

NSW DEPARTMENT OF INDUSTRY

Ten-year review of the Snowy water licence—summary of submissions

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More information

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Abbreviations

Table 1. Abbreviations used in this document

Abbreviation	Expanded term
ATW	Above-target water
AWOP	Annual water operating plan
CICL	Coleambally Irrigation Co-operative Limited
DISV	Dry inflow sequence volume
licence	Snowy water licence
MDBA	Murray–Darling Basin Authority
Ministerial Corporation	Water Administration Ministerial Corporation
MVPD	Murray Valley Private Diverters (Inc)
NSWIC	New South Wales Irrigators' Council
OEH	NSW Office of Heritage
RAR	Required annual release
review report	<i>Ten-year review of the Snowy water licence—final report (2018)</i>
RMIF	River Murray increased flows
SAC	Snowy Advisory Committee
SDLAM	Sustainable Diversion Limit Adjustment Mechanism
SMRIF	Snowy Montane rivers increased flows
Snowy Hydro	Snowy Hydro Limited
Snowy Scheme	Snowy Mountains Hydro-electric Scheme
SRA	Snowy River Alliance
SRIF	Snowy River increased flows
SSC	Snowy Scientific Committee
SWGOC	Snowy Water Government Officials Committee
SWIOID	Snowy Water Inquiry Outcomes Implementation Deed
WCLC	Water Consultation Liaison Committee

Introduction

Purpose of document

The Snowy water licence (the licence) defines Snowy Hydro Limited's (Snowy Hydro's) rights and obligations in relation to water in the Snowy Mountains Hydro-electric Scheme (Snowy Scheme). The licence allows Snowy Hydro to collect, divert, store, and release water by and from the works of the Snowy Scheme for the 75-year term of the licence. The licence also defines the rules for releases into the Murray and Murrumbidgee rivers and imposes environmental flow release obligations on Snowy Hydro for the benefit of the Snowy River and other montane rivers (the rivers of the Snowy Mountains).

The licence is a NSW water licence issued and administered by the Water Administration Ministerial Corporation (Ministerial Corporation), which is a statutory body established under the *Water Management Act 2000* to represent the Crown and carry out various water management functions.

Under the *Snowy Hydro Corporatisation Act 1997*, the licence is subject to mandatory reviews, initially after five years and then at intervals of 10 years.

The NSW Department of Industry administers the licence on behalf of Water Administration Ministerial Corporation and managed the 10-year review. The department commenced the review on 28 June 2017, with interested stakeholders encouraged to lodge submissions.

The review's terms of reference are established under the licence and focus on Snowy Hydro's obligations. The department also considered Snowy Hydro's and the Ministerial Corporation's performance in meeting the conditions of the licence.

The *Ten-year review of the Snowy water licence—final report (2018)* (review report) can be accessed on the [NSW Department of Industry](https://www.industry.nsw.gov.au/snowy-water-licence) website.¹ In brief, the review identifies administrative amendments to the licence and proposes further investigating options to better manage environmental flows and improve current water release rules. Actions arising from the review will improve licence oversight and coordination of environmental water management in the Snowy Mountains.

This report presents the issues raised during the review over two rounds of public submissions. It identifies if an issue has been considered in the review, is due to be considered elsewhere or will not be progressed and the reasons why.

Stakeholders can examine the range of issues raised and track how the issues they raised will be dealt with.

Background

The NSW Department of Industry initiated the review on 28 June 2017 with invitations to the public to lodge submissions by 13 October 2017. The invitation was supported by public briefing sessions in Sydney and Melbourne and a fact sheet summarising key aspects of the licence under review.

There were 24 submissions lodged in response to the invitation from a range of community, environmental, and agricultural groups, government agencies and individuals.

The NSW Government responded to issues raised in the first round of submissions through the release and public exhibition of a draft report on 30 May 2018. The draft report outlined the review's preliminary findings and again sought feedback from the public, this time between 30 May 2018 and 6 July 2018. Public exhibition was supported by briefing sessions in Sydney, Melbourne, Cooma and Orbost.

The department received 16 submissions on the draft report and considered these responses in finalising the review's final recommendations. We released the final review report in December 2018.

¹ [industry.nsw.gov.au/snowy-water-licence](https://www.industry.nsw.gov.au/snowy-water-licence)

Scope of the review

The review’s terms of reference focused on Snowy Hydro’s obligations under the licence, which fall into three broad categories:

1. **increased flow requirements**—also known as environmental releases—including releases under the Snowy River increased flows (SRIF) and Snowy Montane rivers increased flows (SMRIF) programs.
2. **water release requirements**—predominantly releases to the western rivers—including accounting and data provision rules.
3. **administrative obligations**—including obligations relating to compliance reporting, the licensee’s rights in relation to water, the development of annual water operating plans (AWOPs), fees and charges, and the requirement to build and/or modify certain works.

The review also considered Snowy Hydro’s and the Ministerial Corporation’s performance in meeting the conditions of the licence and whether there are any anomalies or practical issues that need to be addressed.

The review did not address:

- the overall volumes of environmental flow releases, and whether they are excessive or insufficient
- the transfer of responsibility for designing Snowy Mountains environmental flows from the NSW Department of Industry to the NSW Office of Environment and Heritage (OEH)
- issues relating to Snowy 2.0 and the possible expansion of the Snowy Scheme
- town water supply issues.

Submissions

Recording of submissions

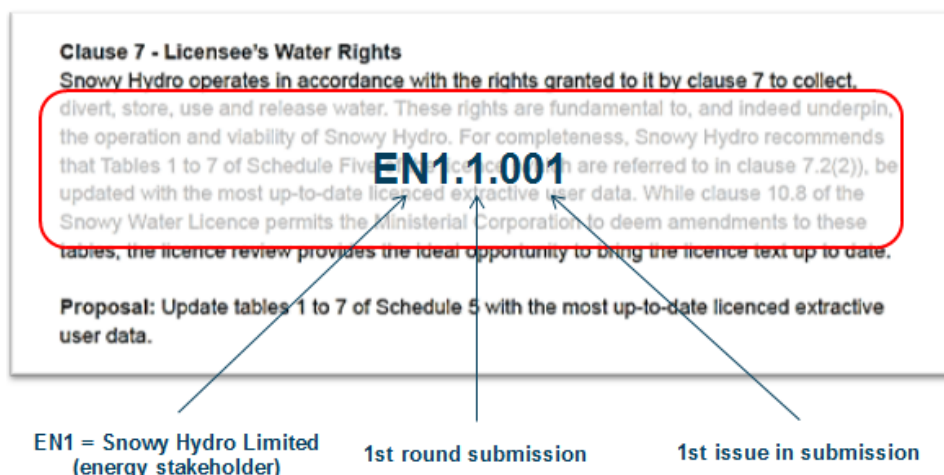
The NSW Department of Industry requested written submissions be clearly marked ‘Submission to the 10-year Review of the Snowy Water Licence’ and lodged via email at snowylicence.review@dpi.nsw.gov.au or by mail.

Once lodged, the department identified and recorded the issues in a Microsoft Excel spreadsheet developed specifically for the review.

Unique identifiers were assigned to every issue raised in a submission based on who lodged the submission, the stakeholder group they represented and to which round of consultation they were responding. Stakeholder groups included energy (EN), environmental (E), community (C), government agencies (G), individuals (I), agriculture (A) and irrigation (I). There were two rounds of submissions.

Figure 1 illustrates how each issue was assigned a unique identifier using the first issue raised by Snowy Hydro in its first submission to the review.

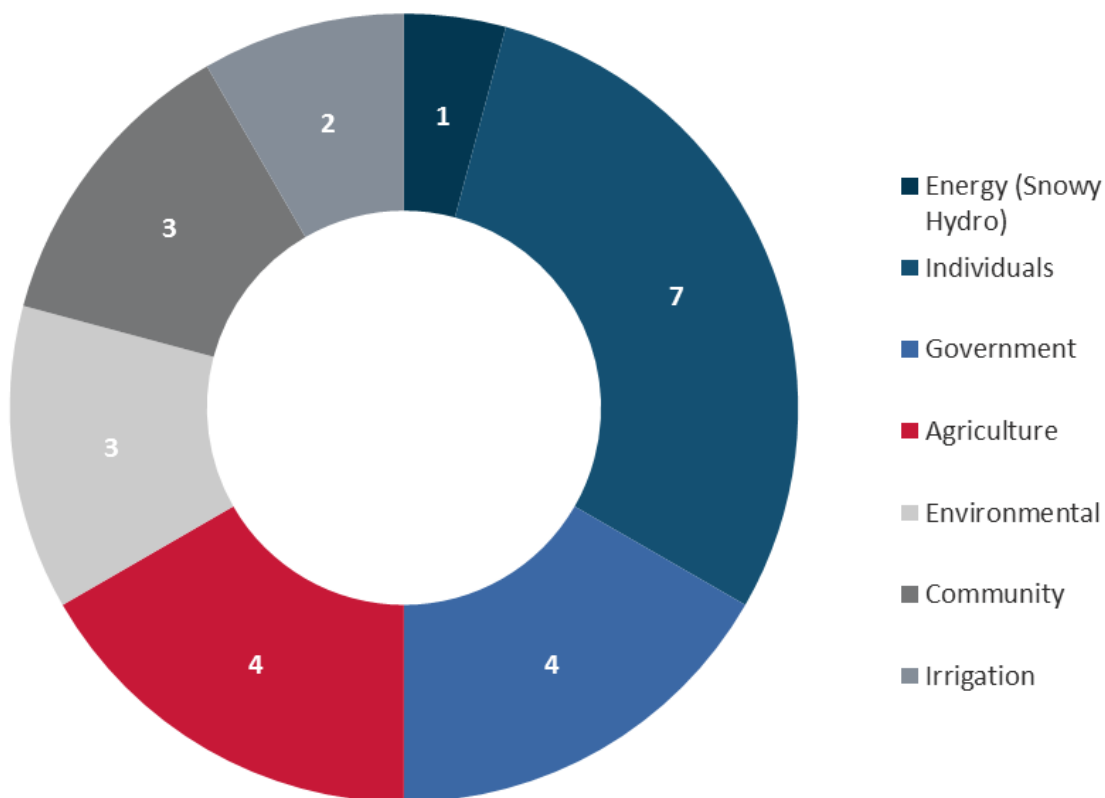
Figure 1. Assigning unique identifiers to issues raised in submissions



Summary of submissions—round 1

The NSW Department of Industry received 24 submissions in the first consultation period from a wide range of stakeholder interests. Notably, the energy industry was underrepresented, with Snowy Hydro being the only energy stakeholder to lodge a submission. Figure 2 shows the number of submissions by stakeholder type.

