AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

Guide to the Automation of Negative Residue Management

Prepared by:	AEMO Electricity Market Monitoring
Version:	4.0
Effective date:	19 November 2025
Status:	FINAL

Approved for distribution and use by:

Approved by:	Ken Harper
Title:	Group Manager – Near-Time Operations
Date:	19 / 11/2025

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Australian Energy Market Operator Ltd ABN 94 072 010 327

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Current version release details

Version	Effective date	Summary of changes
4.0	19 November 2025	Updated for transmission loops and changes to minimise cycling.

Note: There is a full version history at the end of this document.

NOTE ON USE OF "TRADING INTERVAL" / "TI" / "DISPATCH INTERVAL" – Field names used by the NRM process (eg NEGRESIDUE_CURRENT_TI) implicitly refer to quantities calculated for the half-hourly Trading Intervals used prior to 5 minute settlement. The updated process will calculate individual residue values at 5 minute granularity ("5MS"), but retain half-hourly **accumulation** of these residue amounts into the published data fields, so that each field represents the accumulation of 6 underlying values per half-hour. Under the NER a "trading interval" is now specifically defined as a 5-minute settlement period. However it is not proposed to change the NRM process's data field names, as this would require changes to physical EMMS database definitions. Hence these half-hourly accumulated quantities will retain their "_TI" suffixes To avoid any ambiguity, when referring to 5-minute periods this document avoids use of "Trading Interval" or "TI" and uses "dispatch interval" throughout. Half-hourly periods are explicitly referred to as "half-hours" or "30-minute periods".
NOTE ON IMPLEMENTATION TIMING The following provisions are being implemented progressively. The indicative implementation times are: 1. Estimation of directional interconnector settlement residues (new Section 2), changes to Accumulation of negative residue (Section 3) and corresponding parts of the Introduction (Section 1) and Table specification (Appendix A) are intended to be implemented after the system updates are implemented, indicatively scheduled for August 2026 release. 2. Negative Residue Management for transmission loops (new Section 5), the new interconnectors (Table 1) and the new LOOP_NRM_FLAG (Appendix A) systems are indicatively scheduled for August 2026 release but come into practical effect when the loop is represented in dispatch, currently anticipated for October 2026.

1. Introduction

AEMO uses automated constraints to limit the accumulation of negative inter-regional settlement residues in the National Electricity Market (NEM) when this accumulation reaches or exceeds the negative residue accumulation threshold of -$100,000.

To ensure limitation measures are initiated once the accumulated negative residue has, or is expected to, reach or exceed the threshold, AEMO uses an automated negative residue management process. This process activates relevant Negative Residue Management (NRM) constraint equations as soon as the threshold is reached, and schedules NRM constraint deactivation when negative residue accumulation ceases. The aim of the NRM constraint equations is to limit further accumulation of negative residues by reducing the counter-price flow on the relevant directional interconnector in real time. NRM constraint equations may also be used in the pre-dispatch time frame for up to the next two 30-minute periods.

The automatic NRM constraint equations will use the latest residue accumulation values available from dispatch. The accumulation amount, relevant to an affected directional interconnector, is based on negative residues accumulated in prior consecutive 30-minute periods and an estimate of negative residues in the current 30-minute period. Estimates for the current 30-minute period residue are based on completed dispatch intervals[1] in that 30-minute period. At the last dispatch interval of each 30-minute period (for example, 1225-1230 for the 1200-1230 period), or when dispatch results are not available, pre-dispatch estimates of residues for the next 30-minute period are assessed and included in the accumulation amount.

AEMO publishes the estimate of negative residues in real time.

This document provides an overview of the process and the NRM data that is published. In this document, NRM data items are referenced to the relevant field name in the DISPATCH.NEGATIVE_RESIDUE table, shown in italics.

Note that this document uses many terms that are defined in the National Electricity Rules (NER), which are intended to have the same meaning here.

2. Estimation of directional interconnector settlement residues

Note: Estimation of directional interconnector settlement residues will be effective after the system updates are implemented, scheduled for August 2026.

