NEM Direction Compensation Recovery

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Current version release details

Version	Effective date	Summary of changes
x.x3	02 June 2024	Update to reflect National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No.13 and National Electricity Amendment (Implementing integrated energy storage systems) Rule 2023 No.2 IESS rule change and nNew AEMO format

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

1. Introduction

1.1. Purpose and scope

Under the National Electricity Law and clause 4.8.9 of the National Electricity Rules (NER), AEMO can issue "*directions*" to Registered Participants to maintain or restore power system security or reliability. Certain types of direction may result in the payment of compensation to the directed Market Participants and some other participants directly impacted by any resulting changes in dispatch outcomes.

This document summarises how AEMO will recover direction compensation amounts from Market Participants.

2. Direction compensation

After a relevant direction has been issued, AEMO will determine the service or service(s) that were provided as part of the direction. The service will be one or more of the following:

- **Energy**

- **Market Ancillary Service**

- **Other Service (for system security)**

Compensation may be payable to:

- **Directed Participant**

  ~~Refer to~~ NER clause 3.15.7, 3.15.7A, 3.15.7B

- **Affected Participants and ~~Market Customers (with scheduled load)~~Affected Load Participants**
  ~~Refer to~~ NER clause 3.12.2

- **Eligible Person**
  ~~Refer to~~ NER clause 3.12.2

An independent expert may be engaged ~~in order~~ to determine the compensation amount in some circumstances.

3. Direction compensation recovery

~~The compensation amount, interest, and any applicable independent expert fees,~~The compensation amount, interest, and any applicable independent expert fees are recovered from Market Participants.

Specifically, the cost relevant recovery amount ($**CRP**) is payable or receivable by a Cost Recovery Market Participant ($**CRP**).

To assist participants in reconciling billing amounts relating to the recovery of direction compensation, the direction reconciliation files in Appendix A are created for each billing week in which direction compensation recovery amounts are included.

The reconciliation files:

- Sset out the market-wide inputs to the recovery calculation.

- Do not set out the individual-level inputs in respect of a specific CRMP.

The energy used in the following calculations is the energy in all trading intervals during which the direction applied, for the period from the direction start trading interval to the direction end trading interval (inclusive). Accordingly, if a direction applied for only part of a trading interval at the start or end of the direction period, the energy in those whole trading intervals is included in the calculation.

3.1. Energy direction compensation recovery

NER clause 3.15.8(b) requires that compensation for energy directions must be recovered from Market Customers in proportion to their respective shares of total customer energy Cost Recovery Market Participants (**CRMPs**) inin there proportion to their respective shares of total energy in each region.

If an energy direction compensation payment is applied in a given billing week, the $ recovery amount payable by a Cost Recovery Market ParticipantCRP Market Customer in that week will be calculated in accordance with the following formula:

$$Participant\ Recovery\ Amount\$CRP$$
$$= \$CRA \times \sum_{Region} \left(RBF \times \frac{Individual\ CRMP's\ ACE\ Regional\ Consumed\ Energy}{Total\ CRMPs'\ ACE\ Regional\ Consumed\ Energy} \right)$$

where:

Participant Recovery Amount ($)	=	Recovery amount payable by the relevant Market Customer Cost Recovery Market Participant (excl GSTT). The amount payable or receivable by a Cost Recovery Market Participant
$CRAA ($)	=	The cCompensation rRecovery aAmount being recovered from the NEM for the direction.
Participant Individual CRMP's ACE Regional adjusted consumed Eenergy Customer Energy (in MWh)	=	The Cost Recovery Market Participant CRMP'sMarket Customer's adjusted consumed energy amounts (**ACE**) customer energy at its market connection points in each the region, excluding any scheduled loads for which a dispatch bid was submitted. for the period .from the direction start trading interval to the direction end trading interval (inclusive) excluding any scheduled loads for which a dispatch bid was submitted.

Total CRMPs' ACE~~Total Regional adjusted consumed energy Customer Energy~~ (in MWh)	=	The ~~total customer energy~~aggregate total of the adjusted consumed energy amounts~~ACE~~ for all ~~Cost Recovery Market Participants~~ CRMPs ~~Market Customers~~ in ~~each~~ the region, excluding any scheduled loads for which a dispatch bid was submitted. ~~for the period from the direction start trading interval to the direction end trading interval (inclusive) excluding any scheduled loads for which dispatch bids were submitted.~~
RBF	=	The regional benefit factor for ~~each~~ the region, determined by AEMO (as a fraction).

~~The energy used in the calculations is the~~ adjusted consumed energy~~customer energy in all trading intervals during which the direction applied i.e. if a direction applied for only part of a trading interval at the start or end of the direction period, energy in those whole trading intervals are included in the calculation.~~

~~All of~~All the values required to calculate the participant recovery amount, except the Participant Regional adjusted consumed energy~~Customer Energy~~, are available from the energy direction reconciliation file. The reconciliation file contains information outlined in Appendix A

3.2. Market ancillary services direction compensation recovery

NER clause 3.15.8(f) requires that compensation determined for market ancillary services directions be recovered using the same recovery process applicable to the recovery of market ancillary services costs, except that the recovery is done over all of the trading intervals during which the direction applied.