Figure 2. Submissions to round 1 by stakeholder type

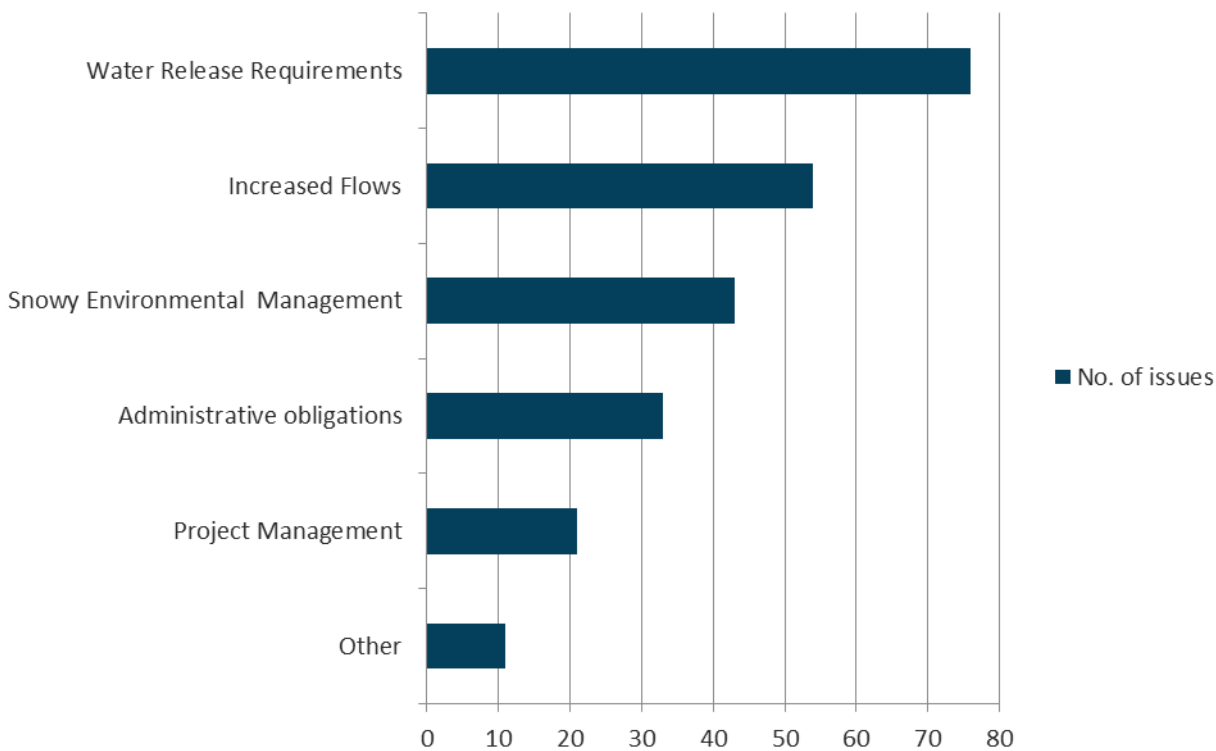


The submitters represented all regions that receive water released from the Snowy Scheme, including the Monaro and Riverina regions of NSW and the Gippsland and Hume regions of Victoria.

The department recorded 238 issues or statements that covered more than 50 topics related to the management of the Snowy Scheme. Roughly 80% of the topics covered fell within the review’s terms of reference.

The issues focus mainly on water release requirements or environmental management. Environmental management issues were split between issues with the increased flows obligations under the licence and the broader natural resource management actions of the NSW Government.

The remainder were generally concerned with the licence’s administrative obligations, water allocation policies in the Murray River and Murrumbidgee River water supply systems, and project governance. Figure 3 shows the number of issues raised in the round 1 submissions for each licence review category.

Figure 3. Number of issues raised per review category

Summary of submissions—round 2

The NSW Department of Industry received 16 submissions in response to the draft report. Government, agriculture, environment, community and irrigation interests from across south-east Australia were represented. Again, Snowy Hydro was the only stakeholder representing energy interests.

Ten stakeholders lodged submissions in both rounds of consultation, meaning six came from stakeholders that had not previously engaged in the review.

The submissions generally focus on the proposals identified in the draft report and on issues that had been raised in earlier submissions but not acted on. Only three new issues were raised.

No proposals were opposed outright. Stakeholders either supported them unconditionally or with qualifications, or remained silent.

The environmental proposals received the most attention, reflecting the mix of stakeholder backgrounds.

How issues were considered

All issues and statements relevant to the review's terms of reference were considered in the review. This was determined by applying a simple test around whether a response to the issue would require the licence to be amended. Issues associated with performance (that is, how a licence provision was followed or implemented) were referred to the performance review for consideration by the independent expert panel.

Issues not considered through the review were recorded, summarised in the draft review report and responded to in this summary of submissions report.

Summary of issues within the terms of reference

This section presents the issues and statements raised in the two rounds of submissions for each of the review's terms of reference.

Issues with administrative obligations

Table 2. Administrative issues raised and responses

Issue/commentary	Issue number	Response
Lack of clarity around priorities between water supply reliability, energy production and environmental flows		
The lack of clarity around management priorities makes it difficult to interpret the licence, particularly when unanticipated scenarios emerge.	G4.1.002	This issue is discussed in section 6.2.1 of the review report. We do not propose further action.
Until environmental considerations are given equal priority with other purposes of the licence, the Snowy River and Snowy montane rivers are unlikely to receive the water they need.	E2.1.001	
Ten years between formal reviews is too long		
So much may change in the restoration of the Snowy River as it is a dynamic work in practice. A five-year review period is more appropriate.	I6.1.008, C2.2.007, I6.2.005	This issue is discussed in sections 6.2.6, 7.6.2 and 7.71 of the review report. Under Action 21 of the review, the NSW Department of Industry will update its regulatory procedures. The department will work with Snowy Hydro and the Water Consultation and Liaison Committee (WCLC) to monitor when licence amendments outside the formal reviews may be required to capture and clarify current practice and simplify and streamline provisions.
Having only one opportunity every 10 years is inadequate	C3.1.001, I5.1.003	
Preparation of annual compliance report		
Snowy Hydro has ceased preparing and publishing an annual operations report.	I1.1.011	This issue is discussed in section 6.2.2 and 7.2 of the review report.
The compliance report does not report on River Murray Annual Allocation, RMIF and associated releases.	A6.1.004	Under Action 1 of the review, the NSW Department of Industry will vary the licence so that Snowy Hydro is obliged to prepare a public version of the AWOP. The Murray–Darling Basin Authority (MDBA) and state environmental water holders report on the use of RMIF in the Murray River.
Penalties for not complying with the licence obligations are inadequate		
There are no realistic penalties for failure to comply with licence conditions.	I1.1.003	This issue is discussed in section 6.2.2 of the review report. The expert panel review of Snowy Hydro's performance acknowledged the penalties for non-compliance are significant and that Snowy Hydro's

Issue/commentary	Issue number	Response
		systems for managing compliance risk are of a high quality. No further action is proposed.
Extractive user data for water licences granted within the Snowy Scheme is out of date		
The licence does not reference the most up-to-date licenced extractive user data.	EN1.1.001	This issue is discussed in section 6.2.3 of the review report. Under Action 2 of the review, the NSW Department of Industry will vary the licence to remove Schedule 5 and reference the publicly available information on rights to water that exist across the Snowy Scheme.
There is a lack of public information around Snowy operations		
The AWOP is currently not publicly available.	A1.1.010, A6.1.003	<p>Transparency is discussed in some form in sections 6.2.2, 7.2.2 and 7.5.2 of the review report.</p> <p>Under Action 1 of the review, the NSW Department of Industry will vary the licence so that:</p> <ul style="list-style-type: none"> • Snowy Hydro is obliged to prepare a public version of the AWOP, summarising the forthcoming year's operations, but withholding information that may disadvantage it on a commercial basis • future WCLC agreements will be published in both the commercial and public versions of the AWOP. <p>In addition, under Action 21 the NSW Department of Industry will review and expand on its internal regulatory policies and procedures for overseeing compliance with the licence. It will embed best practice regulatory values and behaviours in these policies and procedures and adopt an 'if not, why not' approach to publishing information.</p>
The lack of information made public due to the commercial nature of Snowy Hydro's operations makes it difficult to scrutinise management and environmental water accounting.	E2.1.002, C3.1.005, C2.1.002, I1.1.010, I5.1.010	
The annual increased flows release plans are released too late.	C2.1.004	
The ability to really know what the volumes are and how this translates into above-target water (ATW) for Snowy Hydro and therefore the impact and repercussions on Snowy increased flows, has always been an issue of debate.	C1.1.002	
Snowy Hydro has observed a number of inaccurate or misinformed statements in the submissions made to the review and will work with the NSW Government to clarify these issues, with the intent of improving understanding of Snowy Hydro's operations in the wider community.	EN1.2.004	
The community has no access to real-time flow data below the junction of the Mowamba and Snowy Rivers, making it impossible to confirm whether or not SRIF volumes, as a percentage of the mean annual natural flow is being delivered as designated in the Snowy Water Inquiry Outcomes Implementation Deed (SWIOD).	E1.2.009, I6.2.002	

Issue/commentary	Issue number	Response
There are challenges with the reporting and accounting of water, specifically the calculation of annual SRIF releases.	C2.2.004	
Snowy Hydro is not compelled to provide data that explains changes to licence provisions/operations		
Without this information partner governments are inadequately equipped to make decisions about how to maximise efficient use of Snowy Scheme water resources.	G1.1.008, G1.2.009	This issue is discussed in section 6.4.4 of the review report. Relevant water agencies and Snowy Hydro will collaborate to improve modelling capability. This will support the investigations identified in the review and any future reviews that consider variations to the licence.
There is limited advanced notice of Snowy Hydro's release intentions		
Knowledge of future Snowy Hydro releases would allow improved planning.	G4.1.010, G4.1.011, A3.1.012	This issue is discussed in section 6.2.4 of the review report. Under Action 3 of the review, Snowy Hydro will collaborate with the MDBA and WaterNSW to discuss implementation of AWOPs during a water season.
The licence includes redundant provisions		
The licence includes numerous provisions that are now redundant, mostly related to the requirement to construct works and the Mowamba Borrowings Account.	G1.1.013, G3.1.006	This issue is discussed in section 6.3.2 and 6.3.3 of the review report. Under actions 5 and 6 of the review, the NSW Department of Industry will vary the licence to remove all provisions related to the outlet construction works at Jindabyne and Tantangara dams and the operation of the Mowamba Borrowings Account.
The Mowamba Borrowings Account is no longer required.	EN1.1.006, E2.1.005	

Issues with increased flows

Table 3. Issues raised about increased flows and responses

Issue/commentary	Issue number	Response
Inability to deliver SRIF from Mowamba Weir		
Delivering SRIF from a combination of regulated releases from Jindabyne Reservoir and unregulated flows over Mowamba Weir would improve environmental outcomes for the Snowy River.	E1.1.004, E2.1.004, C1.1.001, I5.1.008, I6.1.002, C4.2.001	This issue is discussed in section 6.3.4 of the review report. Under Action 7 of the review, OEH will partner with the NSW Department of Industry to finalise the Mowamba River investigation, which will include: <ul style="list-style-type: none"> evaluating using the Mowamba River as a way to

