

The Digest's 2026 Multi-Slide Guide to Singapore as ASEAN Bioeconomy Hub

A state-built island running on other people's feedstock — and other
people's policy

Singapore has no local feedstock, yet hosts a 2.6 Mt/yr renewable-fuels plant.

Singapore can host large-scale renewable-fuels production without domestic feedstock because imported materials reach a planned industrial ecosystem. Neste's Tuas refinery should be marked beside Jurong Island, not on it.

Capacity depends on imported feedstock

- Neste Singapore has 2.6 Mt/yr renewable-products capacity [2023, Reported].
- That includes up to 1 Mt/yr SAF capacity [2023, Reported].
- Jurong Island spans ~3,000 ha [Regulator-observed — JTC] and hosts 100+ companies and 100+ km of shared pipelines [Regulator-observed — JTC].
- Feedstock arrives by sea; Neste's refinery is in nearby Tuas, not on Jurong Island.



Hub throughput is at records — but throughput and production are different things.

56.20

Bunker sales

Mt sold in 2025 [Reported]; a record for the world's largest bunker port.

1.36

Bio-blended bunkers

Mt sold in 2025 [Reported]; sales rose 55.6% in 2025 [Reported].

55.6%

Sales growth

Increase in bio-blended bunker sales in 2025 [Reported], not evidence of increased local production.

Throughput ≠ production. Bio-blended bunker sales measure fuel supplied at the port, not where its renewable component was made. Source: reported bunker sales, 2025 [Reported].

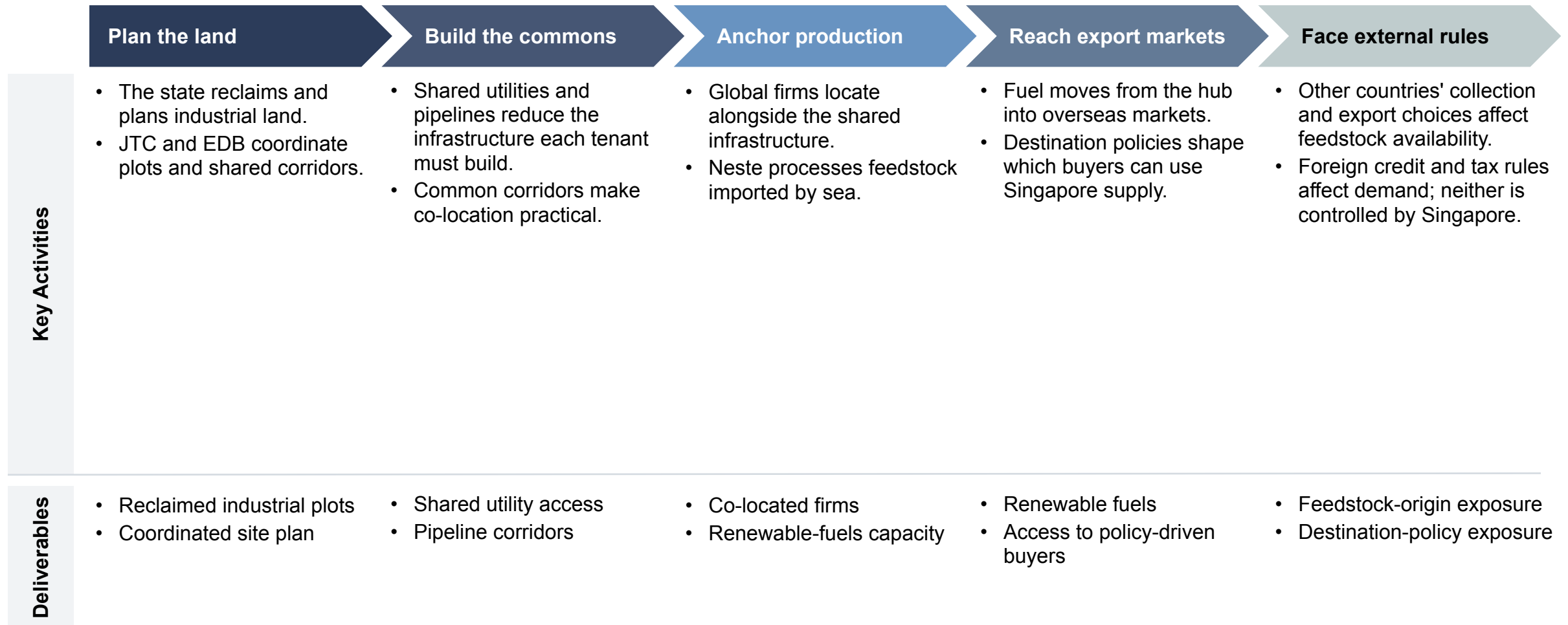
Jurong passes four of five cluster tests — because the state built what firms share.

