

The Digest's 2026 Multi-Slide Guide to the Pacific Northwest SAF Cluster

Washington burns 848 million gallons of jet fuel a year and hosts world-class buyers and labs. It makes about 50,000 gallons of SAF. The missing piece is an asset the next project can inherit.

THE CLUSTER THAT ISN'T YET

What missing component would turn the Pacific Northwest's demand, research capability, policy and announcements into an operating SAF production cluster?

THE SCALE CONTRAST

848 million

gallons of jet fuel (Washington, 2024)

VS

about 50,000

gallons of SAF (Twelve, reported)

i

Twelve is first-commercial or demonstration scale.

THE PACIFIC NORTHWEST EVIDENCE

1

Demand vs. production
 848M gal jet fuel (WA, 2024) vs. ~50k gal SAF (Twelve).
 No commercial production in WA (Jan 2026).

2

The gated credit
 \$1.00–\$2.00/gal (RCW 82.16.187) but needs 20M gal/yr (400× current output). SB 5932 saw no committee action (2026).

3

The announced pipeline
 SkyNRG (50M gal/yr), NEXT (750M gal/yr), BP (10M gal/yr) — all announced, none operating.

4

Falling credit value
 \$91.23 (2023) → \$45.92 (2024) → \$24.84 (2025, through July).

5

Institutions without production
 WSU–PNNL (2008), PNW Hydrogen Hub (terminated Oct 2025), Cascadia Accelerator (launched Jan 2026; 1B gal target by 2035).

THE BIGGER PICTURE

THE PACIFIC NORTHWEST (PRIMARY)

Demonstrates
 ✓ Demand, research and policy without production interdependence.

Does not demonstrate
 ✗ Forest-residue or hydropower cost advantage — none quantified.

CALIFORNIA (COMPARATOR)

Demonstrates
 ✓ Demand basin gains production with convertible assets.

Does not demonstrate
 ✗ Region could replicate it — lacks comparable refinery conversions.

GULF COAST PORT ARTHUR (CONTRAST)

Demonstrates
 ✓ What inheritance looks like (SAF unit added to existing plant for ½ of US capacity).

Does not demonstrate
 ✗ A cost benchmark for the Pacific Northwest.

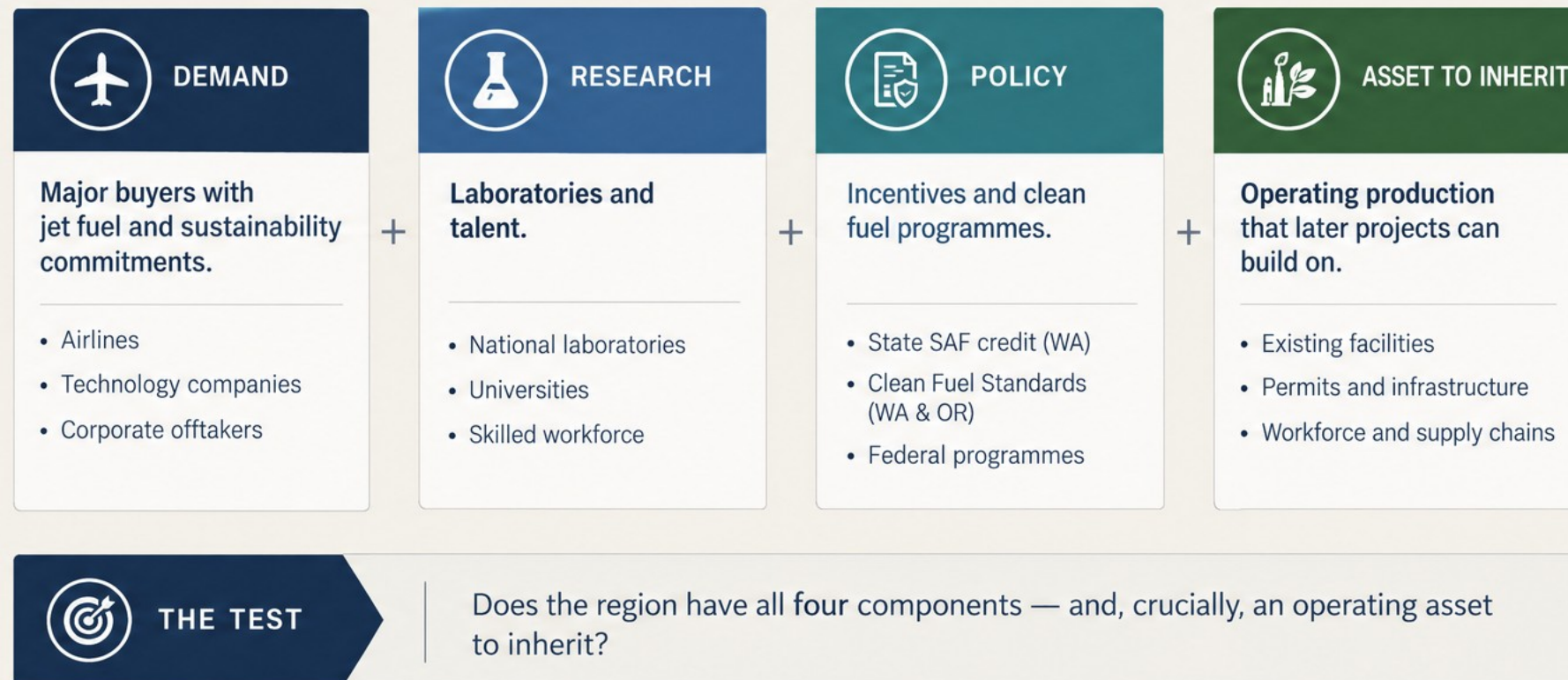
! Keep visible: Twelve is first-commercial or demonstration scale. | 400× gap = 20 million ÷ 50,000.