Issue/commentary	Issue number	Response
The Mowamba aqueduct and Mowamba Weir should be decommissioned to reintroduce natural headwater to the Snowy River.	E1.1.005, C3.1.006, C2.1.001, I5.1.008, I6.1.002	<ul style="list-style-type: none"> provide environmental water to the Snowy River recommending an environmental flow regime for the Snowy River consisting of a combination of releases from Jindabyne Dam and the Mowamba River.
The Mowamba weir holds back the flow of the Moonbah River, the only true alpine stream that could form a key tributary of the Snowy below Jindabyne Dam.	I10.2.001	
Lack of flexibility for delivering SRIF		
The licence prevents environmental managers from adapting releases according to seasonal conditions, increasing flood risks and reducing the effectiveness of SRIF.	G1.1.005, G1.2.007	<p>This issue is discussed in section 6.3.5 of the review report.</p> <p>Under Action 8A of the review, the NSW Department of Industry will investigate more flexible delivery to achieve better environmental outcomes from the available SRIF.</p>
There is no provision to carry over any excess SRIF in years of high allocation, such as occurred in 2016–17 when 214.3 GL were allocated to the Snowy account.	E2.2.005	
Inability to deliver more than 212 gigalitres per year of SRIF		
The licence is silent on facilitating a release of SRIF equal to 28% mean annual flows and implies an upper limit of 21%.	C3.1.009	<p>This issue is discussed in section 6.3.5 of the review report.</p> <p>Under Action 8B of the review, the NSW Department of Industry will work with OEH, Snowy Hydro and Victorian and Commonwealth governments to ensure governments can deliver an average annual flow of 212 gigalitres per year down the Snowy River cost-effectively, in accordance with the intent of the SWIOD.</p>
It is reasonable to assume that in a year in which all entitlements can be delivered then some of the deficits from previous years should be repaid to the Snowy. It is not reasonable for the benefit of the 'bonus' water to be given only to Snowy Hydro.	C3.2.006	
Constraining the achievement of 21% mean annual natural flow for the Snowy River through withholding allocation above 212 gigalitres in any year is inconsistent with the agreed intent of the NSW, Victorian and Commonwealth Governments in entering into the 2002 suite of Snowy Water Agreements, along with the obligations on Snowy Hydro arising from these agreements.	G1.2.004	

Issue/commentary	Issue number	Response
Requirement for SRIF to be released from near-the-surface-horizon of Jindabyne Reservoir		
The warm water temperatures near the surface in Jindabyne Reservoir in summer are unsuitable for trout and montane native fish downstream.	E1.1.007, E3.1.003, C3.1.012	This issue is discussed in section 6.3.8 of the review report. We do not propose direct action. However, the Mowamba River investigation will consider the benefits a new flow regime would have on temperature outcomes in the Snowy River below Lake Jindabyne.
The upper strata of water in Jindabyne dam can reach unacceptably high temperatures.	C2.2.001	
The Snowy Scientific Committee (SSC) advised in 2009 that the near-surface water in Jindabyne Dam to a depth of 5 metres can be higher than 20°C, which is unsuitable for montane fish. Further, a scientific study indicated that the Mowamba River flows were of insufficient volume to change the mean daily water temperature in the Snowy.	E1.2.010	
SMRIF cannot be carried over		
SMRIF cannot be carried over. While the montane tributary weirs are unable to store unreleased SMRIF, there is no reason why the gigawatt hour value should not be carried over as credit to subsequent years. This would address the significant and continuing shortfall in upper Snowy releases.	E1.2.014	This issue is discussed in section 7.5 of the review report. The NSW Government has accepted all recommendations of the independent expert panel regarding the management of SMRIF. OEH will develop a long-term water plan for the SMRIF in accordance with the management framework it applies to other NSW rivers.
Accounting River Murray increased flows (RMIF) as ATW is not in the best environmental interests of the River Murray		
Snowy Hydro should not have discretion over releases of RMIF.	E1.1.009, E2.1.006, A2.1.003	This issue is discussed in section 6.3.9 of the review report. Under Action 11 of the review, the NSW Department of Industry will investigate the trigger for accessing RMIF.
Restricting access to RMIF		
Limiting call outs of RMIF to a volume that would not reduce the net volume of ATW to less than 800 gegalitres does not allow for most effective use of RMIF.	E1.1.010, E2.1.006, G4.1.009, I1.1.008, E2.2.007	This issue is discussed in section 6.3.9 of the review report. Under Action 11 of the review, the NSW Department of Industry will investigate the trigger for accessing RMIF.
Changes to the licence in 2011 were supposed to make the RMIF more accessible and give more flexibility, but there has been no discernible impact.	E2.2.008	

Issue/commentary	Issue number	Response
The definition of net ATW in relation to the call-out of RMIF is incorrect		
The definition of net ATW in clause 1.1(50) is not satisfactory. The use of a net ATW trigger was designed to ensure that encumbered volumes of ATW held by Snowy Hydro were excluded from RMIF call outs. For that reason, net ATW excludes water held in the drought accounts. However, the current definition of net ATW does not exclude similarly tagged ATW water.	EN1.1.022	This issue is discussed in section 6.3.9 of the review report. Under Action 11 of the review, the NSW Department of Industry will investigate the trigger for accessing RMIF.
There is a lack of clarity around the management of RMIF		
Accounting, reporting, and forecasting of RMIF in the Snowy Scheme are not transparent, making it difficult to use it effectively and to apply public scrutiny.	E1.1.013, G1.1.009, G4.1.010	Transparency is discussed in some form in sections 6.2.2, 7.2.2 and 7.5.2 of the review report. The MDBA and state environmental water holders are responsible for reporting on the use of RMIF in the Murray River. The NSW Department of Industry will table this issue in the relevant environmental water management forums.
There is a lack of transparency around use of RMIF, particularly its use via substitution under other intergovernmental agreements.	E1.1.011, E2.1.007	

Issues with water release requirements

Table 4. Issues raised about water release requirements and responses

Issue/commentary	Issue number	Response
The licence does not optimise water and energy objectives		
The licence is weighted towards use of the Snowy Scheme's water resources for electricity production and derivative trading in the national electricity market at the expense of optimum water management.	I1.1.001	The various issues with the water release requirements are discussed in section 6.4 of the review report. The review report commits to completing nine investigations exploring options to better complement water management rules between the Snowy Scheme and downstream water supply systems.
We acknowledge that Snowy Hydro is complying with the terms of the licence, but we question if the licence in its current form provides sufficient protections to the supply of water interests from the Snowy Scheme. The protection of supply for the western rivers was intended in the licence and is seen as highly desirable.	G4.1.001	NSW Department of Industry and key stakeholders will investigate: <ul style="list-style-type: none"> the calculation methods for determining how to account for cloud seeding (Action 12) the interaction of the dry inflow sequence volume (DISV) with other elements of the required annual release (RAR) and its effectiveness in managing release requirements in a changing climate (Action 13) improvements to the effectiveness of the
The licence is couched in terms such as 'the Licensee may release water as it sees fit'.	I1.1.002	

Issue/commentary	Issue number	Response
Neither WCLC nor the Ministerial Corporation can force changes to the AWOP to achieve better outcomes.	I1.1.006	<p>relaxation mechanism (Action 14B)</p> <ul style="list-style-type: none"> • the effectiveness of the flexibility and prerelease provisions (Action 15B) • the effectiveness of spill compensation and flood mitigation arrangements (Action 16A) • options to improve timing of releases to increase water use efficiency and flood management outcomes (Action 16B) • options to secure early season release commitments to support early season water allocations (Action 18) • the effectiveness of the drought and DISV reserve accounts (Action 19) • how net evaporation should be shared between bulk water accounts (Action 20).
There is opportunity for improvement, given that during wet periods water can spill from Blowering and Hume reservoirs and during dry periods water allocations for regulated Murray and Murrumbidgee entitlements can be less than 100%. Such outcomes 'on face value' appear inconsistent with the intent of the water sharing arrangements to, as far as possible, capture and store water during wet periods for release during dry periods.	G2.1.002	
The principles underpinning the design of licence are fundamental		
The operation of the Snowy Scheme revolves around the water available to each development and the preservation of catchment-based sharing of inflows. These principles are fundamental to the design of the Snowy Scheme and must continue to apply.	EN1.1.016	<p>This issue is discussed in section 6.4.1 of the review report.</p> <p>The review did not consider changes to how water is shared at the bulk level, given the current arrangements are fundamental to the design and operation of the Snowy Scheme.</p>
The conditions underpinning the design of licence obligations have changed		
The underlying annual yield of the scheme should be reviewed in light of the millennium drought and a changing climate to ensure the scheme provides the reliability of water supply intended at the time of corporatisation.	G4.1.006	<p>This issue is discussed in section 6.4.1 of the review report.</p> <p>The review did not consider changes to how water is shared at the bulk level, given the current arrangements are fundamental to the design and operation of the Snowy Scheme.</p>

Issue/commentary	Issue number	Response
<p>There are now differences in the nature of holdings between the Snowy–Tumut and Snowy–Murray developments. Changes since corporatisation include:</p> <ul style="list-style-type: none"> the two developments feeding into different, state-based electricity markets, with drivers encouraging periods of high generation growing differences in the inflows into the two developments (reflected in differing drought relief adjustments) different spill implications (as spill rules are a function of the DISV) growing callable volumes on the Murray but not the Murrumbidgee differing treatments of unregulated inflows. 	G4.1.005	The NSW Department of Industry will raise the issue of long-term changes in inflow patterns with partner governments through the Snowy Water Government Officials Committee (SWGOC).
<p>The Snowy River Alliance (SRA) is concerned that in the longer term there will be increasing pressure to maintain diversions from the Snowy and its tributaries, despite a lessening of the total catchment inflows. This may potentially reduce the high security water allocations that underpin environmental flows in the Snowy River, ultimately pushing us back to the bad old days before SRIF commenced.</p>	C3.2.010	
The licence lacks clarity around accounting for ATW		
<p>Accounting for ATW is not well specified and its application appears to prioritise electricity generation at the expense of water supply reliability.</p>	G4.1.016	<p>This issue is discussed in section 6.4.1 of the review report.</p> <p>Under Action 12 of the review, the NSW Department of Industry will seek to agree on cloud seeding water accounting arrangements with Snowy Hydro, the MDBA, WaterNSW and the Victorian and Commonwealth governments, following Snowy Hydro's re-evaluation of its existing data and methods in 2020.</p>
<p>The licence is silent on accounting arrangements for any Snowy Scheme inflow improvements resulting from the cloud seeding program. However, since 2016–17 inflows to the Snowy Scheme resulting from Snowy Hydro's cloud seeding program have been recognised in the ATW accounts.</p>	G1.2.010	<p>NSW Department of Industry will also seek opportunities to clarify ATW accounting arrangements in the licence when considering the amendments</p>

