% to 15%, and far outside the norm for competitive petrochemical projects.

In light of these disappointing economics, coupled with ongoing operational setbacks and a deteriorating global macro environment for olefins and polyolefins, it appears increasingly unlikely that Monaca will ever achieve its originally promised performance metrics. Shell itself seems to have tacitly acknowledged this reality: The company declared in 2023 it would undertake fewer megaprojects in the future,²² and it recently began seeking joint-venture partners for Monaca.²³ Shell CEO Wael Sawan has suggested the company is not the “natural owner” of the facility, noting the Monaca plant is not part of a network, unlike the company's liquified natural gas facilities.²⁴ The statement underscored how far Monaca has shifted from a strategic asset to a financial liability.

The contrast is striking: In its second-quarter 2025 earnings call, Shell downplayed the Monaca plant's fit within its business. Yet when the plant commenced operations in November 2022, the company had proclaimed that “with great market access, innovative offers and connected infrastructure, Shell Polymers Monaca is well positioned and ready to serve customers with high-quality, competitive products.”²⁵ What was once celebrated as a strategically connected hub is now being dismissed as non-core.

The Monaca project's anemic financial performance underscores the structural weaknesses of Shell's chemical portfolio and highlights the volatility of a business that has become a drag on group performance rather than a driver of growth.

¹⁹ [Complaint for Declaratory and Injunctive Relief](#), *Clean Air Council v. Shell Chemical Appalachia*, No. 2:05-mc-02025, U.S. District Court, Western District of Pennsylvania, filed May 11, 2023. Also see: The Associated Press. [Environmental groups sue Shell over air quality at massive new Pennsylvania petrochemical plant](#). May 11, 2023.

²⁰ Pennsylvania Capital-Star. [Beaver County Group calls on DEP for more timely reports on Shell ethane cracker pollution](#). August 5, 2025.

²¹ IEEFA. [Shell's EBITDA target for Monaca facility under threat](#). October 29, 2024.

²² [Shell Q4 2023 Earnings Call](#). Also see: IEEFA. [Shell acknowledges \\$14 billion price tag for petrochemical plant, more than double street estimates](#). February 8, 2024.

²³ See Comments of Shell CEO Wael Sawan in Seeking Alpha. [Shell Q2 2025 Earnings Call](#). July 31, 2025 (hereafter [Shell Q2 2025 Earnings Call](#)). Also see: Wall Street Journal. [Shell explores sale of chemicals assets in U.S. and Europe](#). March 2, 2025. Also see: Marcellus Drilling News. [Shocker: Shell Considers Selling Beaver County, PA Ethane Cracker](#). March 4, 2025.

²⁴ [Shell Q2 2025 Earnings Call](#).

²⁵ Shell. [Shell begins operations at polymers plant in Pennsylvania](#). November 15, 2022.

Shell's Chemicals Business Has Demonstrated Persistent Underperformance

Over the past several years, Shell's chemicals business has consistently underdelivered, raising fundamental questions about the company's capital allocation strategy amid an increasingly challenging macroeconomic environment. Management may have hoped that the ramp-up of the Monaca facility—which represents almost 70% of Shell's total global polyethylene output²⁶—would mark a turning point, revitalizing the segment's financial performance. Instead, despite Monaca's operations and a temporary improvement in ethylene pricing, the division has continued to generate losses.

Figure 7: Shell Major Chemical Plants

		Thousand tonnes/year, Shell share capacity [B]					
	Location	Ethylene	Polyethylene	Styrene monomer	Ethylene glycol	Higher olefins [C]	Additional products
Europe							
Germany	Rheinland	324	—	—	—	—	A
Netherlands	Moerdijk	974	—	817	154	—	A, I
UK	Mossmorran [D]	415	—	—	—	—	O
Asia							
China	Nanhai [D]	1,100	605	645	415	—	A, I
Singapore	Jurong Island [E][F]	281	40	1,069	924	—	A, I, P, O
	Pulau Bukom [F]	1,161	—	—	—	—	A
Americas							
Canada	Scotford	—	—	475	462	—	A, I
USA	Monaca	1,500	1,600	—	—	—	
	Deer Park	889	—	—	—	—	A, I
	Geismar	—	—	—	400	1,390	I
	Norco	1,432	—	—	—	—	A
Total		8,076	2,245	3,006	2,355	1,390	

[A] Major chemical plants are large integrated chemical facilities, typically producing a range of chemical products from an array of feedstocks.

