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IPA RESEARCH NOTE

Economic analysis of the 'climate trigger'

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Key findings

- Introducing a 'climate trigger' would potentially prevent $227.1 billion of investment into the Australian economy.
    - A 'climate trigger' refers to a policy mechanism whereby a certain level of annual carbon emissions from a given project would trigger the need for a federal EPBC Act approval.
- $134 billion of investment in future emission intensive projects would be cancelled immediately by the introduction of a climate trigger. A further $54 billion worth of investment could be delayed, and $39 billion would be high risk.
- Western Australia would be the state most affected by a climate trigger, potentially losing $111.7 billion of investment. Western Australia will incur just over 49 percent of the cost of a climate trigger, with Queensland ($66.6 billion) and the Northern Territory ($18.8 billion) also highly impacted.

Analysis

The federal government is reportedly considering adding a 'climate trigger' to the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as part of its Nature Positive reforms of federal environmental legislation.[1]

A 'climate trigger' refers to a policy mechanism whereby a certain level of annual carbon emissions from a given project would trigger the need for a federal EPBC Act approval.

When he was shadow environment minister in 2005, Anthony Albanese introduced a bill to Parliament to establish a climate trigger in the EPBC Act. Mr Albanese at the time stated that the 'glaring gap in matters of national environmental significance is climate change … It is time to act. It is time for procrastination to end … We need action and one of the actions that we need … is this amendment to the EPBC Act."[2]

Adding a climate trigger to the EPBC Act will duplicate existing federal regulation, add significant costs for businesses and the economy, tie up departmental resources, and could prevent significant investments in major projects in Australia.

The independent review of the EPBC Act conducted by Professor Graeme Samuel AC specifically ruled out a climate trigger, noting that federal legislation to manage carbon emissions already exists and that 'these specific mechanisms, not the EPBC Act, are the appropriate way to place limits on greenhouse gas emissions.'[3]

This paper estimates the potential costs of implementing a climate trigger. It takes as a model the current version of the climate trigger put forward in parliament, the Environment Protection and Biodiversity Amendment (Climate Trigger) Bill 2022. The climate trigger proposed in that Bill would require any proposed projects with between 25,000 and 100,000 tonnes of carbon emissions per year to be required to have an EPBC Act assessment and approval. Projects with more than 100,000 tonnes of annual emissions would be banned outright.[4]

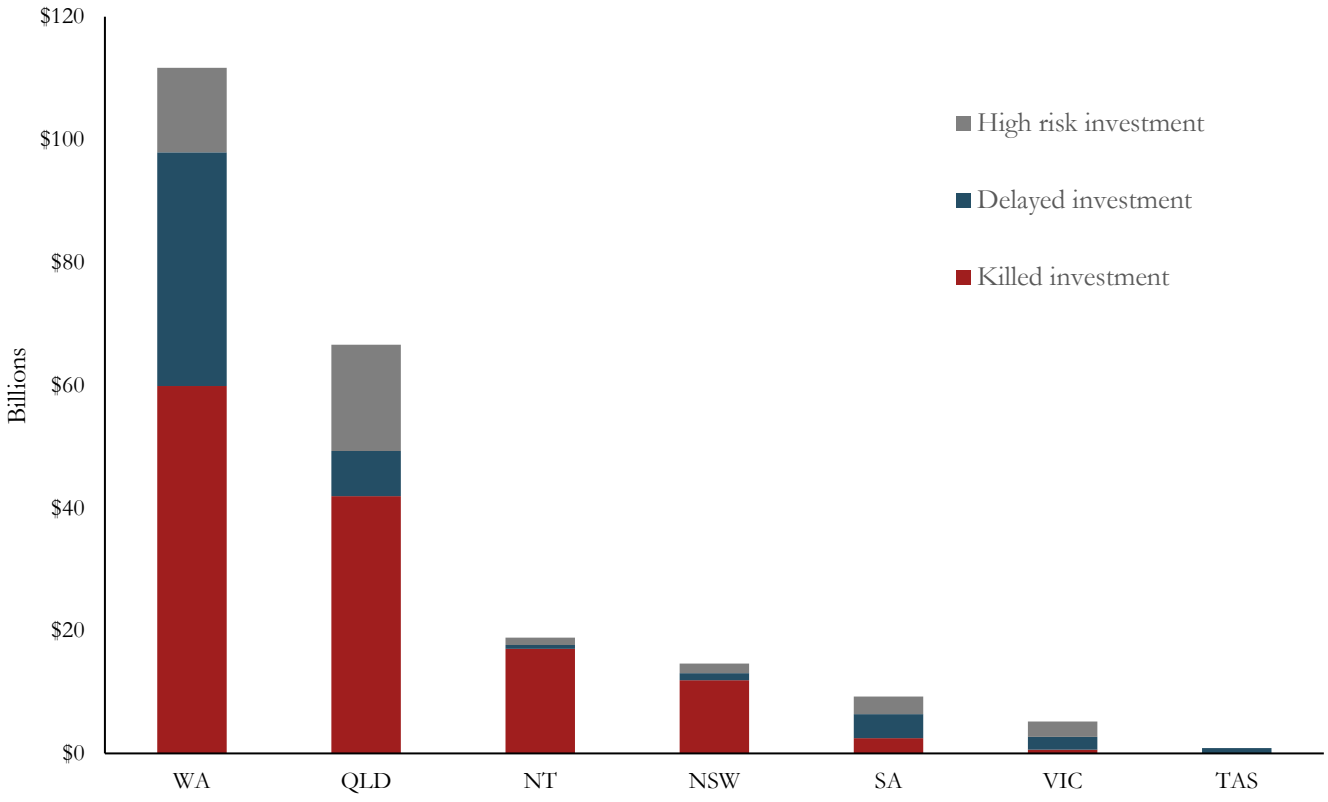
This paper finds that a climate trigger could cost the Australian economy over $227.1 billion in lost investment in major resources projects alone

Impact of a climate trigger on major project investment

The potential impact of a climate trigger on the Australian economy is the risk of losing some $227.1 billion in investment. This is a conservative estimate for reasons explained further in the methodology section.

