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One Step Forward, Two Steps Back

New coal mines in the Hunter Valley

23 new coal projects are proposed in NSW, with total production capacity equivalent to 15 Adani-sized mines. Ten Adanis' worth of these projects are proposed for the Upper Hunter. Local and international factors mean not all of these projects can proceed. A moratorium should be placed on new coal approvals while a coherent regional planning framework is developed for the Hunter. This framework should be based around a world with net zero emissions in 2050.

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Summary

The coal industry is currently proposing 23 new coal mines and mine extensions in NSW with a combined additional annual production of more than 155 million tonnes. This is equivalent to around 15 new Adani mines' worth of output.

The rush to mine coal is accelerating, not slowing, as proponents scramble for approvals before a potential downturn in the market driven by climate action and cheap renewable energy. Eleven new coal projects were added to the NSW major projects list in 2020 alone, with annual capacity of nearly 70 million tonnes, far more than in preceding years.

In the Upper Hunter Valley, proposals for new projects have a combined output of 98 million tonnes per year, equivalent to ten new Adani-sized mines.

These proposals for major new coal mines in NSW, and in the Upper Hunter in particular, follow the doubling of production from 130 million tonnes in 2000 to 260 million tonnes in 2014. Governments and the coal industry expected this growth to continue, but NSW production peaked in 2014 and the boom is not coming back:

- Existing coal mines are operating well below their approved capacity.
- Plans to expand the export capacity of the Newcastle Port were scrapped in 2018, with the coal industry itself citing a lack of world demand for export coal.
- Estimates of capacity required for the Hunter coal railways have been revised down.

The legacy of the boom lives on, however, in the approvals of existing mines and the new projects in the planning system. Current approvals could see over 165 million tonnes produced in 2030. For context, the Port of Newcastle's record annual throughput is 165 million tonnes. It is simply incapable of exporting the coal from these new mines.

The case for new coal mines is, of course, undermined by increasing international climate ambition and continuing declines in the price of renewable energy. Put simply, world demand for coal is likely to fall not rise over the life of the new mines being proposed.

The local impacts of coal mines are inadequately considered. The vast majority of NSW coal production either occurs in, or is transported through, the Upper Hunter region which already has some of Australia's most polluted air. The likely failure to rehabilitate existing and proposed mine sites to anything like their original condition will deliver lasting scars on the Upper Hunter, reduce the ability of the agriculture, wine, equine and tourism industries to grow, and potentially leave significant liabilities for the NSW Government.

The scale of new mine proposals, and the subsequent noise, air and water impacts, not only imposes significant 'external costs' on other industries and residents but acts as a deterrent to potential investment. Even mines that do not go ahead can stop investment in other industries on nearby land for decades.

While the proponents of each new coal project make optimistic claims about how their project will deliver a significant increase in coal exports, royalty revenues, and employment, it is clear that all of these claims cannot simultaneously be true. With flat or falling world coal demand, no plans to expand the volume of coal exports the Port of Newcastle can handle, and no likelihood of new coal fired power stations being built in NSW there is simply no market for, nor transport infrastructure to market, an enormous increase in new coal production in NSW or the Upper Hunter Valley. Building new coal mines when existing coal mines are under-utilised increases disruption to the existing workforce and imposes additional external costs on other Hunter Valley landowners and communities.

Despite the constraint on world demand, the local constraints on export infrastructure, and the cumulative impact of so many new mines on local air, water and biodiversity, the NSW Department of Planning, Industry and Environment oversees a process in which each mine is evaluated separately rather than evaluated within a coherent regional framework.

Given the combined scale of the proposed new coal projects, the current state of national and international climate commitments, and the risks to the Hunter Valley of building new mines in the short term that cannot deliver benefits in the long term, this paper concludes that the NSW Government should introduce a moratorium on new coal mine projects until it has undertaken a cumulative assessment of the economic, environmental and social consequences of pursuing so many new coal projects at this point in history. Regional planning is required if strong economic, social and environmental outcomes are to be delivered. The number and scale of the proposed new coal mines, combined with the impact that each mine has on the potential for other industries to develop, ensures that a system based on case by case approvals cannot possibly deliver a coherent, efficient, or equitable outcome for the Hunter Valley or other coal mining areas of the state.

The paper also recommends that the NSW Legislative Council to conduct an inquiry into:

