

SOVEREIGN BUILD CORPORATION

MORAL MAJORITY PARTY SBC COST AND BENEFITS

Phase 0 through Phase 3 — Full National Network

Financial Analysis | Route Economics | National Benefit Register

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This document is a working document. All figures are indicative pending formal engineering study.

WHAT'S NEW IN VERSION 11

Version 12 incorporates Pylon Design Rev 3. Phase 0 cost ~\$235M/km current rates / ~\$146M/km volume (was flat \$142M/km). Stage 1 freight viaduct alone ~\$119M/km current / ~\$74M/km volume — revenue from Month 20. Two pylon designs locked: Design B (37.5m) for Phase 0.1, 0, all spurs; Design A (50m) for Phase 1, 2, 3 with continental water conduit. Five sequential phases (0.1, 0, 1, 2, 3) plus parallel spur phases (0-2, 0-3). Inland is how we do it. Version 10 redefined Phase 0.1 as Newcastle → Muswellbrook spur (111.14 km, follows existing Hunter rail). Phase 0 spine includes Muswellbrook explicitly. Two-mode philosophy locked across all SBC infrastructure — single multimodal viaduct carries freight + maglev passenger + HVDC + services on every kilometre. Network total ~22,539 km. Inland is how we do it. Version 9 re-locked Phase 0 at 2,410.27 km / 0.8° max slope (was 2,423.29 km / 0.7° in v8) following refined Google Maps measurement. Network total updates to ~22,539 km. Version 8 added the Phase 0-3 Melbourne–Adelaide Spur (665.51km, 6° max slope, Adelaide Hills escarpment engineering). Adelaide and Melbourne both promoted to double-junction status. Seven of eight Australian capital cities now directly network-connected. Network total ~22,539 km (updated v9). Version 7 added Northern Spur and Brisbane Southern Link with Wellcamp as continental eastern hub.

Update	Detail
Pylon Design Rev 3 incorporated	Design B (37.5m, 1m water pipe) for Phase 0.1, Phase 0, all spurs. Design A (50m, full water conduit) for Phase 1/2/3 inland transcontinental.
Phase scheme unified: 0.1, 0, 1, 2, 3 sequential + 0-2, 0-3 parallel	Sequential phases follow strict revenue-funded order. Parallel spur phases (0-2 east coast, 0-3 second-wave) operate alongside the continental phases.
Cost framework Stage 1 + Stage 2	Phase 0 ~\$235M/km current / ~\$146M/km volume. Stage 1 freight viaduct alone ~\$119M/km current / ~\$74M/km volume. Mega Factory long-term ~\$25M/km → ~\$6M/km.
Phase 0.1 redefined: Newcastle → Muswellbrook 111 km	Was WSA → Newcastle 434 km estimate. Follows existing Hunter rail corridor. 15.1° max slope is existing rail reality.
Two-mode philosophy locked	SBC = single multimodal viaduct, four services every km. Inland Phase 0 route defends 1.85× crow-flies ratio by serving 3 capitals + farming corridor + Wellcamp hub on one spine.
Network total ~22,539 km	Was 22,862 km — Phase 0.1 reduced 434 → 111 km.
Phase 0 re-measured: 2,410.27 km / 0.8°	Refined Google Maps measurement. Newcastle confirmed as Phase 0.1 spur. Network total ~22,539 km.
Phase 0-3 Melbourne–Adelaide Spur locked	Melbourne → Ballarat → Bordertown → Adelaide. 665.51 km. Max slope 6° on Adelaide Hills escarpment. Best engineering precedent of three escarpment spurs (existing rail and road tunnels through Mount Lofty Ranges).
Adelaide and Melbourne → double junctions	Adelaide: SBC#2 + Melbourne–Adelaide Spur. Melbourne: Phase 0 + Melbourne–Adelaide Spur. Both upgraded from single-corridor terminus.

Update	Detail
Seven of eight capitals connected	Sydney, Melbourne, Brisbane, Perth, Adelaide, Darwin, Canberra. Only Hobart excluded (no rail bridge to Tasmania possible). Most complete capital-city rail coverage ever proposed in Australian history.
Phase 0-2 Northern Spur	Wellcamp → Cape Tribulation. 1,465.45 km. Max slope 1.5°. Zero tunnels. (carried from v7)
Phase 0-3 Brisbane Southern Link	Wellcamp → Brisbane → Port Macquarie. 537.03 km. Max slope 10.7° escarpment engineering. (carried from v7)
Wellcamp continental eastern hub	Quadruple junction: Phase 0 × SBC#1 × Northern Spur × Brisbane Southern Link. (carried from v7)
Network total ~22,539 km	Main network ~19,622 km (zero tunnels, max 3.5°) + four spurs ~2,917 km.
Eden spur 249.3 km	Phase 0-2 with escarpment caveat (carried from v6).
Phase 0 defined as Melbourne → Brisbane	2,410.27 km. Four hubs: Canberra, WSA, Wellcamp (main), Brisbane.
Intersection cities framework	13 major nodes — 5 Phase 0 hubs + 4 continental upgrades + 4 greenfield + new Adelaide/Melbourne double junctions.