This estimated impact is based on three categories of risk: killed investment, delayed investment, and high-risk investment. Killed investment refers to projects with estimated annual emissions of 100,000 tonnes of carbon dioxide equivalent emissions (t CO2e) or more, which would be banned under a climate trigger. Delayed investment refers to projects with between 25,000 t CO2e and 100,000 t CO2e which would trigger an EPBC Act assessment, and which may not proceed to development. High risk investment refers to projects for which estimated emissions data is not available, but which are deemed to be high risk because it is a coal, oil or gas project which generally have comparatively high annual emissions profiles.

Chart 1: *State based cost of climate trigger*



Source: Department of Industry, Science and Resources

Table 1: *State based cost of climate trigger*

	WA	QLD	NT	NSW	SA	VIC	TAS	TOTAL
Killed investment	$59.84bn	$41.93bn	$17.05bn	$11.90bn	$2.50bn	$0.60bn	NA	$133.83bn
Delayed investment	$38.08bn	$7.31bn	$0.58bn	$1.14bn	$3.91bn	$2.10bn	$0.87bn	$53.99bn
High risk investment	$13.77bn	$17.35bn	$1.20bn	$1.60bn	$2.85bn	$2.50bn	NA	$39.26bn
Total at risk	$111.69bn	$66.58bn	$18.83bn	$14.65bn	$9.26bn	$5.20bn	$0.87bn	$227.08bn

Methodology

This paper is based on data from the Office of Chief Economist's 2023 resources and energy major projects list.[5] This list includes all the major resources and energy projects in Australia which have been publicly announced or are progressing through the different studies and approvals stages. For the purposes of this analysis, any projects listed as 'completed' were excluded. The latest major projects list was published at the end of 2023, and therefore may not contain some projects which were announced after publication.

The investment figures used in this paper are primarily those published in the major projects list as a project cost estimate. For some projects in the list missing this estimate, data has been supplemented using public source information where available. There are a total of eight projects identified as being prohibited by the climate trigger for which no cost estimate was available. There are an additional five projects identified as being at risk of delay from a climate trigger for which no cost estimate was available. A total of twelve projects identified as 'high risk' did not have an available cost estimate. Taken together, these figures make the analysis in this paper relatively conservative.

The estimated emissions for projects have been sourced from public source documents, assisted by modelled estimates of the emissions intensity of mining operations for some projects. Estimated emissions were not available for a large number of projects on the list, either because this data has not yet been estimated or because that information is not yet publicly available. Out of a total of 344 projects across Australia identified in this analysis, emissions estimates were available for only 132 projects. Emissions estimates could not be sourced for 212, or 61.6 per cent, of major resource and energy projects across Australia. This is another factor making this analysis relatively conservative.

Further, this analysis has only looked at major resources and energy projects. There are other projects and developments which would likely be impacted by the introduction of a climate trigger, but are outside the remit of this paper. For example, in Western Australia the Great Northern Highway – Bindoon Bypass project has estimated scope one emissions of 194,603t CO_2e during construction.[6] This is a $275 million project funded by the Western Australian ($55 million) and Federal ($220 million) governments.[7] Major projects such as commercial and residential property development, industrial developments, and public infrastructure will be impacted by the climate trigger. Some simply will not proceed, while many others which would not otherwise be impacted by the currently existing EPBC Act, or whose obligations under that Act would be expanded, would see higher costs and delays due to assessment and approval processes.

Finally, this analysis likely underestimates the costs of a climate trigger as it simply takes a point in time assessment of some of the currently proposed major resources and energy projects and assumes that they have a one-off benefit to the economy through capital investment. It does not account for ongoing sustaining capital costs or later stages of investment built upon an initial project. It also does not assess the foregone

operational expenses once these projects become operational, such as wages and supplier payments made, state royalties and payroll taxes, and federal corporate taxes paid. Nor does it estimate how many future projects will never be proposed because they could not proceed under a climate trigger. Australia has vast mineral deposits which can be developed with the appropriate policy settings. A climate trigger would prevent vast swathes of these from ever being developed.

Data tables

Table 2: Western Australia

Project	Company	Commodity group	Cost estimate (AUD)	Estimated start of commercial operations	Emissions
H2Perth	Woodside	Hydrogen	$1,000m	2029+	8,500,000
Browse to North West Shelf	Woodside/ BP / PetroChina / Japan Australia LNG	Oil & gas	$21,429m	2026+	4,000,000
HyEnergy Project (Phase 1)	Providence Resources Ltd	Hydrogen	$5,000m	2029+	1,800,000
Havieron	Newmont Mining and Greatland Gold	Gold	$529m	2025+	1,536,605
Collie Green Steel Mill	Green Steel WA	Iron Ore	$400m	2025+	562,000
Wingellina	Nico Resources Limited	Nickel, cobalt	$2,390m	2027	500,000
NiWest Nickel-Cobalt Project	Alliance Nickel Limited	Nickel, cobalt	$1,261m	2026+	440,000
Ravensthorpe Gold Project	Medallion Metals	Gold	$163m	2026	296,104
Murchison Technology Metals Project aka Gabanintha Vanadium?)	Technology Metals AU Ltd	Other Commodities	$532m	2025	280,770
Cashmere Downs	Cashmere Iron	Iron Ore	$2,500m	2029+	248,376
Hemi Gold Project	De Grey Mining Limited	Gold	$1,345m	2026	240,734
Thunderbird (Stage 2)	Sheffield Resources/Yansteel	Other Commodities	$258m	2028	239,002
Mulga Rock	Deep Yellow Limited	Uranium	$393m	2028	225,000
Nyidinghu	Fortescue Metals Group	Iron Ore	$3,100m	2029+	220,800
Rhodes Ridge	Rio Tinto/Wright Prospecting	Iron Ore	$510m	2029+	220,800
West Pilbara Iron Ore Project	Aquila, AMCI/POSCO	Iron Ore	$6,800m	2029+	220,800
Yeelirrie	Cameco	Uranium	$650m	2028+	193,530
Ashburton Hub/Onslow Iron Ore Project	Mineral Resources Ltd	Iron Ore	$3,000m	2024	193,200
Balmoral South	Australasian Resources Limited, Mineralogy Pty Ltd	Iron Ore	n/a	2029+	163,095
Western Range	Rio Tinto/Baowu Steel Group	Iron Ore	$2,900m	2025	138,000
Jimblebar beneficiation plant	BHP	Iron Ore	$1,000m	2028+	137,577
Mount Ida	Juno Minerals	Iron Ore	$1,600m	2029+	124,188
Aurukun Bauxite projects	Glencore Bauxite Resources and Mitsubishi	Aluminium, Alumina, Bauxite	$1,280m	2026+	118,722

