REPORT MAY 2024

The Climate Wreckers Index

The superannuation industry's \$150 billion fossil fuel fixation



Key findings

Super funds have more than doubled their investments in climate wrecking companies over two years, to a total of \$39 billion.

The default or largest investment options of 30 of Australia's largest super funds had **\$39 billion** invested in Climate Wreckers Index companies at the end of 2023. This is a significant increase from December 2021, where these options collectively invested \$19 billion of members' retirement savings in climate wrecking companies. The increase in super funds' investments in these companies is roughly in line with the growth in these companies' market value, meaning there has been no major trend of super funds actively selling down these dirty investments.

Every single super fund has increased its investments in the Climate Wreckers Index over the past two years.

Almost all of these super funds are committed to net zero emissions by 2050 or acknowledge that climate change poses significant risks, yet **every single one of them** has increased its investments in these companies over the past two years, both in dollar terms and as a proportion of their share investments. Corporate regulator ASIC (the Australian Securities and Investments Commission) has repeatedly <u>warned</u> it is on the lookout for companies without a 'reasonable basis' for having made net zero claims or targets. Funds genuinely committed to a net zero future must stop supporting fossil fuel companies taking the world in the opposite direction.

Just three Australian companies – Woodside Energy, Santos and Whitehaven Coal – are responsible for the majority of projected emissions attributable to the fossil fuel expansion plans of climate wreckers in most super funds' portfolios.

While most super funds are invested in a significant amount of Climate Wreckers Index companies, Woodside, Santos and Whitehaven are responsible for **59% of projected emissions** from the fossil fuel expansion plans of companies in the average super fund's portfolio. Funds looking to clean up their members' retirement savings must focus on these companies as their highest priorities.

Investments in climate wreckers have skyrocketed while investments in clean energy companies have languished.

Despite the fact that super funds' investments in Climate Wreckers Index companies have increased by about \$20 billion over two years, investments in clean energy companies* have decreased by half a billion dollars to just **\$7.7 billion** over that same timeframe.

This means that for every dollar invested in clean energy companies, super funds have five dollars invested in climate wreckers.

The funds with the default investment options most exposed to the Climate Wreckers Index, 31 December 2023 (as a proportion of share investments):

- UniSuper Balanced (11.5%)
- Commonwealth Super Corp PSS Default (10.8%)
- MLC MySuper Growth (10.4%)

Interestingly, if BHP were to adopt a coal phase out plan aligned with the Paris Agreement and drop off the Climate Wreckers list, UniSuper's Balanced option would be the investment option with the *least* investment exposure to Climate Wreckers Index companies.

The funds with the default investment options least exposed to the Climate Wreckers Index, 31 December 2023 (as a proportion of share investments):

- ESSSuper Balanced (6.6%)
- Aware Super High Growth (6.6%)
- NGS Super Diversified MySuper (6.7%)

^{*}Companies in the Bloomberg Goldman Sachs Global Clean Energy Index.



Introduction

The Climate Wreckers Index is made up of the 190 publicly-listed companies from all over the world with the biggest plans to expand the scale of the fossil fuel industry. The list includes:

- The top 60 oil and gas producers by expansion plans
- The top 60 coal miners by expansion plans and coal reserves
- The top 30 companies by new gas power plant development plans
- The top 30 companies by new coal power plant development plans
- The top 10 companies by liquefied natural gas (LNG) import and export terminal development plans

Together, these companies are planning new coal, oil and gas projects that could add the equivalent of a staggering **277 years** of Australia's national annual emissions!

The combined emissions from these projects, totalling more than 129 gigatonnes, would eat up about **half of the remaining global carbon budget** for keeping global warming to 1.5°C.

Climate scientists have been telling us for years that achieving the climate goals of the Paris Agreement leaves no room for new coal, or oil gas projects. The Intergovernmental Panel on Climate Change (IPCC) has been <u>abundantly clear</u> that emissions from existing fossil fuel infrastructure will take us past the Paris Agreement's critical 1.5°C global warming threshold, let alone emissions from new projects.

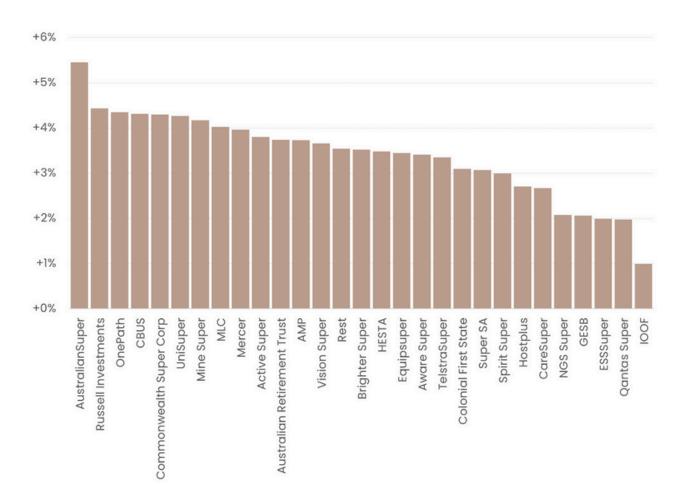
The International Energy Agency (IEA) has also been <u>clear</u> that keeping global warming to 1.5°C means no new or expanded coal, oil and gas projects can go ahead, with its 'Net Zero by 2050' scenario designed to be the most cost-effective and technically-feasible pathway to achieving this temperature goal. Yet this small group of Climate Wreckers Index companies are forging ahead with their dangerous fossil fuel expansion plans, ignoring climate science and threatening a stable and habitable future for all.

Our retirement savings are propping up the world's worst climate wreckers

We've cross-checked the default or largest investment options of 30 of Australia's largest super funds and found that the average option has **nearly 9%** of its members' share investments in Climate Wreckers Index companies. While this is a slight decline in exposure from the year before, **every single super fund** has increased its exposure to the Climate Wreckers Index over the past two years (see Figure 1), meaning that **\$39 billion** of members' retirement savings was invested in these companies as at December 2023, compared with \$19 billion in 2021.

The default investment option of Australia's largest super fund, AustralianSuper, has increased its relative exposure to the Climate Wreckers Index by more than any other fund over the past two years, largely due to its <u>massive buy up</u> of Woodside shares in 2022. This now means that Woodside alone makes up around 20% of the value of AustralianSuper's investments in these climate wreckers.

Figure 1Every fund has increased its exposure to Climate Wreckers over the last two years Change in exposure as a proportion of share portfolio between December 2021 and December 2023



IOOF's default investment option has increased its relative exposure to the Climate Wreckers Index the least of all funds, making it the fourth least exposed out of the 30 investment options analysed.

