Regional NSW

MINUTE
State Significant Development Undertake a Resource & Economic Assessment

Due Date	12 October 2021
Project Reference	SF21/118447
REA Reference	DOC21/837530

Overview

The process is designed to validate the resource/reserve estimates stated in a proponent's Environmental Impact Statement. It will also confirm if the production schedule and product mix by market segment is considered feasible.

The advice is scalable, dependent on the project type and size. The most comprehensive assessment will be undertaken for:

- Greenfield projects
- Petroleum projects
- Extension projects, that meet any of the below criteria:
    - Nominal royalty value >$10M over the life of the project
    - Capex >$10M
    - Production increase >1M tonnes/year (for coal only)
    - Significant impact to other industries
    - Strategically important for the region

Resource and Economic Assessment

MEG will provide strategic comment on (where appropriate):

- Proximity to existing infrastructure.
- The relationship of the resource to existing mines or extractive industry (geographic or strategic).
- The dependency of other industries on the resource project.
- Regional output/business turnover.
- Total value-add to region/state.

MEG will provide project-specific comment on (where appropriate):

- The size, quality, and availability of the resource.
- Proponent experience and status.
- Independent analysis of royalty potential over the life of the project (sensitivity analysis +/- 25%).
- Independent estimate of the export income potential.
- Sale/destination and flow on market implications. Flow on effects to supply/demand from product added to the market. e.g. domestic market reshuffle, the potential implication for royalties depending on supply and demand.
- Social/Economic impact e.g. jobs.

Regional NSW

Mining, Exploration & Geoscience

Newstan Mine Extension Project (SSD-10333)

Resource & Economic Assessment

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Contents

Executive summary

Determination

Mining, Exploration and Geoscience (MEG) assessed the Newstan Mine Extension Project (SSD-10333) (the Project) and considers that the Project will provide an appropriate return to the NSW Government including:

Parameter	$m (2021 dollars)
Total royalties received	136
Net Present Value (NPV) royalties (7% discount rate, real)	73
Annual estimated royalties (average)	11 (Approximate)

In addition, The Project will generate:

- on average 320 full-time equivalent (FTE) continuing jobs during operations from 2024 to 2039. The mine would also employ an additional 50 FTEs during the construction period and an additional 1280 indirect jobs
- a value of around $2 billion in current dollars, with the NPV of this revenue stream at around $1 billion
- capital investment of about $130 million

Newstan Extension Project - Estimated economic contribution over project life

Parameter	$m (Estimated)
Net economic valuation benefit	$74.3 (NPV)
Regional benefit (payroll)	$15
Annual non-labour expenditure (regional)	$53
Annual regional sum spent in local economy (LGA)	$15
Total annual expenditure in NSW	$82

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

If approved, the additional export income from the Project would contribute to the around A$14.5 billion (2020-2021 financial year total) of coal exports annually from NSW. If the Project does not proceed the economic benefits outlined above will not be realised.

The Project

Centennial Newstan Pty Ltd (Centennial Newstan or the Proponent), has submitted an application to extend and optimise the existing Newstan Operation. Newstan was placed on care and maintenance in April 2009 and again in August 2014 due to market forces. The Project would include the extraction of approximately 25.82 Million Tonnes (Mt) of Run-of-Mine (ROM) coal over a fifteen-year period. The Project would be supported by the use and augmentation of the existing Newstan Colliery infrastructure and the nearby Awaba Colliery surface facilities.

The Project would support the extraction of coal by working within the existing underground mining precinct that has been established for over 130 years by using board and pillar mining with continuous miner methods to limit mine subsidence.

The Project would:

- provide production over a 15 year period from 2024 to 2039
- extract 25.82 Mt of ROM coal
- extract 21.17 Mt of product coal

The Project would involve the continued use of existing and approved infrastructure at the Newstan Colliery, Awaba Colliery, extracted coal will be transported to the Northern Coal Logistics Project for handling. This element is approved under SSD-5145 and will not be part of this Project.

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 Newstan Mine Extension Project (SSD-10333) 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 Proposal 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 Centennial Newstan Operation is situated in the Hunter Coalfield of the Sydney Basin, approximately 25 kilometres southwest of Newcastle. Mining at Newstan Colliery began in 1887. The operation was placed on care and maintenance in April 2009 and again in August 2014, due to market forces. The Project interrelates with three existing approved Centennial Coal operations, Newstan Colliery, Awaba Colliery and the Northern Coal Logistics Project.

The Project will produce a new semi-soft coking coal product and a thermal coal product using underground mining methods and is seeking approval for an operational capacity of up to 4 Mtpa of ROM coal.