Project	Company	Commodity group	Cost estimate (AUD)	Estimated start of commercial operations	Emissions
Pilbara Hub (Marillana and Ophthalmia - Initial Development)	Mineral Resources Ltd/Brockman Resources	Iron Ore	$105m	2024+	110,400
Western Ridge	BHP/ITOCHU/Mitsui	Iron Ore	$750m	2026+	110,400
Kintyre	Cameco	Uranium	$600m	2028+	106,700
West Erregulla (Phase 1)	Strike Energy / Hancock Energy / Australian Gas Infrastructure Group	Oil & gas	$347m	2024	105,951
Lockyer Gas Project	Mineral Resources	Oil & gas	$250m	2028	89,455
Murchison Hydrogen Renewables Project	Hydrogen Renewables Australia, Copenhagen Infrastructure Partners	Hydrogen	$10,000m	2029+	86,315
Greenbushes Expansion CGP4	Tianqi Lithium Australia Pty Ltd & IGO Ltd	Lithium	$537m	2027	82,194
Project Haber	Strike Energy	Hydrogen	$3000m	2026	75,000
Browns Range (Stages 2 and 3)	Northern Minerals	Other Commodities	$500m	2026	72,000
Winu	Rio Tinto	Copper	n/a	2025	69,859
South Erregulla	Strike Energy	Oil & gas	$90m	2024	67,040
Weld Range	Sinosteel Mid West	Iron Ore	$4,000m	2029+	66,240
Southdown	Grange Resources/Sojitz/Kobe Steel	Iron Ore	$1,400m	2026+	62,094
Yalgoo (Yogi)	FI JV Ltd	Iron Ore	$1,500m	2025+	62,094
Yilgarn (Koolyanobbing) Magnetite	Mineral Resources Ltd	Iron Ore	$400m	2029+	62,094
Koongie Park	AuKing Mining Limited	Copper	$134m	2025+	60,000
Hardey Project	API/Hancock Prospecting	Iron Ore	$10,300m	2024+	55,200
McPhee Creek	Atlas Iron/Hancock Prospecting	Iron Ore	$605m	2025+	55,200
Sanjiv Ridge (Stage 2)	Atlas Iron/Hancock Prospecting	Iron Ore	n/a	2024+	55,200
Sulphur Springs Copper-Zinc Project	Develop Global Limited	Copper	$296m	2025+	54,600
Mackay Potash Project	Agrimin Ltd	Other Commodities	$622m	2026+	50,712
Australian Vanadium Project	Australian Vanadium Ltd	Other Commodities	$604m	2025	45,000
Ashburton Stage 2 (Bungaroo South and Kumina)	Mineral Resource Limited	Iron Ore	n/a	2025+	44,160
Gudai Darri capacity expansion	Rio Tinto	Iron Ore	$130m	2025	38,640
Caravel (Stage 1)	Caravel Minerals Ltd	Copper	$1,676m	2026	38,152
Lake Giles iron ore project (Moonshine and Ularring)	Macarthur Minerals	Iron Ore	$863m	2024+	37,256
Ridley Magnetite Project	Atlas Iron/Hancock Prospecting	Iron Ore	$400m	2029+	37,256
Lake Wells	Australian Potash	Other Commodities	$292m	2025+	34,108

Project	Company	Commodity group	Cost estimate (AUD)	Estimated start of commercial operations	Emissions
Cadoux Kwinana High Purity Alumina	FYI Resources	Aluminium, Alumina, Bauxite	$284m	2025+	31,608
Bidaminna Mineral Sands Project	Image Resources	Other Commodities	$194m	2026	31,000
Mt Forrest	Mindax/Norton Gold Fields	Iron Ore	n/a	2027+	24,838
Robe Mesa	CZR Resources	Iron Ore	$153m	2024+	19,320
Ashburton (salt)	K+S Group	Other Commodities	$850m	2025+	19,000
Blacksmith Project	Red Hawk Mining	Iron Ore	$150m	2025+	16,560
Yangibana	Hastings Technology Metals Limited	Other Commodities	$470m	2025	12,937
Tubridgi Phase 2	AGI Tubridgdi	Oil & gas	$53m	2023	11,724
Arrowsmith Hydrogen Project Stage 1	Infinite Green Energy	Hydrogen	$300m	2025	7,498
Manna Lithium Project	Global Lithium Resources	Lithium	$435m	2026	729
Eramurra Solar Salt Project	Leichhardt Industrials Pty Ltd	Other Commodities	$280m	2027	
Kumpupintil Lake Potash Project	Reward Minerals Ltd	Other Commodities	$451m	2025+	
Pilbara Hydrogen Hub	Australian Government and Western Australian Government	Infrastructure	n/a	2029+	
Australian Renewable Energy Hub	bp Australia, Intercontinental Energy, Macquarie Capital and Macquarie's Green Investment Group	Hydrogen	$50,000m	2029+	
Lake Hope HPA Project	Impact Minerals and Playa One Pty Ltd	Aluminium, Alumina, Bauxite	$253m	2025+	
Lake Maitland Uranium Project Extension (expansion to Wiluna Uranium)	Toro Energy	Uranium	$270m	2028+	
Austvolt Cathode Precursor Material Manufacturing Plant	Ausvolt	Other Commodities	n/a	2028+	
Barrambie Titanium Project	Neometals	Other Commodities	$215m	2025	
Collie BAM Facility	International Graphite	Other Commodities	$441m	2026+	
Collie net zero magnesium refinery	Magnium Australia	Other Commodities	n/a	2028+	
Cummins Range	RareX Ltd.	Other Commodities	$412m	2025	
Cyclone Zircon Project	Diatreme Resources	Other Commodities	$136m	2028+	
Gabbin Kaolin Project	Suvo Strategic Minerals	Other Commodities	$68m	2026	
Karratha Project	EcoMag Ltd	Other Commodities	n/a	2028+	
Kwinana Integrated Battery Material Facility	IGO Ltd/Wyloo Metals	Other Commodities	$800m	2028+	
Lake Throssell	Trigg Minerals Ltd	Other Commodities	$412m	2028	