Residues in dispatch interval I for a specific regulated physical interconnector are calculated as below:

Residue $R_{(I)}$ =

$$RRP_{(I, ToRegion)} \times [\ Actual\ Flow_{(I)} - (\ [1 - RLS]\ \times Cleared\ Losses_{(I)}\ )]$$

minus

$$RRP_{(I, FromRegion)} \times [\ Actual\ Flow_{(I)} + (RLS \times\ Cleared\ Losses_{(I)}\ )]$$

where *ToRegion* and *FromRegion* are the notional To and From regions assigned to the interconnector.

For example, *ToRegion* and *FromRegion* for the NSW1-QLD1 interconnector are the QLD1 and NSW1 regions respectively, regardless of the actual flow direction. By convention, **Actual Flow** is positive when physical transfers at the regional boundary are out of FromRegion into ToRegion, and negative when these transfers are out of ToRegion into FromRegion.

$RRP_{(I, Reg)}$	= Spot price in dispatch interval I in region 'Reg'
Actual $Flow_{(I)}$	= 0.5*(METEREDMWFLOW + MWFLOW)/12 in dispatch interval I for a physical interconnector (ie the average of the beginning of interval metered flow and the end of interval flow target[2]), expressed in MWh, at the regional boundary. These flow variables are published in the MMS table DISPATCHINTERCONNECTORRES.
RLS	= FROMREGIONLOSSSHARE for a physical interconnector, published in MMS table INTERCONNECTORCONSTRAINT
Cleared $Losses_{(I)}$	= MWLOSSES/12 in dispatch interval I for a physical interconnector, expressed in MWh, from DISPATCHINTERCONNECTORRES

Residue amounts for a dispatch interval are separately calculated for each physical regulated interconnector linking a given pair of regions, summed over parallel interconnectors, and then assigned to a single directional interconnector based on the physical direction of net boundary flow in that dispatch interval[3]. This estimation approach matches the basis used to determine residues for settlement purposes.

Negative residues for a directional interconnector in a given dispatch interval are simply the lower of the assigned residue amount and zero: **Negative $Residue_{(I)}$ = MIN($Residue_{(I)}$, 0).**

The estimated negative residue amounts are accumulated across three timeframes, and these are relative to the half-hour in which the calculation occurs (the calculation occurs every five minutes at times labelled by *NRM_DATETIME*):

- previous half-hours (*CUMUL_NEGRESIDUE_PREV_TI*),
- current half-hour (*NEGRESIDUE_CURRENT_TI*), and
- next half-hour (*NEGRESIDUE_PD_NEXT_TI*).

The sum of the previous and current amounts is stored in *CUMUL_NEGRESIDUE_AMOUNT*.

[2] Averaging these beginning of interval and end of interval values is likely to give a more representative real-time estimate of energy transferred during the dispatch interval than using only the beginning of interval metered flow level.

[3] Thus the NSW1_QLD1 directional interconnector accumulates residues associated with net flows from New South Wales to Queensland across the parallel Queensland – New South Wales Interconnector (QNI) and Terranora (Directlink) physical interconnectors, while the QLD1_NSW1 directional interconnector accumulates residues associated with net physical flows in the opposite direction.

The negative residue estimate for the next half-hour *(NEGRESIDUE_PD_NEXT_TI)* is only used at the last dispatch run in each half-hour, and is based on the results from the latest available pre-dispatch run (identified by *PREDISPATCHSEQNO*).

The NRM process uses the sum of the negative residue amounts determined for the previous, current and, where applicable, next half-hours to trigger or activate negative residue management via NRM constraints, commencing from the next dispatch interval *(EVENT_ACTIVATED_DI)*.

The prior accumulated negative residue *(CUMUL_NEGRESIDUE_PREV_TI)* will be reset to zero when the negative residue estimate in the current half-hour *(NEGRESIDUE_CURRENT_TI)* is zero.

Calculation of these accumulated negative residue amounts is as follows:

Previous and current half-hours

If J is a given half-hour:

$$\text{Negative Residue}_{(J)} = \sum_{I \in J} Negative\ Residue_{(I)}$$

In the case of the current, incomplete half-hour, the sum comprises only those dispatch intervals I solved up to the time of calculation.