[B] Shell share of capacity of subsidiaries, joint arrangements and associates (Shell- and non-Shell-operated), excluding capacity of the Infineum additives joint ventures.

[C] Higher olefins are linear alpha and internal olefins (products range from C4 to C2024).

[D] Not operated by Shell.

[E] The polypropylene and olefins production mentioned refers to Shell share of capacity of our non-operated joint ventures Petchem Corporation of Singapore (PCS) and The Polyolefin Company (TPC) which are on Jurong Island.

[F] The plant has been classified as held for sale.

A Aromatics, lower olefins

I Intermediates

P Polypropylene

O Other

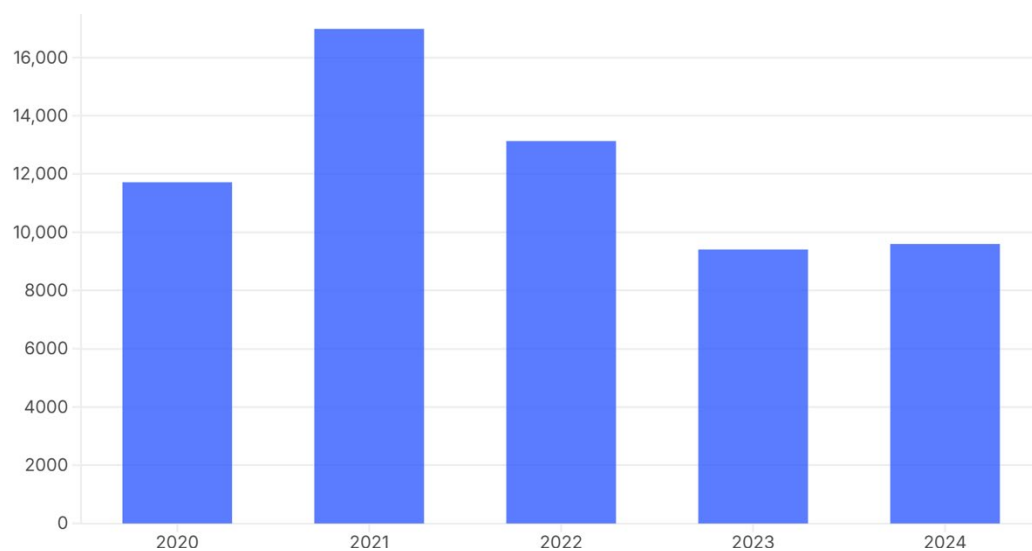
Source: [Shell Annual Report 2024](#)

A review of business-level financials from 2021 through 2024 paints a sobering picture (See Figure 8). Revenues, which peaked in 2021 at \$16.9 billion in the post-COVID rebound, fell sharply by 43% to \$9.6 billion in 2024. In relative terms, chemicals have shrunk in importance to Shell: While the segment once represented 6% of consolidated revenue, it accounted for only 3% by 2024. Capital

²⁶ IEEFA's calculation based on Figure 9.

