

Agreed operating protocol for the trial of flexible Snowy Montane River Increased Flows from Tantangara Dam

This protocol is an agreement between The Water Administration Ministerial Corporation established under section 371 of the Water Management Act 2000 (WAMC¹) and Snowy Hydro Limited (Snowy Hydro or Licensee) for the purposes of clause 25.4 of Schedule 3 of the Snowy Water Licence² (the Licence) to vary the volume of water targeted for releases from Tantangara Dam.

1. Background and Context

- 1.1. An outcome of the Ten-year review of the Snowy Water Licence review³ is to trial flexible releases of environmental water into the Snowy River from Jindabyne Dam. In July 2024 a protocol was developed to achieve this, titled *Agreed operating protocol for the trial of flexible Snowy River Increased Flows* (DOC24/92839). This protocol seeks to implement a similar trial of flexible releases of environmental water into the upper Murrumbidgee River from Tantangara Dam.

2. Relevant Licence Conditions

- 2.1. Clause 26.1 of Schedule 3 of the Licence provides for the WAMC to require Snowy Hydro to target specified monthly release volumes from Tantangara Dam during each month of the

¹ Under the 'Water Administration Ministerial Corporation Instrument of Delegation 2022', all functions of WAMC under the Snowy Water Licence are delegated to the Executive Director, Water Operations and Resilience at the NSW Department of Climate Change, Energy, the Environment and Water (the department). Other actions under the protocol will be undertaken by departmental staff, include staff from the departments' Water group and Biodiversity, Conservation and Science group.

² The Snowy Water Licence issued by the Water Administration Ministerial Corporation on 30 May 2002 as amended and in force from 16 December 2020.

following water year, by providing written notice no later than 13 February of the prior water year.

- 2.2. Clause 26A.1 of Schedule 3 of the Licence provides for the WAMC to require Snowy Hydro to target specified daily release volumes from Tantangara Dam on each day of the following month, by providing written notice of not less than six business days prior to the commencement of the relevant month.
- 2.3. In the absence of target volumes being notified under clause 26.1 and 26A.1 of Schedule 3 of the Licence, clauses 26.3 and 26A.4 of Schedule 3 of the Licence provide for default monthly and daily release volumes from Tantangara Dam.
- 2.4. WAMC's delegated environmental water managers have sought Snowy Hydro's agreement to the trial of a variation to the process for setting target release volumes with a view to maximising the ecological outcomes of the water by delivering flows that reflect real-time natural conditions.

3. Objectives

- 3.1. WAMC and Snowy Hydro ('the parties') have developed and agreed this operating protocol to implement the trial of flexible Snowy Montane River Increased Flows from Tantangara Dam ('this operating protocol'), which seeks to:
 - a. establish a flow regime in the Murrumbidgee River below Tantangara Dam that more closely mimics the natural flow regime (that is, the flow regime prior to the impoundment of flows by Tantangara Dam), and
 - b. enable the release of water from Tantangara Dam via four higher flow events per water year, triggered by a defined natural flow increase in the Murrumbidgee River upstream of Tantangara.
- 3.2. This operating protocol is intended to trial arrangements for the flexible delivery of SMRIFs which will be subject to ongoing monitoring and evaluation for the purposes of determining whether the Licence should be amended to provide for more flexible delivery of SMRIFs.

4. Commencement and term

- 4.1. This operating protocol commences on the day on which it is signed by both parties.
- 4.2. The parties acknowledge that implementation of this protocol commenced by the nomination by the WAMC of June 2024 as a Trigger Event Month and activities undertaken by Snowy Hydro in response to that nomination before this protocol's commencement will be treated as being undertaken as if the protocol had commenced.

- 4.3. This operating protocol ceases to have effect at the end of the 2026-27 water year being 30 April 2027, unless extended by written agreement of the parties.
- 4.4. The parties may terminate this operating protocol by written agreement. Before terminating the agreement, the parties must jointly prepare and provide written reasons to the Water Consultation and Liaison Committee ('WCLC') and allow a reasonable period of time which must not exceed 10 business days for the WCLC to provide comments on the proposed termination.
- 4.5. The parties agree that the written reasons provided to the WCLC under clause 4.4 are for commenting purposes only and that the WCLC does not have the right to veto the proposed termination.

5. Amendment

- 5.1. This operating protocol may be amended at any time by written agreement of the parties and in accordance with the Licence.
- 5.2. The department may seek the advice of the WCLC for the amendment, termination or extension of this operating protocol or on any other relevant matter.
- 5.3. WAMC will consider any concerns, advice, or request to amend, terminate or extend this operating protocol by members of the WCLC.