Table 1Super funds' investments in the Climate Wreckers Index

Fund	Investment Option	Exposure to Climate Wreckers Index (% of listed equities)*	Total value of investments in Climate Wreckers Index
Active Super	High Growth	8.7%	\$183 million
AMP	MySuper 1970s	9.4%	\$426 million
Australian Retirement Trust	Lifecycle Balanced Pool	9.3%	\$2,961 million
AustralianSuper	Balanced	9.7%	\$9,885 million
Aware Super	High Growth	6.6%	\$3,181 million
Brighter Super	MySuper	9.2%	\$818 million
CareSuper	Balanced MySuper	9.3%	\$684 million
CBUS	Growth	8.6%	\$2,819 million
Colonial First State	FirstChoice Wholesale Growth	8.9%	\$126 million
Commonwealth Super Corp	PSS Default	10.8%	\$1,174 million
Equipsuper	MySuper	9.0%	\$565 million
ESSSuper	Balanced	6.6%	\$105 million
GESB	My West State Super	8.0%	\$485 million
HESTA	Balanced Growth	8.5%	\$2,579 million
Hostplus	Balanced	7.4%	\$2,056 million
IOOF	Balanced Investor Trust	7.2%	\$147 million
Mercer	SmartPath 1969-1973	9.1%	\$410 million
Mine Super	High Growth	9.4%	\$499 million
MLC	MySuper Growth	10.4%	\$1,556 million
NGS Super	Diversified (MySuper)	6.7%	\$309 million
OnePath	ANZ Smart Choice 1970s	9.5%	\$335 million
Qantas Super	Glidepath (Altitude)	8.0%	\$136 million
Rest	Core Strategy	9.0%	\$3,196 million
Russell Investments	Goal Tracker	9.6%	\$297 million
Spirit Super	Balanced (MySuper)	7.7%	\$909 million
State Super	Balanced	7.3%	\$39 million
Super SA	Triple S Balanced	7.3%	\$698 million
TelstraSuper	MySuper Balanced	8.6%	\$303 million
UniSuper	Balanced	11.5%	\$2,221 million
Vision Super	Balanced Growth	7.7%	\$250 million

^{*}In order to compare funds with different allocations to publicly-traded company shares (listed equities), we calculated each fund's investment exposure to the Climate Wreckers Index as a proportion of its total allocation to listed equities, minus any investments in pooled or managed investment fund products, such as Exchange Traded Funds (ETFs). This allows us to properly compare funds' direct investments in Climate Wreckers Index company shares. The full methodology is included below. Each fund in the above table was contacted ahead of publication and given the opportunity to provide any further disclosures not captured by our research and raise any issues relating to our analysis.

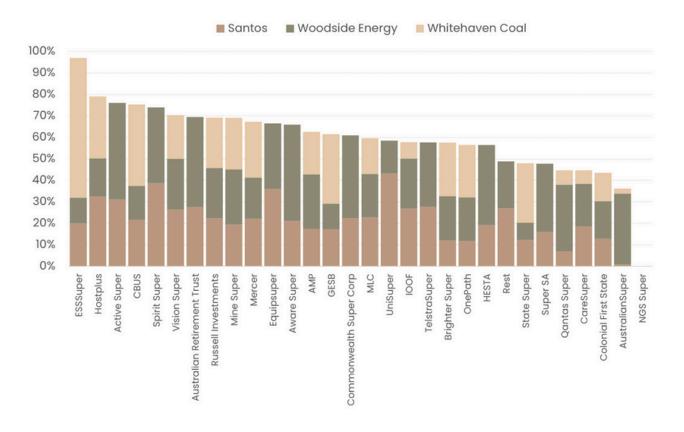
Almost all super funds in the above table <u>acknowledge</u> that climate change poses significant risks, and many of them are even committed to achieving net zero portfolio emissions by 2050. Yet they all remain invested in the small group of companies actively undermining the net zero transition and a stable climate future through their dangerous fossil fuel expansion plans.

Of these companies, three of them are particularly appalling – oil and gas companies Woodside Energy and Santos, and coal miner Whitehaven Coal. All three companies are Australian-based and have significant plans to expand the fossil fuel industry, flying in the face of climate science and the wishes of local communities that will be (or already are) impacted by these companies' projects.

These three companies are responsible for the majority of most super funds' portfolio emissions attributable to fossil fuel expansion (see Figure 2). While most super funds are invested in a significant number of Climate Wreckers Index companies, Woodside, Santos and Whitehaven alone are responsible for **59% of emission**s tied to fossil fuel expansion in the average super fund's portfolio.

These companies are responsible for an astounding 97% of ESSSuper's expansionary fossil fuel emissions in its Balanced investment option, with Whitehaven alone accounting for 65%! While Active Super has divested from Whitehaven, Woodside makes up 45% of its High Growth investment option's overall fossil expansionary fossil fuel emissions. On the other end of the scale, NGS Super has no exposure to any of these companies, and while Woodside, Santos and Whitehaven make up about 36% of AustralianSuper's Balanced option's expansionary fossil fuel emissions, Woodside alone is responsible for more than nine tenths of those emissions.

Figure 2Funds can cut their fossil fuel growth emissions by targeting just three companies Share of expansionary fossil fuel emissions in portfolio (December 2023) by company



Super funds therefore have no excuse to continue ignoring the climate-wrecking behaviour of Woodside, Santos and Whitehaven, and could make material progress towards their climate commitments by rapidly forcing these three companies onto a Paris-aligned pathway of sharply declining fossil fuel production and publicly divesting if this fails.

Our <u>research</u> has demonstrated that funds seeking to live up to their climate commitments through 'active ownership' must identify and prioritise problem companies for targeted engagement, if they are to avoid scrutiny from regulators or face potential legal action for greenwashing. Corporate regulator ASIC has repeatedly <u>warned</u> it is on the lookout for super funds without a 'reasonable basis' for having made net zero claims or those without effective climate-related active ownership strategies, meaning funds that have let these companies get away with climate destruction for far too long should be very concerned.

"Non-state actors cannot claim to be net zero while continuing to build or invest in new fossil fuel supply."

- **The Hon. Catherine McKenna**, Chair, <u>High-level Expert Group on the Net</u> Zero Emissions Commitments of Non-State Entities

Super funds must spare no effort to end these companies' destructive fossil fuel growth plans and loudly divest if they fail to step into line.

For the full list of Climate Wreckers Index companies, see Appendix 3.

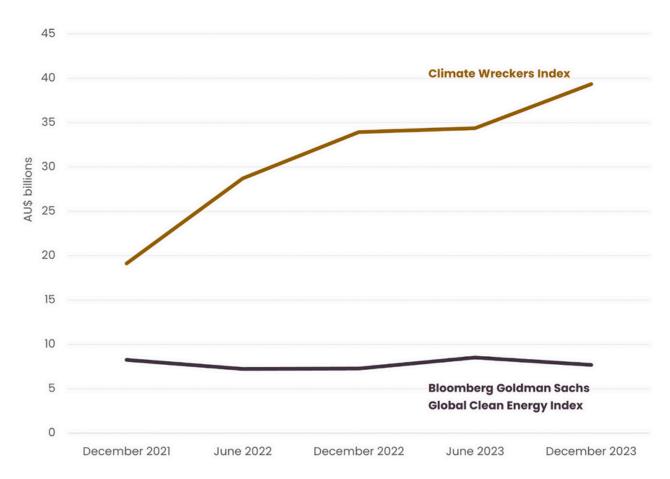


Clean energy investments struggling

Despite the fact that super funds' investments in Climate Wreckers Index companies have more than doubled over two years, investments in clean energy companies – those on the Bloomberg Goldman Sachs Global Clean Energy Index – have decreased by half a billion dollars to just \$7.7 billion over that same timeframe (see Figure 3). This now means that for every dollar invested in clean energy companies, super funds have five dollars invested in climate wreckers.

