



DOC21/234261

Nicole Brewer
Director Energy Resource Assessment – Resource Assessments
NSW Department of Planning, Industry and Environment
GPO Box 39
SYDNEY NSW 2001

29 March 2021

Dear Ms Brewer,

Major Projects – State Significant Infrastructure
Snowy 2.0 – Transmission Connection Development Application (SSI-9717)

Thank you for providing the NSW Environment Protection Authority (EPA) with the opportunity to provide comment on the Environment Impact Statement (EIS) for the proposed Snowy 2.0 Transmission Connection (the Project). The EPA understands that the Project will connect the proposed Snowy 2.0 pumped hydro and generation project (the Snowy 2.0 project) to the existing high voltage transmission network.

The EPA notes that the Project is not currently scheduled under the *Protection of the Environment Operations Act 1997* (POEO Act) and therefore will not require an Environment Protection Licence. If approved, the works will be carried out by an authorised network operator. Accordingly, the EPA will be the Appropriate Regulatory Authority as per Part 6 of the POEO Act.

The EPA has reviewed the EIS for the Project and provides detailed comment and recommendations in **Attachment A**.

The EPA notes that the Project is partly located within the Kosciuszko National Park (KNP). The EPA reminds the Proponent that the important and sensitive environmental values of KNP require a high level of protection from construction activities associated with the Project.

If you have any queries or wish to discuss this matter further, please contact Carlie Armstrong or myself on (02) 6229 7002 or at Queanbeyan@epa.nsw.gov.au.

Yours Sincerely,

A handwritten signature in blue ink, appearing to read 'Nigel Sargent', is written over a light blue horizontal line.

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ATTACHMENT 1

WATER

Appropriate Level of Ecosystem Protection

The NSW Water Quality Objectives (WQOs) are the environmental values and long-term goals to consider when assessing and managing the likely impact of activities on waters. The WQOs can help to select the most appropriate management options. The guiding principles are:

1. where the environmental values are being achieved in a waterway, they should be protected, and
2. where the environmental values are not being achieved in a waterway, all activities should work towards their achievement over time.

Consistent with the National Water Quality Management Strategy (NWQMS), the policy in NSW is that waterways that flow through relatively undisturbed national parks, World Heritage areas or wetlands of outstanding ecological significance are designated as being of high conservation value. The national water quality guidelines (ANZG (2018)) recommend that for high conservation/ecological value ecosystems there should be:

1. no change in biodiversity beyond natural variability (biological indicators);
2. no change beyond natural variability using ecologically conservative decision criteria for detecting change (physical and chemical stressors). Any relaxation of the objective should only occur where comprehensive biological effects data clearly show that biodiversity would not be altered;
3. for toxicants generated by human activities, detection at any concentration could be grounds for investigation and management intervention. For natural occurring toxicants, background concentrations should not be exceeded. Where local data has not been gathered, apply the default values. Any relaxation of these objectives should only occur where comprehensive biological effects and monitoring data clearly show that biodiversity would not be altered.

The project to the east of the Tumut/Talbingo Reservoir is located within KNP and is of high conservation value. This is consistent with the level of protection adopted for the Snowy 2.0 project for waterways within KNP. The project to the west of Tumut River/Talbingo Reservoir is located within Bago State Forest and could be considered a slightly to moderately disturbed ecosystem. This is consistent with the level of protection adopted for the Snowy 2.0 project for Talbingo and Tantangara Reservoirs.

The EPA considers that the EIS does not currently adopt an appropriate level of ecosystem protection for the Project. In that regard:

The EPA recommends that the Proponent adopt an appropriate level of protection for waterways in conducting the water quality assessment that will inform the development of appropriate management and mitigation measures.

Baseline Water Quality Data

The Proponent must demonstrate that the proposed works will maintain the environmental values of the receiving waterway where they are currently being achieved or contribute to restoring the environmental values where they are not currently achieved. For projects occurring in high conservation value areas such as KNP, an appropriate and robust baseline dataset is expected ahead of works. This is useful for detecting impacts to waterways during construction and operation and to inform management decisions.