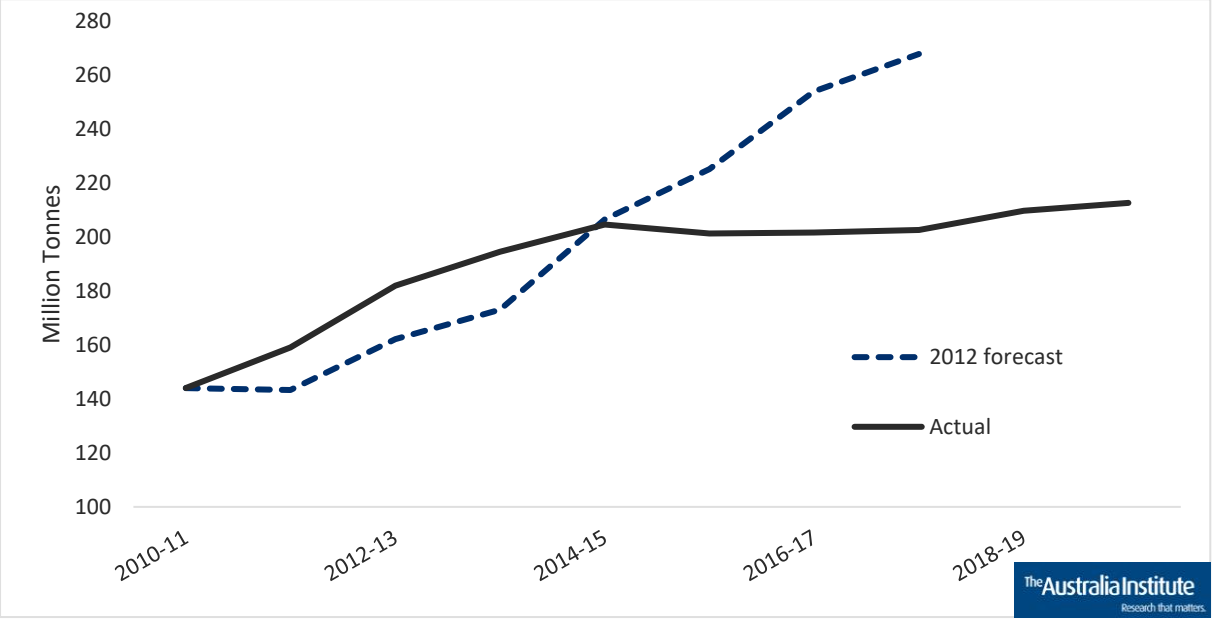
1) The adequacy of the existing system of rehabilitation bonds for coal projects in light of the unique financial and environmental risks faced by the coal industry.
2) Whether and to what extent the companies bearing rehabilitation obligations have the financial capability to meet those obligations and whether that capability is being monitored by the Government during the course of the mine's life.
3) Whether those companies have a history of responsible stewardship of natural resources and can be regarded as being fit and proper to fulfill the obligations imposed on them with respect to remediation
4) The quality of rehabilition that has been conducted at coal mines in NSW to date.
5) Whether the rehabilition standards and obligations which have been imposed in the past and which are being imposed today represent world's best practice.
6) The potential land uses for sites that have been remediated.

Introduction

Coal production in NSW doubled from 130 million tonnes in 2000 to 260 million tonnes in 2014.[1] While the NSW Government, the Commonwealth Government and many in the coal industry expected that rapid growth to continue through the 2020s and 2030s, such growth did not occur. The combination of reduced demand for coal from NSW coal fired power stations and, more significantly, a reduction in coal demand from the rest of the world, resulted in NSW coal production peaking in 2014.

Coal exports have grown much more slowly than the coal industry, Commonwealth and state governments had predicted during the boom years. As Figure 1 shows, the disparity between Commonwealth Government forecasts of coal exports made in 2012 and the reality of coal exports grew to more than 65 million tonnes in just five years.

Figure 1: Australian thermal coal export forecast vs actual



Source: Department of Industry, Science, Energy and Resources (various years) *Resource and Energy Quarterly Forecast Data*

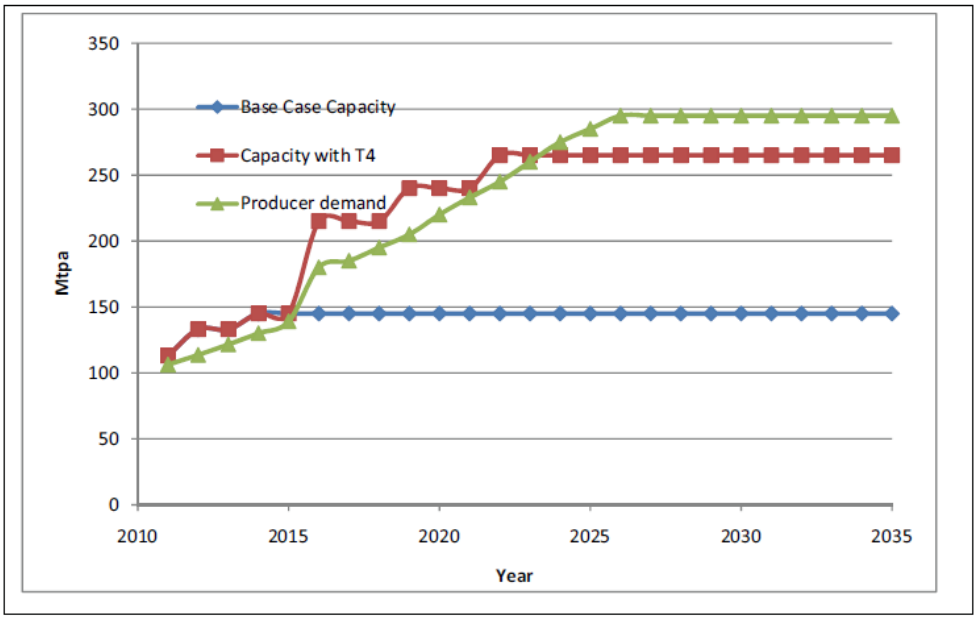
Similarly, the difference between NSW Government forecasts of coal royalties in 2012 and the money subsequently received in 2016 was $1.3 billion. Coal royalties were predicted to reach $2.5 billion in 2012, but $1.2 billion was the eventual payment in 2016.[2]

[1] Coal Services NSW (2014) *Coal Services Annual Report 2013-2014,* https://www.coalservices.com.au/mining/about-us/annual-reports/; Coal Services NSW (2004) *Coal Services Annual Report 2003-2004,* https://www.coalservices.com.au/mining/about-us/annual-reports/