Next half-hour

If J is the next half-hour, the calculation of residue for physical interconnectors has the same form as given above, but price and flow data are from the pre-dispatch data which are at half-hourly granularity:

$RRP_{(J, Reg)}$ = Spot price for half-hour J in region 'Reg'

$\text{Actual Flow}_{(J)}$ = $MWFLOW_{(J-1)}$ / 2

RLS = FROMREGIONLOSSSHARE

$\text{Cleared Losses}_{(J)}$ = $MWLOSSES_{(J)}$ / 2

MWFLOW refers to the cleared flow of the relevant physical interconnector(s). Note that the MWFLOW in half-hour J-1 of pre-dispatch is used to represent the initial or metered megawatts (MW) flow in half-hour J.

3. Accumulation of negative residue

Note: Changes to accumulation of negative residue and corresponding parts of the Introduction (Section 1) and Table specification (Appendix A) will be effective after the system updates are implemented, indicatively scheduled for August 2026.

The accumulation of negative residue for a directional interconnector commences from the first dispatch interval in any half-hourly period in which residues across the directional interconnector become negative (*NEGRESIDUE_CURRENT_TI*)[4].

After any dispatch interval when the accumulated negative residue (*CUMUL_NEGRESIDUE_AMOUNT)* plus, in the last dispatch interval only of a half-hour, the pre-dispatch estimate for the following half-hour (*NEGRESIDUE_PD_NEXT_TI*), reaches or exceeds the threshold of -$100,000, AEMO's automated

[4] Note that a different criterion, and modified NRM process, applies when a directional interconnector is part of an operational transmission loop, as set out in Section 5.

process will start managing to limit the negative residue (unless the underlying dispatch prices are subject to review[5]).

The past accumulated negative residue (*CUMUL_NEGRESIDUE_PREV_TI)* will be reset to zero when the negative residue for the current 30-minute period (*NEGRESIDUE_CURRENT_TI*) is estimated to be zero.

4. Negative residue management process

4.1. Negative residue management constraint equations

Note: Negative Residue Management for transmission loops, the new interconnectors (Table 1) and the new LOOP_NRM_FLAG (Appendix A) systems scheduled for August 2026 release but come into practical effect when the loop is represented in dispatch, currently October 2026.

The NRM process involves a permanently invoked set of constraint equations to manage flow on each directional interconnector, where the NRM constraint equation is named 'NRM_<Directional Interconnector ID>' as shown in Table 1.

For example, constraint equation 'NRM_NSW1_QLD1' manages the net flow from New South Wales to Queensland over the 'NSW1-QLD1' and 'N-Q-MNSP1' interconnectors.

Table 1 NRM constraint equations

Constraint equation	Interconnector flow direction	Physical interconnectors
NRM_NSW1_QLD1	New South Wales to Queensland	NSW1-QLD1, N-Q-MNSP1
NRM_QLD1_NSW1	Queensland to New South Wales	
NRM_NSW1_VIC1	New South Wales to Victoria	VIC1-NSW1
NRM_VIC1_NSW1	Victoria to New South Wales	
NRM_SA1_VIC1	South Australia to Victoria	V-SA, V-S-MNSP1
NRM_VIC1_SA1	Victoria to South Australia	
NRM_SA1_NSW1	South Australia to New South Wales	NSW1-SA1
NRM_NSW1_SA1	New South Wales to South Australia	

These constraint equations have the form Left Hand Side (LHS) ≤ Right Hand Side (RHS) where the relevant physical interconnectors are the controllable variables on the LHS. The constraint violation penalty (CVP) factor for each of these equations is set to 2[6]. AEMO's control room will block the relevant constraint equation and manually set the CVP if a different factor is required.

Typically, NRM constraint equations are permanently invoked, but not active in dispatch by being swamped out with a large RHS value.