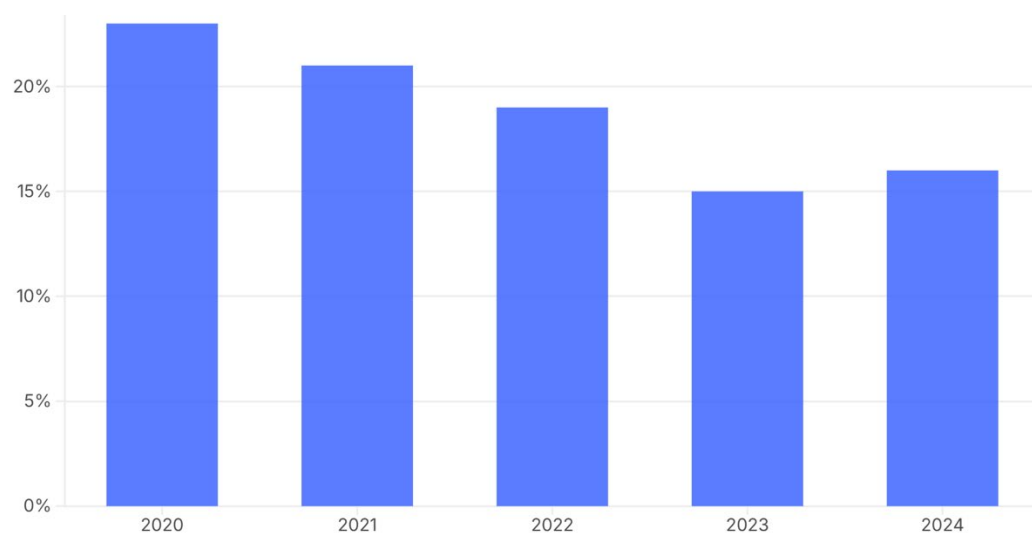
allocation trends further highlight management's retreat. Although Shell maintained total capex at roughly 7% of revenues from 2021 to 2024, investment in chemicals fell disproportionately. Capital expenditure as a share of chemical revenues dropped from 21% in 2021 to 16% in 2024 (see figure 9), while chemicals' share of group-wide capex declined from 19% to just 8% over the same period.