[2] NSW Treasury (2012) *Budget paper no.2*, https://www.treasury.nsw.gov.au/sites/default/files/2017-06/2012-2013%20Budget%20Papers%20BP2%20Budget%20Statement.pdf; NSW Treasury (2016) *Budget*

Governments were not alone in making such bullish predictions. In 2009 Port Waratah Coal Service (PWCS), one of the two coal exporters that operate at the Port of Newcastle, proposed to build a $5.3 billion expansion of coal export capacity (known as T4) which would have given it the capacity to export an additional 120 million tonnes of coal per year. The company's 2012 forecasts were for PWCS alone to be exporting nearly 300 million tonnes per year through the late 2020s as shown in Figure 2 below:

Figure 2: PWCS coal export terminal capacity and forecast producer demand – 2012



Source: Gillespie Economics (2012) Port Waratah Coal Services Terminal 4 Project Economic Assessment

These expectations were wildly optimistic. Despite approval in 2015, the T4 project was scrapped in 2018 due to the coal export volumes not reaching forecast levels. Volumes through the PWCS terminal have never exceeded the blue line in Figure 2 above.

The abandonment of T4 is just one sign that the coal export boom in NSW ended some years ago. Another is the downward revisions of the requirements of the coal rail network, compiled by the Australian Rail Track Corporation (ARTC), a government-owned entity that works closely with the coal industry. Most years the ARTC updates its Hunter Valley Corridor Capacity Strategy, including detailed estimates of capacity requirements.[3] These estimates have declined substantially since the boom years and the 2020 update revised down volumes by around 10 million tonnes.[4]

paper no.2, https://www.treasury.nsw.gov.au/sites/default/files/pdf/2016-2017_Budget_Papers_BP1_Budget_Statement.pdf

[3] ARTC (2020) *Hunter Valley Strategy*, https://www.artc.com.au/projects/hv-strategy/.

[4] ARTC (2020) 2020 *Hunter Valley Corridor Capacity Strategy*, https://www.artc.com.au/uploads/2020_HVCCS_Final.pdf

Another sign that growth in NSW coal production is unlikely is that existing mines are producing at below their approved capacities. While some closures and cut backs have been linked to the covid pandemic,[5] others are longer term. The huge Hunter Valley Operations mine has approved capacity of 42 million tonnes of raw coal per annum, but produced just 19 million in 2019.[6] BHP's Mount Arthur mine produced 25 million tonnes in 2019, despite approved capacity of 36 million tonnes.[7] BHP is trying to sell the Mt Arthur mine and recently revised its value down by US$1.2 billion to around US$300 million.[8]

Recent analysis by the coal industry shows that there is coal production capacity already approved in the Hunter to produce 165 million tonnes of raw coal in 2030.[9] This does not include capacity from the mines near Gunnedah and Mudgee that is also transported through the Hunter to the Port of Newcastle. For context, the Port of Newcastle's record throughput is 165 million tonnes.[10]

These trends are not likely to change. Climate policy is becoming more ambitious in most countries and competition from renewable energy is increasing as it gets cheaper. World demand for coal is likely to fall not rise over the life of the new mines being proposed.

[5] See for example Connell and Turton (2020) *Mass job losses at Hunter Valley mine as industry reacts to plummeting thermal coal price*, https://www.abc.net.au/news/2020-08-19/hunter-valley-coal-mining-feels-the-impact-of-plunging-price/12573370.

[6] Hunter Valley Operations (2019) *Hunter Valley Operations Annual environmental Review,* https://insite.hvo.com.au/document-library/https-insite-hvo-com-au-document-library-reports-annual-hvo

[7] BHP (2020) *Annual Reporting 2020*, https://www.bhp.com/investor-centre/annual-reporting-2020/; BHP (2019) *Mt Arthur coal annual review*, https://www.bhp.com/-/media/bhp/regulatory-information-media/coal/nswec/mt-arthur-coal/annual-environmental-management-reviews/191112_mt-arthur-coal-annual-review-fy19---amended-12-november-2019.pdf

[8] BHP (2021) *BHP operational review for the half yearended 31 December 2020*, https://www.bhp.com/-/media/documents/media/reports-and-presentations/2021/210120_bhpoperationalreviewforthehalfyearended31december2020.pdf?la=en

[9] Mach Energy (2020) *Mount Pleasant Operation Environmental Impact Statement: Appendix S Greenhouse gas assessment*, https://machenergyaustralia.com.au/wp-content/uploads/45.-Appendix-S-Greenhouse-Gas-Assessment.pdf

[10] Kirkwood (2020) *Port of Newcastle hits record coal exports, unofficial figures by Hunter Valley Coal Chain Coordinator show*, https://www.newcastleherald.com.au/story/6568665/newcastle-coal-exports-hit-record-volumes-in-2019/

Impacts on the Upper Hunter

Much of the expansion in NSW coal production has taken place in the Upper Hunter Valley between Singleton and Aberdeen, which, as a result, has some of the most polluted air in Australia. Data from the National Pollution Inventory shows that the Upper Hunter postcode 2333 area had the worst air quality of any postcode in the state.[11] Table 1 shows that the six new mines or mine expansions approved just in that postcode area between 2001 and 2020 resulted in an expansion of potential coal production of 85 million tonnes per year.

