

Diamond Green Diesel: Choosing What Port Arthur Can Make

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Decision scope: A hypothetical DGD governance discussion about product allocation at Port Arthur for 2027.

Case convention: The discussion, role, and alternatives are constructed for teaching. Public sources establish the facility, joint venture, and commercial relationships, not a scheduled board meeting, an internal disagreement, or an actual allocation decision.

An option already built

Diamond Green Diesel (DGD), a 50/50 joint venture of Valero Energy and Darling Ingredients, had an unusual choice at its Port Arthur, Texas, renewable-fuels facility. The plant could make renewable diesel (RD), and an upgrade that began operating in late 2024 gave it the capability to convert part of that capacity to neat sustainable aviation fuel (SAF). The conversion project was complete. The question was how to use the capability in 2027-not whether to approve the original project again.

Assume you are advising a hypothetical DGD governance committee preparing a 2027 operating-allocation rule. Should SAF become the preferred use of Port Arthur's flexible capacity? Should RD remain the default? Or should the partners preserve both routes and switch only when verified economics and contractual obligations support a change? Valero operates the facilities and provides services under contract, but Darling is an equal owner. The public record does not establish that Valero can make this decision unilaterally. [P1, P2]

The option looked sizeable. Port Arthur's annual nameplate capacity was about 470 million gallons of RD. DGD said the completed project could upgrade about half of that capacity-roughly 235 million gallons per year-to neat SAF. This is a capability measure, not actual production, a guaranteed switching rate, or an estimate of profitable SAF volume. Public disclosures did not show the facility's product-specific yields, switching time and cost, operating constraints, current run rates, or how the partners would allocate output. [P1, P3]

A market signal with two sides

Valero's reported renewable-diesel results had improved sharply. In the second quarter of 2026, Valero's Renewable Diesel segment reported \$879 million of margin and \$717 million of operating income, compared with \$54 million of margin and a \$79 million operating loss in the prior-year quarter. Valero attributed most of the \$825 million margin increase to about \$1.0 billion of benefit from higher product prices, primarily RD, partly offset by roughly \$200 million of higher feedstock costs. These are quarterly Valero segment figures; they are not DGD standalone earnings, Port Arthur results, or SAF economics. They also do not establish that the quarter's price and margin conditions will persist. [P4]

Management expected RD demand to remain strong, citing in part higher federal Renewable Fuel Standard obligations. The EPA's final applicable biomass-based-diesel volumes were 9.07 billion RINs for 2026 and 9.20 billion for 2027. Those obligations support demand for qualifying fuels through the compliance system. They do not promise DGD a particular price, volume, or margin, and they are not SAF-specific offtake. [P4, P5]

SAF had a different policy and customer context. The federal 45Z clean-fuel credit was extended through 2029, but legislation changed its treatment after 2025: the prior special SAF base amount no longer applied, and SAF and non-SAF fuels shared the same base amount, subject to wage compliance, inflation adjustments, emissions calculations, and eligibility rules. Some foreign feedstocks became ineligible for post-2025 production. Equal base amounts do not imply equal effective credits, because fuel pathway, feedstock, emissions, and other conditions matter. DGD's actual eligible credit by product was not disclosed. [P6]

Valero had previously made a positive case for the SAF project. In a March 2025 investor presentation, management described the Port Arthur project as a \$315 million investment, half attributable to Valero, and estimated it would exceed Valero's 25% after-tax return hurdle. That was a forecast for a completed project under the assumptions and policy conditions then in force. It was not a realized return, a current comparison of SAF and RD, or a promise that future SAF output would earn a premium. [P7]

Meanwhile, competing supply was growing. Neste reported global SAF production capability of 1.5 million metric tonnes per year in 2025 and expected 2.2 million tonnes per year in 2027 following an expansion. Those company-reported figures show that a significant competitor planned additional capacity; they do not establish production, sales, market share, customer demand, or prices. The units also cannot be compared directly with DGD's gallon capacity without assumptions. [P8]

The joint venture's commercial position

DGD sold RD, renewable naphtha, and neat SAF into markets in the United States, Canada, and Europe. Its audited 2025 statements reported sales to Valero of \$1.440 billion of RD and \$613 million of neat SAF. The statements also described product-specific sales arrangements with Valero, with varying RD volumes through 2026 and neat SAF volumes through 2027. These are related-party sales and revenue values; they do not reveal external customer netbacks, a SAF premium, unit margins, or whether existing volume commitments can be shifted between products. [P2]

That structure made the allocation question a joint-venture decision with incomplete public information. DGD's interests, Valero's downstream and operating interests, and Darling's interests may overlap, but the case evidence does not show that they are identical. The sources do not disclose the partners' decision rights for product mix, contract price formulas, take-or-pay provisions, product reallocation rights, or how tax attributes flow between entities.

Students must treat these as diligence questions rather than assume the answer.

Exhibit 1. DGD's disclosed operating footprint

Facility	Approximate RD nameplate capacity	Other disclosed capability
St. Charles, Louisiana	700 million gallons/year	30 million gallons/year renewable naphtha
Port Arthur, Texas	470 million gallons/year	20 million gallons/year renewable naphtha; capability to upgrade about 50% of RD capacity to neat SAF

Source: Valero 2025 Form 10-K, printed pp. 9-11; DGD 2025 audited statements, pp. 7-8. Capacities and conversion capability are nameplate disclosures, not actual output. The roughly 235 million gallons/year of potential SAF corresponds to half of Port Arthur's RD nameplate capacity; it is not an operating forecast. [P1, P3]