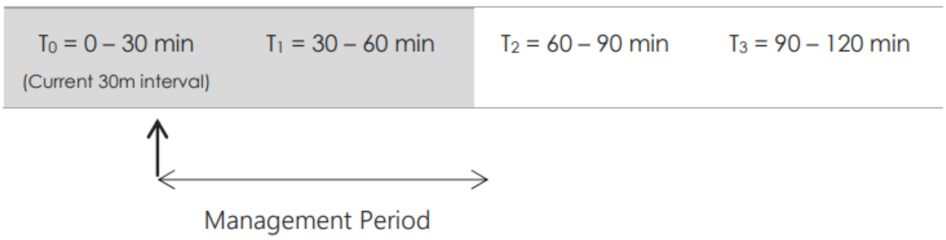
[5] *Automated procedures to identify intervals subject to review* is available at https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/market-operations/policy-and-process-documentation.

[6] *Schedule of Constraint Violation Penalty Factors* is at https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/market-operations/policy-and-process-documentation.

4.2. Negative residue management period

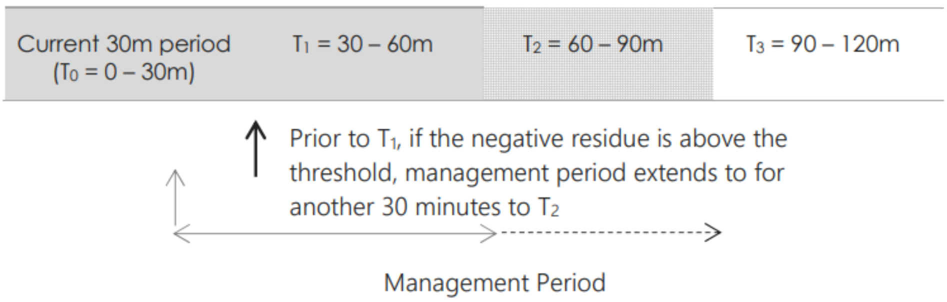
When the threshold is reached or exceeded, the relevant NRM constraint equations will be automatically activated to manage the accumulated negative residue from the next dispatch interval until the end of the following 30-minute period. Within this management period, NRM constraint equations can be temporarily de-activated and re-activated and when certain conditions are met, as discussed in 4.3.

Figure 1 Negative residue management period



If the accumulated negative residue before the start of a new 30-minute period[7] remains above the threshold, the management period is extended for another 30-minute period. This extension will also take place if the management period has not previously been extended but negative residue exceeding the threshold is then detected within the final scheduled 30-minute period.

Figure 2 Negative residue management period extension



4.3. Management of directional interconnector flow

The management process uses an NRM constraint equation to progressively constrain off counter-priced flow in pre-defined steps, with the size of the step dependent on the amount, and sign, of the estimated residue (which may be positive or negative) for the current half-hour, defined as 'NRM_DI_AMT'.

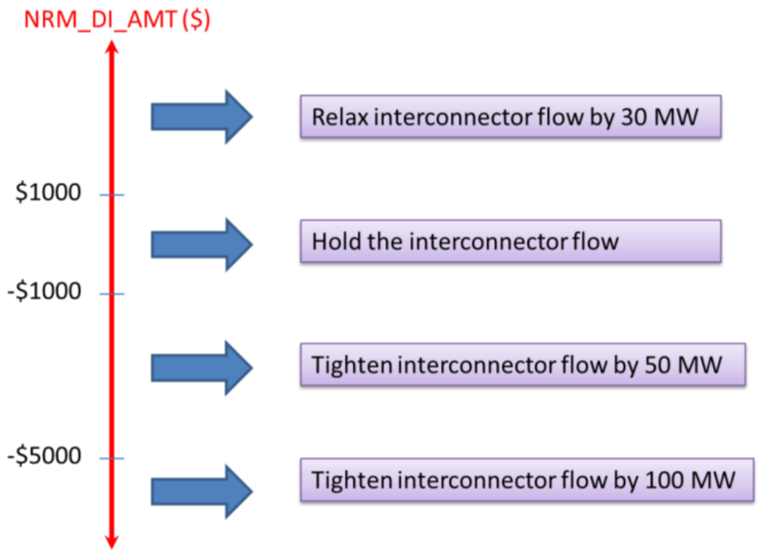
Depending on the value of 'NRM_DI_AMT', the constraint equation will constrain the directional interconnector with either a more aggressive or a more conservative step. If the 'NRM_DI_AMT' is positive, beyond a defined limit, the NRM constraint equation will relax the directional interconnector flow by another pre-defined step. These step adjustments are automatically carried out while ensuring that the minimum flow target in the constrained (counterprice) direction remains above a fixed small

