

The Digest's 2026 Multi-Slide Guide to Texas Hydrogen and SAF Intersection

The Gulf holds the hydrogen pipes. Texas's e-fuels plant went to the wind.

The Gulf holds over 90% of US hydrogen pipeline, yet Texas's only e-SAF plant sits far inland, in wind country.



The infrastructure–siting gap

- US hydrogen pipeline totals ~1,600 miles [Regulator-observed — CRS/PHMSA].
- >90% lies along the Gulf Coast [Regulator-observed — CRS/PHMSA].
- Air Products' network spans 600+ miles and connects 20+ plants [Reported].
- Infinium Roadrunner is announced for Reeves County: ~7.6 MMgal/yr, due 2027 [Announced].

The Gulf concentrates hydrogen pipelines, while the announced Roadrunner e-SAF plant is inland in West Texas wind country. Existing pipe and this project's chosen location do not coincide.

The hydrogen hub was awarded; the money and the anchor projects have not arrived.

The hub award has not translated into substantial disbursements or dependable anchor projects. ExxonMobil's pause and Air Products' exit weaken the case for assuming a near-term build-out.

~\$2m

Hub funds disbursed

Of \$112m for retained hydrogen hubs disbursed, Oct 2026 [Reported].

\$7bn

Baytown project paused

ExxonMobil paused its Baytown hydrogen project, Nov 2025 [Reported].

Up to
\$2.9bn

LCEC exit charges

Air Products exited its Louisiana Clean Energy Complex, Jun 2026 [Reported].

Move an e-SAF plant from Houston to West Texas and its economics change — because of power, not pipes.

	Gulf coast	West Texas
Hydrogen pipe and storage geology	✓ Hydrogen pipeline network serves established industrial users. ✓ Storage geology and Class VI framework support the coastal cluster.	✗ The cited Gulf hydrogen pipeline network is not located here. ✗ The cited Gulf storage cluster is not the siting rationale.
Refining and wind power	✓ Refining and RD benefit from surrounding Gulf assets [Library screen G.2]. ✗ The coastal hydrogen network does not supply low-cost wind power.	✗ The Gulf refining cluster is not the project's surrounding asset. ✓ Wind-country siting aligns with e-SAF's need for low-cost power.
e-SAF construction and siting	✗ The cited e-SAF project under construction is not on the coast. Moving e-SAF here adds pipe proximity without establishing its decisive power advantage.	✓ Roadrunner is the cited West Texas e-SAF project; its start is due in 2027 [Announced]. Its location supports a power-led siting explanation, not a claim of cost competitiveness.

For refining and RD, the Gulf passes the cluster test [Library screen G.2]. For e-SAF, relocating toward West Texas changes access to the key input—power—while moving away from the coastal pipes.

A legacy network rewards the users it already serves; a new pathway follows its own main input.

Existing Gulf assets reinforce refinery supply and brownfield HEFA. Without committed low-carbon hydrogen offtake, hub projects pause while e-SAF follows power toward West Texas wind.

Existing Gulf assets	Refinery anchor contracts	Incumbent pathways benefit	Hub demand remains uncommitted	e-SAF follows power
Activities • The coastal network supplies established hydrogen users. • Storage permissions strengthen the Gulf's position for emitters.	Activities • Refiners contract for reliable supply on existing pipe. • Signed users support network extension.	Activities • Refining draws on the established hydrogen cluster. • A HEFA bolt-on uses existing refinery infrastructure.	Activities • Existing refinery demand does not itself commit buyers to low-carbon hydrogen. • Without that offtake, announced hub projects pause.	Activities • Power is the decisive surrounding input for e-SAF. • Roadrunner's West Texas location sits outside the coastal hydrogen network.
Deliverables • Hydrogen pipelines • Storage primacy	Deliverables • Long-term refinery supply agreements	Deliverables • Refinery supply • Brownfield HEFA bolt-on	Deliverables • Low-carbon hydrogen offtake gap • Paused hub projects	Deliverables • West Texas wind siting • Roadrunner [Announced]

The Gulf's hydrogen and storage assets are real — and built for refiners and emitters.

The Gulf has an established industrial network and a substantial storage-permitting pipeline. Neither, by itself, establishes committed low-carbon hydrogen demand.