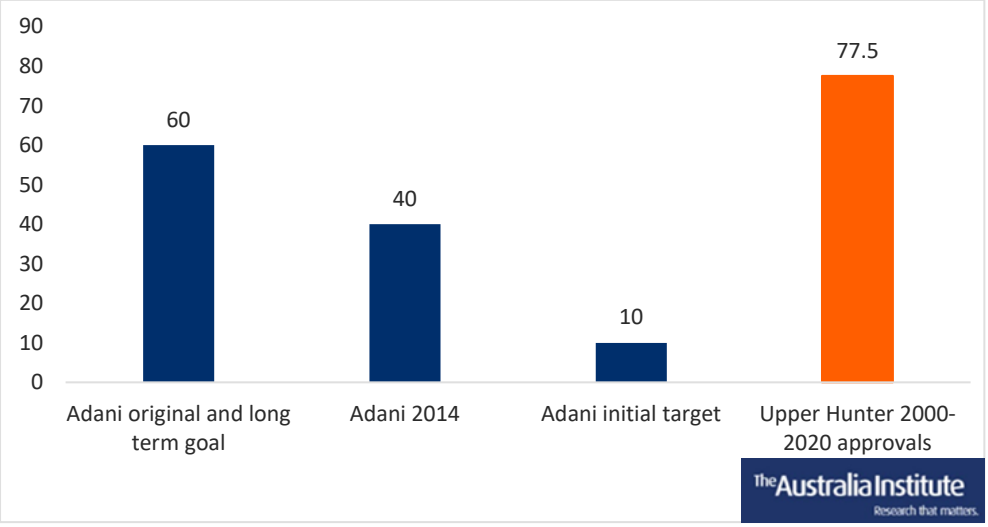
Table 1: Coal projects in the Upper Hunter region (2333 postcode)

Mine	Additional volume produced per year (mtpa)	Year approved/commenced/ modified
Mount Arthur	36	2001, 2010
Muswellbrook	2	2005
Mangoola	13.5	2007, 2014
Bengalla	15	2015
Mount Pleasant	10.5	2016
Maxwell	8	2020
Total	**85**	

Sources: See appendix

To put that expansion into context, the potential output of the new mines approved in the Upper Hunter 2333 postcode alone between 2001 and 2020 is bigger than the original Adani 'mega mine' proposed in Queensland's Galilee basin and around eight times larger than the current, smaller, proposal for the Adani mine, as shown in Figure 3 below:

Figure 3: Relative size of Adani coal projects in the Upper Hunter (2333 postcode)



[11] ACF (2018) *The dirty truth: Australia's most polluted postcodes*, https://www.acf.org.au/stronger_air_pollution_standards_needed_to_protect_poorer_australians

Sources: See appendix

These projects would also impact on water resources. The Upper Hunter area was identified by the Commonwealth Government's Hunter Bioregional Assessment as being very likely to experience significant drops in groundwater levels and significant shortfalls of water (up to 12 billion litres) in the Hunter River, as a direct result of mining activity.[12]

Despite the end of the coal boom and the impacts on air, water, the wider environment and community, still more new coal projects are being proposed for the Upper Hunter and other coal producing regions of NSW.

[12] Australian Government (2018) *Bioregional Assessments: Impact and risk analysis for the Hunter subregion*, https://www.bioregionalassessments.gov.au/assessments/3-4-impact-and-risk-analysis-hunter-subregion

A new coal boom?

Despite the expected growth in post-2014 coal exports not eventuating, in recent years there has been a boom in proposals to develop new coal projects in NSW and in the Upper Hunter in particular. Table 2 provides details of the 23 coal projects that, according to the Commonwealth Government are currently in the NSW coal project pipeline.

Table 2: NSW new coal project pipeline 2020

Project	Volume (MTPA)	Region	Project status
Ashton South East opencut	2.4	Upper Hunter	Feasibility
Maxwell Underground	8	Upper Hunter	Announced
Spur Hill	8	Upper Hunter	Feasibility
Dartbrook	6	Upper Hunter	Announced
Glendell Continued Operations	10	Upper Hunter	Announced
Mangoola Operations	13.5	Upper Hunter	Announced
Mt Pleasant Optimisation Project	21	Upper Hunter	Feasibility
Mount Owen Continued Operations	8.5	Upper Hunter	Committed
United-Wambo	6.5	Upper Hunter	Committed
Bulga Optimisation Project and Bulga Underground	10	Upper Hunter	Feasibility
Liddell new mining area	4	Upper Hunter	Announced
Stratford extension project	1.2	Gloucester	Committed
Vickery	8	Gunnedah	Feasibility
Watermark	10	Gunnedah	Feasibility
Wallarah 2	5	Newcastle	Feasibility
Dendrobium Extension Project	5.2	Southern	Feasibility
Hume Coal Project	3	Southern	Feasibility
Tahmoor South	3.5	Southern	Feasibility
Bylong	6.5	Western	Feasibility
Airly Increase Production	1.2	Western	Feasibility
Angus Place Extension Underground	3	Western	Announced
Chain Valley Extension	2	Western	Announced
Narrabri Stage 3	9	Western	Feasibility
Total	**155.5**		

Source: Unless otherwise detailed in Appendix, all figures from Department of Industry, Science, Energy and Resources (2020) *Resources and Energy Major Projects List*

The data in Table 2 suggests that, despite the failure of the coal export boom to continue, and despite the commitments of the NSW Government and the global community to significantly reduce greenhouse gas emissions by 2050, the NSW Government is entertaining the prospect of approving 15 Adani equivalents of new coal output. The Port of Newcastle, with its capacity of around 200 million tonnes per year is not physically capable of handling this proposed new capacity and that of the existing mines in the Hunter Valley.

