Mining, Exploration and Geoscience
Department of Regional NSW

RDOC23/10417

27 February 2023

Clay Preshaw
Executive Director Energy and Resource Assessments
Department of Planning and Environment
4 Parramatta Square, 12 Darcy Street
Parramatta NSW 2124

ADVICE RESPONSE: Hunter Valley Operations (HVO) Continuation Project: HVO North Open Cut Coal Continuation Project (HVO North) (SSD-11826681) & HVO South Open Cut Coal Project (HVO South) (SSD-11826621) (treated/assessed as one project)

Dear Clay,

I refer to Department of Planning and Environment correspondence dated 30 January 2023 inviting the Department of Regional NSW's Mining, Exploration and Geoscience group (MEG) to provide comments on the HVO North and HVO South Projects (the Project) submitted by Hunter Valley Operations Pty Ltd (the Proponent).

MEG position

MEG considers the Project to be an efficient use of resources and that it will provide an appropriate return to the NSW Government.

MEG is satisfied that, should the operational outcomes be achieved, the proposed mine design and mining method submissions adequately recover resources and will provide an appropriate return to the state.

Executive summary

HV Operations Pty Ltd (HVO or the Proponent), has submitted applications to extend and optimise the existing multi-pit open cut coal mining complex. The Project would extend the current approved mining completion dates of 2025 and 2030 respectively, to the end of 2050 at HVO North and the end of 2045 at HVO South.

Table 1: MEG estimate of total royalties

Resource parameter	$m (2022 dollars)
Total royalties received	5223
Net Present Value (NPV) royalties (7% discount rate, real)	2442
Annual estimated royalties (average)	194 (approximate)

The Project will generate:

- On average 1,118 full-time equivalent (FTE) continuing jobs during operations from 2023 to 2050 and an additional 600 FTEs during the construction period.
- Generate before tax profits of $2.9 billion, based on total revenue of $19.7 billion and total costs of $16.8 billion, including $2.8 billion in capital investment and $1.6 billion in royalties in NPV terms (Proponent's estimate).
- Generate $4.8 billion in net benefits for NSW in Net Present Value (NPV) terms, comprising $2.1 billion in direct benefits and $2.7 billion in indirect benefits.

Table 2: life-of-project economic contribution

Estimated economic contribution parameter	Estimate $m (NPV, 2022 AUD)
Net economic valuation benefit - Net Present Value	
Direct benefits	2,122.5
Indirect benefits	2,739.6
Incremental indirect costs	13.7
Total	4,848.5
Indirect Worker benefit	
Local region	954.5
Other NSW	69.3
Total	1023.8
Indirect Supplier benefit	
Local region	760.3
Other NSW	955.5
Total	1715.8

MEG considers the Project will provide an appropriate return to the NSW Government

The HVO North and HVO South Projects are considered to be an efficient use of resources. If the Project does not proceed the economic and social benefits outlined above will not be realised.

Project strategic considerations

Resource and economic context

The Project will contribute to meeting the ongoing demand for high-quality thermal and semi-soft coal throughout a period in which there is expected to be a gradual decline of coal mining in the Hunter region, giving local communities time to adapt. The Project aligns with strategic direction and policy objectives at a local, state and national level.

The Project has been developed to avoid and minimise impacts where reasonable and feasible to do so, and the design and proposed management measures are based on comprehensive understanding of the environmental conditions in and around the Project area, gained over a long history of mining at HVO.

The Projects aims to optimise resource recovery by mining through previously mined areas, mining to the extent of existing mining tenements and by extracting coal from lower seams at HVO North.

Economic benefits of the Project

The Proponent states that the project will:

- Generate $4.8 billion in net benefits for NSW in Net Present Value (NPV)[1] terms, comprising $2.1 billion in direct benefits and $2.7 billion in indirect benefits.
- Extend the life of the mine from 2023 to 2050.
- Produce 437.6 million tonnes of thermal coal and 59.7 million tonnes of metallurgical coal.
- Generate before tax profits of $2.9 billion, based on total revenue of $19.7 billion and total costs of $16.8 billion, including $2.8 billion in capital investment.
- $1.6 billion in royalties in NPV terms (Proponent's estimate).