Project	Company	Commodity group	Cost estimate (AUD)	Estimated start of commercial operations	Emissions
McIntosh	Hexagon Resources Limited/Green Critical Minerals Pty Ltd	Other Commodities	$148m	2027	
Mt Mulgine	Tungsten Mining	Other Commodities	$669m	2028+	
Munglinup	Mineral Commodities	Other Commodities	$88m	2025	
Oakover Project	Firebird Metals Ltd	Other Commodities	$123m	2025	
Onslow rare earths plant	Hastings Technology Metals Limited	Other Commodities	$478m	2028	
Speewah	Tivan Limited	Other Commodities	$550m	2026	
Springdale Graphite Project	International Graphite	Other Commodities	n/a	2026+	
WA pCAM Hub (refinery)	Pure Battery Technologies	Other Commodities	$460m	2025	
Windimurra	Atlantic Pty Ltd	Other Commodities	$213m	2028+	
Clio-Acme	Chevron	Oil & gas	$6,751m	2027+	
Dorado	Santos / Carnarvon Petroleum	Oil & gas	$2,766m	2028	
Equus	Western Gas	Oil & gas	$2,600m	2027	
Transborders Energy's Generic FLNG Solution	Transborders Energy	Oil & gas	$1,600m	2028+	
Black Swan Restart	Poseidon Nickel Limited	Nickel, cobalt	$50m	2024	
Fisher East	Kedalion Nickel Pty Ltd	Nickel, cobalt	$87m	2025+	
Gonneville Project	Chalice Mining Limited	Nickel, cobalt	$1,600m	2029	
Goongarrie Nickel Cobalt Project	Ardea	Nickel, cobalt	$3,117m	2028	
Mt Thirsty	Greenstone Resources/ Conico Limited	Nickel, cobalt	$371m	2025+	
Kathleen Valley Refinery	Liontown Resources Ltd	Lithium	$725m	2028+	
Pioneer Dome	Essential Metals	Lithium	$293m	2026	
Paroo Station	LeadFX	Lead, Zinc, Silver	$262m	2029	
Sorby Hills	Boab Metals Limited	Lead, Zinc, Silver	$245m	2024	
Balla Balla infrastructure project	BBIG (subsidiary of Todd Corporation)	Infrastructure	$5,600m	2029+	
Karratha Hub	Woodside, BP, Shell, Chevron, MIMI	Infrastructure	n/a	2029+	
Pilbara Hub	Mineral Resources Ltd	Infrastructure	$1,500m	2026+	
Pilbara Solar and Storage Project - Phase 1	Rio Tinto	Infrastructure	$600m	2026	
South West Hub	Government of West Australia, Dept of Mines Ind Reg Safety, Alcoa of Australia, Verve Energy, Griffin Group, Premier Coal, Perdaman Chemicals and Fertilize	Infrastructure		2029+	

Project	Company	Commodity group	Cost estimate (AUD)	Estimated start of commercial operations	Emissions
Stanley Point Berth 3	Mineral Resources Ltd/Hancock Prospecting	Infrastructure	n/a	2026+	
Arrowsmith Hydrogen Project Stage 2	Infinite Green Energy	Hydrogen	n/a	2029+	
Arrowsmith Hydrogen Project Stage 3	Infinite Green Energy	Hydrogen	n/a	2029+	
Arrowsmith Hydrogen Project Stage 4	Infinite Green Energy	Hydrogen	n/a	2029+	
Boolathana Project	Gascoyne Green Energy	Hydrogen	n/a	2029+	
Bristol Springs Solar Hydrogen Project	Frontier Energy Limited	Hydrogen	$242m	2029+	
Collie Battery and Hydrogen Industrial Hub Project	Sunshot Industries	Hydrogen	n/a	2029+	
Early Production System: MEG-HP1	Infinite Green Energy	Hydrogen	$110m	2025	
East Kimberley Clean Hydrogen Project	Aboriginal Clean Energy Partnership (Balanggarra Ventures Limited, MG Corporation, Kimberley Land Council, Pollination)	Hydrogen	$3,000m	2029	
Geraldton Export-Scale Renewables Investment (Demonstrator scale)	bp Australia, GHD Advisory Group Ltd	Hydrogen	n/a	2029+	
Geraldton Export-Scale Renewables Investment (full scale)	bp Australia, GHD Advisory Group Ltd	Hydrogen	n/a	2029+	
H2Kwinana	bp Australia, Macquarie Capital	Hydrogen	$1,376m	2029+	
HyEnergy Project (Remainder)	Providence Resources Ltd	Hydrogen	n/a	2029+	
Joint Feasibility Study for Creation of a Supply Chain of Low Carbon Ammonia in Western Australia	Mitsui E&P Australia Pty Ltd	Hydrogen	n/a	2029+	
Mid West Clean Energy Project	Pilot Energy	Hydrogen	n/a	2027	
Western Green Energy Hub	InterContinental Energy, CWP Global, Mining Green Energy Limited	Hydrogen	$100,000m	2025	
Bardoc Gold Project	Genesis Minerals Limited	Gold	$232m	2025+	
Cardinia Gold Project	Kin Mining	Gold	$77m	2025+	
Kal East Gold Project	Black Cat Syndicate Limited	Gold	$99m	2025+	
Katanning Gold Project	Ausgold Limited	Gold	$297m	2025	
Mt Gibson Gold Project	Capricorn Metals Limited	Gold	$339m	2025	
Nifty	Cyprium	Copper	$149m	2025+	
Whim Creek	Anax Metals	Copper	$71m	2024	

