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Snowy Water Licence Review
Intergovernmental and Strategic Stakeholder Relations
Department of Primary Industries Water
Locked Bag 5123
Parramatta, NSW, 2124

Dear Reviewer,

Snowy Water Licence Review - 2017

The Snowy River Alliance (SRA) is pleased to have the chance to contribute to the Snowy Water Licence Review. We are the community group which campaigned successfully to achieve increased flows to the Snowy River. The Snowy River Licence represents the reduction of 40 years of campaigning to a written agreement between Snowy Hydro and its stakeholders (represented by the NSW Government).

As a key stakeholder, the SRA is concerned by having only one opportunity every 10 years to input to this vital document. The complexity of interrelated legislative requirements and agreements is such that an ongoing dialogue is vital. The original Snowy Hydro Corporatisation Act provided for the Snowy Scientific Committee (SSC) to ensure independent scrutiny of the effectiveness of the environmental flows. This Committee was at least able to provide ongoing input until it was disbanded.

The 2014 Snowy Hydro Corporatisation Amendment Bill was promoted by the Minister as a way to gain community representation in the decision making process. The failure to proclaim that Bill leaves the community still with “no seat at the table” and the strongly held view that no-one is looking after the interests of the Snowy River. The community has no trust in the lack of

coordination between the organisations which have piecemeal responsibilities for the Snowy. It is clear that no single Minister is accountable for the outcomes which were committed to by the three governments which signed the Snowy Water Inquiry Outcomes Implementation Deed (SWIOID). There needs to be a single point of responsibility (preferably a Minister), to whom all relevant parties are accountable. The proposed new Snowy Advisory Committee should also be accountable to this Minister.

There has been a very short time available to prepare this submission - only 12 working days after the briefing which was held in Sydney on September 26th. We have attempted to identify the key issues and can provide additional evidence on these matters as required. The most crucial issues in the licence which we believe need immediate review and correction are set out below:

- a) the incorrect accounting for Mowamba River flows which reduces the intended volume of Snowy River Increased Flows
- b) The permanent removal of the Mowamba Weir and aqueduct
- c) the lack of achieved flows in the Snowy Montane Rivers
- d) the lack of transparency of water accounts due to “commercial in confidence” considerations
- e) The overall inadequacy of annual releases into the Snowy River

Specific details of these issues are addressed in the following appendices.

Thank you for the opportunity to provide input to the Snowy River Licence Review. The SRA is looking forward to further constructive interaction with the NSW Government and Snowy Hydro Limited in the future.

Yours sincerely



Vickii Wallace

President, Snowy River Alliance

Attachment A: The Incorrect Accounting for Mowamba River Flows

Background

The Mowamba River is a tributary of the Snowy River which joins the Snowy downstream of Jindabyne Dam. The Mowamba Weir captures the water in this river and diverts it via an aqueduct into Jindabyne Dam. This aqueduct also collects the waters of Cobbon Creek from Cobbon Creek weir. The first environmental flows were returned to the Snowy River on 28th August 2002 when Mowamba Aqueduct was turned off to allow the Mowamba River to once again flow down its natural course to the Snowy.

In 2006 the aqueduct was turned back on to send these flows back to Jindabyne Dam. Issues with cutting off the flow of the Mowamba have been the source of great friction with the community ever since that time. Many of the Government, NGO and private submissions to the 2007 Snowy Water Licence review raised this issue and requested permanent removal of the Mowamba weir.

When environmental flows were being introduced to the Snowy an amount of 28% of the Mean Annual Average Flow (MANF) was nominated in the agreements as a target flow to be returned to the river. As an intermediate target 21% or 212 gegalitres per annum was to be delivered by 2012. This 21% was in addition to the existing (very small) flow already present in the river since the dam. A small riparian flow (8.6 gegalitres per annum) had been allowed to pass through the Jindabyne dam since it was constructed. An even smaller riparian flow (0.4 gegalitres per annum) was released into the Mowamba river bed. 0.4 gegalitres per annum is equivalent to 12 litres per second – ie about 1 bucketful per second. However when heavy rain or snowmelt caused the Mowamba weir to spill, a flush of fresh water passed directly down the Mowamba River and into the Snowy.