Royalty return to the state

Total royalties estimate

Using the below assumptions and parameters, MEG has calculated that the State will receive:

Resource parameter	$m (2022 dollars)
Total royalties received	5223
Net Present Value (NPV) royalties (7% discount rate, real)	2442
Annual estimated royalties (average)	194 (approximate)

Assumptions

- Coal sales of 497.3 million tonnes; 88 per cent thermal coal and 12 per cent metallurgical coal.
- Average thermal coal price of $120 a tonne and average metallurgical coal price of $217 a tonne, reflecting the higher prices observed since the Russian-Ukraine war.
- USD/AUD exchange rate of 0.75.
- Deductions of $3.50 a tonne and royalty rate of 8.2 per cent.

Resource Assessment

The resource utilisation, recovery and economic benefits assessment undertaken by MEG is addressed in Attachment A.

The Proponent has completed resource and reserve estimations for the Project in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC code) produced by the Australasian Joint Ore Reserves Committee. The JORC Code is an industry-standard professional code of practice that sets minimum standards for public reporting of mineral exploration results, mineral resources and ore reserves. Reserves are the economically

[1] Net Present Value has been estimated using a 7 per cent discount rate over the period 2023 to 2050, and is expressed in 2022 AUD

mineable portion of a resource. A JORC compliant reserves report assists in independently assessing the commercial viability of the Project and the proposed mining method.

In view of the opportunities and constraints outlined in the Proponent's Project and based on the information currently available, MEG considers the Project is consistent with the objects of the *Mining Act 1992*.

Furthermore, in relation to clause 2.21 of the State Environmental Planning Policy (Resources and Energy) 2021, the Project represents an efficient development and utilisation of minerals resources which will foster significant social and economic benefits.

MEG is satisfied that, should the operational outcomes be achieved, the proposed mine design and mining method submissions adequately recover resources and will provide an appropriate return to the state.

Application of section 380AA of the Mining Act 1992 – restrictions on planning applications for coal mining and titles required to undertake mining

The Proponent must ensure that it holds the appropriate titles as required for making planning applications for coal as relating to the Project which satisfies the requirements of section 380AA.

Section 380AA states:

> *(1) An application for development consent, or for the modification of a development consent, to mine for coal cannot be made or determined unless (at the time it is made or determined) the applicant is the holder of an authority that is in force in respect of coal and the land where mining for coal is proposed to be carried out, or the applicant has the written consent of the holder of such an authority to make the application.*
>
> *(2) For that purpose, an authority in respect of coal need not be in force in respect of the whole of the land to which the application for development consent relates but must be in force for the land where mining for coal is proposed.*

The requirement for a mining authority and royalty liability

The requirement for a mining lease

As coal is a prescribed mineral under the Act, the Proponent is required to hold appropriate mining titles allowing for mineral extraction, such as a mining lease, to undertake mining.

For ancillary mining activities as, in so far as the ancillary activities are to be carried out in connection with and in the immediate vicinity of a mining lease in respect of a mineral, the Proponent is required to hold a Mining Lease for ancillary mining activities or an 'off title' designated ancillary mining activity as defined by clause 7 of the Mining Regulation 2016 (the Regulation).

Where a proposal includes Crown Land the Proponent is required to comply with the *Commonwealth Native Title Act 1993* and undertake the right to negotiate process for the Crown Lands within the current exploration licence area(s) if proof of extinguishment cannot be determined.

Royalty Liability

The holder of a mining lease is also liable to pay a royalty for both publicly and privately-owned minerals (refer to section 282-285 of the Act).

Application of section 65 of the *Mining Act 1992* – development consents under the *Environmental Planning and Assessment Act 1979*

A development application under the *Environmental Planning and Assessment Act 1979* must be approved before a mining lease can be granted. A mining lease will only be granted for activities specified in the development consent.

Section 65 states:

> *The Minister must not grant a mining lease over land if development consent is required for activities to be carried out under the lease unless an appropriate development consent is in force in respect of the carrying out of those activities on the land.*

Biodiversity offset assessment

MEG requests that the Proponent consider potential resource sterilisation should any future biodiversity offset areas be considered. The Proponent must consult with MEG and any holders of existing mining or exploration authorities that could be potentially affected by the proposed creation of any such biodiversity offsets, prior to creation occurring. This will ensure there is no consequent reduction in access to prospective land for mineral exploration or potential for the sterilisation of mineral and extractive resources.