[7] This is determined after the dispatch run for the last dispatch interval of the current 30 minute period, and based on the actual accumulated negative residue plus the estimated residue for the next 30 minute period of the latest pre-dispatch run.

but non-zero "offset" value. The purpose of this offset is to allow the NRM process to detect the ongoing occurrence of small negative settlement residues and mitigate the risk of the NRM management period terminating prematurely.

Figure 3 shows a typical example of the different thresholds of NRM_DI_AMT and the corresponding actions taken by the NRM constraint equation with the different steps sizes (MW).

Figure 3 Example of negative residue management process



The current step sizes and thresholds for 'NRM_DI_AMT' (NR$) for each directional interconnector, and applicable offset values (minimum flow limits) are listed in Table 2 and will be continually reviewed on a half-yearly basis in order to improve the NRM process.

Table 2 NRM constraint equation – RHS step sizes and minimum flow offsets*

NRM_DI_AMT (NR$) Interconnector constraint	NR$ < -5000	-5000 <= NR$ < -1,000	-1,000 <= NR$ < 1,000	NR$ >= 1,000	Offset
NRM_NSW1_QLD1	-100 MW	-50 MW	0 MW	30 MW	20 MW
NRM_QLD1_NSW1	-100 MW	-50 MW	0 MW	30 MW	20 MW
NRM_NSW1_VIC1	-100 MW	-50 MW	0 MW	30 MW	20 MW
NRM_VIC1_NSW1	-100 MW	-50 MW	0 MW	30 MW	20 MW
NRM_VIC1_SA1	-50 MW	-30 MW	0 MW	30 MW	20 MW
NRM_SA1_VIC1	-30 MW	-25 MW	0 MW	25 MW	20 MW
NRM_NSW1_SA1	-75MW	-40 MW	0	30 MW	20 MW
NRM_SA1_NSW1	-75MW	-40 MW	0	30 MW	20 MW

*The offset is subject to incremental tuning without necessarily reissuing this guide. For example, it may be announced via a market notice.

Asymmetrical step sizes – where larger steps are applied for negative residues and smaller steps are applied for positive residues – were introduced to minimise the negative residue accumulation and to avoid oscillations of the target interconnector flow over consecutive dispatch intervals. If the relaxation and tightening introduced by the NRM constraint equations were applied symmetrically, the target interconnector flow can oscillate over a series of consecutive intervals. When oscillations occur, it will be difficult to return the target interconnector flow to a stable state where there will be zero residues.

4.4. Temporary suspension of negative residue management within the management period

Within a management period, the NRM constraint equation will continue to manage the accumulation of negative residue until one of the following conditions is met:

- For the last three dispatch intervals, the NRM constraint equation has not bound (DI_NOTBINDING_COUNT = 3) and non-negative NRM_DI_AMT (that is, *NEGRESIDUE_CURRENT_TI* = 0) were occurring.
- For the last three dispatch intervals, the NRM constraint equation has violated (*DI_VIOLATED_COUNT = 3*) and non-negative NRM_DI_AMT (that is, *NEGRESIDUE_CURRENT_TI* = 0) were occurring.
- AEMO's control room manually intervenes in the process by blocking the NRM constraint equation (*NRMCONSTRAINT_BLOCKED_FLAG*).

Temporary suspension of an NRM constraint within a management period will cease if NRM_DI_AMT becomes negative with magnitude exceeding -$1,000.

4.5. End of management period

The management of negative residues ceases at the end of the scheduled management period for a directional interconnector when its accumulated negative residue is below the threshold of -$100,000 and there are no further extensions to the management period.