In the pre-corporatisation EIS, the Department of Industry and Science ¹ estimated that spills and riparian releases from the Mowamba averaged 24 gegalitres per annum. This is equivalent to over 2% of the MANF of the Snowy River. In the original Snowy River Inquiry this flow was recognised as an existing flow to which the 21% or 28% increased flows should be added. That decision was reflected in the SWIOID in the definitions, and equally in the Snowy Water Licence.

The Base Passing Flow is defined in both documents as:

the base passing flow with respect to the Snowy River is: the volume of 9GL per Water Year from Jindabyne Dam PLUS the non - regulated flow past the relevant Works on Mowamba River and Cobbon Creek prior to the Corporatisation Date

¹ Department of Industry and Science 2000, Draft EIS Corporatisation of Snowy Mountains Hydro - Electric Authority, p44; Snowy River Flow Response Monitoring Project, 2004, Fact Sheet No 2, November 2004; Snowy Mountains Hydro - Electric Authority (SMHEA) 1998, Spills and riparian releases, average scheme inflows and diversions 1905 - 1987 statistics and information design reports for structure and operational records based on G/D.G.E.N./31/1 and I.S./G - GEN/76/1

In other words, non-regulated flow means water passing over the spillway of either or both weirs. This is clearly intended to be included in the Base Passing Flow, or it would not have been so carefully defined in the documents.

Despite this very clear definition, any spills have been deducted from the following year's Snowy River Increased Flows. To address this confusion, the base passing flow should be clearly identified as 33 gigalitres per annum. Because these spills from Mowamba have been accounted for as a reduction in the following year's Snowy River Increased Flow they have been paid back to Snowy Hydro. This is unjust and against the spirit and the letter of the SWIOID and the Snowy Water Licence.

Accounting for such spills should also be transparent and publicly available in Snowy Hydro's Annual Water Report. These quantities of water are not part of Snowy Hydro's commercially sensitive Above Target Water (ATW) and should be clearly reported annually. See also Appendix D regarding transparency.

Snowy River Alliance Recommendations

The SRA recommends the following:

1. that the Base Passing Flow with respect to the Snowy River be clearly identified as including the non-regulated flows from the Mowamba Weir and Cobbon Creek weirs
2. that the volume of Mowamba Spills water incorrectly deducted from the Snowy River Increased Flows over the past 15 years since 2002 be repaid to the Snowy River Increased Flows Account
3. that the Snowy Hydro accounts for increased environmental flows be published annually in the Snowy Hydro Annual Water Report, to provide transparency on environmental matters that do not impact on Snowy Hydro's commercial operations.

Attachment B: Permanent Removal of Mowamba Aqueduct

Background

In the 2007 final report of the 5 year review of the Snowy Water Licence ² the NSW Office of Water acknowledged that “a number of submissions raised concerns that the environmental objectives for the Snowy River as outlined in the licence and SWIOID have so far not been achieved.” (page 5, Analysis of Issues Raised in Public Submissions)

The review then highlighted that further studies were required (including by the Snowy Scientific Committee) and summarised their proposed actions as follows (page 6):

Proposed Actions

- The Minister to ask the NSW Office of Water to investigate by 2012 options for better achieving environmental objectives under low flow conditions, including options for the decommissioning of Mowamba Aqueduct
- The advice of the SSC will continue to be considered as decisions are made on any amendments to the current flow regime

There have been substantial benefits identified through decommissioning of the Mowamba Aqueduct and these have been reported in various peer reviewed technical papers by former DPI Water staff and others.

Extensive further information is available if required to support this position. Identified benefits include:

- a) better thermal regimes for the Snowy during autumn and spring
- b) availability of dissolved carbon within the food chain
- c) availability of dissolved silica
- d) oxygenated water
- e) connectivity between the Snowy and its only remaining alpine tributary

These benefits only arise when the Mowamba River water is not diverted to Jindabyne Dam. Further scientific details can be provided on request.

² *Final report – Five-year review of the Snowy Hydro Water Licence Licence review – May 2002 to May 2007*
ISBN 978 1 921546 92 1
NOW 09_270a
November 2009

Once again, this highlights that either a Snowy Scientific Committee or Snowy Advisory Committee needs to exist to evaluate this type of investigation. It is not clear whether the promised studies were fully completed, but it is clear that the Government published its intent to undertake such studies.

Snowy River Alliance Recommendation:

The SRA recommends that the Snowy Water Licence be varied to provide for the permanent decommissioning of the Mowamba Aqueduct and the removal of the Mowamba Weir and the Cobbon Creek Weir.

