

Regional Profiles

Pilbara

Overview

Pilbara is one of Australia's largest mining regions, producing significant volumes of iron ore and hosting extensive gas extraction. The high level of energy-intensive mining activity, combined with the remoteness of operations, means the region remains heavily reliant on fossil fuels. However, government policies and mining companies' decarbonisation commitments are expected to support the region to transition to a decarbonised future.



Population (2025)

- 62,170 persons
- 1.1% 5-year avg. annual growth
- WA: 2.3% 5-year avg. annual growth



Total Area

- 506,778.1 km²
- 20.1% of WA



Gross Regional Product (2022-23)

- \$104.1 Billion
- 19.6% of WA



Employment (2022-23)

- 59,676 persons
- 4.6% of WA

Working Zones: Ashburton, East Pilbara, Karratha, Newman, Port Hedland, Roebourne and South Hedland (maps at end of profile).

Region Selection Rationale

Exposure to Decarbonisation	Economic Opportunities from Decarbonisation
• Carbon Intensity: 8 gas-fired power stations and 42 safeguard facilities. In 2024-25, safeguard facilities accounted for 69.7% of Western Australia's Safeguard Mechanism direct (scope 1) emissions. Approximately 4.5% of jobs in the region are potentially impacted by decarbonisation. • Urgency: The region is heavily reliant on fossil fuels, particularly gas, for electricity generation, underpinning both residential energy supply and extensive iron ore mining operations. • Adaptive Capacity: Adaptive capacity is influenced by a mix of enabling and constraining factors. Households generally have high incomes, strong secondary school completion rates, and low unemployment, which supports adaptive capacity. However, the region's remoteness from major population centres remains a key disadvantage. • Readiness: Western Australia's government plans include expansion of renewable energy infrastructure and emissions reduction initiatives. Several major mining firms have also committed to significant decarbonisation targets.	• Natural Assets: The Pilbara has substantial mineral resources that are critical to the manufacture of renewable energy technologies, which provides strong potential for the development of green industries. The region also benefits from high-quality solar energy resources. • Workforce Compatibility: Approximately 35.0% of workers in the Pilbara are employed in roles that are highly compatible with clean energy industries. • Enabling Infrastructure: Key infrastructure networks, such as the Port Hedland Airport and major transport corridors, including the Great Northern Highway and North West Coastal Highway, support export activity and enable labour mobility into and out of the region.

Source: NZEA (2026).



