Climate Council of Australia

Submission to: The New South Wales Independent Planning Commission hearing into the Maxwell Underground Coal Mine Project

Addressed to: Independent Planning Commission
via https://www.ipcn.nsw.gov.au/have-your-say

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About the Climate Council

The Climate Council is an independent non-profit organisation funded by donations by the public. Our mission is to provide authoritative, expert advice to the Australian public on climate change.

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1. Executive Summary

It is the Climate Council's firm position that this project should not be approved.

The concerns we highlight are centred on the following key facts:

- Meeting the globally-agreed temperature goal of limiting global warming to well below 2°C above pre-industrial levels requires a well-planned and rapid transition to a fully decarbonised energy system. Immediate, deep and permanent greenhouse gas emissions reductions are required to stabilise the global climate at this level. This means that there is no room for new—or expanded—fossil fuel projects. The project should be rejected on that basis alone.

- New South Wales is already experiencing significant climate impacts. 2019 was the driest and warmest year on record for New South Wales, and these two factors contributed to extensive drought conditions. New South Wales—including the Hunter region—also bore the brunt of the most horrific fire season ever witnessed in Australia. Many regions of southern and eastern Australia, including the Hunter Valley, are expected to experience further heat extremes and continued decreases in cool season rainfall over the coming decades, likely leading to more time in drought.

- Recent months have seen significant international momentum towards net zero emissions targets, including Australia's largest coal export partners—many of which are listed as potential export destinations for the Maxwell Underground Coal Mine Project (Japan, South Korea and China).

- The Hunter Valley has significant job creation and economic opportunities from renewable energy. The region is set to be established as the fourth renewable energy zone in NSW. The Hunter Valley is also one of the most promising locations for the production of clean steel, which uses renewable hydrogen to replace metallurgical coal. The Hunter Valley has everything it needs to be a global leader in these industries of the future, but it must seize the opportunities now, rather than locking in new fossil fuel projects.

2. Introduction and overview

We thank the Independent Planning Commission for the opportunity to be heard on the important matter of whether the proposed Maxwell Underground Coal Mine Project should proceed.

It is the Climate Council's firm position that this project should not be approved, as the proponent has failed to demonstrate genuine public benefit capable of outweighing the very significant harm from the project.

Our position on this development shares a lot in common with certain features of the NSW Land and Environment Court's judgment in the *Rocky Hill* litigation. The current state of the remaining global greenhouse gas emissions budgets is such that staying beneath the globally agreed temperature goal identified in the Paris Agreement, which Australia has ratified, means all new fossil fuel developments must be rejected. Approving this mine will lead to an unnecessary and unacceptable additional increase in global greenhouse gas concentrations at a time when an urgent, rapid and deep decrease in emissions is required.

In 2020, there is no rational justification for any new fossil fuel projects. In Australia, wind and solar are the cheapest form of new electricity generation even when backed by storage technologies (CSIRO 2018). These technologies are rapidly outpacing the growth of coal worldwide as our major export partners grapple with the reality of their net zero emissions goals. We must accelerate the transition to renewable energy and storage. New fossil fuel projects will only delay responses to climate change and exacerbate its dangers.

Further, many existing fossil fuel assets are becoming stranded, with expected future revenues unable to cover current and future outlays, ultimately leading to project or company failure. In this context, there is a clear risk that the proponent may not be financially and operationally strong enough to undertake this type of development. This would result in its failure, and remediation and other costs passing to the state.

In this submission, we focus on the accelerating international momentum towards decarbonisation and the declining role for both thermal and metallurgical coal. Alternative technologies are rapidly developing, and the Hunter Valley is well positioned to lead in clean industries of the future, such as renewable energy and clean steel, creating jobs for generations of locals while addressing long term challenges such as climate change at the same time.

The simple and most essential fact is that this project, if approved, would see an overall increase in greenhouse gas concentrations in the atmosphere relative to the counterfactual scenario where this project did not occur. This project would do little more than further exacerbate the kinds of climate impacts that Australia—and New South Wales in particular—has felt most acutely in the past year with a Black Summer of devastating bushfires, drought and extreme heat. As a result, the project clearly fails to meet the public interest and should be rejected.

3. The global emissions budget and the Australian climate context.

The 2015 Paris Agreement establishes a shared global goal of limiting global mean warming to well below 2°C above pre-industrial temperatures, while pursuing efforts to limit average warming to 1.5°C. This goal has been agreed to by all 197 members of the United Nations, and formally ratified by all but eight countries, making it the appropriate benchmark for a globally agreed goal. Australia is a signatory to this agreement and ratified it in 2016 (United Nations Treaty Collection n.d.).