Table 3: Queensland

Project	Company	Commodity group	Cost estimate (AUD)	Estimated start of commercial operations	Emissions
East Olive Downs South Extended/Willunga	Pembroke Resources	Coal	$300m	2029+	1,989,000
Surat Gas Project (Phases 2-5)	Arrow Energy	Oil & gas	$8,000m	2026	1,050,000
Townsville Energy Chemical Hub - Stage 1	Queensland Pacific Metals Pty Ltd	Nickel, cobalt	$2,100m	2025+	1,018,400
Townsville Energy Chemical Hub - Stage 2	Queensland Pacific Metals Pty Ltd	Nickel, cobalt	$1,750m	2028+	1,018,400
Moranbah South	Anglo American and Exxaro Resources Limited	Coal	$2,000m	2029+	1,000,000
Saraji East	BM Alliance	Coal	$2,400m	2026+	810,000
Winchester South	Whitehaven Coal	Coal	$1,000m	2029+	580,000
Springsure Creek	Adamelia Resources	Coal	$1,200m	2029+	426,100
Lake Vermont Meadowbrook Extension	Bowen Basin Coal Pty Ltd / Jellinbah	Coal	$100m	2027+	362,942
Elimatta	New Hope Coal	Coal	n/a	2029+	314,100
Caval Ridge Mine Horse Pit Extension	BHP Mitsubishi Alliance	Coal	$4,000m	2026	271,895
Alpha (mine and rail)	GVK Hancock Coal	Coal	$10,800m	2029+	211,317
Gemini coal mine	Magnetic South	Coal	n/a	2025+	186,857
Wandoan	Glencore	Coal	$7,000m	2029+	182,693
Aurukun Bauxite projects	Glencore Bauxite Resources and Mitsubishi	Aluminium, Alumina, Bauxite	$1,280m	2026+	118,722
Meandu King 2 East Project	Stanwell	Coal	n/a	2024+	97,000
Kevin's Corner	GVK	Coal	$5,200m	2029+	96,824
Abbot point dredging	QLD Government	Infrastructure	$240m	2027	84,464
Port of Townsville Expansion (Stage 3)	Port of Townsville Limited	Infrastructure	$1,287m	2029+	36,285
Wiggins Island Coal Terminal (Stages 2 and 3)	Wiggins Island Coal Export Terminal (WICET)	Infrastructure	$580m	2029+	28,240
Port of Townsville Expansion (Stage 2)	Port of Townsville Limited	Infrastructure	$200m	2026+	23,485
Byerwen Coal project Stage 2	Byerwen Coal	Coal	$646m	2029+	15,054
Mahalo Gas project	Comet Ridge / Santos	Oil & gas	$200m	2025	6,129
Cape Flattery Silica Sands	Metallica Minerals Ltd	Other Commodities	$165m	2027	
H2-Hub Gladstone	The Hydrogen Utility (H2U)	Hydrogen	$4,700m	2025	
Atlas (Stage 3)	Senex Energy	Oil & gas	$1,000m	2025	
Blackwater South	BHP	Coal	n/a	2029+	
Blue Energy Bowen (Moranbah to Rolleston) gas pipeline	Blue Energy	Infrastructure	n/a	2024	
Bowen Gas Project	Arrow Energy	Oil & gas	$500m	2025	

Project	Company	Commodity group	Cost estimate (AUD)	Estimated start of commercial operations	Emissions
Carborough Downs	Fitzroy Australia Resources	Coal	n/a	2025+	
Central Queensland Hydrogen Hub	Stanwell Corporation Limited, Queensland Governemnt	Infrastructure	$138m	2027	
Central Queensland Hydrogen Project	Stanwell Corporation Limited, Iwatani Corporation, Marubeni Corporation, Kansai Electric Power Company, Keppel Infrastructure	Hydrogen	n/a	2027	
Century - Silver King and East Fault Block	New Century	Lead, Zinc, Silver	$78m	2024	
Charters Towers	Citigold Corporation	Gold	$149m	2025+	
Colton	New Colton Coal	Coal	n/a	2029+	
Comet Ridge	Bowen Coking Coal	Coal	$52m	2029+	
Corvus (formerly Teresa)	Corvus Coal Assets (New Emerald Coal)	Coal	n/a	2029+	
Curragh Extension Project	Coronado Global	Coal	$93m	2024	
Dysart East	Bengal Energy	Coal	$200m	2025	
Edify Green Hydrogen Project (full scale)	Edify Energy	Hydrogen	n/a	2029+	
Edify Green Hydrogen Project (stage 1)	Edify Energy	Hydrogen	n/a	2029+	
Emerald Coaches Green Hydrogen Mobility Project	Emeral Coaches	Hydrogen	$100m	2024	
Ernest Henry Mine Extension	Evolution Mining	Copper	$475m	2028	
Eva Copper Project	Harmony Gold Mining Company	Copper	$836m	2025	
Galilee Gas Pipeline	Jemena	Infrastructure	$600m	2024	
Gibson Island Green Ammonia Project	Fortescue Future Industries, Incitec Pivot Ltd	Hydrogen	n/a	2029+	
Glenaras gas project	Galilee Energy	Oil & gas	$1,500m	2025	
Glenaras to Cooladdi pipeline	APA	Infrastructure	n/a	2025	
Glencore Surat Hydrogen Project	Glencore	Hydrogen	n/a	2029+	
Goonyella-Riverside & Broadmeadow Extension (Red Hill) Mine	BMA	Coal	n/a	2029+	
Green Hydrogen Export Project	Origin Energy, Kawasaki Heavy Industries	Hydrogen	n/a	2029+	
Green Methanol Feasibility Study	Cement Australia (a Holcim and Heidelberg Materials joint venture), Mitsubishi Gas Chemical Company	Hydrogen	$150m	2028	
Grosvenor Phase 2	Anglo American	Coal	n/a	2026+	
Han-Ho H2 Hub	Ark Energy Corporation Pty Ltd	Hydrogen	n/a	2029+	
Hay Point Hydrogen Export	Dalrymple Bay Infrastructure Ltd, North Queensland Bulk Ports Corporation,	Hydrogen	n/a	2029+	

