

NEM DIRECTION COMPENSATION RECOVERY

PREPARED BY: Settlements & Prudentials

VERSION: 1.3

DATE: 13 January 2015

Disclaimer

This document is made available to you on the following basis:

- (a) **Purpose** – *This document has been produced by the Australian Energy Market Operator Limited (AEMO) to provide information about compensation payments following the issue of directions as at the date of publication.*
- (b) **No substitute** – *This document is not a substitute for, and should not be read in lieu of, the National Electricity Law (NEL), the National Electricity Rules (Rules) or any other relevant laws, codes, rules, procedures or policies. Further, the contents of this document do not constitute legal or business advice and should not be relied on as a substitute for obtaining detailed advice about the NEL, the Rules, or any other relevant laws, codes, rules, procedures or policies, or any aspect of the national electricity market or the electricity industry.*
- (c) **No Warranty** – *While AEMO has used due care and skill in the production of this document, neither AEMO, nor any of its employees, agents and consultants make any representation or warranty as to the accuracy, reliability, completeness or suitability for particular purposes of the information in this document.*
- (a) **Limitation of liability** - *To the extent permitted by law, AEMO and its advisers, consultants and other contributors to this document (or their respective associated companies, businesses, partners, directors, officers or employees) shall not be liable for any errors, omissions, defects or misrepresentations in the information contained in this document, or for any loss or damage suffered by persons who use or rely on such information (including by reason of negligence, negligent misstatement or otherwise). If any law prohibits the exclusion of such liability, AEMO's liability is limited, at AEMO's option, to the re-supply of the information, provided that this limitation is permitted by law and is fair and reasonable.*

© 2010 - All rights reserved.

Contents

1	Introduction	5
2	Direction Compensation	5
3	Direction Compensation Recovery	5
3.1	Energy Direction Compensation Recovery	5
3.2	Market Ancillary Services Direction Compensation Recovery.....	6
3.3	Other (System Security) Direction Compensation Recovery.....	6
4	Reconciliation of Direction Recovery Amounts.....	8
5	Information Available.....	8
Appendix A	Direction Reconciliation Files	9
Appendix B	Sample Reports	10

Version Release History

VERSION	DATE	BY	CHANGES
1.1	19-Mar-2010	LindaM	Initial version.
1.2	15-Nov-2011	LindaM	Added disclaimer, and recovery for system security directions post 1-Jul-2011.
1.3	13-Jan-2015	LindaM	Updated to reflect the introduction of Small Generation Aggregators in the NEM.

1 Introduction

Under the National Electricity Rules (NER), AEMO can take action as necessary to maintain or restore the power system in a secure, satisfactory, or reliable operating state. If a direction is issued compensation may be payable to one or more participants.

This document describes the types of direction compensation payable, and the recovery of compensation from market participants.

2 Direction Compensation

After a 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 (or System Security)**

Compensation may be payable to:

- **Directed Participant**
For the generating units or services that were the subject of the direction.
- **Affected Participants**
For scheduled generating units or scheduled network service providers that were not the subject of the direction, but which had their dispatched quantity affected by the direction.
- **Eligible Persons**
For persons entitled to receive an amount from AEMO pursuant to NER clause 3.18.1(b)(1) where there has been a change in flow of a directional interconnector, for which the eligible person holds Settlement Residue Auction units for the intervention price trading interval, as a result of the direction.

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

3 Direction Compensation Recovery

The compensation amount, interest, and an independent expert fee if applicable, are recovered from market participants.

To assist participants in reconciling billing amounts relating to the recovery of Direction compensation, reconciliation files are created for each billing week in which Direction compensation recovery amounts are included. The reconciliation files set out the market-wide inputs to the recovery calculation.

3.1 Energy Direction Compensation Recovery

Rules clause 3.15.8(b) requires that Compensation determined for Energy directions must be recovered from Market Customers in proportion to the customer energy.