In 2018, the Intergovernmental Panel on Climate Change ('IPCC') released its special report, *Global Warming of 1.5°C*. This report was exceedingly clear on two matters. First, while limiting global warming to well below 2°C above pre-industrial temperatures is much safer than allowing further warming, there is a distinct and appreciable benefit to reducing climate change further, especially in a country as vulnerable to the impacts of climate change as Australia (IPCC 2018). Second, the report outlines, with unprecedented clarity, what must be done to meet those goals. Namely: immediate, deep and enduring cuts are required to greenhouse gas emissions around the world (IPCC 2018).

The reality is that more greenhouse gas has been added to the global atmosphere since the publication of the IPCC's first assessment report in 1990 than had occurred in the entire history of humankind before that report (Gütschow et al. 2019; IPCC 1990). In 2019, the global community was further from the necessary goal of net zero emissions than it has ever been, with emissions from burning fossil fuels—coal, oil and gas—having reached record highs (Global Carbon Project 2020). It is difficult to know what the full impact of COVID-19 will be on global emissions. The shock to global economies has been enormous, but a pandemic is far from the kind of systemic change needed to manage climate change effectively. Now, we have a unique opportunity to reboot economies and tackle long term challenges such as climate change at the same time, by creating clean jobs as the backbone of our economic recovery (AlphaBeta and Climate Council 2020). New fossil fuel developments, such as the Maxwell Underground Coal Mine Project, can only set us back.

It is important to put the global temperature goals enshrined in the Paris Agreement into context. The world has already warmed by an average of 1.1°C above pre-industrial levels (World Meteorological Organization 2020). Australia's climate has warmed on average by 1.4°C since 1910 (CSIRO and BoM 2020). In the past 12 months, New South Wales has seen record high temperatures and set a new record for the lowest ever rainfall (BoM 2020a), with these two factors contributing to extensive drought conditions across the state (BoM 2020b). These conditions were driven by a changing climate (Abram et al. 2020).

New South Wales also bore the brunt of the most horrific fire season ever witnessed in Australia (Filkov et al. 2020). In 2019/20, Australia experienced unprecedented, devastating bushfires. Eight million Australians were affected and thirty-three lives were lost to the fires (Commonwealth of Australia 2020). Smoke-related health costs totalled $1.95 billion and an estimated 429 people died of conditions worsened by toxic smoke inhalation (Johnston et al. 2020). 219 of these excess deaths were in New South Wales—more than the ACT, Queensland and Victoria combined (Borchers Arriagada et al. 2020). Over 3,000 homes were lost and over 24 million hectares were burnt. The national financial impact of the fires is estimated to be in excess of $10 billion (Commonwealth of Australia 2020). An estimated

three billion vertebrate animals were either killed or displaced (WWF 2020), 80 percent of the Blue Mountains World Heritage Area and 50 percent of Gondwanan rainforests were burnt (Commonwealth or Australia 2020).

Political inaction has brought climate change to our door, making Australia's severe weather catastrophically more extreme. Australia is unprepared for worsening extreme climate events and the Federal Government is unwilling to admit that much more mitigation action is needed. Australia's climate record is woefully inadequate and ranks among the worst of G20 nations (Climate Transparency 2020).

Australia is one of the most vulnerable developed countries in the world to the impacts of climate change (IPCC 2014). The future under even greater global heating will be far more difficult than it is today.

Direct macroeconomic shocks from climate change, including reduced agricultural yields, damage to property and infrastructure, and commodity price hikes, are likely to lead to painful market corrections and could trigger serious financial instability in Australia and the region. The property market is expected to lose $571 billion in value by 2030 due to climate change and extreme weather, and will continue to lose value in the coming decades if emissions remain high. One in every 19 property owners face the prospect of insurance premiums that will be effectively unaffordable by 2030 (costing 1% or more of the property value per year) (Climate Council 2019).

On current trends, the accumulated loss of wealth from reduced agricultural productivity and labour productivity as a result of climate change may exceed $19 billion by 2030, $211 billion by 2050, and $4 trillion by 2100. By 2050, climate change is projected to halve the irrigated agricultural output of the Murray-Darling Basin region, which currently accounts for 50% of Australia's irrigated agricultural output by value (about $7.2 billion per year) (Climate Council 2019).

Over the next 30 years, increasing economic damages from climate change will cost the Australian economy at least $1.89 trillion, if current emissions policies are maintained (Kompas et al. 2020). Over the next 50 years, unchecked climate change will reduce Australia's economic growth by 3% per year and cost around 310,000 jobs per year. By 2070, economic cost doubled, shrinking Australia's GDP by 6%—a $3.4 trillion loss in GDP (present value terms) (Deloitte Access Economics 2020).

