

AEMO Directions to Participants in South Australia

24 August 2022

Draft Determination Report

Disclaimer

This report has been prepared by IES Advisory Services (IES) for AEMO and is supplied in good faith and reflects the knowledge, expertise and experience of the consultants involved. In conducting the analysis for this report IES has endeavoured to use what it considers is the best information available at the date of publication. IES makes no representations or warranties as to the accuracy of the assumptions or estimates on which the forecasts and calculations are based.

The degree of reliance placed upon the projections in this report is a matter for that reader's own commercial judgement and IES accepts no responsibility whatsoever for any loss occasioned by any person acting or refraining from action as a result of reliance on the report.



Notes to this report

Units and dollars

Unless otherwise specified:

- Dollars refer to Australian dollars.
- The claim determination amounts do not include interest payable to participants.



Table of Contents

Disclaimer	ii
Notes to this report	iii
<u>1 Introduction.....</u>	<u>1</u>
1.1 Background and direction to participants	1
1.2 Description of services provided	2
<u>2 Claims for additional compensation – Claimant1</u>	<u>2</u>
2.1 Summary of claims by Claimant1	2
2.2 Assessment of the claimed amounts.....	3
2.2.1 Additional net direct fuel costs (Gas) – per 3.15.7B(a3)(1)	3
2.2.2 Additional net direct maintenance costs (VOM) – per 3.15.7B(a3)(2)	3
2.2.3 Additional net direct other costs (FCAS) – per 3.15.7B(a3)(6).....	4
2.2.4 Additional net direct other costs (Transportation) – per 3.15.7B(a3)(6)	4
2.2.5 Additional net direct other costs (Start-up costs) – per 3.15.7B(a3)(6)	4
2.2.6 The amount calculated as DCP	4
2.3 Summary of the determination – Claimant1	4
<u>3 Claims for additional compensation – Claimant2</u>	<u>5</u>
<u>4 Claims for additional compensation – Claimant3</u>	<u>5</u>
4.1.1 Additional net direct fuel costs (Gas) – per 3.15.7B(a3)(1)	6
4.1.2 Additional net direct maintenance costs (VOM) – per 3.15.7B(a3)(2)	6
4.2 Summary of the determination – Claimant3	6
<u>5 Submissions on matters in the Draft Determination Report</u>	<u>7</u>



1 Introduction

IES has been appointed by AEMO as independent expert to assess claims for additional compensation submitted by *Directed Participants* in relation to the directions issued during Billing Weeks 17 to 20 in 2022.

1.1 Background and direction to participants

During billing weeks 17 to 20 in 2022 AEMO issued directions to maintain the system in a secure operating state. This report presents the assessment of claims made by three claimants, Claimant1, Claimant2 and Claimant3. The directions associated with the claims that have been assessed are summarised in Table 1, Table 2 and Table 3 with the information appropriately masked to maintain confidentiality.

Table 1 Summary of the directions – assessed claims – Claimant1

Directed unit	Event number	Issued	Effective	Ended	Reason
PS3	107-1	16/04/2022 17:00	16/04/2022 22:00	17/04/2022 15:30	System strength
PS4	107-2	16/04/2022 17:00	16/04/2022 22:30	17/04/2022 15:30	System strength
PS4	109-2	23/04/2022 17:30	24/04/2022 9:00	24/04/2022 14:30	System strength
PS4	110-2	24/04/2022 17:00	25/04/2022 9:00	25/04/2022 14:30	System strength
PS2	113-1	14/05/2022 17:20	15/05/2022 9:00	15/05/2022 15:30	System strength
PS4	113-2	14/05/2022 17:20	15/05/2022 9:00	16/05/2022 14:30	System strength

Table 2 Summary of the directions – assessed claims – Claimant2

Directed unit	Event number	Issued	Effective	Ended	Reason
PS3	114-2	20/05/2022 11:10	20/05/2022 11:30	20/05/2022 15:00	System strength
PS1	114-3	20/05/2022 11:35	20/05/2022 11:35	20/05/2022 15:00	System strength

Table 3 Summary of the directions – assessed claims – Claimant3

Directed unit	Event number	Issued	Effective	Ended	Reason
PS1	108-1	22/04/2022 18:00	23/04/2022 9:00	23/04/2022 14:30	System strength
PS1	109-1	23/04/2022 17:30	23/04/2022 22:00	24/04/2022 9:00	System strength



1.2 Description of services provided

The directions issued by AEMO were for the provision of system strength. A directed participant providing system strength is deemed, for the purposes of National Electricity Rules (NER) Clause 3.15.7(a1), to provide energy, refer to NER Clause 3.15.7(a2)(4)(iii). A directed participant that provides energy is entitled to compensation including for additional net direct costs incurred as a result of the provision of the service. NER Clause 3.15.7B(a3) lists, without limitation, components included in the calculation of additional net direct costs. 3.15.7B(b) states that submissions made must “(1) itemise each component of a claim; (2) contain sufficient data and information to substantiate each component of a claim...”

