ANTIMONY INPUT STRATEGY • 2027–2031

Qualify supply first. Fund a five-month buffer with an escalation gate.

$2.30m	4.35 t	0.0 t
Stock capital, 5 months	2027 severe residual; alt qualified	2030 severe residual

RECOMMENDED ACTION — **Qualify suppliers, procure approved stock, and negotiate conditional domestic offtake**

MODELED PROCUREMENT CASE | Assumed annual demand: 100 metric tons of contained antimony

Material specification and refining origin determine usable supply

USGS antimony market indicators show national dependence; procurement exposure is defined by grade, conversion and end use.

BUYER-RELEVANT PHYSICAL SUPPLY CHAIN

ORE	CONCENTRATE	REFINED FORM	QUALIFIED INPUT
Antimony-bearing mineral	Beneficiation and assay	Metal / oxide / trisulfide	Approved grade and batch release

Trace the mine, smelter/refiner and final chemical form. A second importer can share the same upstream bottleneck.

SECTOR BENCHMARKS

91% 2025 net import reliance

55% China's 2021–24 share of metal + oxide imports

$25/lb 2025 average metal price

WHY PRICE AND FORM MATTER

USGS metal price rose from $10.24/lb in 2024 to $25/lb in 2025. The model prices contained Sb at this metal benchmark; defense-qualified trisulfide or oxide requires separate supplier bids and conversion factors.

Import licensing persists while domestic production and processing mature

Government financing supports project development; usable buyer-grade supply depends on a separate sequence of commercial milestones.

IMPORT CONTROL

Export eligibility is an upstream sourcing gate

China: antimony licensing under No. 33/2024. U.S.-specific Clause 2 suspension ends 27 Nov 2026; Clause 1 covers U.S. military uses.

MOFCOM 33 46 / 72

STIBNITE / PERPETUA

Commercial domestic deliveries remain conditional

EXIM lists $2.906bn as authorized. Perpetua targeted 2029 operations; finance closing, construction, off-site conversion and offtake remain gates.

EXIM Perpetua 10-Q

PROCESSING PATH

Pilot-scale milestones establish capability

INL commissioned an approximately 1 ton/day ORE-processing pilot in July 2026. U.S. Antimony reports $16.2m obligated of a $27m DPA award.

INL USAC 10-Q

PROCUREMENT IMPLICATION Confirm source origin, refinery, legal end use, product grade, testing and contractual delivery before awarding volume.

Five-month balanced sourcing meets the modeled 2030 service and cash gates

2030 severe stress: 8-month interruption; assumed buyer demand 100 metric tons Sb/year; 15% of annual volume assumed domestically deliverable.

SOURCING POLICY	BUFFER	RESIDUAL LOSS	STOCK CAPITAL	ANNUAL PREMIUM + CARRY
Domestic-led	2 months	**22.1 t**	**$0.92m**	**$768k**
Diversification-led	3 months	**16.7 t**	**$1.38m**	**$773k**
Inventory-led	9 months	**0.0 t**	**$4.13m**	**$703k**
Balanced / conditional	5 months	**0.0 t**	**$2.30m**	**$813k**

