

# Glendell Continued Operations Project

## Submission to NSW Independent Planning Commission

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*The economic assessments of the Glendell proposal overstate its benefits and understate its costs. Applying current carbon prices to only its direct emissions gives a net present value of between negative \$460 and negative \$570 million. This excludes consideration of the potential heritage and biodiversity impacts.*

Rod Campbell  
March 2022

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# Introduction

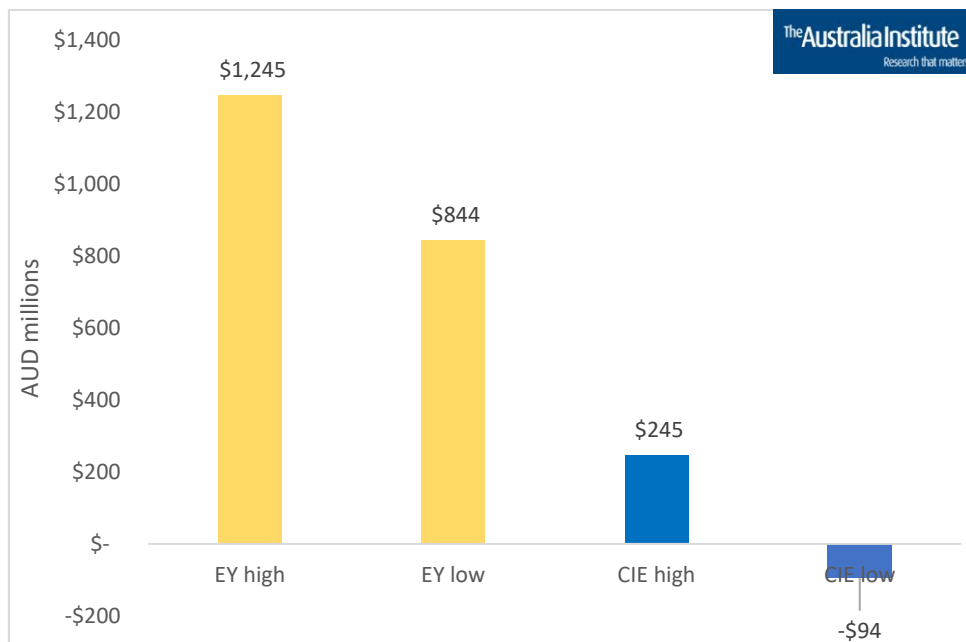
The Australia Institute welcomes the opportunity to make a submission to the NSW Independent Planning Commission (Commission) on the proposed Glendell Continued Operations Project (the Project). The Project, owned by Glencore, would produce around four million tonnes per annum (mtpa) of saleable thermal and semi-soft coking coal out to 2044. The Project is an extension on an existing mine.

Key environmental and social costs of the project are its impact on the Ravensworth Homestead, a site of historical significance and massacres of indigenous people, as well as significant greenhouse gas emissions.

The proponent commissioned Ernst and Young (EY) to assess the economic impacts of the project as part of the environmental impact statement (EIS) process. EY estimate the net present value (NPV) of the project to the NSW community at between \$844 million and \$1,245 million.

The Department of Planning and Environment (DPE) commissioned a review of EY's assessment from the Centre for International Economics (CIE). The CIE's review is highly critical of EY's assessment, making alternative estimates of NPV to NSW of between negative \$94 million and positive \$245 million. The disparity between NPV estimates is shown in Figure 1 below:

**Figure 1: Economic value of Glendell Project to NSW, EY vs CIE**



Sources: EY and CIE reports

Figure 1 shows the radical difference in estimated values by the different consultants. The DPE's response to this difference has been to split the difference, as outlined in the Assessment Report:

Glencore's economic assessment included a cost-benefit analysis to evaluate the net benefit/cost of the Project to NSW, and a local effects analysis to assess the net effects in the region. The cost-benefit analysis, which included consideration of all environmental externalities, calculates that the Project would have a net benefit of \$1.1 billion to the NSW economy in net present value (NPV) terms.

The Department's independent economic expert disagreed with aspects of Glencore's assessment, including the values attributed to coal price, company and payroll tax, worker and supplier benefits, and greenhouse gas emissions. While still representing a net benefit, the independent expert's analysis indicates that the Project is more likely to deliver a net benefit of around \$151 million.