While the average fund has almost 9% of its members' share investments in Climate Wreckers Index companies, less than 2% of their investments on average are in publicly listed clean energy companies.

Figure 3Investments in Climate Wreckers skyrocketing while clean energy languishes
Total investments (30 super funds) by index



There is undoubtedly a smaller pool of capital available to large investors like super funds wanting to invest in clean energy companies, given the fact that this industry is much younger and less entrenched than the fossil fuel sector. Yet this does not get super funds off the hook for their increasing investments in climate wreckers when they should be phasing them out, in line with their climate commitments.

You cannot transition away from an industry while you're enabling its expansion and super funds' ongoing financial support for the companies recklessly building new coal, oil and gas projects is a significant handbrake on the clean energy transition. Super funds' obligation to act in their members' best long term financial interests should compel them to take urgent action today to rein in the unacceptably risky fossil fuel growth plans of portfolio companies and divest from them where this fails.

BHP is a big problem – for the super industry and the climate

BHP is by far the biggest contributor to super funds' investments in the Climate Wreckers Index overall, accounting for about 60% of the industry's investments in the Index (see Figure 4). This shouldn't be surprising – BHP is a behemoth in the Australian share market, accounting for about 11% of its value.* Super funds are required to match the investment performance of the broader share market, making BHP very difficult to avoid for many funds. Interestingly, the significant exposure to BHP in UniSuper's Balanced investment option makes this option the most exposed to the Climate Wreckers Index – excluding BHP from all investment options, UniSuper's Balanced option would be the least exposed!

But make no mistake: BHP absolutely deserves its place in the Climate Wreckers Index. BHP's mines, which are mostly co-owned with <u>Mitsubishi</u>, churned out a mind-boggling <u>72 million tonnes</u> of climate-destroying coal in financial year 2023. The company's currently operating mines contain 1.9 billion tonnes of known coal reserves, which if burned would result in over 5 billion tonnes of CO2 released into the atmosphere, or **11 years** of Australia's annual emissions.

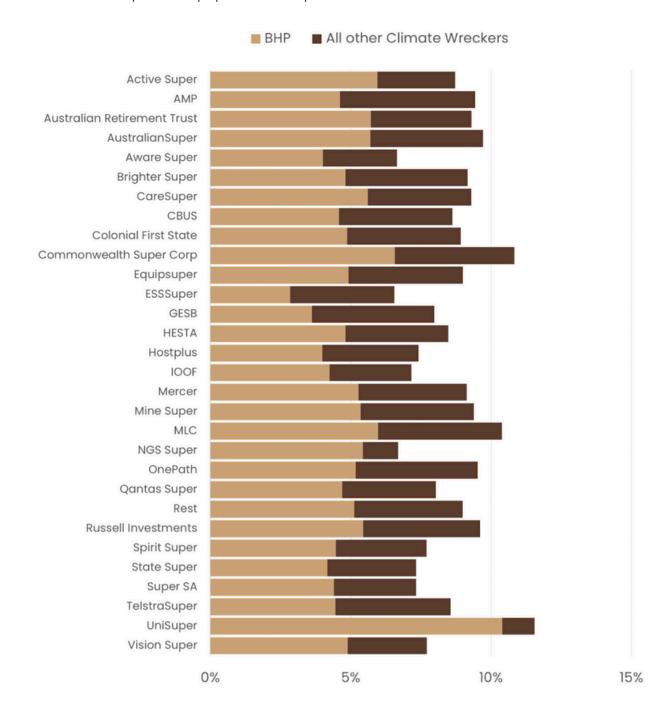
BHP is also pursuing several new destructive coal projects. In a show of complete disregard for the world's climate goals, BHP is actively seeking approval to:

- Continue digging up coal at its Peak Downs mine for another 93 years;
- Extend the life of its Caval Ridge mine from the 2030s to the 2050s;
- <u>Significantly expand</u> the size of the massive Blackwater mine, which it offloaded in April 2024 to climate villain <u>Whitehaven Coal</u>; and
- Build a brand new coal mine called <u>Saraji East</u>.

It doesn't have to be like this. In 2022, BHP <u>committed</u> to closing its Mount Arthur thermal coal mine by 2030, even though it holds enough coal to continue producing for another 38 years. The company needs to show the same leadership with its remaining mines and present a clear pathway to managing them down in line with global climate goals.

*ASX300 index at 31 December 2023.

Figure 4BHP is a significant problem for the super funds
Climate Wrecker exposure as a proportion of share portfolio



Super funds could play a major role in making that happen. The five largest funds – AustralianSuper, Australian Retirement Trust, Aware Super, UniSuper and Hostplus – collectively own **nearly 8% of BHP** across their dozens of investment options. This gives them significant influence over – and a responsibility for – the company's strategy, including its coal expansion plans.

In response to BHP's recent bid on fellow coal miner Anglo American's assets, Vision Super's

Chief Investment Officer (CIO) made comments about the potential takeover, noting there could be favourable outcomes for the climate:

"It may be that [BHP] closes down some coal mines earlier than would be the case if Anglo American remained a stand-alone company. That would be a good thing."

- Michael Wyrsch, CIO, Vision Super

If super funds want to remain invested in BHP, they must push the company to transition its business to align with global climate goals, which would involve dropping its coal expansion plans and committing to managing existing dirty assets in line with those goals, rather than selling them on to even dirtier operators.



Case studies: The diehard climate wreckers

If the Climate Wreckers Index is a group of the worst of the worst companies with fossil fuel growth plans, then the below companies are a small subset of climate wreckers that are hell-bent on pursuing fossil fuel expansion at all costs. **These are the diehard climate wreckers.**

Woodside Energy

Woodside is <u>pursuing</u> massive new oil and gas projects consistent with the failure of the Paris Agreement, including the monstrous Scarborough gas field off the coast of Western Australia, and the associated Pluto Train 2 LNG processing plant. The Scarborough-Pluto 2 project could result in the <u>emissions equivalent</u> of running 15 coal-fired power stations every year, <u>threatens</u> to accelerate degradation of the Murujuga rock art due to industrial emissions, and would also cause significant impacts to the local marine environment. <u>Independent analysis</u> has concluded the Scarborough-Pluto combined project "…represents a bet against the world implementing the Paris Agreement."

Woodside also <u>intends</u> to exploit the monstrous Browse offshore gas basin, a project even bigger and more polluting than the already out-of-line Scarborough project and which will <u>threaten</u> the pristine Scott Reef. The Browse, Scarborough and Pluto 2 projects are collectively referred to as the Burrup Hub, <u>deemed</u> "Australia's biggest climate threat," which could be responsible for a colossal estimated **6.1 billion tonnes** of climate-wrecking emissions over its proposed 50 year lifetime.