Exhibit 2. What the policy and reported results do-and do not-say

Evidence available by cutoff	What it may inform	What it does not establish
Q2 2026 Valero Renewable Diesel segment margin: \$879m, versus \$54m in Q2 2025	Recent segment conditions; issuer attributed most of the increase to product prices, primarily RD	DGD or Port Arthur profit; SAF margin; a sustainable forward run rate
EPA applicable biomass-based diesel volumes: 9.07bn RINs in 2026; 9.20bn in 2027	Compliance demand conditions for qualifying fuels	DGD offtake, RD netback, or SAF demand
Post-2025 45Z base amounts: \$1.00/gallon when prevailing-wage conditions are met or \$0.20 otherwise, before inflation and emissions adjustments	A framework for evaluating eligible clean-fuel production	DGD's product-specific credit, eligibility, or relative netback
Management's 2025 estimate that the SAF project would exceed a 25% after-tax hurdle	The historical rationale for completing the project	Realized project return or current incremental SAF economics

Sources: Valero Q2 2026 Form 10-Q, pp. 42, 47-48; EPA final 2026-27 RFS rule; IRS Form 7218 instructions; Valero March 2025 investor presentation, slide 9 and footnotes. Figures are not directly comparable measures of product profitability. [P4-P7]

Three operating policies

The hypothetical committee could consider three policies:

1. **SAF-preferred allocation.** Use feasible flexible capacity for SAF unless a verified constraint or contract obligation prevents it. This could position DGD to serve customer demand and use the existing capability. It would expose the JV to the risk that any assumed SAF premium, eligible credit, or demand does not cover feedstock, yield, processing, logistics, and contractual costs.

2. **RD-default allocation.** Keep RD as the default use and make SAF only against confirmed offtake or a verified superior netback. The EPA volumes and Valero's outlook provide a reason to take RD seriously, while the 2026 quarterly segment results show how high prices can matter. But regulatory volumes do not guarantee DGD economics, and aggregate results cannot determine which product earns more at Port Arthur.
3. **Trigger-based allocation.** Preserve the ability to use both routes, subject to process and contract constraints. Allocate an increment to SAF only when a documented, comparable expected netback clears an agreed hurdle over RD, after eligible credits, feedstock, yields, operating and logistics costs, and contract effects. Specify who validates the inputs, who approves a switch, and how often the rule is revisited. A trigger can help the partners learn, but it is not useful if the plant cannot switch economically or if the necessary market evidence is unavailable.

The real-options perspective offers a way to think about flexibility. Pindyck explains that an irreversible investment can carry an opportunity cost because committing now gives up the ability to wait for information; he also discusses operational decisions such as starting, stopping, and staging activity. That framework can prompt the committee to ask what value the existing routing option preserves. It does not establish that DGD can switch cheaply, that waiting is optimal, or that SAF will outperform RD. The models are general and do not estimate DGD's products, contracts, or JV governance. [A1]

The recommendation

The committee has no public, comparable per-gallon netbacks for RD and SAF; no disclosed product-specific costs, yields, eligible credits, switching costs, or external customer commitments; and no established public account of which partner controls a 2027 allocation decision. A recommendation therefore needs to state what evidence would govern a switch, how contractual and partner approvals would work, and when the rule would be reviewed.

Should DGD prefer SAF, keep RD as its default, or adopt a trigger-based allocation rule for Port Arthur's flexible capacity in 2027? Which assumptions must be tested before the partners commit volume? What evidence would cause you to change the rule?

Discussion questions

1. Which facts support the case for RD, and which support preserving the SAF route? Which claims remain hypotheses?
2. What should “netback” include for a comparable RD-versus-SAF decision? Which missing data matter most, and who in the JV should validate them?
3. How should the committee interpret Valero’s Q2 2026 Renewable Diesel results and the historical project-return estimate? What conclusions would exceed the evidence?
4. Design a trigger-based policy. Specify the metric, hurdle, contract checks, decision rights, review cadence, and stop conditions. If you cannot quantify the trigger, what process should replace false precision?
5. How do the 50/50 ownership structure and related-party sales affect the governance of the decision? What additional information should each partner request?

Sources and cutoff

The cutoff is July 30, 2026, 12:58:16, as displayed by SEC EDGAR for Valero’s Q2 2026 Form 10-Q acceptance; the header does not state a timezone. Source locators and access depth are documented in the research source register and evidence extraction.

- **[P1]** Valero Energy Corp., 2025 Form 10-K, filed February 25, 2026, printed pp. 9-11 and Note 12. [SEC filing](#)
- **[P2]** Diamond Green Diesel Holdings LLC, 2025 audited financial statements, printed pp. 7-8 and 23-25. [SEC exhibit](#)
- **[P3]** Valero, March 2025 Investor Presentation, slide 9 and footnotes pp. 42-44. [PDF](#)
- **[P4]** Valero, Q2 2026 Form 10-Q, accepted July 30, 2026, printed pp. 42, 47-48. [SEC filing](#)
- **[P5]** U.S. EPA, final Renewable Fuel Standards for 2026 and 2027, updated July 9, 2026. [Rule summary and linked final rule](#)
- **[P6]** Internal Revenue Service, Instructions for Form 7218, December 2025, “What’s New” and “Applicable Amount.” [Instructions](#)
- **[P7]** Valero, March 2025 Investor Presentation, slide 9 and footnotes pp. 42-44. [PDF](#)
- **[P8]** Neste, 2025 Annual Report and 2025 Green Finance Report update. [Annual report; update](#)
- **[A1]** Robert S. Pindyck, “Irreversibility, Uncertainty, and Investment,” *Journal of Economic Literature* 29(3), 1991, pp. 1110-1148. [Author-hosted PDF](#)

Pindyck was read in full. Other academic references in the dossier were available only as abstracts or metadata and are not load-bearing in this case. No post-cutoff information or later outcomes are included.