



Australian Government



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Snowy Water Licence Review  
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### **Submission to the Snowy Water Licence Review 2017**

Thank you for the opportunity to provide a submission to the 2017 Review of the Snowy Water Licence. The Murray-Darling Basin Authority (MDBA) welcomes the review as an opportunity to refine the terms of operation of the Snowy Scheme to benefit power and water interests.

The MDBA's submission to the 2017 licence review is attached. The submission raises areas of concern to be considered by the review, it does not include detailed discussion of all issues and does not propose specific amendments to the licence in all matters. If you require any clarification or further information please do not hesitate to contact me.

The MDBA looks forward to the opportunity to contribute to the review.

Yours sincerely,

Andrew Reynolds  
Executive Director River Management

## **Submission to the Snowy Water Licence Review 2017**

### **Background**

The responsibilities of the Murray-Darling Basin Authority (MDBA) include sharing the waters of the River Murray between the Governments of New South Wales, Victoria and South Australia and the day to day operation of the River Murray System.

In relation to the Snowy Scheme ('the Scheme') these responsibilities include determining state shares of water released by Snowy Hydro Limited (SHL) to the catchment of Hume Dam and incorporating releases from the Scheme in planning and implementing Murray System operations.

The MBDA has membership of the Water Consultation and Liaison Committee (WCLC) established under the Snowy Water Inquiry Outcomes Implementation Deed. The WCLC is comprised of representatives of SHL and State and Commonwealth Governments. It convenes annually to review SHL's Annual Water Operating Plan with a view to ensuring SHL's compliance with the Snowy Water Licence (Licence).

### **Introduction**

The terms of reference of the review identified three areas for consideration, in summary:

1. Environmental Releases (focussed on Snowy River flows);
2. Water Release Requirements (primarily releases to the Murray and Murrumbidgee rivers);and
3. Administrative obligations (reporting, construction obligations, fees and charges)

This MDBA submission is focussed on water release requirements. Comments are presented in two sections; the first an overview of areas for consideration in the review, the second a discussion of details of the calculation of SHL's release obligations and other aspects of water accounting.

The original Licence (2002) was a codification of existing practices. There have been major changes in the electricity market since Corporatisation (and some significant changes to the Licence).

The MDBA believes that the relative priorities of energy and water targeted at the time of Corporatisation should be maintained or, where necessary, re-instated by the Licence review. Acknowledging that SHL is complying with the terms of the Licence we question if the Licence in its current form provides sufficient protections to the supply of water interests from the Scheme. The protection of supply for the western rivers was intended in the Licence and is seen as highly desirable by the MDBA.

Increased modelling capability is necessary for all parties to be able to test options and to evaluate the implications of proposed changes to the Licence. Modelling capabilities should be developed that include a realistic representation of the variable water demands of SHL and the interactions between the Scheme and the Murrumbidgee and Murray rivers. This will allow for the development of robust policy settings that will be able to operate effectively over a wide range of conditions in an uncertain future.

## **Overviews**

### Power of the Licence

The Licence should be the definitive specification of roles and responsibilities in relation to the operation of the Scheme. However it is not possible to effectively address all possible future scenarios and, as we have seen through a period of unprecedented low inflows into the Scheme, some perverse outcomes are likely in a future with many uncertain elements. The Licence would benefit from inclusion of a preamble articulating the principles used to establish relative priorities for water supply reliability and energy production. This would assist in interpretation of the licence, particularly in the event of unanticipated scenarios emerging.

The Annual Water Operating Plan (AWOP) details SHL's recent and future operations for the review of the WCLC, as required by the Licence. The AWOP includes a list of past decisions of the WCLC that are relevant for current Scheme operations along with matters that have been discussed by WCLC. In addition the AWOP includes deviations from the Licence that have been agreed (by WCLC) for specific years (with no commitment to long-term agreement) and matters that have not been agreed but that SHL intends to pursue.

The prior decisions of the WCLC and issues raised through the WCLC should be considered in the review and the Licence amended as required to incorporate changes or address concerns.

While it is not possible for the Licence to list all factors deliberately omitted the authority of the Licence should be clearly stated. A periodic review of issues raised by the WCLC or a process for considering issues raised would be an improvement.