Assets and demand are not the same

- Louisiana: 30; Texas: 18 of 106 Class VI applications, Q1 2026; combined share: 45% [Consultant estimate — Enverus].
- Class VI primacy began in Louisiana, Feb 2024, and Texas, Dec 2025 [Regulator-observed].
- ExxonMobil has 16 Mtpa of CCS contracts with six customers [Announced]; contracts are not operating capture.
- Hydrogen pipes, storage geology, refining and ports are established strengths; committed low-carbon hydrogen demand remains unproven.



The pipeline's option value went to refiners who signed long-term supply.



Contracts shaped network value

- Air Products linked its pipeline to Motiva Convent and Shell Deer Park contract wins [Reported, 2011].
- Its existing, reliable supply capability mattered to those customers [Reported, 2011].
- Long-term refinery contracts supported network extensions.
- The network carries no open-access obligation.

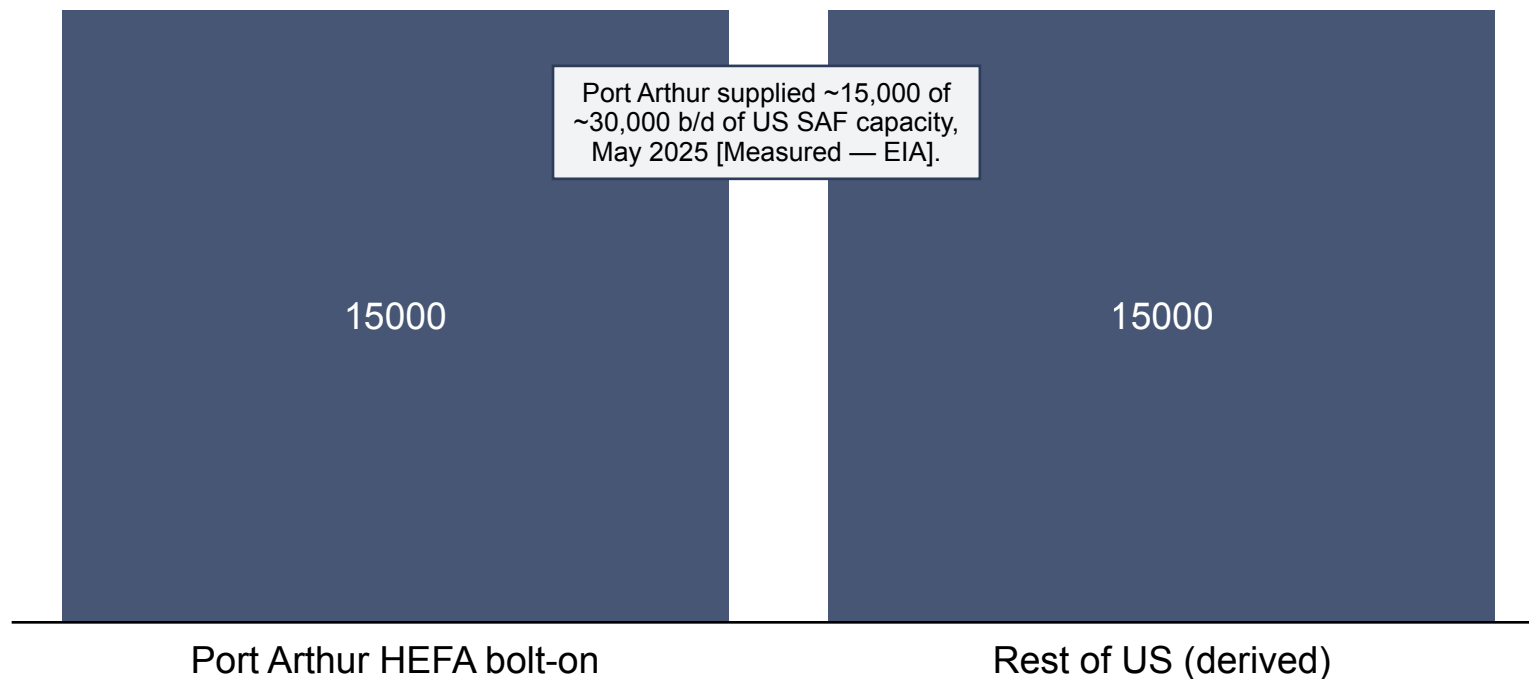
Existing pipeline capacity gave contracted refiners a supply advantage. Its value did not automatically transfer to prospective users outside those contracts.

Half of US SAF capacity came from one HEFA bolt-on, not from hydrogen-to-liquids.