Issue/commentary	Issue number	Response
<p>The ability to know what the accurate volumes are, how this translates into ATW for Snowy Hydro, and the impact and repercussions on RMIF, has always been debated. This grey area of access to waters held over for release needs to be investigated and made clear and open, which will allay stakeholder concerns, reduce conflict and clarify this matter.</p>	<p>C2.2.006</p>	<p>recommended from the review's investigations.</p>
<p>Relaxation provisions are sub-optimal</p>		
<p>The volume of 'relaxation water' has been lower, and arrived later, under baseline conditions than would have been the case using actual conditions for both developments. Changes to government policy and industry practices mean that baseline conditions—those existing at corporatisation—no longer persist, and use of observed or historic information is less likely to be a reasonable proxy. The current approach to determining the relaxation volumes is not achieving its intended outcomes, to the detriment of all water users.</p> <p>Snowy Hydro also notes there have been issues in assessing 'baseline conditions'.</p>	<p>EN1.1.017</p>	<p>This issue is discussed in section 6.4.2.2 of the review report.</p> <p>Under Action 14 of the review, the NSW Department of Industry will:</p> <ul style="list-style-type: none"> • vary the licence to correct errors in the Snowy–Tumut relaxation volume calculation and clarify licence provisions • investigate ways to make the relaxation mechanism more effective.
<p>Significant changes to water management and allocation policies have occurred since the baseline year of 2002. Is it still appropriate and does it allow relaxation provisions to function as intended?</p>	<p>A1.1.007, A3.1.010</p>	

Issue/commentary	Issue number	Response
<p>There is no mechanism to defer RAR between years when downstream needs are already met. There is only provision for releases to be relaxed whereby only a portion can be called back out in the following year only, with the remainder transferred to ATW in perpetuity.</p>	<p>A2.1.002, A3.1.009, A5.1.002, G4.1.008</p>	
<p>Annual release requirements can only be changed at the request of water management agencies if Snowy Hydro agrees and thus it is not possible to optimise the Snowy Scheme's storages with those of the Murray–Darling Basin.</p>	<p>I1.1.004</p>	
<p>The relaxation arrangements may be sub-optimal. This could be a function of the relaxation arrangements themselves or other external factors.</p>	<p>G2.1.003</p>	
<p>Applying relaxation provisions while there is a DISV could lead to a reduced RAR.</p>	<p>G4.1.012</p>	
<p>The current definition of the volume of water that may be called out relative to the maximum relaxation volume and actual release deficit relative to a fixed 900 gigalitres does not take into account the pre-release volume.</p>	<p>EN1.1.021</p>	
<p>There is a known error in demands listed from the Snowy–Tumut relaxation calculation.</p>	<p>EN1.1.018, G4.1.013</p>	
<p>Current spill protections are inadequate</p>		
<p>The large inflows that occurred during the 2011 and 2017 Snowy water years revealed that the current definition of 'unused spill' and how this affects related provisions is inadequate.</p> <p>Currently, the unused spills calculation takes no account of factors that may cause a spill in Blowering or Hume Dams, other than inflows from the Snowy Scheme. The definition of unused spill also takes no account of Snowy Hydro's minimum release obligations.</p> <p>Finally, the exclusion of Blowering Pre-Releases from unused spills from Blowering Dam has resulted in releases being treated differently for the Snowy–Tumut and the Snowy–Murray developments.</p>	<p>EN1.1.023</p>	<p>This issue is discussed in section 6.4.2.4 of the review report.</p> <p>Under Action 16A of the review, the NSW Department of Industry will review the effectiveness of spill compensation and flood mitigation arrangements in the licence.</p>

Issue/commentary	Issue number	Response
It is unclear whether within-year release rules are operating as intended and providing adequate spill protections for downstream water supplies.	G4.1.014, A1.1.008, A3.1.011	
The lack of spill protection for DISV flexibility releases can affect the availability of downstream water supplies.	G4.1.014	
There are opportunities to improve flood mitigation		
<p>The Tumut River channel capacities referenced in clause 43 of the <i>Water Sharing Plan for the Murrumbidgee Regulated River Water Source 2016</i> exacerbate the difficulties of airspace management at Blowering Reservoir.</p> <p>It has been demonstrated that the limits of 9 GL/ day at Oddy's Bridge and 9.3 GL/Day at Tumut township severely and unnecessarily hamper the ability of WaterNSW to make pre-releases from Blowering Dam as required under the Blowering Air Space Deed. This issue is exacerbated by inflows from Goobragandra River, which can exceed the Tumut township channel capacity without any release from Blowering Dam.</p>	EN1.1.026	<p>This issue is discussed in section 6.4.2.4 of the review report.</p> <p>Under Action 16B of the review, the NSW Department of Industry commits to investigating options to improve licence rules around the timing of releases to increase water use efficiency and flood management outcomes.</p>
Snowy Hydro has complete control over the timing of release of ATW, which could occur when either, or both, Blowering and Hume Dams are full.	I1.1.007	
There are no constraints on releases when downstream storages do not have the capacity to capture them.	I1.1.005, I2.1.003, A1.1.009, A3.1.008	
Spilling RAR can help meet ecological outcomes and potentially reduce pressure to recover more environmental water in the Murray–Darling Basin beyond 2024 in the next Basin Plan.	A2.1.001	
Snowy Scheme releases are not contributing to early season water allocations		
There is no requirement to make releases early in the season, which delays announcements of water allocations.	A3.1.005, A6.1.002	<p>This issue is discussed in section 6.4.2.7 of the review report.</p> <p>Under Action 18 of the review, the NSW Department</p>

Issue/commentary	Issue number	Response
After a dry sequence period, RAR volumes can be low at the start of the water year, limiting early season allocation announcements.	G4.1.007	of Industry will investigate options to secure commitment of releases from the Snowy Scheme to support increased early season water allocations for Murray or Murrumbidgee water users.
There are numerous operational and policy implications for governments and water authorities associated with Snowy Hydro advancing ATW under commercial arrangements to irrigation organisations. These include inequity, uncertainty, risks to third parties and funding of approvals.	G1.1.014, G4.1.004	
It is unclear whether the flexibility and pre-release provisions are meeting their objectives		
The review provides an opportunity to review the operation of the drought account, pre-release/flexibility, wet sequence protection provisions, introduced in 2011, to ensure they meet their intended objectives.	A1.1.004, A3.1.006, A5.1.003, A5.1.004, G1.1.010, G3.1.002	This is discussed in section 6.4.2.3 of the review report. Under Action 15B of the review, the NSW Department of Industry will review the operation of the flexibility and pre-release provisions, including their interaction with other RAR provisions, and to considering opportunities to improve existing arrangements.
Is the Blowering Airspace Deed being called on more often as a consequence of operational changes facilitated through increased flexibility?	A5.1.005	
The pre-release/flexibility provisions are weighted towards electricity generation at the expense of overall water management.	I1.1.009	
The water authorities do not receive advanced notice if Snowy Hydro applies the flexibility provisions.	I2.1.001	
Applying pre-release/flexibility provisions during dry periods when Snowy Scheme storages are depleted could result in a premature failure of a development.	I2.1.002	
Applying flexibility when storages and inflows are below target could advance the occurrence of the DISV provision, increasing the risk of storage failure.	I2.1.002	
The pre-release/flexibility provisions were added to the licence in 2011 in isolation and were not adequately incorporated in all elements of the licence.	G4.1.015	
CICL still considers that the changes made	A5.2.001	

Issue/commentary	Issue number	Response
to Snowy Hydro's water licence in 2011, by formalising the flexibility arrangements, were beneficial to Snowy Hydro's commercial operations. The benefits to downstream water users of the 2011 changes are more difficult to quantify.		
It is unclear whether the drought and DISV reserve provisions are meeting their objectives		
It is unclear how the operation of and interactions between the drought accounts and DISV reserve accounts relate to allocations against NSW general security entitlements, in particular whether the drought accounts have reduced general security allocation in dry years.	A1.1.005, A3.1.007	This is discussed in section 6.4.3.1 of the review report. Under Action 19 of the review, the NSW Department of Industry will investigate the effectiveness of the drought and DISV reserve accounts and considering options for improving how they support downstream water user requirements.
The triggers for release of the drought reserves provide no direct benefit to general security water entitlement holders and the accumulated DISV has impacted significantly on general security announced allocations	A5.1.006	
The water accounting rules are complex and unclear in some cases		
Water accounting methods discussed and agreed by the WCLC are ambiguous, opaque and only visible in the AWOP.	G1.1.011	Transparency is discussed in some form in sections 6.2.2, 7.2.2 and 7.5.2 of the review report. Under Action 1 of the review, the NSW Department of Industry will vary the licence so that:
Some decisions agreed by the WCLC remain 'without prejudice' so lack clarity and are uncertain.	G1.1.012, G4.1.003	<ul style="list-style-type: none"> • Snowy Hydro is obliged to prepare a public version of the AWOP, summarising the forthcoming year's operations, but not disclosing information that may disadvantage it on a commercial basis
Licence complexity makes it extremely difficult to engage with and understand, and for water managers and river operators downstream to plan.	G1.1.007, A3.1.015	<ul style="list-style-type: none"> • future WCLC agreements will be published in both the commercial and public versions of the AWOP.
The licence does not currently define how the Maximum Probable Annual Water Release should be calculated. This can create uncertainty and potential disagreements in the AWOP process. This uncertainty was increased by the amendments to the licence adopted in October 2011, in particular the introduction of flex releases (which, as mentioned, represent a pre-release of the following year's RAR).	EN1.1.034	Under Action 21 , the NSW Department of Industry will review and expand on its internal regulatory policies and procedures for overseeing compliance with the licence. It will embed best practice regulatory values and behaviours in these policies and procedures and adopt an 'if not, why not' approach to publishing information.
The sharing of net evaporation is inequitable		
Net evaporation is currently shared amongst the Snowy–Murray and Snowy–Tumut developments and ATW/RAR accounts	EN1.1.033	This is discussed in section 6.4.3.2 of the review report. Under Action 20 of the review, the NSW Department

Issue/commentary	Issue number	Response
based on the actual volume of water in each of those physical storages and accounts. Following the same principles, the RMIF account and the Snowy–Murray and Snowy–Tumut drought accounts should also be subject to a relative share of evaporation.		of Industry will further investigate and resolve how net evaporation should be shared between bulk water accounts.
There are errors in the flexibility and pre-release provisions		
As a result of an administrative error during a variation to the licence, incorrect drafting appears in clause 1.1(3). The intention of the licensee and the Ministerial Corporation is that the reference therein to 'Clause 13.1' should be a reference to 'Clause 13.2'.	EN1.1.029	This is discussed in section 6.4.2.3 of the review report. Under Action 15A of the review, the NSW Department of Industry will vary the licence to correct the drafting error in the definition of the 'agreed annual release' and reflect the WCLC drafting of the definition of 'recovery amount'.
There is a drafting error in the definition of the 'Recovery Amount' used in the maximum pre-release volume calculation in Clause 13.4 and referenced in Clause 16.1.	EN1.1.030	