THE THREE NUMBERS

Every media appearance. Every ministerial briefing. Every consortium meeting. Three numbers close the argument.

Number	HSRA	SBC Phase 0
Cost per km	\$474M/km — 1 service	\$235M/km current / \$146M/km volume — 6 services
Freight removed	Zero — passengers only, forever	100% from coastal corridor, Month 20
Revenue from	2037 at earliest	Month 20 of construction

18x better value per service delivered. Revenue 17 years earlier. Melbourne–Brisbane 25 years earlier.

CORRIDOR COST ANALYSIS — ALL CORRIDORS LOCKED

Seven major transcontinental corridors plus Phase 0.1 first-build section plus four east/south-coast spurs (Eden Phase 0-2, Northern Phase 0-2, Brisbane Southern Link Phase 0-3, Melbourne–Adelaide Phase 0-3). Total national network ~22,539 km. Main network (~19,622 km) zero tunnels, max 3.5°. Four spurs (~2,917 km) bring every east and south coast population centre into the network — three of the four require escarpment engineering flagged separately. All measurements Google Maps Advanced Measurements.

Corridor	Route	Length	Max slope	Tunnels	Cost at \$235M/km current / \$146M/km volume
HSRA (comparison)	Sydney–Newcastle coastal	168 km	6.5°	115 km	\$474M/km — 1 service
SBC Phase 0.1	WSA → Newcastle (first build)	111.14 km	2.3°	Zero	\$61.6B freight-first
SBC Phase 0	Melbourne → Canberra → WSA → Wellcamp → Brisbane	2,410.27 km	0.7°	Zero	\$342B full stack
SBC#1	Brisbane → Kalgoorlie → Perth	3,536 km	1.2°	Zero	\$502B full stack
SBC#2	Darwin → Alice → Port Augusta → Port Adelaide	2,633 km	0.6°	Zero	\$374B full stack
SBC#3	Albury → Mount Isa → Karumba	2,171.49 km	1.3°	Zero	\$308B full stack

Corridor	Route	Length	Max slope	Tunnels	Cost at \$235M/km current / \$146M/km volume
SBC#4	Mackay → Mount Isa → Port Hedland	3,173 km	3.5°	Zero	\$450B full stack
SBC#5	Derby → Kalgoorlie → Esperance	2,040.63 km	0.2°	Zero	\$290B full stack
SBC#6	Albany → Kalgoorlie → Alice → Mt Isa → Port Douglas	3,546.56 km	1.1°	Zero	\$504B full stack
Eden spur	Canberra → Cooma → Eden (Phase 0-2)	249.3 km	9.2°*	See *	~\$35B
Northern Spur	Wellcamp → Cape Tribulation via QLD coast (Phase 0-2)	1,465.45 km	1.5°	Zero	~\$208B
Brisbane Southern Link	Wellcamp → Port Macquarie via NSW north coast (Phase 0-3)	537.03 km	10.7°*	See *	~\$76B
Melbourne–Adelaide Spur	Melbourne → Ballarat → Bordertown → Adelaide (Phase 0-3)	665.51 km	6.0°*	See *	~\$95B
TOTAL	Complete national network	~22,539 km	3.5° main network*	Zero on main network*	~\$3.25T gross — commercially self-funded

* Eden spur (9.2°), Brisbane Southern Link (10.7°), and Melbourne–Adelaide Spur (6°) are Phase 0-2 and Phase 0-3 future freight corridors. Slope concentrated on Great Dividing Range / Mount Lofty Ranges escarpment descents — requires detailed engineering study (switchback, short tunnel, or alternative gentler descent route) in detailed design phase. Median slope 0° or 0.1° across each full corridor — most of each spur is near-flat. Adelaide Hills section has the strongest engineering precedent of three (existing rail and road tunnels through same range). Phase 0 and all seven main transcontinental corridors remain zero tunnels and max 3.5° (SBC#4). Northern Spur clean at 1.5° max — no escarpment engineering required.

Gross network cost commercially self-funded from freight + HVDC revenue beyond Phase 0. Government makes one investment — the Phase 0 freight line. Every subsequent corridor is funded from the revenue the freight line earns. Cost reduces progressively to \$6M/km at Mega Factory maturity across the full national network.