4.6. Notices to participants

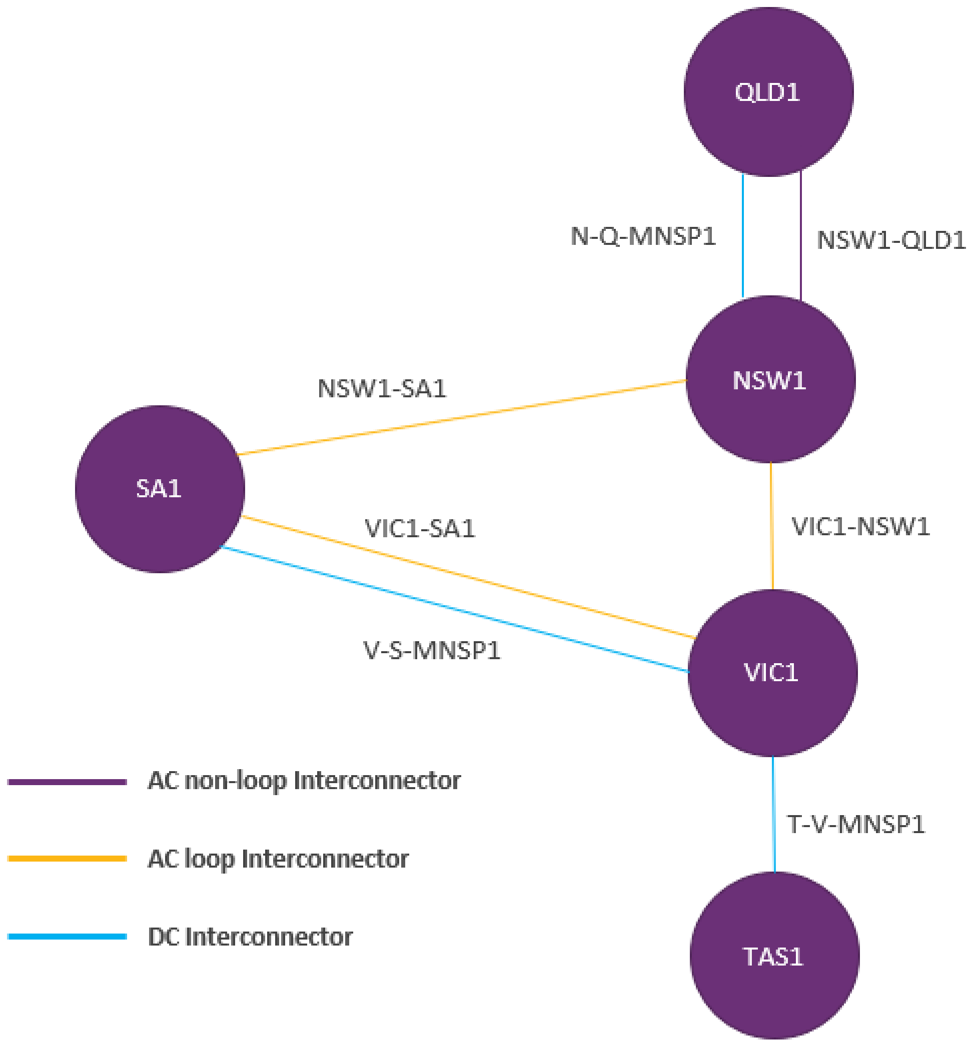
The NRM process automatically issues Market Notices when an NRM constraint equation becomes active to inform participants that NRM is active. This will be followed by another Market Notice to inform participants when the management period has ended.

5. Negative residue management for transmission loops

5.1. Transmission loops

A transmission loop in the NEM arises when three regions are linked by AC interconnections in a triangular topology, as illustrated in Figure 4.

Figure 4 Transmission loop diagram



The NEM's first transmission loop is formed when Project EnergyConnect is included as an interconnector in the dispatch process, representing the physical interconnector linking Bundey in South Australia to Wagga Wagga in New South Wales (NSW1-SA1). This configuration creates the SA1_NSW1 and NSW1_SA1 directional interconnectors, forming a loop with the existing VIC1_SA1 / SA1_VIC1 and VIC1_NSW1 / NSW1_VIC1 directional interconnectors.