The Department recognises that the assessment prepared by Glencore and the independent review undertaken by CIE are likely to represent the two extremes when it comes to the realised benefit to NSW (i.e. they are the best and worst case scenarios).

In any case, the Department accepts that the Project is likely to result in a net benefit to NSW...<sup>1</sup>

The Department offers no evidence or analysis to support its view that EY and CIE have produced "best and worst case scenarios". It makes no effort to assess the validity of either claim. Pleasingly, the Commission has picked up on this discrepancy in meetings with the Department and the Proponent. Commissioner Leeson asked the Department for clarification, with the crux of the answer as follows:

I guess in the case of Glendell, depending on the apportionment approach, I guess all, all the, all the sort of methodologies are still showing a, like a, a positive net benefit.<sup>2</sup>

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<sup>1</sup> DPE (2022) *Glendell Continued Operations Project Assessment Report*, page ix, <https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2022/02/glendell-continued-operations-project-ssd-9349/referral-from-the-department-of-planning-and-environment/glendell-cop--assessment-report-recommendation.pdf>

<sup>2</sup> IPCN (2022) *Transcript of proceedings: Glendell Continued Operations Project, Department of Planning and Environment Meeting*, [https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/transcripts-and-material/2022/glendell/220310\\_glendell\\_department-meeting-transcript.pdf](https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/transcripts-and-material/2022/glendell/220310_glendell_department-meeting-transcript.pdf)

As shown in Figure 1 above, the Department’s claim that all estimates of NPV are positive is not correct. The CIE’s range includes negative results. Commissioner Leeson asked the same question to the proponents, receiving the unsurprising response that their consultants had taken “the proper approach”.<sup>3</sup>

Far from representing a “worst case scenario”, the CIE’s assessment is overly optimistic in regard to the NPV of the Glendell Project. Consideration of the CIE’s approach to several issues suggests that the projects NPV to the NSW community is likely to be substantially lower and probably negative:

- Heritage approach
- Disruption to operations
- Climate impact values

These issues are discussed in the following sections, along with the EY approach to employee and supplier benefits, which was covered in the well-known Rocky Hill case.

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<sup>3</sup> IPCN (2022) *Transcript of proceedings: Glendell Continued Operations Project, Applicant meeting*, [https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/transcripts-and-material/2022/glendell/220310\\_glendell\\_applicant-meeting-transcript.pdf](https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/transcripts-and-material/2022/glendell/220310_glendell_applicant-meeting-transcript.pdf)

# Heritage

Neither of the assessments by EY or CIE include detailed quantitative or qualitative discussion of heritage impacts from the project. EY's report has an appendix that includes four paragraphs on "Aboriginal cultural heritage" and a half page on "historic heritage" that concludes:

The costs of relocating the Ravensworth Homestead complex are included in the capital costs of the Project. To avoid any double-count of potential historical impacts, as noted in the Technical Notes, any residual historical heritage losses are assessed qualitatively.

Presumably EY mean here that the impacts of moving the Homestead are to be assessed qualitatively by the Commission, as there is no further discussion in EY's document.

CIE's approach is the same as EY – the costs of relocation of the homestead, as estimated by Glencore, are included but with no quantification or detailed qualitative assessment of whether this imposes a cost on the community and how great such a cost might be.

The lack of quantification of economic values of heritage impacts is not necessarily a flaw in these assessments. Such estimates are always subjective and sometimes counter-productive. However, neither assessment draws attention to what is potentially a significant social cost, one that has drawn considerable public attention

It is important that the claims of economic benefit made by the Department need to be understood as not including this social cost.