B1 FACTORY COST ANALYSIS — FULL WORKING

Component costs per bay

Component	Factory cost	Basis
2 footing pads	\$29,600	Concrete \$350/m ³ , reinforcement \$1,800/t
2 tapered legs	\$33,800	Circular taper formwork premium. PT strand.
HB1 freight transverse	\$94,500	8 PT anchorages × \$8,000 each
HB2 freight deck × 10	\$669,000	High volume repetitive. Factory efficiency.
2 connecting columns	\$5,944	Simple circular section.
HB3 maglev transverse	\$65,958	6 PT anchorages × \$8,000 each
HB4 maglev deck × 10	\$566,630	Lighter than HB2. Same efficiency.
HVDC arms × 6 (steel)	\$58,932	Fabrication + hot-dip galvanising
TOTAL PER BAY	\$1,524,364	40 bays/km × \$1,524,364 = \$61M/km factory

Installed cost per km — full build-up

Cost category	Cost/km	Notes
Factory components	\$61M/km	Full working above.
Site installation	\$10M/km	1,360 crane lifts/km.
Rail track (6 tracks)	\$10M/km	InfraBuild Newcastle supply.
Freight catenary	\$4M/km	Installed last.
HVDC cable and fittings	\$5M/km	6 bipolar lines.
Foundations	\$4M/km	Standard flat terrain.
Maglev guideway hardware	\$22M/km	Technology transfer. Highest uncertainty.
Engineering + PM	\$10M/km	15% of direct costs.
Contingency 25%	\$31M/km	—
GROSS INSTALLED	\$157M/km	Before corridor saving.
Less existing corridor saving	-\$15–25M/km	Zero land, existing surveys, rail supply route.
NET INSTALLED FULL B1	\$130–142M/km	vs HSRA \$474M/km
Freight-first only	\$25–50M/km	Without maglev guideway.

REVENUE MODEL — PHASE 0

Revenue streams from Day 1

Revenue stream	Source	Year 5 estimate
Freight tolls	Per tonne km charge to freight operators moving to SBC from road/coastal rail	\$2–4B/yr
HVDC transmission	Transmission tariff per GWh moved through 72GW HVDC lines	\$1–3B/yr
Maglev fares	Passenger fares — competitive with flying at ~\$80–120 per trip	\$500M–1B/yr
Water conduit tariff (B2)	Bulk water transport tariff — added when B2 upgrade complete	\$200–500M/yr
Gas/fibre tariff (B2)	Pipeline and fibre dark capacity lease	\$100–300M/yr
TOTAL PHASE 0 YEAR 5	All streams	\$3.5–8B/yr

Revenue from Month 20. Self-funding from Year 3. Phase 1 construction funded from Phase 0 revenue. Government makes one investment — the freight line. Everything else is commercially self-funded.

HSRA revenue comparison

Year	HSRA revenue	SBC Phase 0 revenue
2028	Zero — still planning	First freight revenue — diesel transitional
2029	Zero — tunnelling	HVDC partial revenue. Growing.
2031	Zero — tunnelling	Phase 0.1 WSA–Newcastle full operational.
2035	Zero — tunnelling	Melbourne–Brisbane complete. \$3.5–8B/yr.
2037	Stage 1A opens. Newcastle–Gosford only.	\$5–8B/yr. Phase 1 building.
2042	\$93B spent. BCR 0.2.	National network substantially complete.

INTERSECTION CITIES — THE ECONOMIC REDISTRIBUTION CASE

Every corridor junction is a city. Eleven major network nodes: four Phase 0 hubs plus Albury, four continental junction upgrades (Kalgoorlie, Alice Springs, Mount Isa, Port Augusta), and four new greenfield cities at remaining intersections. Every state with interior gets a major new inland node.

Existing cities upgraded to continental junction status

City	Corridors	Role
Kalgoorlie	SBC#1 × SBC#5 × SBC#6	TRIPLE JUNCTION. WA Goldfields. Gold, lithium, nickel. Becomes WA inland capital. Pop 30,000 today.
Alice Springs	SBC#2 × SBC#6	Double junction. NT centre. MacDonnell Ranges hub. Arrente country.
Mount Isa	SBC#3 × SBC#4 × SBC#6	TRIPLE JUNCTION. NW QLD. Gulf country continental capital. Access to six ports on five separate seas. Kalkadoon country — partnership from Day 1.
Port Augusta	SBC#2	SA hub. SBC#2 central junction. Future SA aviation hub potential. 35min to Adelaide by maglev.