The EIS identifies that existing water quality data from the Snowy 2.0 EIS is relied on for the eastern extent of the project. However, there is no characterisation of the existing water quality in the western extent (i.e. west of the Tumut River). The Proponent identifies that given surrounding land-use; it is expected that waterways in the western extent would exhibit similar water quality to waterways within the eastern extent of the project. The EPA considers this is unlikely because:

1. Land use differs. The eastern extent is within KNP, while the western extent is within State Forest;
2. Surface geology is different. The western extent is dominated by tonalite and granodiorite, while the eastern extent is dominated by limestone and sandstone. Different geology could alter surface and groundwater quality;
3. Groundwater is likely to contribute surface water baseflow in some waterways. There is no groundwater quality provided for the western extent.

The EIS does not provide water quality data for Cave Gully and several unnamed tributaries of Yarrangobilly River, Tumut River, Yorkers Creek, New Zealand Gully and Native Dog Creek. A summary of water quality from the Snowy 2.0 EIS is provided for Wallace Creek, Yarrangobilly River, Lick Hole Gully and Tumut River/ Talbingo Reservoir. However, raw data is not provided, and the effects of wet weather have not been assessed.

The EPA notes that water quality data for the Snowy 2.0 EIS was collected during a drought period between February 2018 and March 2019 and prior to the bushfires in 2020. In that regard, the EPA considers that the data may not be contemporary for the proposed Project.

In order to appropriately characterise baseline water quality within receiving waterways impacted by the Project, the EPA recommends that the Proponent prepare a surface water quality monitoring program that includes (but is not limited to):

- 1. monitoring locations during baseline and construction phases;***
- 2. analyte list and sampling frequency for each location;***
- 3. sampling frequency for each project phase that includes***
 - a. baseline monitoring at a frequency that reflects seasonable variability***
 - b. construction phase monitoring at a frequency commensurate with risk and to inform any Trigger Action Response Plan(s);***
- 4. a Trigger, Action, Response Plan detailing water quality triggers and operational responses for water quality exceedances;***
- 5. a plan to regularly confirm that water quality is consistent with water quality triggers.***

Water Management at Substation

The EPA considers that the management of water generated within the substation is unclear. The EIS provides a general statement that there will be no discharges other than water applied for dust suppression. The EIS also identifies that water used for the testing of the spill oil containment system at the substation site would be captured and treated on site. It is unclear how the water captured during testing will be managed, if and where it will be discharged to, or what the quality of the discharged water would be.

It is also unclear how stormwater captured during routine operation will be managed. There has been no characterisation of the stormwater discharge, and it is unclear if the substation site will store materials/equipment that may leach pollutants (e.g. old transformers/capacitors that could leach PCBs).

The EPA recommends that the Proponent provide further information on the management of the spill containment system and stormwater at the substation.

If stormwater and/or water from the spill containment system is to be discharged to the downstream receiving environment, it is recommended that the Proponent:

- 1. characterises the expected quality of the discharge in terms of the concentrations and loads of all pollutants present at non-trivial levels;***
- 2. provide details of any onsite water treatment measures;***
- 3. provide details of the stormwater pit size(s) and the rainfall events that the stormwater pits are designed to accommodate;***
- 4. provides the frequency and volume of site discharges under a range of scenarios such as commissioning, typical and worst case;***
- 5. assesses the potential impact of the proposed discharge on the environmental values of the receiving waterway with reference to the relevant ANZECC guideline values; and***
- 6. where the discharge has potential to cause non-trivial harm, assess practical measures to avoid, minimise or mitigate impacts to the downstream receiving environment.***

Dewatering

The EIS has deferred assessment of whether dewatering (e.g. groundwater encountered during boring for pile footings) will be required until detailed design. The EIS indicates that if dewatering is required, the discharge of water will be limited to vegetated grassed areas away from waterways.

The EPA notes that if a discharge to waters is required as part of any dewatering activities, the Proponent must complete an assessment to identify whether management and mitigation measures are required to achieve the WQOs.

SEDIMENT AND EROSION CONTROL

The approach to sediment and erosion control is unclear. The EIS indicates that the design will include adequate sediment and erosion controls to manage impacts on receiving waters where required.