# Disruption to operations

In meeting with the Department, Commissioner Pilton asked:

Has any thought been given to the possibility of the market just collapsing at some stage in the future and what happens? Would it require an early mine closure or whatever, and what happens to rehabilitation in that case? (p29)

The Department answered that no consideration had been given to a collapse of the coal market and focused on the system of mine rehabilitation bonds in NSW. This system has been found to be inadequate by the NSW Auditor General and The Australia Institute.<sup>4</sup>

The Department's claim not to have considered a major reduction in coal demand is surprising given that its own consultants have urged such consideration in the past,<sup>5</sup> and also NSW Treasury's recent modelling of a coal phase out, finding:

The lower global coal demand scenario, in which coal production in NSW ceases after 2042, results in GSP being 0.9 per cent lower than the reference case in 2041 and remaining 0.6 per cent lower in 2061.<sup>6</sup>

Treasury's finding of minimal economic impact from a coal phase out reinforces earlier modelling by The Australia Institute and Centre of Policy Studies at Victoria University.<sup>7</sup>

In relation to the Glendell Project, a major reduction in the demand for NSW coal would likely result in one or more of the following:

- Production of coal below approved capacity.

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<sup>4</sup> Audit Office of NSW (2017) *Mining Rehabilitation Security Deposits*, <https://www.audit.nsw.gov.au/our-work/reports/mining-rehabilitation-security-deposits>; Campbell and Carter (2021) *Mind the gaps: Unused capacity and unfunded rehabilitation in Upper Hunter coal mines*, <https://australiainstitute.org.au/report/mind-the-gaps/>

<sup>5</sup> BIS Oxford Economics (2020) *Peer review of economic impact assessment: Tahmoor South Coal Project*, <https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-8445%2120201218T044925.096%20GMT>

<sup>6</sup> NSW Treasury (2021) *The sensitivity of the NSW economic and fiscal outlook to global coal demand and the broader energy transition for the 2021 NSW Intergenerational Report*, page 19, [https://www.treasury.nsw.gov.au/sites/default/files/2021-05/2021\\_igr\\_ttrp\\_-\\_the\\_sensitivity\\_of\\_the\\_nsw\\_economic\\_and\\_fiscal\\_outlook\\_to\\_global\\_coal\\_demand\\_and\\_the\\_broader\\_energy\\_transition\\_for\\_the\\_2021\\_nsw\\_intergenerational\\_report.pdf](https://www.treasury.nsw.gov.au/sites/default/files/2021-05/2021_igr_ttrp_-_the_sensitivity_of_the_nsw_economic_and_fiscal_outlook_to_global_coal_demand_and_the_broader_energy_transition_for_the_2021_nsw_intergenerational_report.pdf)

<sup>7</sup> Denniss et al (2016) *A Coal Moratorium and the Australian Economy*, <https://australiainstitute.org.au/report/a-coal-moratorium-and-the-australian-economy/>

- Production at Glendell coming at the expense of other mines in NSW.
- Periods in care and maintenance.
- Early cessation.

All of these outcomes would significantly reduce the economic benefits of the project, as well as many of the costs. The lack of consideration of such scenarios is a major shortcoming of coal mine assessments in NSW. The CIE's review at least notes:

Coal price forecasts at the lower end of the range would place greater pressure on mine profitability and could result in mines halting production (either temporarily or permanently). The benefits estimate below do not account for this, although additional analysis is presented in the main body of the report to provide some guidance to decision makers. (page 1)

CIE find that at World Bank coal price forecasts "we may expect production to temporarily cease at Glendell in 2030", resulting in royalty payments reducing by around 50%. CIE do not calculate an NPV in relation to this scenario, however, as significant social and environmental costs are incurred in the initial years of the project it is likely that this would result in a negative NPV to the NSW community.



# Climate impacts

EY estimate the value of the direct emissions of the mine at \$62.3 million in present value terms. This is derived by applying a sale price of carbon credits of \$14.17 per tonne to the project's 10.4 million tonnes of CO<sub>2</sub> emissions and discounting this cost to a present value. This is problematic because:

- It represents an offset price rather than the actual damage cost of carbon emissions. Offset prices are heavily influenced by scheme design and market conditions.
- There are major integrity questions around offset schemes in Australia and internationally.<sup>8</sup> In other words, many offsets may not actually reduce emissions.
- Many emitters, including coal mines in NSW, emit far more than anticipated in planning documents.<sup>9</sup>
- The price is very low. Current European carbon offset prices are \$AUD116/t, while UK government guidance on social cost of carbon ranges from \$AUD216 - \$AUD652.<sup>10</sup> Academic estimates of social cost of carbon range from \$AUD235 - \$AUD1,069/t.<sup>11</sup>
  - In the USA, the Biden Administration has reinstated an Obama Government recommended value of social cost of carbon that centres on US\$51 (AUD\$68)/t. This was in response to the Trump administration's moves to exclude climate values from project assessment. The Biden executive order states that its range is an interim estimate, that will be updated in 2022.<sup>12</sup> It is widely expected that its