Despite the <u>urgent need</u> for fossil fuel production to begin declining in line with global climate goals, Woodside plans to <u>significantly increase</u> oil and gas production this decade, with its overall **emissions expected to rise at least 18%** by 2028 from 2022 levels as weak emissions



targets and plans are dwarfed by planned production growth. Beyond clearly contravening the IEA's <u>key conclusion</u> that there is no room for new oil and gas production projects in the pathway to net zero emissions by 2050, Woodside inappropriately <u>blends</u> data from key climate scenarios in an attempt to portray new gas projects as 'Paris-aligned,' conflicting with the latest climate science.

Woodside <u>recently suffered</u> a world record-breaking vote against its climate plan, at the company's 2024 annual general meeting. Beating its own world record vote against a climate plan in 2022, a staggering **58% of Woodside's shareholders** voted against the company's poor excuse for a climate transition plan this year. After five years of blatantly disregarding shareholder concerns about its climate risk management plan, Woodside has not materially updated its inadequate climate transition plan since <u>2020</u>.

The funds most exposed to Woodside, as a proportion of listed equities:

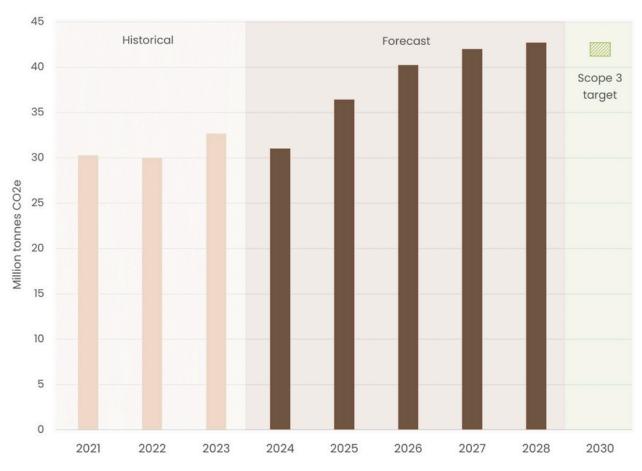
- AustralianSuper: 1.69% (Balanced option)
- Commonwealth Super Corp: 1.52% (PSS Default option)
- Australian Retirement Trust and AMP: 1.37% (Lifecycle Balanced Pool and MySuper 1970s options, respectively)

Santos

Santos is also <u>pursuing</u> massive new oil and gas projects consistent with the failure of the Paris Agreement, including the dangerous offshore Barossa gas project and destructive Narrabri gas project. Santos is pursuing major new projects that would <u>increase</u> its emissions by 22% from 2023 to 2028, even assuming its inadequate emissions targets are implemented. Furthermore, Santos' meagre commitment to help its customers reduce their Scope 1 and 2 emissions by 1.5Mtpa by 2030 would represent **just 4.6%** of Santos' 2023 Scope 3 emissions.



Figure 5Santos scope 3 target is wholly inadequate
Santos projected scope 3 emissions with abatement target



Source: Market Forces Investor Update: Santos Limited, March 2024

Santos plans to drill 850 gas wells throughout the Pilliga Forest and surrounding farmland near Narrabri, New South Wales. The company is still desperately pursuing this toxic project, despite years of opposition from <u>Gomeroi Traditional Owners</u> and <u>farmers</u>, as well as former Chief Scientist <u>Penny Sackett</u>, who has confirmed the project is inconsistent with the Paris Agreement and net zero by 2050. Some Gomeroi Traditional Owners have <u>recently won</u> a landmark appeal against the Native Title Tribunal in the Federal Court, which found that the Tribunal had failed to consider climate change in its approval of the Narrabri project.

Santos is also pushing ahead with its Barossa gas project, a massive new <u>proposed gas field</u> 300km North of Darwin, in the Northern Territory. If the project goes ahead, Santos will transport gas from the Barossa field to an existing LNG processing facility in Darwin. The extremely high carbon dioxide (CO2) content of Barossa gas has led energy experts to <u>state</u> that the Barossa to Darwin LNG project looks like it's shaping up to become "...a CO2 emissions factory with an LNG by-product."

Santos' oil and gas projects are not just damaging to a safe climate future, but Traditional Owners' cultural heritage as well. Tiwi Islands Traditional Owners <u>successfully</u> challenged Santos over its Barossa project in the Federal Court in 2022 for failing to adequately consult with them, subsequently winning the follow-up appeal from Santos. Since then, further legal

challenges have been mounted against Santos' Barossa project, and some Tiwi Islands Traditional Owners have even <u>travelled</u> all the way to Tokyo to speak directly with the financiers of Santos and raise concerns about Barossa.

The funds most exposed to Santos, as a proportion of listed equities:

ESSSuper: 1.39% (Balanced option)
Hostplus: 1.24% (Balanced option)
Equipsuper: 1.13% (MySuper option)

Whitehaven Coal

Whitehaven Coal is the biggest undiversified coal mining company on the Australian share market. Whitehaven's <u>plans</u> to massively expand the coal industry are completely at odds with the Paris Agreement goal of limiting global warming to 1.5°C.

Whitehaven is planning to spend around \$4.5 billion on three new coal mines and expansions by the end of this decade: Vickery, Narrabri Stage 3 and Winchester South. In June 2023, the company lodged an application to extend the life of its controversial Maules Creek coal mine by another nine years. Additionally, in its acquisition of the Blackwater and Daunia mines from BHP, Whitehaven confirmed one of the other assets it received was the mining tenements for the Blackwater South project, a huge mine that could see Whitehaven mining coal until 2121 if approved, and is estimated to cost over \$1 billion to develop. If all of these projects proceed as planned, when emissions from digging up and burning the coal are added, over their lifetimes these mines would unleash some 3.6 billion tonnes of carbon emissions, the equivalent of more than 7.5 times Australia's annual emissions.

Whitehaven's existing Maules Creek coal mine is one of Australia's most controversial mining projects and was <u>strongly opposed</u> by local farmers and Gomeroi Traditional Owners. Despite a



massive community campaign that included a two year blockade, Whitehaven bulldozed hundreds of hectares of critically endangered forest that <u>provide important habitat</u> for rare and endangered species like the Superb Parrot, Regent Honeyeater and Squirrel Glider.

Lock the Gate Alliance has compiled a <u>comprehensive list</u> of Whitehaven's law-breaking over the last 10 years. This compilation shows the company and its subsidiaries have been found guilty or investigated 35 times and incurred almost \$1.5 million in total penalties.

The funds most exposed to Whitehaven, as a proportion of listed equities:

• ESSSuper: 0.55% (Balanced option)

• **Cbus:** 0.21% (Growth option)

• State Super: 0.16% (Balanced option)

Equipsuper, Spirit Super and Super SA appear to have removed Whitehaven from their default options since December 2022. Vision Super's default option appears to have picked up exposure to Whitehaven since June 2023.