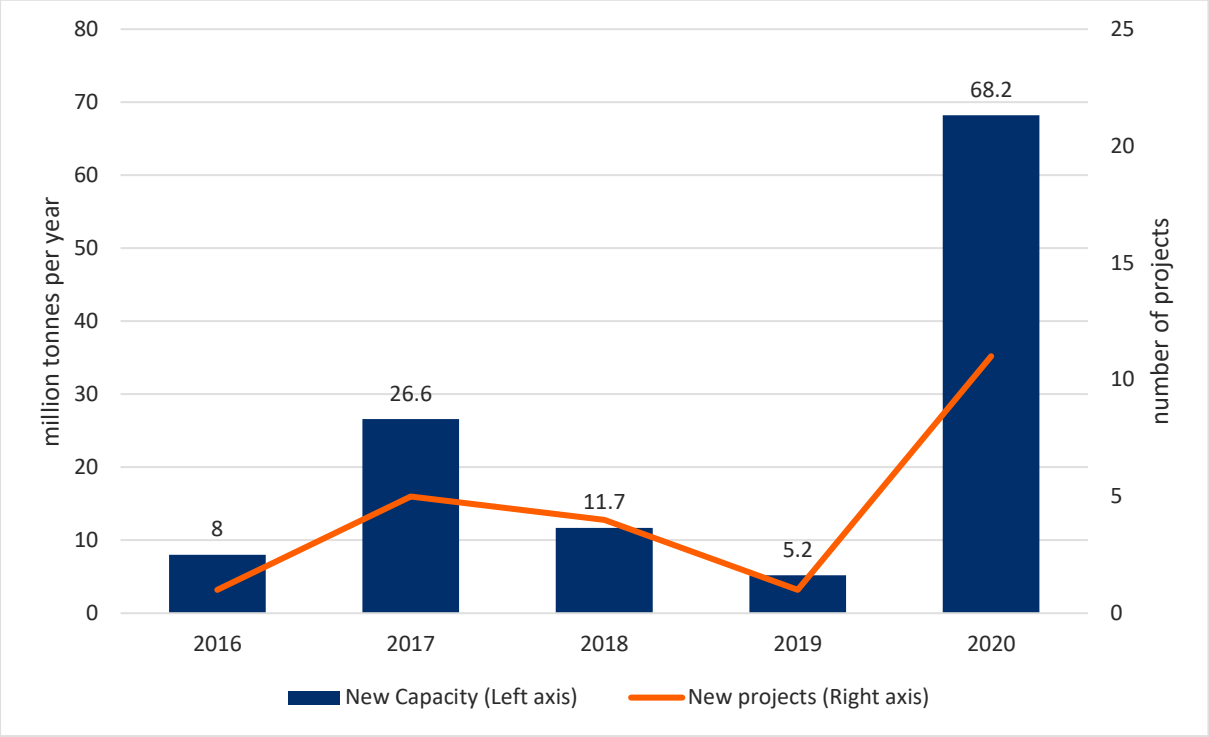
Table 2 is not definitive. Arguably projects such as the Hunter Valley Operations Continuation Project, West Muswellbrook and Ridgelands exploration projects should be added. Others that are on the list face significant hurdles before they can begin production. For example, the NSW Independent Planning Commission recently refused approval of the Dendrobium Extension and refused the Bylong Project in 2020. The NSW Department of Planning, Industry and Environment has recommended against approval of the Hume Coal Project. The Federal Department notes that many of these projects "have not progressed for years".[13]

Not progressing is not the same as stopping, however. Many coal projects have become "zombie mines" that never die but continue to create uncertainty and impose costs on the communities around them. Communities and land users opposed to coal developments have to devote considerable time and resources to defending their interests, and often the interests of the wider public. Land values and development plans are impacted when there is a proposed coal project near a house, farm or town. And new business, particularly agriculture and tourism businesses, are unlikely to establish themselves on land that may be subject to noise, dust and visual pollution in the coming years. Unlike a proposed restaurant or a proposed housing development, a proposed coal mine imposes significant external costs on other land owners, and the local economy, from the moment it is announced. These costs continue until the project is formally abandoned and the relevant licences and approvals cancelled.

Governments rarely intervene to revoke an approval or otherwise kill off a zombie mine. Nor do they make any effort to prevent new zombie projects from appearing – the list of new coal projects proposed in NSW, shown in Table 2, grew rapidly in recent years. In fact, the number of new coal proposals was far greater in 2020 than in preceding years, as shown in Figure 4 below:

[13] DISER (2020) *Resources and Energy Quarterly – December 2020*, page 65, https://publications.industry.gov.au/publications/resourcesandenergyquarterlydecember2020/index.html