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<sup>8</sup> Long and McDonald (2022) *Insider blows whistle on Australia's greenhouse gas reduction schemes*, <https://www.abc.net.au/news/2022-03-24/insider-blows-whistle-on-greenhouse-gas-reduction-schemes/100933186>

<sup>9</sup> ACF (2022) *Emissions exposé: Australia's biggest polluters are emitting more than approved and getting away with it*, [https://www.acf.org.au/emissions\\_expose](https://www.acf.org.au/emissions_expose)

<sup>10</sup> EEX (2022) Futures Market: EEX EUA Future, <https://www.eex.com/en/market-data/environmental-markets/derivatives-market>; UK Government (2021) *Valuation of greenhouse gas emissions: for policy appraisal and evaluation*, <https://www.gov.uk/government/publications/valuing-greenhouse-gas-emissions-in-policy-appraisal/valuation-of-greenhouse-gas-emissions-for-policy-appraisal-and-evaluation>

<sup>11</sup> Ricke et al (2018) *Country-level social cost of carbon*, <https://www.nature.com/articles/s41558-018-0282-y>

<sup>12</sup> US Government (2021) Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990, [https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument\\_SocialCostofCarbonMethaneNitrousOxide.pdf](https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf)

estimates will increase,<sup>13</sup> given input from senior researchers.<sup>14</sup> Legal contests between US states and the Federal Government around social cost of carbon have delayed this process, with the Federal Government recently winning an important legal appeal.<sup>15</sup>

- The imminent update of US social cost of carbon figures is ignored by Umwelt in its response to the CIE review.<sup>16</sup>

More problematic than the low estimates used by EY in the Glendell assessment is their approach of then multiplying the cost to NSW by the state's share of global population, or 0.1%. This reduces the value in the cost benefit analysis to just \$70,000.

The logic applied here by EY is that the costs of climate change are global and as a small share of the global population, the cost to NSW is small. This approach is problematic because:

- Without prominent discussion in text, it serves to obscure that other jurisdictions bear a large cost of the project. NSW essentially free-rides on a cost borne by the rest of the world. This point should be made clear to decision makers and other readers.
- NSW and Australia have adopted climate policies, such as net zero emissions goals and the Paris Agreement, which require jurisdictions to take responsibility for their direct emissions and reduce them over time. In this context, any project that would increase emissions will come at the expense of emitting activities elsewhere in the economy. It therefore imposes an opportunity cost on NSW that needs to be included in a NSW-focused cost benefit analysis.
- Climate impacts are complex and this approach seems out of line with the Earth-systems approach that many climate scientists take in studying climate change. For example, part of the cost of a tonne of carbon emitted in NSW might be "borne" by Siberia through melting permafrost, which in turn could increase emissions and costs borne by NSW. While arithmetically appealing, the

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<sup>13</sup> Chemnick (2021) *Cost of Carbon Pollution Pegged at \$51 a Ton*,

<https://www.scientificamerican.com/article/cost-of-carbon-pollution-pegged-at-51-a-ton/>

<sup>14</sup> Rennert et al (2021) *The Social Cost of Carbon: Advances in Long-Term Probabilistic Projections of Population, GDP, Emissions, and Discount Rates*, [https://www.brookings.edu/wp-content/uploads/2021/09/Social-Cost-of-Carbon\\_Conf-Draft.pdf](https://www.brookings.edu/wp-content/uploads/2021/09/Social-Cost-of-Carbon_Conf-Draft.pdf)

<sup>15</sup> Phillips (2022) *Appellate court rules Biden can consider climate damage in policymaking*, <https://www.washingtonpost.com/climate-environment/2022/03/16/social-cost-of-carbon-ruling/>

<sup>16</sup> Umwelt (2021) *Response to the peer review of the Economic Impact Assessment of the Glendell Continued Operations Project*, See section 5.4, <https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=RFI-32759324%2120211220T063354.992%20GMT>

approach taken by EY is not supported by the inter-linked nature of climate systems.