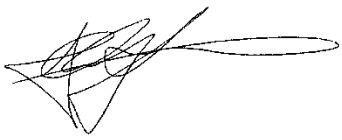
Summary of review

MEG considers that should the Project be approved, efficient and optimised resource outcomes can be achieved.

MEG requests that it be provided with an opportunity to review the draft conditions of approval before finalisation and any granting of development consent.

For enquiries and further information on this matter, please contact the Industry Advisory and Mining Concierge team on 02 4063 6860 or mining.concierge@regional.nsw.gov.au

Yours sincerely,



Tony Linnane
Executive Director Strategy, Performance and Industry Development
Mining, Exploration and Geoscience

Encl.
Attachment A – Hunter Valley Operations North & South Continuation Project – Resource & Economic Assessment (RDOC23/10416)
Attachment B - RR Response - Hunter Valley Operations North & South Continuation Project (RDOC23/56113)

Attachment A

Mining, Exploration and Geoscience
Department of Regional NSW

Hunter Valley Operations Continuation Project:

- HVO North Open Cut Coal Continuation Project (SSD-11826681)
- HVO South Open Cut Coal Continuation Project (SSD-11826621)

Resource & Economic Assessment

February 2023

Published by the Department of Regional NSW

nsw.gov.au/RegionalNSW

Title: Hunter Valley Operations Continuation Project

Subtitle: Resource & Economic Assessment

File reference: RDOC23/10416

More information

Industry Advisory & Mining Concierge Unit, Industry Development – Mining, Exploration & Geoscience

mining.concierge@regional.nsw.gov.au or 02 4063 6534

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Executive summary

Determination

The Department of Regional NSW - Mining, Exploration and Geoscience (MEG) has reviewed the Hunter Valley Operations Continuation Project (HVOCP or the Project), made up of two separate State Significant Development applications, which have been treated as one combined project for the purposes of this assessment:

- HVO North Open Cut Coal Continuation Project (HVO North) (SSD-11826681)
- HVO South Open Cut Coal Continuation Project (HVO South) (SSD-11826621)

MEG considers that the Project will provide an appropriate return to the NSW Government including:

- Around $5.2 billion in total royalties (current dollars).

Parameter	$m (2022 dollars)
Total royalties received	5,223
Net Present Value (NPV) royalties (7% discount rate; 2025 to 2050)	2,422
Annual estimated royalties (average)	194 (Approximate)

In addition, the Project will generate:

- $4.8 billion in Net Present Value (NPV) terms of total net production benefits to the NSW economy.
- Project capital investment of about $2.8 billion.
- On average 1,118 full time equivalent (FTE) jobs during operations from end of 2023 to 2050.
- Construction activities associated with the Project is estimated to create approximately 600 temporary employment opportunities over an approximate 5-year period.
- The Project is projected to provide significant positive economy-wide impacts to both the local region of Lower Hunter and to NSW.

The Project is considered to be an efficient use of resources.

If the Project does not proceed the economic benefits outlined above will not be realised.

The Project

Hunter Valley Operations – HV Operations Pty Ltd (HVO or the Proponent), has submitted applications to extend and optimise the existing multi-pit cut coal mining complex, comprising of two mine sites separated by the Hunter River; HVO North and HVO South.

The Project would extend the current approved mining completion dates of 2025 and 2030 respectively, to the end of 2050 at HVO North and to the end of 2045 at HVO South.

The primary objective of the Project is to efficiently and economically recover an additional 684 Million tonnes (Mt) of Run-Of-Mine (ROM) (approximately) coal resources over approximately 25 years and is predominately within existing and approved project area across the HVO complex while maximising the utilisation of existing infrastructure.

The Project would support would optimise resource recovery from the existing operation, predominantly by extracting coal from deeper seams at HVO North. At HVO south, an extension to the life of the mine is proposed to facilitate improved mine sequencing outcomes.

The Project would:

- Extend the life of mine from 2025 to 2050 HVO North.
- Extend the life of mine from 2030 to 2045 HVO South.
- Extract an additional 684 Mt of ROM coal.
- Produce an additional 497 Mt of product coal.