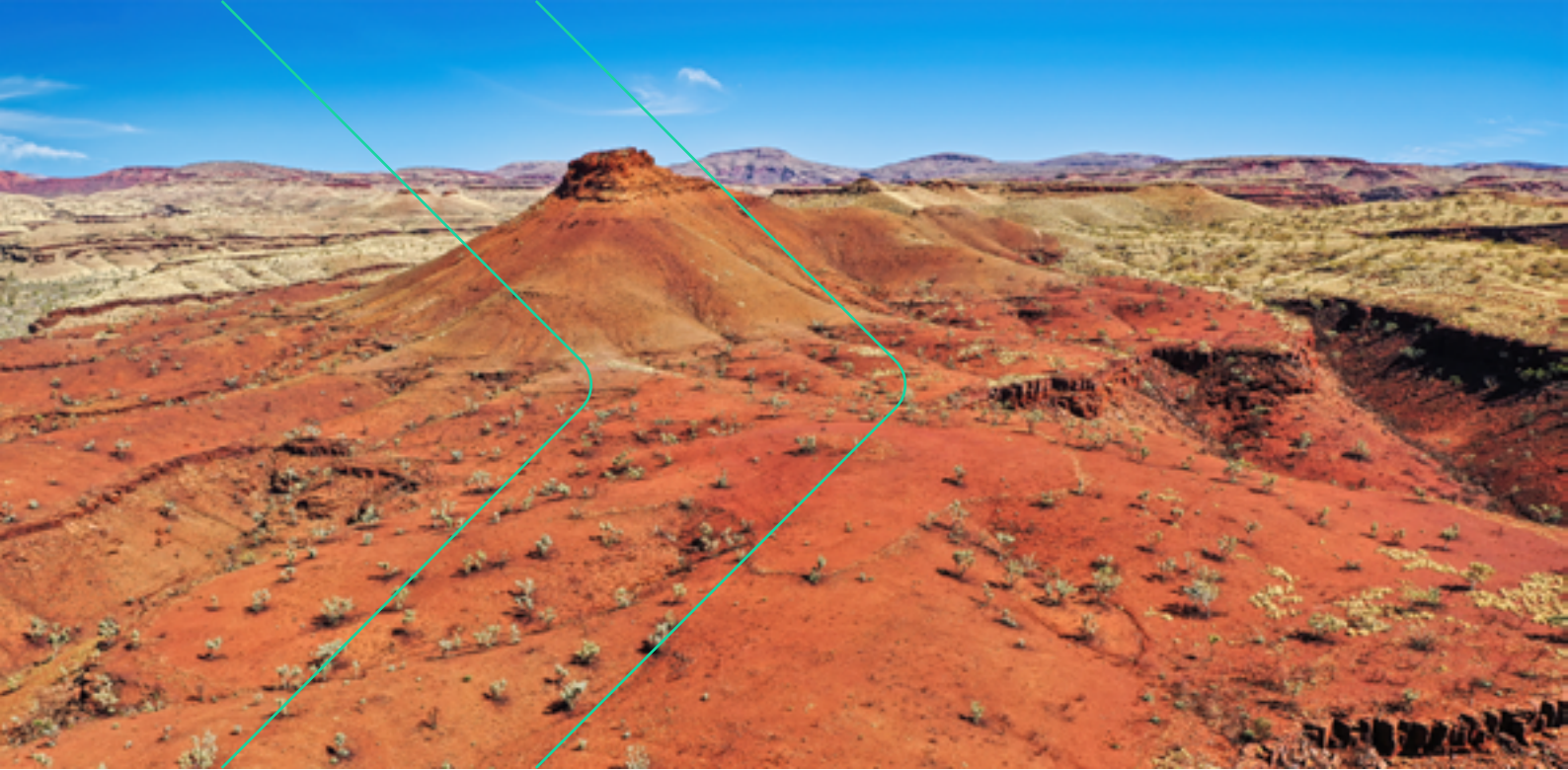
Carbon-Intensive Industries

Gas-Fired Power Stations

Facility	Owner	Public closure date	Employees	S1 emiss. (tCO ₂ -e) (23/24)	% of WA S1 emiss. (23/24)	% of Aus S1 emiss. (23/24)
Cape Lambert	Rio Tinto	Unknown	Unknown	108,551	0.2%	<0.1%
Karratha	ATCO	Unknown	6	53,106	0.1%	<0.1%
Newman	APA	Unknown	23	376,230	0.5%	0.1%
Paraburdoo	Rio Tinto	Unknown	Unknown	289,565	0.4%	0.1%
Port Hedland	APA	Unknown	11	340,466	0.5%	0.1%
South Hedland	TransAlta	Unknown	4	306,419	0.4%	0.1%
West Angelas	Rio Tinto	Unknown	Unknown	197,559	0.3%	0.1%
Yurralyi Maya	Rio Tinto	Unknown	375	410,351	0.6%	0.1%
Total 8	4	-	419	2,082,247	3.0%	0.6%

Note: S1 emiss. indicates Scope 1 Emissions. Further information on Scope 1 emissions can be found [here](#).

Source: AEMO (2026), DCCEEW (2025a, 2025b).



Safeguard Facilities (Emit 100,000+ tonnes CO2 annually – power stations connected to grid are exempt)

Facility	No.	S1 emiss. (tCO2-e) (24/25)	% of WA Saffeguard emiss. (24/25)	% of Aus Safeguard emiss. (24/25)
Metal ore mining	25	6,797,563	14.4%	5.1%
Oil and gas extraction	9	21,692,719	45.9%	16.2%
Electricity generation	3	1,182,220	2.5%	0.9%
Rail freight transport	3	1,468,007	3.1%	1.1%
Road freight transport	1	126,242	0.3%	0.1%
Fertiliser and pesticide manufacturing	1	1,637,599	3.5%	1.2%
Total	42	32,904,350	69.7%	24.6%

Note: S1 emiss. indicates Scope 1 Emissions. Further information on Scope 1 emissions can be found [here](#).
Source: CER (2026).

