

Marathon Petroleum: How should it manage renewable diesel?

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Strategy case for MBA students and working professionals

Decision setting: August 4, 2026. All information in this case was public by that date. Financial figures are U.S. dollars.

A portfolio question amid volatile signals

Marathon Petroleum Corporation (MPC) entered the second half of 2026 with renewable-diesel production, joint ventures, feedstock operations and long-standing refining and midstream businesses. Its latest filing presented a striking year-over-year improvement in Renewable Diesel segment results. MPC attributed much of the improvement to higher regulatory-credit values. The filing also showed that throughput, planned downtime, sales prices, renewable inputs and purchased product all mattered. The evidence offered reasons to keep operating and potentially grow the platform, but it did not disclose the economics of the next investment.

For this classroom exercise, assume you are a member of a **hypothetical MPC executive strategy team** asked to recommend the company's renewable-diesel portfolio posture for its next planning cycle. This assignment is invented: MPC had not announced this review, a specific expansion, a pause, a target, or a capital-allocation decision by the cutoff. You may recommend concentrating on existing operations, staging incremental commitments, restraining new commitments while continuing to operate current assets, or a conditional sequence. Distinguish what MPC should do with today's assets from whether it should commit to additional capacity or other irreversible investments.

A connected business, with several ownership boundaries

MPC reported three segments: Refining & Marketing (R&M), Midstream, and Renewable Diesel. Renewable Diesel processes renewable feedstocks and markets and distributes product through Midstream and third parties. MPC described sales to wholesale customers, spot-market buyers and some long-term supply-contract customers. The segment includes joint ventures; it is not synonymous with wholly owned plant output. Midstream primarily reflects MPLX and provides transportation, storage, distribution and marketing services across MPC's operations.¹

At December 31, 2025, MPC reported 184 million gallons per year of design capacity at its wholly owned Dickinson, North Dakota facility, which processes corn oil, soybean oil, fats and greases. It reported 730 million gallons per year of capacity at Martinez Renewables, a 50/50 joint venture with Neste in California; the company said the facility reached full capacity in late 2024. MPC's Green Bison joint venture with ADM processes soybeans and supplies refined soybean oil exclusively to MPC, with a stated capacity sufficient for about 75 million gallons per year of renewable diesel. MPC also described feedstock aggregation and pretreatment

operations in Cincinnati and Beatrice. These figures are design or feedstock capacities-not annual MPC-owned production, available incremental capacity, utilization, or a return measure.¹

MPC's traditional refining and midstream businesses create a second boundary. The company reported long-term fee-based agreements with MPLX, including certain minimum throughput, storage and distribution commitments. Lower volumes may affect refining economics even when some related costs remain committed. MPC also reported RFS compliance costs in R&M. A renewable-diesel credit cannot therefore be treated automatically as a company-wide net benefit, and MPC's public segment disclosures do not provide a project-level bridge from renewable fuel credits through all segments and joint ventures.¹

Exhibit 1. Recent reported results

Measure (\$ millions, except volume)	Q2 2026	Q2 2025	H1 2026	H1 2025
R&M segment Adjusted EBITDA	6,655	1,890	8,032	2,379
Midstream segment Adjusted EBITDA	1,778	1,641	3,376	3,361
Renewable Diesel segment Adjusted EBITDA	258	(19)	296	(61)
Renewable Diesel margin	321	49	454	75
Renewable-diesel sales-volume change vs. comparable prior period (thousand gallons/day)	+91	-	(44)	-
R&M RIN compliance expense	683	314	1,280	668

Source: MPC Q2 2026 Form 10-Q, Note 9 and Item 2 MD&A, pp. 9-10, 39-43. Segment Adjusted EBITDA, Renewable Diesel margin and R&M margin are company-reported measures and are not interchangeable. Renewable Diesel margin is a non-GAAP measure. RIN expense is a reported R&M cost. "H1" is the six months ended June 30. Volume changes are year-over-year.¹

