

AEMO Directions to Participants in South Australia

17 November 2023

Final Determination Report

Disclaimer

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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.



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1 Introduction

IES has been appointed by AEMO as independent expert to assess claims for additional compensation submitted by *Directed Participants* in relation to directions issued during Billing Weeks 21 to 24 in 2023.

1.1 Background and direction to participants

During billing weeks 21 to 24 in 2023 AEMO issued directions to maintain the system in a secure operating state. Under NER Clause 3.15.7B(c)(1) AEMO must refer claims that exceed \$20,000 to an independent expert. The directions associated with the claims that have been assessed for Claimant1 and Claimant2 are summarised in Table 1 and Table 2 respectively. The information in the tables have been appropriately masked to maintain confidentiality. For each directed unit in an event, the table shows the time and date the direction was issued along with the start and end time for each direction. Event No. 318-2 was cancelled prior to the effective time.

Table 1 Summary of the directions – assessed claims – Claimant1

Directed unit	Event number	Issued	Effective	Cancelled	Reason
PS1	316-2	30/05/2023 16:30	31/05/2023 12:00	31/05/2023 15:00	System security
PS1	318-2	2/06/2023 23:30	3/06/2023 10:30	3/06/2023 10:00	System security

Table 2 Summary of the directions – assessed claims – Claimant2

Directed unit	Event number	Issued	Effective	Cancelled	Reason
PS2	312-1	20/05/2023 15:00	21/05/2023 0:30	21/05/2023 13:30	System security
PS2	313-4	24/05/2023 16:30	24/05/2023 17:00	25/05/2023 14:30	System security
PS2	314-2	26/05/2023 17:00	27/05/2023 8:30	27/05/2023 16:40	System security
PS2	315-1	27/05/2023 14:45	27/05/2023 22:30	29/05/2023 6:00	System security
PS2	316-1	30/05/2023 22:00	31/05/2023 9:30	31/05/2023 15:30	System security
PS2	319-1	3/06/2023 10:20	3/06/2023 20:00	5/06/2023 15:00	System security
PS2	320-1	5/06/2023 14:00	5/06/2023 21:00	6/06/2023 15:00	System security
PS2	323-2	7/06/2023 17:00	7/06/2023 21:30	9/06/2023 15:30	System security
PS2	324-1	9/06/2023 21:00	10/06/2023 10:30	10/06/2023 15:30	System security
PS1	321-2	7/06/2023 0:00	7/06/2023 0:15	7/06/2023 15:00	System security



AEMO DIRECTIONS TO PARTICIPANTS IN SOUTH AUSTRALIA DURING BW 21-24 2023

Directed unit	Event number	Issued	Effective	Cancelled	Reason
PS3	321-3	7/06/2023 0:00	7/06/2023 0:15	7/06/2023 15:00	System security
PS2	325-2	10/06/2023 19:00	11/06/2023 2:00	11/06/2023 15:25	System security
PS2	325-3	11/06/2023 15:00	12/06/2023 0:30	13/06/2023 4:00	System security
PS2	328-2	14/06/2023 14:30	14/06/2023 23:30	15/06/2023 14:30	System security
PS2	329-1	15/06/2023 14:00	16/06/2023 0:00	16/06/2023 2:30	System security
PS2	330-1	22/06/2023 16:00	22/06/2023 22:30	23/06/2023 6:30	System security

The applicable versions of the NER are version 199 with respective start and end dates of 11 May 2023 to 29 May 2023 and version 200 with respective start and end dates of 30 May 2023 to 6 September 2023. Based on the information provided in the cover sheets of the NER versions, the amendments incorporated in the NER versions do not impact the determination of additional costs.¹

1.2 Description of services provided

AEMO issued directions to the participant to maintain power system security. A directed participant entitled to compensation under 3.15.7B may submit a claim for additional compensation for the sum of:

- The aggregate loss of revenue and additional net direct costs; less
- The amount notified under 3.15.7(e).

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...; and
- (3) be signed by an authorised officer of the applicant certifying that the written submission is true and correct."