Major Commonwealth Funded Net Zero Projects (excluding cancelled and completed) (top projects by value)

This table reflects projects that have received Commonwealth funding (as of April 2026), identified through publicly available sources, consistent with the [Net Zero Investment Map](#), including the programs below.

- **Capacity Investment Scheme (CIS)**
- **Australia Renewable Energy Agency (ARENA)**
- **Clean Energy Finance Corporation (CEFC)**
- **Northern Australian Infrastructure Facility (NAIF)**
- **National Reconstruction Fund (NRF)**
- **Regional Hydrogen Hubs Program**

Project	Description	Status	Cwth Govt Funding	Value
Mardie Salt Project	Involves construction of large ponds, crystallisers, two process plants, and a new port facility for export of salt and other products. New trans-shipment port within Pilbara Ports Authority's Cape Preston West Port area will enable exports and will be available to other developments in the region. Project aims to export 5 million tonnes per annum of high-purity salt via evaporation of seawater driven by solar and wind energy.	Development	\$490.0M NAIF (Loan)	\$1.3B
Fortescue Solar Innovation Hub	Pilbara Energy, subsidiary of Fortescue, will partner with ARENA and emerging original equipment manufacturer (OEM) to identify, trial and deploy a range of technical and commercial innovations to drive down the levelised cost of energy of Solar PV in the Pilbara.	Concept	\$45.0M ARENA	\$500.0M
Decarbonising the Pilbara and Beyond	Project involves a pre-FEED study focusing on renewable hydrogen production in the Pilbara, integrating various renewable energy technologies to supply up to 1GW of energy.	Concept	\$21.5M ARENA	\$94.7M
Yuri Renewable Hydrogen to Ammonia Project	This facility will generate renewable hydrogen to produce renewable ammonia at Yara Pilbara Fertilisers' neighbouring liquid ammonia plant.	Construction	\$47.5M ARENA	\$87.1M
Karratha Airport Solar Plant	Project involves design, construction, commissioning and operation of a 1 MW solar photovoltaic facility with cloud predictive technology at Karratha Airport. The City of Karratha, which owns Karratha Airport, will enter into a 21-year power purchase agreement with the solar plant.	Operational	\$2.3M ARENA	\$6.8M

Note: Information correct as of April 2026.

Source: ARENA (2026), NZEA (2026).

Regional Renewable Energy Projects (aggregated)

The aggregated tables below draw on RenewMap’s energy project database which contains information on the location and size of public and privately funded energy generation projects. Results are shown in aggregated form to illustrate the breadth and depth of projects in the region.

Operational

Type	Projects (No.)	Total Project Size (MW)	Total Storage Size (MWh)
Battery	4	263	265
Biogas	3	18	N/A
Hydrogen	2	1	N/A
Solar PV	1	8	N/A
Total	10	290	265 (Known Storage)

Note:

- RenewMap is a commercial subscription and is not publicly available.
- MW = Megawatt. A unit that measures capacity of energy systems.
- MWh = Megawatt hour. In battery technology, this unit measures the total amount of energy the system can store.
- Information correct as of April 2026.

Source: RenewMap (2026).

Under Development and Proposed

Type	Projects (No.)	Total Project Size (MW)	Total Storage Size (MWh)
Battery	4	785	510
Hydrogen	1	60	N/A
Total	5	845	510 (Known Storage)

Note:

- RenewMap is a commercial subscription and is not publicly available.
- MW = Megawatt. A unit that measures capacity of energy systems.
- MWh = Megawatt hour. In battery technology, this unit measures the total amount of energy the system can store.
- Information correct as of April 2026.

Source: RenewMap (2026).