A cluster needs four things, not three

The Pacific Northwest's SAF cluster isn't just about production. It needs four components to work — and a test to show it's on track.

THE CLUSTER ANATOMY

Analytical illustration



Sources: Washington State Standard, Jan 2026; Twelve / gasworld, 2026 (company-reported); US EIA, May 2025; Washington State Legislature; Hydrocarbon Processing, Sept 2026; Spokesman-Review, 2025; OPB, 2024; Washington State Standard, 2026; Washington Department of Ecology (2023); IETA, Sept 2025; WSU; S&P Global / Lynnwood Times, Oct 2025; Alaska Airlines, Jan 2026.

Keep visible: 2035 figure is an announced target, not a forecast.

Demand is real: Washington burns 848 million gallons of jet fuel a year

JET FUEL DEMAND (WASHINGTON, 2024)

848 million gallons

of jet fuel used in Washington in 2024.

OPERATING SAF PRODUCTION
(TWELVE, MOSES LAKE)

~50,000 gallons

per year (Twelve's AirPlant One).

ANCHOR BUYERS AND PARTNERS

**Alaska
Airlines**

major airline
buyer

Boeing

aerospace
& defense

Amazon

technology
and logistics



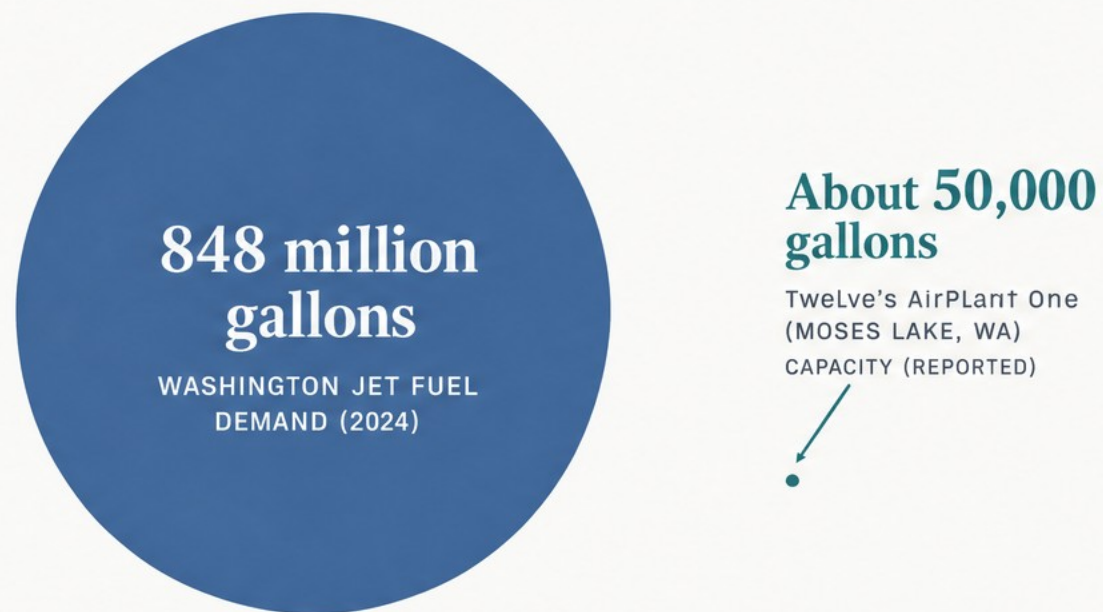
**Demand and technology buyers
are concentrated in the region.**

THE BOTTOM LINE

**The Pacific Northwest has real jet fuel demand and world-class buyers —
but almost no operating SAF production.**

Production is not: about 50,000 gallons against 848 million

ANNUAL JET FUEL DEMAND vs. SAF CAPACITY (PROPORTIONAL AREA)



The 848 million vs. 50,000 gallon gap is about 17,000×, or 400× the 20 million gallon credit trigger (see slide 6).

The Pacific Northwest's only operating producer is about 50,000 gallons a year.

- The region's only operating SAF producer, Twelve's AirPlant One at Moses Lake, WA, is reported online with capacity of about 50,000 gallons a year.
- A January 2026 report found no commercial-scale SAF production in Washington.