Adaro

Adaro Energy Indonesia (Adaro) is a pure play coal mining company with plans to expand. Adaro <u>produced</u> nearly 66 million tonnes of coal in 2023 alone – an increase of 25% from 2021 levels – and has coal <u>reserves</u> of 1 billion tonnes. Burning all of these reserves would release 2 billion tonnes of CO2-e, equivalent to nearly double <u>Indonesia's</u> total annual emissions. Adaro has stated plans to ramp up coal production to <u>67 million tonnes</u> in 2024. To justify its business plans, Adaro <u>presents</u> global coal demand forecasts that are even higher than the International Energy Agency's 2.5°C-aligned STEPS scenario.



Adaro also plans to build an <u>aluminium smelter</u> through a subsidiary which would be powered by new coal-fired power plants in North Kalimantan, a province of Indonesia on the island of Borneo. At full capacity, the smelter would produce 1.5 million tonnes of aluminium per annum and at least two-thirds of its power needs would be met by burning coal. The first phase of the smelter project includes building a new 1.1GW coal power plant, meaning the smelter would emit 5.2 MtCO2-e per annum throughout the first phase.

State Super is the only fund with material exposure to Adaro (0.08% of its Balanced option's listed equities). Mercer appears to have removed Adaro from its default option since December 2022. Cbus' default option appears to have picked up exposure to Adaro since June 2023.

TEPCO and Chubu Electric

TEPCO, Chubu and their joint venture JERA are betting against the climate goals of the Paris Agreement and undermining their own net zero emissions commitments by expanding the LNG and coal power sectors.

JERA is <u>responsible</u> for a whopping 150 MtCO2-e annually, or 14% of Japan's <u>annual emissions</u> (2022). JERA <u>currently</u> generates 100% of its electricity from fossil fuels (75% gas, 25% coal) with no phase out timelines.

JERA is also pursuing significant involvement in the LNG sector, including gas fields, LNG terminals and LNG to power projects in countries such as Australia, Bangladesh, the United States, and Vietnam. This includes a stake in the Barossa gas field, discussed in the Santos case study above.



The funds most exposed to TEPCO, as a proportion of listed equities:

- AMP: 0.02% (MySuper 1970s option)
- Brighter Super: 0.02% (MySuper option)
- GESB: 0.02% (My West State Super option)

Vision Super appears to have removed TEPCO from its default option since December 2022. CareSuper, Cbus, Mine Super and Russell Investments' default options appear to have picked up exposure to TEPCO since December 2022.

The funds most exposed to Chubu Electric, as a proportion of listed equities:

- Vision Super: 0.07% (Balanced Growth option)
- State Super: 0.06% (Balanced option)
- **AMP:** 0.03% (MySuper 1970s option)

CareSuper, Cbus, Mine Super, NGS Super and Russell Investments' default options appear to have picked up exposure to Chubu since December 2022.

Mitsubishi Corp

Mitsubishi Corp is a rare example of a company with a complete Climate Wreckers Index bingo card – it turned up in our research as expanding fossil fuels in all four areas considered for the Index: gas power plants, coal production, LNG terminals and oil and gas production.

Despite its <u>stated goal</u> of reducing its greenhouse gas (GHG) emissions to net zero by 2050, Mitsubishi is currently bidding for and investing in new LNG projects in Bangladesh and Vietnam.* If built, these proposed LNG projects are expected to operate for several decades and would continue to emit GHGs after 2050.

However, Mitsubishi has no policy to rule out or in any way restrict the development of new oil and gas fields or new LNG projects. Instead, the company plans to expand LNG and gas power operations and is at significant risk of contradicting the goal and the timeline of net zero emissions by 2050. These projects also risk destroying the lives and livelihoods of communities residing by these projects.

Mitsubishi is expanding its gas business by building gas fields, LNG terminals and LNG to power projects, contrary to the International Energy Agency's Net Zero by 2050 <u>scenario</u>, which makes clear that achieving this goal means no new fossil fuel supply and an extremely limited and narrowing role for fossil fuels in electricity generation.

Meanwhile, Mitsubishi's coal mining subsidiary is <u>expanding</u> its metallurgical coal mining operations in Australia, seeking a mine expansion that could see the mine operating beyond 2100!

The funds most exposed to Mitsubishi Corp companies, as a proportion of listed equities:

- AMP: 0.06% (MySuper 1970s Super option)
- HESTA: 0.05% (Balanced Growth option)
- Qantas Super: 0.05% (Glidepath Altitude option)

Mine Super and State Super's default options appear to have picked up exposure to Mitsubishi Corp companies since December 2022.

*According to financial subscription sources and news reports, in Bangladesh, Matarbari Summit LNG terminal and Matarbari LNG terminal and in Vietnam, Bac Lieu power plant and Long Son power plant

General Electric

General Electric (GE) has historically been heavily involved in coal power generation, both in the United States and also as a developer of coal power plants internationally. While the company <u>announced</u> it is exiting new coal power builds, it is planning major expansions in the LNG and gas power sectors.

GE's stated <u>mission</u> of "addressing the climate crisis" rests in stark contradiction to pursuing and developing projects that are incompatible with global climate goals. Such a disconnect puts the company at risk of being accused of greenwashing.

Market Forces' <u>research</u> has found GE is involved in new LNG to power plants in Vietnam and Bangladesh with combined capacity of almost 25 GW.

The funds most exposed to GE, as a proportion of listed equities:

- **IOOF:** 0.23% (Balanced Investor Trust option)
- Colonial First State: 0.22% (FirstChoice Wholesale Growth option)
- Australian Retirement Trust: 0.21% (Lifecycle Balanced Pool option)

GESB appears to have removed GE from its default option since December 2022. CareSuper, Cbus, Colonial First State, IOOF, Mine Super, State Super and Vision Super's default options appear to have picked up exposure to GE since December 2022.

[^]Excluding non-fossil fuel-related subsidiaries (see methodology below)

Further information and methodology

Constructing the list of 190 companies (the Climate Wreckers Index)

Process

Data was pooled from several sources:

- 1. Global Energy Monitor (GEM)'s 'Global Coal Plant Tracker', aggregating plants in development by MW capacity ('coal plant developers').
- 2. GEM's 'Global Gas Plant Tracker', aggregating plants in development by MW capacity ('gas plant developers').
- 3. Urgewald's <u>Global Oil and Gas Exit List (GOGEL)</u>, ordered by short term expansion plans in million barrels of oil (MMBOE) equivalent ('upstream oil and gas expanders') and LNG terminals capacity under development in million tonnes per annum (mtpa) ('LNG terminal developers').
- 4. GEM's 'Global Coal Mine Tracker', by aggregating each mine by company and creating two lists: one ordered by 'probable and proven' reserves in currently operating coal mines in million tonnes, and one ordering by size of expansion plans in million tonnes per year.

The companies on the list were screened to only include publicly traded companies. The final list of 190 companies was composed of the top 30 public coal plant developers, the top 30 public gas plant developers, the top 60 public upstream oil and gas expanders, the top 10 public LNG terminal developers, and 60 companies from the coal mine tracker consisting of 35 companies based on reserves, and 25 companies based on expansion plans.