The claims for additional compensation include amounts due to four components:

- Additional net direct fuel costs (Gas) – per 3.15.7B(a3)(1), plus
- Additional net direct maintenance costs (VOM) – per 3.15.7B(a3)(2), plus
- Additional net direct other costs (FCAS and start-up costs where applicable) – per 3.15.7B(a3)(6), less
- The amount calculated as DCP.

AEMO has calculated the compensation amount the directed participant is entitled to receive (DCP) in accordance with NER Clause 3.15.7(c). The claimants have submitted written claims for additional compensation under NER clause 3.15.7B. The assessment of these claims is discussed in this report.

Where it is considered important for clarity, terms defined in the NER have been italicised in the report. A reference to a clause in this report is a reference to the clause in the NER unless stated otherwise.

The remainder of this report is organised as follows:

Section 2 – Claims for additional compensation – Claimant1,

Section 3 – Claims for additional compensation – Claimant2,

Section 3 – Claims for additional compensation – Claimant3, and

Section 4 – Submissions on matters in the Draft Determination Report.

2 Claims for additional compensation – Claimant1

2.1 Summary of claims by Claimant1

The assessed claims submitted by Claimant1 comprised direct cost components of fuel cost (Gas), variable operations and maintenance cost (VOM), start-up costs for some events and recovery of contingency FCAS charges incurred while the units operated in compliance with the directions. The total cost of the direction is the sum of these components. The additional compensation claimed is equal to the latter quantity less DCP. The amounts in the claims submitted by Claimant1 were all rounded to the nearest dollar. The amounts shown in the above table are given in dollars and cents based on the supporting information and calculations in the provided excel models.

The assessed claims submitted by Claimant1 are summarised in Table 4.



Table 4 Summary of additional compensation claimed – assessed claims - Claimant1

Directed unit	Event No.	Total Fuel Cost	VOM Cost + Start up Cost	FCAS Recovery	Total Cost of Direction	DCP	Additional Compensation Claimed
PS3	107-1	\$141,621.13	\$2,122.91	\$64.27	\$143,808.32	\$90,046.15	\$53,762.17
PS4	107-2	\$139,712.17	\$2,062.25	\$60.85	\$141,835.27	\$85,486.94	\$56,348.33
PS4	109-2	\$42,135.87	\$667.20	\$13.74	\$42,816.81	\$29,340.54	\$13,476.27
PS4	110-2	\$38,599.84	\$657.09	\$16.15	\$39,273.08	\$27,292.58	\$11,980.50
PS2	113-1	\$69,339.18	\$788.51	\$27.94	\$70,155.62	\$48,566.32	\$21,589.30
PS4	113-2	\$421,349.47	\$3,578.61	\$577.23	\$425,505.31	\$264,427.00	\$161,078.32
Total		\$852,757.67	\$62,530.28	\$760.17	\$916,048.13	\$545,159.52	\$370,888.61

2.2 Assessment of the claimed amounts

This Section assesses the claimed amount by examining the method used and correctness of the calculation of each of the components of net additional costs included in the claim.

2.2.1 Additional net direct fuel costs (Gas) – per 3.15.7B(a3)(1)

Claimant1 calculated gas costs as follows:

- 1) Calculated the gas volume consumed by the units as the product of the heat rate and energy dispatched while under direction. The heat rate relationship was based on a technical report and the energy quantities from the dispatch data.
- 2) Calculated a volume weighted average price of gas based on the volumes and prices of the gas supplied to the units while generating under direction. Prices were supported by invoices.
- 3) Gas transportation costs were not claimed as no additional costs were incurred in connection with the directions.

This method in the view of IES provides a reasonable reflection of the gas costs incurred in relation to carrying out the *direction*.

2.2.2 Additional net direct maintenance costs (VOM) – per 3.15.7B(a3)(2)

The claim included a component of additional maintenance costs of the directed units. Claimant1 used a VOM rate based on data from a very old study and indexed that cost by 2.5% for each year from the date of the study to the present. This is not a reliable estimate of VOM but Claimant1 could not furnish other supporting data. In view of this we have used the VOM for these units provided in the “2021 Inputs and assumptions workbook” available on AEMO’s website.¹ The workbook expresses the VOM costs in June 2021 terms and the amounts were indexed to June quarter 2022 terms.² It is noted that this approach to estimating VOM is essentially the same approach adopted in a recent final determination.³

¹ <https://aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp/2022-integrated-system-plan-isp/current-inputs-assumptions-and-scenarios>.