The Hunter Valley itself faces a combination of severe and compounding climate impacts that are already taking a significant toll on health and livelihoods. The region's tourism and wine industries took a heavy hit from the devastating Black Summer fires—a disaster fuelled by climate change—with grape crops suffering heavy damage from smoke and visitor numbers well down (ABC 2020). Like many regions of southern and eastern Australia, the Hunter Valley is expected to experience further heat extremes and continued decreases in cool season rainfall over the coming decades, likely leading to more time in drought. This means a further increase in the number of days of dangerous fire weather and a longer fire season (CSIRO and BoM 2020). New fossil fuels projects, and failure to help curb global greenhouse gas emissions, will further amplify these trends.

Australia is the world's 14th largest emitter, meaning that it emits more than 181 other countries (Gütschow et al. 2019). By contrast, Australia ranks 55th on population (UNFPA 2020). By total impact on the climate, Australia is the world's third largest fossil fuel exporter, behind only Russia and Saudi Arabia (The Australia Institute 2019). Australia is the world's largest exporter of metallurgical coal and second largest exporter of thermal coal (Office of the Chief Economist 2020).

Decisions made today on whether to approve new fossil fuel infrastructure determine how much worse the future will be for Australians. Until greenhouse gas emissions—driven primarily by the burning of coal, oil and gas—are very close to zero each year, the world will continue to warm, with ever-worsening impacts (IPCC 2018). Existing fossil fuel infrastructure across the world is more than sufficient to push the world past 1.5°C of mean average temperature increase (Tong et al. 2019), and planned infrastructure is more than sufficient to push the world past 2°C (Stockholm Environment Institute et al. 2019). As a result, limiting warming to well below 2°C requires already planned fossil fuel infrastructure to not proceed, and does not allow for new fossil fuel developments. Existing fossil fuel facilities must be phased out over the next two decades.

Australia is on the frontline of climate change—confronted by more frequent, longer lasting and more intense heatwaves, harsher droughts, coastal flooding and longer, more dangerous bushfire seasons (IPCC 2014; IPCC 2018; CSIRO and BoM 2016; CSIRO and BoM 2018). The approval of any new fossil fuel project would worsen climate impacts, putting Australian lives, the economy, and the natural environment at risk. In this context, the Maxwell Underground Coal Mine Project should be rejected.

4. International momentum towards net zero emissions.

Recent months have seen significant international momentum towards net zero emissions targets, including many major economies and most of Australia's major trading partners. In September 2020, China—the world's largest greenhouse gas emitter and a major importer of Australian coal—announced that it would achieve carbon neutrality by 2060 and would peak its emissions within the next ten years (Mallapaty 2020). In October 2020, both Japan and South Korea—also major importers of Australian coal—committed to net zero emissions by 2050 targets (Investor Group on Climate Change 2020).

There is also considerable movement from Australia's major trading partners beyond Asia. The results of the recent US election will accelerate the transition away from fossil fuels in that country and create new momentum globally. President-elect Biden has outlined a policy agenda that includes a target for net zero emissions no later than 2050, a zero-emissions electricity sector by 2035, and a US$2 trillion economic recovery plan focused on reducing emissions and creating clean jobs (Investor Group on Climate Change 2020). The European Union (EU)—collectively the world's largest economy—has an existing target for net zero emissions by 2050, with the EU bloc expected to lift its current 2030 target of reducing emissions by 40% below 1990 levels to at least 55% (Climate Council 2020). China, Japan and South Korea have also all agreed to strengthen their 2030 goals (Investor Group on Climate Change 2020). The United Kingdom and New Zealand also have net zero

emissions by 2050 targets. For even some of these goals to be met, worldwide coal use must drop precipitously over the next decade.

In its Air Quality and Greenhouse Gas Assessment, the proponent (Malabar Coal) has assumed that 100 percent of the coal produced from the Maxwell mine will be exported, primarily to Asia (Todoroski Air Sciences 2019). However, many of the potential export destinations listed (Japan, South Korea and China), have recently set net zero emissions targets and indicated their intentions to move beyond fossil fuels (Todoroski Air Sciences 2019; Investor Group on Climate Change 2020).

Global momentum towards decarbonisation is accelerating. As the world—and many of Australia's key trading partners—shift away from fossil fuels, there is no case for approving new coal developments such as the Maxwell Underground Coal Mine Project.

5. A brighter future is possible for the Hunter Valley region.

As we rebuild our economy from the COVID-19 crisis, Australia has enormous opportunities to create jobs in renewable energy and the clean industries it could power. The country could become a global leader in the clean industries of the future, with generations of Australians working in industries such as clean manufacturing, mining, minerals processing, and renewable hydrogen. The Hunter Valley region has huge opportunities from these key industries of the future, but in order to ensure the region leads, governments must seize these opportunities now, rather than continuing to approve new fossil fuel projects.

