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Fuel efficiency alone won't dig coalminers out of a deepening diesel hole

Appendix: Fuel intensity of major Australian coalminers

BHP–BMA	
Location	Listed: Australia. Key ownership: Australia–US
2030 emissions target	30% reduction by FY2030 (Scopes 1 & 2, absolute on FY2020 base)
Operating mines in the Safeguard Mechanism	Open-cut (OC): Goonyella, Peak Downs, Saraji and Caval Ridge Underground (UG): Broadmeadow
Fuel intensity trend	Fuel intensity increased by 20% in the four years to 2025 due to production falling by 18% while diesel use remained essentially constant.
Key drivers	Strip ratios. BHP reported in 2023 that "production was impacted by an increase in prime stripping". In the half-year to December 2024, BHP reported the "highest half-year of prime stripping in four years", which would "underpin higher production in the medium term". In BHP's latest operational review report (March 2026), it reported "the highest YTD [year-to-date] stripping volumes in five years". Excessive strip ratios contributed to the closure of the Saraji South mine in late 2025.
Other factors	Product yield declined by 7% over the period as BHP pushed its portfolio towards benchmark hard coking coal. This implies additional coal-handling and preparation plant (CHPP) reject haulage to overburden emplacement areas. It also resulted in more diesel used per tonne of coal sold.
Diesel's share of Scope 1 emissions	Across all BHP operations, diesel combustion makes up 91% of its CO2 emissions. Diesel's share of Scope 1 (direct) emissions has increased from 63% in FY2021 to 80% in FY2025. For BMA assets, it was 66% in FY2025 across all mines, and 90% for OC Safeguard facilities.
Annual diesel use (est.)	BMA: 23PJ / 595ML

Glencore	
Location	Listed: UK. Key ownership: Various
2030 emissions target	25% reduction by FY2030 (Scopes 1, 2 & 3, absolute on 2019 base)
Operating mines in the Safeguard Mechanism	OC: Bulga, Clermont, Collinsville, Hail Creek, HVO (JV), Rolleston, Mangoola, Mt Owen, Ravensworth, United (JV) UG: Integra, Oaky Creek
Fuel intensity trend	Glencore's environmental, social and governance (ESG) data (2024) reports on direct energy consumed in its coal business unit at 42PJ in 2024, up from 36PJ in 2020. Energy intensity rose by 12% to 35GJ/ kilotonne CuEq, not counting a 3.5PJ restatement increase in 2022.*
Key drivers	Equipment substitution. At HVO, three electric loading units (two draglines and an electric rope shovel) consuming no diesel were replaced with diesel-powered units: five excavators, two loaders and nine haul trucks. At Collinsville mine, the final dragline was removed in FY2025.
Other factors	Strip ratios were stable — with the exception of HVO, where strip ratios rose through 2024 before easing in 2025.
Diesel's share of Scope 1 emissions	Across all Glencore operations, mineral oil makes up 68% of its direct energy consumed. Diesel's share of Scope 1 emissions for Australian coal assets is estimated at 54% for FY2025 across all open-cut Safeguard mines.
Annual diesel use (est.)	Coal division: In CY2024, 42.5PJ of direct energy consumed (not just diesel) – excludes Elk Valley Resources (EVR). In CY2025, 60PJ incl EVR.

*Note: Glencore coal energy use restatement in CY2022 from 39PJ to 42PJ reflects industrial asset portfolio changes from acquisitions and disposals.

