Department of Planning, Industry and Environment
Major Projects Team
Attention: Anthony Ko

6 November 2019

Submission on Snowy 2.0 Main Works Environmental Impact Statement

I strongly object to the Snowy 2.0 project as described in the Main Works Environmental Impact Statement (EIS). The scale and intensity of environmental impact described in the EIS is unacceptable in Kosciuszko National Park (KNP), a National Heritage listed national parks. It also is economically unsound.

General concerns

I am concerned by:

- the way that the environmental assessment of the project has been spit into a number of separate phases. This prevents the community from being able to see the scale and nature of the environmental impacts in one document.
- the lack of appropriate consideration of alternatives which could significantly reduce the environmental impacts of the proposal.
- The vast amounts of information which are currently on exhibition in the EIs that make it difficult for the community to properly evaluate and comment on the proposal.

Environmental impacts

The EIS repeatedly states that the Snowy 2.0 project will have a minor impact on KNP on the basis that the development footprint represents approximately 0.25% of the total area of the park. This assessment is misleading and incorrect for the following reasons:

- The "Project Area", as depicted in the EIS, covers approximately 50 km by 50 km (250,000 hectares), which is a third of KNP - an area twice the size of Greater Sydney,
- Rare sub-alpine habitats will be destroyed by Snowy 2.0. These areas provide refugia for alpine species affected by climate change, and
- What is proposed is an unacceptably large loss of critically important habitats in a NSW National Park. The EIS states that the construction footprint will 'disturb' 1,680 hectares, clear 1,053 hectares of native vegetation, and destroy 992 ha of threatened species habitat (threatened fauna, threatened flora and Threatened Ecological Communities).

The construction footprint in the EIS substantially understates the full extent of permanent damage outside the heavy construction zones. Additional areas that will suffer permanent environmental damage include:

- Talbingo and Tantangara Reservoirs,
- the sites of 100 kms of new and upgraded roads and 10 kms of transmission lines with a 120 metre-wide easement,
- areas above the tunnels where groundwater will be depleted (see below), and
- sites construction camps (for 2,100 workers) and multiple works areas.

When all these areas are taken into account, Snowy 2.0 will permanently damage more than 10,000 ha of KNP (100 square kms), rather than the claimed 1,680 ha.

Such a proposal should not be contemplated in an internationally renowned conservation reserve. Mitigation and offsetting measures would be totally inadequate to compensate for the scale of environmental damage.

The project requires tunnelling through 27 kms of rock, large scale quarrying, road building and widening and the establishment of large accommodation and construction sites. The EIS does not indicate how 14 million cubic metres of spoil, some of which is heavily contaminated by asbestos and acidic compounds, can be disposed in KNP without causing significant additional environmental impacts. It is likely that much of the excavated materials will be used in 'landscaping' works that will further exacerbate the damage to the Park. Over 8 million cubic metres of spoil are to be dumped in the active storage areas of Talbingo and Tantangara Reservoirs, depleting their capacities. I am appalled that approval is being sought to dump 14,000,000 m^3 of waste material, some of which is contaminated, in a National Park.

The EIS describes extensive impacts on water dependant habitats and species through disruption to ground water systems by the tunnelling as well as in works beside 8 kms of the Yarrangobilly River.

Watertable drawdown is predicted to be in excess of 50 m above the tunnel in areas of high hydraulic conductivity (Gooandra Volcanics). The drawdown at 3 km either side of the tunnel is still 0.5 m in the western plateau. This will have a catastrophic impact on the environment along sections of the 27 km tunnel resulting in existing creeks drying up, impacting fish and other native aquatic fauna and reducing inflows to the reservoirs that in turn will impact water releases.

These impacts are totally unacceptable. Once ground water systems are impacted by excavation and tunnelling activities the damage is irreversible and can become worse over time.

Snowy 2.0 will disperse pest species (including redfin perch, eastern gambusia, wild goldfish, Epizootic Haematopoietic Necrosis Virus (EHNV) and elodea weed) throughout the waterways of KNP and downstream. Redfin is a Class One Noxious Pest - it is illegal to transfer Redfin between waterways in NSW. Snowy Hydro acknowledges that it is inevitable that these noxious species will be transferred from Talbingo to Tantangara. Establishment of Redfin Perch will negatively impact recreational anglers and significant populations of threatened native fish.