Under this configuration, the physics of alternating current (AC) power flow and its interaction with the NEM's regional pricing mechanism can give rise to more frequent accrual of negative inter-regional settlement residues on one or more of the loop interconnections, under standard economic dispatch conditions when there are no binding intra-regional constraints of the kind that generally cause negative settlement residues on radial (non-loop) interconnections.

To maximise the net economic benefits of transmission loop operation, if the aggregate value of settlement residues around the loop as a whole remains positive, then NRM constraints are not applied to interconnectors experiencing counterprice flows and negative residues in an operating transmission loop. This is achieved by modifications in how the NRM process applies to loop interconnectors, described in the following section.

5.2. NRM process modifications for loop interconnectors

To maximise the net benefits of trade among regions linked by a transmission loop, for interconnectors in that loop AEMO modifies the application of the negative residue management process as follows:

- During dispatch intervals in which the aggregate of settlement residues around all directional interconnectors in an operating transmission loop ("loop-aggregate residue") is positive, accumulation and monitoring of negative residue amounts against the -$100,000 threshold, and application of NRM constraints – the usual NRM process for radial interconnectors – is suppressed.
- If loop-aggregate residue becomes negative in any dispatch interval, or the transmission loop becomes non-operational due to outage of one or more of its AC links, the NRM process then applies for loop interconnectors.
  - Accumulation and monitoring of negative residues on each loop interconnector begins from this point but does not necessarily lead to the application of NRM constraints unless and until accumulated negative residues reach the threshold of -$100,000. Each loop interconnector is separately monitored and managed, meaning that NRM constraints would only be applied to an interconnector accruing negative residues in excess of the threshold.
- If loop-aggregate residue returns to a positive value while the transmission loop is operational, the NRM process is again suppressed. Any active management period for one or more loop interconnectors terminates at the end of the 30-minute period in which loop-aggregate residue returns to a positive level. Accumulated negative residue values reset to zero on all loop interconnectors.
- The status of loop-aggregate residues and suppression of the NRM process is monitored and controlled using a "Loop NRM Flag" status flag for each directional interconnector. This flag is set to 0 for directional interconnectors in an operating loop while loop-aggregate residue is positive, indicating suppression of the NRM process. The Loop NRM Flag is set to 1 – signalling application of that process – if:
  - the transmission loop becomes non-operational due to an outage of one of its AC interconnectors; or
  - the loop is operational and loop-aggregate residue is negative.
- For completeness, Loop NRM Flag variables are also defined for directional interconnectors not forming part of a transmission loop, but are permanently set to a value of 1, indicating uniform application of the NRM process.

6. Publication of inputs for negative residue management

The publication of inputs for NRM constraint equations are available from:

- data Interchange in the DISPATCH_NEGATIVE_RESIDUE table, and

- AEMO's website:
  - http://nemweb.com.au/Reports/CURRENT/DISPATCH_NEGATIVE_RESIDUE/ (Current month, one file per dispatch interval [DI])
  - http://nemweb.com.au/Reports/ARCHIVE/Dispatch_Negative_Residue/ (Previous months, one file per day).

The table/file is populated for each five-minute dispatch interval, displaying only residues that are negative for each directional interconnector. It provides several key pieces of information including:

- loop NRM Flag value,
- active management period (*NRM_ACTIVATED_FLAG*),
- negative residue amounts (*CUMUL_NEGRESIDUE_AMOUNT*, *CUMUL_NEGRESIDUE_PREV_TI*, *NEGRESIDUE_CURRENT_TI* and *NEGRESIDUE_PD_NEXT_TI*), and
- dispatch interval when the management will cease (*EVENT_DEACTIVATED_DI*).

Appendix A describes the data in the DISPATCH_NEGATIVERESIDUE table.