The CEO, as chief operating decision maker, uses segment Adjusted EBITDA and forecast-to-actual variances in annual planning and ongoing monitoring for capital and personnel allocation. MPC's reconciliation excludes items including turnaround costs, depreciation and amortization, net interest and other financial costs. Segment assets are not used by the CEO to assess segment performance and were not reported in the segment table. For the first half of 2026, segment Adjusted EBITDA totaled \$11.704 billion, while income before income taxes was \$8.016 billion after reconciliation items. A \$32 million clean-fuel production tax credit was shown outside segment results; MPC said it reflected recognition of 2025 credits after proposed February 2026 guidance clarified 45Z qualification criteria.¹

MPC defines Renewable Diesel margin as sales revenue plus the value attributable to qualifying regulatory credits, less renewable-input costs and purchased-product costs, including product from Martinez Renewables JV. It is not GAAP gross margin and MPC cautions that it may not be comparable with similarly titled measures at other companies. For the second quarter, the company said Renewable Diesel margin was \$321 million, compared with \$49 million a year earlier, "driven by improved regulatory credit values." Sales revenue rose \$620 million, which

MPC attributed primarily to higher prices and sales volume. For the first half, margin was \$454 million versus \$75 million; MPC cited improved credit values, while the 44-thousand-gallon-per-day decrease in volume was largely due to planned first-quarter downtime at Martinez Renewables JV. These are period comparisons and company explanations, not proof that either period is a sustainable run rate.¹

R&M faced credit exposure on another side of the ledger. MPC reported RIN expense of \$683 million for Q2 2026 versus \$314 million in Q2 2025, and \$1.280 billion for H1 2026 versus \$668 million in H1 2025. Those expenses do not reveal a net company-wide credit position: facilities, fuels, credit types, timing, and segment accounting differ. Nor do the data establish that expanding renewable diesel would offset R&M compliance costs dollar for dollar.¹

Regulation creates both support and uncertainty

On March 27, 2026, the U.S. Environmental Protection Agency finalized Renewable Fuel Standard volume requirements for 2026 and 2027. Total applicable renewable-fuel volumes were 26.81 billion RINs for 2026 and 27.02 billion for 2027; biomass-based diesel totals were 9.07 billion and 9.20 billion RINs, respectively. One RIN is equivalent to one ethanol-equivalent gallon. These are program-wide requirements, not MPC sales, guaranteed credit prices, or assurance that a particular facility's production qualifies.²

California's 2025 Low Carbon Fuel Standard amendments took effect July 1, 2025. CARB's September 2025 implementation FAQ described feedstock-sustainability and certification provisions with future implementation dates. Federal clean-fuel production credit rules were also changing: Treasury and IRS issued proposed 45Z regulations in February 2026 after statutory changes. The proposal-not final guidance-was what a decision-maker could have considered at the cutoff.³

These rules could support eligible production and credit value. They could also leave uncertainty about implementation, compliance costs, feedstock pathways, and future value. MPC's disclosures identify regulatory credits and operating costs as Renewable Diesel segment drivers. Students should separate regulatory eligibility and demand signals from commodity economics: renewable feedstock prices, conventional fuel prices, product sales prices, facility utilization, and credit values need not move together.

What the strategy research adds

Pindyck's theoretical survey explains why a firm facing uncertain future value may value the option to delay an irreversible investment until it learns more. His models also show that operating flexibility-such as temporarily suspending production when price is below variable cost-can change investment value. The theory does not show that waiting is best for MPC; existing assets, operating flexibility, scarcity, competitive moves, and foregone learning can change the comparison.⁴