Issues with performance

Table 5. Performance issues raised and responses

Issue/commentary	Issue number	Response
Non-compliance with delivery of SMRIF targets		
<p>Not all Montane riverine works have been completed with the following modifications still outstanding:</p> <ul style="list-style-type: none"> • Gungarlin River weir modified to deliver flows below Island Bend dam. • Perisher Creek aqueduct modified to deliver flows below Guthega dam via Perisher Creek and Rams Flat Creek. 	E1.1.014, E2.1.009, E1.2.005, E2.2.010	<p>This issue is discussed in sections 7.5 and 7.7 of the review report and section 6.2 of the report of the independent expert panel.²</p> <p>The NSW Government has accepted all recommendations of the expert panel regarding the management of SMRIF.</p> <p>The NSW Government is transferring responsibility for Snowy increased flows to OEH and is capturing the roles and responsibilities in a memorandum of understanding between NSW Department of Industry and OEH.</p>
The NSW Government's method of distributing water allocation fails to meet delivery targets and favours the upper Murrumbidgee River.	E1.1.015, E2.1.010, E2.2.012	OEH will be supported by the Snowy Advisory Committee (SAC), the re-established SWGOC (Action 23), NSW Department of Industry and Snowy Hydro.
There is a lack of public transparency about why the flow targets are not being achieved.	C3.1.007	OEH will plan and deliver SMRIF in accordance with the management framework it applies to other NSW rivers. In doing so, it will review the current SMRIF program and ensure ongoing planning and delivery is informed by scientific monitoring and evaluation, consultation, communication and expert advice.
The flow targets and environmental objectives specified in the licence are not being met.	C3.1.007, C3.1.016, I5.1.009	To help improve transparency, NSW Department of Industry will also update its regulatory procedures to ensure the licence is varied when necessary to reflect agreed approaches and incorporate improved knowledge (Action 21).
The strategy of using Tantangara Dam releases to absorb the variation in apportionment of SMRIF results in two sections of the Upper Snowy River scheduled to receive SMRIF continuing to receive greatly reduced volumes (with a concomitant loss of environmental benefit) compared to the licence target volumes.	E1.2.013	
Management of SMRIF appears to be inconsistent with obligations and appears to be based more on cost effectiveness than appropriate environmental management. It is difficult to ascertain if the works as required in the licence do meet the necessary legislated outcomes.	C2.2.003	

² Winfield, D., Smith, G. and Carter, R. 2018, *Expert Panel for the 10 Year Review of the Snowy Water Licence*, Final Report, provided by Alluvium Consulting for NSW Government. (www.industry.nsw.gov.au/snowy-water-licence)

Issue/commentary	Issue number	Response
More than two variations to SMRIF targets have been implemented, with lower volumes being targeted from different locations in the upper Snowy River. It is also unclear whether the variations to SMRIF to the upper Snowy are temporary or permanent.	E1.2.015	
The total volume of SMRIF available is also reduced under the adopted strategy due to targeting releases from Tantangara and Geehi rivers.	E1.2.016	
Individual management strategies have not been prepared for each of the five rivers referred to in Schedule 3, Table One nor an assessment of the environmental consequences (i.e. measure of performance) of providing much reduced flows to the two sections of the upper Snowy compared to the target flows in Schedule 3, Table One.	E1.2.017	
The approach to managing the SMRIF program fails to satisfy community expectations for obvious sections of the upper Snowy such as that immediately below Guthega. The community expects to see water in that section of river. It appears to be a case of 'trust us we have looked into it but it's too costly', with no opportunity for skilled or experienced community members to contribute to the decision process.	C3.2.009	
Currently, practices to provide flows to the upper montane streams seems to be very ad hoc where the annual allocation may be provided but to only one stream. Unfortunately, with these streams, out of sight is out of mind for both those charged to implement these flows and, more importantly, the general public, who cannot know that they are still damaged and need environmental flows to correct this.	I6.2.004	
Accounting spills from Jindabyne Reservoir as SRIF		
Spills from Jindabyne Reservoir in 2012–13 should not be accounted for as SRIF in the following years and should be paid back.	E1.1.006, C2.1.003, C3.1.013	Discussed in sections 7.3 and 7.7 of the review report and section 6.1 of the report of the independent expert panel. ³

³ Winfield, D., Smith, G. and Carter, R. 2018, *Expert Panel for the 10 Year Review of the Snowy Water Licence*, Final Report, provided by Alluvium Consulting for NSW Government. (www.industry.nsw.gov.au/snowy-water-licence)

Issue/commentary	Issue number	Response
There appears to be anomalies as to how spills are accounted for in the past and repatriated back to Snowy Hydro, when this may not have been required.	C2.2.005, I6.2.003	Under Action 22 of the review, the NSW Department of Industry will seek to simplify Lake Jindabyne spill provisions to increase clarity and ensure the intent of the current arrangements is well understood.
Accounting of unregulated flows over Mowamba and Cobbon Creek weirs as SRIF		
There are concerns unregulated passing flows over Mowamba Weir and Cobbon Creek Weir are being accounted for as SRIF in future years.	E1.1.008, C3.1.004, C1.1.002, I5.1.007, I6.1.004	Discussed in sections 7.4 of the review report. No further action is proposed.

Level of support for draft report proposals

Table 6. Issues raised about draft report proposals and responses

Issue/commentary	Issue number	Response
General comments on draft report		
The draft report has failed to propose any licence variations that will deliver improved environmental outcomes and has ignored recommendations from the community in this regard.	E1.2.001, E2.2.003	The review's findings seek to achieve healthier Snowy Mountain rivers. The NSW Department of Industry will investigate better ways to deliver environmental flows. The identified licence amendments will increase transparency and community understanding about how environmental water in the Snowy is managed. The actions build on the Snowy Water Initiative and recent environmental water management reforms that include setting up the SAC and transferring Snowy environmental water management functions to OEH. A key principle of the approach to the review was to ensure timely completion to provide certainty for Snowy Hydro and stakeholders that rely on water released from the Snowy Scheme. A two-staged approach to the review ensures stakeholder priorities are identified and provides the time needed to adequately assess the costs and benefits of non-administrative changes to the licence, including variations to the increased flows provisions.
The review is seriously limited by the lack of independent scientific information on the condition of the Snowy catchments.	E1.2.002	Available scientific information will be considered in the investigations.
Some of the investigations are continuations of commitments made more than 10 years ago (e.g. Mowamba investigations).	C3.2.001	N/A

Issue/commentary	Issue number	Response
All the draft proposals to investigate key water release requirement provisions should be identified as high-priority actions and these investigations be conducted as a package in conjunction with each other.	G1.2.008	The work plan ensures all stakeholder priorities are identified. The complexity and interaction of the licence provisions will necessitate that the investigations be conducted as a package.
Proposal 1—Increased public reporting		
Snowy Hydro supports proposals to increase access to publicly available information concerning the licence.	EN1.2.001	N/A
There is a need to preserve commercially sensitive information.	EN1.2.002	The review report identifies an opportunity to respond to concerns about a lack of transparency and improve public reporting of Snowy Scheme operations, while protecting Snowy Hydro's commercial interests. Accordingly, Action 1 does not commit Snowy Hydro to disclosing information in the public AWOP that may disadvantage it on a commercial basis.
The public AWOP must include the volumes targeted for release of SMRIF and RMIF and annual allocations to RMIF.	E1.2.004	Section 6.2.2 of the review report includes details on the content of the public AWOP.
Environment Victoria endorses the proposal to increase transparency around the AWOP.	E2.2.001	N/A
Victoria strongly supports the implementation of proposed actions to increase transparency, particularly where they provide water managers with timely information that can be fed into allocation determinations, for environmental planning or where it has the potential to improve coordinated management of the different water supply systems.	G1.2.001	N/A
Support NSW Department of Industry's proposal to change the licence to require Snowy Hydro to prepare a public version of the AWOP.	A1.2.001, A5.2.003	N/A
Support the public release of the WCLC agreements.	A1.2.002, A5.2.004	N/A

Issue/commentary	Issue number	Response
Murray Valley Private Diverters (MVPD) is keen to create ongoing dialogue with the processes for preparing and implementing Snowy Hydro's AWOPs.	A7.2.005	Under Action 21 of the review, the NSW Department of Industry apply best practice to the administration of the licence. This includes improving the governance of the AWOP process and adopting an 'if not, why not; approach to publishing all policies, decisions, information and processes to the extent that it does not compromise the commercial operations of Snowy Hydro.
Proposal 3—Collaboration on water operations		
Snowy Hydro supports proposals to increase collaboration and consultation with relevant stakeholders.	EN1.2.003	N/A
It is unclear whether Proposal 3 involves WaterNSW acting as the consulting authority or as a stakeholder that is consulted during the process.	G2.2.005	It is intended that the collaborative arrangements be agreed between the relevant organisations.
Support the proposal for Snowy Hydro to more closely consult with the MDBA and WaterNSW on the implementation of the AWOP during a water season.	A1.2.003, A5.2.005	N/A
MVPD sees consultation between water agencies and Snowy Hydro as critical to avoid any reduced reliability in NSW Murray general security water entitlement yield.	A7.2.006	N/A
Proposal 4—Contents of the AWOP		
CICL supports proposal 4.	A5.2.006	N/A
Proposal 5—Construction of outlets at Jindabyne and Tantangara dams		
It is appropriate to remove redundant provisions.	EN1.2.005	N/A
Proposal 6—Mowamba Borrowings		
It is appropriate to remove redundant provisions.	EN1.2.005	N/A

Issue/commentary	Issue number	Response
Environment Victoria endorses the proposal to delete the Mowamba borrowings account.	E2.2.002	N/A
Proposal 7—Mowamba River investigation		
It is not necessary to undertake further investigations into the environmental benefits of delivering SRIF from Mowamba Weir. It can be varied to facilitate a release should it be found beneficial.	E1.2.007, C2.2.001	As discussed in section 6.3.4 of the review report, governments have made good progress on the Mowamba River investigation. However, more work is required to understand the operational, economic, social and cultural heritage implications of required flow and infrastructure changes, and whether the timing is right to adopt such a strategy from an ecological perspective.
The reintroduction of Moonbah River as a natural headwater to the Snowy has been considered for many years and there has been significant scientific research performed to warrant a change.	I6.2.001	
Pushing out any changes to licence conditions to allow delivery of SRIF to beyond 2020 creates an unacceptable delay.	E2.2.004	The work plan ensures all stakeholder priorities are identified and provides the time needed to adequately assess the costs and benefits of non-administrative changes to the licence, including variations to the SRIF provisions.
The SRA strongly endorses finalising the Mowamba River investigation. We recognise that the accounting for what would become completely unregulated flows would be complex.	C4.2.001	N/A
Victoria is supportive of the proposal to finalise the Mowamba River investigation and requests that it be identified as a high priority action for the proposed work plan.	G1.2.006	Section 8 of the review report provides detail on the implementation plan. It is proposed all investigations be completed in 2020 before proposing a second round of licence amendments.
Support for completing the Mowamba investigations and ultimately removing Mowamba Weir to allow the Snowy River to have a natural headwater.	I8.2.001, I11.2.001	N/A
Proposal 8—Delivery of annual SRIF target volumes		
Carryover is critical to ensuring no SRIF remains undelivered.	E1.2.008	Under Action 8A of the review, the NSW Department of Industry will investigate opportunities to increase delivery flexibility (including carryover) to achieve better environmental outcomes from the available SRIF.