### Advances

SHL has agreed special arrangements (advances or deals) with sections of the water user community in a number of years. The MDBA believes that these special arrangements have at times provided limited benefit to the water users involved with likely costs to third parties.

All the special arrangements that have been agreed have employed discretions allowed under the Licence. However the 2016 advance arrangement introduced new terms with different conditions to similar elements of the Licence. Variations from the Licence included that guaranteed releases were not included in the Required Annual Release for the year.

The 2016 arrangements contributed to the release of 530 GL of Flex. This moves the Scheme releases away from the reliable supply that was intended in its' design.

The review should consider amending the Licence to ensure that any future advances do not impact the reliability of supply of water users. This could be achieved by including provisions that prevent actions inconsistent with the guiding principles established in a preamble.

### Two Developments

The two developments of the Scheme, the Snowy-Murray and Snowy-Tumut, have a consistent treatment in the Licence. The two developments have separate, specified inflows with the inflows of each development required to be accounted against the release from that development. The MDBA understands there is a marginal difference in energy efficiency between the two developments.

At the time of Corporatisation there was a national electricity market and little difference between the nature of holdings of the Snowy-Murray and Snowy-Tumut. Consequently there was assumed to be little difference to SHL in generating through Murray or Tumut.

However, changes since Corporatisation include:

- 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 (Dry Inflows Sequence Volumes (DISV)));
- different spill implications (as spill rules are a function of DISV);
- growing callable volumes on the Murray but not the Murrumbidgee;
- differing treatments of unregulated inflows.

The review should consider revising the Licence to correct for the differences between the developments that have arisen since Corporatisation to protect Murray and Murrumbidgee water users from any impacts of SHL being driven to favour generating through one development over another.

### Alternative Approaches

#### *Review of Annual Yield*

The development of modelling capability, noted above, would allow for a comprehensive evaluation of alternative approaches to the operation of the Scheme including testing against future inflow scenarios. The underlying annual yield of the scheme (1,062 GL on the Murray Development) 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.

#### *Early Season Commitment of Minimum RAR Volume*

It may be possible to provide significant benefits to water users with minor impacts on power supplies and vice versa. A mechanism that assumes some level of future improvement could be implemented for years with a low opening Required Annual Release (RAR), similar to the operation of the Drought Reserve. This approach would go some way to providing the early season allocations sought by water interests when previously entering into advance arrangements with SHL.

Such a mechanism could be that a low opening RAR is initially increased by (a supplement of) say 200 GL. The supplement would be reduced through the year as RAR increases, down to zero when RAR has increased by 200 GL. This would allow Murray water interests access to an additional 200 GL at the start of the water year but would not require SHL to release additional water unless the RAR failed to increase by 200 GL through the course of the water year.

Where improvement of 200 GL is not realised releases in excess of RAR could be taken from Above Target Water, the Drought Account or some other reserve built within the Scheme.

The appropriate supplement volume would need to be determined through modelling and consultation with affected parties.

### *Adjusting RAR between years*

Water interests may be open to providing SHL with some ability to move RAR between years providing the release was guaranteed. Such an approach could provide SHL with increased flexibility while maintaining security of supply for water users.

### Access to River Murray Increased Flows

The conditions of use of River Murray Increased Flows (RMIF) should be amended to increase the environmental value of that water. The limitation on environmental water managers access to RMIF held in the Scheme when total Above Target Water (ATW) is below 800 GL is restrictive. RMIF was intended to be a highly reliable reserve but if it cannot be accessed at a time of high need its functionality, including as an environmental drought reserve, is reduced. The review should consider benefits and costs of reducing the 800 GL limit.

### Information Sharing

Advance notice of SHL release intentions is of significant benefit in managing the River Murray system. Knowledge of future SHL releases would allow improved planning of transfers from Dartmouth to Hume dam and in doing so potentially reduce subsequent spills. Minimum releases updates through the year could bring forward water allocation improvements for water users.

Early advice of potential releases from the Scheme that impact the supply of RMIF would improve environmental water use. Environmental manager's annual planning occurs between February and June each year in preparation for spring watering events. An indication of likely delivery of RMIF would inform that planning. While it is understood that guarantees cannot be made under the current arrangements, advance notice of likely releases would provide significant benefits.