Project	Company	Commodity group	Cost estimate (AUD)	Estimated start of commercial operations	Emissions
	Brookfield Group, ITOCHU Corporation				
Karin	Vitrinite Pty Ltd	Coal	n/a	2029+	
Kogan Creek Hydrogen Ready Gas Peaking Power Station	Queensland Government (CS Energy as development lead)	Hydrogen	n/a	2027	
Minyango	Qcoal	Coal	$390m	2029+	
Moorlands	Cuesta Coal Ltd	Coal	$148m	2029+	
Mount Isa North Uranium Project	Paladin Resources	Uranium	n/a	2028+	
New Lenton	Bowen Coking Coal	Coal	n/a	2029+	
Northern Gas Pipeline extension	Jemena	Infrastructure	$5,000m	2025	
Northern Silica Project	Diatreme Resources	Other Commodities	$535m	2026	
Origin and ENEOS	Origin Energy, ENEOS	Hydrogen	n/a	2029+	
Pacific Solar Hydrogen Facility	Austrom Hydrogen Limited	Hydrogen	n/a	2029+	
Richmond-Julia Creek Vanadium Project	Richmond Vanadium Technology Pty Ltd	Other Commodities	$242m	2025	
Rolleston (phase 2)	Glencore, Sumisho, IRCA	Coal	$400m	2026+	
Sconi	Australian Mines Limited	Nickel, cobalt	$1,500m	2028	
South Galilee	Alpha Coal Pty Ltd and AMCI (Alpha) Pty Ltd	Coal	$4,200m	2029+	
Taroborah	Shenhuo Group	Coal	$560m	2029+	
Walford Creek	Aeon Metals	Copper	$996m	2026+	
Wards Well	Stanmore SMC	Coal	$1,500m	2028	
Washpool	Magnetic South	Coal	$358m	2029+	
Watershed Tungsten project	Tungsten Mining	Other Commodities	$172m	2026+	
Westmoreland	Laramide Resources	Uranium	$317m	2028+	

Table 4: Northern Territory

Project	Company	Commodity group	Cost estimate (AUD)	Estimated start of commercial operations	Emissions
Mt Todd	Vista Gold	Gold	$1,338m	2027	434,000
Nolans Project	Arafura Resources	Other Commodities	$1,590m	2025	349,000
Mt Bundy	Primary Gold Pty Ltd (Hanking Australia Investment)	Gold	$412m	2024+	215,000
Mount Peake	Tivan Limited	Other Commodities	$824m	2028+	178,000

Project	Company	Commodity group	Cost estimate (AUD)	Estimated start of commercial operations	Emissions
Ammaroo Phosphate Project	Verdant Minerals Ltd	Other Commodities	$414m	2025+	164,896
Greater Sunrise	Timor GAP / Woodside / Osaka Gas	Oil & gas	$11,800m	2029+	149,748
Chandler Salt Mine	Tellus Holdings	Other Commodities	$676m	2026+	104,310
Jervois	KGL Resources	Copper	$298m	2024	66,139
Rover 1	Castile Resources Limited	Gold	$280m	2025	46,878
Molyhil	Thor Mining/Investigator Resource Ltd	Other Commodities	$252m	2025+	15,080
Winchelsea Island Manganese Mine Project	Winchelsea Mining Pty Ltd	Other Commodities	n/a	2028+	8,485
Amadeus to Moomba Gas Pipeline	Central Petroleum/Australian Gas Infrastructure Group/Macquarie Capital	Infrastructure	$1,200m	2024	
Bayu Undan CCS Project	Santos, SK E&S, INPEX ,Eni, Tokyo Timor Sea Resources	Infrastructure	$2,117m	2026	
Bonnaparte CCS	Inpex, TotalEnergies CCS Australia Pty Ltd, Woodside Energy Ltd	Infrastructure	n/a	2029+	
Charley Creek	Enova Mining Limited	Other Commodities	$156m	2028+	
Darwin Green Liquid Hydrogen Export Project and Hydrogen Hub Development	Lattice Technology (Korea) Co. Ltd	Hydrogen	$1,090m	2029+	
Darwin H2 Hub	Northern Territory Government, Total Eren	Hydrogen	n/a	2029+	
Darwin LFP cathode manufacturing plant	Avenira Ltd	Other Commodities	$527m	2025+	
Desert Bloom Hydrogen (phase 1)	Aqua Aerem	Hydrogen	$700m	2027	
Desert Bloom Hydrogen (phase 2)	Aqua Aerem	Hydrogen	$16,129m	2029+	
Green Springs Project	Climate Impact Capital Limited (CIC)	Hydrogen	$14,928m	2029+	
Hayes Creek	PNX metals	Lead, Zinc, Silver	$58m	2029	
Ichthys expansion (Train 3)	Ichthys LNG	Oil & gas	n/a	2030	
Minhub MSP	MinHub Operations Pty Ltd	Other Commodities	n/a	2026+	
Northern Territory LNG	Tamboran Resources	Oil & gas	n/a	2030	
Reindeer CCS	Santos, SK E&S	Infrastructure	n/a	2029+	
Tiwi H2 (initial phase)	Provaris Energy	Hydrogen	n/a	2025	
Tiwi H2 (remainder)	Provaris Energy	Hydrogen	n/a	2029+	
Winchester Magnesium Project	Korab Resources	Other Commodities	$416m	2028+	