- EIA's May 2025 list of US SAF producers included none in Washington or Oregon.
- Twelve is first-commercial or demonstration scale; capacity is company-reported.

! KEEP VISIBLE

The Pacific Northwest has demand, research and policy — but almost no operating production.

The research base is deep, and decades old

1. WSU-PNNL

Bioproducts, Sciences & Engineering Laboratory

RICHLAND, WA

OPENED

2008

FOCUS

Biofuels, bioproducts, materials and engineering research

2. CASCADIA SUSTAINABLE AVIATION ACCELERATOR

Launched January 2026

WITH ALASKA, BOEING, AMAZON, WSU AND PNNL

Alaska

Airlines and aviation buyer

Boeing

Aerospace and demand

Amazon

Technology and logistics

WSU & PNNL

Research and innovation

\$10 million

philanthropic funding

\$10 million

state funding

Target: up to **1 billion** gallons of SAF by **2035**

3. KEY TAKEAWAY

Knowledge asset exists; it is not a production asset.



WORLD-CLASS RESEARCH BASE

People, science, innovation

NO OPERATING PRODUCTION

No commercial-scale SAF and no convertible asset to inherit

The credit nobody can claim: a 20-million-gallon trigger

Washington's alternative
jet fuel credit is worth

\$1.00–2.00
a gallon

(RCW 82.16.187, enacted 2023,
as SB 5447)

It cannot be claimed until
Ecology verifies at least

20 million
gallons a year

of operating in-state capacity.

SB 5932, which would allow
claims from 2031 regardless,
**saw no committee
action in 2026.**

! KEY POINTS

- **Credit value:** \$1.00–2.00/gal (RCW 82.16.187, enacted 2023).
- **Trigger:** ≥ 20 million gal/yr of in-state capacity (verified by Ecology).
- **SB 5932:** claims from 2031 regardless; no committee action in 2026.
- **400x gap:** $20,000,000 \div 50,000$ (a calculation).

The 20-million-gallon trigger: a 400x gap (a calculation: $20,000,000 \div 50,000$)

Current output
(approx.)