Figure 4: New NSW coal projects on major projects list by year added

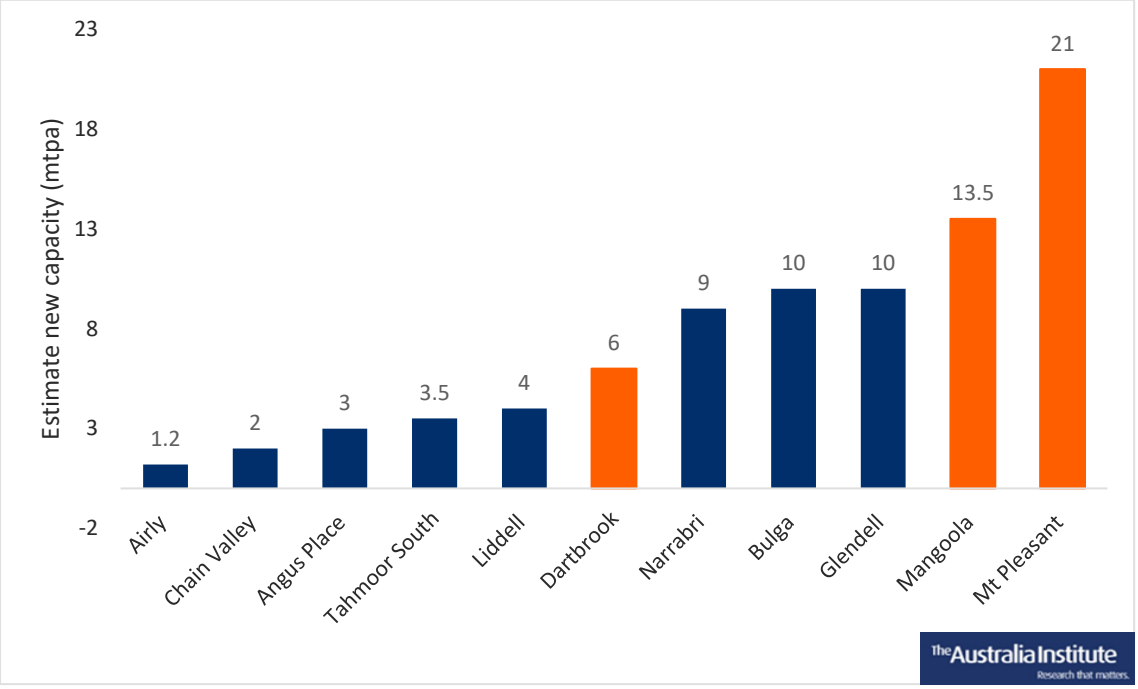


Source: DISER (various years) Resources and Energy Major Projects List

Figure 4 shows that 11 new projects were added to the major projects list in 2020, with a total capacity of nearly 70 million tonnes per annum. These projects joinined 13 others proposed in earlier years. This large increase likely reflects a rush by proponents to progress projects as quickly as possible before a potential major shift in the coal market due to climate action and cheaper renewable energy.

Five of these projects added to the list in 2020 are around the size of the current Adani development in the Galilee basin, as shown in Figure 5 below.

Figure 5: New NSW coal projects added to major projects list in 2020



Source: DISER (2020) Resources and Energy Major Projects List

The largest new proposal shown in Figure 5 is the Mt Pleasant project. It would extract up to 21 million tonnes of coal each year, more than double the current Adani proposal. It targets low quality coal and would operate until 2048.[14] The orange bars in Figure 5, Mt Pleasant, Mangoola and Dartbrook, are in the Upper Hunter postcode area already highlighted as having the state's worst air quality.

Whether any particular project is developed or becomes a zombie mine is uncertain. What is certain is that the process that allows new coal mines to be proposed and remain in the project pipeline indefinitely is not assisting the state, and particularly the Hunter region, prepare for a carbon neutral future. A regional planning process, as opposed to the current case by case assessment of mine projects, would help evaluate new coal projects to ensure they are consistent with:

1) Likely world demand for coal
2) Capacity of the Port of Newcastle to export coal
3) Region-wide air quality standards
4) Regional development goals

The NSW Government's 2020 NSW *Strategic Statement on Coal Exploration and Mining in NSW* fails to provide this. It makes no specific plans for the Hunter, or any region, and it is based on forecasts that assume the world takes minimal action on climate change, contrary

[14] See Campbell and Shields (2021) *Pleasant Dreams: Submission on the Mount Pleasant Optimisation Project economic assessment*, https://australiainstitute.org.au/report/pleasant-dreams/

to the stated positions of the NSW Government, the Commonwealth Government and the governments of most of the countries to which NSW exports coal.[15]

[15] NSW Government (2020) *Strategic Statement on Coal Exploration and Mining in NSW,* https://www.resourcesandgeoscience.nsw.gov.au/__data/assets/pdf_file/0004/1236973/Strategic-Statement-on-Coal-Exploration-and-Mining-in-NSW.pdf

Whole less than the sum of the parts

Each new coal project proposed in NSW is required to undertake an environmental impact assessment and outline the potential economic benefits of their project. While the claims made by individual mine proponents are often found to be exaggerated,[16] the process of requiring each mine to evaluate its impact in isolation from other proposed coal projects leads to a significant overestimation of the likely economic benefits and a significant underestimate of the likely environmental costs.

The cumulative consequences of building 11 new coal mines or expansions in the Upper Hunter are quite different from the sum of the impacts of each of them.

Consider the following:

- Coal mines produce a significant amount of dust and cause a significant amount of air pollution. While one project might not be expected to have a significant impact on nearby air quality, multiple mines will lead to a significant increase in both the amount of particulate air pollution and the number of days on which particulate air pollution is above acceptable levels.
- Coal mines use a large amount of water, and while an individual mine might in isolation not place undue burden on the water table or river health, building 11 new mines likely will.
- Coal mines disrupt large amounts of land and, in turn, impose costs on a wide range of species. While species may be able to migrate to other nearby sites, if 11 sites are to be disturbed then the consequences for biodiversity will be significantly worse.