Appendix A. NEGATIVE_RESIDUE table specification

Table 3 Dispatch

Name	DISPATCH
Comment	Results from a published Dispatch Run

Table 4 Negative_Residue

Name	NEGATIVE_RESIDUE
Comment	Shows the inputs provided to the Negative Residue Constraints in the Dispatch horizon, as determined by the automated NRM process's calculations.
Visibility	Public

Table 5 Field names

Field name	Data type	Mandatory	Comment
SETTLEMENTDATE	DATE	Yes	Dispatch Interval to which the results from the NRM process apply in Dispatch
NRM_DATETIME	DATE	Yes	The time that the NRM process estimated residues and evaluated activation or deactivation of NRM constraints for this and future dispatch intervals. This evaluation took place immediately after NEMDE produced dispatch quantities and prices at the **start** of the **preceding** dispatch interval. Hence NRM_DATETIME is typically 10 minutes earlier than SETTLEMENTDATE.
DIRECTIONAL_INTERCONNECTORID	VARCHAR2(30)	Yes	Directional interconnector ID (see table 2)
LOOP_NRM_FLAG[8]	NUMBER(1,0)	Yes	Status flag indicating suppression of NRM monitoring and management for a directional interconnector in an operating transmission loop. Set to 0 when process suppressed (loop operational and loop-aggregate residue > 0), otherwise 1 (loop operational and loop-aggregate residue < 0, loop non-operational, or interconnector not part of a loop).
NRM_ACTIVATED_FLAG	NUMBER(1,0)	No	1 if NRM constraint applies for SETTLEMENTDATE, else 0
CUMUL_NEGRESIDUE_AMOUNT	NUMBER(15,5)	No	Accumulated negative residue amount used to trigger an NRM event and apply an NRM constraint. Equal to the sum of CUMUL_NEGRESIDUE_PREV_TI and NEGRESIDUE_CURRENT_TI. In the final dispatch interval of each half-hour, the pre-dispatch estimate for the next half-hour (NEGRESIDUE_PD_NEXT_TI) is added to CUMUL_NEGRESIDUE_AMOUNT for evaluation against the threshold.

[8] The MMS Data Model will be updated once the required IT changes are implemented.

Field name	Data type	Mandatory	Comment
CUMUL_NEGRESIDUE_PREV_TI	NUMBER(15,5)	No	Accumulated negative residue amount for prior half-hourly intervals. Resets to 0 if NEGRESIDUE_CURRENT_TI is 0.
NEGRESIDUE_CURRENT_TI	NUMBER(15,5)	No	Negative residue amount estimated for the current half-hourly interval. Equal to the sum of any estimated negative residues for completed dispatch intervals within the current half-hour.
NEGRESIDUE_PD_NEXT_TI	NUMBER(15,5)	No	Negative residue amount for the next half-hourly interval, as estimated in the latest available pre-dispatch run. Only used in the final dispatch interval of each half-hour.
PRICE_REVISION	VARCHAR2(30)	No	Subject To Review, Indeterminate, Accepted or Rejected
PREDISPATCHSEQNO	VARCHAR2(20)	No	Pre-dispatch sequence number
EVENT_ACTIVATED_DI	DATE	No	The dispatch interval in which the current NRM event was first activated
EVENT_DEACTIVATED_DI	DATE	No	The dispatch interval after which the current NRM event is presently scheduled to end.
DI_NOTBINDING_COUNT	NUMBER(2,0)	No	Count of the number of consecutive dispatch intervals that the relevant NRM constraint is not binding (0-3). NRM constraints will be temporarily swamped out during an NRM event if this count reaches 3.
DI_VIOLATED_COUNT	NUMBER(2,0)	No	Count of the number of consecutive dispatch intervals that the NRM constraint is violated (0-3). NRM constraints will be temporarily swamped out during an NRM event if this count reaches 3.
NRMCONSTRAINT_BLOCKED_FLAG	NUMBER(1,0)	No	1 if NRM constraint is blocked, else 0

Version release history

Version	Effective date	Summary of changes
4.0	19 November 2025	Updated for transmission loops and changes to minimise cycling.
2.0	1 February 2018	Publication of NRM inputs.
1.1	9 July 2014	New template.
1.0	1 May 2012	Initial draft.