~50,000
gallons/yr

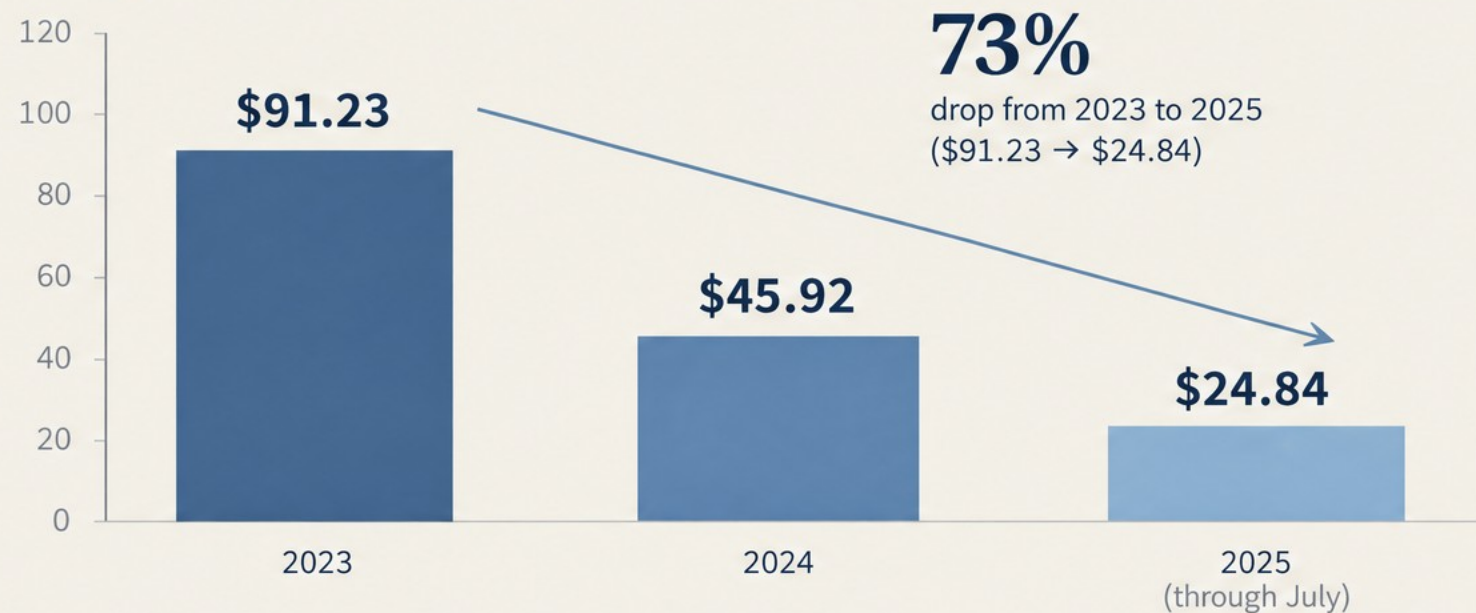
Twelve's AirPlant One
(first-commercial or
demonstration scale)

Credit trigger
20,000,000
gallons/yr

400x

A falling credit: Washington Clean Fuel Standard prices dropped by about 73%

Average credit price (USD per gallon)



Policy value is weakening as the region waits for supply.

! Keep visible: Washington's credit is \$1.00–2.00 per gallon, but cannot be claimed until 20 million gallons of in-state capacity is operating (about 400× current output). SB 5932, which would allow the credit from 2031, had no committee action in 2026.