Attachment C: Lack of flows in Snowy Montane Rivers

Background

The SRA considers that Snowy Hydro Limited has acted with good faith in the implementation of the Snowy Water Inquiry Implementation Deeds and the Snowy Water Licence for the period 2002 to 2017. This has been shown by Snowy Hydro's efforts in:

- (i) upgrading infrastructure
- (ii) undertaking trial releases to improve understanding of montane rivers and water management
- (iii) voluntarily jointly funding selected river studies, and
- (iv) working in a co-operative basis with government to implement the Snowy Water Initiative

The SRA congratulates Snowy Hydro on the effort made towards repairing the selected montane rivers of the Snowy Mountains and their continued support to make improvements to the program implementation. Our concerns relate to the requirements imposed under the licence rather than Snowy Hydro's performance in delivery.

The environmental water releases to the Snowy Montane Rivers includes water to be discharged to the following waterways:

- (a) upper Murrumbidgee River below Tantangara Dam,
- (b) the Goodradigbee River,
- (c) the Geehi River,
- (d) the upper Snowy River below Guthega and
- (e) the upper Snowy River below Island Bend.

The SRA is very concerned about the slowness in delivering the target flows to the Snowy Montane Rivers. This has been blamed on difficulty achieving water savings in the western rivers, the impact of climate on water availability and the need to optimise the use of the available water via infrastructure upgrades.

The SRA considers that there are still some significant deficiencies in the SMRIF program. In particular the commitments within the SWIOID (Annexure 3) relating to the conversion of foregone generation into water volumes. In the NSW DPI Water release strategy for Montane Rivers, 2017-2018 Table 1,³ it is proposed that the available volumes for release into the Snowy – Island Bend will

³ Williams, S. (2017). Release strategy for the Snowy Montane Rivers Increased Flows, 2017-18. Snowy Flow Response Modelling and Modelling program, NSW DPI Water, Sydney.

be only 18.9 GL vs a SWIOID requirement of 29 GL. Similarly the release requirement for Snowy – Perisher Range will be 3.4 GL vs a SWIOID requirement of 30 GL.

It is not clear why these flows are so far below the SWIOID targets, many years after the SMRIF program commenced, but clearly this is not what was envisaged in the SWIOID. If there is a need to change these targets then there should be community engagement in the process. This will also result in a need to change the licence requirements and the SWIOID.

Some of the deficiencies in the SMRIF include:

- Environmental objectives in the existing Snowy Water Inquiry instruments may be outdated.
- Insufficient water in the SMRIF portfolio to meet annual water targets for Snowy Montane Rivers.
- Insufficient monitoring, modelling and reporting by NSW DPI Water.
- No community involvement or consultation mechanism

Snowy River Alliance recommendations

The SRA considers that the following issues need to be addressed in implementing the SMRIF program:

1. Replace environmental objectives in the existing Snowy Water Inquiry instruments that are outdated
2. Engage with the community and environment groups where changes such as those outlined in the 2017-18 SMRIF strategy are proposed.
3. Increase the water portfolio of up to 150 GWhr forgone electricity to achieve the desired ecological outcomes in the Snowy Montane Rivers, particularly in the upper Snowy River and the Murrumbidgee River below Tantangara.
4. Develop a program to measure the ecological response of water releases to the Snowy Montane Rivers.

Appendix D. Lack of Transparency in Water Accounts

Background

It has been evident since the corporatisation of Snowy Hydro Ltd that there is a lack of transparency of certain water accounts due to “commercial in confidence” considerations. The SRA understands the need for Snowy Hydro to operate in a commercial manner. There is no question that once water has been determined to be Above Target Water (ATW) then Snowy Hydro are entitled to manage it as required.

In contrast however there are other water accounts which should be reported transparently, particularly where they relate to environmental outcomes. In the past, the balance in the Mowamba Borrowings Account was withheld. It is now fully discharged. It is our belief that accounts recording volumes of spills from Mowamba should be publicly available. As explained in Appendix A, the SRA believes that spills from Mowamba have incorrectly been subtracted from the following year’s Snowy River Increased Flows. A calculation of the total of Mowamba spills since corporatisation should be the subject of a new transparent account, to be repaid to the Snowy River at a rate to be determined.