Details

- Public companies that appeared on multiple lists were kept on the list they appeared
 highest, removed from the other list(s) and replaced by the company with the next-highest
 value. If a company was in the same position on multiple lists, the priority was given to the
 coal plant list, then coal mine reserves, then coal mine expansion, then oil and gas
 expansion, then LNG terminals, then gas plants.
- Where multiple companies owned a coal mine/coal plant/gas plant, the relevant capacity (MW/Mt/Mtpa) was distributed pro rata based on ownership. Where this information was not provided in the primary source, it was assumed to be an equal split between owners.
- Companies from the primary sources were only included if they were publicly listed.
- We compiled all publicly listed subsidiaries as identified by the Bloomberg RELS function, excluding those without a clear involvement in fossil fuels or where the purported parent's ownership was below 20% (indicating no significant influence) or where it couldn't be confirmed through further analysis. A table of subsidiaries excluded or included is in appendix 2.

Clean energy exposure

Our figures for clean energy investments are based on the <u>Bloomberg Goldman Sachs Global Clean Energy Index</u>. This index has some overlap with the Climate Wreckers Index due to the diversified nature of some companies (13 entities in total, mostly utilities). We opted not to exclude these entities from our clean energy investment figures to avoid skewing the data.

Emissions calculations

Upstream oil and gas emissions were estimated by adding up the total barrel of oil equivalent (BOE) of near-term expansion plans for the 60 companies on that list. We applied emissions factors from the <u>US EPA</u>. GOGEL combines oil and gas production, so we estimated the oil-gas split to be 50-50. In <u>2021</u>, global oil and gas production was 58% oil to 42% gas in BOE terms, so given the higher emissions from oil, our assumption is conservative. Our estimates are limited to product combustion only (i.e., exclude wellhead emissions, transport emissions etc).

LNG terminals were not included in the emissions calculations due to the risk of double counting emissions from upstream gas production.

Gas plant emissions were calculated based on the total megawatts (MW) in development. We assumed that new plants in development are combined cycle plants, which is the less emissions intensive technology. We used emissions factors from the <u>IPCC</u>, and a capacity factor of 57% based on the <u>US CCGT fleet</u>. Plants were assumed to have an economic life of 30 years.

Coal plant emissions were aggregated at the plant level from GEM's own emissions estimates.

Coal mine emissions were calculated by taking the total 2P (proven and probable) reserves in proposed new coal mines, including mines proposed by the 35 companies included for the size of their reserves in operating projects. This data is only available in some cases, in large part because companies often do not estimate reserves at the early stages of a project. Companies disclose resources (measured/indicated) more frequently, but this likely overestimates the size of projects by a significant margin since only a portion of resources are ultimately mined, so we opted for reserves despite the weaker data availability.

To improve our emissions estimates, we made an effort to supplement the data for the top five coal mine expander exposures in the dataset using a wider range of company disclosures such as EIS documentation. These five companies account for 85% of the super funds' total exposure to coal mine expanders.

We then applied emissions factors from the <u>Australian Government</u> based on the type of coal: Lignite, anthracite, bituminous, subbituminous and metallurgical. If GEM indicated a mine contained a mix of metallurgical and thermal we assumed 100% thermal; this makes our estimates conservative, since metallurgical coal has a higher emissions factor than thermal coal. As with oil and gas, our estimates only account for product combustion.

In a change from our 2023 methodology, we now include emissions from planned projects not part of a company's main inclusion criteria. For instance, where a company has both coal mining and coal power expansion plans, but was included on the basis of its coal mining plans, we previously counted only emissions from its proposed coal mines; we now include emissions from its planned coal power as well. This has increased our total estimates by better reflecting the totality of the companies' plans.

Overall, we found that the companies on the Climate Wreckers Index are pursuing:

- New or expanded oil and gas fields with combined expected production of 128 billion barrels of oil equivalent
 - The estimated carbon dioxide emissions from combustion of this much oil and gas is more than 49 billion tonnes, equal to 104 times Australia's annual emissions
- · New or expanded coal mines with combined reserves of 16 billion tonnes
 - The estimated carbon dioxide equivalent (CO2-e) from combustion of this much coal is

29 billion tonnes, equivalent to 62 times Australia's annual emissions

- · New coal plants with combined capacity of 235 GW
 - Based on GEM emissions data, the total emissions from these coal plants is estimated to be 37 billion tonnes of CO2-e, equal to 80 times Australia's annual emissions
- New gas plants with combined capacity of 198 GW
 - Assuming that of these plants will be modern combined cycle plants, the total emissions is estimated to be 15 billion tonnes of CO2-e, equal to 31 times Australia's annual emissions

To create figure 2 (share of expansionary emissions in each fund's portfolio), we took each fund's position (in AUD) as a share of company market capitalisation (at 31 December 2023) to estimate their respective ownership of each company. We then multiplied this figure by company expansionary emissions, calculated as per the methodology above, to arrive at the amount of expansionary emissions 'held' by each fund in their share portfolios.

Super Fund Option Exposures

Scope

The scope of our analysis covers the default (or largest) investment option of Australia's largest 30 super funds by assets under management, according to <u>APRA's June 2023 fund-level</u> <u>superannuation statistics [Table 2a and Table 2b]</u>. Further to these APRA-regulated funds, our analysis includes any state-regulated funds big enough to be included in the top 30 list.

Where mergers between super funds occurred between June 2023 and 31 March 2024, the single merged entity is listed on the table (noting the previous fund name/s) and occupies only one position on the table, unless the merged funds were found to have clearly separate default options with different investments.

The final analysis pertains to 30 funds. HUB24, Netwealth and Macquarie were excluded as they do not appear to have default investment options comparable to the rest of those captured in the study. North Super was excluded due to a lack of pre-December 2023 data.

Process

Portfolio holdings disclosures were collected for the final 30 superannuation fund options (see sources in appendix 2 below). These holdings were filtered for listed equities, and we extracted all the investments whose security identifiers matched companies in the Climate Wreckers Index. We calculated and have presented the total investment exposure to Climate Wreckers Index companies as a percentage of total listed equities in the option, minus any allocation to pooled or managed investment fund products within the total listed equities allocation. Portfolio holdings disclosures are as at 31 December 2023.

Average Exposure Figures

To calculate the average exposure to Climate Wreckers Index companies, we took the average percentage of listed equity assets invested in Climate Wreckers Index companies for all fund options profiled, applied this average exposure to all superannuation listed equity assets (based on the industry average asset allocation), and divided by the number of accounts, per ASFA's March 2024 Superannuation Statistics.