The second point negates the claim by EY that their approach is in line with the relevant guidelines. As NSW policy is to reduce emissions in line with international efforts, the additional abatement that the Glendell Project will require will impose a cost on other parts of the NSW community.

The proponents quote a submission made by me in 2015 in support of their approach:

Further, in The Australia Institute Submission on Draft Guidelines (Campbell, 2015), the requirement to attribute climate change impacts to NSW only was directly raised with the clear and obvious conclusion from this submission being that the CBA is to be directly focussed on the impacts to NSW:

*Of particular concern in relation to project scope is the issue of greenhouse gas emissions. Under a NSW-focused cost benefit analysis, the cost to NSW of each tonne of carbon emitted is a small fraction of the cost of emissions at a global scale. We recommend keeping the scope of the assessment consistent, but requiring discussion of scope 1, 2 and 3 emissions in the text of the assessment.*<sup>17</sup>

In discussions with the Commission, David Holmes of Umwelt also claimed that my 2015 submission suggested EY's approach was "appropriate".<sup>18</sup>

This is incorrect on two fronts.

- First, the quote from my submission is taken out of context. Umwelt reproduce the final paragraph of a section discussing not greenhouse gas emissions but scope of analysis more broadly. At the time, a scope of assessment focussed on NSW seemed necessary as numerous assessments commissioned by mine-proponents included profits to overseas investors as part of NSW community benefits, heavily overstating the economic case for projects in NSW. Read in context, my submission supports a consistent scope of analysis, but warns

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<sup>17</sup> Umwelt (2021) *Response to the peer review of the Economic Impact Assessment of the Glendell Continued Operations Project*, <https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=RFI-32759324%2120211220T063354.992%20GMT>

<sup>18</sup> IPCN (2022) *Transcript of proceedings: Glendell Continued Operations Project, Applicant meeting*, page 29, [https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/transcripts-and-material/2022/glendell/220310\\_glendell\\_applicant-meeting-transcript.pdf](https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/transcripts-and-material/2022/glendell/220310_glendell_applicant-meeting-transcript.pdf)

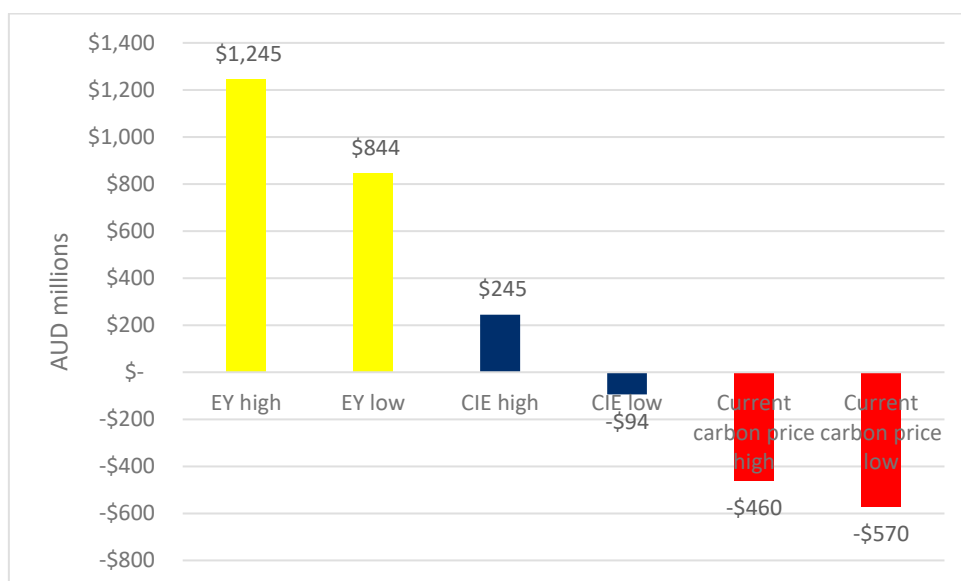
against inappropriate treatment of greenhouse gas emissions, exactly as taken by EY and Umwelt.