It is highly likely that this noxious species will be transferred from Tantangara downstream to the Murrumbidgee River and Lake Eucumbene and thence throughout the rest of the Snowy Scheme and downstream rivers (Snowy, Murrumbidgee and Murray) despite the barrier and filtration systems proposed by Snowy Hydro.

The visual amenity of KNP and the sense of wilderness and solitude unique to alpine landscapes will be significantly impact. These aesthetic qualities, and the experience of visitors, will be seriously diminished by the increases in roads and permanent large structures, especially, the transmission lines. The project will cause irreversible damage to the ambience of the National Park.

Minimal contribution to renewable energy

Snowy Hydro claims that Snowy 2.0 will help stabilise the national energy market as new renewable generation is added to the grid. This claim is highly dubious. I also do not accept that this aim justifies the extent and severity of environmental destruction that the project will cause to KNP, especially in the absence of a credible assessment of alternative ways of stabilising the national energy market. The data provided in the EIS seriously undermine the claimed benefits of the project. Snowy 2 would not be a significant contributor of renewable energy because:

- It will be a net consumer of electricity 'round-trip' losses of 30% and transmission losses of 10%.
- For at least the next ten years most of the energy required for pumping water will come from coal-fired power stations, not renewables, contradicting the claim that Snowy 2.0 will 'store' electricity from renewable generators.
- The claimed 350 GWh would only be available in the most exceptional of circumstances, requiring the top reservoir (Tantangara) to be full. If the full volume was used, at least one-third of the water couldn't 'fit' within the smaller capacity of the lower reservoir (Talbingo) and would be discharged to Blowering and 'lost' to the Snowy 2.0 system. If Talbingo were not empty (historically it is kept near full to provide for operation of the Tumut 3 pumped hydro station), then most of the water from Tantangara would be discharged to Blowering and 'lost' to Snowy 2.0.
- The practical recyclable capacity of Snowy 2.0 is considerably less than the claimed 350 GWh.
- Whenever Tantangara were emptied, it would then require several months of pumping to be returned to full supply.
- If Snowy 2.0 ever generated its claimed 350 GWh of energy, it would take 500 GWh of pumping energy to re-charge, incurring 150 GWh of losses.

Uneconomic

It is clear that the cost of Snowy 2.0 will be many times greater than the original $2 billion and then $3.8 billion estimates – a single contract for $5.1 billion has recently been awarded. It is likely that the project, including transmission, will be $10 billion, or even more. The project is not economically viable.

Snowy Hydro is wholly owned by the Commonwealth Government. Therefore, the Australian public bears the risk of Snowy 2.

In addition to its shareholding the Commonwealth increased the commitment of public funds through a $1.38 billion subsidy into the project. This is anti-competitive in the context of the National Energy Market.

Flawed planning and approval process

The Main Works EIS is only part of the assessment of the broader Snowy 2.0 Project.

It is over 2½ years since Snowy 2.0 was announced (March 2017). Over the intervening period the Snowy Hydro Board has authorised the Final Investment Decision, the Government has approved the project and kicked in $1.38 billion, a $5.1 billion contract has been awarded, construction commenced 8 months ago (February 2019) and major equipment is being ordered. Yet, the Main Works EIS has only just been released and the EIS for the high voltage transmission lines is yet to come.

The effect of this incremental piece-meal planning and assessment process has been to deny the community a holistic view of the full scope and impacts of Snowy 2.0. This approach compromises transparency from both a proposal and assessment perspective. Given the scale of the project this approach can only be seen as designed to obscure the full extent of environmental impact on KNP.

Despite the Environmental Planning and Assessment Regulation 2000 requiring *"an analysis of any feasible alternatives to the carrying out of the development, activity or infrastructure",* no such analysis has been provided. The project must not be approved until this information is provided, especially as many alternatives have been identified with far less environmental impacts and having sounder economic fundamentals.

The EIS makes multiple references to mitigating the impacts of Snowy 2.0 through promising future plans and works in consultation with NPWS or through formal offsetting processes. No appropriate offsets for the habitats that would be destroyed by Snowy 2.0 exist, given that all of the comparable alpine and subalpine areas of NSW are in KNP.

Conclusion

The Snowy 2.0 project, as described in the Main Works EIS, is inconsistent with the principles of Ecologically Sustainable Development and should not be approved. The dubious economic benefits of the project do not justify the large environmental and social impacts that this project would have.

Yours sincerely,

Rachel Fitzhardinge