What the scorecard means	Jurong Island cluster-test scorecard [Library screen G.2]	
- Shared assets and cross-firm flows reflect state-planned utilities and corridors. - Labour is not measured; the scorecard cannot establish a shared workforce [Library screen G.2]. - Energy and chemicals account for ~a quarter of Singapore’s manufacturing output [Regulator-observed — JTC]. - The renewable-fuels layer is largely one firm: Neste. Source: Library screen G.2; JTC.	Cluster test	Result
	Shared asset	Pass
	Cross-firm flow	Pass
	Labour	Not measured
	Inheritance	Pass
	Production	Pass

Shared infrastructure supports a broad chemicals cluster, but renewable-fuels production remains concentrated in Neste.

A coordinator that owns the land and utilities can build a cluster on imported inputs.

State-planned land and shared infrastructure make imported-feedstock production viable. The resulting fuels depend on feedstock-export decisions and destination-market policies outside Singapore.



Singapore's cluster has a landlord: the agencies that own the commons also choose the tenants.

JTC and EDB sit at the centre of the cluster's land-and-infrastructure decisions; MPA and CAAS govern the marine and aviation interfaces. Firms operate within these public systems, while feedstock supply remains outside their control.

JTC and EDB · The industrial commons

- JTC manages industrial land and shared corridors [Regulator-observed].
- EDB works with firms on investment and site planning [Regulator-observed].
- Shared infrastructure lets firms co-locate without each building the entire utility network.

MPA · The marine interface

- MPA oversees Singapore's bunkering port.
- Port oversight connects fuel suppliers with vessels calling at Singapore.
- Bunkering activity is fuel handling, not evidence of local fuel production.

CAAS · The aviation interface

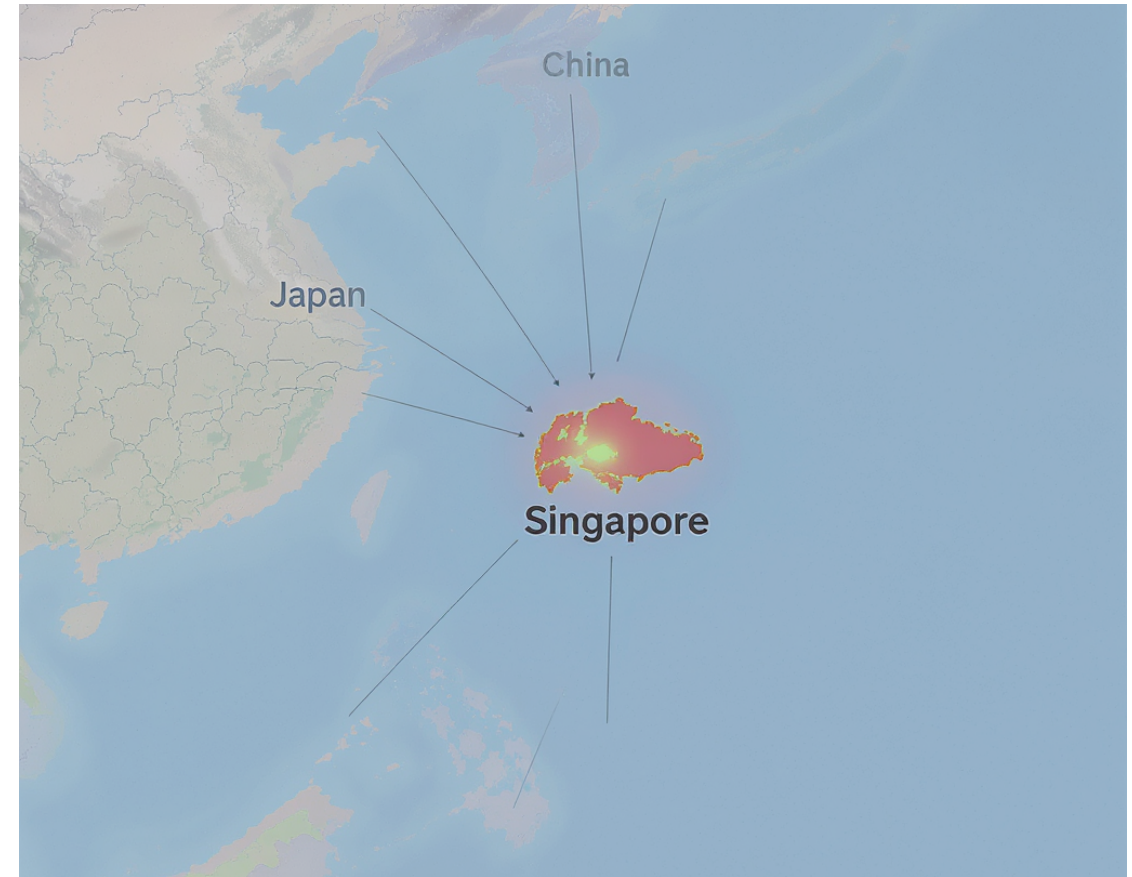
- CAAS shapes aviation-fuel demand and administers the SAF levy.
- Its demand role differs from JTC's control of industrial land.
- A domestic buying mechanism can aggregate demand without securing imported feedstock.