Issue/commentary	Issue number	Response
Victoria is supportive of the proposal outlined in the draft report to investigate the operation of the SRIF 'increased flow' provisions, and requests that it be identified as a high priority action in the proposed work plan.	G1.2.004	Section 8 of the review report provides detail on the implementation plan. It is proposed all investigations be completed in 2020 before proposing a second round of licence amendments.
Proposal 9—Data sources for reporting increased flows targets		
It is appropriate to formalise agreed arrangements not currently incorporated in the licence to improve transparency and certainty for all stakeholders.	EN1.2.006	N/A
Proposal 10—Riparian releases		
It is appropriate to formalise agreed arrangements not currently incorporated in the licence to improve transparency and certainty for all stakeholders	EN1.2.006	N/A
The proposed riparian release variations may cause environmental damage because they are so low and they lack variation.	E1.2.006	The riparian releases secure existing landowner water rights and provide important local habitat by preventing the Mowamba and Eucumbene rivers from ceasing to flow.
Proposal 11—Call out of RMIF		
Victoria expects that arrangements should enable environmental water managers' access to RMIF at times that will enable it to contribute to environmental objectives expected when governments committed to the agreed outcomes in 2002. Victoria requests that the evaluation of current arrangements for storage and management of RMIF be identified as a high-priority action for the proposed work plan.	G1.2.005	Under Action 11 of the review, the NSW Department of Industry will consider the effectiveness of the current RMIF provisions in meeting environmental objectives. Any proposed variation to the call-out right will also need to consider the impact Snowy Hydro's ability to generate electricity.

Issue/commentary	Issue number	Response
Any further investigation to amend the RMIF must consider the potential impact on the supply measure benefits under the Sustainable Diversion Limit Adjustment Mechanism (SDLAM) and any risks to water access licence holders. Notwithstanding the previous point, New South Wales Irrigators' Council (NSWIC) would welcome it if the NSW Department of Industry would find more ways to amend the RMIF that could not only improve the operation of the mechanism but could enhance the benefits of the SDLAM supply measure benefit.	A1.2.005	Any proposed variation to the RMIF call-out right will consider the impact on the sustainable diversion limit adjustment supply measure volume.
CICL supports exploration of the RMIF call out provisions.	A5.2.007	N/A
Proposal 12—The DISV		
Given the opaqueness of the DISV calculations and its application, NSWIC and its members would welcome more detailed information on the DISV from the NSW Department of Industry.	A1.2.006	N/A
CICL supports consideration of the DISV in the work plan. It is CICL's view that the DISV calculation and its application in the Snowy–Tumut system demonstrated its effectiveness during the millennium drought.	A5.2.008	N/A
Proposal 13—Relaxation		
WaterNSW welcomes the investigations into the relaxation mechanism.	G2.2.001	N/A
Support the proposal to correct a drafting error for the Snowy–Tumut development and the inclusion of the WCLC drafting of Schedule 4, Clause 10.1.	A1.2.007, A5.2.009	N/A
Identifying opportunities to defer releases to future years to improve water availability provides an important opportunity to optimise the operation of Snowy Hydro that could benefit all water licence holders.	A1.2.008, A5.2.010	N/A
Proposal 14—Flexibility and prereleases		
WaterNSW welcomes the investigations into flexibility.	G2.2.002	N/A
Support corrections in the drafting of the	A1.2.009,	N/A

Issue/commentary	Issue number	Response
terms 'agreed annual release' and 'recovery amount' as per proposal 14A.	A5.2.011, A5.2.012	
Support for exploring the flexibility and pre-release provisions.	A1.2.010, A5.2.013	N/A
Proposal 15—Timing of releases		
WaterNSW supports proposal 15b and are committed to working with Snowy Hydro and other listed entities to deliver on it.	G2.2.006	N/A
NSWIC is pleased that the NSW Department of Industry is considering options to improve licence rules around the timing of releases to increase water use efficiency and flood management outcomes.	A1.2.011	N/A
NSWIC stresses that detailed stakeholder consultation and a thorough risk assessments will be required for proposed changes to the unused spills provisions.	A1.2.016	Section 8 of the review report provides detail on the implementation plan. Community interests will be represented through already established consultation mechanisms in the southern Murray–Darling Basin.
NSWIC continues to see merit in reviewing the effectiveness of the wet sequence protection provisions introduced in 2011.	A1.2.017	N/A
NSWIC would like to better understand the operational requirements of the licence in cases where Hume or Blowering dam is near or at capacity. It should be avoided that Snowy Hydro is required to make RAR to downstream storages when there is no capacity for these storages to capture it.	A1.2.018	Under Action 16B of the review, the NSW Department of Industry will investigate options to improve licence rules around the timing of releases to increase water use efficiency and flood management outcomes.
CICL supports consideration of timing of releases in the work plan.	A5.2.014	N/A
MVPD has not had sufficient explanation of the implications of Snowy Hydro proposed changes to 'unused spills'. We believe therefore given the risks to MVPD members, direct discussions are required to provide explanation on proposed changes and issues of risk need to be fully explored prior to any decision.	A7.2.010	Section 8 of the review report provides detail on the implementation plan. Community interests will be represented through already established consultation mechanisms in the southern Murray–Darling Basin.
Proposal 16—Accounting for inter-valley transfers		
Support the proposed amendment to codify the arrangement for inter-valley transfers to be complemented by a transfer in water availability for each development. It is understood that some of the inter-valley	A1.2.012, A5.2.015	All advances have included pay back provisions in the relevant agreement, including pay back of water transfers between the Snowy–Tumut and Snowy–Murray developments.

Issue/commentary	Issue number	Response
transfers have been advances of future allocations, therefore, once these volumes are repaid, the respective accounts should be adjusted to ensure repayment to the development from which it was advanced.		
Proposal 17—Early season commitment of release volumes		
WaterNSW welcomes the investigations into early season access to water allocations.	G2.2.001	N/A
CICL supports exploration of the MDBA's proposal to use the drought accounts to underwrite early season allocations.	A5.2.016	The MDBA has proposed that supplementary supplies could be underwritten by any ATW account stored in the Snowy Scheme (i.e. not specifically the drought accounts). This is discussed further in section 6.4.2.7 of the review report.
Proposal 18—Drought and DISV reserve accounts		
WaterNSW welcomes the investigations into the DISV and Drought reserves.	G2.2.004	N/A
As CICL understands this issue, the current approach reserves any recovery volume to offset starting allocation in the next water year. CICL supports this approach. Exploration of this option is a lower priority.	A5.2.017	N/A
Proposal 19—Sharing of net evaporation		
Exploration of this issue is a lower priority. While an assessment of this issue is warranted, the impact of any changes to the evaporation calculations needs to be considered for water access licence holders' allocations and the SDLAM.	A1.2.013, A5.2.018	Any proposed variation to how evaporation is shared will consider the impact on the MDBA's assumptions for the Basin Plan, the SDLAM and water releases from the Snowy Scheme.
It is not clear whether revised evaporation modelling would have implications (positive or negative) to assumptions made by the MDBA when developing the Murray–Darling Basin Plan.	A7.2.009	
Proposal 20—Modelling support		
WaterNSW supports proposal 20 and is committed to working with Snowy Hydro and other listed entities to deliver on it.	G2.2.007	N/A
Support the recommendation to improve the modelling capabilities to support the investigation committed for the next phase of the review.	A1.2.014, A5.2.019	N/A

Issue/commentary	Issue number	Response
Proposal 21—Expert review of performance		
Support the proposal for an expert review of the company's performance.	EN1.2.008, G1.2.002, A1.2.015, A5.2.020	N/A
The expert panel would appear to have a legal compliance role rather than an independent scientific review role.	E1.2.018	<p>Detail of the expert panel's independent review of performance is contained in section 7 of the review report.</p> <p>The scope of its review of the SMRIF program included assessing the appropriateness of the management approach taken to meeting SMRIF targets. It was not tasked with reviewing Snowy Hydro preferred SMRIF modifications, nor the analysis supporting the proposals.</p>
Proposal 22—Snowy Water Advisory Government Officials Committee		
Snowy Hydro supports the proposal to re-establish the SWAGOC. The charter for this committee should reflect the dual purpose underpinning the licence as well as its historical context.	EN1.2.009	The SWGOC will provide strategic advice and direction for water management in the context of the purpose of the Snowy Scheme and the regulatory framework that governs how water is used and managed.
The SRA congratulates the review team for acknowledgement in Section 8 of the draft report that there is a critical need for the NSW Government to continue to oversee water management in the Snowy Mountains. An open and transparent consultative mechanism must be created which allows ongoing dialogue	C3.2.002	N/A
The NSW Government should commit to establish the SWGOC with defined terms of reference within three months of the release of the final review report.	G1.2.011	Under Action 23 of the review, the NSW Department of Industry will re-establish the SWGOC in 2019.

Summary of project management related issues

Table 7. Project management issues raised and responses

Issue/commentary	Issue number	Response
Guiding principles and objectives for the review		
The framework for implementing the review should include a set of agreed principles to guide the assessment of actions.	G1.1.002	The relevant water agencies and Snowy Hydro will collaborate to ensure our analytic modelling tools are capable of supporting the investigations. This will allow the various agencies, corporations and project groups to undertake and engage stakeholders on detailed analyses of proposed variations to the licence, including the costs and benefits. These costs and benefits will be assessed against agreed criteria, informed by stakeholder consultation and submissions.
<p>The review outcomes must continue to support the environmental objectives of increased flow requirements under Schedule 3, Part 2, Section 5 of the licence, namely:</p> <ul style="list-style-type: none"> (1) improving the temperature regime of river water (2) achieving channel maintenance and flushing flows within rivers (3) restoring connectivity between rivers for migratory species and for dispersion (4) improving triggers for fish spawning (5) improving the aesthetics of currently degraded riverine environments. <p>This applies equally to the administrative obligations under the licence.</p>	E3.1.001	
Any changes to the licence obligations must improve both the ability of the regulator to monitor compliance with the licence and achievement of environmental objectives facilitated through the role of the WCLC.	E3.1.002	
Snowy Hydro's water release obligations should not be diminished in favour of its electricity generation objective.	A1.1.002, A3.1.002, A4.1.001	
Any changes to Schedules 3 and 4 of the licence must not adversely impact on the volumes of water and flexibility of delivery arrangements for downstream users.	G3.1.003	
Lack of transparency around Snowy Hydro's operations stymie stakeholder evaluations of proposed changes to the licence and make it impossible to weigh up costs and benefits of any trade-offs between Snowy Hydro's commercial interests and those of downstream communities and the environment.	A2.1.004	

Issue/commentary	Issue number	Response
There has been minimal consultation on the review to date in lead up to inviting stakeholder submissions		
There has been minimal consultation from NSW Department of Industry on the review.	C2.1.009, I5.1.004	Consultation on the review is summarised in section 1.2.5 of the review report and in the 'Background' section of this report. NSW Department of Industry considered this advice in developing its stakeholder communications and engagement plan for the release of the review's draft report.
Too short a period following the stakeholder briefings to prepare submissions.	I5.1.004	
Stakeholder, community and environment engagement		
All stakeholder interests should be represented in the project.	G1.1.001, G1.1.002	Stakeholder and community involvement in the next phase of the review is outlined in section 8 of the review report. NSW Department of Industry will continue engaging and consulting with stakeholders and the community through identified project groups and through public exhibition of proposed variations to the licence.
The issues relating to the water release mechanisms are complex and the investigations will require significant resourcing and effort. As these mechanisms have significant potential impact on releases to the Murray River, the Victorian Government expects to be properly engaged, along with community stakeholders, in the undertaking these investigations.	G1.2.008	
WaterNSW notes the draft report does not propose that it be formally involved in the investigations into the relaxation mechanism, flexibility, early season access to water allocations, effectiveness of the DISV and Drought reserves.	G2.2.001, G2.2.002, G2.2.003, G2.2.004	
Stakeholders need to be fully involved and given the opportunity to understand the options, including any risks and opportunities of any proposed changes.	A1.2.019, A5.2.022	
We encourage the NSW Government to continue direct discussions with MVPD as our members are directly affected by any changes in water management.	A7.2.002, A7.2.011	
We would like to stress the importance of direct discussions/consultation on issues affecting the NSW Murray, directly with stakeholders in this region.	A7.2.003	
Consistency with the Murray–Darling Basin Agreement		
The NSW Government needs to ensure any changes to the licence arising from the review are reflected in Schedule F of the Murray–Darling Basin Agreement.	G3.1.001	The Inter-jurisdictional project group will consider the need for consequential amendments to the Murray–Darling Basin Agreement. The agreement will not need to be amended as a consequence of the administrative variations to the licence.

