

# From Strategic Option to Subsidy Ratchet?

*Industrial policy in the Nyrstar Port Pirie and Hobart case*

Australia's A\$240 million smelter support programme

Christopher Findlay and Hein Roelfsema

# A small strategic by-product, bundled with a large distressed host

Domestic location is neither necessary nor sufficient for resilience. A security label can weaken the standard tests of additionality, cost and instrument choice — while the strategic output may depend on a much larger, loss-making operation.

|                               |                                                                                                                                                                                                                   |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>The strategic output</b>   | Antimony — critical for defence and electronics, ~90% of the supply chain concentrated in China, which imposed export controls from 2024. Port Pirie can produce up to ~5,000 t/yr, about 15% of world supply.    |
| <b>The host it depends on</b> | A lead multi-metals smelter (Port Pirie) and a zinc smelter (Hobart), losing a reported ~A\$15 million a month from energy costs, ageing assets and commercial pressures — unrelated to antimony.                 |
| <b>The policy trap</b>        | Supporting the by-product can be used to justify supporting the entire commercial operation. The by-product link is both the reason broad support can be legitimate and the test that limits how broad it may be. |

## THE INTERVENTION

# A\$240 million across two packages — and a working antimony stream

**A\$240m**

Total announced support  
(A\$135m Aug 2025 + A\$105m Jun 2026)

**~1,400**

Direct jobs protected across  
Port Pirie and Hobart

**Nov 2025**

First antimony metal cast;  
first commercial shipment Feb 2026

## SEQUENCE OF EVENTS

|                 |                                                 |
|-----------------|-------------------------------------------------|
| <b>Mar 2025</b> | Hobart cuts output 25%; strategic review begins |
| <b>Aug 2025</b> | First package: A\$135m (Commonwealth, SA, Tas)  |
| <b>Nov 2025</b> | First antimony metal cast at Port Pirie         |
| <b>Feb 2026</b> | First commercial-grade antimony shipment        |
| <b>Jun 2026</b> | Second package: further A\$105m through 2026    |

# Three lenses combined with process tracing and a coded media corpus

## Second-best economics

When several distortions exist at once, correcting only one need not improve welfare. Support may be justified — but only against the best feasible alternative, not a first-best ideal.

## Real-options reasoning

Under uncertainty and irreversibility, keeping an option open has value. A bridge buys time to learn and preserve capability before committing.

## Political economy

Concentrated, visible gains face diffuse costs. Intervention itself creates sunk assets and a coalition that raises the political cost of exit.

*The central contribution is dynamic: an intervention changes the future constraint set it is later judged against.*

## FINDING 1

# The first package was a defensible second-best bridge

Facing irreversible closure, a short decision horizon and no reserve, alternative material or new refinery available in time, government bought time. The pilot succeeded: antimony was cast, qualified and shipped.

### The by-product link cuts both ways

- It strengthens the case — if antimony genuinely cannot be made without a working lead circuit, funding that circuit is the only way to obtain the metal, not a reluctant compromise.
- It sets the limit — the case justifies only the minimum host configuration technically required, not the entire commercial operation.

### WHAT OPTION VALUE REQUIRES

Not confidence that the whole system survives — only that expected gains from improved choice and temporary availability exceed the cost of keeping the option open.

*A static comparison of monthly losses against metal prices misses what the bridge actually bought: avoided irreversible exit, preserved specialised people and equipment, and information.*

## FINDING 2

# Why an option can harden into an open-ended subsidy

The same bridge that preserved capability also created sunk public assets and strengthened the coalition for continuation. Success and failure both argue for more support — unless a stopping rule exists.

### Information asymmetry

Nyrstar knows more about losses, related-party terms, engineering dependencies and closure timing than government does.

### No public stopping rule

No cumulative ceiling, no minimum strategic-delivery obligation, no audited host cost, no automatic taper when the Strategic Reserve begins.

### The electricity wedge

A commissioned study puts firmed renewable power at ~A\$66/MWh against ~A\$117/MWh privately — a general grant pays the ~A\$51/MWh gap without removing it.

### Related-party transactions

Reported losses depend partly on prices set within the Trafigura group; support lacks the arm's-length benchmark, audit and clawback the tax incentive already builds in.

*The first package reads as rational option purchase. The second marks the point where option preservation and commitment escalation become hard to separate.*

## Match the instrument to the diagnosis — an explicit ordering

No single grant can be presumed to solve the whole problem. Ranked most to least preferred for securing Australian antimony:

|          |                                            |                                                                                                                                                               |
|----------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1</b> | <b>Remove the domestic distortion</b>      | Reform electricity-market design so any efficient processor faces a lower cost (provisional on confirming it is a policy distortion, not a real system cost). |
| <b>2</b> | <b>Physical stockpile + allied offtake</b> | Forward cover that delivers metal during an embargo, when a financial hedge cannot.                                                                           |
| <b>3</b> | <b>Cooperative pooled reserves</b>         | Mutual-supply with partners such as Japan — cheaper, and it lowers the payoff to coercion.                                                                    |
| <b>4</b> | <b>CMPTI, used conditionally</b>           | Rules-based 10% offset from 2027 — below the top three (late, capped) but far superior to a discretionary grant.                                              |
| <b>5</b> | <b>Discretionary operating grant</b>       | Defensible only as a narrow, time-limited bridge where nothing higher-ranked can be put in place in time.                                                     |

## Buy a bounded option, not a business – three tests

### What is bought

Define the quantity, grade and delivery conditions of strategic antimony and the specific host assets required. Split payment into delivered output, guaranteed availability and verified milestones — not a lump sum around the firm's aggregate loss.