Stanmore Resources	
Location	Listed: Australia. Key ownership: Indonesia–Australia
2030 emissions target	None
Operating mines in the Safeguard Mechanism	OC: Acquired BHP's South Walker Creek (SWC) and Poitrel mines in Queensland in 2022, having already operated the Issac Downs mine with an electric dragline.
Fuel intensity trend	Run of Mine (ROM) production since the acquisition (FY2022) has grown by 14% to 19.1MTPA; liquid fuel use has grown by 73%; and fuel intensity has grown by 51%.
Key drivers	Strip ratios grew by 12.4% to 8.9:1 in FY2025, indicating geology alone does not explain the rising fuel intensity. Strip ratios increased year-on-year to 2024 with the advancement of overburden removal ahead of capacity ramp-up at SWC and opportunistic high strip ratio mining at Issac Downs. Stanmore expects lower strip ratios as it develops the SWC mine. It reported in March 2026: "Pit preparation activities are targeting ROM coal at an average 8:1 strip ratio, and the company has introduced 31 new [diesel] trucks and five new excavators to support pre-stripping."
Other factors	Diesel-heavy equipment drives the high intensity. Several large-scale development projects contributed to pre-production diesel use. Box cuts at Y-South and Ramp-10 in 2024 and MRAC2 creek diversion in FY2024-25. Stanmore increased CHPP capacity in 2024 at SWC, driving additional coarse reject and tailings emplacement trucking. At Poitrel, it introduced tailings pumping in March 2026, eliminating the need for tailings haulage.
Diesel's share of Scope 1 emissions	52% in FY2025, across all Safeguard mines.
Annual diesel use (est.)	7.9PJ of combusted liquid fuels / 196ML

Whitehaven	
Location	Listed: Australia. Key ownership Australia–US
2030 emissions target	32% reduction by FY2030 (Scope 1 emissions intensity on FY2023 base)
Operating mines in the Safeguard Mechanism	OC: Maules Creek, Vickery and Tarrawonga in NSW; since April 2024, Blackwater and Daunia mines in Queensland (FY2025 first full year). UG: Narrabri
Fuel intensity trend	Diesel intensity rose by 22% in FY2025, reflecting a shift to larger-scale open-cut metallurgical coalmining and the inclusion of diesel-intensive Queensland operations.
Key drivers	Strip ratios. Increased by 13% at the NSW mines in the four years to FY2025. Closure of the lower strip ratio Werris Creek (~8:1), replaced by structurally higher-strip mines (>10:1) represents a permanent shift in Whitehaven's strip-ratio profile.
Other factors	Queensland acquisitions. At Blackwater, Whitehaven commissioned the first of two new 800-tonne excavators to rebuild pre-strip inventories in the September 2024 quarter. Future upgrading the CHPP to 18MTPA ROM feed capacity may increase reject and tailings haulage requirements. Daunia is applying to extend the mine footprint to accommodate out-of-pit waste dumping, which will extend haul distances over time. Strip ratios have increased by an estimated 8% in the past few years, but Whitehaven anticipates some improvements in the next two years. Planned expansions (Vickery and new Winchester South mine) could increase diesel intensity further.
Diesel's share of Scope 1 emissions	51% at Whitehaven in FY2025 across all Safeguard mines; and 61% for OC Safeguard mines.
Annual diesel use (est.)	13.8PJ / 356ML (stated as 340ML in March 2026 operations review)

Yancoal	
Location	Listed: Australia. Key ownership: China
2030 emissions target	None
Operating mines in the Safeguard Mechanism	OC: Moolarben (truck and shovel), Mount Thorley Warkworth (dragline, truck and shovel), and others (truck and shovel). UG: Aston, Kestrel (announced acquisition)
Fuel intensity trend	Yancoal's FY2025 ESG data shows total fuel use up by 26% from FY2021, while ROM production declined by 8% – a 37% increase in diesel fuel intensity. Intensity peaked in FY2023 following a jump in strip ratios at Moolarben and Mount Thorley Warkworth mines, which have since stabilised.
Key drivers	Strip ratios for the NSW open-cut mines increased by 14% from FY2021 to FY2025. Yancoal reported in 2023 that "To capitalise on a period of record high coal prices, mines prioritised coal extraction over pre-strip and overburden removal in 2022." In 2024 it reported: "We prioritised recovery works in the early part of the year on pre-strip and overburden removal." In 2025 it stated that additional fleet was added to "open up some new mining areas and account for the slightly longer haul cycles".
Other factors	Production. In 2026, Yancoal announced two world records, using diesel-powered Liebherr R 9800 excavators, with 1.75 million bank cubic metres (BCMs) of total material movement.
Diesel's share of Scope 1 emissions	Estimated at 33% across all Safeguard mines, and 47% for OC Safeguard mines.
Annual diesel use (est.)	12.2PJ / 315ML