Greenfield intersection cities — four new

City	Location	Corridors	Strategic opportunity
City 1	WA Pilbara / Great Sandy Desert	SBC#1 × SBC#4	Mining/solar/HVDC hub. Links iron ore country to continental grid.
City 2	NT south Tanami	SBC#4 × SBC#5	Cattle + solar + gas hub. Central-north desert capital.
City 3	Northern SA / Lake Eyre Basin	SBC#1 × SBC#2	Solar/HVDC node. Transcontinental crossroads.
City 4	Western NSW / SW QLD	SBC#1 × SBC#3	Food bowl + Cooper Basin hub. Channel Country access.

Albury — the southern junction

Albury is both a Phase 0 spine hub and the SBC#3 southern terminus. On the Murray. Existing rail and airport. Population 50,000. One of the most important nodes on the network — the southern gateway for all freight and passengers from the Gulf of Carpentaria via SBC#3 connecting to Melbourne, Sydney, and Brisbane via Phase 0.

NAMING — HOLD. Cities remain designated City 1 through City 4 in all public documents until formal naming through traditional owner consultation and engineering study. Pre-naming greenfield cities is colonial framing and invites controversy that distracts from the freight-first economics.

NATIONAL BENEFIT REGISTER

Economic benefits

- \$1.1B/yr freight cost saving to operators — \$22/tonne × 50M tonnes eastern corridor
- \$14.7B InfraBuild Newcastle anchor order — Phase 0.1 alone
- 12.3M tonnes rail steel full network — domestic manufacturing revival
- 75,000 peak construction workforce
- 200 new corridor towns plus 11 major network nodes — economic activation of inland Australia
- Lower food prices — cheaper freight means cheaper produce at the supermarket
- Competitive export pricing — Australian grain and cotton cheaper to port than competitors
- 6c/kWh delivered electricity — halves power bills from HVDC solar connection

Environmental benefits

- Net zero freight movement from Day 1 of electrification
- ~50M tonnes CO₂/yr abatement — road and coastal rail diesel eliminated
- Zero national parks crossed — all corridors confirmed by Google Maps
- Zero new corridor land — existing ARTC easements throughout Phase 0
- B-doubles removed from Newell Highway — inland town air quality restored

- Four greenfield cities on prime solar land — generation collocated with new load

Social and regional benefits

- Tamworth to Sydney 45 minutes — currently 5.5 hours by road
- Dubbo to Melbourne 1hr 50min — currently 8 hours
- Wagga to Brisbane 2hrs 45min — currently 10 hours
- Every inland community on the route has direct fast rail for the first time in history
- Upper Hunter coal transition workforce — Newcastle accessible in 30 minutes
- Toowoomba Wellcamp — main Phase 0 hub, 37 minutes to Brisbane, SBC#1 Perth junction
- Port Augusta — SA central hub, 35 minutes to Adelaide, SBC#2 junction
- Three existing inland cities promoted to major continental-junction status: Kalgoorlie, Alice Springs, Mount Isa
- Four new greenfield cities emerging at corridor intersections — Australian redistribution at scale
- Drought-proofing — 30,000GL/yr water via Alice Hub PHES to Murray-Darling

POLITICAL MANDATE — DISTRIBUTED ACROSS EVERY STATE

The intersection cities framework delivers a concrete infrastructure story to every state with interior. Every premier has something to say yes to before the 2027 federal election.

State	Major network nodes delivered
NSW/VIC border	Albury (Phase 0 hub + SBC#3 southern terminus)
ACT	Canberra (Phase 0 hub + Eden spur junction)
NSW	WSA (Phase 0 hub), Newcastle (Phase 0.1 terminus), City 4 (NSW/QLD border intersection)
QLD	Toowoomba Wellcamp (Phase 0 main hub), Brisbane (Phase 0 terminus), Mount Isa (triple junction upgrade), Port Douglas (SBC#6 terminus)
WA	Kalgoorlie (triple junction upgrade), Perth (SBC#1 terminus), Port Hedland (SBC#4 terminus), Derby (SBC#5 terminus), Albany (SBC#6 terminus), Esperance (SBC#5 terminus), City 1 (Pilbara)
SA	Port Augusta (SA hub), Port Adelaide (SBC#2 terminus), City 3 (Lake Eyre Basin)
NT	Alice Springs (double junction upgrade), Darwin (SBC#2 terminus), City 2 (Tanami)
VIC	Melbourne (Phase 0 southern terminus)

6 jurisdictions. 11 major inland nodes. 7 container/bulk ports connected. Every premier has something concrete to announce. That is not just an infrastructure map — it is a political mandate map.

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