In terms of economic benefits, a similar pattern presents for the simple reason that each new coal project must inevitably 'cannibalise' the market of other coal projects. That is, because the world market determines how much coal will be burned, and the Port of Newcastle's terminal capacity determines how much coal can be exported, the decisions made by the proponents of individual coal projects, or indeed of the NSW Government,

[16] For example, Rio Tinto's Warkworth mine once claimed it would create 45,000 jobs, but the NSW Land and Environment Court accepted that this number was in fact close to zero. Adani's Carmichael mine famously boasted it would create 10,000 jobs, but the company's own economist conceded in court that less than 1500 jobs were likely to eventuate. See Martin (2013) *Rio fails basic maths at the coalface*, https://www.smh.com.au/business/rio-fails-basic-maths-at-the-coalface-20130421-2i8b4.html; Branco (2015) *Adani Carmichael mine to create 1464 jobs, not 10,000*, https://www.smh.com.au/national/queensland/adani-carmichael-mine-to-create-1464-jobs-not-10000-20150427-1mumbg.html

plays a minimal role in determining the total amount of coal that can be exported from NSW in any year.

Consider the following:

- If the potential for direct and indirect employment at each mine is estimated separately, and the world demand for coal and the capacity of the Port of Newcastle to export coal does not allow for each mine to operate at full capacity, then the impact of new coal projects on employment will be significantly lower than the total of the claimed job creation for each project.
- Similarly, if each mine estimates its royalty payments to the NSW Government on the assumption it will operate at full capacity, and world demand for coal and the Port of Newcastle export capacity do not allow for each new coal project to operate at full capacity, then the amount of royalties paid to the NSW Government will inevitably be significantly lower than the total of the royalty payments claimed by each of the proponents of new coal projects.
- While the assumption commonly made by the proponents of new coal projects is that those employed in their coal mine will be additional to the workforce of existing coal mines, with capped capacity at the Port of Newcastle and flat world demand for coal this cannot be the case. This is true for export coal mines built outside of NSW as well. For example, in 2017 the Port of Newcastle commissioned economic modelling from Wood Mackenzie that showed that if the Galilee Basin in Queensland were to export 150 million tonnes per annum (well below the potential 300 million tonnes of all Galilee Basin projects), this would result in a reduction in Hunter Valley coal output of 86 million tonnes and a loss of 9,100 jobs in the Hunter Valley.[17]
- Australia has a larger share of the world export coal market than Saudi Arabia has of the world market for oil. If large new coal projects in the Hunter Valley or Galilee Basin go ahead, then they will inevitably push the world coal price down, delivering benefits to those who buy Australian coal, but resulting in a loss of jobs in, and royalty payments from, existing coal mines.

In short, in order to estimate the economic impact of building 11 new coal mines in the Upper Hunter and another 12 elsewhere in the state, it is necessary to consider the cumulative impact of such a large expansion in supply on both the economy and the natural environment.

[17] Long (2017) *Galilee Basin mines will slash coal output, jobs elsewhere, Wood Mackenzie says*, https://www.abc.net.au/news/2017-07-06/galilee-basin-mining-project-will-reduce-coal-output:-research/8682164; Murray et al (2018) *The impact of Galilee Basin development on employment in existing coal regions*, https://australiainstitute.org.au/report/the-impact-of-galilee-basin-development-on-employment-in-existing-coal-regions/

The clearest example of the consequences of the failure to perform such a cumulative analysis is the Australian export gas industry. In the decade to 2017 the gas industry spent $80 billion building three near identical gas export facilities next to each other on Curtis Island near Gladstone.[18] Each of the three projects was approved on the basis that each of them would boost exports, royalties and jobs. But in reality, each of them drove up the costs of building the facilities, drove up the price of gas for other (non export) gas users, and drove down the profits that each of the three projects expected to make. The total value of assets write downs on Curtis island is now more than $10 billion and the Australian east coast gas price is now permanently higher than it once was.

[18] Verrender (2020) *Australian Government's gas plans overlooks root cause of the problem*, https://www.abc.net.au/news/2020-09-16/government-gas-plans-overlook-the-root-cause-of-the-problem/12666784

False hope and delayed transition

It is rational for the owners of potential mine sites to seek approval for a coal project even if that project never goes ahead. Just as the owner of a vacant block of land can profit from seeking approval for a new development, even if they themselves do not build the project, the same is true for the developers of coal projects. Land with an approved coal project is worth more than land without an approved project.

While some may argue that the number of coal mines that are approved is irrelevant as it is the amount of coal that is actually mined that matters, such an approach ignores the social and economic consequences associated with offering false hope to the coal industry and delaying the transition plans of other land users.

While most of the world is planning how to transition away from fossil fuel use, the NSW Government 'planning process' is overseeing one of the largest transitions towards coal production in world history.

If the NSW Government genuinely believes that world demand, and Port of Newcastle capacity, can accomodate a 155 million tonne per year expansion in exports of coal through the Hunter Valley then they should explain why it is simultaneously planning for a net zero world by 2050 and a world that is buying far more coal from NSW than it has ever bought before.

Or if the NSW Government does not expect world demand for coal to surge then it should work constructively with the owners of, and workers in, NSW coal mines to maximise the amount of time they have to plan for their transition out of the coal industry. Building new coal mines to compete with existing coal mines, or even simply approving new coal mines near existing coal mines, has a significant impact on the decision making of those already involved in the coal industry. Put simply, the fewer new coal mines are built, the longer existing coal mines will be able to operate and the more new projects that are approved, the greater the uncertainty for those working in existing mines.