However, specific detail is not provided. The EPA considers it appropriate for the Proponent to:

1. Consider best management practice and guidance;
2. Modify controls in the context of terrain constraints and to minimise vegetation clearing;
3. Implement enhanced controls to reduce the risk of erosion wherever possible. Examples may include, but are not limited to:
 - a. staging construction activities to minimise land disturbance at any one time;
 - b. using timber windrows during clearing to assist erosion control;
 - c. retaining vegetation within flow lines for as long as possible;
 - d. retaining groundcover on soils to minimise the potential loss of sediment;
 - e. treating topsoils with a high level of care to enable reuse in the rehabilitation phases;
 - f. using surface covers and binders to limit soil loss;
 - g. installing clean water diversions early; and
 - h. ensuring prompt stabilisation and rehabilitation of the site.

Erosion and sediment control plans should address vegetation clearing, initial site establishment, construction and operation of unsealed access roads, laydown areas, stockpile areas, permanent infrastructure (such as the substation and pylons) and instream works (such as waterway crossings).

The EPA recommends that the Proponent:

- 1. provides further detail on sediment and erosion control approaches for both standard and high conservation value receiving environments in the context of site constraints, enhanced erosion controls and sediment basin sizing with reference to best management practice and guidance;***
- 2. considers reuse of any water collected within sediment basins to avoid or minimise discharges and reduce the reliance on potable water; and***
- 3. if stormwater is expected to contain pollutants other than 'clean' sediment at non-trivial levels (e.g. oils and grease, metals), recommend additional or alternative treatment measures to avoid, minimise and mitigate potential water pollution risks.***

SPOIL MANAGEMENT

The EIS identifies that the proposed Project will generate up to 365,000m³ of spoil during earthworks. The Proponent has identified that spoil will be:

1. Reused on other elements of the project where possible;
2. Where it cannot be reused, emplaced within the subaqueous emplacement area in Ravine Bay within the Snowy 2.0 Project, using the existing approvals for this project;
3. Where unsuitable for reuse or subaqueous emplacement, transported to a suitable disposal area.

The EPA notes that the EIS does not:

1. Demonstrate if other alternatives to emplacement have been explored;
2. Demonstrate that all reasonable and practical measures to avoid subaqueous emplacement have been explored (e.g. reuse of material on access tracks throughout the local road network);
3. Demonstrate if the spoil will be suitable for subaqueous disposal, or the expected quantity of material to be disposed of via sub-aqueous emplacement;
4. Assess water quality impacts associated with subaqueous emplacement of Project material, noting geology, extraction method and particle size may differ from those approved for Snowy 2.0.

The EPA reiterates that the Spoil Management Plan for the Ravine Bay emplacement area in the Snowy 2.0 project has not been approved and accordingly, the environmental controls required for the Ravine Bay emplacement area have not been developed. The EPA acknowledges that further information will become available as the Snowy 2.0 project progresses; but reiterates that a comprehensive Emplacement Management Plan is required prior to undertaking any emplacement in Ravine Bay. The EPA reiterates that the Proponent must ensure that the necessary approvals have been provided to facilitate emplacement in Ravine Bay prior to transporting this material. Where the approvals have not yet been received, the Proponent must demonstrate how the material will be managed (e.g. stored in temporary stockpiles) and what controls will be used to minimise and mitigate potential impacts to waters.

The EPA recommends that the Proponent:

- 1. demonstrates that all reasonable and practical measures to avoid subaqueous emplacement have been considered;***
- 2. provides detail of the expected volumes of spoil to be reused and the volume to be disposed of via subaqueous emplacement;***
- 3. where emplacement cannot be avoided, undertakes an impact assessment to demonstrate that the expected spoil quality, particle size, dispersion properties are consistent with those approved for the Snowy 2.0 project;***
- 4. provides further detail on the emplacement of material in Ravine Bay, including any temporary storage of material prior to subaqueous emplacement, the associated controls to minimise or mitigate potential impacts to receiving waters and point of 'hand-over of responsibility' to the Snowy 2.0 project.***