Transmission Infrastructure Projects

North West Interconnected System (NWIS) Transmission Infrastructure Projects

Project	Description	Status	Timing	Cost
Pilbara Green Link	550 kilometres of transmission lines will connect to Horizon Power’s infrastructure to the Australian Renewable Energy Hub (AREH) and other renewable energy projects.	Announced	Unknown	Unknown
Pilbara Energy Transition Plan	The Pilbara Energy Transition Plan identifies priority projects within strategic corridors in the Pilbara region that connect renewable resources to sites of industrial energy loads.	Announced	Unknown	Unknown
NWIS Upgrades	Includes various expansions to existing NWIS to improve capacity and facilitate the integration of renewable energy projects.	Ongoing	Unknown	Unknown

Source: DCCEEW (2023), PV Magazine (2024), WA Govt (2026).

Major Industries

Gross Value Add (2022-23)

Ranked Industries (Top Five)	Value (\$M)	% of GVA
Mining	\$83,044.1	92.9%
Construction	\$1,896.4	2.1%
Rental, Hiring and Real Estate Services	\$1,097.5	1.2%
Transport, Postal and Warehousing	\$639.8	0.7%
Public Administration and Safety	\$353.4	0.4%

Note: Gross Value Add estimates are sourced from REMPLAN (2026), incorporating Australia Bureau of Statistics (ABS) 2021 Census (PoW), ABS 2024 Estimated Resident Population, ABS 2022–23 National Input–Output Tables, and ABS June 2025 Gross State Product into its modelling. Gross Value Add (GVA) measures the value of goods and services produced, minus the cost inputs used in production. Further information on GVA can be found [here](#).

Source: REMPLAN (2026).

Employment

Place of Work (2022-23)

Ranked Industries (Top Five)	Employees (No.)	% of Employment
Mining	31,295	52.4%
Construction	6,530	10.9%
Accommodation and Food Services	2,968	5.0%
Transport, Postal and Warehousing	2,849	4.8%
Health Care and Social Assistance	2,240	3.8%

Note: Employment by Place of Work (PoW) estimates are sourced from REMPLAN (2026), incorporating Australia Bureau of Statistics (ABS) 2021 Census by PoW, ABS 2024 Estimated Resident Population, ABS 2022–23 National Input–Output Tables, and ABS June 2025 Gross State Product into its modelling.

Source: REMPLAN (2026).

Employment – Place of Usual Residence (2021)

Ranked Industries (Top Five)	Employees (No.)	% of Employment
Mining	9,072	34.3%
Construction	2,394	9.0%
Education and Training	1,971	7.4%
Health Care and Social Assistance	1,889	7.1%
Transport, Postal and Warehousing	1,680	6.3%

Source: ABS (2021).

Key Economic and Social Indicators

Employment

Indicator (2021 Census unless otherwise stated)	Pilbara	Western Australia
Median working age	38	40
Median income (annual gross, exc. super)	\$78,000 – \$80,999	\$33,800 – \$41,599
Participation in workforce	67.5%	63.9%
Female participation in workforce	65.2%	60.3%
Workforce Self-Sufficiency (% of Workerforce)	46.9%	N/A
Unemployment rate (Dec 2025)	2.8%	4.0%
Regional Labour Market Index (Dec 2025)	Below Average	N/A

Source: ABS (2021), DEWR (2026), JSA (2026).

Demographics

Indicator (2021 Census)	Pilbara	Western Australia
Median age	33	38
First Nations (% of population)	17.6%	3.5%
Educational attainment (% of population aged 15 and above):		
• Below Year 12	45.2%	60.3%
• Year 12 or equivalent	54.8%	60.3%
• Certificate III and IV	30.8%	19.4%
• Bachelor and above	16.4%	26.1%