Sendstad and Chronopoulos develop a formal real-options model of renewable-energy investment under uncertain electricity prices, technological improvement, and the possible provision or withdrawal of a fixed premium subsidy. Their numerical offshore-wind example finds that a higher likelihood of subsidy withdrawal raises the investment threshold, while sequential investment in improved technology can mitigate delay relative to a lumpy investment. The modeled electricity premium and technology upgrades differ from RFS credits, LCFS and 45Z; these are mechanisms to consider, not MPC forecasts.⁵

Markel, Sims and English model entry and exit by second-generation biofuel producers with distinct fuel-market and RFS/blender-tax-credit uncertainty. Their abstract and publisher

preview report that annual policy adjustments and unpredictable credit expiration or reinstatement can discourage biofuel investment. The full article was not available to the case authors; its detailed specifications and results are not reproduced here. The model concerns a different production generation and earlier policy regime, so it offers a question about risk separation, not a company-specific prediction.⁶

Three postures to debate

1. **Operate and optimize the current platform.** Focus on feedstock access, uptime, utilization, commercial outlets and operating coordination across wholly owned and JV assets. This can capture value from existing commitments without assuming a new expansion. Its weakness is that public information cannot show whether operational changes are feasible, what they cost, or how much margin improvement would persist.
2. **Stage new commitments.** Preserve the option to invest through smaller steps, partnerships, contracts or decision gates while seeking evidence about credit regimes, input access and facility performance. This may limit exposure to uncertainty while keeping growth options open. Its weakness is that no public source identifies a specific modular project; staging can delay scale, learning or returns that depend on a larger commitment.
3. **Restrain incremental renewable-diesel commitments.** Continue managing existing operations while setting a high bar for additional commitments and weighing other needs in R&M and Midstream. This can avoid assuming recent credits or price conditions endure. Its weakness is that the company may forgo eligible demand, valuable operating experience or strategic options; no public disclosure shows that other uses of capital are superior.

The choice is not whether renewable diesel is “good” or “bad.” It is how to manage current operations and what evidence should be required before further commitment. The case supplies no incremental project forecast, hurdle rate, capital budget, discretionary capital pool, or project-level economics. Do not invent one as if it were MPC guidance.

Discussion questions

1. Which facts most strongly support continuing to develop the current platform? Which facts argue for caution about incremental commitments?
2. How should the team distinguish policy-credit value from product markets, feedstock economics, uptime and JV accounting? What does R&M's RIN expense add to a company-wide discussion?
3. Which posture do you recommend for current operations, and which for new investment? What public or internal evidence would change your choice?
4. What would a useful set of decision gates measure, and how could those measures avoid treating non-GAAP segment results as returns?

Sources

1. Marathon Petroleum Corporation, [FY2025 Form 10-K](#), filed Feb. 26, 2026, Item 1 “Renewable Diesel,” Item 7 and Note 24; and [Q2 2026 Form 10-Q](#), filed Aug. 4, 2026, Note 9, pp. 9-10; Item 2, pp. 39-43. The Q2 tables and metric definitions are the source for Exhibit 1.
2. U.S. Environmental Protection Agency, [Final Renewable Fuel Standards for 2026 and 2027](#), announced Mar. 27, 2026; table of final volume requirements and RIN definition.
3. California Air Resources Board, [LCFS Regulation](#) and [2025 LCFS Amendment Implementation FAQ](#), Sept. 15, 2025; Internal Revenue Service, [proposed regulations on the clean fuel production credit](#), IR-2026-20, Feb. 3, 2026.
4. Robert S. Pindyck, “Irreversibility, Uncertainty, and Investment,” *Journal of Economic Literature* 29, no. 3 (1991): 1110-1148, <https://doi.org/10.1257/jel.29.3.1110>.
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6. Evan Markel, Charles Sims, and Burton C. English, “Policy Uncertainty and the Optimal Investment Decisions of Second-Generation Biofuel Producers,” *Energy Economics* 76 (2018): 89-100, <https://doi.org/10.1016/j.eneco.2018.09.017>. Case authors accessed abstract and publisher preview only.