The hub's main input is set by other countries' collection and export choices.

Singapore can process imported used cooking oil, but it cannot control how much source countries collect or export. Malaysian supply allegations remain contested and should not be treated as an established flow.

Imported used cooking oil

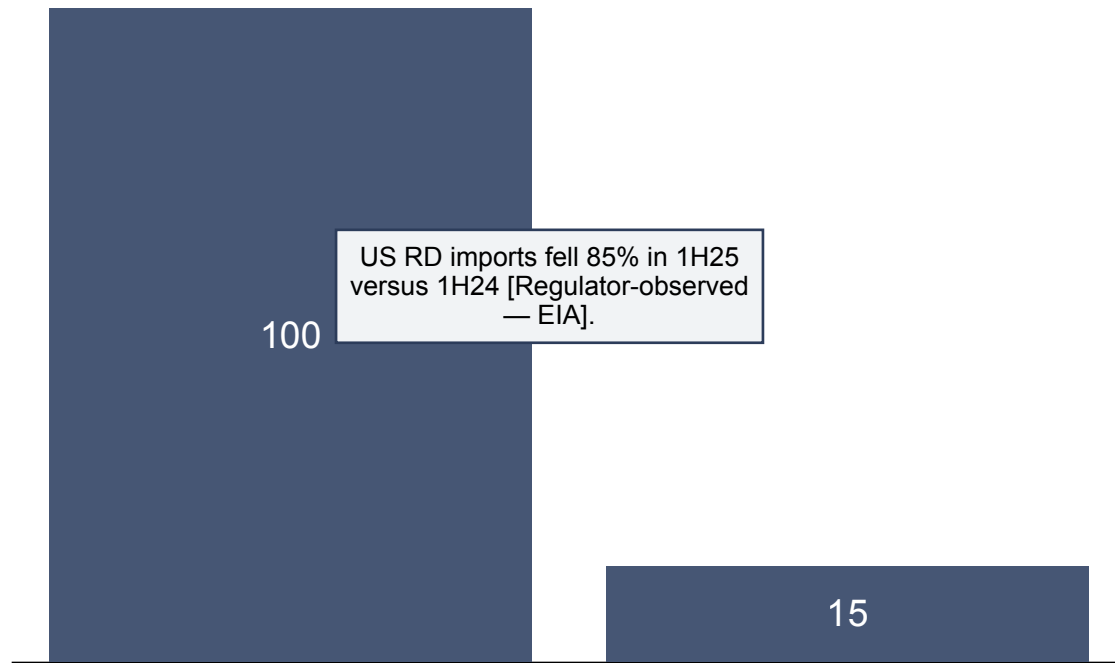
- China exported ~737 kt of UCO to Singapore in 2024 [Reported].
- Japan exports ~110 kt of its 500 kt UCO supply, mostly to Singapore [Regulator-observed — via USDA].
- Malaysian UCO supply is subject to allegations; the claim is contested [Reported, contested].
- Singapore's processors depend on collection and export decisions made in source countries.