Issue/commentary	Issue number	Response
Capacity to deliver the review		
The NSW Government does not have the capacity to undertake the ten-year review in an impartial and informed manner.	I5.1.015	The NSW Government will deliver the actions identified in the review with the support of key stakeholders. The review's next phase is outlined in section 8 of the review report.
The proposed work plan is ambitious.	A5.2.021	
Review terms of reference too narrow		
The terms of the review are very narrow and do not address some important legal requirements and serious issues relating to the lack of implementation of the various Snowy Water Inquiry legal agreements by the department's current management.	I5.1.018	This issue is discussed in section 6.2.6 of review report. It is not appropriate to expand the review's charter beyond the obligations in the licence. A review of Snowy Water Inquiry agreements is a matter for the SWGOC to consider.
Details of and commitment to implementing recommendations		
Unfortunately, some previous tasks have not been completed in a timely manner and it is important to have clearly documented requirements that transcend changes of responsibility between departments or staff members over the long term.	C3.2.005	Section 8 of the review report provides detail on the implementation plan. It is proposed all investigations be completed in 2020 before proposing a second round of licence amendments.
Victoria expects the final review report to provide sufficient information about the implementation of its recommendations to provide all stakeholders with clarity.	G1.2.003	
Assessment of options		
It is CICL's view that the most likely outcome is that no change will be made to the water licence if Snowy Hydro is able to demonstrate the change will negatively impact on their commercial operation. It is essential to clarify the starting point early in the work plan. Is it is CICL's view that the starting point should be the initial licence.	A5.2.002	The investigations will include detailed analyses of proposed variations to the licence, including the costs and benefits. These costs and benefits will be assessed against criteria that are agreed by the review's project groups and informed by stakeholder consultation and submissions.
NSW Department of Industry should be cognisant of all the impacts of the proposals, in light of the dual purpose of the Snowy Scheme and the need for Snowy Hydro to self-fund its water storage, diversion and release functions under the licence. Proposed variations to the licence need to recognise the complex legal framework in which it exists.	EN1.2.007	

Issue/commentary	Issue number	Response
Any adverse changes to the licence may add to the cumulative risks already experienced and identified in the future stages of the implementation phase of the Basin Plan in NSW Murray region. Changes to major southern storage operations and to Murray River operations (i.e. changes in flow patterns and/or elevated flooding risks) can impact both the property rights of water and/or land property rights of our members.	A7.2.001	
Any changes to RMIF arising from the review will need to be considered in the context of the supply measure proposal.	G3.1.005	
MVPD is concerned about any changes to the RAR that negatively impact Murray River flows. Timing of releases is seen as critical to underpin flow regimes in the Murray and Edward Wakool system having direct implications for water orders (e.g. dropping Murray River levels can prevent access to entitlements). Timing of releases in wet years can have major implications for elevating flooding risks.	A7.2.008	

Summary of issues outside the review's terms of reference

Table 8. Issues outside the review's terms of reference and responses

Issue/commentary	Issue number	Response
The Commonwealth Government is responsible for repairing the damage caused by the Snowy Scheme		
The Snowy Mountains Hydro-electric Authority was established by the Commonwealth Government and as it is once again the sole owner of Snowy Hydro it is the responsibility of the Commonwealth to repair the damage incurred by the Snowy Scheme during its construction and ongoing operations.	E1.2.020	This is a matter for the Commonwealth Government to consider.
Community and scientific input to environmental flows planning		
There is no community, independent or scientific input to SRIF release planning and delivery of SMRIF.	C3.1.002, C2.1.005, G1.1.003, G1.1.006, I5.1.005, I6.1.006, I71.002, 17.1.004, I6.2.006	In July 2018, the Minister for Regional Water appointed the SAC to provide expert and community input to the design of environmental flows to the Snowy River and Snowy montane rivers. The committee is chaired by Terry Bailey, and brings together the local knowledge and expertise of individuals from Snowy River and Snowy Mountains communities and the NSW and Victorian governments. Its first task will be to advise on the Snowy River environmental water strategies for the 2019–20 water year.
There is a legal obligation for the Snowy Scientific Committee to exist and be funded.	C2.1.005, I5.1.017	
The absence of any consultative mechanism for the management of Snowy water resources has proved to be a major frustration for the community.	C3.2.002	

Issue/commentary	Issue number	Response
SRIF and SMRIF are not adequately protected		
SMRIF released from Tantangara is being diverted to Googong Reservoir for ACT's water supply.	E1.1.016, E2.1.011	The NSW Government's water reform action plan commits to better managing environmental water. We are currently developing solutions to issues associated with delivering environmental water, such as protecting held environmental water from downstream extraction.
The <i>Water Sharing Plan for the Snowy Genoa Unregulated and Alluvial Water Sources 2016</i> does not protect environmental water releases from extraction.	C3.1.015	
Governments have not achieved the agreed water recovery targets		
Typically, only 15% of Snowy River mean annual natural flow has been delivered in recent years. Because many of the entitlements obtained from western rivers are of low or general security, we fully expect the allocation to remain at these levels during years of average rainfall or less. This is far short of the 21% target and only around half of the 28% flow identified as essential for the river.	C3.1.010, I5.1.011, E1.2.019, C3.2.003	<p>Alongside the Victorian and Commonwealth governments, the NSW Government has secured more than 308 gigalitres of water entitlements to target long-term average delivery of 212 gigalitres and 70 gigalitres each year for environmental flows in the Snowy and Murray Rivers respectively. The 212 gigalitre target for the Snowy River equates to a mean annual natural flow of 21%.</p> <p>This recovery volume was achieved in 2012 by securing water entitlements through water savings projects and water licence purchases.</p> <p>The conversion of Southern Murray–Darling Basin water entitlements to Snowy River environmental flow releases depends on annual rainfall and runoff volumes and water entitlement allocation processes. Hence, annual environmental flow volumes for the Snowy River vary from year to year.</p>
There has been a lack of progress by governments to recover the 28% Snowy River flow recovery target.	E1.1.017, C3.1.011, C2.1.007, I5.1.002, I6.1.001, I6.1.003, I7.1.003	
The Burungabugge and Gungarlin rivers should be retained as free-flowing rivers.	E1.1.019, E2.012, E3.003	
More environmental flows should be recovered for the tributary rivers and streams in the upper Snowy catchment.	I5.1.009	
We are concerned that the draft report states that 'the significant water recovery task is now complete'. This implies that there is no intent to secure further allocations of water to increase the security of the SRIF. And it will be a very rare year in which 21% flow is achieved, and there is no prospect of that being delivered as an average figure.	C3.2.007	

Issue/commentary	Issue number	Response
Inadequate monitoring and reporting on increased flows programs		
There is currently insufficient monitoring, modelling and state of environment reporting of ecological response to delivery of increased flows.	C3.1.014, I5.1.016	<p>The NSW Government is transferring responsibility for managing Snowy environmental water to the OEH. OEH prepares annual watering plans and annual outcomes reports on the use of water for the environment for rivers across NSW. It is also developing long-term water plans to provide longer-term goals for environmental water management. OEH will apply this management framework to Snowy environmental water, guided by the intergovernmental agreements agreed under the SWIOD.</p> <p>OEH will support the planning and delivery of increased flows through scientific monitoring and evaluation. OEH adopts a scientific approach to managing water for the environment and its environmental watering targets and events include monitoring to assess the effectiveness of environmental flows. The level of monitoring and evaluation undertaken for the Snowy environmental flows will match the activities it carries out in other NSW catchments and will have regard to the information needs of the SAC and investment in environmental water recovery for the Snowy.</p> <p>More details on how OEH manages water for the environment can be accessed from the OEH website.</p>
There is a lack of transparency and independent scrutiny around achieving environmental objectives set out in the licence.	E2.1.003	
The expiration of the Snowy benchmarking monitoring program has taken away insight into environmental improvements for the whole river, including the lower reaches in Victoria	C2.1.006	
State-based monitoring programs fail to adequately monitor ‘whole of river’ impacts/improvements.	G1.1.004	
Monitoring of increased flows remains unfunded.	C3.1.007, G1.1.004	
The failure to account for unregulated flows below Mowamba Weir means that it is impossible to know if the SRIF target is being achieved in full.	E2.2.006	
We are pleased to hear that OEH will take on responsibility for environmental flows in the Snowy, but this must be supported by ongoing scientific research.	C3.2.008	
Inadequate funding of complementary environmental programs		
Complementary management of riparian zone is just as important as water releases (i.e. weed management, native vegetation, fencing, sediment control etc.)	C3.1.018	<p>The South East Local Land Services branch coordinates actions to help improve water quality and fish passage, and increase riparian vegetation and aquatic habitat in the Monaro region in accordance with the <i>South East Local Strategic Plan (2016)</i>.</p> <p>Under Action 23 of the review, the NSW Department of Industry will re-establish the SWGOC to jointly oversee and coordinate water management in the Snowy Mountains. One of the SWGOC’s roles will be to help coordinate water management and complementary management activities in the whole Snowy River basin.</p>
There needs to be better consideration of risks associated with stocking fish	C3.1.020	
The NSW Government must continue to build on previous revegetation and weed control programs.	C2.1.008	
Landholder and taxpayer funding of environmental measures are inequitable.	I5.1.001	

Issue/commentary	Issue number	Response
Lack of government commitment, coordination and oversight on Snowy River management		
There is lack of coordination between governments and agencies with management responsibilities for the Snowy River.	C3.1.003, I5.1.006, I6.1.001	The NSW Government is committed to the outcomes of the Snowy Water Initiative and to building community confidence in the way the Snowy montane and Snowy rivers are managed. We are reforming environmental water management arrangements to ensure the recovered water is used to its greatest effect.
NSW Government does not have the capacity to manage environment water in the Snowy Mountains.	I5.1.015	We are transferring responsibility for Snowy Mountains increased flows to the OEH, which will be supported in its new role by the SAC.
The NSW Government has lost significant community trust in the management of Snowy flows through mismanagement, deliberate political undermining of intent of the agreement and failure to honour commitments and legislative obligations.	I7.1.001	Under Action 23 of the review, the NSW Department of Industry will re-establish the SWGOC to provide strategic advice and direction for water management in the Snowy River and Snowy Mountains, facilitate integration of activities between stakeholders, and set work priorities.
There is no formal mechanism for partner governments to coordinate Snowy management.	G1.1.003	
The NSW Government has repeatedly failed to deliver on its commitments to restore the health of the Snowy and other rivers affected by the Snowy Scheme.	E1.2.003	
Climate change is not adequately considered in environmental flows planning		
There is a lack of consideration given to climate change in the recovery and management of increased flows.	C3.1.019	NSW will raise the issue of long-term changes in inflow patterns with partner governments through the SWGOC.