6. Variation of Increased Flow Requirements and daily release volumes to be targeted from Tantangara Dam

- 6.1. Clause 25.4 of Schedule 3 of the Licence provides for the parties to agree to vary the volume of water targeted for release from Tantangara Dam.
- 6.2. This operating protocol is an agreement between the parties and for the purpose of clause 25.4 of Schedule 3 of the Licence.
- 6.3. The parties agree to vary the volume of water targeted for release from Tantangara Dam and the notification requirements under clauses 26A.1 and 26A.4 of Schedule 3 of the Licence, as set out in section 7.
- 6.4. This operating protocol does not vary any other obligations under the Licence.

7. Alternative trial release arrangements

- 7.1. WAMC may require up to four 'Trigger Event Releases' per water year.

Trigger events

- 7.2. A 'Trigger Event Release' means a release from Tantangara Dam into the Murrumbidgee River during a nominated Trigger Event Month.
- 7.3. Each Trigger Event Release will target the daily discharge rates, including a peak flow date and up to 4 (but normally 3 or less) additional days of ascension or recession notified to the Licensee under clause 7.5.
- 7.4. WAMC may only require one Trigger Event Release per Trigger Event Month and each Trigger Event Release must not exceed a daily release volume of 475ML.
- 7.5. WAMC will aim to provide Snowy Hydro with daily release targets for the Trigger Event Months as part of the notification required no later than 13 February under Clause 26.1 of Part 6 of Schedule 3 of the Licence ('the 13 February notification'). As a minimum, WAMC will notify Snowy Hydro of daily release targets for a Trigger Event Month at least six business days prior to the commencement of the Trigger Event Month.
- 7.6. For Trigger Event Months, the Trigger Event Release will be nominally targeted on a date commencing on or near the 25th day of the Trigger Event Month, to be known as the "Default Date".
- 7.7. Where the 'Murrumbidgee Trigger' is met during a Trigger Event Month, Snowy Hydro will implement the Trigger Event Release.
- 7.8. When the Trigger Event Release is being implemented, Snowy Hydro will target release of the daily discharge rates of the Trigger Event Release notified under clause 7.5 in replacement for the daily release targets for those days notified under clause 7.5. The daily release targets replaced by the daily discharge rates of the Trigger Event Release are to be delivered on consecutive days beginning on the Default Date.
- 7.9. If the Murrumbidgee Trigger has not been met by the Default Date, then Snowy Hydro will target the Trigger Event Release on the Default Date, or a later date in the Trigger Event Month agreed between Snowy Hydro and WAMC.

Nominating Trigger Event Months

- 7.10. WAMC will nominate the months for Trigger Event Releases for the following water year as part of the annual 13 February notification. Each of the nominated months will be known as a 'Trigger Event Month'.
- 7.11. Clause 7.10 does not apply to the water year commencing 1 May 2024, for which the parties have agreed the Trigger Event Months will be June 2024 and April 2025.
- 7.12. WAMC and Snowy Hydro may agree to change a nominated Trigger Event Month up to six business days prior to the commencement of the Trigger Event Month.

Agreeing the Murrumbidgee River Trigger

- 7.13. The 'Murrumbidgee Trigger' is an agreed flow trigger at the Murrumbidgee River above Tantangara Reservoir gauge (Snowy Hydro gauge, station 410535) that, if reached, activates a 'Trigger Event Release'.
- 7.14. WAMC is responsible for proposing a Murrumbidgee Trigger. WAMC will propose a draft Murrumbidgee Trigger at least 6 business days before the commencement of the water year.
- 7.15. WAMC and Snowy Hydro will agree to a Murrumbidgee Trigger a minimum of six business days before the commencement of each Trigger Event Month.
- 7.16. The Murrumbidgee Trigger may be expressed as a discharge rate and/or a percentage increase in discharge rate, relative to a reference such as the average discharge rate of the preceding day, in the Murrumbidgee River at Murrumbidgee River above Tantangara Reservoir gauge (Snowy Hydro gauge, station 410535).

Alerts

- 7.17. WAMC and Snowy Hydro will work together to establish a system for providing alerts when the Murrumbidgee Trigger is met.
- 7.18. Snowy Hydro will be responsible for monitoring the Snowy Hydro gauge station 410535 and establishing an alert system which alerts Snowy Hydro and WAMC that the Murrumbidgee Trigger has been met.

Process following an alert

- 7.19. After receiving an alert under clause 7.18, Snowy Hydro will, as soon as practicable during business hours (9am-5pm), verify the Murrumbidgee Trigger is a valid reading (that is, a check will be made that there is no obvious error in the gauge) by assessing that the increased discharge is associated with rainfall and that the gauge has elevated readings on the preceding and following hours. If the Murrumbidgee Trigger is verified as a valid reading Snowy Hydro will notify WAMC as soon as possible.
- 7.20. As soon as practicable after receiving verification from Snowy Hydro under 7.19, WAMC will ascertain whether the Bureau of Meteorology has any relevant flood warnings or flood watches in place as further described in clause 8.2.
- 7.21. Once the steps under clauses 7.19 and 7.20 have been completed, WAMC will provide advice in writing to Snowy Hydro whether the Trigger Event Release is to be delivered (note: the parties acknowledge that WAMC will use best endeavours to provide advice by 12 noon on the day of receiving the alert, to provide the maximum chance to target the trigger release within 24 hours following the Murrumbidgee Trigger being met.).