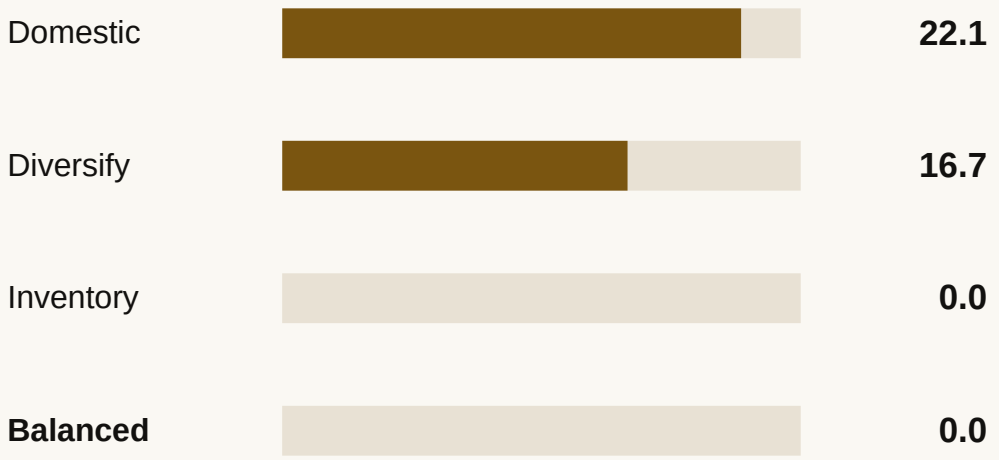
Trade-off: Balanced saves $1.84m of stock cash against inventory-led, with $110k higher modeled annual premium/carry.

The balanced policy releases cash while covering the modeled 2030 supply loss

Two buyer constraints determine the choice: residual shortfall ≤5 t and starting inventory cash ≤$3m. Both thresholds are illustrative.

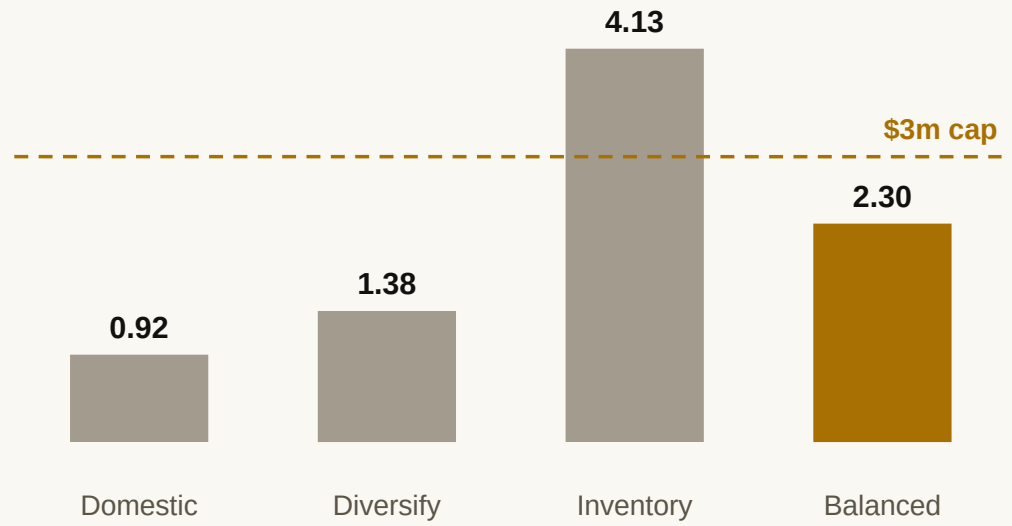
SEVERE UNFILLED VOLUME | t Sb

Illustrative 2030 supply loss after stock and emergency cover



CASH TIED UP IN INVENTORY | USD m

Illustrative $3m stock capital ceiling



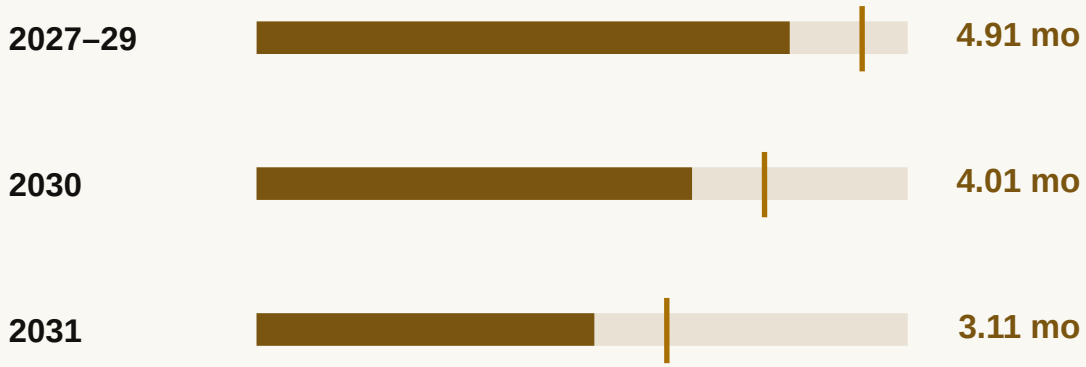
Incremental annual scenario expense: $813k balanced vs $703k inventory-led. Stock acquisition principal is tracked separately.