Appendices

Appendix 1: Super Funds profiled (including sources)

Fund	Investment option profiled
Active Super	Accelerator-High Growth
АМР	MySuper 1970s
Australian Retirement Trust	Lifecycle Balanced Pool
AustralianSuper	Balanced
Aware Super	High Growth
Brighter Super	MySuper
CareSuper	Balanced (MySuper)
CBUS	Growth (MySuper)
Colonial First State	FirstChoice Wholesale Growth
Commonwealth Super Corp	PSS Default
Equipsuper	MySuper
ESSSuper	Balanced
GESB	My West State Super
HESTA	Balanced Growth
Hostplus	Accumulation Balanced
Insignia Financial (IOOF)	Balanced Investor Trust
Mercer	SmartPath 1969-1973
Mine Super	High Growth
MLC	MySuper Growth
NGS Super	Diversified MySuper
OnePath	ANZ Smart Choice 1970s
Qantas Super	Glidepath (Altitude)
Rest	<u>Core Strategy</u>
Russell Investments	Goal Tracker
Spirit Super	Balanced (MySuper)
State Super	Balanced
Super SA	Triple S Balanced
Telstra	Balanced MySuper
UniSuper	Balanced
Vision Super	Balanced Growth

Appendix 2: Conglomerate Subsidiaries

Company	Included ¹	Excluded
Adani Group	Adani Energy Solutions Ltd Adani Enterprises Ltd Adani Ports & Special Economic Zone Ltd Adani Power Ltd Adani Total Gas Ltd	Adani Green Energy Ltd Adani Wilmar Ltd
Adaro Energy	Adaro Minerals Indonesia Tbk PT	Arindo Holdings Mauritius Ltd
AES Corp		AES Andes SA Empresa Electrica de Oriente SA de CV Cia de Alumbrado Electrico de San Salvador SA de CV
Alpha Metallurgical Resources		ANR Inc
Anglo American		Kumba Iron Ore Ltd Anglo American Platinum Ltd
Banpu	Indo Tambangraya Megah Tbk PT	
ВР	BP Castrol KK Castrol India Ltd	
China Cinda Asset Management		Cinda Real Estate Co Ltd Cinda Securities Co Ltd Cinda International Holdings Ltd
Chubu Electric Power		Toenec Corp ES-Con Japan Ltd ECON Japan Reit Investment Corp
Diamondback Energy		Viper Energy Partners LP
DMCI Holdings	Semirara Mining & Power Corp	
Dubai Electricity and Water Authority PJSC		Emirates Central Cooling Systems Corp
Ecopetrol		Interconexion Electrica SA ESP
EDP - Energias de Portugal		EDP Renovaveis SA
Engie SA	Engie Brasil Energia SA Engie Energia Chile SA	Al Kamil Power Co SAOG
ExxonMobil		Hugoton Royalty Trust
General Electric Company (GE)		GE T&D India Ltd
Glencore		Perubar SA Altyntau Kokshetau JSC
Guangzhou Development Group		Guangzhou Zhujiang Brewery Co Ltd
Indika Energy		Mitrabahtera Segara Sejati Tbk PT
ITOCHU Corporation	Itochu Enex Co Ltd	Prima Meat Packers Ltd CI Takiron Corpltochu-Shokuhin Co Ltd
Jastrzebska Spolka Weglowa SA		Polski Holding Nieruchomosci SA
KKR & Co Inc		JB Chemicals & Pharmaceuticals Ltd Guangdong Yuehai Feeds Group Co Ltd KKR Credit Income Fund MYOB Finance Australia Ltd Medical Information Managements Solutions LLC

Company	Included ¹	Excluded
		Pepper Money Ltd/Australia LCY Technology Corp
Korea Electric Power Corp	KEPCO Engineering & Construction Co Inc KEPCO Plant Service & Engineering Co Ltd	
Mitsubishi Corporation	Chiyoda Corp	Nihon Shokuhin Kako Co Ltd Nitto Fuji Flour Milling Co Ltd Mitsubishi Shokuhin Co Ltd Lawson Inc
Mitsui & Co		Mitsui Auto Finance Peru SA
NLC India		Rashtriya Chemicals & Fertilizers Ltd
NMDC		Legacy Iron Ore Ltd NMDC Steel Ltd
ONGC	Hindustan Petroleum Corp Ltd Mangalore Refinery & Petrochemicals Ltd	
PetroChina	Kunlun Energy Co Ltd	
PetroVietnam		Petec Coffee JSC PTSC Thanh Hoa Port JSC Petrovietnam Fertilizer & Chemicals JSC Petroleum Information Technology Telecom & Automation JSC Thai Binh Petrovietnam Oil JSC PetroVietnam Gas JSC
San Miguel Corp		San Miguel Food and Beverage Inc Ginebra San Miguel Inc San Miguel Brewery Hong Kong Ltd Delta Djakarta Tbk PT
Saudi Aramco	Saudi Aramco Base Oil Co S-Oil Corp	Saudi Basic Industries Corp SABIC Agri-Nutrients Co Yanbu National Petrochemical Co MOBI Industry Co
Shanghai Electric Group		Shanghai Electric Wind Power Group Co Ltd
SK Inc		SK Biopharmaceuticals Co Ltd SK REITs Co Ltd SK Growth Opportunities Corp
TBEA Co Ltd		Xinte Energy Co Ltd
TotalEnergies		SunPower Corp Total Senegal SA
Vedanta		Cairn India Ltd Hindustan Zinc Ltd
Vinacomin		Vinacomin - Viet Bac Mining Industry Holding Corp JSC Vinacomin Motor Industry JSC
Yancoal Australia		Yancoal SCN Ltd
YPF		MetroGas SA

¹ Only shows companies that matched in the disclosures. The parent company was always included.

Appendix 3: The Climate Wreckers Index companies

Name	Main fossil fuel activity	Other activities
ACWA Power Co	Gas power expansion	
Adani Group	Coal mine expansion	Coal mine reserves, Coal power expansion
Adaro Energy	Coal mine reserves	Coal power expansion
AES Corp	Gas power expansion	
Aker BP	Oil and gas expansion	
ALLETE Inc	Coal mine reserves	
Alliance Resource Partners	Coal mine reserves	
Alpha Metallurgical Resources	Coal mine reserves	
Anglo American	Coal mine expansion	Coal mine reserves
Antero Resources	Oil and gas expansion	
APA Corporation	Oil and gas expansion	
ARC Resources	Oil and gas expansion	
Arch Resources	Coal mine reserves	
Aspire Mining	Coal mine expansion	
Atlas Resources	Coal mine expansion	
Banpu	Coal mine reserves	
Bayan Resources	Coal mine expansion	
Beijing Jingneng Clean Energy Co Ltd	Gas power expansion	
Beijing Jingneng Power Company	Coal power expansion	
Bharat Petroleum	Oil and gas expansion	
ВНР	Coal mine reserves	Coal mine expansion
Bowen Coking Coal	Coal mine expansion	
ВР	Oil and gas expansion	
Bumi Resources	Coal mine reserves	
Canadian Natural Resources	Oil and gas expansion	
Cenovus Energy	Oil and gas expansion	
Cheniere Energy Inc	LNG terminals expansion	
Chesapeake Energy	Oil and gas expansion	
Chevron	Oil and gas expansion	
China Cinda Asset Management	Coal mine reserves	Coal mine expansion
China Coal Xinji Energy Co Ltd	Coal power expansion	
China Energy Engineering Corporation	Coal power expansion	
China Power International Development Ltd	Coal power expansion	
China Resources Power Holdings	Coal power expansion	Gas power expansion
China Shenhua Energy Company Ltd	Coal power expansion	
China Southern Power Grid Energy Storage Co Ltd	Gas power expansion	
Chord Energy Corporation	Oil and gas expansion	
Chubu Electric Power	Gas power expansion	