- 7.22. Snowy Hydro will use reasonable endeavours to target the Trigger Event Release as soon as possible following WAMC confirmation under clause 7.21. (Note: the parties acknowledge that in order to maximise ecological benefits the release should ideally be made within 24 hours but no later than 48 hours following the Murrumbidgee Trigger being met).
- 7.23. WAMC and Snowy Hydro may agree to extend the period between the Murrumbidgee Trigger occurring and the Trigger Event where the Murrumbidgee Trigger occurs on or immediately precedes a non-business day.
- 7.24. Where Snowy Hydro anticipates that the Trigger Event Release cannot be reasonably achieved within 48 hours following the Murrumbidgee Trigger being met, Snowy Hydro will inform WAMC in writing as soon as possible.
- 7.25. WAMC may cancel the Trigger Event if the delay between the Murrumbidgee Trigger and the release of the Trigger Event is likely to be greater than 48 hours.

8. Safety management conditions

- 8.1. The notification by WAMC to Snowy Hydro of daily releases as part of the Trigger Event will not exceed the daily release volume which requires implementation of the Safety Management Process (currently 1,400 ML/).
- 8.2. As soon as reasonably practicable after receiving an alert under 7.18, WAMC will ascertain whether the Bureau of Meteorology has issued any flood watch notices or flood warnings for gauges subject to such notices and warnings on the Murrumbidgee River below Tantangara Dam. WAMC will determine whether to cancel the Trigger Event Release if such a flood watch notice or flood warning is in place by providing written advice to Snowy Hydro in accordance with clause 7.21.

9. Compliance conditions

- 9.1. Snowy Hydro's obligations under clause 25.1(1) and (2) of Schedule 3 of the Licence for monthly and yearly target releases are not affected by this operating protocol.
- 9.2. During a Trigger Event Month, Snowy Hydro's obligations under clause 25.1(3) of Schedule 3 of the Licence with respect to daily volumes does not apply and is substituted by the obligations set out in clauses 7.22 to 7.25.
- 9.3. WAMC will have regard to the novelty and increased difficulty of making adjustments to release targets at short notice based on the Murrumbidgee Trigger, when assessing Snowy Hydro's compliance with its obligations with respect to daily target releases under clauses 7.22 for Trigger Event Months.

10. Monitoring and Evaluation

- 10.1. The parties will prepare an evaluation report of the implementation of this operating protocol in the previous Snowy water year to the WCLC by 1 September. The initial draft will be prepared by the department. Snowy Hydro will review the initial draft report prepared by the department and if it is satisfied with it, agree to the report being an evaluation report for the purposes of this clause. WAMC and Snowy Hydro will agree to dates for this review process each year to achieve the 1 September deadline.
- 10.2. The evaluation report under clause 10.1 must include an assessment of:
- a. whether the operating protocol has met the objectives at clause 3.1 for the previous water year. This may include, for example, a comparison of discharges in the Murrumbidgee River at Tantangara Dam outlet and any chosen Murrumbidgee gauges to:
 - i. the daily flows notified by WAMC to Snowy Hydro on 13 February,
 - ii. the expected flow regime under natural (pre-development) conditions (where estimation is practicable), or
 - iii. flows at gauges in reference rivers.
- The department will be responsible for drafting this analysis. Snowy Hydro will be responsible for providing the hourly flow data from the gauges it operates.
- b. any material impacts to the environment, including an analysis by the department of potential benefits from the flow regime, such as whether releases coincided with or extended flow events originating from tributaries.
 - c. any unintended consequences of the implementation of the operating protocol.
 - d. any material impacts to the water resources for downstream valleys, including the unregulated Murrumbidgee River and the regulated Murrumbidgee .
 - e. any material impacts on Snowy Hydro operations.
- 10.3. The parties will consider amending this protocol where material impacts have been identified by the evaluation report in the first or second year.
- 10.4. Following the provision of the second annual evaluation report, WAMC will seek WCLC's recommendations to:
- a. vary the Licence for the purposes of adopting the alternative operational arrangements in the operating protocol,
 - b. extend the term of the operating protocol, or
 - c. terminate the operating protocol.

10.5. The Annual Water Operating Plan (‘AWOP’) prepared by Snowy Hydro under clause 8 of the Licence must include details of the implementation of this operating protocol and the Public AWOP must include an overview of the alternative operating arrangements under this operating protocol.

11. Version control

Version	Content	Issued date
Version 1	Approved version	March 2025
Version 2	Personal info e.g. names, emails and signature section are removed	May 2025