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OXFAM Aotearoa

CLOSING TIME

Why Aotearoa needs a just transition from fossil fuel production **now.**

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FOREWORD
INDIA LOGAN-RILEY

My mahi has taken me around the world. No matter where I go, the stories of colonialism are carved into the land and permeate the waterways.

Even on the other side of the world from Aotearoa in a place called Sápmi (illegally occupied by Sweden, Norway, Finland and western Russia) I have walked through the deep snow with indigenous Sámi friends as they speak of facing the last handful of winters with their siblings, the reindeer. The winters are becoming too warm and the melting snow is sealing the reindeer's food under ice and they are starving. When the reindeer starve, Sámi starve. Not only for lack of resources like food and materials that are sourced from reindeer, but also in wairua. This is the same starving as when a family member is lost and an intergenerational home is destroyed.

We have also experienced this loss of homes and loved ones in our own islands. Only months ago, Cyclone Gabrielle tore through my family's homelands. The toll that this has taken on Te Matau a Māui and Tairāwhiti can still be seen in the slip-covered mountain ranges, house-high piles of silt and the way everyone still holds their breath during heavy rain.

In the impacts of climate change we are bound to the lives of people the furthest from our corner of Te Moana Nui a Kiwa. As the ice-and-snow territories of my Sami friends melt, the coast-eroding waters in Hawkes Bay rise.

This is why keeping fossil fuels in the ground for a just transition in Aotearoa matters to all our neighbours and our home communities.

If these climate disasters are the atua teaching us lessons, and we listen, then we must take to heart that we need to do all we can now to prevent more heartache.

That is why I urge you to read this report in its fullness and receive the generous offerings that fill its pages.

In this political context more than ever it is important we look to whakapapa and understand why Te Tiriti o Waitangi remains a central pou in guiding our climate action. Te Tiriti was created in the aspiration of looking after the health and wellbeing of everyone in Aotearoa. It also conveyed the realms of responsibility across the Crown and mana whenua, as well as the power to execute that responsibility. In the mis-use of power and dismissal of obligation we have seen breaches of Te Tiriti and the abuse of our precious environments.

This report draws attention to the colonisation of Indigenous peoples, the commodification of Indigenous lands, and the carbonisation of our atmosphere. It sketches out the relationship where these injustices, the exploitation of workers, and the destruction of nature, are dispossessing a future for the generations that come. It aptly names this the fossil economy.

And importantly, the following pages offer much-needed details and stepping stones in a just transition for everyone in the fullness of Te Tiriti.

So if you are feeling despondent, and dispossessed, get behind tino rangatiratanga. Tino rangatiratanga is the legitimate source of power to defend Papatūānuku and advance climate justice. Solidarity across coalitions, based on unconditional support for tino rangatiratanga, is the best chance we have for climate justice.

We need justice for Māori. We need justice for Pacific peoples. We need justice for workers. We need justice for disabled people. We need justice for the animals and ecosystems around us. And all of these are required as justice for future generations.

The whakapapa of the fossil economy is heavy and heartbreaking. Thankfully, on the other side of heartache sits a doorway to greater joy. A place where workers have jobs they can take pride in knowing they're tangibly building us a healthier future. A future where we can tell our neighbours in faraway places that we are doing our best in loving them by reducing our emissions. All while addressing the harms of the past to bring justice, so that no one is left behind.

Ka whawhai tonu mātou, Āke! Āke! Āke!

India Logan-Riley (Ngāti Kahungunu ki Ngāti Hawea, Rongomaiwahine, Rangitāne)

Climate Justice Organiser (ActionStation), Community Researcher (Pūrangakura).

FOREWORD
LAVETANALAGI SERU

From the Blue Pacific continent, the call for a just and equitable transition away from fossil fuel dependence is one that goes hand in hand with the mitigation ambition of limiting global temperature rise to well below 1.5 degrees Celsius.

This report by Oxfam Aotearoa New Zealand sets out the necessary actions that the New Zealand government must take, to ensure a future where the Pacific, Aotearoa New Zealand, and the global community can thrive sustainably.

The science is unequivocally clear - for the global temperature to be kept to 1.5 degrees Celsius, deep, rapid, and immediate greenhouse gas emissions reductions are required in a pathway that is 1.5 Celsius compatible. In fact, it suggests that we see emissions peak at the very latest by 2025 and the current level of emissions must be cut by half by 2030 to have a chance to meet the 1.5°C limit. Without this, we are not going to be on track.

We know that the burning and use of fossil fuels is the key driver of the climate crisis that is wreaking havoc in our region and across the world. Yet, some governments continue to be beholden to the corporate interests and the greed of the few fossil fuel barons, and companies; propping them up with fossil fuel subsidies and tax breaks. These must end immediately!

We simply cannot allow the further expansion of the fossil fuel industry, nor allow for the exploration or approval of new coal, oil and gas projects, in Aotearoa New Zealand, or anywhere else across the world. To do so, will spell climate impacts of epic proportions, threatening the human rights, wellbeing, livelihoods, and security of millions of people across the planet.

Committing to the just and equitable phase-out of fossil fuel extraction and production is a moral imperative and a beacon of hope for humanity. Enshrined in the principle of equity, this would imply that historic emitters will need to go the furthest and fastest, providing the means for others to rapidly follow suit. The just and equitable phase-out of fossil fuels goes hand in hand with the phase-in of renewable energy and the doubling of energy efficiency. Finance is a key enabler of this just and equitable transition.

Let this report be a catalyst for change.

The choices made today will shape the legacy we leave for our children and their children. In the Pacific, we envision a future where the winds of change propel us towards a sustainable, just, equitable and fossil fuel-free future.

Lavetanalagi Seru

Regional Coordinator, Pacific Islands Climate Action Network

FOREWORD
RICHARD WAGSTAFF

The only thing certain about the New Zealand economy is that it will face future disruptions – the key unknown is when. Challenges will come from both climate change and issues such as automation, globalisation, and changing technological trends. Left unchecked, these challenges have the potential to cause real harm to New Zealand workers and their communities. The economy will be unnecessarily impacted, skills will be lost, and human capital will be destroyed in the process.

These changes risk reducing the availability of good work together with secure and liveable incomes. We can and should address these challenges through a just transition process. That means making deliberate decisions on how economic change occurs, and managing the process so that costs of change don't fall narrowly on the shoulders of those with the least ability to pay. Our experience in the past 40 years is economic change has often been badly managed, with lasting harm generated. Let us not repeat the mistakes of the past.

A just transition also means that we make our workforces more adaptable to change, and more adept in the skills needed for the future. It means investing in research and development, better schools and hospitals, and delivering jobs where people are, rather than where the economy might want them to be. It means leaving no one behind as the economy grows. That will require closer working between government, business, and unions – this is common elsewhere in the world, but still an evolving field in New Zealand.

Delivering a just transition for New Zealand, away from fossil fuels while maintaining great jobs across Aotearoa, will also help shift us towards a more productive, sustainable, and inclusive economy and society. New Zealand has a great image around the world for being a clean and green nation, one that cares for its environment and its future. It's time to make that rhetoric a reality.

Richard Wagstaff

President, New Zealand Council of Trade Unions

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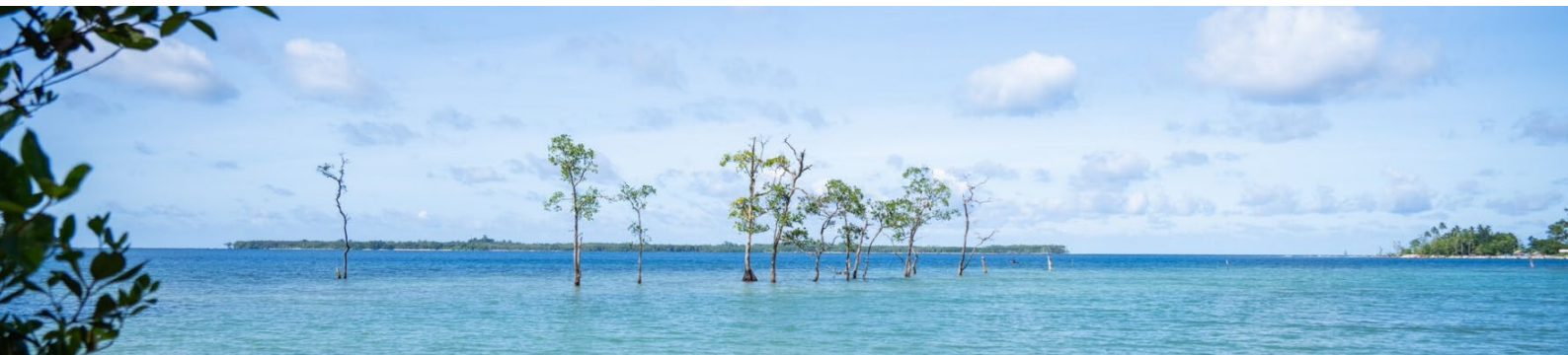
Executive summary

For our communities in Aotearoa and the Pacific to have a liveable future, there can be no future for oil, fossil gas, and coal. Later is too late. Working people and communities in Aotearoa and across the Pacific need and deserve a fast and just transition now, where a managed decline of fossil fuel production is matched with the creation of good jobs in renewable energy, clean industries and social services.

Our fossil fuel-dependent economy in Aotearoa New Zealand has been founded on the violent dispossession of tangata whenua and ongoing breaches of Te Tiriti o Waitangi. This economy continues to prioritise the accumulation of wealth by the few over the wellbeing of the many, while producing far more than our fair share of the carbon emissions that have caused and continue to worsen the global climate crisis.

Fossil fuel production has to end everywhere as fast as possible, with countries like New Zealand taking the lead.

- Fossil fuels are driving the climate crisis. New Zealand must stand with the Pacific to back a global phase out of fossil fuel production that is full, fast, fair and funded. As well as taking this message to the UN climate negotiations, we need to back our commitments with action at home to end fossil fuel exploration and production.
- We now have overwhelming evidence that time has run out for the fossil fuel industry to coexist with a liveable climate. The latest analysis from the Intergovernmental Panel on Climate Change (IPCC), the International Energy Agency (IEA), the UN Environment Program, and others, shows there is no room to expand or explore for new oil, gas or coal production, anywhere in the world.
    - To keep within 1.5 degrees, 58% of the fossil fuels in currently developed fields and mines must stay in the ground. Just the oil and gas in currently active fields would take us past 1.5 degrees of global warming.
- We need to focus on ending fossil fuel production, and not just reducing consumption, because decisions being made now by our government and by fossil fuel companies would lock in future emissions, causing further harm to the climate and putting our economy on the wrong track for the future.
- For a fair and equitable global phase out of fossil fuels, New Zealand and other richer countries need to use our capacity to diversify our economies and end fossil fuel production with the most urgency, as well as providing climate finance funding to support just energy transition to renewable energy in lower income countries, including in the Pacific.
- If countries like New Zealand shy away from our fair share, other countries will be forced to take on an unfair share of the transition in order to stay the course for 1.5 degrees.



Overturning New Zealand's ban on new offshore oil and gas would be a costly and shortsighted mistake.

- Opening up new oil and gas fields for exploration and development would be inconsistent with New Zealand's obligations under the Paris Agreement to keep global warming below 1.5 degrees, and with the incoming Government's own stated commitment to continuing New Zealand's support for a global fossil fuel phaseout.
- Overturning the offshore ban would damage New Zealand's international reputation and relationships, including as an associate member of the Beyond Oil and Gas Alliance (BOGA). With calls for a global phase out of fossil fuels at the centre of global climate talks, and with strong leadership coming from our Pacific neighbours, the new Government's commitment to reopening offshore exploration will cause ongoing embarrassment and risk.
- Delaying production phaseout, especially by expanding production, will only add to the problem of stranded assets and increase costs, including disruption and harm to workers and communities.

Oil and gas production in New Zealand is already declining at exactly the rate needed for an average share of the global phase out needed for 1.5 degrees. Doing our fair share would mean closing existing fields early.

- Production from New Zealand's currently developed oil and gas fields is projected to decline by 62% and 43% respectively by 2030. This represents a combined reduction of 48% in the annual emissions embodied in the produced fuels, which is the average global reduction in carbon dioxide emissions that the IPCC says is needed to keep global average temperature increases below 1.5 degrees.
- As a developed economy, with historical responsibility for past carbon emissions and with a high capacity to transition, New Zealand needs to end fossil fuel production earlier than the global average. To contribute our **fair share**, New Zealand needs to close existing oil and gas fields early as part of a managed decline with a just transition. There is no way that exploring for new oil and gas fields can be consistent with the 1.5 degrees limit.

New Zealand's fossil fuel exports are small but cause disproportionate harm.

- Coal and oil combined made up only 1% of New Zealand's exports in 2022 but, when used, produced emissions equivalent to more than 9% of the rest of our economy.
- Other industries bring in more in export revenue, without causing the same harm as fossil fuels. For example, New Zealand's wine exports earned 260% of the revenue from coal and oil combined in 2022.

Getting Aotearoa off gas must be a top priority for the Government.

- All of New Zealand's piped gas is produced domestically in a closed market with no facilities for import or export. The New Zealand Government's proposed 'Gas Transition Plan' shows the co-dependency between fossil gas production and large industrial consumers, where major supply contracts underwrite gas field development and continued expansion into new fields is necessary to keep the big customers operating. Methanol production alone soaks up 40% of New Zealand's fossil gas supply. This

circular system of incentives means that if fossil gas production declines at the rate needed for transition, the market is likely to collapse.

- A slowed phase out of gas will face the same challenges as a faster one – just later.
- A new study has shown that fossil gas can be just as damaging to the climate as coal power when the effects of methane leaks are considered. The study found that if just 0.2 percent of fossil gas production is leaked, then the effect on global warming over 20 years is as bad as using coal. MBIE figures for gas production in New Zealand show 'transmission and distribution losses' of 0.5 percent.
- Suggestions that more gas is needed in the transition have been extensively debunked.
- Rather than intervening to prop up a failing market which causes harm, the Government must actively manage a rapid decline in both gas demand and supply consistent with keeping global heating below 1.5 degrees.
- The Government could enter into contracts or take ownership of assets needed to ensure a rapid and urgent managed decline of gas production that matches the transition of electricity assets to 100% renewable generation and storage.
- The Government must act with urgency to make sure gas-fired 'peaker' plants are replaced as soon as possible, to meet peak electricity demand with renewable energy, energy storage, and active demand management.
- The Government should take an active role in building and operating renewable power storage, complementing the role of Transpower as the publicly owned operator of the electricity grid. This could be a role for the proposed Ministry of Green Works.
- The Government should continue its support for the transition from fossil fuels to electricity, including by maintaining EECA's grants for residential customers, the State Sector Decarbonisation Fund, and the Government Investment in Decarbonising Industry Fund. Further support should include funding for communities to build renewable power generation and storage systems.

New Zealand's unique circumstances make us well placed to showcase a full phaseout of fossil fuel production to the world.

- New Zealand has a developed economy, with a relatively small proportion dependent on fossil fuel production. This means New Zealand has the economic capacity to fund and support a just transition, where a managed decline of fossil fuel production is matched with the creation of good jobs in renewable energy, clean industries and social services.
- Fossil fuels produced in New Zealand have a minimal and declining role in energy security. This is because all crude oil produced in New Zealand is exported, as is almost all lignite coal.
- Gas-fired power stations are now obsolete for baseload electricity generation, with renewables being added to the grid more cheaply than fossil fuels can compete with. Renewable energy storage is more affordable than ever, with New Zealand's first grid-connected battery system already being built.