In 2024 Singapore supplied almost all US renewable diesel imports — until the US changed its rules.

US renewable diesel imports before and after the 45Z rule

US renewable diesel imports [derived index; 1H24 = 100; Regulator-observed — EIA]



[derived index; 1H24 = 100; Regulator-observed — EIA]

Policy exposure

- Neste Singapore supplied 96% of US RD imports in Jan–May 2024 [Regulator-observed — EIA].
- The 45Z domestic-only rule changed the incentive for imported renewable diesel.
- Total US RD imports fell 85% in 1H25 versus 1H24 [Regulator-observed — EIA].
- Singapore-specific export changes are not published; the US-wide decline cannot be assigned to Singapore.

Policy exposure

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Singapore's bottleneck is not local land or labour — it is global feedstock and foreign credit rules.

Singapore can manage the land, utilities, pipelines and port that firms share. Feedstock availability and destination-market incentives remain offshore constraints.
Source: The Digest analysis.

Controlled by Singapore

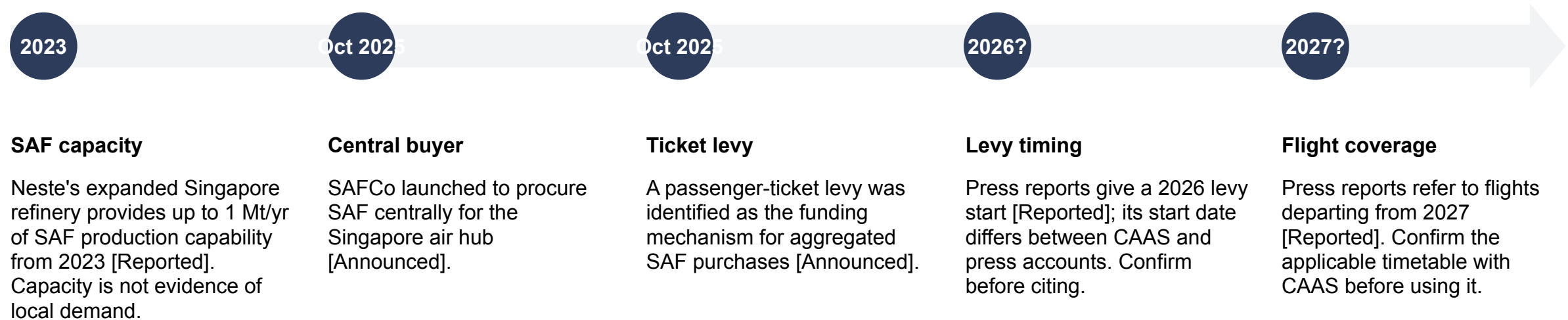
- JTC and EDB plan industrial land and shared corridors.
- Shared utilities and pipelines reduce the need for each tenant to build its own.
- The port handles imported inputs and outbound fuels; handling volume is not production.
- Expanding the local commons cannot guarantee access to used cooking oil.

Controlled elsewhere

- Used cooking oil is traded globally; collection and export choices at origin affect availability.
- California credits influence demand for fuel shipped from Singapore.
- US tax rules can change the value of supplying the US market.
- Foreign feedstock and credit rules can constrain utilisation even when local infrastructure is available.

Singapore is only now building demand of its own for the fuel it makes.

SAFCo aggregates aviation demand through a ticket levy [Announced], but the levy start date differs between CAAS and press reports. A central buyer can improve demand visibility without securing imported feedstock.



Hub assets change hands when parents change strategy.



Singapore — Bukom divestment

Shell sold Bukom to Chandra Asri and Glencore in 2025 [Reported], showing how parent strategy can reshape hub assets.



Rotterdam — project cancellations

Three of four announced biofuel projects in Rotterdam were cancelled [Reported]; parent commitment matters beyond site infrastructure.

Ask whether renewables are core to the parent: shared infrastructure does not prevent divestment or project cancellation. Source: reported company announcements.