If an Energy Direction compensation payment is applied in a given billing week, the recovery amount payable by a participant in that week will be:

$$Participant\ Recovery\ Amount = CRA \times \sum_{Region} \left(RBF \times \frac{Participant\ Regional\ Customer\ Energy}{Total\ Regional\ Customer\ Energy} \right)$$

where:

Participant Recovery Amount (\$) = Recovery amount payable by the participant (excl GST).

CRA (\$) = The Compensation Recovery Amount being recovered from the NEM for the direction.

Participant Regional Customer Energy (in MWh) =
The customer energy for the participant in each region for the period from the Direction start trading interval to the Direction end trading interval (inclusive).

Total Regional Customer Energy (in MWh) =
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 region, determined by AEMO (as a fraction).

The energy used in the calculations is the 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 the values required to calculate the participant recovery amount, except the Participant Regional 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

Rules clause 3.15.8(f) requires that Compensation determined for Market Ancillary Services directions be recovered using the same recovery process as Market Ancillary Services, except that the recovery is done over all of the trading intervals during which the direction applied. According to the Market Ancillary Services recovery rules:

- Contingency raise services (6sec, 60sec, and 5min raise) are recovered from Market Generators and Market Small Generation Aggregators. Recovery is in proportion to the sent out generation for each Participant for net exports to the grid only.
- Contingency lower services (6sec, 60sec, and 5min lower) are recovered from Market Customers.
- Regulation services (raise and lower regulation) are recovered according to causer pays, with any residual amount recovered from Market Customers.

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

3.3 Other Service (System Security) Direction Compensation Recovery

Rules clause 3.15.8(g) requires that Compensation determined for directions other than energy and ancillary services directions must be recovered from Market Customers, Market Generators, and Market Small Generation Aggregators in proportion to the customer energy, generator energy, and small generation aggregator energy respectively.

If a System Security compensation payment is applied in a given billing week, the recovery amount payable by a participant in that week will be:

$$Participant\ Recovery\ Amount = CRA \times \sum_{Region} \left(RBF \times \frac{PGE + PSGE - PCE}{TGE + TSGE - TCE} \right)$$

where:

<i>Participant Recovery Amount</i> (\$)	= Recovery amount payable by the participant (excl GST).
<i>CRA</i> (\$)	= The Compensation Recovery Amount being recovered from the NEM for the direction.
<i>PGE</i> (in MWh)	= Participant regional generator energy. The generator energy for the participant 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.
<i>PSGE</i> (in MWh)	= Participant regional small generation aggregator energy. The small generation aggregator energy for the participant 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.
<i>PCE</i> (in MWh)	= Participant regional customer energy. The customer energy for the participant in each region for the period from the Direction start trading interval to the Direction end trading interval (inclusive).
<i>TGE</i> (in MWh)	= Total regional generator energy. 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.
<i>TSGE</i> (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.
<i>TCE</i> (in MWh)	= Total regional customer energy. 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).
<i>RBF</i>	= The regional benefit factor for each 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 the values required to calculate the participant recovery amount, except the Participant Regional 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 Appendix A.

Note that prior to 1-Jul-2011, system security direction compensation was recovered from Participants in the same proportion as the largest single fixed component of Participant fees.

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 A. 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 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:**
http://www.aemo.com.au/data/market_notices/MARKETNOTICEINDEX.shtm
- **Independent Expert Reports**
<http://www.aemo.com.au/Electricity/Resources/Reports-and-Documents/Reports-on-Directions>

Direction compensation reconciliation files are available from:

- Settlements Direct:
Category 'NEM Summary Data'
Type: NEM Directions Recovery Reconciliation'
- AEMO web page:
For other service directions and energy directions post July 2011:
http://www.nemweb.com.au/REPORTS/CURRENT/Directions_Reconciliation
For ancillary services directions and energy directions prior to July 2011:
<http://www.aemo.com.au/Electricity/Data/Settlements/Direction-Compensation-Recovery>

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. Eg 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 (eg 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	
COMPENSATION_AMOUNT	The compensation amount paid by AEMO.
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
    
```