Figure 8: Shell Chemical Business Revenue



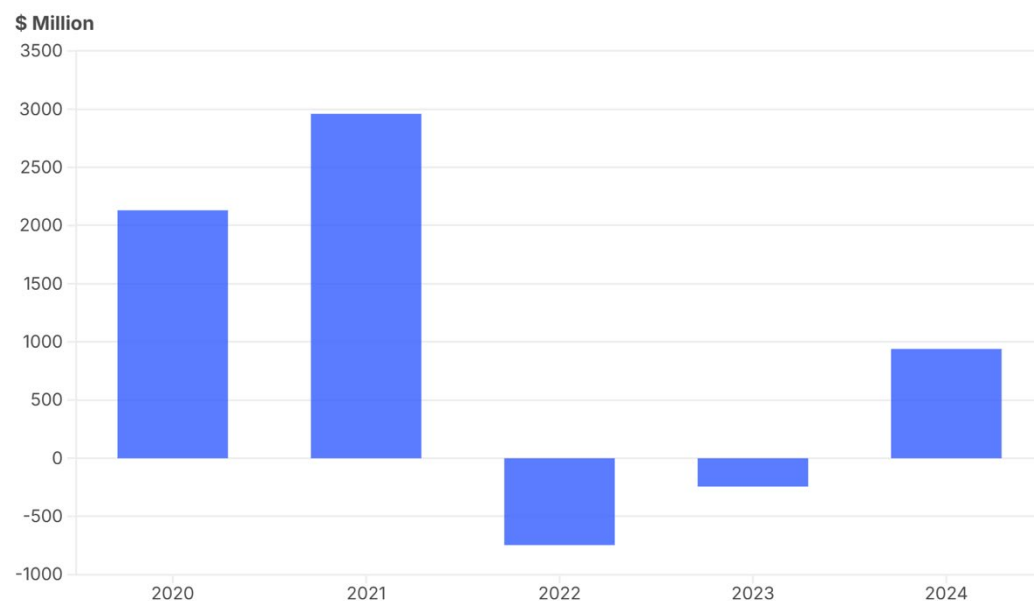
Source: Shell Quarterly Databook, IEEFA

Figure 9: Shell Chemical Capex As % of Chemical Revenue

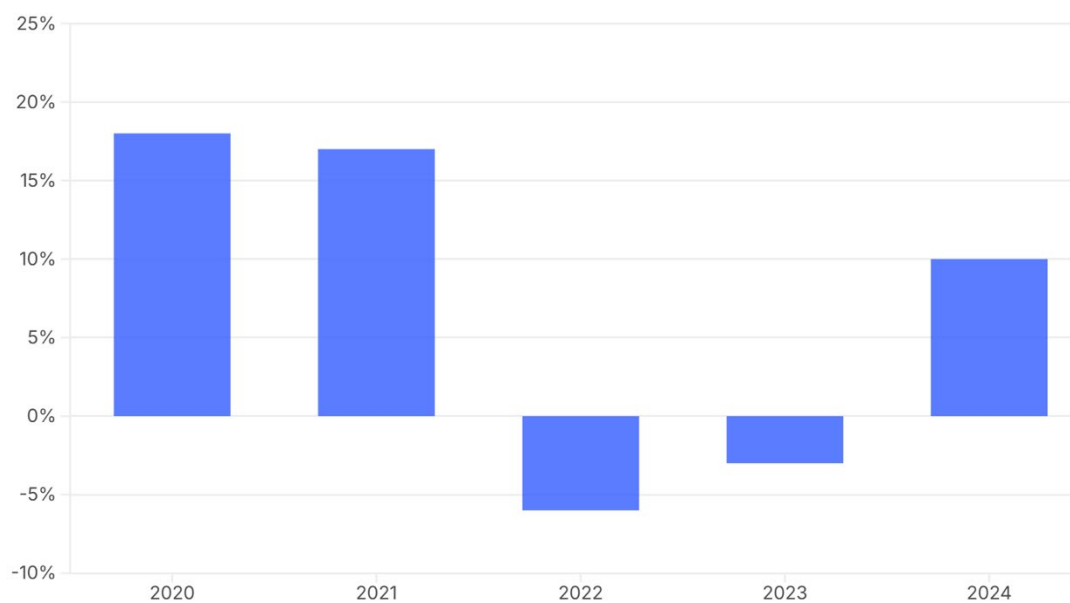


Source: Shell Quarterly Databook, IEEFA

The erosion of profitability has been even more severe than the revenue decline. Between 2021 and 2024, EBITDA contracted by 68%, collapsing from \$2.96 billion to just \$939 million (see figure 10). Chemical business margins deteriorated from 17% in 2021 to barely 10% by 2024 (see figure 11), reflecting both weaker pricing and higher feedstock costs.

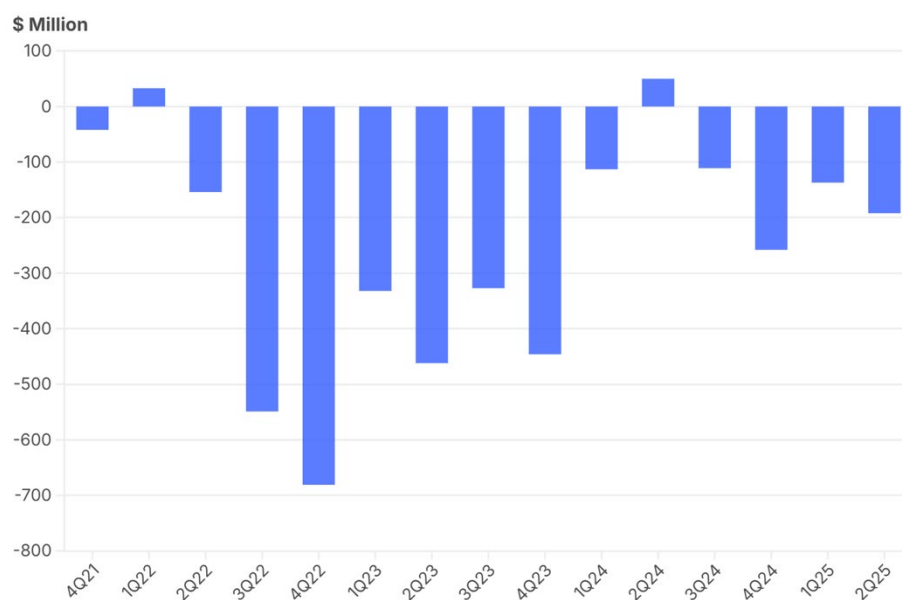
Figure 10: Shell Adj. EBITDA for Chemicals