The Government needs to manage the decline in fossil fuel production to protect our communities.

- The New Zealand Government's ban on new permits for offshore oil and gas exploration in 2018 was an historic break with the outdated consensus of fossil-fuelled

development, with lasting impacts on the industry's confidence in operating in New Zealand. Even if the ban were now to be overturned, most major global oil and gas companies are unlikely to take the risk of new investment in offshore exploration in the absence of policy consensus from the major political parties.

- In the context of a globally declining industry, a delayed and unmanaged transition from fossil fuel production could attract increasingly speculative and short-term investment, putting workers and communities at a disadvantage. For example:
    - In 2020, the local subsidiary of Malaysia-based Tamarind Resources went into receivership, owing $380 million to more than 80 creditors, many of them small businesses in Taranaki. The company also abandoned their wells, leaving the New Zealand public with a $349 million bill to clean up the mess of decommissioning the Tui oilfield.
    - Meanwhile, a new company called Matahio Energy has acquired the onshore licenses for production and exploration in Taranaki that were previously held by Tamarind's subsidiaries in New Zealand. Matahio is owned by a holding company based in Singapore. Five of the senior managers of Matahio were previously employed by Tamarind subsidiaries, including the Chief Executive, Chief Financial Officer and Chief Operating Officer.
- Whatever expansion in oil, gas or coal production the Government allows will increase the risks and the costs of phase out. Any new infrastructure built now will become stranded assets when the industry inevitably declines. Likewise, any jobs created now to maintain or expand fossil fuel production in the short term will mean more workers who will need support for employment transition later.

Aotearoa needs a just transition away from fossil fuel production.

- Working people and communities in Aotearoa need a real plan for just transition to end fossil fuel production.
- We could learn from Spain's just transition from coal, which has involved workers, in their unions and communities, to end coal mining and rapidly phase out coal power while creating more jobs than have been lost.
- A just transition to end fossil fuel production in Aotearoa must give effect to Te Tiriti o Waitangi, including to ensure that Māori communities benefit equitably from the transition, that harm is avoided, and that the approach to transition appropriately incorporates matauranga Māori, including as articulated in the Tika Transition Framework.
- Aotearoa has an opportunity to build a better energy system and a better economy, that serve people not profit and protect our common home. Moving beyond fossil fuels can be part of our journey to a just future from an unjust past.
- A just transition would carry broader benefits than just emissions reductions - it could also contribute to improving social outcomes and equity in health, employment, accessibility, and other areas of community wellbeing.

Introduction

New Zealand's fossil fuel lobbyists are thirsty for another round of fossil fuel exploration and expansion. Our newly elected Government seems ready to serve them what they want.

But it's clear they've had too much already. To keep going now would just be embarrassing for everyone.

It's closing time.

Fossil fuels are to blame for the climate crisis that is already devastating communities in Aotearoa and the Pacific. Cyclones and other extreme weather events are getting worse, with devastating impacts for people throughout the region – from Vanuatu, to Central Auckland.

Burning fossil fuels also contributes to air pollution that kills more than eight million people around the world every year, including more than three thousand people in Aotearoa.[1]

Around the world, the communities who are facing the worst impacts of the climate crisis have done the least to cause it. The low-income communities in Aotearoa and the Pacific who have been most affected by recent cyclones and extreme weather, worsened by climate change, are the same communities most affected by energy poverty and colonial legacies.

In Aotearoa, there are 110,000 people who cannot afford to keep their homes warm enough. Energy hardship is significantly worse for Māori and Pasifika families. These communities have not benefited from fossil-fuelled economic development, but they are now the ones paying the human cost.[2]

The communities that Oxfam Aotearoa works with across the Pacific are already living the reality of the climate crisis. Crops, fishing grounds and access to fresh water are all becoming affected by the changing climate, making life especially difficult for Pacific women who often carry the burden of providing food and clean water for their children and families.[3]

The cause of all this harm and hardship is the continued production and use of fossil fuels.

That's why Pacific communities and leaders have been raising their voices to call for a global phase out of fossil fuels. Aotearoa should be standing with the rest of the Pacific to support a global phase out of fossil fuel production.

As this report makes clear, the fossil fuel industry is out of time. There is no longer any room for exploration or expansion of fossil fuels. Existing mines and fields will have to close early to give us a decent chance of staying below 1.5 degrees of global heating, as the world's governments committed to in the Paris Agreement.

The global phase out of fossil fuels must start now and it must be full, fast, fair, and funded.

New Zealand, and other richer countries, must take the lead on phasing out fossil fuels. Not only do richer countries bear greater historical responsibility for the emissions causing the climate crisis, we have benefited from the wealth this has created. Additionally, our economies are less dependent on fossil fuel production and we have greater capacity to fund and support a just

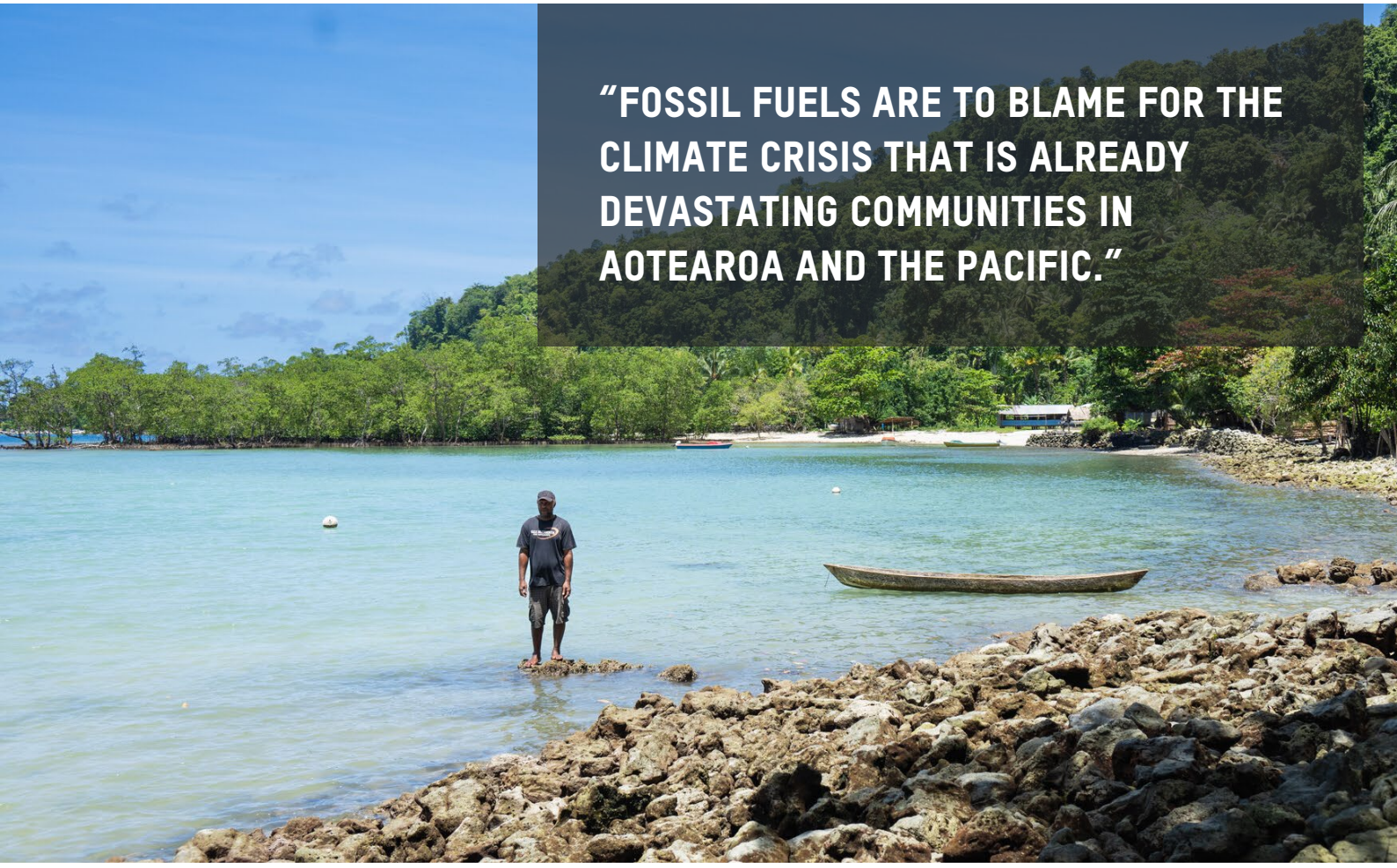
transition. As well as to moving fastest to end fossil fuel production, rich countries should be contributing funds to enable just transitions to renewable energy in lower income countries.

This report focuses on fossil fuel production because decisions being made now by our government, and by fossil fuel companies, threaten to lock in decades worth of climate pollution that we can't afford. The easiest time to stop new fossil fuel production is now, before licenses are granted and final investment decisions are made.

A just transition to close down fossil fuel production in Aotearoa would protect our workers and communities from the chaotic future that lies ahead for an industry facing global decline. Beyond the immediate tasks of supporting workers and their diverse communities through a rapid phase out of fossil fuel production, a just transition must commit political support and funding to alternatives with much broader impact for equity and justice in our communities.

A just transition must give effect to Te Tiriti o Waitangi and ensure that Māori communities, hapū me hapori, are increasingly able to exercise authority over how to use their own resources, support community development, and fulfil obligations as kaitiaki of ecosystems. A just transition can be a step towards decolonisation, starting Aotearoa on the journey towards broader changes charted by Matike Mai.[4]

Ending production of oil, gas and coal, with a rapid and just transition, is not only necessary for our climate and to avoid harmful disruption for workers and communities, it can be an important step towards creating better alternatives for a more just and equitable future in Aotearoa.



A just future from an unjust past

The economy of Aotearoa New Zealand has been built around a dependence on fossil fuels, producing far more than our fair share of the carbon that is causing the global climate crisis. Our economy is unequal and unsustainable. It continues to prioritise boundless growth and accumulation of wealth by the few over the social wellbeing of the many.

The story of how we ended up with an economy here in Aotearoa that is dependent on the extraction and consumption of fossil fuels is bound up with the story of colonisation. The fossil fuel industry in this country has been founded on the violent dispossession of tangata whenua and ongoing breaches of the rights, responsibilities, and authority guaranteed in Te Tiriti o Waitangi.

Moving beyond fossil fuels can be part of our journey of decolonisation, beyond the unequal and unsustainable economy we have inherited, to a just future from an unjust past.

Māori political economy: economies of mana

Prior to colonisation, Māori had complex political economies, described by Mānukā Henare (Ngāti Hauā, Te Aupouri, Te Rarawa, Ngāti Kahu) as economies of mana.[5] As well as being the basis for sovereignty and social order, mana motivates reciprocal exchange because one maintains and enhances one's own mana by maintaining and enhancing the mana of others – mana-aki-tanga.

In economies of mana, people, land and resources are bound together by whakapapa, and this carries significant obligations. Manaakitanga drives escalating reciprocal exchanges of taonga and resources that create and maintain social obligations, determined and regulated by tikanga, and conducted within a web of whakapapa.[6] In these exchanges, mana is attained by how much passes through one's hands rather than how much accumulates in one's hands.

The focus on reciprocal exchange rather than accumulation in economies of mana makes a deep difference to how people interact with each other and with the natural world. Because economies of mana are not based on a drive for accumulation, there is not the same incentive to pursue growth at all costs. This means that economies of mana are more able to adapt when confronted with ecological and social limits. In an economy of mana, natural resources are not treated as property to be exploited, but are governed by tikanga that recognise the interconnected mana of people and nature. Similarly, rather than labour being an exploitative relationship controlled by those who have accumulated the most wealth, mahi has dignity and forms part of reciprocal relationships and collective efforts.

The fossil economy: fuelling boundless growth and accumulation

Unlike economies of mana that foster reciprocal exchange, the European economies that drove colonisation were based on boundless accumulation of wealth. Economies of accumulation require constant growth and expansion of economic activity, breaching rather than adapting to ecological and social limits. The drive for accumulation of wealth also means that economic activity becomes more and more concentrated under the control of the wealthy few.

Using the stored energy in fossil fuels like coal, oil and gas, these economies have been able to expand beyond the ecological limits of their immediate environments. By the nineteenth

century, as European economies were expanding their influence into the Pacific, they had become part of what Andreas Malm calls the fossil economy*:* "an economy of self-sustaining growth predicated on the growing consumption of fossil fuels, and therefore generating a sustained growth in emissions of carbon dioxide".[7]

The fossil economy as we know it has its origins in the industrial revolution of Britain in the late 18th and early 19th centuries, especially in industries like the cotton mills, enabled by and spreading outwards through the expansion of empire.[8] The central innovation of the fossil economy was the pairing of fossil-fuelled industry with social institutions and structures that enabled and enforced the prioritisation of boundless growth and private accumulation of wealth as the central missions of the economy.

Economic growth and the accumulation of wealth pre-existed the industrial revolution, as did the use of fossil fuels, but when they were brought together, the fuel and the flame were combined. The union of economic growth and fossil fuel consumption has pushed climate-polluting emissions to utterly unsustainable and still rising levels. This union marks the origins of the fossil economy.

An injustice of the fossil economy is that continued economic growth, narrowly measured, has damaged the life-supporting capacity of the planet.

Emissions produced now will have their greatest impact on future generations. A major polluter burning fossil fuels today will never encounter most of their victims. Because carbon emissions persist in the atmosphere for thousands of years, most of the people they will harm do not yet exist.

Early adopters of labour-saving technologies, powered by fossil fuels throughout the nineteenth century, were unlikely to have anticipated the wide-reaching effects this would have for far-off times and far-off places: droughts, rising sea levels, extreme weather events, famine, conflict, despair, and resistance.

But those that have continued to invest in fossil-fuel production in recent decades have done so despite knowing the consequences. In fact, the more that the fossil fuel companies and their investors have learned about climate change, the more harmful fossil fuels they have committed to bring into the world.

A second injustice of the fossil economy is the vicious intergenerational cycle of climate injustice. Malm refers to this as 'invisible missiles aimed at the future'.[9]

Imagining and creating a just future requires grappling with an unjust past. History matters, because we need to know how we came to be here and how all of this accumulated history has created a profoundly unjust present. Unless we act collectively to change course, a future of escalating climate crisis will be an unjust future for us all, and an especially unjust future for the many, based on the actions of the few.

Although the fossil economy appears now as an inescapable totality, a social and ecological structure where economic progress and fossil-derived energy are a unity, it was *constructed* this way. It was constructed this way by vested interests, and it has been reproduced, enlarged, and maintained by vested interests. But because it was constructed this way, another way can be constructed now.

The fossil economy was not inevitable and is not inevitable. It cannot be inevitable.

Expansion of the fossil economy from Britain to the colonisation of Aotearoa

In the late eighteenth century, the political economy of Māori was coming into contact with the global economy, which was not necessarily yet the fossil economy. But contact is not equal to colonisation. Just like the fossil economy was not inevitable, colonisation was not inevitable.