Major components include:

- underground extension
- utilisation of Newstan Colliery and Awaba Colliery Surface Site infrastructure
- transportation via the existing men and materials drift at Newstan Colliery
- gas captured and transferred to gas flaring facility at Awaba Colliery
- water extraction via the existing Fassifern Pump Station
- clearing of 0.35ha of remnant vegetation for new ancillary services that could not be sited on pre-disturbed areas.

The Project proposes the ongoing use and upgrade of the surface infrastructure at Awaba Colliery Surface Site in addition to the construction and operation of a number of new facilities. Centennial Newstan proposes to make use of the existing disturbed areas for the siting of new infrastructure as part of the project. The Northern Coal Logistics Project (the current handling, processing and transport facilities for Mandalong Mine) will handle the coal once it reaches the surface which will then be distributed by rail to the Port of Newcastle and Eraring Power Station. This element is already approved under SSD-5145 and will not be assessed as part of this Project.

Underground mining, the handling and processing of ROM coal at the Northern Coal Logistics Projects, and the rail transport of coal products is undertaken 24 hours per day, seven days per week.

The Newstan Mine Extension Project

The Project seeks to extend underground mining operations at Newstan to the south that would enable 15 years of mining, that would extract coal until 2039. The area covers approximately 1,153 hectares and is located under undulating, unpopulated bushland which is predominately crown land. The area is bounded by Eraring Power Station to the south, the M1 Pacific Motorway to the west and the Main Northern Railway traverses the area in a north-south direction.

Centennial Newstan indicates that the Project would produce a total of 25.82 Mt ROM coal recovery within the West Borehole seam.

The Project, if approved, would support the employment of about 50 FTE during construction with an operational workforce of approximately 320 FTE personnel.

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:

- further extraction from the Newstan mining leases by mining of additional coal reserves
- construction of conservative protection barriers to minimise subsidence impact risks to the Main Northern Railway, Eraring Power Station and Eraring Ash Dam and sensitive surface water features such Stockyard Creek, Kilaben Creek, and Stony Creek
- progressive rehabilitation of minor surface disturbances, removing of all underground plant and equipment at the completion of mining, filling and sealing mine access and removing or finding a beneficial reuse for mine infrastructure
- construction and operation of new ancillary infrastructure in support of mining
- provide a life of mine operations to 2039
- an average operational workforce of approximately 320 people
- ongoing exploration activities; and other associated infrastructure, plant, equipment and activities.
- produce a semi-soft coking coal product for the export market and a thermal coal product for both the domestic and export markets
- help to ensure ongoing security of thermal coal supply for domestic electricity generation at the adjacent Eraring Power Station through the beneficial use of existing private infrastructure
- provide tangible social and economic benefits to the local community and positive flow-on effects to regional and State economies through additional wages and royalties
- design, construct, operate and close the project in an ecologically sustainable manner
- minimise the project's impacts on sensitive built and natural environmental features
- optimise resource recovery. The coal resource is a public asset owned by the State of NSW and it is therefore in the public interest to optimise resource recovery
- regularise the development consents for Newstan and Awaba Collieries into a single contemporary development consent, providing streamlined and enhanced environmental management

Size and quality of the resource

Centennial Newstan is seeking approval for the continuation of underground mining the West Borehole seam of the Newcastle Coal Measures. The strata dips gently at approximately 1 to 2 degrees to the southwest. The overburden depth to the West Borehole Seam ranges from approximately 140 metres in the northwest of the proposed mining area to approximately 330 metres in the southeast. The coalesced West Borehole seam ranges in thickness from 3.5 metres to 5.5 metres, with average raw ash content of 29.6 percent.

In 2019, the Proponent completed coal resource and reserve estimation for the project in accordance with the Australasian Code for Reporting Exploration results, Mineral Resources and Ore Reserves (the JORC Code). 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.

MEG has verified that the Project will provide about 25.82 Mt of additional ROM. The Proponent has sought approval to extract up to 4 Mtpa which will be sent to the Newstan Colliery Surface Site, for coal preparation. They estimate they will produce 21.2 Mt of product over the life of the Project (16 years). The coal recovered from the project will produce both a semi-soft coking coal product for the export market and a thermal coal product for the domestic market. The Proponent expects the split to be 70 percent domestic thermal coal and 30 percent export semi-soft metallurgical coal.

The thermal coal will supply the Eraring power station which is to the southeast of the project area. This power station generates approximately 25 percent of NSW's energy needs. Eraring is currently scheduled to be decommissioned by 2032. After this time, it is assumed the coal will be either diverted to another NSW power station or sold on the export market.