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Guangdong Electric Power Development Co Ltd Gas power expansion Coal power expansion	Guangdong Electric Power Development Co Ltd	Gas power expansion	Coal power expansion

Name	Main fossil fuel activity	Other activities
Guangzhou Development Group	Gas power expansion	
Guangzhou Hengyun Enterprises Holdings Ltd	Gas power expansion	
Gulf Energy Development Public Company Ltd	LNG terminals expansion	Gas power expansion
Hess	Oil and gas expansion	
Hidrovias do Brasil SA	Gas power expansion	
Hindalco	Coal mine expansion	
Huadian International Power Co Ltd	Coal power expansion	Gas power expansion
Huaihe Energy	Coal mine reserves	Coal power expansion
Huaneng Power International	Gas power expansion	Coal power expansion
Hubei Energy Group Co Ltd	Coal power expansion	
Imperial Oil Ltd	Oil and gas expansion	
Indika Energy	Coal mine reserves	
Inner Mongolia Yitai Coal Co Ltd	Coal mine reserves	Coal mine expansion
Inpex	Oil and gas expansion	
ITOCHU Corporation	Oil and gas expansion	
Jaiprakash Power Ventures Limited (JPVL)	Coal mine expansion	
Jastrzebska Spolka Weglowa SA	Coal mine reserves	
Jiangsu Xukuang Energy Co Ltd	Coal power expansion	
Jiangxi Ganneng Co Ltd	Coal power expansion	
Jinneng Holding Shanxi Electric Power Co Ltd	Coal power expansion	
Jointo Energy Investment Co, Ltd Hebei	Coal power expansion	
JSW Steel Ltd	Coal mine expansion	Coal power expansion
Kinder Morgan Inc	LNG terminals expansion	
KKR & Co Inc	LNG terminals expansion	
Korea Electric Power Corp	Gas power expansion	
Manila Electric Co	Gas power expansion	
Marathon Oil Corporation	Oil and gas expansion	
Marubeni Corporation	Gas power expansion	
Matador Resources Company	Oil and gas expansion	
MC Mining	Coal mine expansion	
Mitsubishi Corporation	Coal mine reserves	Gas power expansion, Oil and gas expansion, Coal mine expansion
Mitsui & Co	Oil and gas expansion	
Mongolia Energy Corporation	Coal mine reserves	
Mongolian Mining Corporation	Coal mine reserves	
NACCO Industries	Coal mine reserves	
National Fuel Gas	Oil and gas expansion	
New Fortress Energy	LNG terminals expansion	Gas power expansion
NLC India	Coal mine expansion	Coal mine reserves, Coal power expansion
NMDC	Coal mine expansion	

Name	Main fossil fuel activity	Other activities
NTPC	Coal power expansion	Coal mine expansion, Coal mine reserves
Occidental Petroleum Corporation	Oil and gas expansion	
ому	Oil and gas expansion	
ONGC	Oil and gas expansion	
Osaka Gas Co Ltd	Oil and gas expansion	
Ovintiv Inc	Oil and gas expansion	
Peabody Energy	Coal mine reserves	
Permian Resources Corporation	Oil and gas expansion	
Petrobras	Oil and gas expansion	
PetroChina	Oil and gas expansion	
PetroVietnam	LNG terminals expansion	Gas power expansion, Oil and gas expansion, Coal power expansion
Pioneer Natural Resources	Oil and gas expansion	
PKN Orlen	Oil and gas expansion	
Polska Grupa Energetyczna (PGE)	Coal mine expansion	Gas power expansion, Coal mine reserves
PowerChina	Coal power expansion	
PT Barito Pacific Tbk	Coal power expansion	
PT Bukit Asam	Coal mine reserves	
PTT Exploration and Production Public Company (PTTEP)	Oil and gas expansion	
Qatar Electricity and Water Company QPSC	Gas power expansion	
Range Resources	Oil and gas expansion	
Reliance Power	Coal mine reserves	
Repsol	Oil and gas expansion	
RioZim	Coal power expansion	
Romgaz SA	Oil and gas expansion	
RWE	Coal mine reserves	
San Miguel Corp	Gas power expansion	Coal power expansion
Santos	Oil and gas expansion	
Sasol	Coal mine expansion	Coal mine reserves
Saudi Aramco	Oil and gas expansion	
SDIC Power Holdings Co Ltd	Coal power expansion	
Sempra	LNG terminals expansion	
Shaanxi Coal Industry	Coal mine reserves	Coal mine expansion, Coal power expansion
Shaanxi ENERGY Investment Co Ltd	Coal power expansion	
Shanghai Electric Group	Coal mine expansion	
Shanghai Electric Power Co Ltd	Coal power expansion	
Shanxi Coal International Energy Group Co Ltd	Coal power expansion	
Shanxi Coking Coal Group	Coal mine reserves	Coal mine expansion

Name	Main fossil fuel activity	Other activities
Shell plc	LNG terminals expansion	Oil and gas expansion
Shenergy Company Ltd	Coal power expansion	
Shenzhen Energy Group	Gas power expansion	
Siemens Energy AG	Gas power expansion	
Sinopec	LNG terminals expansion	Oil and gas expansion, Coal mine reserves
SJVN Ltd	Coal power expansion	
SK Inc	Gas power expansion	Oil and gas expansion
SM Energy	Oil and gas expansion	
Southern Co	Gas power expansion	
Southwestern Energy	Oil and gas expansion	
Stanmore Resources	Coal mine expansion	
Steel Authority of India (SAIL)	Coal mine expansion	
Suncor Energy	Oil and gas expansion	
Talen Energy Corp	Gas power expansion	
Tauron Polska Energia S.A.	Coal mine reserves	
TBEA Co Ltd	Coal mine reserves	Coal power expansion
Teck Resources	Coal mine expansion	Coal mine reserves
Tellurian Inc	LNG terminals expansion	
Tenaga Nasional Bhd	Gas power expansion	
TerraCom	Coal mine expansion	
Thungela Resources Limited	Coal mine reserves	
Tokyo Electric Power Co	Gas power expansion	
Top Energy Company Ltd Shanxi	Coal power expansion	
TotalEnergies	Oil and gas expansion	LNG terminals expansion
Tourmaline Oil	Oil and gas expansion	
Var Energi ASA	Oil and gas expansion	
Vedanta	Coal mine expansion	
Vinacomin	Coal mine reserves	
Wenergy Group	Coal power expansion	
Whitehaven Coal	Coal mine expansion	Coal mine reserves
Woodside Energy	Oil and gas expansion	
Xinyi Glass Holdings Ltd	Coal power expansion	
Yancoal Australia	Coal mine expansion	
Yankuang Energy	Coal mine reserves	
YPF	Oil and gas expansion	
Zhejiang Zheneng Electric Power Co Ltd	Coal power expansion	

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