In Britain, people had been forced off lands.[10] This resulted in mass migrations from rural areas to cities, where the majority of people worked for others, so they could rent from others, and buy food from others. This so-called industrial revolution resulted in a lot of people living and working together, becoming more frustrated as the conditions of their life and work deteriorated, and organising to change them. The pressure was building for social revolution. At the same time, a small class of people had become wealthier than they had ever been, and they needed somewhere to invest that wealth.

A third injustice of the fossil economy, is that the gains from the unity of growth and fossil fuels have disproportionately accrued to owners and their descendants, not workers and their families.

The colonisation of Aotearoa was driven by the need for boundless growth and accumulation at the core of the expanding fossil economy. Promoters of colonialism saw the settlement of colonies like New Zealand as the fix for the surplus of both labour and wealth in British society of the time, and as a source of new resources, new markets, and new profitable investments.[11] For the colonial economy to be formed in the ways needed for the expanding British Empire, it needed to be disciplined and controlled, at least until it was sufficiently established. Along with their surplus labour and wealth, Britain sent their class system, government institutions, military, police, prisons, and religion.

Colonial dispossession and the assumption of sovereignty

Māori economies and societies were forcibly dismantled to make way for the colonial economy with significant and long-lasting traumatic impacts for Māori. This was despite the Crown's promise in Te Tiriti o Waitangi to respect the rangatiratanga of tangata whenua over their whenua, kāinga and taonga. Simon Barber (Kāi Tahu) refers to this process as tangata being severed from whenua, and transformed into labour and property.[12]

Crown sovereignty initially spread itself via the purchase and violent confiscation of Māori whenua, in particular places, but eventually assumed itself across the entire nation. This assumed sovereignty included the ownership and management of minerals and resources.[13]

The dispossession of Māori whenua, kāinga and taonga, through military violence and the imposition of Crown institutions, were the preconditions for the creation of the fossil economy in Aotearoa.[14]

The development of New Zealand's fossil economy

Prior to colonisation, Māori were aware of fossil oil, gas and coal, and that they could be burned. Some may have used coal for cooking.[15] The existence and properties of oil and gas were also known from the small amounts that seeped to the surface. Māori, as with Europeans of the time, did not have technical knowledge to extract and exploit these resources prior to the signing of Te Tiriti.[16] These fossil fuels were not necessary for economies of mana.

Soon after Te Tiriti, British settlers began prospecting for coal, aware of it as the industrial revolution's fuel of choice.[17] With the guidance of local Māori, Thomas Brunner 'discovered' the coalfield now known as Brunner, the first field with major development potential.[18] Coal was seen as essential to the expansionist vision of the New Zealand Government under Premier Vogel, powering the development of railways from the 1870s. Coal powered the growth of industrial agriculture too, allowing the export of refrigerated meat and dairy products to Britain from the 1880s.[19]

From the beginning of the fossil economy in New Zealand, the Crown assumed the right to grant exploration and production licenses for coal, oil and gas. Although it took until the 1970s for an oil and gas industry to become established in New Zealand, the existence of these resources was well known by the end of the 19th century.[20] Following pressure from major British and American oil companies for a licensing regime that would safeguard investments, the Petroleum Act 1937 vested ownership of the resource in the Crown and established a new system of licenses and royalties.[21]

The Crown's ownership of petroleum is now secured by the Crown Minerals Act 1991. However, the Waitangi Tribunal has found that prior to the Petroleum Act 1937, Māori had legal title to the petroleum in their land.[22] The Petroleum Act, combined with previous actions to alienate Māori land, effectively deprived Māori of their rights over oil and gas reserves. The Tribunal recommended that the Crown negotiate with affected Māori groups how to put this right, including potential changes to ownership rights and royalties from oil and gas development. The Crown rejected this recommendation, and the breach of Māori rights remains unresolved.[23]

Māori have been unjustly deprived of the billions of dollars in royalties collected by the Crown for oil, gas and coal extraction on their lands. Since 2007, the petroleum royalties appropriated by the Crown amount to over $4 billion. More fundamentally, Māori have been denied the right of self-determination over whether that extraction should be happening at all.

While much of the damage caused by the unjust development of the fossil economy cannot be undone, there are some remedies available today. Māori rights of self-determination over their lands and resources should be restored, with compensation for the unjust loss. This would provide a fair basis for Māori to participate in shaping the future economy of Aotearoa.

A fourth injustice of the fossil economy in New Zealand is that Māori whenua was forcibly taken to fuel the fire, Māori interests and desires were ignored in the development of the fossil economy, and what remains of Māori whenua is at risk from the fossil economy's climate crisis.[24]

Imperial extraction

At the same time as the growth of the fossil economy has allowed urban industries to grow beyond their ecological limits, agriculture has been industrialised to supply the growing urban centres.[25] The industrialisation of agriculture has also relied on fossil fuels, from coal used in greenhouses and early refrigeration, to today's diesel-powered machinery. Intensive dairy farming in New Zealand now also relies on fossil fuels in the form of nitrogen fertiliser, produced using fossil gas, as a feedstock.

The intensive and industrialised forms of agriculture required by, and enabled by, the fossil economy rely on extracting nutrients from soils faster than they can naturally be replaced. In addition to nitrogen fertiliser, New Zealand farming has relied on importing phosphate fertiliser since 1867 to boost its economic productivity. The costs have been devastatingly high for those who live where the phosphate is extracted such as our Pacific neighbours in Nauru and on Banaba Island in Kiribati, and more recently in Western Sahara.[26] This agricultural intensification, getting more out of the land by pumping more into it, is directly connected to the use of fossil fuels, and more broadly to the pursuit of boundless growth and wealth accumulation built into the fossil economy.[27]

A fifth injustice of New Zealand's fossil economy is the imperialism associated with extraction of resources such as phosphate from our Pacific neighbours. Phosphate is an input to agricultural production, which fuels economic growth, but results in methane emissions. This exacerbates the climate crisis, devastating those same and other Pacific neighbours now and into the future.

But it does not have to be this way.

The fossil economy is baked into the core of this country through these five injustices. Colonisation of Māori as tangata whenua; imperialism in the Pacific; growth and profit at the expense of nature; disproportionate share of growth and profits to owners, not workers, and a deep, intergenerational injustice.

Any attempt towards a just future needs to take this unjust past seriously.

The Crown and vested interests constructed the fossil economy here in ways destructive to tangata whenua, Pacific peoples, nature, workers, and future generations. Together, following the leadership of tangata whenua, we can all be part of constructing another way.

A just future from an unjust past.

Beyond the fossil economy - Indigenous leadership

Indigenous communities have contributed the least to fossil fuel emissions, and benefited the least from fossil-fuelled economic development, but now face some of the worst impacts of the climate crisis. The connections between the injustices of colonisation and climate change were

acknowledged in the latest IPCC report. For the first time, the 2022 report of the IPCC working group on climate impacts issued a finding that vulnerability to the effects of climate change intersects with 'historical and ongoing patterns of inequity such as colonialism'.[28]

In Aotearoa, and around the world, the fight to move beyond the fossil economy is being led by Indigenous Peoples and other communities who are connecting the local harms caused by fossil fuel extraction with the global challenge of the climate crisis.

When the Brazilian. oil company Petrobas began exploratory drilling off the East Coast of Aotearoa in 2011, members of Te Whānau a Apanui took to the seas and the courts to oppose them. Petrobas later abandoned their exploration, saying the economics of deep-sea drilling no longer added up.[29]

Around the same time, kaitiaki of Parihaka continued their tradition of nonviolent defence of their whenua by writing to the government opposing fossil fuel development in Taranaki. Although they never received a response, their stand was acknowledged when the government maps for permit applications (known as the 'block offer') were released in 2013 with a neat square drawn around Parihaka. This exclusion was continued when a further block offer was issued in 2023, but in response the Parihaka community has called for the exclusion of the entire Parihaka Block – a 45,000 acre territory shown on 19th century maps as the original lands of the Parihaka community.[30]

In North America, Indigenous Peoples have led the defence of their lands and waterways against the encroachment of the fossil fuel industry. A 2019 study found that Indigenous Peoples in the US and Canada were leading active resistance against fossil fuel expansion projects equivalent to 1.6 billion tons of CO2 per year, more than a quarter of the total combined emissions of both countries. In addition, successful campaigns led by Indigenous Peoples had already prevented nearly a billion tons of annual emissions.[31] For instance, Indigenous-led resistance succeeded in preventing the Keystone XL pipeline extension project, as well as continuing to challenge the operation of the Dakota Access pipeline.[32]

In Ecuador, Indigenous Peoples led the struggle to end oil production on their lands, culminating in a successful national referendum vote to end drilling in the Yasuní National Park region.[33]

Indigenous Peoples have also been leading voices for climate justice in international negotiations, alongside leaders and communities in the Pacific and across the Global South.

Beyond the fossil economy - Pacific leadership

Pacific countries played a powerful leading role in ensuring that the 1.5 degree limit was included in the Paris Agreement,[34] supported by warnings from the IPCC that temperature increase above that limit would severely increase climate change impacts, including extreme weather and sea-level rise. For this reason, Pacific governments have called climate change the 'single greatest existential threat facing the Blue Pacific'.[35]

Naming the region as the Blue Pacific reflects the importance of the ocean to Pacific communities. Pacific peoples know that healthy oceans feed, protect and connect their communities. On the other hand, when the ocean is heating and acidifying due to climate change, threatening the survival of coral reefs and ocean life, worsening the severity of storms,

eroding and inundating coastal land, the whole Pacific way of life and the survival of communities is at stake.

In March 2023, Ministers from six Pacific nations announced a visionary commitment to lead our region and the world into a future free from fossil fuels: the Port Vila Call for a Just Transition to a Fossil Fuel Free Pacific. The Climate Ministers from Vanuatu, Solomon Islands, Niue, Tuvalu, Tonga and Fiji called on all governments in the Pacific region to 'spearhead the unqualified, global, just and equitable phase out of coal, oil and gas production in line with the global temperature goal of below 1.5 degrees'. Meeting amongst the devastation left by two major cyclones that hit communities in Vanuatu less than a month earlier, they didn't hold back in putting blame where it belongs:

> The science is clear that fossil fuels are to blame for the climate emergency. This is a crisis driven by the greed of an exploitative industry and its enablers.[36]

Vanuatu is already backing up this statement with commitments and actions to rapidly phase out fossil fuels, including a program of action to reach close to 100% renewable electricity generation by 2030.[37] The Port Vila Call expressed this determination from Pacific nations to show the way forward for Climate Justice: 'We have the power and responsibility to lead, and we will'.

This diplomatic leadership continued at the 2023 Pacific Islands Forum Leaders Meeting, where Port Vila Call signatories encouraged other member countries, especially Australia and New Zealand, to make similar commitments. The final communique at the conclusion of the Forum showed the results of the New Zealand and Australian governments pressuring other Pacific countries to dilute their commitment to ending fossil fuels down to just an aspirational statement. Oxfam in the Pacific's Executive Director Eunice Wotene responded:

> Pacific Islanders do not want symbolic gestures or aspirational language – we need concrete commitments and courageous leadership. Anything less is an affront to Pacific communities and a betrayal of our urgent call for climate action.[38]Despite the pressure from New Zealand and Australia, Pacific leaders secured some key practical commitments that back up aspiration with substance. These included commitments from all Pacific leaders to phase out fossil fuels in our energy systems in line with keeping global warming below 1.5 degrees, as well as to increase climate finance and appoint an Energy Commissioner for a Just Transition to a Fossil Fuel Free Pacific.[39] With their support for a Just Transition to a Fossil Fuel Free Pacific, including in the Port Vila Call, Pacific leaders are not only standing up for their own people, they are standing up for all of us who are experiencing the reality of the climate crisis.

The political leaders of the richer countries of the Global North have been slow to listen to the calls to action for climate justice coming from Indigenous Peoples, the Pacific, and the Global South. For too long, New Zealand's governments have seen our interests as aligned with the global fossil economy and have followed the lead of the richest and most polluting countries of the Global North. But a global consensus is forming that the reign of the fossil economy is coming to an end, and that it needs to end even faster to protect our common home. Aotearoa must seize this opportunity to break with our fossil past and forge the way to a just future.

Full, Fast, Fair and Funded:
Global Phase Out of Fossil Fuels

To turn the climate crisis around, more than half of the fossil fuels in currently developed fields and mines must stay in the ground. There is no longer any room for new fossil fuel exploration or expansion, anywhere in the world.[40]

The global phase out of fossil fuels must start now and it must be full, fast, fair and funded.

Full

The only safe way to reduce emissions from fossil fuels is to reduce production of fossil fuels.

There is no room for any new exploration or development of coal, oil or gas fields, anywhere in the world, within the climate limits agreed by the world's governments in the Paris Agreement.[41] Just using the oil, gas and coal in currently developed reserves would push the world past 2 degrees of warming.[42]

The need for a full global phase out of fossil fuels is now so urgent that any assessment of remaining carbon budgets needs to be understood as a tool for harm reduction. There is no longer any safe carbon budget and no time for delay.[43] Any carbon budget now is linked to a threshold of how much harm will be caused to people and ecosystems by the emissions produced until we achieve a full end to fossil fuel production.

The reality is that global production and use of fossil fuels needs to halve by 2030 and almost completely end before 2050.[44] This timeline is based on the maximum amount of carbon dioxide emissions that are compatible with limiting temperature increase to 1.5 degrees. Any transition pathway with a longer timeline than this would either breach 1.5 degrees, or depend on false solutions like carbon capture or removal.

Carbon Capture, Utilisation and Storage (CCUS) technologies are risky, expensive and unproven at scale. Technological approaches to Carbon Dioxide Removal (CDR) are even more speculative, and likely to be prohibitively expensive, while offsetting fossil fuel emissions by planting trees would put unsustainable demands on land use. As Oxfam revealed in 2021:

> Using land alone to remove the world's carbon emissions to achieve 'net zero' by 2050 would require at least 1.6 billion hectares of new forests, equivalent to 60 times the size of New Zealand or more than all the farmland on the planet.[45]

Major land-grabs for carbon offsetting schemes are already happening, often threatening the land rights and livelihoods of Indigenous Peoples and other local communities.[46]

Protection and restoration of forests and ecosystems needs to happen in addition to reducing emissions from fossil fuels, not as an alternative or offset, and is best achieved by recognising the land rights and authority of Indigenous Peoples and local communities.

False solutions

Carbon Capture, Utilisation and Storage (CCUS)

There is no evidence that Carbon Capture, Utilisation and Storage (CCUS) is effective, safe or cost-efficient on the scale required to eliminate emissions from fossil fuel production and use. CCUS involves capturing greenhouse gases at the point of emission and using or storing that gas in a form that industry advocates claim will keep the emissions out of the atmosphere.