Resource recovery

The proponent proposes to mine the West Borehole Seam via underground bord and pillar using continuous miner methods. This design, which includes areas of first workings, partial extraction and full extraction, balances coal recovery with a need to limit mine subsidence. The proponent aims to limit the extent of subsidence in specific areas based on the need to protect important built assets and natural environmental features.

Geological constraints to mining in this area include a sill to the west of the Project, seam splitting to the east, a paleochannel that runs north-east to south-west and three major faults with throws greater than 2 metres. Other constraints include the railway corridor that bisects the Project, Eraring ash dam and power station in the southeast and a high-water control zone to the south.

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

Over the life of the Project, the majority of production would be sold on the domestic thermal market to the nearby Eraring power station (70 percent), with the remaining 30 percent sold on export semi-soft metallurgical market. As the announced closure of the Eraring power station is currently 2032 it is likely that any domestic thermal coal produced from the Project may need to be sold to other NSW coal-fired power stations. Bayswater could be a suitable destination, which is currently scheduled to close in 2036. If the closure dates for both power stations come into being or are brought forward, it is possible that any coal produced by the Proponents post-2036 could be sold into the export semi-soft metallurgical export market, or exported on the export thermal market.

Assuming that the majority of the produced coal from the Project is sold into the domestic market, MEG has estimated that the total value of the coal produced would be around $2 billion in current dollars. The net present value of this revenue stream would be around $1 billion at a real discount rate of seven percent.

If approved, the additional export income from the Project would contribute to the around A$14.5 billion (2020-2021 financial year total) of coal exports annually from NSW. Export income provides benefits to the NSW and Australian economies. The balance of trade of any country is a crucial driver of the global economy.

The Project, if approved, would provide on average around 320 full time operational jobs from 2024 to 2039. These estimated jobs numbers compare favourably with other NSW currently operating coal mines with similar production rates. MEG estimates that these direct mine jobs would result in an additional 1280 indirect jobs in both mine and non-mine related services. Initial capital investment for the Project is indicated to be of the order of A$130 million with additional ongoing capital expenditure.

MEG also notes from the Economic Assessment prepared by the Proponent's economic consultant (AIGIS Group) that the Project would deliver a net benefit in NPV terms of A$82 million to the NSW economy.

Royalty calculation

Assumptions

The Project is a proposed underground mine which is mostly under 400 metres in depth; therefore, a royalty rate of 7.2 percent applies to all saleable production. This rate is applicable to the net disposal value. Net disposal value is the price received per tonne minus any allowable deductions. The main allowable deduction is for coal beneficiation. As a majority of ROM coal from the operation would be subject to the full washing cycle, a deduction of A$3.50 per tonne from the value of coal produced applies. A deduction for levies also applies which would amount to no more than A$1.00 per tonne. Hence allowable deductions for royalty for the Project of A$4.50 per tonne are applicable.

Coal from the Project is expected to be sold into the domestic thermal market (70 percent) and the remaining 30 percent sold into the export semi-soft metallurgical market. A review of coal quality information by MEG suggests this is achievable. The majority of the domestic thermal coal is expected to be sold to the nearby Eraring power station. However, it is also possible that during the life of the Project other NSW coal-fired power stations may purchase coal from the Project.

The price for the domestic thermal coal from the Project is expected to be in the range $75-$80 per tonne. Coal price forecasting for export coal is inherently difficult and over the project life variations in coal prices are expected. For the export semi-soft metallurgical coal from the Project MEG has assumed a long-term price of $125 per tonne.

MEG has estimated that if the Project is approved, around 21 Mt of product coal would be able to be economically mined from the Project over the project life, which is from 2024 to 2039.

Total royalties estimate

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

Parameter	$m (2021 dollars)
Total royalties received	136
Net Present Value (NPV) royalties (7% discount rate, real)	73
Annual estimated royalties per year (average)	11 (Approximate)

Departmental Assessment

Assessed by	Unit	Branch
Assessing Officer: Gwen Stefani Senior Geologist	Geoscience Assessment & Advice (GAA)	Geological Survey of NSW
Assessing Officer: Bryan Whitlock Senior Resources Analyst	Resource Economics	Strategy, Performance & Industry Development
Assessing Officer: Katherine Courtney Project Officer - Industry Advisory & Mining Concierge	Industry Development	Strategy, Performance & Industry Development
Assessing Officer: Adam W. Banister Senior Advisor - Industry Advisory & Mining Concierge	Industry Development	Strategy, Performance & Industry Development

Approvals

Approved by	Date approved in CM9
Approving Officer: Dr Kevin Ruming Director Geoscience Assessment & Advice	Approved in CM9 18/10/2021
Approving Officer: Kristina Erzikov Director Performance	Approved in CM9 18/10/2021
Approving Officer: Chris Celovic Director Industry Development	Approved in CM9 27/10/2021