Source: Shell Quarterly Databook, IEEFA

Figure 11: Shell Adj. EBITDA Margin for Chemicals

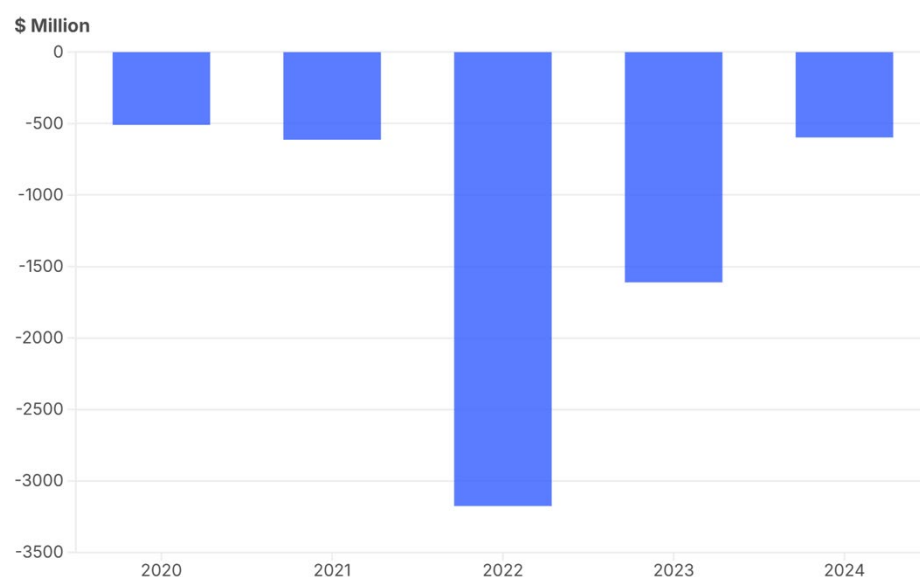
Source: Shell Quarterly Databook, IEEFA

Adjusted net income provides an even starker picture: The division has not been profitable since 2022 (see Figure 12), recording positive adjusted earnings in only two of the last 15 quarters and just once in the most recent 12 quarters.

Figure 12: Shell Adj. Net Income (Chemicals)

Source: Shell Quarterly Databook, IEEFA

Cash generation has been equally problematic. Shell does not disclose free cash flow (FCF) for the chemicals business separately, but using a simplified calculation of EBITDA minus capex reveals a consistently negative trend (see Figure 13). Even in 2021, when revenues peaked, chemicals business free cash flow was a negative \$613 million. Over the 2021-24 period, the division averaged approximately \$1.5 billion of negative free cash flow annually, confirming that the business has not created value but instead consumed capital.

Figure 13: Shell Implied FCF (Chemicals)

Source: Shell Quarterly Databook, IEEFA

Taken together, these figures illustrate a division caught in structural decline. Revenues have eroded, margins have compressed, and free cash flow has been persistently negative, all despite the scale and cost of investments such as Monaca. The track record of the chemicals division represents not only a drag on Shell's consolidated performance but also a cautionary example of how capital-intensive bets in oversupplied markets can destroy long-term value.

A Challenging Outlook and Eroding Consensus Leave Chemicals on a Fragile Path Forward

The near-term outlook for Shell's chemicals business remains bleak, with analyst expectations continuing to trend downward. A consensus projection by analysts predicts an adjusted net loss of approximately \$385 million in 2025, underscoring the chemical business' inability to escape structural headwinds. While analysts still forecast a rebound to a \$355 million profit in 2026, the credibility of these projections is increasingly in question, as seen in Figures 14 and 15.