The Project would involve enabling the continuation of an existing mining complex in a long-established coal mining and power generation region, maximise resource recovery, minimise further disturbance and provide ongoing employment opportunities for the existing 1,118 full time equivalent (FTE) workforce well beyond the life of the current planning approvals under which the complex currently operates.

Introduction

State significant development is regulated under the *Environmental Planning and Assessment Act 1979*, which requires a Proponent to apply to the Department of Planning, Industry and Environment for development consent, supported by an Environmental Impact Assessment (EIS).

This Resource & Economic Assessment (REA) conducted for the Hunter Valley Operations Continuation Project by MEG assessed:

- The social and economic benefits to NSW including royalties, capital investment, revenues and jobs.
- The resource/reserve estimates stated in the Proponent's EIS.
- If the Proposal is an efficient development of the resource, that resource recovery is optimised and waste minimised.
- If the Project will provide an appropriate return to NSW.

The objects of the *Mining Act 1992* are to encourage and facilitate the discovery and efficient development of mineral resources in NSW.

Of particular relevance to this REA are Section 3A Objects:

- To recognise and foster the significant social and economic benefits to NSW that result from the efficient development of mineral resources.
- To ensure an appropriate return to the State from mineral resources.

The relevant section of the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 is Part 3, Clause 15: Resource Recovery requires that resource recovery is efficient, optimised and minimises waste.

Project overview

Current mine history and ownership

The existing HVO Complex is situated in the Hunter Valley approximately 24 kilometres northwest of Singleton, compromising of two mine sites separated by the Hunter River, HVO North and HVO South. HVO Joint Venture between Yancoal (51%) and Glencore 49%,

The HVO complex produces high quality thermal and semi-soft coking coal using open cut mining methods suitable for use in international and domestic markets.

HVO North operates under Development Consent DA 450-10-2003, which allows extraction of up to 22 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal until 12 June 2025. HVO South operates under Project Approval (PA) 06_0261, which allows for extraction of up to 20 Mtpa of ROM coal until 24 March 2030.

The Hunter Valley Operations (HVO) Continuation Project

The Project involves a life-of-mine extension to existing operations and would extend the current approved mining completion dates of 2025 and 2030 respectively, to the end of 2050 at HVO North and the end of 2045 at HVO South.

HVO indicates that the Project would result in an additional 684 Mt ROM coal recovery.

The Project, if approved, would support the ongoing employment opportunities of the existing HVO Operational workforce of approximately 1,118 FTE workforce. The construction activities associated with the Project are estimated to create approximately 600 temporary employment opportunities over an approximate 5-year period.

MEG notes that this REA has been undertaken in accordance with commercial-in-confidence resource and mine schedule data supplied by the Proponent.

The Project, if approved, would support the following activities and development:

- An extension of life of mine until the end of 2050.
- Construction of infrastructure updates including Lemington Road realignment and relocation of transmission and telecommunication lines.
- Construction of haul road from HVPP to the Ravensworth ROM pad, to enable the transport of ROM coal from HVO North to Ravensworth operations.
- Progressive rehabilitation activities as mining progresses with final rehabilitation activities to be completed following cessation of mining operations in 2050.
- Coal handing improvements, extension of the HVLP product coal stockpile, or the construction of a new product coal stockpile and train loading facilities at the Newdell Load Point.
- Development of clean water drains and diversions, levees and dams required to support mining activities.
- An average operational workforce of approximately 1,118 FTE, increasing to 1,524 FTE (in 2040).

- Measures to mitigate social impacts or enhance social benefits of the project/modification.
- Ongoing exploration activities; and other associated infrastructure, plant, equipment and activities.
- Existing infrastructure relocations to facilitate mining extensions, for example, local roads, powerlines and water pipelines.
- Construction and operation of new ancillary infrastructure in support of mining.