~~The reconciliation file for market ancillary service direction compensation recovery contains information outlined in Appendix A .~~

3.3. Other service (system security) direction compensation recovery

NER clause 3.15.8(g) requires that compensation determined for directions other than for energy and ancillary services must be recovered from ~~Cost Recovery Market Participants~~CRMPs~~Market Customers, Market Generators, and Market Small Generation Aggregators~~ in proportion to the relevant ACE ~~Adjusted Consumed Energy (ACE) and Adjusted Sent Out Energy (**ASOE**),~~the customer energy, generator energy, and small generation aggregator energy respectively.

If a compensation payment for this type of direction is applied in a given billing week, the cost recovery amount payable or receivable by the CRMP (**$CRP**) ~~the recovery amount payable by a Market Participant~~ in that week will be calculated in accordance with the following formula:

$$\text{~~Participant Recovery Amount~~} \$CRP = \$CRA \times \sum_{Region} \left(RBF \times \frac{\text{~~PGE + PSGE~~} TPSOE - TPCE}{\text{~~TGE + TSGE~~} RATSOE - RATCE} \right)$$

where:

Participant Recovery Amount ($)	=	Recovery amount payable by the relevant Market Participant (excl GST).
$CRA ($)	=	The Ccompensation Rrecovery Aamount being recovered from the NEM for the direction.
PGE TPSOE (in MWh)	=	Participant regional sent out energyregional generator energy. The sum of the ASOE, for all connection points located in the region of the Cost Recovery Market ParticipantCRMP located in the region, of the adjusted sent out energy for the period from the direction start trading interval to the direction end trading interval (inclusive) in all relevant intervention price trading intervalsThe generator energy for the Market Participant (if a Market Generator) in each region for the period from the direction start trading interval to the direction end trading interval (inclusive), where generator energy is the net generation with a floor of 0MWh applied in each trading interval.
PSGE (in MWh)	=	Participant regional small generation aggregator energy. The small generation aggregator energy for the Market Participant (if a Market Small Generation Aggregator) in each region for the period from the direction start trading interval to the direction end trading interval (inclusive), where small generation aggregator energy is the net generation with a floor of 0MWh applied in each trading interval.
*TP*CE (in MWh)	=	Participant regional customer energyregional consumed energy. Tthe sum of the ACE, for all connection points located in the region of the Cost Recovery Market ParticipantCRMP located in the region, of the adjusted consumed energy amounts for the period from the direction start trading interval to the direction end trading interval (inclusive) in all relevant intervention price trading intervalsThe customer energy for the Market Participant (if a Market Customer) in each region for the period from the direction start trading interval to the direction end trading interval (inclusive).
TGE RATSOE (in MWh)	=	Total regional sent out energygenerator energy. The sum of the ASOE, for all connection points located in the region of all CRMPslocated in the region of all Cost Recovery Market Participants, of the adjusted consumed

		~~energy for the period from the direction start trading interval to the direction end trading interval (inclusive) amounts in all relevant intervention price trading intervals~~The total generator energy for all Market Generators in each region for the period from the direction start trading interval to the direction end trading interval (inclusive), where generator energy is the net generation with a floor of 0MWh applied for each Participant in each trading interval.
~~*TSGE*~~ (in MWh)	=	~~Total regional small generation aggregator energy.~~ The total small generation aggregator energy for all Market Small Generation Aggregators in each region for the period from the direction start trading interval to the direction end trading interval (inclusive), where small generation aggregator energy is the net generation with a floor of 0MWh applied for each Participant in each trading interval.
<u>RA</u>*TCE* (in MWh)	=	~~Total regional customer~~<u>consumed</u> ~~energy.~~ <u>The sum of the ACE, for all connection points located in the region of all CRMPs~~located in the region of all Cost Recovery Market Participants~~, of the adjusted consumed energy amounts for the period from the direction start trading interval to the direction end trading interval (inclusive) in all relevant intervention price trading intervals</u>~~The total customer energy for all Market Customers in each region for the period from the direction start trading interval to the direction end trading interval (inclusive)~~.
RBF	=	The regional benefit factor for ~~each~~ <u>the</u> region, determined by AEMO (as a fraction).

~~The energy used in the calculations is the energy in all trading intervals during which the direction applied i.e. if a direction applied for only part of a trading interval at the start or end of the direction period, energy in those whole trading intervals are included in the calculation.~~

~~All of~~<u>All</u> the values required to calculate the participant recovery amount, except the Participant Regional <u>Adjusted Consumed Energy (ACE) and Adjusted Sent Out Energy (ASOE)</u>~~Generator Energy, Small Generation Aggregator Energy, and Customer Energy~~, are available from the system security direction reconciliation file. The reconciliation file contains information outlined in <u>Appendix A</u> .