Announced, not operating: the pipeline is all paper

THE PIPELINE



THE ANNOUNCED PROJECTS

SkyNRG Project Wigeon PORT OF WALLA WALLA, WA	50M gal/yr jet fuel and SAF	\$600–800m estimated cost	• Key permits in place • No final investment decision • Start date slipped from 2029 to 2031
NEXT Renewable Fuels PORT WESTWARD, OREGON	~750M gal/yr renewable diesel and SAF	N/A estimated cost	• Still in federal permitting
BP Cherry Point CHERRY POINT, WA	10M gal/yr SAF	N/A estimated cost	• Indefinite pause

 **KEEP VISIBLE:** All announced, none operating. Announced projects are not capacity.

KEY TAKEAWAYS

- 

All announced, none operating.
The pipeline is real, but there is no production today.
- 

Not capacity.
Announced projects do not add to current or near-term output.
- 

Slippage and pauses.
Projects have slipped, paused or are still in permitting.
- 

The gap remains.
From announcement to operation, the region still needs a convertible asset to inherit.

The slips and pauses: momentum has been lost

A timeline of setbacks

Announced projects, policy and infrastructure have all slowed, paused or been terminated.



What inheritance looks like: Port Arthur, Gulf Coast

SAF UNIT ADDED
TO EXISTING RENEWABLE
DIESEL PLANT FOR

\$315 million

PROVIDES ABOUT

half

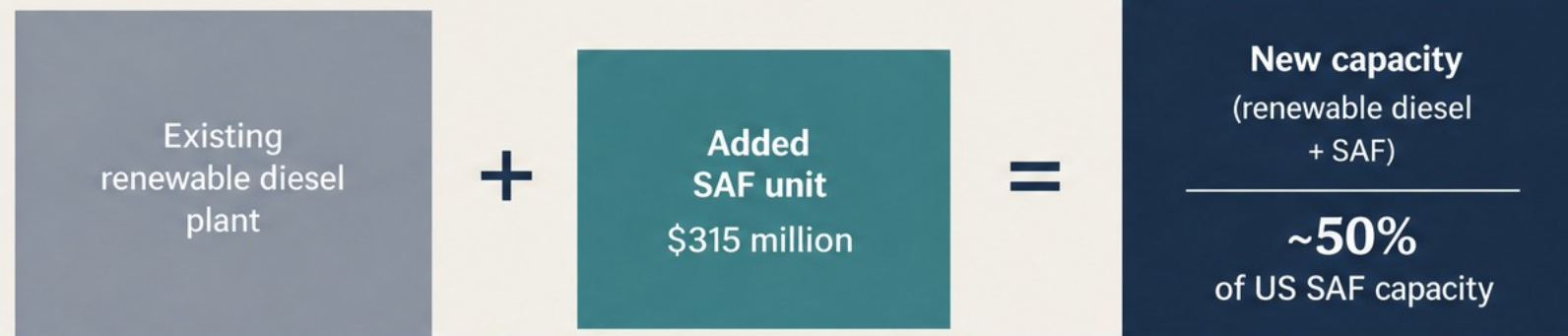
OF US SAF CAPACITY



WHAT THIS SHOWS

What inheritance looks like — not a cost benchmark for the Pacific Northwest.

THE CONCEPT



Analytical illustration

THE CONTEXT

A SAF unit was added to an existing renewable diesel plant in Port Arthur, Texas, for \$315 million, providing about half of US SAF capacity.

THE TAKEAWAY

This shows what inheritance looks like — a line in the sand for later projects, not a cost benchmark for the Pacific Northwest.

THE CAVEAT

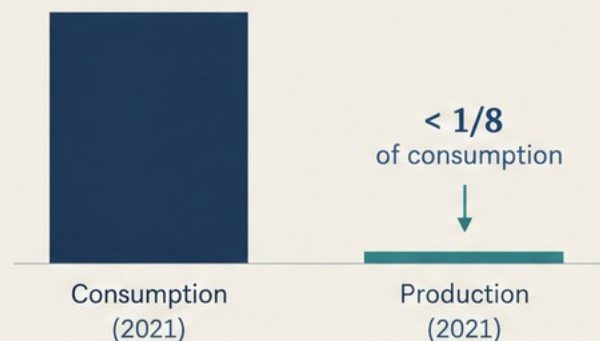
The Gulf Coast example is a different market, with existing infrastructure and a different set of economics and policy conditions. It does not set a price or cost benchmark for the Pacific Northwest.