Size and quality of the resource

HVO proposes to continue mining the coal seams of the lower Jerry Plains and Vane subgroups of the Whittingham Coal Measures. Coal seams amenable to open cut mining occur include the Whybrow, Redbank Creek, Wambo, Whynot, Blakefield, Glen Munro, Woodlands Hill, Arrowfield, Bowfield, Warkworth, Mt Arthur, Piercefield, Vaux, Broonie, Bayswater, Lemington, Pikes Gully, Arties, Liddell, Barrett, and Hebden seams. Currently the Broonie to Barrett seams are mined at HVO North and the Bowfield to Bayswater at HVO South. Based on the LOM, between 2025 to 2050, the Warkworth to Barrett seams will be mined in HVO North and the Blakefield to Bayswater in HVO South.

Coal seams have an average dip of less than 4 degrees. The northern pits are located on the eastern flank of the Muswellbrook Anticline with seam dips 2 – 3 degrees north-eastwards towards the Bayswater Syncline. The Bayswater Syncline trends north-south 5 to 8 kilometres to the east intersecting the southern pits. Localised steep bedding dips occur near major faulting. The weathering profile ranges between 5 to 45 metres with an average of 14 metres. There are several known major faults, igneous dykes and a paleochannel known to exist within HVO.

The Project aims to optimise resource recovery by mining through previously mined areas, mining to the extent of existing mining tenements and by extracting coal from lower seams at HVO North.

The Proponent has completed coal resource and reserve estimation for the Project in accordance with the Australasian Code for Reporting Exploration results, Mineral Resources and Ore Reserves (JORC). The last JORC Statement for HVO was completed as of the 31st of December 2021. The JORC is an industry-standard professional code of practice that sets minimum standards for public reporting of mineral exploration results, mineral resources and ore reserves.

The Proponent has indicated that if the project doesn't receive approval HVO mining operations would likely cease at the expiry of the HVO North consent in June 2025 as there is insufficient time to construct the Lemington Coal Handling and Preparation Plant (CHPP) (and long rail loop) to process HVO South coal.

In the case that HVO North and South continue mining past the current end date in June 2025, the Project will provide an additional 684 Mt of ROM coal (Figure 1), which will produce around 497 Mt of product coal (average yield of 72.8%).

- HVO North will provide about 498 Mt of additional ROM coal which will produce around 355Mt of product coal (average yield of 71.4%).
- The HVO South will provide about 186 Mt of additional ROM coal which will produce around 142 Mt of product coal (average yield of 76.2%).