4. Reconciliation of direction recovery amounts

The information provided in the direction reconciliation files can be used by Participants to reconcile their billing amounts relating to direction recovery. The information contained in direction compensation recovery reconciliation files is outlined in Appendix BB ~~.~~. Note the following:

- Direction funding attracts GST. Participants should add 10% to the participant recovery amount to arrive at the GST inclusive funding amount.

- When sourcing ~~Cost Recovery Market Participant~~CRMP~~participant customer, generator, or small generation aggregator~~ energy data for use in a reconciliation calculation, the version of data used should be that which represents the most recently posted data at the time that the billing run for the week with compensation was run.

- Reconciliation files are available on the day of posting of statements to which the recovery amounts are applied.

5. Information available

Information regarding the compensation amounts paid is available on the AEMO web site in the form of market notices and/or Independent Expert Reports:

- **Market Notices:**

  https://www.aemo.com.au/Market-Notices

- **Independent Expert Reports**

  https://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Market-notices-and-events/Market-event-reports

Direction compensation reconciliation files are available from:

- Settlements Direct:
  Category 'NEM Summary Data'
  Type: NEM Directions Recovery Reconciliation'

- AEMO web page:
  http://www.nemweb.com.au/REPORTS/CURRENT/Directions_Reconciliation

Appendix A. Direction reconciliation files

Reconciliation files for direction compensation recovery post 1-Jul-2011 contain the information outlined in Table 1 below.

Table 1   Direction Compensation Recovery Reconciliation File Contents

Field Name	Description
DIRECTION_ID	The direction identifier for the direction to which the compensation applied. The date on which the direction started can be determined from the first eight digits of the direction identifier. E.g. 20111214.D001 is the direction identifier for the first direction on 14 Dec 2011.
MARKET_NOTICE	The market notices which refer to the direction.
DIRECTION_TYPE_ID	The type of direction (e.g. NON_ENERGY_NON_AS).
DIRECTION_START_DATE	Define the start date and trading interval from which the direction applied.
DIRECTION_START_ INTERVAL	
DIRECTION_END_DATE	Define the end date and trading interval to which the direction applied.
DIRECTION_END_ INTERVAL	
INTEREST_AMOUNT	Interest paid by AEMO. Interest is determined at the average bank bill rate between the settlement date corresponding to the Direction date and the settlement date of the Final Determination week.
INDEPENDENT_EXPERT_FEE	Independent expert fee.
CRA	The Compensation Recovery Amount. This is equal to the sum of COMPENSATION_AMOUNT, INTEREST_AMOUNT, and INDEPENDENT_EXPERT_FEE.
XXX_CUSTOMER_ENERGY	The total regional customer energy for all Market Customers in region XXX for the period to which the direction applied (as defined by DIRECTION_START_DATE, DIRECTION_START_INTERVAL, DIRECTION_END_DATE, and DIRECTION_END_INTERVAL).
XXX_GENERATOR_ENERGY	The total regional generator and small generation aggregator energy for all Market Generators and Market Small Generation Aggregators in region XXX for the period to which the direction applied (as defined by DIRECTION_START_DATE, DIRECTION_START_INTERVAL, DIRECTION_END_DATE, and DIRECTION_END_INTERVAL).
XXX_RBF	The regional benefit for region XXX determined by AEMO.

Appendix B.   Sample reports

Information regarding the recovery of direction compensation will appear in the Settlement Report (**SR**) file for the billing week in which the recovery amount is payable. A sample SR file (for System Security compensation recovery) is presented below.

Figure 1   Sample SR file for System Security compensation recovery

```
Final Determination Statement Transactions
-------------------------------------------------------------------------------
Direction ID                        20090617.D0001
Direction Description               Direction to Port Lincoln.. Market Notices 26588 and 26591 refer.
Start Date                          17/06/2009          PeriodID      40
End Date                            17/06/2009          PeriodID      43
Direction Type                      NON_ENERGY_NON_AS


Summary Final Determination Statement    Final              Provisional       Net
-------------------------------------------------------------------------------
Net AMOUNT for Direction            -$0.03              $0.00        -$0.03
Interest Payment                    $0.00


Compensation Funding
-------------------------------------------------------------------------------
Compensation Recovery Amount        -$40,225.70
Your CRA recovery share                  -$0.03
```

Version release history

Version	Effective Date	Summary of Changes
1.1	19-Mar-2010	Initial version
1.2	15-Nov-2011	Added disclaimer, and recovery for system security directions post 1-Jul-2011
1.3	13-Jan-2015	Updated to reflect the introduction of Small Generation Aggregators in the NEM
2.0	13-May-2019	Updated for 5-minute settlements and new AEMO format