The trajectory of earnings estimates throughout the past year highlights this uncertainty. At the beginning of 2025, sell-side analysts were forecasting \$229 million in adjusted net income for the year. Within months, those estimates were revised sharply lower to almost -\$385 million (see Figure 14), reflecting the persistence of weak margins and poor cash generation. A similar pattern may unfold for 2026: While current projections remain positive at \$355 million, they are already well below the \$578 million consensus that prevailed earlier in the year (see figure 15). Given deteriorating market fundamentals and the division's continued negative free cash flow, it would not be surprising to see 2026 expectations revised downward as the year progresses.

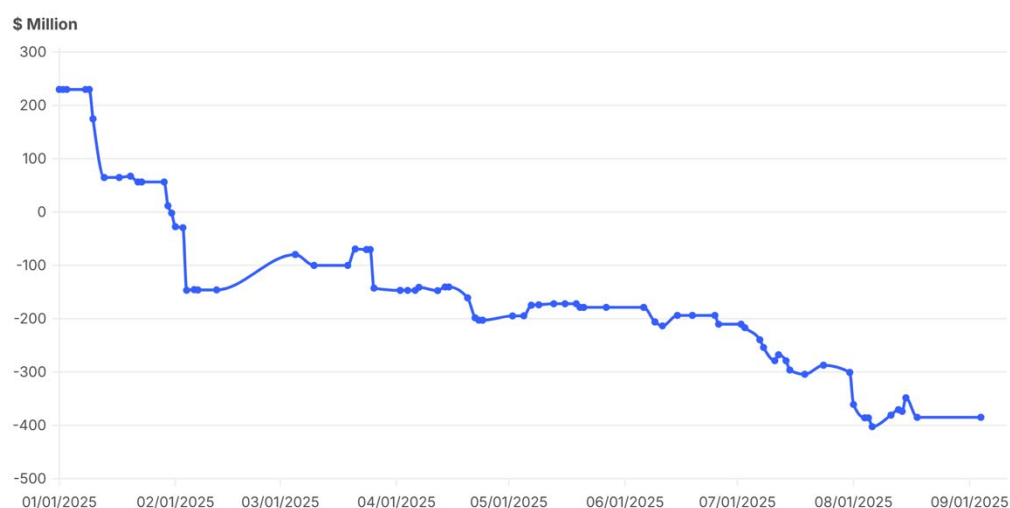
Management's own commentary during the second-quarter 2025 earnings call reinforces this cautious view. Sawan acknowledged that chemicals are mired in "an incredibly prolonged trough" that could potentially last much longer.²⁷ Perhaps most troubling, management admitted that the division continues to generate negative free cash flow. While Shell has pursued incremental efficiency measures, leadership conceded these steps are insufficient to offset the structural pressures. Sawan stated:

"We've been driving down the cost structure there. We've been looking at how we can optimize even further to unlock value, and that's helped us some. But the reality is it's just not enough. We are continuing to see sort of a negative free cash flow there."²⁸

The negative cash flow has prompted directives to pursue steps to move the segment closer to breakeven. CEO Sawan explained, "And so I have instructed the team to take the next level of measures that will potentially bridge that gap and move us closer towards free cash flow neutrality."²⁹

Taken together, these signals suggest that Shell's chemicals division is unlikely to deliver a meaningful turnaround in the near term. Instead, it risks remaining a capital sink, consuming resources while producing subpar returns. Unless market dynamics improve materially—or Shell undertakes deeper restructuring—the prospect of sustained profitability in this segment remains remote.

Figure 14: Change in Street Estimates for Adj. Net Income 2025 (Chemical Segment)



Source: Bloomberg, IEEFA

²⁷ Shell Q2 2025 Earnings Call.

²⁸ *Ibid.*

²⁹ *Ibid.*

Figure 15: Change in Street Estimates for Adj. Net Income 2026 (Chemical Segment)

Source: Bloomberg, IEEFA

Shell's Capital Allocation: An Urgent Case for Strategic Reorientation

Shell's approach to capital allocation within its chemicals division underscores the contradictions of a company caught between legacy investments and future-facing priorities. On one hand, management has taken steps to improve competitiveness by divesting structurally weak assets. The most notable example was the sale of Shell's Singapore petrochemical operations, which accounted for almost 20% of the company's chemical capacity and had long been a heavily loss-making asset.³⁰ This disposal was rightly framed as a corrective measure, freeing up capital and reducing exposure to persistently negative returns.