Of course, it is not just other coal mines that are impacted by the approval of new coal projects. Tourism operators, horse breeders, wine makers, farms, local councils and nearby residents are all adversely affected by the approval of new coal projects. In short, the prospect of a large new coal projects, and the associated dust and noise is a significant impediment to new investment in new job creating projects in the Upper Hunter.

Similarly, the remediation of existing mines needs to be incorporated into a comprehensive regional plan for the Hunter Valley. At least 45 voids, with a total area of over 6,000

hectares are currently slated to be left in the Hunter Valley, an area larger than Sydney Harbour. Remediation costs will run into the billions.[19]

While it is in the interests of individual mine owners to delay expenditure on remediation and minimise that expenditure it is in the interests of the community, and the economy, for such work to be performed quickly and to a standard that renders the land usable for other economic activities. The disparity between the incentives of the mine owners and the community are so great that a NSW Legislative Council inquiry should be conducted into:

1. The adequacy of the existing system of rehabilitation bonds for coal projects in light of the unique financial and environmental risks faced by the coal industry.
2. Whether and to what extent the companies bearing rehabilitation obligations have the financial capability to meet those obligations and whether that capability is being monitored by the Government during the course of the mine's life.
3. Whether those companies have a history of responsible stewardship of natural resources and can be regarded as being fit and proper to fulfill the obligations imposed on them with respect to remediation.
4. The quality of mine remediation work that has been conducted at coal mines in NSW.
5. Whether the remediation standards and obligations which have been imposed in the past and which are being imposed today represent world's best practice.
6. The potential land uses for sites that have been remediated.

[19] ERI (2016) *The hole truth: The mess coal companies plan to leave in NSW*, http://downloads.erinsights.com/reports/the_whole_truth_LR.pdf

Conclusion

NSW coal production is becoming a zero-sum game, with declining demand from local power stations and from global export markets placing incumbent coal producers under considerable pressure to meet shrinking demand.

But despite the failure of the previous forecasts of booming export coal volumes, despite the fact that mines in the Hunter are already shuttered, and despite the fact that many of the existing coal mines are for sale and producing below their nameplate capacity, the NSW Government continues to oversee a planning process on the basis that building new coal mines will deliver additional benefits to the economy and society.

Given the spare capacity in existing mines, the lack of evidence of any emerging boom in world coal demand, proposals to build large new coal mines in Queensland and the availability of existing coal mines for sale it is clear that the people of the Hunter Valley, and indeed NSW, would benefit from a halt on new mining projects until a comprehensive, cumulative impact assessment has been undertaken. This assessment should be used to develop a comprehensive regional plan for the Hunter Valley.

Appendix

Sources for Table 1 and Figure 3

Mine name	Sources
Mount Arthur	https://www.newcastleherald.com.au/story/3777704/mount-arthur-a-story-of-growth/
	https://www.amsj.com.au/mount-arthur-coal-mine/
	https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=MP09_0062%2120190708T035620.630%20GMT
Muswellbrook	https://www.idemitsu.com.au/mining/operations/muswellbrook-coal/
Mangoola	https://www.glencore.com.au/dam/jcr:a45c10a2-1641-40c8-8d5c-3871043dec93/Mangoola%20Open%20Cut%20Fact%20Sheet.pdf
	https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=MP06_0014-MOD-6%2120190619T060508.356%20GMT
Bengalla	https://www.bengalla.com.au/who-we-are/
Mount Pleasant	https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-9526%2120190808T070742.212%20GMT
Maxwell	https://machenergyaustralia.com.au/mount-pleasant/

Table 2: Discussion

Some production volumes of new projects reported in the from Department of Industry, Science, Energy and Resources (DISER) (2020) *Resources and Energy Major Projects List* are inconsistent with volumes of the same projects reported on the websites of NSW Planning or the Independent Planning Commission. In most cases the difference appears to be an error in the list, although in at least the case of Mt Pleasant it could be a difference in interpretation.

The Mt Pleasant Optimisation Project would expand production from 10.5 mtpa to 21 mtpa, an increase of 10.5 mtpa as reported by DISER. However, without the expansion the proponents claim the mine would cease to operate from 2026. So whether the additional capacity is 10.5 mtpa or 21 mtpa depends on the year in question. In this case because for most of the project life the difference would be potentially 21mtpa, that figure has been included in our estimates. Similar issues may explain the other differences.

Sources for Table 2

Project	DISER list (MTPA)	Alt (MTPA)	Source for alternate volume
Ashton SE opencut	2.4		
Maxwell Underground	5	8	https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-9526%2120190808T070742.212%20GMT
Spur Hill	6	8	https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=PDA-105%2120190228T215914.010%20GMT
Dartbrook	10	6	https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-10418%2120210201T004517.605%20GMT
Glendell Cont Ops	10		
Mangoola Operations	5	13.5	https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2020/12/mangoola-coal-continued-operations-project-ssd-8642/referral-from-the-department-of-planning-industry-and-environment/210201-dpie-assessment-report.pdf
Mt Pleasant Optimisation Project	10.5	21	https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-10418%2120210201T004517.605%20GMT
Mount Owen Cont	8.5		
United-Wambo	6.5		
Bulga Opt & Underground	10		
Liddell new mining area	4		
Stratford extension project	1.2		
Vickery	8		
Watermark	10		
Wallarah 2	5		
Dendrobium Extension Project	5.2		
Hume Coal Project	3		
Tahmoor South	3.5		
Bylong	6.5		
Airly Increase Production	1.2		
Angus Place Ext	3		
Chain Valley Extension	2		
Narrabri Stage 3	9		