Both hubs run on imported feedstock; Singapore's difference is a landlord that plans the commons.

What the comparison shows	Singapore and Rotterdam: coordination, inputs and project attrition		
- JTC owns Singapore's land and shared corridors; Rotterdam's port authority convenes firms. - EU SAF feedstock was 85% imported, with 61% from China [Regulator-observed — EASA]. - The Netherlands supplied 29% of EU SAF [Regulator-observed]; ~half of Rotterdam's announced tonnage was cancelled [Reported].	Dimension	Singapore	Rotterdam
	Coordinator	JTC owns and plans land and shared corridors.	Port authority convenes firms.
	Feedstock origin	Imported inputs.	Imported inputs; EU-wide SAF feedstock: 85% imported, 61% from China [date not specified; Regulator-observed — EASA].
	Renewable anchor	Neste.	The Netherlands supplied 29% of EU SAF [date not specified; Regulator-observed].
	Attrition evidence	No Singapore figure stated.	~Half of announced Rotterdam tonnage cancelled [date not specified; Reported].

Singapore's JTC plans shared land and corridors; Rotterdam's port authority convenes firms, while both hubs depend on imported inputs.

Japan is building SAF at its own refineries — using the kind of feedstock it now sends to Singapore.

Japan's refinery conversions could create domestic competition for UCO currently exported to Singapore. Announced capacity does not establish that export flows have changed.

Japan's emerging domestic pull

- Cosmo/Revo/JGC's Sakai facility targets ~30,000 kL/yr of UCO-based SAF; first delivery was Apr 2025 [Demonstrated].
- Refinery-site conversions totalling ~1.2 bn L were announced for 2028–29 [Announced].
- Japan exports ~110 kt of its 500 kt UCO, mostly to Singapore [Regulator-observed — via USDA].
- Whether new domestic SAF capacity keeps Japanese UCO at home remains a watch item, not a finding.



Leaders sit on the shared corridor with diversified feedstock and buyers; laggards depend on one origin or market.

Shared infrastructure is a site advantage; feedstock sourcing, buyer exposure and parent commitment determine how resilient each tenant is.

Observable | Leaders | Laggards | Structural or execution?

Observable	Leaders	Laggards	Structural or execution?
Site	On JTC's shared pipeline and utility corridor	Standalone utilities	Structural
Feedstock origin	Diversified, audited	One dominant origin	Execution
Destination exposure	Several policy markets plus bunkering (destination channel, not production)	One market's credit rules	Execution
Parent commitment	Renewables are core	Non-core, open to divestment	Execution

Singapore's fuels hub sits between two policies it does not control.

	Cluster reading	Company reading
Feedstock	China and Japan supply used cooking oil to Singapore. Collection and export choices in those countries shape input availability.	Neste chose to source imported feedstock for its Singapore operation. Its sourcing decisions remain exposed to origin-country export choices.
Demand	California credits and US tax rules influence destination demand. Singapore's shared infrastructure cannot determine foreign eligibility rules.	Neste chose to serve policy-driven markets abroad. Foreign credit and tax changes can alter the value of those sales.
What explains the plant	State-planned land, utilities and corridors made industrial co-location feasible. Those commons enable the plant but cannot insulate it from offshore risks.	Neste's company choice, rather than the cluster, may explain the plant [Library I-09 alternative]. That interpretation still depends on Singapore's shared commons; offshore risks remain.

“The commons made the plant possible; the risks sit offshore.” Whether cluster design or Neste's strategy best explains the investment, neither controls feedstock exports or foreign demand rules.

Use Singapore's commons, but underwrite the feedstock and policy risks the hub cannot control.

International operators

- Engage JTC and EDB for shared corridors.
- Price feedstock-origin risk.
- Price destination-policy risk.

Investors and lenders

- Request actual plant utilisation.
- Separate capacity from production.
- Exclude bunker throughput from production.

Obligated parties

- Check your import eligibility rules.
- Test credit treatment before contracting.
- Singapore supply depends on your rules.

Watch list

- Confirm SAF levy start and SAFCo contracts.
- Track China's UCO share.
- Track Japan's refinery conversions.

Shared infrastructure lowers local entry friction; it cannot guarantee imported inputs or access to policy-driven buyers. Source: The Digest analysis.