² Australian Bureau of Statistics (June 2022) All groups CPI ; Adelaide, Series ID A2325821J; 'TABLE 5. CPI: Groups, Index Numbers by Capital City' [time series spreadsheet], Consumer Price Index, Australia,



2.2.3 Additional net direct other costs (FCAS) – per 3.15.7B(a3)(6)

The claimant included in its claim for additional compensation an amount to recover the FCAS charges it incurred due to carrying out the *direction*. The claimant calculated the dispatched energy from the directed units as a percentage of the total energy and applied that factor to the contingency raise costs incurred during the direction period. The energy quantities were supported by dispatch data. Raise contingency costs are charged to generators on the basis of the energy they produce at the time. In our view this is a reasonable method of attributing these costs to the direction.

2.2.4 Additional net direct other costs (Transportation) – per 3.15.7B(a3)(6)

Gas transportation costs were not claimed as no additional costs were incurred in connection with the directions.

2.2.5 Additional net direct other costs (Start-up costs) – per 3.15.7B(a3)(6)

Start-up costs, incurred in some events, were based on an engineering report and information provided by the claimant. To assess reasonableness of the start-up costs included in the claim, the claimed costs were benchmarked against independent information in the public domain for the units concerned. IES has allowed the start-up costs included in the claims.

2.2.6 The amount calculated as DCP

The compensation to which a directed participant is entitled (DCP) in the case of a direction for the provision of energy is specified in 3.15.7(c). The price used in determining the DCP is the 90th percentile of prices for energy a year immediately preceding the trading day of the *direction*. This amount was calculated by AEMO.

2.3 Summary of the determination – Claimant1

The independent expert made, what it considered to be a more reasonable estimate of the VOM costs related to the direction. As a result the determined amount is less than claimed by \$1,497.14. Table 5 summarises the determination based on the above assessment. Following assessment of the claim submitted by Claimant1 the independent expert determination is that Claimant1 is entitled to an additional compensation amount equal to \$369,391.47.

Table 5 Summary of determination – Claimant1

Directed unit	Event No.	Total Fuel Cost	VOM Cost + Start up Cost	FCAS Recovery	Total Cost of Direction	DCP	Additional Compensation Claimed
PS3	107-1	\$141,621.13	\$1,705.83	\$64.27	\$143,391.24	\$90,046.15	\$53,345.09
PS4	107-2	\$139,712.17	\$1,619.46	\$60.85	\$141,392.48	\$85,486.94	\$55,905.54
PS4	109-2	\$42,135.87	\$22,738.05	\$13.74	\$64,887.66	\$29,340.54	\$35,547.12
PS4	110-2	\$38,599.84	\$17,440.08	\$16.15	\$56,056.07	\$27,292.58	\$28,763.50

accessed 22 August 2022. Available at <https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/consumer-price-index-australia/latest-release#data-download>

³ Final Assessment of Additional Compensation for Directions in SA Between February 25th and March 26th, 2021 by the consultancy SLC.



AEMO DIRECTIONS TO PARTICIPANTS IN SOUTH AUSTRALIA DURING BW 17-20 2022

Directed unit	Event No.	Total Fuel Cost	VOM Cost + Start up Cost	FCAS Recovery	Total Cost of Direction	DCP	Additional Compensation Claimed
PS2	113-1	\$69,339.18	\$14,109.19	\$27.94	\$83,476.31	\$48,566.32	\$34,909.99
PS4	113-2	\$421,349.47	\$3,420.53	\$577.23	\$425,347.23	\$264,427.00	\$160,920.23
Total		\$852,757.67	\$61,033.14	\$760.17	\$914,550.99	\$545,159.52	\$369,391.47

3 Claims for additional compensation – Claimant2

Claimant2 submitted a claim for additional compensation which included fuel cost (Gas), operations and maintenance cost expressed in equivalent operating hours terms (EOH) incurred while the units operated in compliance with the directions. No amounts related to FCAS recovery were included in the claim. The total cost of the direction is the sum of the cost components in the claim. The additional compensation amount claimed is equal to the latter sum less DCP (as calculated by AEMO in accordance with the NER). AEMO has discretion under NER Clause 3.15.7B(c)(1) to not refer claims under \$20,000 to an independent expert. The claims assessed are shown in Table 6.

Fuel and transport costs were supported by invoices. The EOH included Start costs, Fixed and Variable O&M supported by information provided by the claimant.

The amounts in Table 6 reflect the additional claim made based on the information provided by Claimant2 except for the last column of the table which shows the additional compensation amount as claimed, with the rounding to the nearest 10 cents as submitted.

