Department of Planning, Industry and Environment
Major Projects Team
Attention: Anthony Ko
05/11/2019

Submission on Snowy 2.0 Main Works Environmental Impact Statement

I,PETER COMINO wish to indicate our strong opposition 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 inappropriate in any sensitive sub alpine region, let alone Kosciuszko National Park (KNP), one of our nation's most iconic, National Heritage Listed national parks.

In addition to the unacceptable environmental impacts on KNP, the fractured assessment process seems designed to conceal the catastrophic extent of environmental impacts and there is a district lack of credible consideration of less expensive, lower impact alternatives.

Claims about energy storage potential are dubious and the excessive cost will be paid for by the Australian public, the ultimate owners of the Snowy Hydro scheme.

These failures clearly demonstrate that the **Snowy 2.0 project does not meet the standards required of Environmentally Sustainable Development** and accordingly the project should be refused by the Minister for Planning.

The project is of vast scale and the quantity of documentation makes it very difficult to address all my/our concerns about the project. Issues of particular concern are described below:

Environmental impacts

The EIS repeatedly asserts 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. I consider this assessment to be utterly 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.
- While KNP is one of the largest National Parks in NSW (690,000 hectares), the portion containing sub-alpine habitats, the areas to be destroyed by Snowy 2.0, is much smaller. This sub-alpine area has some of the rarest habitat in Australia, and will prove increasingly important for the retreat of alpine species affected by the heating climate. These rare habitats provide the appropriate context for assessing the adverse environmental impacts of Snowy 2.0, not the lower altitude landscapes that characterise the majority of KNP.
- This construction will be largest ever proposed loss of critically important habitats in a NSW National Park. The EIS acknowledges 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 acknowledged in the EIS substantially understates the full extent of permanent damage outside the heavy construction zones, including Talbingo and Tantangara Reservoirs, 100 kms of new and upgraded roads, 10 kms of transmission lines with a 120 metre-wide easement swathe, ground water depleted areas above the tunnels, 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.
- No development of this scale or intensity is appropriate in the sensitive habitats of a declared conservation reserve. The issue should not be whether the impacts of a proposal of this scale and intensity can be 'mitigated', offset or otherwise approved under the Environmental Planning and Assessment Act framework. On the contrary, such a proposal simply should not be contemplated in an internationally renowned conservation reserve in the first place.

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 provide a credible account of how 14 million cubic metres of spoil, some of which is heavily contaminated by asbestos and acidic compounds, can be disposed

in KNP without further significant environmental impacts. It is clear that much of the excavated materials will be used in 'landscaping' works that will further exacerbate the damage to the Park. Unbelievably, over 8 million cubic metres is to be dumped in the active storage areas of Talbingo and Tantangara Reservoirs, depleting their capacities. How could approval be given for anyone to dump waste material, some of which is contaminated, in a National Park, let alone 14,000,000 m3 - enough to cover a football field to a height of 3 km?

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, will dry up existing creeks, impact the local fish and animals and reduce inflows to the reservoirs and hence water releases.

It is remarkable that Snowy Hydro would show such disregard for the protection of water dependant ecosystems not just in alpine areas but at the headwaters of our major waterways. I/we do not accept the assertion that such impacts are 'acceptable'. Experience demonstrates that once ground water systems are disrupted by mining activities the damage is irreversible and can become even more extensive 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 the dominant Redfin Perch will be to the detriment of both recreational anglers and significant populations of threatened native fish.

Even worse than it being accepted that these noxious species will be transferred to Tantangara, it is highly doubtful that the barrier and filtration systems proposed by Snowy Hydro will stop their eventual transfer downstream to the Murrumbidgee River and Lake Eucumbene and thence throughout the rest of the Snowy Scheme and downstream rivers (Snowy, Murrumbidgee and Murray).

One of KNP's core values is the sense of wilderness and solitude unique to alpine landscapes. These aesthetic qualities, and the experience of visitors, will be seriously diminished by the increases in roads, permanent large structures and especially the transmission lines. The project will not only impact directly on the areas trashed by the project - the overall sense and experience of the Park landscape will be damaged forever. The implication in the EIS that the community will regard the proposed infrastructure as evidence of the nation's engineering prowess offers hollow recompense for the loss of the Park's unique aesthetic qualities.

Minimal contribution to renewable energy

Snowy Hydro claims that Snowy 2.0 will play a pivotal role in stabilising the national energy market as new renewable generation is added to the grid. I/we don't not accept that such claims justify 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 providing this service. In any case, the data provided in the EIS seriously undermines the claimed benefits of the project. Specifically:

- Snowy 2.0 will be a net consumer of electricity, not a generator, with 'round-trip' losses of 30%, plus another 10% for transmission.
- For the next decade or so most pumping electricity will come from coal-fired power stations, not renewables, belying 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. At anything approaching this amount the project is totally uneconomic.

Snowy Hydro is wholly owned by the Commonwealth Government, hence the Australian community. The ultimate bearers of the risk of Snowy 2.0 are the Australian community.

In addition to its shareholding the Commonwealth increased the commitment of public funds through a $1.38 billion subsidy into the project. Why was this necessary and why is the Commonwealth Government playing favourites in the National Electricity 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 be put on hold until such fundamental information is provided, especially as many alternatives have been identified with far less environmental impacts and better economics, both within and outside KNP.

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 could be provided, given that all of the comparable alpine and subalpine areas of NSW are already included in KNP.

Conclusion

The Snowy 2.0 project, as described in the Main Works EIS, does not meet the principles of Ecologically Sustainable Development as mandated in the Environmental Planning and Assessment Act. In short, the staggering scale and severity of environmental impacts are by no means commensurate with the environmental, economic and community benefits of the project.

Yours sincerely,
PETER COMINO