### How it is governed

Independently verify the minimum host; benchmark related-party prices at arm's length; make payment conditional on environmental performance; cap cumulative exposure; require open-book audit and clawback. Name the reserve, allied offtake and CMPTI that will take over.

### How it ends

Publish an ex ante stopping rule: a decision date, an efficient host cost, a minimum strategic availability, required private co-investment and a maximum residual payment. If the test fails, shift to managed transition and the parallel regional plan.

# Australia and Japan: complementary, not symmetric

Pooling turns Port Pirie's output into part of an international option portfolio — and, by making allied cover visible, changes the dominant supplier's incentives.

## Australia brings

Resources, processing sites and the potential to supply qualified antimony metal.

## Japan brings

A major user with little domestic antimony, deep stockpiling experience and institutions that finance projects and run reserve disciplines.

**4 May 2026 — Joint Declaration on Economic Security Cooperation.** Leaders Albanese and Takaichi made critical minerals a core pillar of the relationship, backed by up to A\$1.3 billion in Australian project finance (Critical Minerals Facility and Export Finance Australia) and coordinated investment — a concrete route from Port Pirie to an allied option portfolio.

## What an arrangement could specify

Target cover, grades, financing, destination rights, audits and release triggers — with joint procurement cutting redundant stocks.

## Why it pays both sides

Australia gains demand certainty; Japan gains a non-Chinese channel without rebuilding a host smelter of its own.

Visible allied cover reduces the payoff to an export-control threat — the strategic effect, not just the metal secured.

# When cooperation with China is feasible

China refines most of the world's antimony and has restricted exports since 2024. But capacity to coerce is not the same as a standing incentive to. A dominant supplier prefers to keep trading under three conditions — each of which allied cover and a reserve are designed to bring about.

1

## Using the lever destroys it

A visible embargo speeds substitution, recycling and rival investment among buyers, eroding China's own future market and revenue.

2

## Reciprocal dependence

A supplier dominant in one material is often a dependent buyer in others — mutual exposure that makes restraint attractive and gives buyers something to bargain with.

3

## Targets can wait it out

With stocks and allied alternatives, an interruption is a manageable, temporary cost, not acute scarcity — so the leverage is low-value and short-lived.

**The 2024-26 episode fits the logic.** The US-specific ban was suspended (to 27 Nov 2026) while licensing and the military-end-user ban persist; exports run through an 11-firm whitelist; and prices fell from about US\$27.50 to US\$14.50 a pound as buyers substituted and new supply arrived — coercion eroding its own value.

**The aim is not to exclude China but to change its incentives** — making continued supply the more attractive course for a supplier otherwise tempted to weaponise its position.

# A research agenda: making the argument testable

The case is a theory-guided study, not a general model. Its wider value is in questions it poses for research — above all, whether its core ideas can be defined precisely enough to measure and check against evidence.

## Does the ratchet generalise?

Whether support creeping upward over time appears in other countries and industries — especially other cases where a small strategic metal is bundled with a larger, struggling operation.

### HOW TO TEST IT

Test: code successive support packages for spending caps, tapers and delivery obligations, and check whether their absence predicts which programmes grew and became permanent.

## Can narrative be measured?

Whether the link between a growing public story and a widening subsidy can be measured more rigorously than a single hand-picked set of media items allows.

### HOW TO TEST IT

Test: larger coded samples and side-by-side comparisons, rather than one purposive corpus.

## Can the concepts be operationalised?

Whether reachability, host-system interdependence and the ratchet — used here descriptively — can be turned into defined, measurable variables.

### HOW TO TEST IT

Test: score reachability by the output share that still reaches users under a defined disruption; measure interdependence as the cost share genuinely required for the strategic product.

The payoff is a framework others can apply: turning a plausible narrative about one plant into claims that evidence can confirm or refute.

## THE DYNAMIC LESSON

# Speed at entry, discipline at renewal

A temporary bridge can be justified precisely because uncertainty and irreversibility make delay valuable. Yet successful intervention creates sunk commitments, regional expectations and a narrative basis for continuation. Without an ex ante stopping rule, the instrument that preserves a strategic option can generate the very subsidy ratchet that makes exit progressively less credible.

Verified host interdependence · physical forward cover · international cooperation · contestable support · a published terminal test

*Christopher Findlay and Hein Roelfsema*