Table 6 Summary of additional compensation claimed – assessed claims – Claimant2

Directed Unit	Event	Total Fuel Cost	EOH	Transportation	Total Cost of Direction	DCP	Additional Compensation Claimed
PS3	114-2	\$87,250.13	\$18,299.16	\$2,068.08	\$107,617.38	\$26,467.87	\$81,149.50
PS1	114-3	\$81,105.57	\$17,579.61	\$1,922.44	\$100,607.62	\$24,603.88	\$76,003.70
Total		\$168,355.70	\$35,878.77	\$3,990.52	\$208,224.99	\$51,071.75	\$157,153.20

Following assessment of the claim submitted by Claimant2 the independent expert has allowed the claim for additional compensation as submitted for the amount of \$157,153.20.

4 Claims for additional compensation – Claimant3

Claimant3 submitted a claim for additional compensation which included fuel cost (Gas), operations and maintenance cost, and amounts to recover FCAS costs incurred as a result of the provision of the services as directed. The total cost of the direction is the sum of the cost components in the claim. The additional compensation amount claimed is equal to the latter sum less DCP (as calculated by AEMO in accordance with the NER).

The amounts in Table 8 reflect the claim for additional compensation amount as submitted, rounded to the nearest dollar.



Table 7 Summary of additional compensation claimed – assessed claims – Claimant3

Directed Unit	Event	Total Fuel Cost	VOM	Transportation & FCAS	Total Cost of Direction	DCP	Additional Compensation Claimed
PS3	108-1	\$307,925	\$2,554	\$871	\$311,350	\$113,362	\$197,988
PS1	109-1	\$625,294	\$5,340	\$1,828	\$632,463	\$226,634	\$405,829
Total		\$933,219	\$7,894	\$2,700	\$943,812	\$339,996	\$603,816

4.1.1 Additional net direct fuel costs (Gas) – per 3.15.7B(a3)(1)

The gas prices and amounts were supported by invoices. The unit involved in direction event 109-1 was not dispatched into the market after the direction period ended. The claimant shut it down following the direction. The shutdown procedure still meant that the unit continued to consume gas during three 5-minute intervals after the last interval in the direction. The claimant advised that they made a commercial decision to turn the unit off mainly due to negative wholesale prices in the market. Wholesale prices published by AEMO were checked and showed that prices continued to be negative for several hours after the direction ended. In contrast the unit was not shutdown after the end of direction event 108-1 and no fuel cost was claimed beyond the end of the direction period. In the view of the independent expert it is reasonable to include fuel costs in the case of event 109-1 involved in an orderly shutdown of the unit in this circumstance.

4.1.2 Additional net direct maintenance costs (VOM) – per 3.15.7B(a3)(2)

The VOM costs were supported by invoices. In the case of event 109-1 the claimant included VOM for 11.5 hours, 0.5 hours beyond the end of the direction period. Upon reviewing the supporting evidence the portion of the cost beyond the direction period was not allowed and the VOM cost reduced to cover only the 11 hours of the direction event.

4.2 Summary of the determination – Claimant3

The independent expert made, what it considered to be a more reasonable determination of the VOM costs related to direction event 109-1. As a result, the determined amount was reduced by \$232.18 compared to the amount claimed. The costs incurred were available to the nearest cent in the supporting information provided by the claimant. The more precise amounts were used in arriving at the determined cost, except for the VOM which was adjusted. The determination also used AEMO’s determined DCP amount, which was available to the nearest cent. The amounts to the nearest cent resulted in a small reduction of \$0.48 compared to the amounts stated to the nearest dollar in the claim as submitted.

Table 8 summarises the determination based on the above assessment. Following assessment of the claim submitted by the claimant the independent expert determination is that Claimant3 is entitled to an additional compensation amount equal to \$603,583.82.



Table 8 Summary of determination – Claimant3

Directed Unit	Event	Total Fuel Cost	VOM	Transportation & FCAS	Total Cost of Direction	DCP	Additional Compensation Claimed
PS3	108-1	\$307,924.58	\$2,553.98	\$871.25	\$311,349.81	\$113,362.18	\$197,987.63
PS1	109-1	\$625,294.26	\$5,107.96	\$1,828.28	\$632,230.50	\$226,634.30	\$405,596.19
Total		\$933,218.84	\$7,661.93	\$2,699.53	\$943,580.30	\$339,996.48	\$603,583.82

5 Submissions on matters in the Draft Determination Report

Interested parties are invited to make submissions on the matters contained in the draft report in accordance with the intervention settlement timetable. Details of the closing time to receive submissions are set out in said timetable.

This invitation is in fulfilment of the requirements of the NER.