The claims for additional compensation include amounts due to:

- 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

¹ AEMC website <https://energy-rules.aemc.gov.au/ner/historic>



- Additional net direct other costs (FCAS and start-up costs where applicable) – per 3.15.7B(a3)(6), less
- The amount calculated as ‘DCP’ under 3.15.7(c). AEMO calculates the provisional compensation in accordance with 3.15.7(c) and informs the directed participant pursuant to 3.15.7(e).

AEMO has calculated the compensation amount the directed participant is entitled to receive, DCP, in accordance with NER Clause 3.15.7(c).

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, and

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

2 Claims for additional compensation – Claimant1

2.1 Summary of claims

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 additional compensation claimed is equal to the sum of these components less ‘DCP’. The assessed claims submitted by the claimant are summarised in Table 3. The amounts shown in Table 3 are given in dollars and cents based on the supporting information and calculations provided by the claimant in support of the claim. Event No. 318-2 was cancelled prior to the effective time.

Table 3 Summary of additional compensation claimed – assessed claims – Claimant1

Directed unit	Event No.	Total Fuel Cost + VOM Cost + Start up Cost	FCAS Recovery	DCP	Additional Compensation Claimed
PS4	316-2	\$66,273.76	\$7.76	\$38,108.17	\$28,173.35
PS4	318-2	\$22,990.22	\$-	\$-	\$22,990.22
Total		\$89,263.98	\$7.76	\$38,108.17	\$51,163.57



2.2 Assessment of the claimed amounts

This Section assesses the claimed amount by examining the method used and correctness of the calculations 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)

The claimant 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 was taken 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. Gas prices were supported by invoices and, where applicable, transaction notes for spot purchase.
- 3) Gas transportation costs were not claimed as no additional costs were incurred in connection with the directions.

The costs and 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 claimant used a VOM rate per hour of operation based on data from a very old study and indexed that cost using an index value of approximately 1.3724. The supporting information provided by the claimant referenced CPI data published by the Australian Bureau of Statistics (ABS). However, it is not clear how the index value used in the claim is related to the referenced ABS data. The amount claimed for VOM was compared to the VOM \$/MWh rate for these units provided in the 2022 ISP plan supporting material, 'Forecasting Assumptions Update workbook; Variable OPEX tab; Existing, Committed and Anticipated generators table' available on AEMO's website.² The workbook expresses the VOM costs in June 2021 terms and the amounts were indexed to terms consistent with the period of the directions using CPI data published by the Australian Bureau of Statistics.³ The direction occurred during the June 2023 quarter and the CPI index applied to the direction period was calculated by linear interpolation between the index of the quarter the direction occurred in and the quarter immediately preceding it. In our view, this is a reasonable estimate of the index. It is noted that estimating VOM with reference to the ISP data indexed by the CPI index data is essentially the same approach adopted in a number of

² AEMO website <https://aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2022-integrated-system-plan-isp/current-inputs-assumptions-and-scenarios>.

³ Australian Bureau of Statistics, time series workbook. 6401.0 Consumer Price Index, Australia; 'TABLE 5. CPI: Groups, Index Numbers by Capital City', 'Data1', Index Numbers; All groups CPI; Adelaide, Series ID A2325821J. June 2023. Available at <https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/consumer-price-index-australia/latest-release#data-download>



previous final determinations.⁴ The VOM estimate based on the indexed ISP data was slightly lower than the claimed amount for the direction event 316-2. We have adjusted downward the VOM amount for this direction by \$52.51.

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

For direction 316-2, 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 taken from dispatch data. Raise contingency costs are charged to generators on the basis of the energy they produce in each interval. In our view this is a reasonable method of attributing these costs to the direction.

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

Start-up costs 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.

2.2.5 The amount calculated as DCP

The method of calculating the provisional 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 in the year immediately preceding the trading day of the *direction*. This amount was calculated by AEMO.