Table 5: New South Wales

Project	Company	Commodity group	Cost estimate (AUD)	Estimated start of commercial operations	Emissions
Narrabri (Stage 3)	Whitehaven Coal	Coal	$420m	2024+	1,360,000
HVO Continuation	Yancoal / Glencore	Coal	$500m	2025+	1,126,923
Narrabri coal seam gas project	Santos	Oil & gas	$3,600m	2025	1,052,000
Chain Valley Extension	Delta Coal	Coal		2024+	792,000
Mt Pleasant Optimisation Project	Mach Energy	Coal	$950m	2026+	452,000
Boggabri Coal Extension	Idemitsu	Coal	$513m	2029+	444,580
Spur Hill	Malabar Coal	Coal	$920m	2029+	431,200
Mt Thorley	Yancoal Australia	Coal		2029+	385,591
Dartbrook	Australian Pacific Coal	Coal	$953m	2025+	369,000
Sunrise Project	Sunrise Energy Metals Limited	Nickel, cobalt	$2,368m	2025+	327,433
Dubbo Project	Australian Strategic Materials Limited	Other Commodities	$1,678m	2027	140,040
Hawsons Iron Project	Hawsons Iron Ltd	Iron Ore		2026+	136,607
Moolarben CHPP upgrade	Yancoal	Coal		2027	110,030
Copi Project	RZ Resources	Other Commodities	$325m	2026	47,300
Port Kembla Hydrogen Hub	BlueScope / Shell / RioTinto / NSW government	Infrastructure	$224m	2029+	44,145
McPhillamys	Regis Resources Ltd	Gold	$215m	2026+	42,500
Angus Place West	Centennial Coal	Coal	$210m	2026+	42,473
Newstan Mine Extension	Banpu	Coal	$170m	2029+	38,397
Bowdens Project	Silver Mines	Lead, Zinc, Silver	$246m	2025	19,300
Nyngan Scandium Project	Scandium International Mining Corp	Other Commodities	$117m	2027	11,767
Hunter Valley Hydrogen Hub	Origin Energy, Orica	Hydrogen	$200m	2026	438
Copper Hill project	Golden Cross Resources	Copper	$131m	2026+	
Good Earth Green Hydrogen and Ammonia Project	Hiringa Energy (Operator), Sundown Pastoral Company	Hydrogen	n/a	2029+	
Hunter Energy Hub	AGL Energy, Fortescue Future Industries, APA Group, INPEX Corporation, Jemena, Osaka Gas Australia	Hydrogen	n/a	2029+	
Illawara Hydrogen Technology Hub	BOC Ltd.	Hydrogen	$55m	2025	
ScaleH2	ATCO Australia Pty Ltd	Hydrogen	n/a	2029+	
Eastern gas pipeline extension	Jemena	Infrastructure	$400m	2023	
Hunter gas pipeline	Santos	Infrastructure	$1,200m	2025	
Broken Hill Cobalt Project	Cobalt Blue Holdings	Nickel, cobalt	$600m	2026	

Project	Company	Commodity group	Cost estimate (AUD)	Estimated start of commercial operations	Emissions
Flemington	Australian Mines Limited	Nickel, cobalt	$74m	2026	
Blue Bush	Tellus Holdings	Other Commodities	$140m	2026+	
Platina Scandium Project (Owendale)	Rio Tinto	Other Commodities	$83m	2028+	
Taronga Tin Project	First Tin	Other Commodities	$114m	2026	

Table 6: South Australia

Project	Company	Commodity group	Cost estimate (AUD)	Estimated start of commercial operations	Emissions
Central Eyre Iron Project	Iron Road Ltd	Iron Ore	$2,500m	2029+	114,460
Hillside	Rex Minerals	Copper	$854m	2025	73,802
Razorback	Magnetite Mines Limited	Iron Ore	$1,900m	2025+	62,094
Magnetite Expansion Project, Middleback Ranges	SIMEC Mining	Iron Ore		2024+	31,047
Siviour Graphite Project (Stage 2)	Renascor	Other Commodities	$550m	2028	25,000
Siviour Battery Anode Material Project	Renascor	Other Commodities	$395m	2026	25,000
Siviour Graphite Project (Stage 1)	Renascor	Other Commodities	$215m	2025	25,000
Cape Hardy Green Hydrogen Hub (phase 1)	Amp Energy, Iron Road Ltd	Hydrogen	$15,000m	2028	
Cape Hardy Green Hydrogen Hub (phase 2)	Amp Energy, Iron Road Ltd	Hydrogen	$15,000m	2029+	
entX and Kimberly-Clark – Millicent Mill Green Hydrogen Project (stage 1)	entX Limited Kimberly-Clark Australia	Hydrogen	n/a	2029	
entX and Kimberly-Clark – Millicent Mill Green Hydrogen Project (stage 2)	entX Limited Kimberly-Clark Australia	Hydrogen	n/a	2026	
Green Cement Decarbonisation Project	Hallett Group, Elecseed, Korea Hydro and Nuclear Power Company	Hydrogen	n/a	2028	
Neoen-ENEOS Export Project	Neoen Australia, ENEOS Corporation	Hydrogen	n/a	2029+	
Port Pirie Green Hydrogen Project (Phase 1)	Trafigura Group Pte. Ltd	Hydrogen	n/a	2027	
Port Pirie Green Hydrogen Project (Remainder)	Trafigura Group Pte. Ltd	Hydrogen	n/a	2029+	
SM1	Vast	Hydrogen	n/a	2026	
East Coast Gas Storage	3dOil	Infrastructure	n/a	2029+	
Myponie Point- Iron Ore export facility	Flinders Ports Pty Ltd/Hawsons Iron Ltd	Infrastructure	n/a	2024+	
Neurizer Urea Project	NeuRizer	Hydrogen	$2,600m	2025	
Leigh Creek coal to gas - project stage 2	NeuRizer	Oil & gas	$2,600m	2026+	

Project	Company	Commodity group	Cost estimate (AUD)	Estimated start of commercial operations	Emissions
Carrapateena Block Cave 1 Expansion	BHP	Copper	$1,250m	2026	
South Australian Government Hydrogen Facility	The Office of Hydrogen Power South Australia	Hydrogen	$593m	2026	
Kalkaroo	Havilah Resources	Copper	$332m	2025+	
Elizabeth Creek (Phase 2)	Coda Minerals	Copper	$320m	2027	
Elizabeth Creek (Phase 1)	Coda Minerals	Copper	$277m	2027	
LNG import terminal - Outer Harbor Project	Venice Energy	Oil & gas	$250m	2026	
Eyre Peninsula Gateway Project – Demonstrator Stage	The Hydrogen Utility (H2U)	Hydrogen	$240m	2026	
Port Bonython Hydrogen Hub	Government of South Australia (Project lead on behalf of itself and project partners)	Infrastructure	$140m	2029+	
Paris Silver Project	Investigator Resources Limited	Lead, Zinc, Silver	$131m	2024	
Koppamurra	Australian Rare Earths Limited	Other Commodities	$108m	2026	
Uley 2	Quantum Graphite Limited	Other Commodities	$80m	2025+	
Maldorky	Havilah Resources	Iron Ore	$70m	2029+	
Mindarie Mineral Sands Project	Murray Zircon	Other Commodities	$70m	2023	
Great White Kaolin Project (Stage 2 & Stage 3)	Andromeda	Other Commodities	$68m	2027	
Bird in Hand (Adelaide Hills) Gold Project	Terramin Australia Limited	Gold	$54m	2024+	

