Submission Snowy 2.0

Department of Planning, Industry and Environment

Major Projects Team

Attention: Anthony Ko

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Submission on Snowy 2.0 Main Works Environmental Impact Statement

I wish to lodge my strong opposition to the Snowy 2.0 project as described in the Main Works Environmental Impact Statement (EIS).

The Kosciuszko National Park was set aside to preserve a precious alpine environment which is unique world-wide due to its existence at lower altitudes compared to other examples across the world and its far greater assemblage of plants again of a unique Australian Flora which other alpine regions do not possess.

Snowy 2.0 and its interconnecting transmission lines are located within Kosciuszko National Park. It is totally inappropriate and incompatible for infrastructure of such magnitude and environmental consequences to be permitted within the delicate alpine and sub-alpine environments of the Park.

Snowy 2.0 presents itself as an ill consider politically expedient stunt that was rushed by a then failing Government as a desperate initiative to claim some action on climate change and future energy supplies in an era of non-investment in such projects due to the lack of Government policy on energy and renewables. This has resulted in an unacceptable EIS which wallpapers over many significant concerns with unsubstantiated assertions. The EIS is all too prone to using executive style persuasive report jargon especially the use of the word 'critical' as it skates blithely over the complete lack of a business case and the already alarming escalation in costs.

The concerns, which alone should defeat the proposal are as follows: massive amounts of environmental destruction, a non-economic business case, the renewable energy hoax of the whole operation, better alternatives lying elsewhere.

Environmental Destruction

Snowy 2.0 is proposed in one of the most significant natural landscapes in Australia, with its delicate alpine and sub- alpine environments involving a permanent impact on 10,000ha of Kosciuszko National Park involving the following

Land-clearing including 120ha or 1.2 million square metres for a 10km transmission corridor and 400ha at Lobs Hole, dumping rock wast in reservoirs - 14,000,000 cubic metres of excavated rock,

Invasive Pest Species Proliferations and Distribution including the voracious predator and Class 1 Noxious Fish, Redfin Perch which will be transported from Talbingo up to Tantangara Reservoir and thence throughout the Snowy,

Current Construction Activities underway without EIS assessment for the whole activity.

Non Economic Case

FLAWED BUSINESS CASE. Six weeks after the Business

Case was approved by the Government, the cost estimate (of $3.8) was eclipsed by the first major contract to be signed (at $5.1 billion).

COSTS SOAR. The final cost, including transmission lines, could be as high as $10 billion – i.e. 500% higher than the original estimate of $2 billion! This staggering amount exceeds the value of the whole of Snowy Hydro ($7.8 billion).

ECONOMICALLY UNVIABLE. Snowy 2.0 could not cover the interest on its debt, let alone make a profit. The economics simply don't stack up.

SUBSIDY. Taxpayers shouldn't have to provide Snowy 2.0 with a $1.38 billion subsidy.

ELECTRICITY COST REDUCTIONS? No information is provided to support the claim that Snowy 2.0 will reduce electricity prices.

OVERLY OPTIMISTIC TIMING. The estimated construction time has more than doubled since Snowy 2.0 was first announced, from 2021 to 2027.

MINIMAL PAYMENT FOR USE OF KOSCIUSZKO.

Snowy 2.0 proposes to only make minimal payments for use of Kosciuszko National Park during construction and operation – another inappropriate subsidy and unfair advantage compared to Snowy 2.0's competitors!

The renewable energy hoax

COAL-FIRED GENERATION. Snowy 2.0 is being promoted as a 'green battery' for renewable energy. Yet, for at least the next decade or so, most of Snowy 2.0's pumping electricity will come from coal-fired generators.

Perversely, this will result in increased emissions. NET LOSSES (40%). Snowy 2.0 will consume more energy than it generates. For every 100 units of electricity used to pump water up to Tantangara Reservoir, only around 70 units of electricity will be retrieved when the water flows back down through the turbine generators to Talbingo Reservoir.

As well as having a 'round-trip' loss of 30% within the pumping / power cycle, there are also losses in transmitting electricity to and from Snowy 2.0 of typically 5% each way.

So, for every 100 units of electricity purchased by Snowy 2.0, it will deliver only about 60 units.

The lack of transparency

Alarmingly there is NO PUBLIC SCRUTINY OF THE BUSINESS CASE.

Snowy Hydro is a Commonwealth Government Corporation. All Australians bear the liabilities of this risky project, including a $1.38 billion taxpayer subsidy.

Electricity consumers and taxpayers need to know whether the project is financially viable and the claimed benefits are deliverable. Snowy Hydro has not released its Business Case or any financial information.

FLAWED PROCESS. The staged approach to the financial and environmental assessment, along with the limited release of information, means that neither the Government nor the public can comprehensively assess the entire project. The transmission lines EIS has yet to be released.

LACK OF RIGOROUS REVIEW. The Government's review of Snowy 2.0's Business Case was based primarily on advice from Snowy Hydro. The Government needs expert advice, independent of Snowy Hydro, on the environmental, economic and engineering impacts of the project.

15-03-2017 $2 Billion

21 DEC 2017 3.8- 4.5 Billion

(expected to be at lower end of range)

05 APR 2019

(major works contract) $5.1 Billion

APR 2019 $10 Billion

(NPA prediction

incl transmission)

Better Alternatives

IS SNOWY 2.0 THE BEST OPTION? Snowy Hydro has focused totally on the 'Snowy 2.0' project. No information has been provided on why Snowy 2.0 is the best option.

Alternative pumped storage options exist – even Snowy Hydro has made references to the future use of other sites.

Alarmingly, no substantive analysis of alternatives was included in the EIS, despite a legal requirement to do so.

There are alternatives involving less construction, cost, risk, transmission and environmental impact.

BROADER ALTERNATIVES NOT REVIEWED. Many other pumped storage opportunities have been identified in NSW, with a combined capacity considerably greater than Snowy 2.0. Before committing to Snowy 2.0 and providing a $1.38 billion subsidy, it was incumbent on the

Government to review all storage options, including other pumped hydro, batteries and demand response.

There is no need to cut corners on the pretext that Snowy 2.0 is the only option for electricity storage and must be urgently constructed.

More generally further expansion of the above concerns is as follows.

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/we 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 do 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 Kosciuszko National Park is suffering enough threatening processes from feral populations of horses and other non-indigenous animals including deer, dogs and cats without a massive human induced destruction of a key part.

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.

Snowy 2.0 is trying to boost its chances of approval through biased information. It is a government creation trying to justify its existence. The proponents are seeking their own security above what is best for the nation. I do not accept that that Snowy 2.0 will play a pivotal role in stabilising the national energy market and it certainly does not justify the extent and severity of environmental destruction that the project will cause to Kosciuszko National Park.

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.

Snowy 2.0 should be stopped in its tracks. The Commonwealth Government should revoke approval of the Business Case, due to its significantly underestimated costs and overstated benefits to the Australian public. And the NSW Minister for Planning should refuse approval for the EIS due to the overwhelming damage to Kosciuszko National Park.

Yours sincerely

Ian Hill