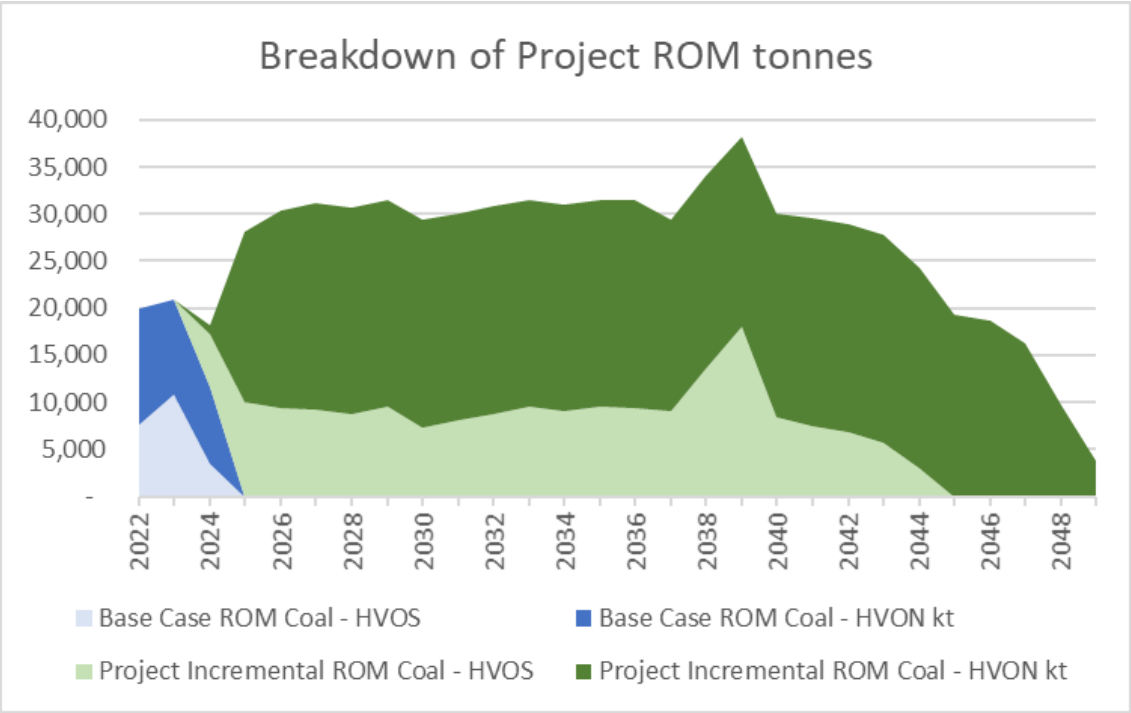


Figure 1 - Breakdown of Project ROM tonnes by year

The Project plans to produce two products (product tonnes reported at 10% as received (ar) moisture):

- Semi Soft Coking Coal Specification (~ 9.7% ash at 2.5% moisture ar)
- Thermal Coal Specification (~ 13.7% ash at 2.5% moisture ar)

Based on the LOM (2023- 2050) the product split is 88 per cent thermal and 12 per cent semisoft metallurgical coal. The Proponent can modify these product specifications when needed to fit their customers' needs. The project is estimated to produce 59 Mt of semi soft coking coal and 438 Mt of thermal coal. A review of coal quality data confirms the proposed product quality, target export market split, and yield are achievable.

Currently HVO supplies 100 per cent product to export market, predominantly in Asia.

Coal qualities in the Project area are comparable with coal currently produced from the current operation. ROM coal from HVO North and HVO South is currently processed at the Hunter Valley CHPP and/or the Howick CHPP both located at HVO North. The proposed Project at HVO North includes CHPP and MIA upgrades. As is currently occurring, product coal would be predominantly transported via overland conveyor to the HV load point (LP) or Newdell Load Point or via truck to the Ravensworth Coal Terminal, and then via rail to the Port of Newcastle for export.

Resource recovery

The Proponent has assessed several mine designs and determined that the selected mine designs are the most appropriate. Many factors constrain a mine plan and extraction methodology and therefore the resource recovery of the Project. These include geological features (structure, strip ratio, coal quality and geotechnical), environmental constraints (natural waterways, cultural heritage sites, Biophysical Strategic Agricultural Land (BSAL) areas, listed vegetation communities, sensitive areas, noise, visual and air quality), physical constraints (existing infrastructure, surrounding existing operations and land ownership), social factors and commercial viability.

Continuing to mine the coal resources in the Projects area via open cut methods will optimise the recovery of coal in both Projects. The Proponent plans to extend HVO South from 2030 to 2045 by reducing the extraction rate from 20 Mtpa to 18, no longer mining South Lemington 1 and 2 Pits and Riverview South Extension and constructing the Lemington CHPP and long rail loop (not retaining approval for the conveyor and short rail loop). Both proposed consents include upgrades to tailings and water management; and amendments to approved final landform.

The proposed development consent boundary for HVO North is similar to the existing consent boundary with some changes to allow for infrastructure relocation and the additional mining footprint between the Mitchell and Carrington Pits. The HVO South development consent boundary will remain largely the same. Other changes proposed to the existing HVO North consent are the Lemington Road alignment (new Hunter River crossing and movement of transmission and telecommunication lines). The existing ridgeline between HVO North and the township of Jerrys Plains will be preserved. Changes to the consent boundary at HVO South relate to alignment with cadastral boundaries and exclusion of the Warkworth Northern Biodiversity Offset area. There is no proposed increase in height of in pit and out of pit emplacement areas.

After examination of the Proponent's EIS, MEG considers the Project an efficient development of coal resources that provides an appropriate return to the State, within the mine footprint, giving due consideration to the constraints of the location.

Economic benefits of the resource

The Proponent states that the project will:

- Generate $4.8 billion in net benefits for NSW in NPV[1] terms, comprising $2.1 billion in direct benefits and $2.7 billion in indirect benefits.
- Extend the life of the mine from 2023 to 2050.
- Produce 437.6 Mt of thermal coal and 59.7 Mt of metallurgical coal.
- Generate before tax profits of $2.9 billion, based on total revenue of $19.7 billion and total costs of $16.8 billion, including:
  - $2.8 billion in capital investment
  - $1.6 billion in royalties (in NPV terms)
- Provide an annual average of 1,118 full-time equivalent jobs.