Five months clears the eight-month severe test; weak alternative supply reverses it

Required inventory is calculated from gross disruption, emergency-cover assumption, buyer continuity tolerance and material demand.

MINIMUM BUFFER UNDER EIGHT-MONTH SEVERE TEST

Months of inventory required



Filled bar: minimum buffer to keep unfilled demand at or below 5 t

Vertical marker: inventory needed for zero modeled shortfall

REVERSE THE DECISION WHEN...

2027 alternative unqualified — **16.5 t unfilled**

Entire demand defaults to incumbent lane

Alt-supplier curtailment reaches 75% — **5.7 t unfilled**

Reassess origin independence and buffer sizing

Alt exposure + domestic delay — **12.45 t unfilled**

Escalate inventory and add qualified sources

Disruption persists 12 months — **15.15 t unfilled**

Pre-agree contingencies for extended interruption

Decision: hold five qualified months; pre-price a sixth-month option subject to Finance approval

Procurement qualifies the material; Finance stages inventory; Strategy gates offtake

Decision authorities are tied to source evidence, buyer acceptance testing, contract enforceability and measurable supply availability.

2027	2028	2029	2030	2031
PROCUREMENT	**ENGINEERING**	**STRATEGY + LEGAL**	**OPERATIONS**	**FINANCE + RISK**
Map Tier 2/3 origin, grades, volume and lead time; secure qualified stock offers.	Qualify second processing/refining lane and establish alternate-source framework.	Review Stibnite financing, full construction, offsite processing and terms.	Recognize domestic share only after conforming delivery and production acceptance.	Reprice stock, test ten/twelve-month disruptions, and reset material cover.
GATE: accepted assays + storage plan	**GATE: independent supply path**	**GATE: enforceable offtake clauses**	**GATE: delivered qualified lot**	**GATE: annual capital/service review**

FIRST 90 DAYS | Procurement builds qualified BOM + supplier map; Engineering approves forms; Finance verifies stock cost and cash ceiling.

Public records establish exposure; editable buyer assumptions govern the decision

Evidence checked 4 November 2026 · Model and memo specify source dates, classifications and formula dependencies.

ORIGINAL SOURCES | CLICK TO OPEN

01	USGS MCS 2026 / antimony	06	EXIM: authorized financing register
02	SMPT material evidence register	07	Perpetua Form 10-Q (June 2026)
03	MOFCOM No. 33 (export licensing)	08	United States Antimony Form 10-Q
04	MOFCOM No. 46 (military-use rule)	09	Idaho National Laboratory pilot
05	MOFCOM No. 72 (temporary suspension)	10	DLA Strategic Materials / stockpile

MODEL CONTROL PANEL

Demand	100 t contained Sb/year (assumed)
Price	$25/lb 2025 metal proxy
Severe duration	8 months
Emergency cover	10% residual deficit
Buffer	5 months provisional
Annual carry	12% of stock value
Service / capital	≤5 t / ≤$3m
Domestic ramp	0% to 2029; 50% of target 2030

The producer, volume, procurement prices, risk limits and alternative-supplier terms are illustrative. Detailed decision tests and source classifications are in the companion workbook.