Snowy River Alliance recommendations

The SRA recommends that the accounts for environmental water volumes be explicitly detailed in the Snowy Hydro Annual Water Report.

Appendix E. The overall inadequacy of annual releases into the Snowy River

The Snowy Water Inquiry Outcome Implementation Deed 2002 (SWIOID 2002) and the Snowy Water Licence required 21% of Mean Annual Natural Flow (MANF) to be delivered to the Snowy River below Jindabyne on an annual basis by 2012. These releases are referred to as Snowy River Increased Flows (SRIF). Upon agreement between the SWI partners, an annual volume up to 28% can be released via the SRIF program. We note that the accounting errors identified in Appendix A are reducing the flows actually delivered by approximately 2 percentage points each year.

The SWIOID describes the mechanism by which the critical flow identified by the Snowy River Inquiry (ie 28% of the MANF) can be delivered to the Snowy River. (SWIOID Clause 5, Annexure 1, Page 41). There does not appear to be any related provision under the Snowy Water Licence. In other words, it appears that the authors of the licence have assumed there will be no prospect of the delivering any flow greater than 21% up to the essential 28% of MANF originally identified as crucial to achieving recovery of the Snowy River.

The SRA considers the ability of the SHL infrastructure to release a wide range of flow rates to be of world class standard. The infrastructure upgrades and the assistance provided by SHL allows a great deal of flexibility in the daily and hourly release rates and allows more physical re-working of the Snowy River with a small volume of water.

The SRA is concerned however at the small allocation of environmental water, typically only 15% of MANF that has been actually delivered over recent years. The 21% scheduled for the 2017-18 water year is welcomed, but significant improvements are still required. Because many of the entitlements obtained from western rivers are of low or general security, we fully expect the allocation to return to 15% in the 2018-19 year and any other year of average rainfall or less. This is far short of the 21% actual flow by 2012 which was promised and only around half of the 28% flow identified as essential.

The SRA is concerned that improvements will take many decades and we need to be certain of long-term commitment by the SWI partner governments and the community.

Issues

- The inability to regularly achieve 21% of MANF on an annual basis.
- The absence of any reference to 28% MANF in the Snowy Water Licence
- The treatment of water allocation when allocations exceed 21% of MANF.
- The need to allocate 28% of MANF on an annual basis to meet fundamental ecosystem requirements as per the *Water Management Act 2000*.
- Consistent tributary releases via the Mowamba River to the Snowy River are required to provide basal resources
- Warm water pollution during autumn and early winter.
- The management of water levels in Lake Jindabyne during winter and spring, and the accounting of spills.
- The apparent cessation of the SWI and no funding to measure outcomes.
- The need to review the Snowy Water Sharing Plan to protect environmental water releases.
- Environmental objectives in the existing Snowy Water Inquiry instruments are outdated.
- The rate of flow recession using hydrological flow scaling, once daily volumes exceed 12,000 ML/day need to be carefully managed.
- Complementary management of the riparian zone is as important as the water releases.
- Greater consideration of climate change needs to be incorporated into the program.

- Stocking of native fish in the Snowy River requires better consideration than the previous Australian Bass program.

Snowy River Alliance recommendations

The SRA considers that the following issues need to be addressed in implementing the SRIF program below Jindabyne:

1. Replace environmental objectives in the existing Snowy Water Inquiry instruments that are outdated
2. The Snowy River below Jindabyne requires the 28% of Mean Annual Natural Flow. A specific review of the means to achieve 28% of MANF needs to be undertaken by the SWI partners.
3. The licence implies an annual upper limit of 21% of MANF (i.e. 212 GL per year). The upper limit should be 28%. Both targets need to be reviewed as the probability of achieving 21% in any one year will be greatly reduced with climate change and a drying climate.
4. The arrangements for releases from the Mowamba River to the Snowy River to be formalised.
5. The issues regarding warm water pollution from Jindabyne Dam be addressed via tributary releases during autumn. This can reduce water temperature between 2 - 6°C.
6. Greater funding of river works is required in-order to make the best use of the available SRIF water. Increased funding for (i) exotic woody weed management i.e. willows, acer, etc and (ii) re-establishment native riparian vegetation, (iii) greater fencing and off-channel water options for graziers (iv) sediment control.
7. No further stocking of native fish in the river system, until adequate due diligence is undertaken.