The assessment was completed on 14 December 2022 and indicates that the project would receive thermal coal prices of $94 a tonne and metallurgical coal prices of $106 a tonne. These prices appear low – royalty data indicates that HVO received prices nearly three times higher in 2021-22 and Consensus Economics' January 2023 forecasts indicate that long-term real thermal and metallurgical coal prices of $120 and $217 a tonne respectively should be expected.

The Proponent's sensitivity analysis indicates that higher coal prices would increase NSW's direct net benefits from the project from $2.1 billion to nearly $3.1 billion because royalties and company tax would be higher. Higher coal prices would not change the indirect benefits of the project.

However, higher coal prices would result in much higher company profits; for example, should the project sell its coal at the prices forecast by Consensus Economics in January 2023 instead of the prices used in the Proponent's central case, total revenue would be nearly $18 billion dollars higher ($12 billion in NPV terms).

Table 1: life-of-project economic contribution

Parameter	$m (NPV, 2022 AUD)
Net economic valuation benefit - Net Present Value	
Direct benefits	2,122.5
Indirect benefits	2,739.6
Incremental indirect costs	13.7
Total	4,848.5
Indirect Worker benefit	
Local region	954.5
Other NSW	69.3
Total	1023.8
Indirect Supplier benefit	
Local region	760.3

[1] Net Present Value has been estimated using a 7 per cent discount rate over the period 2023 to 2050, and is expressed in 2022 AUD

Other NSW	955.5
Total	1715.8

Royalty Assumptions

- Coal sales of 497.3 Mt, 88 per cent thermal coal and 12 per cent metallurgical coal.
- Average thermal coal price of $120 a tonne and average metallurgical coal price of $217 a tonne, reflecting the higher prices observed since the Russian-Ukraine war.
- USD/AUD exchange rate of 0.75.
- Deductions of $3.50 a tonne and royalty rate of 8.2 per cent.

Total royalties estimate

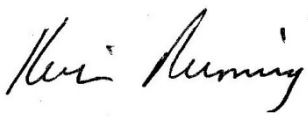
Using the above assumptions and parameters, MEG has calculated that the State will receive:

Parameter	$m (2022 dollars)
Total royalties received	5,223
Net Present Value (NPV) royalties (7% discount rate; 2025 to 2050)	2,422
Annual estimated royalties (average)	194 (Approximate)

Departmental Assessment

Assessed by	Unit	Branch
Assessing Officer: Toni Dick Geologist	Resource Assessment	Geological Survey of NSW
Assessing Officer: Anton Wood Manager Resource Economics	Resource Economics	Strategy, Performance & Industry Development
Assessing Officer: Adam W. Banister Senior Advisor	Industry Development	Strategy Performance & Industry Development

Approvals

Approved by	Signature	Date
Approving Officer: Dr Kevin Ruming Director Assessment & Advice Geological Survey of NSW		23/02/2023
Approving Officer: Julie Robertson Director Strategy & Performance Strategy Performance and Industry Development	Approved in CM9	15/02/2023
Approving Officer: Yvette Lloyd Director Industry Development Strategy Performance and Industry Development	Approved in CM9	24/02/2023
Approving Officer: Tony Linnane Executive Director Strategy, Performance & Industry Development	Approved in CM9	27/02/2023

Attachment B

Resources Regulator
Department of Regional NSW

20th February 2023

Joe Fittell
Department of Planning
Joe.Fittell@planning.nsw.gov.au

Via: Major Projects Portal

Dear Joe,

I refer to the Hunter Valley Operations North & South Continuation Project EIS Report, submitted to the Resources Regulator on 30th January 2023 (SSD-11826681 & SSD-11826621).

The Resources Regulator has reviewed the information and requires further clarification as outlined below.

1. *Rehabilitation objectives specific to Tailings Storage Facilities (TSF)*

Clarification that all TSFs will have capping and a final landform that will meet industry-accepted guidelines for TSF closure, namely ANCOLD and the Global tailings Standard. In particular, a commitment is required that any surface water management structures (including spillways/drop structures) for TSFs in the final landform will be designed to the engineering requirements specified by these guidelines.