Issue/commentary	Issue number	Response
Lack of integration with the Murray–Darling Basin Plan		
Management of Snowy water resources should not be managed independently from the Murray–Darling Basin.	E1.1.018, E3.1.003, I5.1.012	<p>Snowy Mountains water resource are not managed independently from the Murray–Darling Basin because the Murray and Murrumbidgee water supply systems and the Snowy Scheme are connected.</p> <p>In terms of setting sustainable diversion limits for the Snowy River, the health of the Snowy River was considered in the Snowy Water Inquiry. It resulted in the Snowy Water Initiative and the recovery of more than 308 gigalitres of water entitlements in the southern Murray–Darling Basin. Water allocated to these entitlements is used to target long-term average delivery of 212 gigalitres and 70 gigalitres each year for environmental flows in the Snowy and Murray Rivers respectively. The 212 gigalitre target for the Snowy River contributes to achieving a mean annual natural flow of 21%.</p>
Enabling water users to carryover water allocation in the Snowy Scheme would improve water management		
The capacity for water users to carryover allocation in the Snowy Scheme would minimise the loss of productive water.	A6.1.005	The ability for the Snowy Scheme to secure carryover will be considered in any future review of the carryover rules.
A dispute between governments has caused RMIF to accumulate in the Snowy Scheme		
Communities expect governments to have effective arrangements in place to deliver RMIF to achieve environmental outcomes given the communities commitment to water recovery for a healthy Murray–Darling Basin.	A1.1.011, A3.1.003, A5.1.007	<p>The rules for RMIF are contained across a number of different instruments and plans including the SWIOID, the licence, Murray–Darling Basin Agreement, the Strategy for RMIF and River Murray water licences.</p> <p>The NSW, Victorian and Commonwealth governments are reviewing and improving these arrangements as part of the Basin Plan via the sustainable SDL adjustment supply measure project titled <i>2011 Snowy Water Licence Schedule 4 Amendments to River Murray Increased Flows (RMIF) Call Out Provisions</i>.</p>
Accumulating RMIF has altered the yield characteristics of the entitlements from which it was recovered.	A1.1.011, A5.1.007	
RMIF was meant as an annual release, however RMIF has only been released twice and has not been called out by the Ministerial Corporation since this right was provided in 2011.	E1.2.011	
Capacity to borrow to increase water allocations in the Murray system		
The accumulation of RMIF may provide an opportunity to introduce a mechanism to borrow RMIF to support allocations against River Murray water entitlements.	A6.1.001	<p>Options for increasing early season water allocations are discussed in section 6.4.2.7 of the review report.</p> <p>Under Action 18 of the review, the NSW Department of Industry will investigate options to secure</p>

Issue/commentary	Issue number	Response
The capacity to continue the practice of Snowy Hydro advancing ATW to irrigation organisations boosts water availability for irrigators seeking more supplies during dry years.	A3.1.013, A6.1.005	commitment of releases from the Snowy Scheme to support increased early season water allocations for Murray or Murrumbidgee water users.
Inclusion of RMIF call out provisions as a supply measure project under the Basin Plan		
The RMIF call out provisions were in force when the Basin Plan came into effect and the remaining restrictions are not providing adequate flexibility to justify a sustainable diversion limit adjustment.	E2.1.008, E1.2.012, E2.2.009	The Basin Plan sustainable diversion limits were determined through hydrological modelling that applied the proposed new arrangements to baseline arrangements that and reflected water sharing arrangements and infrastructure as per June 2009. ⁴
Including RMIF as a supply measure project is supported, to the extent the project allows greater flexibility in the use of RMIF and the department demonstrates there are no third-party impacts on downstream water entitlement holders.	A1.1.011, A3.1.004, A4.1.002	The RMIF 'call out' right was added to the licence in May 2011, so was not included in the determination of the sustainable diversion limits. The call out right was agreed as a supply measure project because the new right, when implemented fully, will provide environmental managers more flexibility to achieve better outcomes with the available water.
MVPD is concerned there is a perception that the SDL projects business cases affecting NSW Murray have gone through detailed consultation with stakeholders.	A7.2.004	All supply measure projects are at different stages of planning and implementation with all expected to be delivered by mid-2024. NSW is committed to meaningfully engaging with relevant communities at appropriate stages throughout planning, implementation and construction of these projects.
To date detailed discussions about the supply measure project have not occurred and therefore it would not be appropriate to include such changes in Snowy Hydro licence until these issues are fully explored.	A7.2.007	More details on NSW's supply measure projects can be found on the NSW Department of Industry website.
MVPD does not believe a comprehensive risk assessment has occurred and the limited internal departmental risk assessments are not sufficient to fully informed decisions.	A7.2.012	
Commonwealth position on the WCLC		
The Commonwealth position is currently vacant following the transfer of water responsibilities from the Environment to the Agriculture Ministers.	G3.1.007	N/A

⁴ MDBA 2012a, *Hydrologic modelling to inform the proposed Basin Plan: Methods and results*, MDBA publication no: 17/12, Murray-Darling Basin Authority, Canberra.
(www.mdba.gov.au/sites/default/files/archived/proposed/Hydro_Modelling_Report.pdf)

Issue/commentary	Issue number	Response
Snowy 2.0 could change the timing of releases and reduce reliability of downstream entitlements and availability of SMRIF		
Expansion may incentivise Snowy Hydro to shift its operational balance as yields of water within the scheme for electricity provision may become greater than releasing it for downstream uses, potentially impacting timing of releases and therefore annual water determinations.	A1.1.012, A4.1.003, A6.1.006	The NSW Government is committed to ensuring that water releases to the Murray and Murrumbidgee rivers are not affected by Snowy 2.0. Further, the government and local communities have worked hard to improve the health of the Snowy River and local Snowy mountain rivers, and this investment will be protected.
Changes due to Snowy 2.0 could negatively impact the market value of downstream water entitlements and risk detrimental economic impact in the Murray and Murrumbidgee valleys.	A3.1.014	Snowy Hydro's feasibility study into Snowy 2.0 concluded the expansion will not impact downstream water users or environmental flows because there will be no change to Snowy Hydro's water or environmental release obligations under the licence.
Changes in timing of releases into Blowering dam have the potential to cause a dam imbalance and supply restraints in the Murrumbidgee valley.	A5.1.008	This will be validated in a comprehensive and transparent planning and environmental approvals process, which involves preparing environmental impact statements for both the exploratory and construction phases of the project. The environmental impact statements will address the environmental, social and economic impacts of the project phases and be submitted to the NSW Department of Planning and Environment as part of the approval process. Community members will have the opportunity to review each environmental impact statement and make submissions during the declared periods.
There is a risk Snowy 2.0 could increase the value of montane river water due to increased generation potential and therefore reduce the volume of SMRIF available in the future.	I7.1.006	
Snowy River environmental flows are preventing access for landholders downstream of Jindabyne Reservoir		
Snowy River environmental releases preventing access to private properties that need attending.	I3.1.001, I4.1.001	The NSW Government is committed, and legally bound, to continue delivering environmental flows down the Snowy River to improve its health. The higher base flows are an important component of the flow regime and changing them may reduce environmental outcomes.
One of the major issues is that you do not always release the water at the same time and you can't trust the timing. You always drive through (the river) in anticipation.	I4.1.002	The government is also committed to building community and stakeholder confidence in how we manage and consult on the Snowy River. We appointed the SAC in July 2018 and are committed to increasing transparency and community understanding about how Snowy environmental water is managed.
The department hasn't shown any duty of care towards the affected landholders.	I3.1.002	The SAC will provide vital community and expert input to the design of the Snowy environmental flows and provide an important means by which community members can engage in how they are managed.

Issue/commentary	Issue number	Response
Transfer of Snowy environmental watering functions to Office of Environment and Heritage		
<p>NSWIC is interested in the inter-agency discussions between NSW Department of Industry and OEH as it pertains to the arrangements for environmental water management.</p>	A1.1.003	<p>The NSW Government has committed to transferring responsibility for Snowy Mountains increased flows from NSW Department of Industry to the OEH. OEH will apply the management approach it applies to other NSW rivers to the Snowy, guided by the intergovernmental agreements agreed under the SWIOID.</p> <p>NSW Department of Industry will continue to administer the licence.</p> <p>The roles and responsibilities of the two agencies will be agreed in a memorandum of understanding (MoU). The MoU will cover functions assigned to the Ministerial Corporation and Minister for Regional Water under the licence and SWIOID and include current policy directions of the NSW Government in relation to environmental water management.</p>
Planning of Snowy River environmental flows does not take tourism into account		
<p>This year we had to cancel numerous rafting trips due to a lack of environmental flows. Also, much of the water released by Snowy Hydro is released in winter when it is too cold to raft. We also require an absolute minimum of 300 ML/day to be able to run a paddling trip. If NSW Department of Industry took tourism and minimum flow requirements into account then we could have a much larger tourism industry on the Snowy River.</p>	I10.2.002	<p>The NSW government will build community and stakeholder confidence in how we manage and consult on the Snowy River. We appointed the SAC in July 2018 and are committed to increasing transparency and community understanding about how Snowy environmental water is managed.</p> <p>The SAC will provide vital community and expert input to the design of the Snowy environmental flows and provide an important means by which community members can engage in how they are managed.</p>

Appendix 1: List of stakeholder submissions

Table 9. Stakeholder submissions

Submitter	Submitter ID	Round 1	Round 2
A G Andrich	I3	✓	
Australian Dairy Industry Council	A2	✓	
B R Dunn	I2	✓	
C Gibson	I8		✓
C Ingram	I7	✓	
Coleambally Irrigation Co-operative Limited	A5	✓	✓
Commonwealth Department of Agriculture and Water Resources	G3	✓	
C Rogerson	I9		✓
Dalgety Chamber of Commerce	C2	✓	
Dalgety District and Community Association	C1	✓	✓
E Guarracino & R Valler	I5	✓	
Environment Victoria	E2	✓	✓
Gippsland Environment Group	E1	✓	✓
I E Pottage	I4	✓	
K Tull	I11		✓
M Talbot	I1	✓	
Murray Irrigation Limited	A6	✓	
Murray–Darling Basin Authority	G4	✓	
Murray Valley Private Diversers (Inc)	A7		✓
National Farmers' Federation	A4	✓	
National Parks Association of NSW	E3	✓	
New South Wales Irrigators' Council	A1	✓	✓
Ricegrowers' Association of Australia	A3	✓	
R Swain	I10		✓
Snowy Hydro Limited	EN1	✓	✓

Submitter	Submitter ID	Round 1	Round 2
Snowy River Alliance	C3	✓	✓
V Wallace	I6	✓	✓
Victorian Government	G1	✓	✓
VR Fish	C4		✓
WaterNSW	G2	✓	✓
TOTAL		24	16