A demand basin that became a producer: California

CALIFORNIA CONSUMED MORE THAN

8×

THE RENEWABLE DIESEL IT PRODUCED
IN 2021.



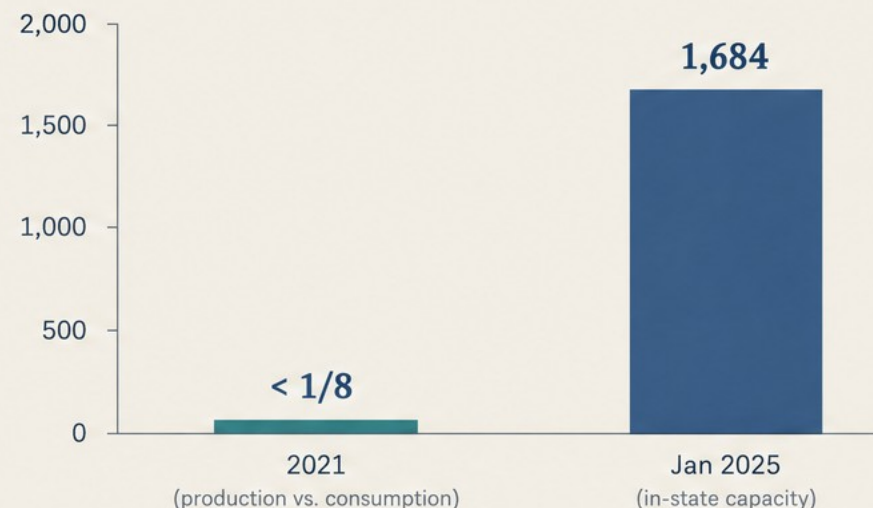
CONVERTED REFINERIES

- 1 Phillips 66 Rodeo**
about 800 million gal/yr
- 2 Marathon/Neste Martinez**
730 million gal/yr

1,684 million gal/yr

IN-STATE CAPACITY BY JANUARY 2025

CALIFORNIA RENEWABLE DIESEL & SAF CAPACITY
(million gallons per year)



**A demand basin gains production
when it has convertible assets.**

California's existing refineries could be converted to renewable diesel and SAF, turning a demand basin into a producer.



**The Pacific Northwest could not
replicate it.**

The region lacks comparable refinery conversions.

The missing component: an inheritable production asset

The first three components are present

Demand, research and policy give the Pacific Northwest a strong foundation.



Demand

Washington used about 848 million gallons of jet fuel in 2024, with major aviation and technology buyers.



Research

World-class labs and universities provide a deep technology and talent base.



Policy

Clean fuel programmes in both states and a generous Washington SAF credit (gated at 20 million gallons a year).

The cluster anatomy

ANALYTICAL ILLUSTRATION



Demand

Major aviation and technology buyers



Research

National laboratories, universities and talent



Policy

Clean fuel programmes and state SAF credit



Production asset

Convertible or operating asset to inherit

3 OF 4 COMPONENTS PRESENT

MISSING

The Pacific Northwest is a pre-cluster, not an emerging cluster

It has the soft components — but almost no operating production and no convertible asset that later projects could inherit.



No forest-residue or hydropower cost advantage is claimed

The region does not demonstrate a quantified cost advantage from forest residues or hydropower.