Clarification that the capping design for all TSFs will support the growth of trees associated with native vegetation final land use either overlaying or adjacent to the TSFs. If capping design cannot accommodate tree growth, further information is required on how this is managed as a post-closure maintenance activity.

2. *Landform design and erosion of areas outside the 'proposed mining area'*

The Regulator has previously been advised that the known erosion resulting from poor landform design at the South-east TSF (also referred to as the East TSF) would be addressed by this area being removed and the final landform re-profiled as part of the continuation project. It would appear that this area is now outside the 'proposed mining area' for the project.

Further information is required on how the known erosion issues and landform design for the South-east TSF will be addressed by the project and if the target erosion rate specified in the project at 2 t/ ha/ year (peak 5 t/ha/year) can be achieved for the final landform over these areas.

3. *Availability of tailings capping material*

Further information is required on how adequate capping material will be made available for the Cumnock 3 Void TSF. This issue was previously raised with Ravensworth Operations in 2020 as part of the Tailings Targeted Assessment Program undertaken at that time. It was understood at the time that capping material is required to be sourced from HVO and there remain uncertainties regarding how the substantial quantity of material will be transported from HVO to Ravensworth - Cumnock 3.

4. *Slope stability*

It is noted that slope stability of the rehabilitated landform has been assessed by a geotechnical engineer and that an acceptable Factor of Safety (FoS) will be achieved as part of the completion criteria but the FoS to be utilised is not provided. Please provide the FoS to be used for final landform design for closure and a justification for its use.

It is also noted that the options for use of pit-lakes in void may potentially include pumped hydro. Further information is required on whether the slope stability design will take into account the potential for rapid draw-down of pit-lake in the event of a pumped hydro scheme or other similar post mining land use that requires pumping of significant quantities of water.

Our Mine safety team have reviewed the EIS Report and have also made the following comments:

- New or altered Tailings Storage Facilities will require the submission of a High-Risk Activity notification at the appropriate time before these works are carried out.
- Given the increasing depth of workings (to the base of the Barrett Seam in HVO North) it would be expected that appropriate monitoring for stability of both high and low walls would be included in the Ground or Strata Failure Principal Hazard Management Plan to ensure that actual results met the assumptions made in the geotechnical stability studies that were undertaken.

LIMITATIONS

It should be noted that the Resources Regulator does not provide any endorsement of the proposed rehabilitation methodologies presented in the plans provided. Under the conditions of a mining authorisation granted under the *Mining Act 1992*, the Resources Regulator requires the holder to adopt a risk-based approach to achieving the required rehabilitation outcomes.

The applicability of the controls to achieve effective and sustainable rehabilitation is to be determined based on site-specific risk assessments conducted by the authorisation holder. An authorisation holder may also be directed by the Resources Regulator to implement further risk control measures required to achieve effective rehabilitation outcomes during the life of the mine.

REGULATORY REQUIREMENTS IF APPROVED

The proponent will be required to comply with rehabilitation requirements under the mining authorisations prior to the commencement of the works associated with the proposal.

The Resources Regulator may undertake assessments of the mine operators' proposed mining activities under the *Work Health and Safety (Mines and Petroleum Sites) Act 2013* and Regulation as well as other WHS regulatory obligations.

BACKGROUND

The Mining Act Inspectorate within the Resources Regulator undertake risk-based compliance and enforcement activities in relation to obligations under the *Mining Act 1992*. This includes

undertaking assessment and compliance activities in relation to mine rehabilitation activities and determination of security deposits. To ensure consistency, the Regulator requests the opportunity to review a copy of the draft development consent prior to any approval of the project.

The Mine Safety Inspectorate within the Resources Regulator is responsible for ensuring the mine operators' compliance with the Work Health and Safety (WHS) legislation, in particular the effective management of risks associated with the principal hazards as specified in the *Work Health and Safety (Mines and Petroleum Sites) Regulation 2014*.

CONTACT
Should you require any further information or clarification, please contact the Regulator on 1300 814 609 (Press Option 2 Press Option 5) or email nswresourcesregulator@service-now.com.

Yours sincerely,

Peter Day

Executive Director

Resources Regulator