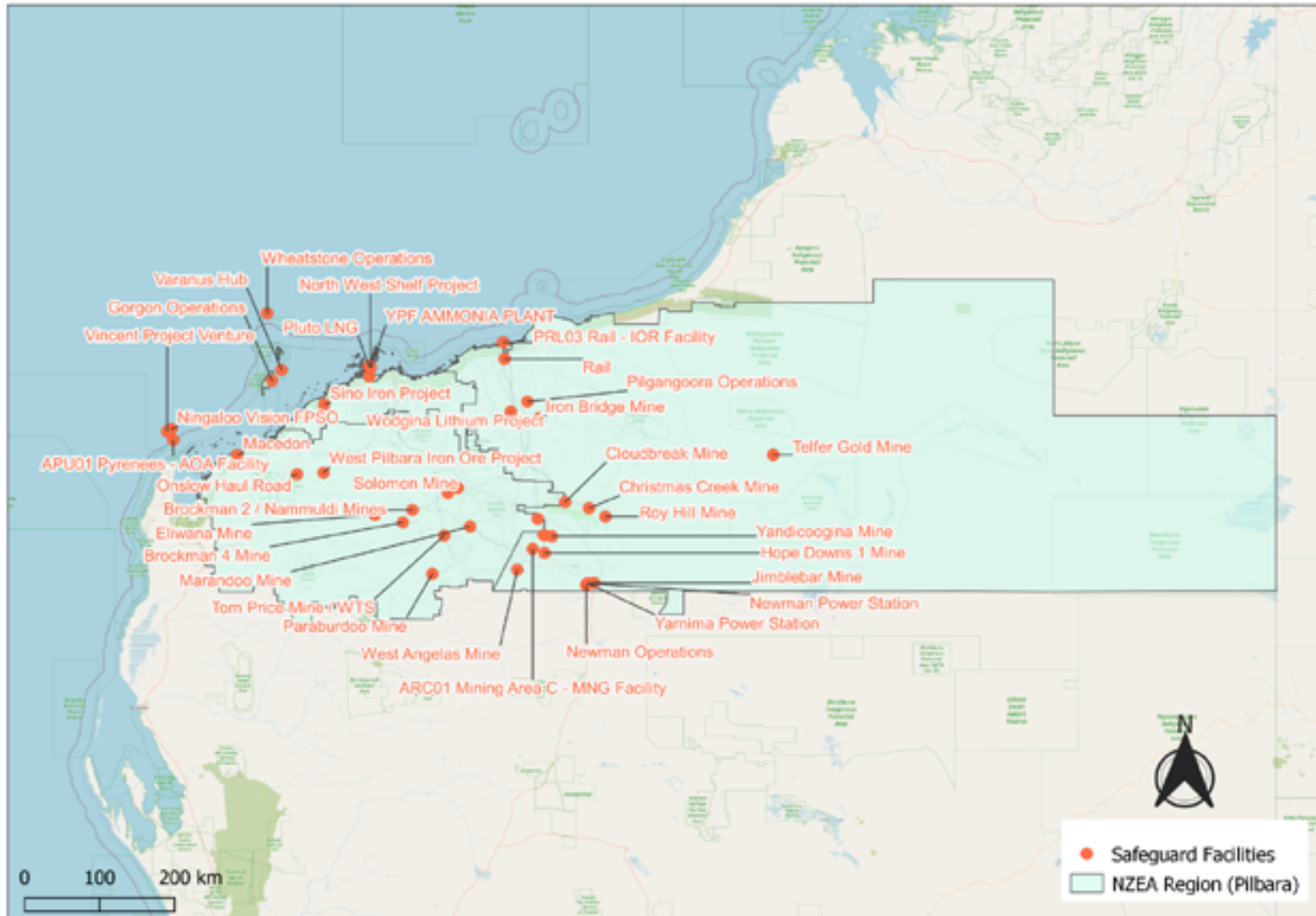
Source: ABS (2021).