CCUS is a highly energy intensive and ineffective way to reduce emissions. Of the options considered in the latest IPCC Synthesis Report, CCUS showed the lowest potential for reducing emissions.[47]

Only a small number of CCUS projects have been built on a large scale, and most have failed. Despite relying extensively on CCUS, the International Energy Agency (IEA)'s latest update to the net zero roadmap admits that '[t]he history of CCUS has largely been one of underperformance.'[48]

A 2022 report from the International Institute for Energy Economic and Financial Analyses (IIEEFA) reviewed a sample of thirteen projects, representing more than half of global CCUS capacity. The report showed that most CCUS projects, at least eight of the thirteen reviewed, had substantially failed to meet promised targets. [49]

The largest CCUS project at the world, at Chevron's Gorgon gas development in Western Australia, is one of those that has failed to perform as promised. Despite the CCUS project receiving more than $60m in federal subsidies, it has captured only around half of the 4m tonnes of annual emissions it was required to contain as a condition of the gas development being approved.[50]

Even when CCUS projects work as intended, they only capture the emissions from extraction of oil and gas and do nothing to prevent the much larger emissions that result from burning the fossil fuels. In addition, the carbon dioxide that is captured is often used to extract more fossil fuels from declining fields, a process known as enhanced oil recovery. As IIEEFA points out, 'enhancing oil production is not a climate solution'.[51]

It could also be worth mentioning the fact that CCUS, even when it works as intended, is an extremely energy intensive process that results in doubling (or even tripling) the amount of gas/coal/etc burned by the power plant.

On the scale of CCUS projects proposed by the oil and gas industry, failure could be catastrophic for communities and ecosystems near storage facilities, as well as for the climate. As the Intergovernmental Panel on Climate Change warned in a special report on CCUS in 2005:

> "CO2 storage is not necessarily permanent. Physical leakage from storage reservoirs is possible via (1) gradual and long-term release or (2) sudden release of CO2 caused by disruption of the reservoir."[52]

A sudden release of large volumes of carbon dioxide from a CCUS reservoir would produce a cloud of suffocating heavy gas that would flow like water over the surrounding area. A cloud of concentrated carbon dioxide would be fatal for any people and animals caught in its path. This risk is only exacerbated in Aotearoa, where earthquakes could impact storage – and where researchers even worry stored CO2 could itself trigger earthquakes.[53]

CCUS is not a safe or sustainable alternative to reducing the production and use of fossil fuels.

Carbon Dioxide Removal (CDR)

Removing carbon dioxide from the atmosphere is also not an alternative to phasing out fossil fuels. There is no existing or foreseeable technological fix for absorbing carbon dioxide at the scale of fossil fuel emissions. So, when the oil and gas industry talks about Carbon Dioxide Removal (CDR) as a way to continue production of fossil fuels, this would require using land for permanent plantation forestry on a huge scale. This would be risky for the climate, because we can't be sure that forests will be permanent, especially during a climate crisis. Land-based CDR would also take away land that communities need for food production.[54]

Any investments in expensive CCUS projects will not only fail to sufficiently reduce the emissions from fossil fuels, they will add to the sunk cost of fossil fuel infrastructure that will become stranded assets as the industry declines, additionally requiring ongoing maintenance costs to address leakage. In many countries, CCUS projects have only been built due to support from public funds, adding to already massive subsidies for the fossil fuel industry and diverting resources that could have been used to fund a transition to renewable energy.

While we don't have technology for CCUS or CDR that is reliable or cost-effective, we do have renewable energy technologies that are cost-effective and ready to replace fossil fuels. In almost all cases where fossil fuels are used, renewable energy solutions are now available and at a cheaper cost than fossil equivalents.

CCUS and CDR projects are false solutions that only serve the narrow interests of fossil fuel companies, enabling the industry to defend production growth to regulators so long as it aligns with increased CCUS or CDR.[55] They are not only dangerous distractions from real climate action, they do not make economic sense when compared to renewable alternatives.

To have a real chance of keeping warming below 1.5 degrees requires immediate and deep cuts in fossil fuel extraction, to reduce production by more than half before 2030.

Fast

Fossils fuels are on their way out. It's not yet happening fast enough to put the world on a path to climate safety, but the trend is already clear. The transition to renewable energy is underway. The question now facing the world is how much harm to communities and nature we are willing to tolerate in return for fossil fuel companies' short-term profits.

To be compatible with climate justice, and obligations under the Paris Agreement, the transition away from fossil fuels in New Zealand and other richer countries of the Global North will need to be faster than the global average. That means production and use of fossil fuels in New Zealand will need to more than halve before 2030 and completely end well before 2050. According to one recent report from the Tyndall Centre, an equitable pathway with a 50% chance of keeping temperature increase below 1.5 degrees would require developed countries like New Zealand to end coal production entirely and reduce oil and gas production 74% by 2030, with a complete end to all fossil fuel production by 2034.[56]

In 2023, UN Secretary-General Guterres called for an immediate end to all exploration for new oil, gas or coal fields, as well as a halt to any expansion of production in existing fields. He further called on OECD countries, including New Zealand, to phase out all coal production and use before 2030 and commit to net zero emissions by 2040.[57]

This strong support for ending fossil fuels from the UN Secretary-General has come after years of stark warnings from UN agencies. The United Nations Environment Program (UNEP) warned in 2021 that the world's governments' plans for fossil fuel production 'remain dangerously out of sync with Paris Agreement limits' and that based on existing plans, production of fossil fuels by 2030 would be more than twice the level consistent with limiting warming to 1.5 degrees.[58] In 2023, UNEP repeated the warning, choosing to title their updated report 'Broken Record' to highlight both the repetition of their continuation of record high global emissions from fossil fuels.[59]

The growing urgency of a full global phase out of fossil fuels was also reflected in the UNFCCC synthesis report of proposed elements for a COP28 decision on how to respond to the global stocktake of governments' collective progress on implementing the Paris Agreement.[60] The report included a call for all fossil fuel exploration to end by 2030. While this recommendation is still too conservative compared to the level of action that is needed, it is still significant coming from an official process of the UN climate body, reflecting consultation with governments.

Forecasts of the pace of transition to renewable energy are consistently accelerating as governments start to adjust their policies to recognise the urgency of climate action. 2022 was the first year that the IEA forecast peak demand for all fossil fuels in its Stated Policies Scenario (STEPS), which is based on current, existing energy policies and actions. The IEA's newly released World Energy Outlook (WEO) for 2023 goes further, forecasting peak demand for all fossil fuels this decade. Even without additional climate action, the WEO shows global demand for oil, gas and coal will peak before 2030. Demand for coal is predicted to decline steeply from this peak, with demand for oil and gas reaching a plateau before declining slowly. This predicted global plateau in demand for oil is driven by the increasing use of electric vehicles and renewable energy, including in China and other emerging economies.[61] While demand for oil may decline more slowly in some other sectors, such as chemical industries, the long-term trend of growing oil demand is expected to reverse by the end of this decade. This latest update to the IEA forecasts matches with analysis of a range of global scenarios in 2023 by the International Institute for Sustainable Development (IISD), also showing that demand for oil and gas is likely to peak before 2030.[62]

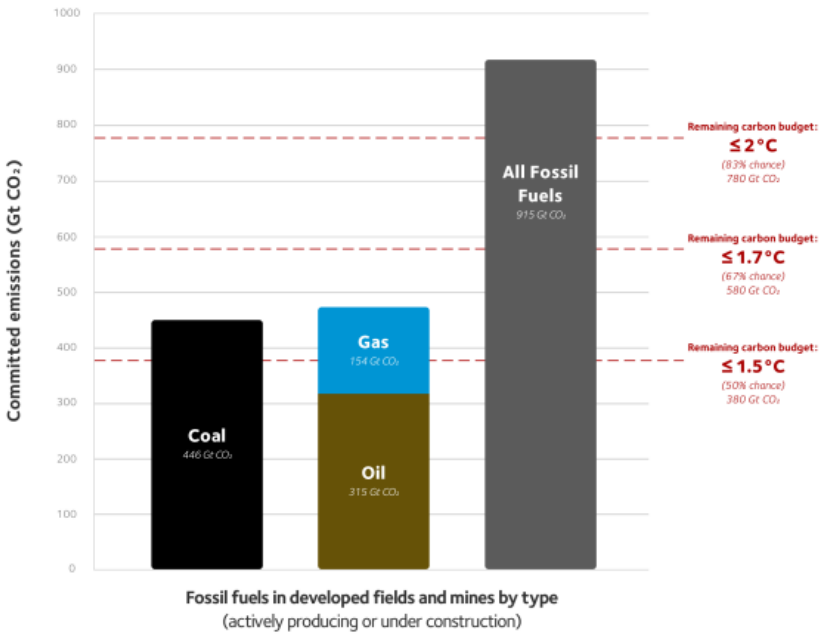
Despite this progress, action to shift from fossil fuels to renewable energy is still not happening fast enough to reach climate safety.

The latest IEA Net Zero Emissions by 2050 Scenario (NZE) shows there is no room for new development of any fossil fuel mines or fields. The NZE Scenario shows that global production and use of all fossil fuels must decline more rapidly this decade than currently planned, with a 45% reduction in coal use between 2022 and 2030, along with a 23% reduction in oil and an 18% decline in fossil gas.[63]

This still underestimates how fast fossil fuel production and use needs to fall to keep within 1.5 degrees. That's because the IEA's modelling assumptions for the NZE Scenario rely extensively on CCUS and CDR. But this shows that, even if we assume that CCUS and CDR projects can be built at unprecedented rates (and avoid failing at the rates they previously have), there is no room for any new exploration or development of fossil fuel mines or fields.

If we are to avoid relying on risky and unproven CCUS and CDR technology, 58% of the fossil fuels in active fields and mines must remain unextracted, to have even a one in two chance of keeping global temperature increase to 1.5 degrees.[64] This means existing fields and mines will need to close early. Where international investors are affected by these decisions, governments will need to collectively stand strong against any attempts by fossil fuel companies to delay the transition by using Investor-State Dispute Settlement clauses in international trade agreements.[65]

A rapid phaseout is required simultaneously across coal, oil and gas production. Even if all coal production stopped today, the committed emissions from currently developed oil and gas fields, on their own, would exceed the remaining carbon budget for 1.5 degrees.[66]

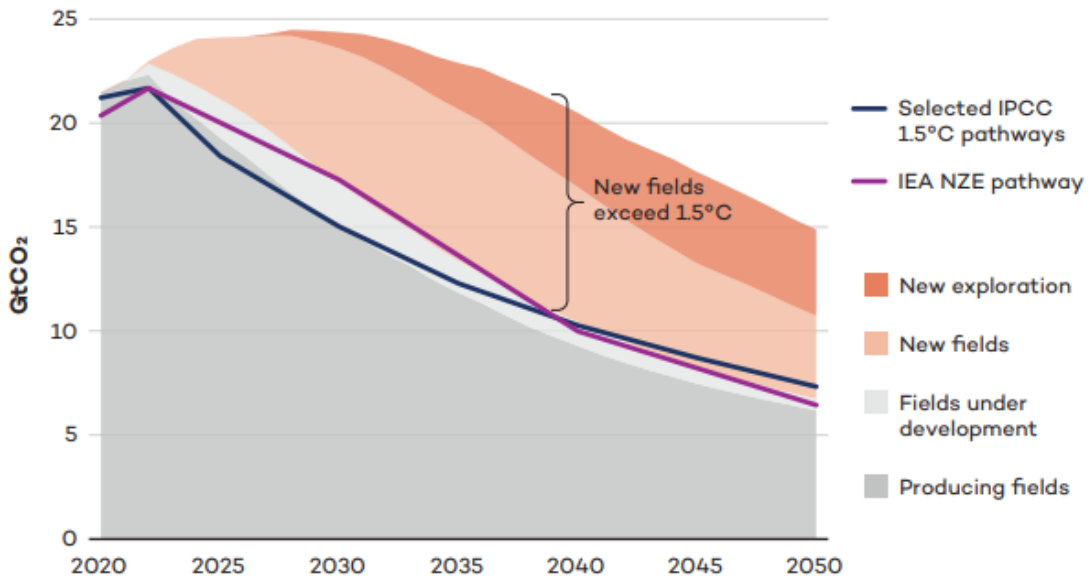


Source: Oil Change International analysis of Rystad Energy data (2023) (oil and gas); Trout and Muttitt et al (2022) (coal); Intergovernmental Panel on Climate Change (2021) and Global Carbon Project (2022) (carbon budgets).

Committed emissions from developed fields and mines compared to remaining carbon budgets for Paris Agreement climate limits. Source: OCI 2023.

IISD analysis in 2022 showed that there was no feasible scenario in which announced plans for development and exploration of new oil and gas fields and exploration would not exceed the carbon budget for 1.5 degrees of warming.[67] The analysis looked at over 100 modelled pathways

produced by the IPCC, excluding those that relied on carbon capture or removal beyond the extent that IPCC analysis shows is feasible with existing technology. The figure below shows the results of this analysis, comparing pathways consistent with 1.5 degrees modelled by the IPCC and IEA with production forecasts from the oil and gas industry. Pathways consistent with 1.5 degrees have a decline in fossil fuel production very close to the rate of decline of currently producing fields. This reinforces that there is no credible scenario consistent with 1.5 degrees that has room for any new exploration or development of fossil fuels.



Sources: Byers et al., (2022); IEA (2021); Rystad Energy (2022b).

Global Oil and Gas Production compared to selected IPCC and IEA 1.5 degree pathways. Source: IISD. 2022.

Fair

For the global phase out of fossil fuels to be fair, wealthy countries must act first to end production. This is because richer countries carry historical responsibility for climate pollution, are less economically dependent on fossil fuel production than some lower income countries, and have greater capacity to support just transitions of their economies away from fossil fuels. At the same time, increased climate finance needs to be mobilised to support just energy transitions in developing countries, including in the Pacific. These principles of equity and 'common but differentiated responsibility' have been agreed in international climate treaties since 1992 and are reaffirmed in the Paris Agreement.[68]

Oxfam research in 2022 highlighted the urgent global need for just energy transition, the responsibility of wealthy countries to meet the costs, and the opportunities for communities if the benefits of transition are shared equitably:

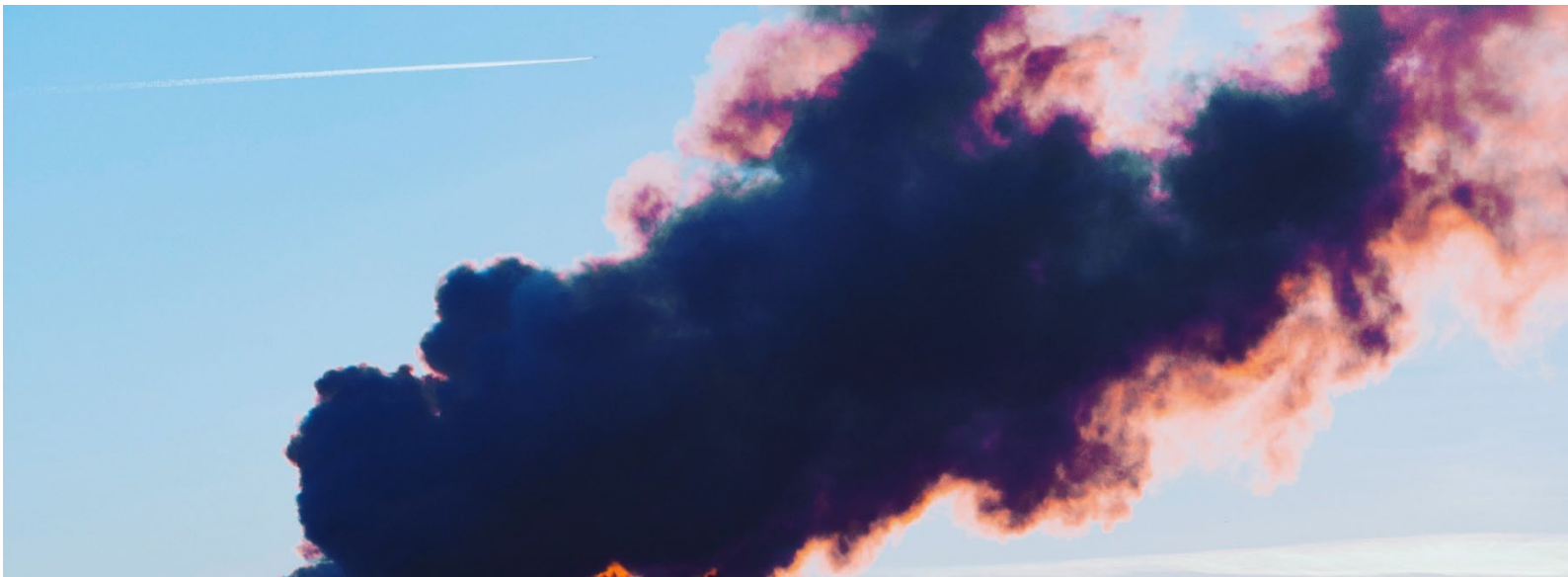
> As well as reducing carbon emissions, the clean energy transition offers countries the prospect of generating various economic, social and environmental co-benefits – such as improved energy access, strengthened energy security, new green jobs, protection against volatile fuel prices, reduced pollution, and decentralised locally owned energy generation.