The global transition away from fossil fuels, and coal in particular, is now beyond dispute. According to the International Energy Agency, global coal demand is experiencing a 'structural fall' (IEA 2020). The declining trajectory is clear for thermal coal, or coal used for electricity, with the rapid growth of renewable energy generation around the world and solar now providing 'some of the lowest cost electricity ever seen' (IEA 2020).

While the Hunter Valley region has an existing thermal coal industry, it also has significant opportunities from renewable energy. The Hunter Valley is already home to renewable energy projects and is set to be established as the fourth renewable energy zone (REZ)[1] in New South Wales (SMH 2020), bringing a jobs and investment boom. As an indication, the three previously announced REZs will support over 6,300 construction and 2,800 ongoing jobs and attract up to $32 billion in private investment by 2030 (NSW Government 2020). REZs also lower electricity bills, with average savings of $130 a year for households and $430 for small businesses (NSW Government 2020).

Alternatives are also developing for metallurgical or coking coal. The proponent states that at least 75% of the coal produced from the Maxwell mine will be metallurgical coal, with up to 25% thermal coal—although we understand that some submitters have disputed these figures. While the Department states that this represents an opportunity to diversify the regional economy (NSW Department of Planning, Industry and Environment 2020),

[1] A renewable energy zone (REZ) is a region with high potential renewable energy resources, such as wind, solar, and pumped hydro, where the development of new renewable energy and storage projects can be coordinated with demand and investment in transmission.

diversifying away from coal production with another kind of coal production does not make sense for the local economy or the climate.

The proponent states that it does not believe alternatives to metallurgical coal will be commercially viable within the life of the Maxwell mine, but alternatives are already being developed and deployed around the world. Alternatives include clean steel produced with renewable hydrogen. The Hunter Valley has been identified as a particularly high potential location for this key industry of the future (Grattan Institute 2020), but the region must begin embracing these opportunities now, rather than locking in new fossil fuel projects.

Clean steel (sometimes called green steel or zero emissions steel), uses renewable hydrogen[2] to replace metallurgical coal in the steel production process. Even when including the cost of transporting iron ore from Western Australia, the Hunter Valley's renewable energy resources and existing industrial workforce and infrastructure make it one of two stand out regions (alongside central Queensland) to develop this industry in Australia (Grattan Institute 2020). In particular, producing clean steel at global export scale will require a large industrial workforce. The Hunter's existing skilled workforce, especially in the coal mining industry, makes it one of the most cost-effective regions for clean steel production. Clean steel manufacturing could create 10,000 jobs in the Hunter Valley by 2050 and these would be long-term, skilled, well-paying jobs (Grattan Institute 2020).

Other countries are already moving to establish clean steel industries. For example, the world's first zero emissions steel pilot plant, known as the HYBRIT project, was recently completed in Sweden. The project is a partnership between steel manufacturer SSAB, iron ore producer LKAB, and electricity company Vattenfall, and the group aims to lead the global market by producing the world's first zero emissions steel (RenewEconomy 2020). The project has the backing of the Swedish Government, which aims to move the entire Swedish steel industry to clean steel within the next 20 years (RenewEconomy 2020)—indicating likely commercial scale for this technology well within the 26-year life of the proposed Maxwell Underground Coal Mine Project.

Demand for products manufactured with renewable energy is already growing and this will only accelerate with the global momentum towards decarbonisation and net zero emissions outline above. This is particularly the case for clean metals, because metal production is responsible for roughly nine percent of all global greenhouse gas emissions, with steel alone responsible for seven percent of emissions (Energy Transition Hub 2019). For example, the European Commission is considering introducing a Carbon Border Adjustment Mechanism, as part of the European Union's efforts to achieve net zero emissions by 2050 (European Commission 2020). This would effectively impose a tax on imported goods to reflect the 'embodied' emissions within that product (BCG 2020), providing an immediate competitive advantage to clean steel, and an immediate penalty to steel produced using metallurgical coal. This creates both opportunities for those who move quickly to develop new renewably-powered industries, and risks for those who do not.

[2] Renewable hydrogen is hydrogen produced from renewable energy, and is likely to play a key role in the clean economy of the future, offering a solution for reducing emissions in industries such as steel-making and long-range and heavy haulage transport.

At a time where global greenhouse gas emissions budgets are rapidly closing and climate impacts are becoming more severe and costly, the Maxwell Underground Coal Mine Project is dangerous and unnecessary. Alternatives that are better for both the climate and the local economy are rapidly developing. Instead of locking in new fossil fuel developments, the Hunter Valley should be supported to develop these new industries of the future. On the basis of the public good, we feel that the Commission has obvious grounds to reject this project and should do so.

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