Port Arthur accounted for approximately half of US SAF capacity in May 2025 [Measured — EIA]. Announced standalone Gulf projects had not reached FID [Announced] and must not be counted as operating capacity.

US SAF capacity, May 2025 [Measured — EIA], barrels per day

■ Barrels per day



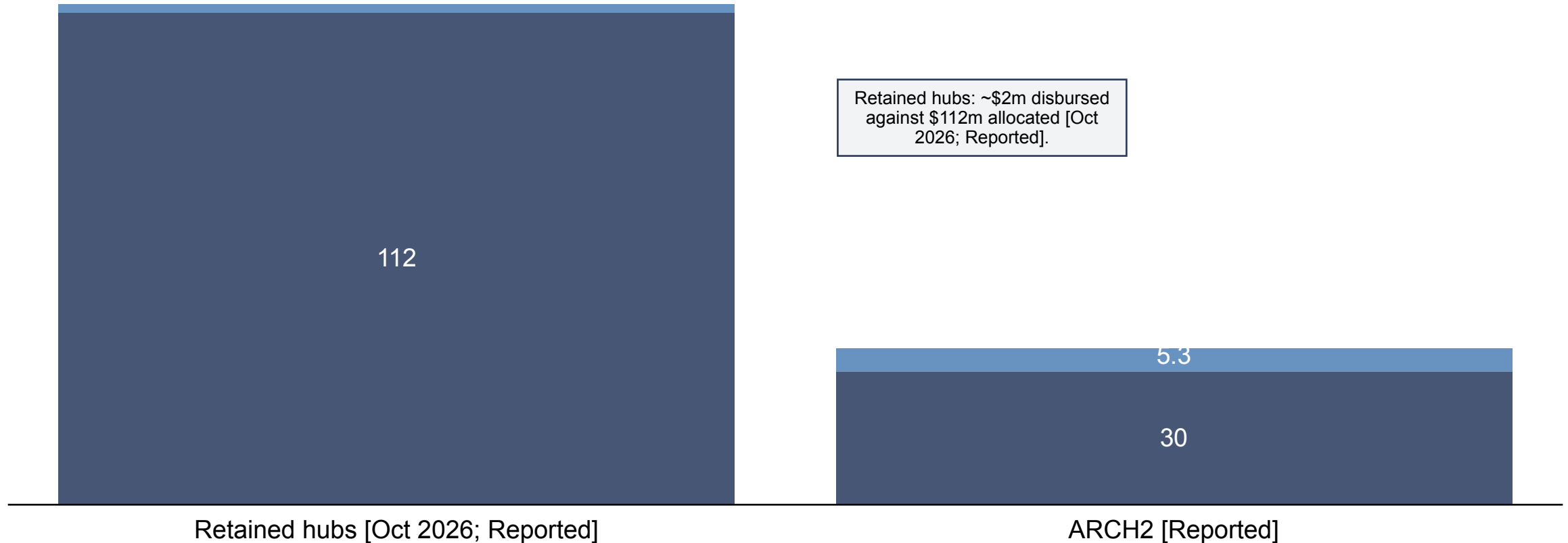
Operating capacity versus proposals

- Port Arthur: ~15,000 b/d of ~30,000 b/d US SAF capacity, May 2025 [Measured — EIA].
- The unit cost \$315m and offers up to 235 MMgal/yr of SAF optionality [Reported — Valero].
- DG Fuels: 178 MMgal/yr; USA BioEnergy: 65 MMgal/yr. Both are announced standalone projects without FID [Announced].
- Keep proposed volumes outside the operating-capacity comparison. Source: EIA; Valero; project announcements.

Count the money spent, not the money announced.

Awards and released funds are not evidence of construction spending. Reported disbursement to retained hubs remains small relative to the stated allocation, while ARCH2's spending is a separate measure of funds released.

■ Allocated or released (USD millions) ■ Disbursed or used (USD millions)



In twelve months the hydrogen build-out lost anchors, money and a permitting pathway.

The sequence combines project withdrawals, a Louisiana review pause and limited federal disbursement. Texas gained Class VI primacy, but that regulatory gain did not reverse the reported retreat in anchor projects.