> Such benefits, combined with the scale of transition required to mitigate the climate crisis, offer humanity an unprecedented opportunity to simultaneously reduce existing inequalities and achieve universal energy access and other vital Sustainable Development Goals (SDGs). But for this to happen the energy transition needs to be undertaken with a conscious commitment and effort to put justice and community rights at its core.[69]

Another study in 2020 proposed five principles for managing an equitable global transition to end fossil fuel production:

- **Science based targets:** Phase out global production of all fossil fuels at a pace consistent with limiting global temperature increase to 1.5 degrees.
- **Wealthy economies end production fastest:** Wealthier, diversified economies must move fastest to end all production of fossil fuels, as they have the greatest capacity to invest in transition and minimise any negative social and economic consequences for workers and communities.
- **Just transition for workers and communities**: Phasing out fossil fuels must be accompanied by public investment and economic diversification to support good employment in renewable energy and low-emission industries.
- **Environmental justice:** Support the rights of Indigenous Peoples and all communities to a healthy environment by shutting down extraction of fossil fuels in areas where disproportionate harm is being done to local communities and environments.
- **Share the cost:** Wealthy economies, that have grown based on past production and consumption of fossil fuels, must bear the greatest costs of transition, including through public grant-based climate finance for developing countries.[70]

Bringing these principles together means that New Zealand and other wealthier countries must act first to end production of fossil fuels fastest, as well as scaling up global funding and support for just energy transition so that all communities can benefit from cheaper and cleaner renewable energy. The Tyndall Centre applied similar principles to reach its finding that the wealthiest nations with the most diversified economies, including New Zealand, must phase out all oil and gas production no later than 2034.[71] This finding was confirmed in the most recent Civil Society Equity Review report, which found that countries like New Zealand with lower socio-economic dependence on fossil fuel production must end all oil, gas and coal production 'by the very early 2030s.[72]



Funded

For a rapid and managed phase out of all fossil fuel production to be fair and equitable will require significant funding to avoid negative impacts and improve equity, including in employment and in access to energy. The fairness of the approach to phasing out fossil fuels is therefore strongly linked to the planning and funding support available for just energy transition in all affected countries. In addition to the domestic costs of ensuring a just energy transition, New Zealand and other wealthier countries will need to provide significant grant-based public funding and support to Pacific countries and others in the Global South to ensure communities benefit from just energy transition[73]. As well as benefitting global efforts to mitigate climate change by reducing emissions, investments in just energy transition can support economic development and improvements in community wellbeing that are resilient and consistent with climate goals.[74]

Governments of countries that are still producing fossil fuels, including New Zealand, should be acting now to ensure that fossil fuel companies are bearing a significant share of the cost of transition. Planning ahead, with a managed decline of production, will allow for costs to be shared equitably and for workers and communities to have a voice in making sure their needs are met through a just transition.

Global demand for oil and coal are projected to peak this decade and will need to decline rapidly in line with climate commitments. In addition, domestic demand for fossil fuels produced in New Zealand will continue to decline over the next decade as pressure mounts to reduce carbon emissions.

Fossil fuel production in Aotearoa New Zealand is already on the decline. With fossil fuels on their way out, the fight now is between hope for the future and a short-term gamble on continuing our destructive past for a bit longer.

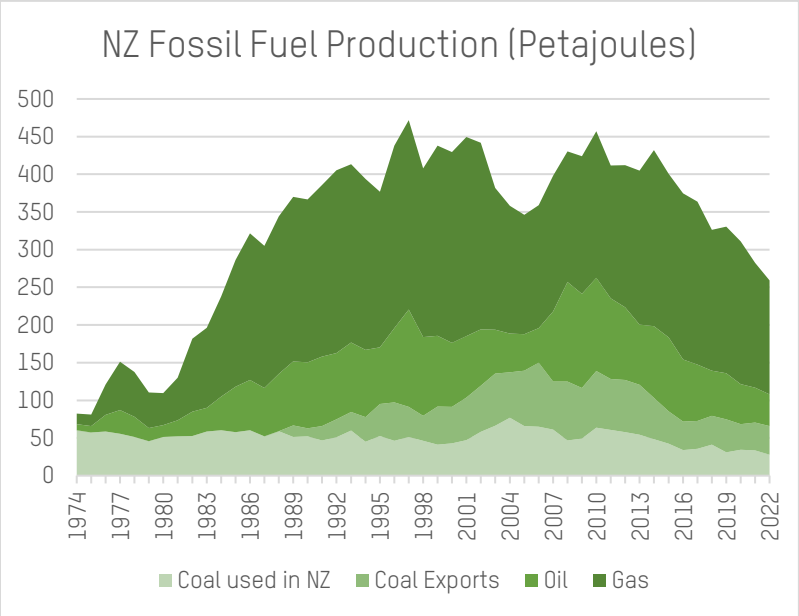
In November 2023, the newly elected coalition government committed to overturning the 2018 ban on offshore exploration for oil and gas.[75] This would be a dangerous mistake.

Reopening new exploration permits and expanding production make no sense when the IEA is saying no new fossil fuel exploration is compatible with the climate goals of the Paris Agreement. And with the IEA also saying that global demand for all fossil fuels will peak this decade and then decline rapidly, encouraging new investments now would only increase the extent of stranded assets.

At a time when our Pacific neighbours and the world's governments are talking seriously about the need for a global phase out of fossil fuels, it would be embarrassing for New Zealand to announce that we are going looking for more.

Oil

Oil production peaked in 2008 and has been falling fast over the last decade due to declining yields from existing fields.[76] Production from currently developed oilfields is projected to decline by 62% between 2023 and 2030.[77]



Source: MBIE Energy Statistics: https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-statistics-and-modelling/energy-statistics/

All crude oil produced in New Zealand is exported for processing. This has always been the case, even while the country's only refinery, at Marsden Point, was still operating. Marsden Point closed in April 2022, though the newly elected Government has committed to investigating its reopening – something the refinery's owner says would cost "billions of dollars", and the union considers unrealistic.[78] Oil production in New Zealand is therefore entirely exposed to the global market. Global demand for oil is forecast to peak before 2030 and will start to decline as transport is electrified.

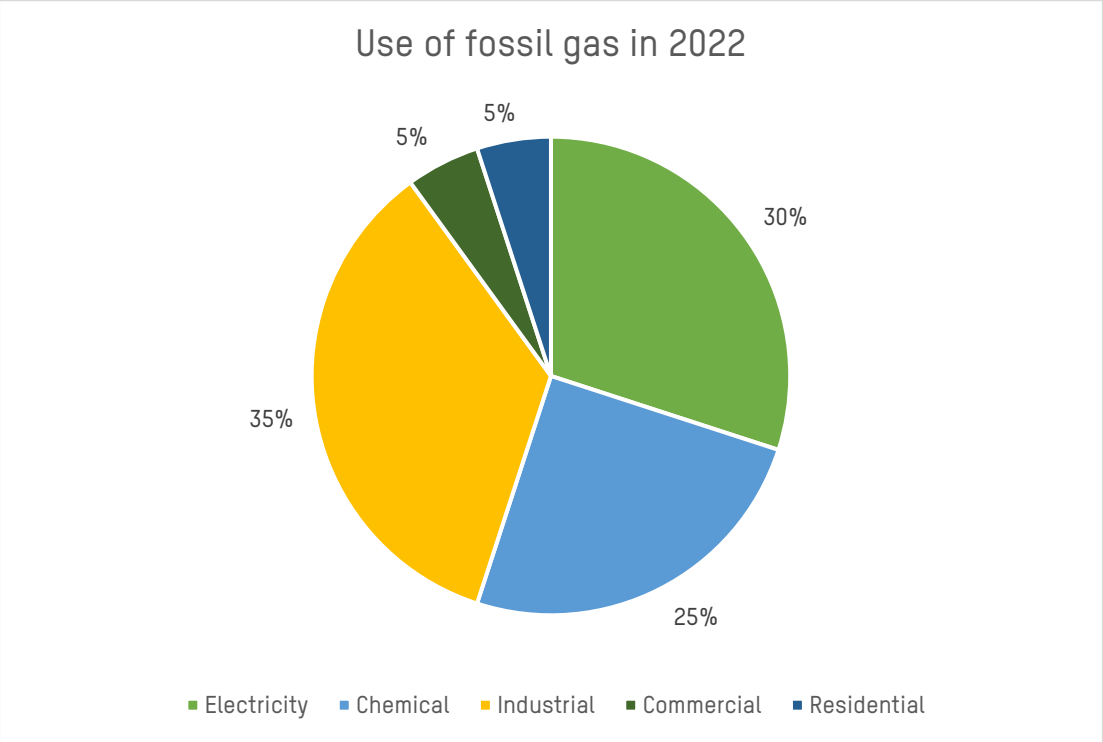
The fact that oil production in New Zealand is almost entirely for export, however, also means that the industry is not related to energy security. If oil production shut down tomorrow, there would be no impact on New Zealand's fuel supply or prices. This means that energy security and affordability are not barriers to a managed decline in production, with a just transition for workers and their communities.

Gas

Fossil gas production in New Zealand is expected to briefly peak in 2024, then continue to fall rapidly in line with the declining yields of existing fields.[79] Production from currently developed fossil gas fields is projected to decline 43% between 2023 and 2030.[80]

New Zealand's fossil gas industry is unique among developed economies in not having facilities to import or export gas through pipelines or Liquefied Natural Gas (LNG) terminals. This means that all fossil gas produced in New Zealand is also consumed within the country.

Less than a third of New Zealand's fossil gas is used for electricity - contributing less than 10% of New Zealand's total electricity supply in 2022. On its own, the energy security demands on gas in New Zealand could not finance the infrastructure of its production. Major supply contracts, including for methanol and fertiliser production, are therefore necessary to underwrite gas field development. Continued expansion into new fields keeps the big customers operating. This complicated market structure, lack of storage, and lack of import-export capacity make a steady decline in production challenging, despite the fact that only a relatively small proportion of fossil gas is used for electricity or residential use. The largest use of fossil gas is the production of methanol, consuming 40% of gas production, of which 95% is then exported. Fertiliser production is another major use.



A new study has shown that fossil gas can be just as damaging to the climate as coal power when the effects of methane leaks are considered. The study found that if just 0.2 percent of

fossil gas production is leaked, then the effect on global warming is as bad as using coal. MBIE figures for gas production in New Zealand show 'transmission and distribution losses' of 0.5 percent.[81]

Coal

Coal production in New Zealand peaked in 2010 and has since declined by more than 50%.[82]Four mines closed between 2020 and 2022, leaving 14 remaining in production. If the rate of decline since 2018 continued, coal production in New Zealand could be expected to decline by a further 60% between 2023 and 2030, and end completely by around 2035.[83] This means that without intervention from government, the coal industry faces an unmanaged decline, in which jobs will be lost as individual mines close. A just transition plan for the coal industry could combine a managed decline, to phase out all production before 2030, with support to ensure an equitable transition for workers and communities.

However, this trend of decline has been made uncertain by the election of a new Government that has indicated a priority of new expansion of coal mining including by "relaxing" rules on mining on conservation land.[84]"

The coal produced in New Zealand for export is bituminous coal, used in steel production and power generation. All of New Zealand's bituminous coal is mined on the West Coast of the South Island. 1.28 million tonnes of bituminous coal were mined in New Zealand in 2022, primarily for export to Asia.[85]

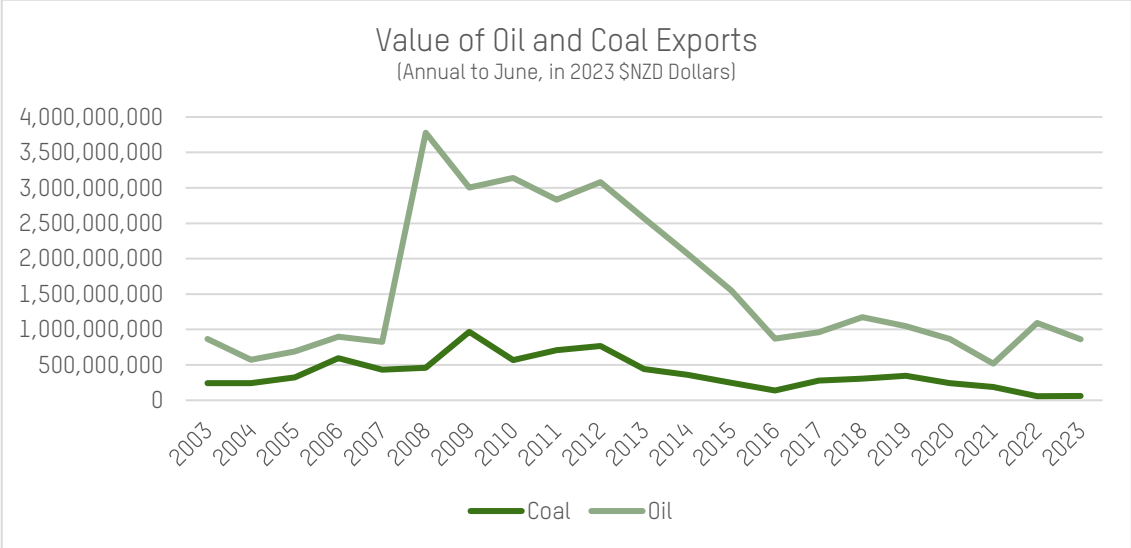
The coal that is produced and used within New Zealand is sub-bituminous. Nearly 1.2 million tonnes of this coal were mined in New Zealand in 2022, primarily in Waikato, Otago and Southland, in addition to almost 690,000 tonnes that was imported. Most of the coal used in New Zealand, about equivalent to domestic production, was used in power generation. The rest, about equivalent to the volume of imported coal, was used for industrial heat. Of this, over 75%, more than 400,000 tonnes, was used in dairy production for drying milk powder, primarily for export.