The fourth component is absent

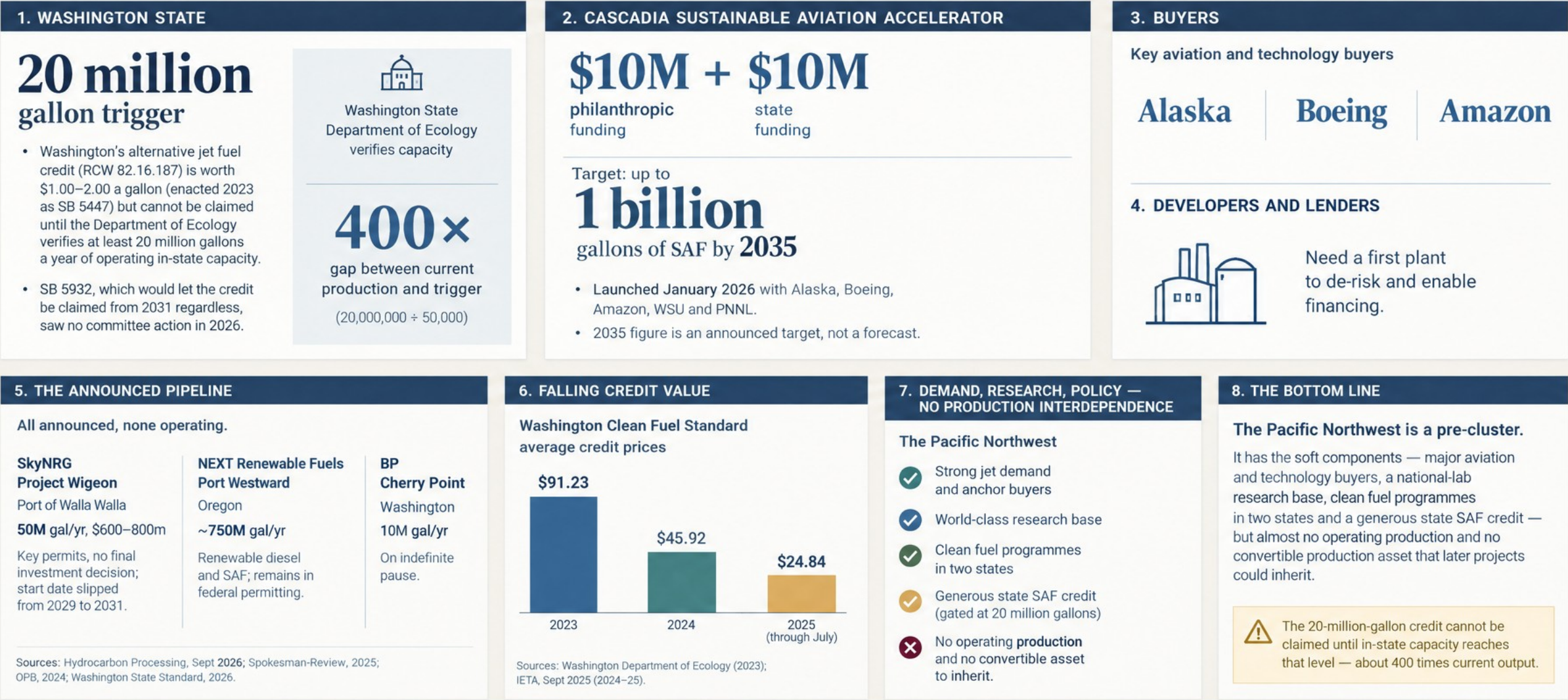
There is no operating production and no convertible asset for future projects to inherit.



Keep visible

The Pacific Northwest is a pre-cluster, not an emerging cluster, and the missing component is a convertible or operating production asset.

Who can act: Washington's trigger design is the lever



Decision test: five questions before backing a Pacific Northwest SAF project

1 What existing asset would this project inherit here, or would it build everything?



Existing asset to inherit



Build everything

KEY QUESTION

Is there a convertible facility, site, infrastructure or supply chain asset the next project can inherit — or would it have to build everything from scratch?

2 Can the incentives it is counting on actually be triggered, and when?



KEY QUESTION

Will the state and federal incentives be available, what are the conditions, and when can they be claimed?

3 Is the offtake commitment matched by a credible first production asset?



KEY QUESTION

Does the offtake agreement line up with a real, credible first plant — not just plans or announcements?

4 Would the same project be cheaper on a convertible site elsewhere?



KEY QUESTION

Could the project achieve a lower cost on a site with convertible assets, existing infrastructure or a stronger supply chain — and how does that compare?

5 What single first plant would let the next project inherit something?



KEY QUESTION

Which first plant would create the assets, permits, supply chain and operating experience the next project could inherit?



Keep visible: The Pacific Northwest has demand, research and policy — but almost no operating production and no convertible asset to inherit.