- Second, the 2015 guidelines drafting process predates the Paris Agreement and the broader adoption of carbon budgeting approaches by countries and other jurisdictions. As discussed above, with these policies in place there is a direct cost to NSW from an increase in Scope 1 and 2 emissions that needs to be included in a cost benefit analysis in full.

Returning to the CIE assessment, it applies a carbon that have increased substantially even since the CIE report was written. Applying the latest EU futures prices, starting at AUD\$116/t, to the project’s scope 1 and 2 emissions results in a present value climate cost of the project of \$772 million. This is in line with CIE Table 5.6, but for reasons that are not clear, the CIE use lower estimates in their NPV calculations.

Applying a climate cost in line with guidelines and current EU futures prices reduces the NPV of the project to between negative \$460 million and negative \$570 million, as shown in Figure 2 below:

**Figure 2: Economic value of Glendell Project to NSW, EY, CIE and CIE at current carbon price**



Sources: EY and CIE reports, EU carbon futures prices.

Figure 2 shows that far from the CIE assessment representing a “worst case scenario” as suggested by the Department, simply applying the current carbon prices in line with the relevant guidelines reduces the value of the project to negative. While this may seem a confronting change, this is simply the numerical reflection of the need to take climate emissions more seriously. The idea that a coal mine represents a net negative to society based on its emissions should not be controversial.

# Worker and supplier benefits

The EY assessment is inflated by an unorthodox approach to worker and supplier benefits that is rejected by most economists. The CIE report goes into these issues in depth and The Australia Institute largely supports the CIE's comments.

This issue was dealt with in the well-known Rocky Hill case in the NSW Land and Environment Court. The same economists were involved – Stephen Brown, then at Cadence Economics, now at EY and Nigel Rajaratnam at CIE. Their methodologies are the same in the Glendell assessment. Below are extracts from the judgement:

I find that any economic benefit to suppliers by achieving higher surpluses through supplying to the Project will be small, in the order of magnitude of Mr Rajaratnam's estimate \$2.86 million (in NPV terms). It may even be that there are no supplier benefits, as the DAE 2016 report concluded. Mr Brown's inflated figure of \$408.7 million (in NPV terms) is unreliable and unproven. Mr Brown's inputs and methodology are uncertain and not able to be tested or verified. A number of inputs seem plainly wrong. I accept and adopt the critical analysis of Mr Brown's estimates by Mr Rajaratnam and the Minister in cross-examination, summarised above.

...

I accept and adopt Mr Rajaratnam criticism of Mr Brown's approach and estimate of worker benefits. If there will be any worker benefits of the Project, they are likely to be small and in the order of magnitude of Mr Rajaratnam's figure of \$4.3 million (in NPV terms).

...

## Conclusion on the cost benefit analysis

I find that the economic benefits of the Project, assessed by Mr Brown in his CBA, are uncertain and in any event substantially overstated. The total direct benefits of the Project are likely to be much lower than he claimed, because less royalties and company income tax will be paid by GRL. The total direct benefits will be in the order of \$20 million (in NPV terms) less than those claimed by Mr Brown. The indirect benefits of the Project will be very small. I find that any worker benefits or supplier benefits will be small, perhaps even none, and nowhere near the inflated values assigned by Mr Brown. On Mr

Rajaratnam's estimates, the total indirect benefits would be in the order of \$122 million (in NPV terms) less than those claimed by Mr Brown.<sup>19</sup>

In the view of the Australia Institute, it is astonishing that after such a comprehensive and critical judgement Mr Brown is still using the same methodologies. Not only does he still use the same flawed approach, but he has been rewarded for doing so, with EY buying out his firm and making him a partner.

Unless the Commission can counter the reasoning of the Rocky Hill judgement, then it should confirm the flaws in the EY approach and require that the Department do the same in the future.

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<sup>19</sup> <https://www.caselaw.nsw.gov.au/decision/5c59012ce4b02a5a800be47f>

# Conclusion

The EY and CIE assessments both overstate the value of the Glendell project to NSW. In an age of decarbonisation it is clear that the state and the world do not need new coal mines.