The Climate Change Commission's Demonstration Path shows coal-fired electricity generation needs to end by 2025, with industrial use of coal declining by more than half this decade. There have been indications of an ability to move even faster than this, with Government announcing significant joint venture investments to rapidly phase out coal use in major industries, including steel and milk powder production.[86] In addition, EECA has been developing Regional Energy Transition Accelerators, to coordinate decarbonisation and connect supply and demand for renewable energy, focused on regions where coal is burned for industrial heat.[87] However, with a change in government the fate of many of these decarbonisation initiatives is still unknown.

Exporting fossil fuel causes real harm for little benefit

All of the oil and around half the coal produced in New Zealand is exported. In addition, 40% of gas production is used to produce methanol, of which 95% is exported.

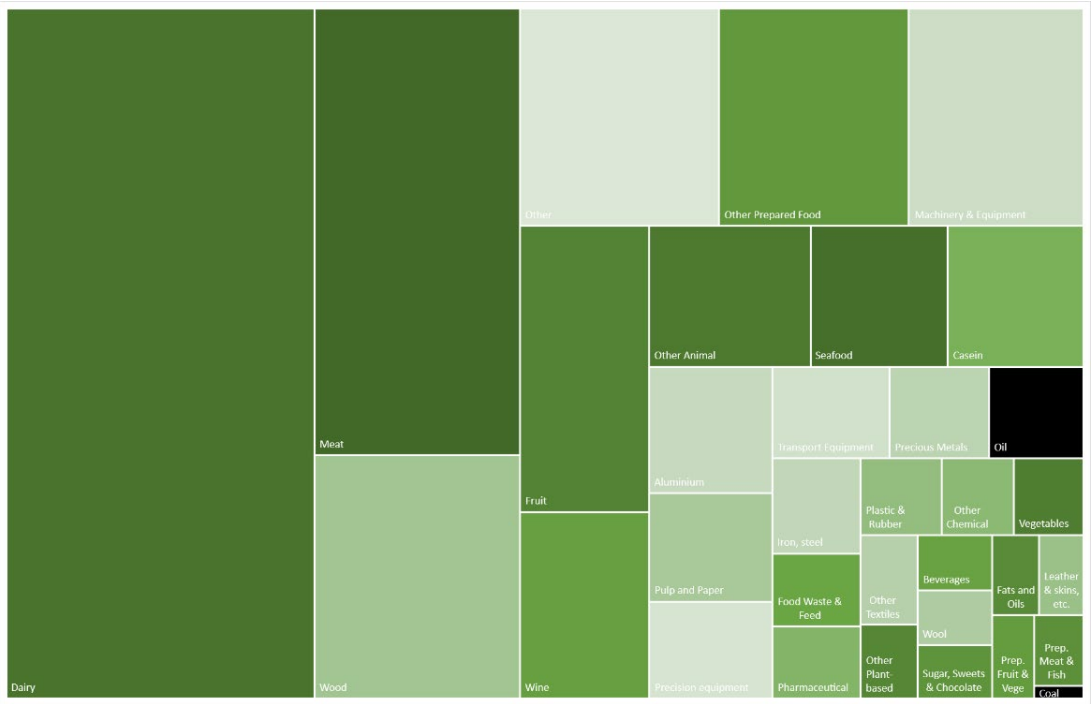
Oil exports make a relatively small contribution to New Zealand's export revenue. Even though 2022 saw some of the highest oil prices in a decade on global markets, which almost doubled the economic value of exports, oil contributed less than 1 % of New Zealand's total export revenue.[88] Those same oil exports produced around 3.6 megatonnes of CO2-equivalent emissions (MtCO2e) when burned.[89]



Coal produced nearly as much in exported emissions, despite representing an even smaller proportion of export earnings. Even with record high prices on world markets in 2022, New Zealand's coal exports made up less than 0.1% of total export revenue.[90] Those coal exports produced an estimated 3.4 MtCO2e when burned.[91]

By comparison, New Zealand's total domestic emissions in 2022 were 75.3 MtCO2e. This means the emissions produced by the consumption of coal and oil exports combined were equivalent to more than 9% of New Zealand's total domestic emissions, despite contributing less than 1% of total export revenue[92].

Other industries bring in more in export revenue, without causing the same harm as fossil fuels. For example, New Zealand's wine exports earned 260% of the revenue from coal and oil combined in 2022.



Visualisation of all New Zealand exports products by value for the year to June 2023.
Oil and coal shown in black.

An uncertain future

New Zealand's new Government, formed in November 2023, has indicated a significant shift in approach to fossil fuel production in favour of new and ongoing development. This leaves much uncertain about the trajectory of New Zealand's fossil fuel phase out.

The coalition deals that have formed the new Government prioritise encouraging new investment in fossil fuel production in Aotearoa.

Speaking to media, incoming Minister of Resources Shane Jones emphasised the new Government's view that "climate change goals must align with the need for energy security", that "the country already used coal to do that so it would be a key feature of ensuring energy security", and that "the Government regarded gas as an essential part of the journey to net zero carbon emissions". Regarding the need to keep the fossil fuel industry operating, he added:

> Those matters, they need to be seen not just through the prism of climate hysteria, but the need to be seen through the prism of regional resilience, jobs, overseas income and quite frankly turning around the narrative that has defined those parts of New Zealand for over 25 years.

While promoting the expansion of currently declining gas, coal and oil production, the incoming Climate Change Minister Simon Watts has confirmed New Zealand will continue to advocate for fossil fuel phaseout on the global stage.

> We've always said, and we have been clear, that the direction of travel is that we need to move away from fossil fuels and onto using renewable energy sources.

Advocating for global fossil fuel phase out while justifying domestic fossil fuel expansion will be a difficult tightrope for the Government to walk, and one which is likely to cause ongoing challenges to New Zealand's global reputation and relationships.

Where are we headed?

Production from New Zealand's currently developed oil and gas fields is projected to decline by 62% and 43% respectively by 2030. In terms of the annual emissions embodied in the produced fuels, this represents a combined reduction of 48% by 2030.[93] If no new fields are explored or developed, this would mean that emissions represented by oil and gas production in New Zealand would decline at around the average global rate that the IPCC says that carbon dioxide emissions need to reduce by. This would still not be consistent with New Zealand's international obligations, based on historical responsibility for emissions and current capacity to act. To meet our international obligations and do our bit towards climate justice, New Zealand needs to reduce oil and gas production by more than half before 2030, as part of a managed decline. Ending all exploration for new oil and gas, both on land and at sea, is the very least that New Zealand needs to do as part of global efforts to reduce the harm of the climate crisis.

Domestic demand for coal and gas produced in New Zealand will also be affected by pressure to reduce emissions. Internationally, New Zealand has committed to an emissions budget of 571MtCO2e for 2021-30 in our Nationally Determined Contribution (NDC) under the Paris Agreement. Based on current emissions budgets, New Zealand would exceed this limit by 99MtCO2e and would have to pay other countries for offsets to make up the difference. This presents a significant fiscal risk, estimated by Treasury to be in the range of NZ$3-23 billion.[94] At current rates of consumption, New Zealand's use of fossil fuels over the rest of this decade would more than account for this full cost. Continuing domestic production of fossil gas would contribute to locking in these costly future emissions.

The offshore exploration ban

Jacinda Ardern famously called climate change her generation's 'nuclear free moment' when she re-launched Labour's election campaign in 2017. Within months after the election, her Government announced an end to new offshore exploration permits for oil and gas. This ban was hard won, and the result of years of campaigning by Māori communities supported by environmental activists.

There had also been a lot of work behind the scenes by trade unions, working to establish the framework for a just transition approach. This work was led by the Council of Trade Unions (CTU), with participation from unions representing workers in the fossil fuel industry. The just transition approach was brought into Labour Party policy by the unions, including through participation in the 2016 Future of Work Commission convened by Labour in opposition. This work laid the foundation for Labour's approach in government, framing the decision to end offshore exploration permits as the start of a just transition.[95]

The framing of the announcement on offshore permits showed awareness from people in government at the time that a managed decline is necessary to protect jobs as part of a just transition:

> This is actually about protecting jobs and incomes in regions like Taranaki which are currently very reliant on fossil fuels. We know that the world is transitioning away from fuels like this and if we don't act to manage that transition, regions like this are going to be left high and dry. Instead, if we have a long-term economic plan now, we can get ahead of the curve and make sure people still have jobs in the years to come.[96]

In the lead up to the 2023 General Election, the National, ACT and New Zealand First parties all pledged to overturn the ban, prompting concern from civil society groups and other governments, including Vanuatu Climate Change Minister Ralph Regenvanu:

> We call on them not to do it. To be in line with Paris, the 1.5 degree target, the science says you cannot do new fossil fuels.[97]

The newly elected National-led Government has since formalised its commitment in its coalition agreements, to further international and domestic scrutiny, including the dubious honour of being awarded the opening Climate Action Network International 'Fossil of the Day' at COP28".

Less than a week after the new Government was sworn in, Palau President Surangel Whipps Jr shared his concerns with media:

> "What a backward position that an island that is part of the Pacific Island Forum that should understand the challenges that we're facing. New Zealand as a Pacific Island and a member of the forum should take a leadership role and should be active in doing all they can to transition away from fossil fuels. That's what they should be working on. They shouldn't be going out and exploring more gas and oil."
>
> "As a Pacific island country. I believe that New Zealand should understand better than any other country in the world the challenges that Pacific islands have. We have Marshall Islands, Tuvalu, Kiribati, all their islands are less than two metres above water. I mean, if you're a Pacific island nation, and you don't understand that, I don't know, I don't know how, what else we can say.
>
> "It's just tragic to be hearing these kinds of actions by the New Zealand government."

The Government's ban on new permits for offshore oil and gas exploration in 2018 was an historic break with the outdated consensus of fossil-fuelled development. If the ban were now to be overturned, as the new Government has committed to do, few major global oil and gas companies would be likely to take the risk of new investment in offshore exploration in the absence of policy consensus from the major political parties, or other significant incentives or assurances from government around longer-term viability. This means that investment decisions can be affected not only by the policies of the current government, but also by the policies and statements of other political parties who may form a future government. If a political party pledged that they would reinstate the exploration ban, and revoke new permits issued since it was revoked, this would likely help to discourage dangerous expansion of the industry. Permit holders would be likely to look for ways to challenge any such decision using Investor-State Dispute Settlement (ISDS) clauses in international trade treaties, but if New Zealand and other richer countries are going to contribute our fair share of a global phase-out, this must include closing existing fields early, requiring governments to be willing to challenge these clauses.[98]

The decision to end new permits for oil and gas exploration in New Zealand waters allowed our government to join as an associate member of the international Beyond Oil and Gas Alliance (BOGA) at COP26 in 2021. Led by Denmark and Costa Rica, BOGA was founded to bring governments and other stakeholders together to 'facilitate the managed phase-out of oil and gas production' globally and provide leadership through commitments to domestic transitions. Overturning the offshore ban could threaten New Zealand's BOGA membership and act as an enabler for other governments to similarly backslide on their climate commitments.

If New Zealand instead committed to ending all permit rounds (known as 'block offers') for new exploration and production of oil and gas on land and sea, we would be eligible to join as a full member of BOGA, alongside 13 other members, including our Pacific neighbours Vanuatu, Tuvalu and the Marshall Islands. One of the biggest positive impacts of New Zealand committing to a managed decline of all fossil fuel production would be the leadership and momentum that this would give to the global effort to phase out fossil fuels.

Drifting into disaster

Without Government intervention to manage a decline in fossil fuel production, the industry is likely to continue the long-term trend of unmanaged and increasingly chaotic decline – albeit potentially punctuated with a brief increase in production before its ultimate demise. In the context of an expected global decline in the industry over the next decade, fossil fuel production will be increasingly defined by speculative investment, bringing increased economic, social and environmental risks. The major global fossil fuel companies have left New Zealand already, or are on their way out, and are unlikely to return. These departures have led Energy Resources Aotearoa to lobby the government to ensure investors can have confidence that gas will have a long-term future in New Zealand. As major players leave the industry, the only likely buyers for their remaining production assets will be marginal companies who see potential for short term profit from continuing extraction while cutting costs and shifting risks onto workers, the public and the environment.

OMV, the last major global oil and gas firm active in New Zealand, announced in 2023 that it intends to exit the country and has put all its Asia-Pacific assets up for sale. OMV owns the Maui gas field, with an additional 69% stake in the Maari field and 74% in Pohokura. Earlier attempts by OMV to sell stakes in its New Zealand operations had fallen through.[99]

There are major risks associated with the declining industry as the major global oil and gas companies sell up and move on. When Canadian oil company TAG quit New Zealand in 2018, their assets were bought up by a subsidiary of Malaysia-based Tamarind resources.[100] Tamarind had previously bought the offshore Tui gas field from an Australian company. But in 2020, the local subsidiary Tamarind Taranaki went into receivership, having failed to extract sufficient short-term profits from the declining production of the Tui field. The financial collapse of Tamarind's local subsidiaries left more than 80 creditors, many of them small businesses in Taranaki, owed over $380 million. The company also deserted their wells, leaving the New Zealand public with a $349 million bill to clean up the mess of decommissioning the Tui oilfield.[101]

Meanwhile, a new company called Matahio energy has now acquired the onshore licenses for production and exploration in Taranaki that were previously held by Tamarind's subsidiaries in New Zealand. Matahio is owned by a holding company based in Singapore. Five of the senior managers of Matahio were previously employed by Tamarind subsidiaries, including the Chief Executive, Chief Financial Officer and Chief Operating Officer.[102]

For workers and communities in Aotearoa to benefit from a just transition to renewable energy and good employment in sustainable industries, government needs to step in and ensure a managed decline of fossil fuel production.