Hub and factory retreat

Pacific Northwest hydrogen hub terminated; Topsoe pauses its Virginia electrolyser factory. [Reported]

Baytown paused

ExxonMobil pauses its \$7bn Baytown hydrogen project. [Reported]

LCEC exit

Air Products exits the Louisiana Clean Energy Complex, with up to \$2.9bn in charges. [Reported]

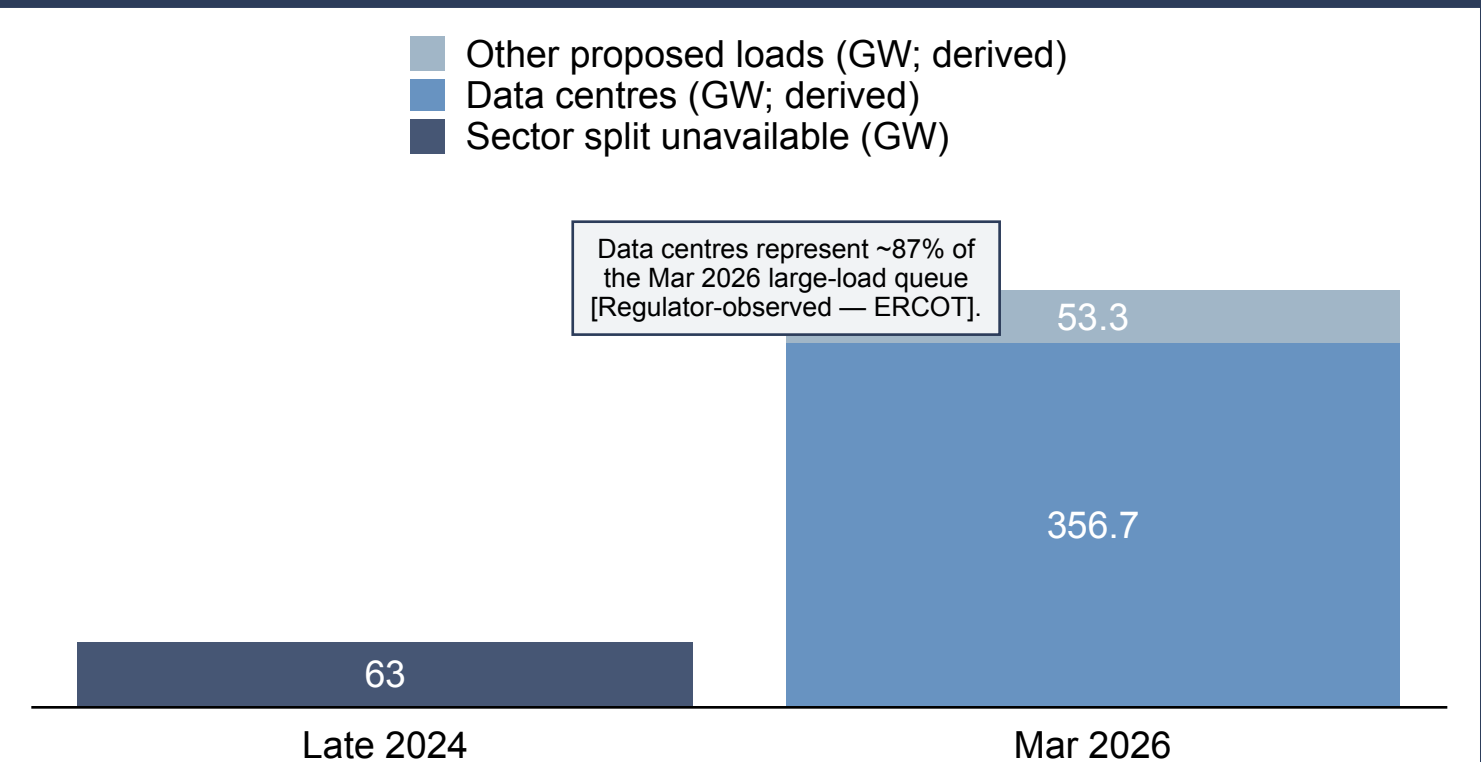


e-SAF's real competitor for Texas power is the data centre, not another fuel plant.

Grid access is the constraint

- ERCOT's large-load queue rose from 63 GW [late 2024; Regulator-observed — ERCOT] to ~410 GW [Mar 2026; Regulator-observed — ERCOT].
- Data centres account for ~87% of the queue [Mar 2026; Regulator-observed — ERCOT].
- The queue measures proposed large loads, not electricity already consumed.
- No named bioeconomy project has yet been delayed by the queue [Directional].