Table 7: Victoria

Project	Company	Commodity group	Cost estimate (AUD)	Estimated start of commercial operations	Emissions
Goschen Project	VHM Ltd	Other Commodities	$600m	2025	200,000
Avonbank Mineral Sands Project	WIM Resource Pty Ltd	Other Commodities	0	2025+	100,000
Fingerboards	Gippsland Critical Minerals	Other Commodities	$200m	2028+	80,148
Wimmera	Iluka Resources	Other Commodities	$775m	2028	50,000
Stockman Project	Aeris Resources	Copper	$202m	2025+	50,000
LNG import terminal - Geelong LNG Regasification Terminal	Viva Energy	Oil & gas	$300m	2024	47,906
Golden Beach Gas project	GB Energy	Oil & gas	$500m	2025	43,567
Western Outer Ring Main	APA	Infrastructure	$122m	2023	40,554

Project	Company	Commodity group	Cost estimate (AUD)	Estimated start of commercial operations	Emissions
Geelong Hydrogen Hub	GeelongPort, CAC-H2	Hydrogen	n/a	2029+	
Portland Renewable Fuels	HAMR Energy	Hydrogen	n/a	2027	
CarbonNet Project	Victorian Government/Australian Government	Infrastructure	n/a	2027	
South East Australian CCS Hub	Exxonmobil	Infrastructure	n/a	2025	
Liquefied Hydrogen Supply Chain Commercial Demonstration Project	Electric Power Development Co. (J-Power), Sumitomo Corporation, Kawasaki Heavy Industries (KHI), Iwatani Corporation	Hydrogen	$2,350m	2029+	
Judith Gas Field Project	Emperor Energy Ltd	Oil & gas	$500m	2027	
Trefoil Project	Beach Energy	Oil & gas	$459m	2025	
Manta Gas Project	Cooper Energy	Oil & gas	$416m	2028	
Kipper	Esso / Woodside / Mitsui	Oil & gas	$400m	2023	
Otway (Phase 3) Development Project	Cooper Energy	Oil & gas	$400m	2024	
Donald Rare Earth and Mineral Sands Project	Astron Limited	Other Commodities	$364m	2025	
LNG import terminal - Port Philip Bay	Vopak	Oil & gas	$250m	2026	
Latrobe magnesium project (Stage 2)	Latrobe Magnesium	Other Commodities	$102m	2025	
Hydrogen Portland Project	Countrywide Renewable Hydrogen Limited, Glenelg Shire Council, Port of Portland	Hydrogen	$85m	2029+	
Melbourne Hydrogen Hub	Countrywide Renewable Hydrogen Limited	Hydrogen	$75m	2029+	
SWP Expansion	APA	Infrastructure	$71m	2023	
Hydrogen Park Murray Valley	Australian Gas Networks (AGN) part of Australian Gas Infrastructure Group (AGIG)	Hydrogen	$64m	2025	
Otway Basin	Beach Energy, Ofer Global Group	Infrastructure	$60m	2029+	
Enterprise Project	Beach Energy	Oil & gas	$51m	2024	

Table 8: Tasmania

Project	Company	Commodity group	Cost estimate (AUD)	Estimated start of commercial operations	Emissions
Savage River Expansion	Grange Resources/Sojitz/Kobe Steel	Iron Ore		2025+	74,513
ABEL Energy Bell Bay Powerfuels Project	ABEL Energy	Hydrogen	$1,200m	2027	
HIF Carbon Neutral eFuels Manufacturing Facility	HIF Global	Hydrogen	$1,000m	2027	

Fortescue Green Hydrogen and Ammonia Plant	Fortescue Metals Group	Hydrogen	$670m	2029+	
Hobart zinc works electrolysis plant	Nyrstar	Lead, Zinc, Silver	$400m	2024	
Mount Lyell	Sibanye Stillwater	Copper	$279m	2025	
Renison Expansion Project (Rentails)	Metals X and Greentech Technology International Limited	Other Commodities	$205m	2028+	
Hellyer Tailings Project	EnviroGold Global Ltd	tasminain	$137m	2024	
Hydrogen Bell Bay	Countrywide Renewable Hydrogen	Hydrogen	$77m	2029+	
Hydrogen Brighton Project	Countrywide Hydrogen Pty Ltd	Hydrogen	$60m	2029+	
Heemskirk	Stellar Resources	Other Commodities	$57m	2026+	
George Town Project (stage 1a)	LINE Hydrogen	Hydrogen	n/a	2024	
George Town Project (stage 1b)	LINE Hydrogen	Hydrogen	n/a	2029+	
H2TAS Project	Woodside Energy Ltd , Marubeni Corporation, IHI Corporation	Hydrogen	n/a	2025+	
Origin Green Hydrogen and ammonia Plant	Origin Energy	Hydrogen	n/a	2029+	
Bell Bay Hub	Tasmanian government	Infrastructure	n/a	2029+	
Tasmania Green Hydrogen Hub	Tasmanian government	Infrastructure	n/a	2029+	
Mt Lindsay	Venture Minerals	Other Commodities	n/a	2026+	
Goschen Project	VHM Ltd	Other Commodities	$600m	2025	200,000
Avonbank Mineral Sands Project	WIM Resource Pty Ltd	Other Commodities	0	2025+	100,000

Source: IPA; Department of Industry, Science and Resources

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End Notes

1. Geoff Chambers, 'Anthony Albanese refuses to rule out climate trigger,' *The Australian* (30 May 2024): https://www.theaustralian.com.au/nation/politics/anthony-albanese-refuses-to-rule-out-climate-trigger/news-story/2803bcf3ac9e67b5a58cb534265362a0.
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