However, these disciplined actions have been undercut by mixed signals elsewhere. In March 2025, Sawan acknowledged that chemicals were not delivering adequate returns, and confirmed a pivot toward LNG and divestments.³¹ Consistent with this statement, Shell has been evaluating strategic sales or even outright shutdowns of certain U.S. and European chemical assets that have proven chronically uncompetitive. Such moves suggest a welcome recognition that the company's balance sheet is better served by higher-return segments such as renewables.

Yet at the same time, Shell announced plans to expand its presence in China through its joint venture with the Chinese National Offshore Oil Corp. (CNOOC) in Huizhou. The expansion—set to raise ethylene capacity from 2.2 million to 3.8 million tons per annum and add 300,000 tons per annum of high-performance specialty chemicals—represents a fresh \$4.2 billion net investment to

³⁰ Shell. [Shell completes sale of interest in Singapore Energy and Chemicals Park](#). April 1, 2025.

³¹ Shell. [Capital Markets Day 2025: Shell Investment Case and Q & A presentation](#). March 25, 2025.

Shell, with startup targeted for 2028.³² This decision appears inconsistent with the company's stated desire to reduce chemical exposure and raises questions over the clarity of its strategic direction.

The broader context only heightens these concerns. The chemicals division continues to suffer from weak profitability, negative free cash flow, and structural oversupply in global markets. Without a clear roadmap, Shell risks perpetuating the very capital inefficiency it has pledged to correct. Compounding the uncertainty is the company's broader retreat, alongside other leading energy groups, from efforts to define a credible net-zero strategy after six years of discussion.³³ This retreat calls into question Shell's ability to align capital allocation with long-term energy transition imperatives.

Taken together, these developments highlight the urgent need for Shell to articulate a coherent capital allocation strategy—one that decisively shifts resources away from underperforming petrochemical assets and toward segments better positioned to deliver sustainable returns and meet the demands of the evolving energy landscape.

Conclusion

Shell's flagship petrochemical asset is falling far short of expectations—fraught with financial, operational, and community challenges. The Monaca facility exemplifies the risks of overinvesting in capital-intensive, structurally challenged sectors amid secular demand shifts and rising competition. With industry fundamentals still deteriorating, margins compressing, and macro uncertainty lingering, IEEFA believes the \$14 billion project is likely to remain a drag on Shell's financials.

Shell should produce an impairment test, enhanced disclosures, and a clear roadmap for strategic reallocation. In a market that increasingly rewards capital agility and returns-based discipline, clinging to underperforming assets like Monaca risks further value destruction.

Shell should reconsider any further investments in petrochemicals, and accelerate its transition toward cleaner energy assets.

³² Oil & Gas Journal. [Shell-CNOOC JV approves Huizhou Phase 3 ethylene, specialty chemicals expansion](#). January 15, 2025.

³³ Financial Times. [Net Zero emissions standard paused as Shell quits](#). July 22, 2025. Also see: Reuters. [Global oil and gas emissions standard put on pause after Shell, others walk away](#), FT says. July 22, 2025.

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

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Todd Leahy

Todd has worked in a variety of roles in academics, the nonprofit, and government sectors. Most recently, he was the Deputy Cabinet Secretary for the New Mexico Energy, Minerals and Natural Resources Department, but has also managed the New Mexico affiliate of the National Wildlife Federation, worked as an attorney for the Missouri Department of Natural Resources, and in a prior life was a college history professor.

He has a JD from the University of Missouri-Kansas City and a PhD in Native American history from Oklahoma State University. He is the author of four books, a handful of articles, and numerous book reviews on Native American history.

When not working, you can find Todd with his nose in a book—either one that he is reading or writing.

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