Housing

Indicator (2021 Census)	Pilbara	Western Australia
Homelessness (% of population)	1.1%	0.4%
Commonwealth Rent Assistance (% of population) (Jun 2025)	1.0%	3.9%
Mortgage stress	10.5%	12.9%
Rental stress	13.6%	28.4%

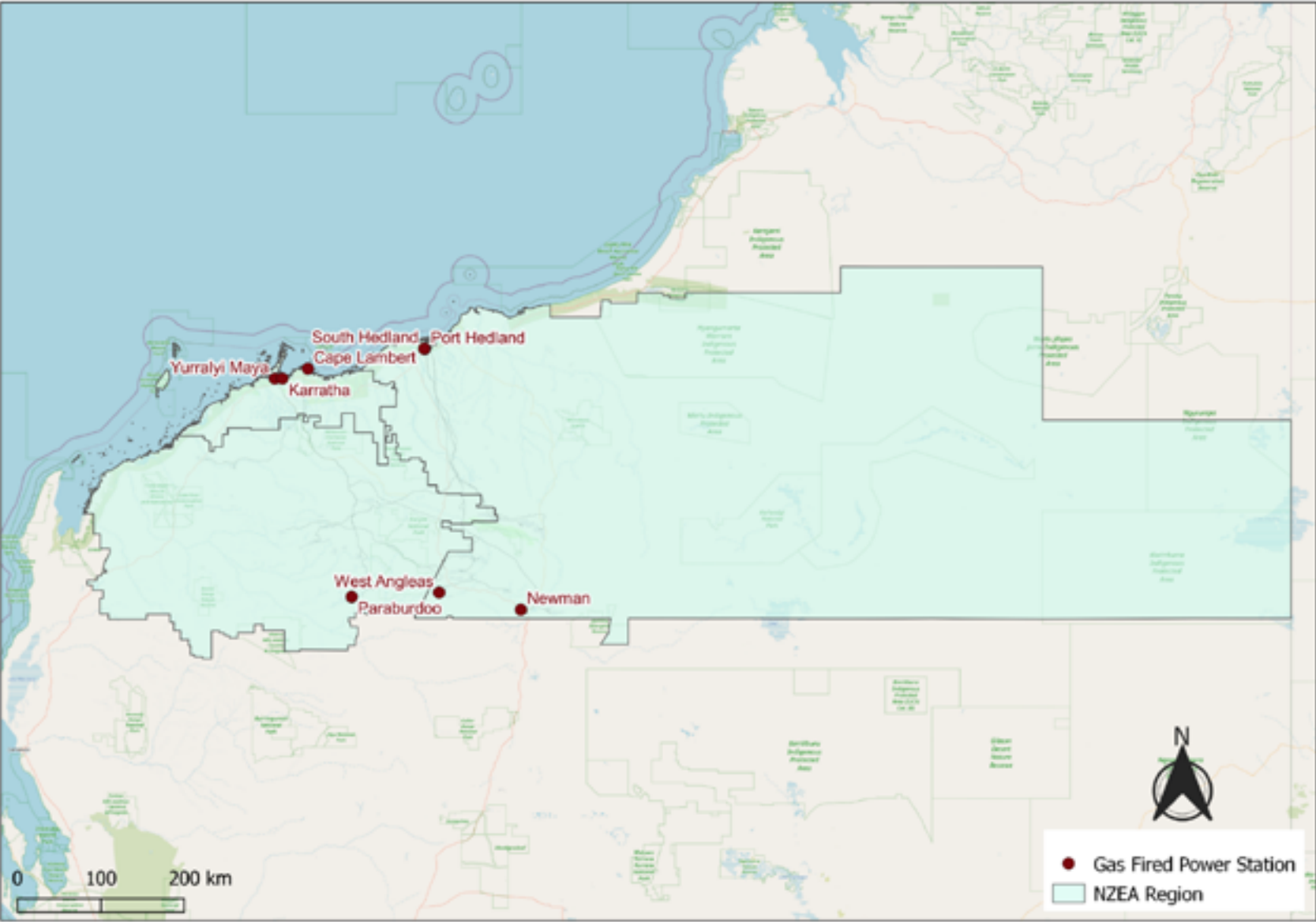
Source: ABS (2021), DSS (2025).