ERCOT large-load queue and data-centre share [Regulator-observed — ERCOT]



The ERCOT large-load queue grew sharply, and data centres account for most of its latest reported size. That signals competition for grid access, not a demonstrated delay to a named bioeconomy project.

A single grid is a single point of failure for power-hungry fuels.



Two disruptions exposed concentrated risk

- Winter Storm Uri, Feb 2021: up to 80% of US basic organic chemicals capacity went offline [Consultant estimate — Wood Mackenzie via Dallas Fed].
- By mid-March 2021, 60% of that capacity remained offline [Consultant estimate — Wood Mackenzie via Dallas Fed].
- Hurricane Harvey, 2017: 16.6% of US refining capacity shut [Reported — CRS].
- Power-intensive fuels sharing the Texas grid inherit a common outage risk; coastal sites also face hurricane exposure.

Shared grid dependence can turn a power disruption into a broad industrial interruption. Coastal siting adds hurricane exposure rather than removing grid risk.

Rotterdam's Porthos was sized to four named emitters before it was built.

Porthos's start slipped to H2 2027 [Announced]; named anchors precede construction, but cannot guarantee its schedule.

Porthos: anchors first



Shell, ExxonMobil, Air Liquide and Air Products backed 2.5 Mt/yr CO₂ and €1.3bn at FID, Oct 2023 [Reported].

Gulf hub: award first



The hydrogen hub received an award, but committed low-carbon hydrogen offtake remains pending.

Policy reversal may explain the stall as much as geography does.

Both policy curtailment and power geography could explain the coastal stall. What would decide it: after hydrogen support returns, does e-SAF choose coastal infrastructure or inland power?

Policy reading

- Curtailment of the 45V hydrogen credit may have weakened coastal hydrogen projects even where pipelines and storage exist.
- Under this reading, paused projects reflect weaker support rather than a failure of the Gulf's industrial cluster.
- Restored hydrogen support could improve the case for coastal production; it would not establish coastal e-SAF demand.
- The deciding observation is whether renewed support brings signed coastal hydrogen offtake and an e-SAF siting decision.

Geography reading

- An e-SAF plant depends heavily on its power supply; the Gulf's existing hydrogen pipes do not provide low-cost electricity.
- Infinium Roadrunner is sited in Reeves County wind country, away from the coastal pipeline concentration [Announced].
- That siting favours the power explanation but cannot isolate geography from changes in hydrogen policy.
- If support returns and e-SAF still chooses cheap power inland, geography remains the stronger explanation.

Projects that advanced sited on power or existing pipe; stalled ones waited on hubs and announcements.

The best cluster for one pathway can be the wrong cluster for another.

Advancing versus stalled project signals				What separates the pathways
Observable	Advancing	Stalled	Structural or execution?	
Siting logic	Power cost and interconnection	Network reputation	Execution	
Funding signal	Disbursed money, signed offtake	Award announcements	Execution	
Network position	Anchor contract on existing pipe	Depends on an unbuilt hub	Structural	
Gulf SAF route	Brownfield HEFA bolt-on	Standalone, no FID	Structural	• Power cost and interconnection are stronger siting signals for e-fuels than a coastal network's reputation. • Disbursed funds and signed offtake distinguish execution from award announcements. • Existing pipe serves contracted users; an unbuilt hub cannot provide the same position. • Brownfield HEFA optionality has advanced while standalone Gulf SAF projects remain without FID.

Site e-fuels on power, count disbursements not awards, and use the Gulf for what it already does well.

Developers

- Secure power supply before selecting an e-fuels site.
- Confirm an interconnection position before committing to a coastal location.
- Treat existing hydrogen pipe as useful only when the project can contract for its supply.

Gulf incumbents

- Use existing refining assets for near-term HEFA SAF bolt-ons.
- Match hydrogen network expansion to anchor supply contracts.
- Do not assume coastal hydrogen infrastructure solves e-fuels power needs.

Investors and lenders

- Underwrite signed offtake rather than expected demand.
- Count disbursed hub funding, not the headline award.
- Keep announced projects separate from projects with committed financing.

Policymakers

- ERCOT and PUCT decisions shape access to power for new large loads.
- Network owners shape whether projects can secure hydrogen supply.
- Track hub disbursements, Roadrunner's planned 2027 start [Announced], the ERCOT queue and Louisiana's Class VI review pause.

Power and interconnection determine the e-fuels siting test; signed demand and disbursed funds determine the financing test. The Gulf's existing pipes and refineries remain most useful to pathways that can contract for them.