An industry resisting change

The corporations that own the licenses and infrastructure to extract oil, gas and coal have a vested interest in keeping the industry going for as long as possible and extracting as much profit as possible, even if delaying the inevitable closures and generating additional stranded assets make the transition harder and more expensive for workers and their communities. These corporations still have a powerful voice and close relationships with parts of our government. Since the 2018 announcement of an end to new offshore exploration permits, the New Zealand oil and gas industry has worked hard to delay transition. The lobby group for the industry changed its name from the Petroleum Exploration and Producers Association of New Zealand

(PEPANZ) to Energy Resources Aotearoa in 2021.[103] The rebrand came with a shift in messaging, accepting the need for transition to renewable energy while arguing for a continuing role for fossil fuels as part of the 'energy mix', with fossil gas in particular portrayed as being essential for energy security.[104]

These claims are not original. They are industry talking points borrowed from overseas and endlessly repeated, even as the economic facts have changed. The global fossil fuel industry has used the same lobbying firms and tactics as the tobacco industry to obscure and deny the scientific evidence of the harm caused by their products.[105]

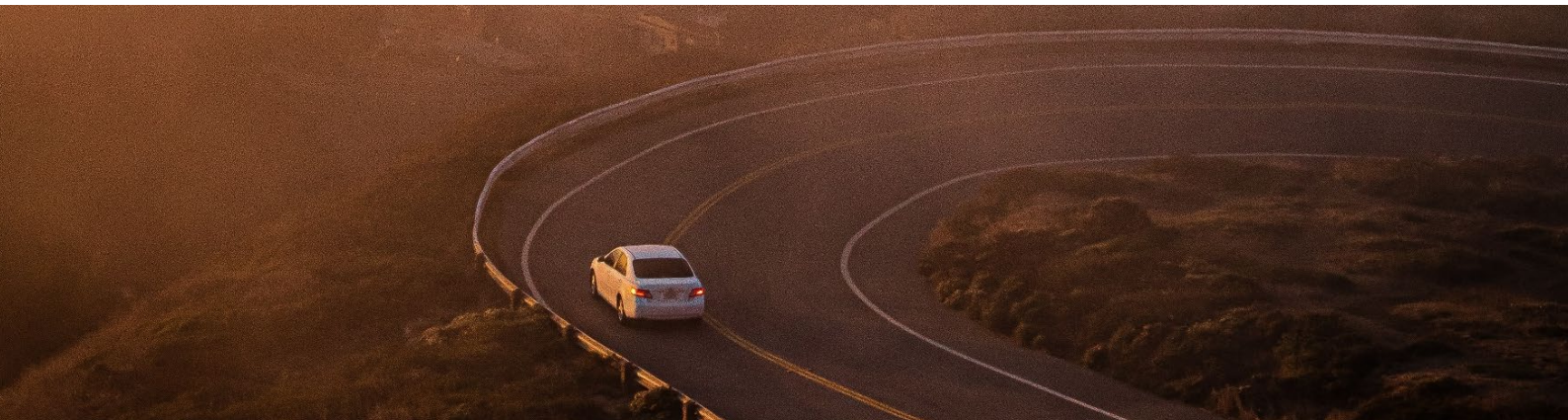
International evidence has debunked the outdated claims that fossil gas can act as a 'bridging fuel' to replace coal in the interim, during a transition to renewable electricity and process heat. This claim has become less and less accurate over the decades that the fossil fuel industry has been repeating it. Not only is there is no longer the time or carbon budget left to delay the urgent phase out of all fossil fuels, there is no longer any function for fossil gas that hasn't been overtaken by clean and cheap renewable alternatives. Recent reports from IISD and Oil Change International show that new investments in fossil gas production and electricity generation are more expensive than renewable alternatives and are unnecessary for a modern electricity grid.[106]

The New Zealand gas industry is out of step with global trends. The head of the IEA wrote in 2023 that "the golden age of gas is... nearing an end" and made it clear that the modern energy grids of the future will run on renewable electricity.[107] Meanwhile, in New Zealand the fossil gas industry was running a marketing campaign to persuade consumers that "gas is here to stay".[108] Behind this message is an industry afraid of stranded assets and lost profits as consumers move from gas to electricity.

Household use of fossil gas makes up only about 4% of consumption, but fossil gas retailers are being warned that they are likely to make significant losses on their investments in the distribution network as the industry declines. These losses will be higher if customers abandon the network early, so the industry is trying to persuade new customers to connect to gas, despite knowing that these customers will face escalating costs as the network winds up. As the costs of maintaining the distribution network are shared over a shorter timeframe and across a dwindling customer base, households that are persuaded to buy new gas appliances now will see rising energy bills and will have to decide when to cut their losses and convert to electric. These costs to consumers are expected to be over $7 billion in total by 2050.[109]

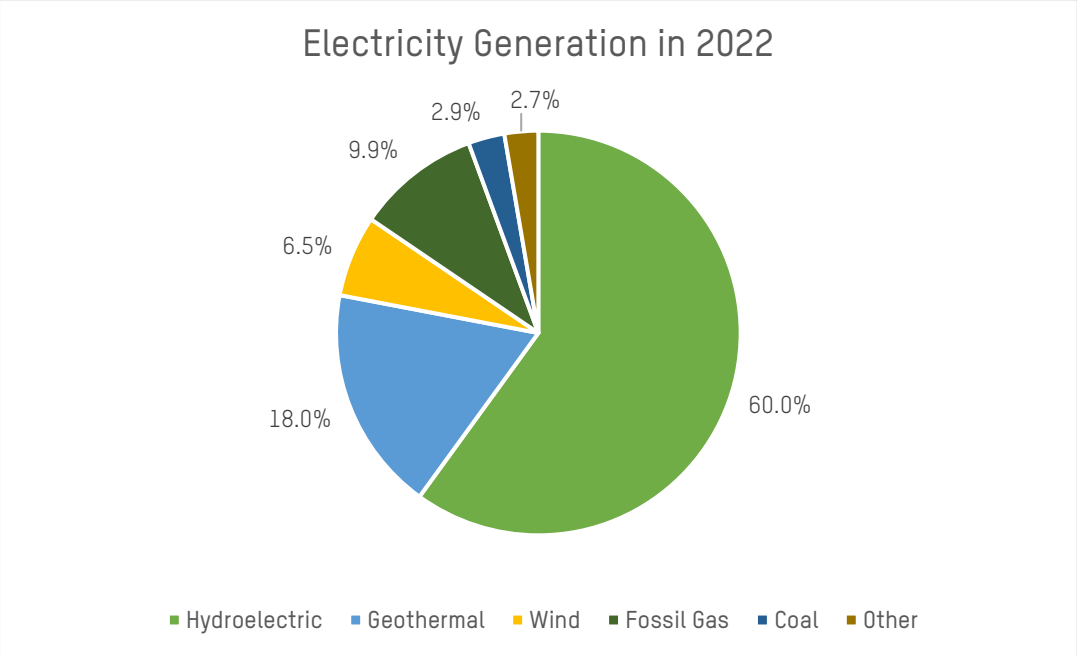
Getting off gas

The good news is that Aotearoa is well placed to make a full transition away from fossil fuels for both power generation and industrial heat. Coal and fossil gas make up a relatively small proportion of our electricity supply. There is abundant potential to expand wind-powered generation in the national grid, as well as to support households and communities to generate



solar power. Planning to support expansion in renewable generation, combined with battery storage and active demand management, could achieve a full transition to renewable electricity – a goal the previous Government aspired to achieve by 2030. Similarly, a transition to renewable energy for industrial heat is well within reach.

The main barrier to the transition to renewable electricity in Aotearoa is not a problem of energy security, but the result of a dysfunctional electricity market. As research by the CTU, FIRST Union and 350 Aotearoa has shown, the companies that control the generation and retail of electricity in Aotearoa (the 'gentailers') have consistently failed to invest in renewable energy over the decades since deregulation and privatisation of the industry. Rather than invest in renewable generation and storage, the gentailers have continued to profit from an electricity market that rewards fossil gas-powered generation with elevated prices at times of high demand. By using their dominant market positions to delay the replacement of their remaining coal and gas-fired plants with cleaner and cheaper electricity, New Zealand's energy companies have generated massive profits, which they have distributed to their shareholders through excessively high dividends. [110] Delaying the transition to renewable electricity has come at the cost of higher household energy bills, while profits have flowed to wealthy shareholders. Overcoming dysfunctional delay to unlock the potential for fully renewable electricity will require more active intervention from government.



Renewable generation provided 87% of Aotearoa's electricity in 2022, with declining use of fossil fuels for baseload power generation. Contact energy closed the Te Rapa gas-fired power plant in June 2023 and will close the larger Taranaki Combined Cycle plant at the end of 2024.[111] This leaves Genesis Energy's Huntly power station as the only baseload electricity generation plant using fossil fuels, with a mix of coal and fossil gas.[112]

Fossil fuels are also used for fast starting power plants to cover peak electricity demand, using either fossil gas or diesel fuel. To achieve fully renewable electricity, these fossil-fueled 'peaker' plants need to be replaced with some combination of fast starting geo-thermal generation, grid-connected batteries or other energy storage, and active demand management

systems. Renewable energy storage is now more affordable than ever, with New Zealand's first grid-connected battery system already being built.[113]

While coal or diesel supply can be fairly easily reduced to meet a decline in demand – either by reducing production or reducing imports – gas is more complicated. Until fossil gas is completely replaced by renewables, its current function in electricity supply will be used to justify continued production. The problem is that even as the role of fossil gas is reduced, the current structure of the gas industry creates perverse incentives for gas producers to find other customers for their surplus gas, rather than reduce production. This means that until fossil gas is entirely removed from the electricity system, the overall emissions impact of gas production in New Zealand is unlikely to substantially reduce.

If New Zealand were to continue gas production past 2030, the cost of offsetting the resulting emissions to meet our NDC under the Paris Agreement will be significant. The only alternative to offsetting these emissions would rely on CCUS facilities proposed by industry. Even if CCUS could be done effectively, it would come with a permanent cost of maintenance and a permanent risk of failure. Ultimately, liability for the cost and risk of maintaining CCUS facilities would be likely to fall back on the public and would continue forever, long after the fossil fuel industry is gone.

The New Zealand Government's initial work on a Gas Transition Plan Issues Paper shows the co-dependency between fossil gas production and large industrial consumers. The circular system of incentives means the gas industry cannot self-manage a decline in production without risk of the market collapsing. At best, the proposals set out in the Gas Transition Plan Issues Paper would maintain current levels of production indefinitely.

Government must therefore actively intervene to set clear signals and manage a rapid decline in both gas demand and supply. Rather than intervening to prop up a failing market, government could enter into contracts or take ownership of assets needed to ensure a managed decline of gas production at the minimum levels of production needed to rapidly and urgently transition electricity assets to 100% renewable generation and storage.

Government should take an active role in building and operating renewable power storage, complementing the role of Transpower as the publicly owned operator of the electricity grid. This could be a role for the proposed Ministry of Green Works.[114] Government should also continue support for the transition from fossil fuels to electricity, including by maintaining EECA grants for residential customers, the State Sector Decarbonisation Fund, and the Government Investment in Decarbonising Industry Fund. Further support should include funding for communities to build renewable power generation and storage systems.

Aotearoa needs a just transition away from fossil fuels

Working people and communities in Aotearoa need a real plan for a just transition to end fossil fuel production.

There is now a global consensus that a transition away from fossil fuels is needed and is underway. The debate now is over how quickly the transition can occur and how it should be managed. In the context of a declining industry, a delayed and unmanaged transition would pose serious risks to workers and communities.

Just Transition

In signing the Paris Agreement, New Zealand has committed to 'take into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs' in the process of taking action to reduce emissions.[115]

If it is implemented with full political commitment and funding, a just transition approach can contribute to building broad support and social license for the rapid action needed to reduce emissions. To achieve this, a just transition must:

1. Fully phase out fossil fuels.
2. Make a fair contribution to global emissions reductions, in line with 1.5 degrees. This means that richer countries like New Zealand must do more than the global average in line with their fair share.[116]
3. Ensure immediate and ongoing wellbeing and financial security for workers and communities – both those directly affected by job changes, and the wider communities impacted by the fossil fuel industry.
4. Act at a scale and pace that matches the urgency of the climate crisis; "later is too late".[117]

Political commitment from government is needed to keep focus on these priorities and to resist attempts by fossil fuel companies to capture the process for their own interests, including prolonging phaseout or transitioning to false solutions. The government must act to rebalance the inherently unequal relationship between workers and employers, to ensure the focus remains squarely on the interests of working people and communities.

In the context of Aotearoa, a just transition must involve Māori as tangata whenua, as well as including the voices and interests of Māori workers through their representative union structures.

The Council of Trade Unions has expressed consistent support since 2017 for a 'Just Transition to a low-emissions economy':

> This means that substantive and ambitious action needs to start now to transform New Zealand's economy and to make sure that all working people have opportunities for decent work in sustainable industries. A Just Transition requires an approach that includes participation of working people through their unions in decision making from the outset, in a process that spans enterprises and industries.[118]

In a discussion document released in 2022, the Council of Trade Unions identified just transition as one of five core 'missions' to guide economic development in Aotearoa:

> Our current reliance on fossil fuels is not working, and we need a pathway to transition to alternative modes of power generation. An energy revolution is an opportunity to put New Zealand on the global stage, producing business opportunities and good jobs for all.[119]

The challenge of achieving a full and just transition away from fossil fuel production in Aotearoa primarily comes down to issues of economic justice and equity. There are no energy security or affordability barriers to ending oil production immediately, and no major energy security or affordability barriers to achieving rapid phase out of coal and gas production. The challenge of a just transition is how to ensure that workers and communities are better off as a result.

The inequitable global impacts of a delayed transition

The need for justice links to the need for speed in making the transition away from fossil fuels. In climate justice, as with social and economic justice, it is especially true that justice delayed is justice denied. The dangers of delay are now being recognised even by established institutions. As Vice-President of the European Central Bank, Luis de Guindos, observes:

> Procrastinating may be easier and less costly today, but means we will pay a higher price tomorrow: the damage to our environment and economies from rising temperatures will be much more severe. In fact, the sooner and faster we complete the necessary green transition, the lower the overall costs and risks.
>
> A delayed transition is therefore expected to lead to much higher physical risk in the long term via more frequent and more intense wildfires and floods than we are already currently experiencing.

The costs of delay would be paid in human lives and livelihoods by the communities in Aotearoa, the Pacific, and around the world, who have done the least to cause the climate crisis and are already facing its worst effects.

International experience shows that a managed decline can be more compatible with justice and equity. Delaying the transition is a threat to justice, as the costs will only increase and the decline is more likely to be chaotic.

Risks to local workers and communities of delayed transition

A just transition requires costs and opportunities to be shared fairly, with public investment to ensure that workers and communities are supported through change. Because production of fossil fuels cannot continue indefinitely, delaying transition will only increase the number of workers who will be affected and need support when decisions are eventually made to close down production.

A delayed transition is also more likely to be chaotic, as larger companies exit a declining industry and offload assets to smaller players driven by short-term profit. This poses risks to workers as well as to communities.

Communities and workers in Aotearoa have experienced the consequences of unmanaged industrial decline before. From the mid-1980s, deregulation of major industries and removal of

import tariffs caused major job losses in manufacturing and food process industries. Closure of big employers caused economic shocks for small communities as hundreds of workers lost their jobs at once. Māori and Pasifika workers were disproportionately affected, with major economic and social impacts on whole communities for generations.[120]

In the small town of Tuatapere, unemployment jumped to 80% overnight in 1987 when the state-owned National Forest Service was closed, creating major disruption and distress for the community. There are also some positive lessons to remember from this time, such as the work of the Community Employment Group to support communities with public funding to create new opportunities for equitable employment.[121]

The industrial transitions of the 1980s were deliberately left to the market, driven by people in government who held an ideological commitment to reducing their role in managing the economy. A just transition requires a different approach.

Workers' voice and the role of unions in a just transition

In 2017, unions in Aotearoa called for a planned approach to just transition to enable 'necessary change', including the transition to low carbon industries.