Safeguard Facilities Map



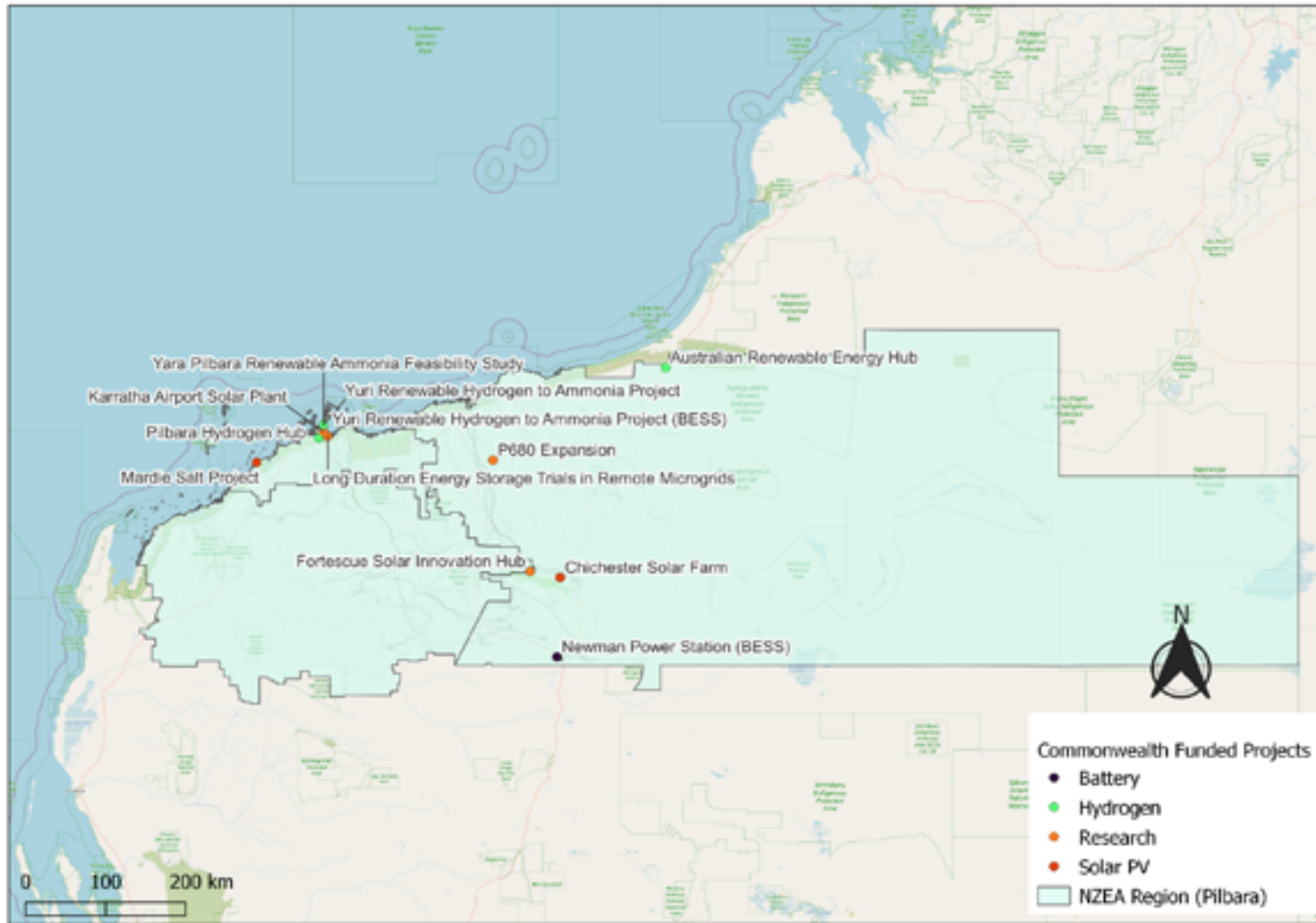
Source: DCCEEW (2025b).

Gas-Fired Power Stations Map



Source: AEMO (2026).

Commonwealth Funded Net Zero Projects Map (Current & Proposed)



Note:

- Commonwealth funded projects include projects from the following schemes, Capacity Investment Scheme, Australian Renewable Energy Agency, Clean Energy Finance Corporation, Northern Australia Infrastructure Facility, National Reconstruction Fund, Regional Hydrogen Hubs Program.
- Information correct as of April 2026.

Source: NZIM (2026).



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