The MDBA is improving its' modelling of the Hume Dam catchment for flood operations and has an increasing need for real-time hydrometric data relating to inflows into Hume Dam. The Licence should require the provision of relevant data from SHL to the MDBA.

In 2017/18 SHL have been keeping the MDBA informed of operations with fortnightly briefings. These briefings have assisted river operations and environmental planning. The MDBA would welcome the need for such collaboration being specified in the Licence.

## **Elements of Schedule 4**

The MDBA considers that a number of the elements of Schedule 4 require revision to ensure that the 2011 changes, particularly the introduction of Flex, achieve the stated aims while not impacting other outcomes provided for by the Licence.

### Relaxation

The Review should consider the interaction between Relaxation and other elements of the Licence. Relaxation provisions should be reviewed to address that:

1. Relaxation is based on meeting (modelled) demands in a particular year, Flex moves water between years, changing the impact of the Relaxation from what would have occurred under the Licence at the time of Corporatisation. Allowing Relaxation and Flex to apply in the same year can have the unintended consequence of less water being available to the Murray in subsequent years. This is inconsistent with the intended operation of Relaxation.
2. Relaxation can reduce the RAR due to high water availability in the short term at the same time as the RAR is also reduced by the Dry Inflow Sequence Volume (DISV) because of low water availability over the long term. In some scenarios this could lead to an excessive reduction in the RAR. This outcome should not be permitted.
3. SHL has indicated a wish to move away from modelled Relaxation to being based on observed values. If observed values are used carryover must be included in demands. If an external trigger is adopted it should match the frequency of modelled Relaxation, otherwise water interests will be disadvantaged.
4. There is a known error in demands listed for the Snowy-Tumut Relaxation calculation. This should be corrected.

### Spill Protections

The Licence includes requirements to increase the RAR following spill where releases have been skewed to the first half of the Snowy water year or when spill follows the release of non-DISV Flex. Elements of the operation of the Within Year Release Rules (WYRR) have been addressed by the WCLC and should be considered by the Review.

In considering previous actions of the WCLC the Review should address elements related to spill protection and in particular:

1. Confirm that the WYRR increases the RAR as stated in the Licence;
2. Confirm the periods listed in relation to the WYRR are correctly specified;
3. Confirm spills are as defined in the licence.
4. Specify that Flex released in a previous year forms part of the current year's RAR for the purposes of the WYRR to protect reliability of supply for water users as intended.
5. The lack of spill protection for DISV Flex can result in the undesirable outcome of one party being impacted by the actions of another. DISV Flex should be given spill protection.

### Accounting for Flex

Flex provisions were added to the Licence in 2011. The provisions were essentially added in isolation and were not adequately incorporated in all elements of the Licence.

Several aspects of accounting for Flex should be addressed to ensure SHL's use of Flex does not impact negatively on water users.

Matters to address include:

1. Flex should be accounted as an early release of RAR in the year following release. This is the most accurate reflection of the releases required by the Licence and is necessary to avoid additional impacts on other aspects of the Licence. This approach has been pursued in several of the special release arrangements and has been adopted by SHL where SHL is required to meet minimum release requirements.
2. Flex is an early release of Below Target Water (BTW) and should be accounted accordingly, not as a release of ATW.

#### Accounting for ATW

Accounting for ATW is not well specified in the Licence. The approach for accounting for ATW has largely been determined by SHL. The MDBA believes that aspects of the accounting of ATW are at odds with the intent of the Licence and prioritise power interests at the cost of water supply reliability. The Licence clearly allows for transfers between ATW and BTW but that approach has not always been followed in practice.

The Licence could be read as stating that ATW cannot increase as long as BTW is not at target. The MDBA accepts that this is not what was intended at Corporatisation. The MDBA has identified a number of aspects of accounting for ATW that should be considered by the review to protect water interests. The MDBA believes that the Licence should include:

1. The sharing of evaporation between ATW and BTW within the Scheme;
2. That the Drought Reserve and RMIF (held in ATW) should not be subject to evaporation,
3. The calculation of the volume of ATW held in each development of the Scheme;
4. That Flex releases are made from BTW.