The CTU called on government to plan for the 'transformation or closure of existing enterprises', while supporting workers and communities to transition into secure and decent work in low carbon industries. They suggested the government could coordinate multi-employer 'pooling and redeployment' schemes to maintain job security, at the same time as investing in support for workers who choose to retrain or look for different jobs.[122] With regard to a just transition from coal mining, the CTU drew on Coal Action Network Aotearoa's 2015 report Jobs After Coal: A Just Transition for New Zealand Communities. The Jobs After Coal report showed that communities that are currently dependent on employment from coal mining, including on the West Coast of the South Island, could be better off in employment and equity terms with a just transition that replaced coal mining with 'thriving job-rich industries in energy efficiency, renewable energy, construction of public transport systems, and expanded horticulture'.[123]

Research by E tū, the union for workers in the fossil fuel industry, showed a majority of oil and gas workers in Taranaki surveyed in 2022 expected changes that would affect their jobs within the next five years. Workers wanted honest communication from their employers well in advance of any changes to their jobs, with support for a range of options including retraining and skills recognition while they were still employed.[124]

In Scotland, a joint initiative led by Friends of the Earth and Platform together with workers and their unions in the offshore oil and gas industry has gone further, raising the collective voice of workers to demand a just transition in their industry. At the same time as the UK government is proposing profit-driven expansion of oil and gas production, workers in the industry are demanding alternatives. Over two years, these workers developed 10 demands covering training and skills, pay, job creation, investment and public ownership. Their proposed programme is comprehensive in its scope, transformative in its scale and deliverable now. Key demands include major investment in creating good jobs in publicly owned renewable energy projects, protection of workers' rights, and support for all communities to transition.[125] When surveyed, 90% of 1092 workers supported the full set of ten demands.

Equity in the transition

The peak representative body for Māori workers, Te Rūnanga o Ngā Kaimahi Māori, introduced the union movement's strategy on just transition within the broader context of the need to heal the damage done by colonisation:

> In framing our discussions around the damage to Papatūānuku, Rangi and Tangaroa we must also look to the damage to ourselves, the people of Aotearoa/New Zealand through the restoration of whakapapa, wairua and kotahitanga. Through Kaitiakitanga a series of pathways could become visible for us to follow.[126]

This statement reminds us that a just transition needs to connect urgent action to end fossil fuels to longer term and deeper processes of decolonisation and healing. This way of seeing a just transition requires us to carry more than one goal at once: decarbonisation *and* decolonisation, with Indigenous justice at the heart of climate justice.

Ensuring equity through the process of transition for communities in all their diversity is the thread that connects the urgent and specific tasks of a just transition in a particular industry to broader and longer-term projects of justice. In a just transition, the process for ending fossil fuel production would ensure that workers and communities affected by closures were supported to create alternative livelihoods without dependence on unsustainable extractive industries. In addition to specific support for workers whose jobs are affected, just transition must be supported by strengthening universal social protection systems[127]. These processes of transition in employment and economic development within communities can include and connect to broader consideration of Indigenous justice, gender justice and disability justice.

As climate justice and disability rights campaigner Áine Kelly-Costello writes, addressing equity for disabled people and other communities in a just transition requires 'going beyond a narrow focus on directly impacted workers to a view on whole of community transitions, and disabled people's insights within them'[128].

The wider community benefits of a just transition would include equitable opportunities for dignified and socially useful work that supports flourishing communities and ecosystems. New jobs can be created in public and community services that value care work, support accessibility for everyone in the community, and promote climate resilient adaptation. Making sure that projects funded through a just transition prioritise equity for communities in all their diversity, including by incorporating principles of accessibility, can help to ensure that everyone benefits from the opportunities of a transforming economy and society. For Kelly-Costello:

> Priorities include combatting the un- and under-employment of people with disabilities, investing in inclusive upskilling opportunities, tackling energy poverty, accessible infrastructure and transport, and designing robust social protection measures which account for the impacts of both climate disruption and transition policies[129].

Clearly, these priorities for advancing equity in a just transition go some way beyond the immediate and urgent tasks of closing down fossil fuel production in Aotearoa. But, if it is done in the right way, a just transition process for the oil, gas and coal industries can be a catalyst for broader changes and opportunities for equity and justice. International experience, including from the closedown of the coal industry in Spain, shows that a just transition process in a single industry can have much broader benefits for equity and community development.

Learning from Spain's fast and fair coal closedown

In only five years since 2018, Spain has ended coal mining and embarked on a rapid just transition to close all coal power stations by 2025, without losing a single job.[130] Spain's just transition has been achieved by involving workers, with their unions and communities, in a just transition that has created more jobs than have been lost.

Government set the parameters for the transition with a decision to end subsidies for the coal industry and redirect public funding for a transition to good jobs in socially and ecologically positive industries. A strong governance framework has also been established, led by a Just Transition Institute (ITJ) that is empowered and resourced to lead the transition across fifteen priority regions, including through public consultation and negotiated agreements with regional authorities, businesses and trade unions.

A range of options have been provided for former coal workers, from early retirement to retraining in renewable energy industries. Over 5000 directly affected workers have been supported, including those in sub-contracted workforces such as cleaning, security and maintenance staff whose jobs were affected by the closures.[131]

Many more workers and communities have also benefitted from the widely varied projects and enterprises that have been established with support from the just transition funds. These have ranged from sustainable industry projects like renewable energy and recycling centres, to environmental restoration on former mine sites, to renewal of hostel accommodation along walking trails, to local history and cultural initiatives, all designed to revitalise communities in the former coal regions and create socially worthwhile, rewarding jobs.[132]

Government has also made use of other policy levers, including procurement criteria for awarding contracts, to promote the goals of a just transition. For instance, licensing criteria for new renewable energy projects have prioritised operators who can show commitment to employing women and former coal employees. This approach seeks to ensure that new employment opportunities are not only available to the male-dominated workforce of the former coal industry, but also contribute towards greater gender equity.[133]

Spain's approach to a just transition has been welcomed by trade unions representing mining workers. Montserrat Mir, secretary of the European Trade Union Confederation, told the Guardian that the process should be used as a model for other countries to follow:

> Spain can export this deal as an example of good practice... We have shown that it's possible to follow the Paris agreement without damage [to people's livelihoods]. We don't need to choose between a job and protecting the environment. It is possible to have both.[134]

Tika Transition

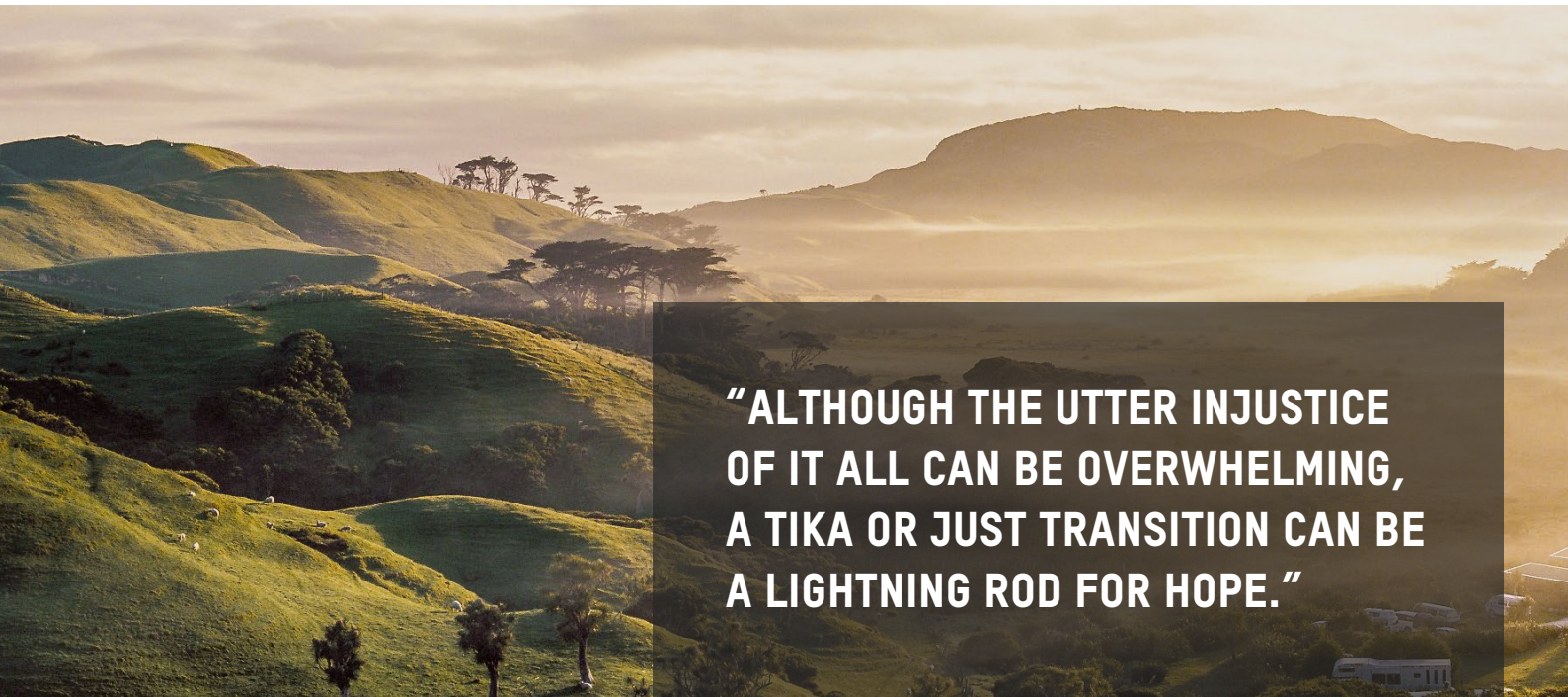
Although there will be tradeoffs in a just transition, Maria Bargh writes that "the transition must be tika" (that which is right and just) for it to be enduring.[135] The transition must uphold tikanga Māori Te Tiriti o Waitangi and other Indigenous rights mechanisms.[136] But tikanga Māori also possesses many of the key ingredients for a just transition, including concepts discussed earlier like mana and manaakitanga, utu or balance, and whakapapa.[137] There are examples everywhere of tikanga being applied as part of local responses to the climate crisis, and these sketch blueprints for scaling out and up.[138]

But it is important to emphasise that Māori, Pacific peoples, workers, and communities are not passive victims to be saved or protected but can be active agents organising for a better world. Framing the 'just' in a just transition, as required to save potential victims from policy, obscures the power that all of these groups have to force changes that are both possible and necessary for a just transition, especially together.[139] We should flip the framing around and foreground these groups not simply as marginalized victims, defined by social weakness, but social forces with the power to win, especially together.

Although we framed the history of the fossil economy as creating five injustices (against Māori; Pacific peoples; nature; workers; and future generations) collectively, these groups or representative movements make up an utter majority. A coalition of those treated unjustly in the fossil economy is a coalition to be reckoned with. The real question is how we connect these seemingly disparate groups into a force with "epoch-changing agency" so that vested interests have to respond to demands for climate justice.[140]

As a start, we draw inspiration from the "four Ds" associated with a radical Green New Deal: decolonisation, decommodification, democratisation and decarbonisation.[141] Decolonisation prioritises Indigenous sovereignty and autonomy as a primary response to the climate crisis. For our context, this is in line with a tika transition. But colonisation was also a process of commodification, which transformed profound relations between people and nature into commodities to be bought, sold, and used up. Decommodification reverses this to render life and labour as invaluable, caring and restoration must replace exploitation and extraction.[142] Democratisation is about restoring or reconstructing societies responsible to themselves. Critics of co-governance have, for example, labelled it a destruction of democracy, but this understanding of democracy is impoverished. Having different groups come together to share responsibility over a resource or a future, is a deepening of democracy. Decarbonisation is only possible through the dismantling of the power structures and systems that introduced so much carbon into the atmosphere that we face catastrophic climate change as a result. These four Ds are principles for building worlds, but can unfold in diverse ways across diverse socio-economic geographies.

Although the utter injustice of it all can be overwhelming, a tika or just transition can be a lightning rod for hope.



Conclusion

Fossil fuels are doing harm.

No further exploration for oil, gas or coal is possible if we are to maintain a liveable climate.

Existing coal mines and oil and gas fields will need to close early to give us a decent chance of keeping global warming within 1.5 degrees. In those currently active mines and fields, at least 58% of the fossil fuels need to stay in the ground.

A global phase out of fossil fuels must start now and it must be full, fast, fair, and funded. New Zealand and other richer countries must lead the way to close down our own production fastest and to fund a just transition to renewable energy in lower income countries, including in the Pacific.

For the future of our communities, and to protect our common home, Aotearoa needs a real plan for a just transition to rapidly end production of oil, gas and coal.

In doing so, we can take the first steps towards a better future of intersecting justice for all our diverse communities – Indigenous and racial justice, gender justice, disability justice, economic justice, and climate justice.

A just and tika transition across our society and economy will be full of possibilities to create better alternatives.

Getting to that better future means leaving coal, oil and gas production in the past.

Together, there are so many places we can go. But we can't stay here.

It's closing time.

Recommendations

Recommended actions for government to deliver a Just Transition to end fossil fuel production in Aotearoa

1. Maintain the ban on new permits for offshore exploration for oil and gas.
2. Ban new permits for onshore exploration for oil, gas, and coal.
3. Set a plan for a managed decline to rapidly phase out existing production of oil, gas and coal, in line with a fair contribution to a global phase out of fossil fuels to keep global heating below 1.5 degrees, with a just transition to give certainty to affected workers and communities.
4. Ban exploration and mining activities on conservation land.
5. Stand with the Pacific to back a global phase out of fossil fuel production that is full, fast, fair and funded. Take this message to the UN climate negotiations and back our commitments with action at home to end fossil fuel exploration and production.
6. Focus on ending fossil fuel production, and not just reducing consumption, because decisions made now would lock in future emissions, causing further harm to the climate and putting our economy on the wrong track for the future.
7. Use our capacity to diversify our economy and urgently end fossil fuel production.
8. Provide climate finance funding to support just energy transitions to renewable energy for lower income countries, including in the Pacific.
9. Actively manage a rapid decline in both demand and supply of fossil gas, consistent with keeping global heating below 1.5 degrees.
10. Rapidly scale up renewable energy generation and storage, including support for community energy projects, with appropriate safeguards.
11. Consider options to enter into contracts or take ownership of assets needed to ensure a rapid and urgent managed decline of gas production that matches the transition of electricity assets to 100% renewable generation and storage.
12. Act urgently to ensure gas-fired 'peaker' plants are replaced as soon as possible, to meet peak electricity demand with renewable energy, energy storage, and active demand management.
13. Take an active role in building and operating renewable power storage, complementing the role of Transpower as the publicly owned operator of the electricity grid. Consider options for a new Ministry of Green Works to contribute to this effort.
14. Continue support for the transition from fossil fuels to electricity, including by maintaining EECA grants for residential customers, the State Sector Decarbonisation Fund, and the Government Investment in Decarbonising Industry Fund. Extend support and funding for communities to build renewable power generation and storage systems.
15. Involve working people, in their unions and diverse communities, to lead development of a real plan for just transition to rapidly end fossil fuel production.

16. Learn from Spain's just transition from coal, which has involved workers, in their unions and communities, to end coal mining and rapidly phase out coal power while creating more jobs than have been lost.
17. Give effect to Te Tiriti o Waitangi, including to ensure that Māori communities benefit equitably from the transition, that harm is avoided, and that the approach to transition appropriately incorporates matauranga Māori, including as articulated in the Tika Transition Framework.
18. Ensure that a just transition creates gender transformative and equitable benefits for all communities, including opportunities for dignified and socially useful work that supports flourishing communities and ecosystems.
19. Invest in creating new jobs in public and community services that value care work, support accessibility for everyone in the community, and promote climate resilient adaptation.

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