2.3 Summary of the determination

The independent expert made what, in our view, is a reasonable adjustment of the VOM costs related to the direction as discussed above. As a result, the determined amount is less than claimed by \$52.51. Table 4 summarises the determination based on the above assessment. Following assessment of the claims, the independent expert’s determination is that the claimant is entitled to an additional compensation amount equal to \$51,111.06.

Table 4 Summary of determination – Claimant1

Directed unit	Event No.	Total Fuel Cost + VOM Cost + Start up Cost	FCAS Recovery	DCP	Additional Compensation Determination
PS4	316-2	\$66,221.25	\$7.76	\$38,108.17	\$28,120.84
PS4	318-2	\$22,990.22	\$-	\$-	\$22,990.22

⁴ See for example the final determination ‘Final Assessment of Additional Compensation for Directions in SA Between February 25th and March 26th, 2021 by the consultancy SLC.



Directed unit	Event No.	Total Fuel Cost + VOM Cost + Start up Cost	FCAS Recovery	DCP	Additional Compensation Determination
Total		\$89,211.47	\$7.76	\$38,108.17	\$51,111.06

3 Claims for additional compensation – Claimant2

3.1 Summary of claims

The assessed claims submitted by Claimant2 comprised direct cost components of fuel cost including variable transportation cost, operations and maintenance cost, start-up costs and recovery of contingency FCAS charges incurred while the units operated in compliance with the directions. The additional compensation claimed is equal to the sum of these components less ‘DCP’. The assessed claims submitted by the claimant are summarised in Table 5. Supporting information and calculations were provided by the claimant.

Table 5 Summary of additional compensation claimed – assessed claims – Claimant2

Directed unit	Event number	Total Fuel Cost + VOM Cost + Start up Cost	FCAS Recovery	DCP	Additional Compensation Claimed
PS2	312-1	\$219,185.30	\$557.31	\$134,166.38	\$85,576.23
PS2	313-4	\$362,362.75	\$603.20	\$221,757.77	\$141,208.18
PS2	314-2	\$184,869.44	\$56.57	\$84,574.00	\$100,352.01
PS2	315-1	\$573,918.88	\$434.93	\$325,155.99	\$249,197.82
PS2	316-1	\$131,901.06	\$31.26	\$60,661.85	\$71,270.48
PS2	319-1	\$634,028.01	\$319.60	\$422,330.34	\$212,017.26
PS2	320-1	\$240,319.64	\$251.69	\$175,628.33	\$64,943.00
PS2	323-2	\$556,192.15	\$282.41	\$406,612.77	\$149,861.79
PS2	324-1	\$78,071.38	\$12.48	\$47,483.00	\$30,600.87
PS1	321-2	\$208,406.41	\$-	\$149,971.42	\$58,434.99
PS3	321-3	\$212,725.33	\$-	\$152,198.68	\$60,526.65
PS2	325-2	\$157,647.63	\$41.13	\$126,962.55	\$30,726.21
PS2	325-3	\$330,539.86	\$90.57	\$257,632.02	\$72,998.41
PS2	328-2	\$158,701.66	\$513.44	\$136,702.10	\$22,512.99



AEMO DIRECTIONS TO PARTICIPANTS IN SOUTH AUSTRALIA DURING BW 21-24 2023

Directed unit	Event number	Total Fuel Cost + VOM Cost + Start up Cost	FCAS Recovery	DCP	Additional Compensation Claimed
PS2	329-1	\$58,618.58	\$290.34	\$22,764.53	\$36,144.39
PS2	330-1	\$114,127.85	\$3.54	\$69,700.60	\$44,430.79
Total		\$4,221,615.93	\$3,488.47	\$2,794,302.32	\$1,430,802.08

3.2 Assessment of the claimed amounts

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

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

The claimant calculated gas costs as follows:

- 1) Calculated the gas volume consumed by the directed units based on the deliveries. The quantity of fuel attributed to the direction was prorated based on the dispatch under direction compared to the total dispatch over the period covered by the gas deliveries.
- 2) Gas volumes and prices are supported by information contained in invoices. Gas volumes were also reconciled against another reporting source.
- 3) Gas transportation costs were also supported by invoices.

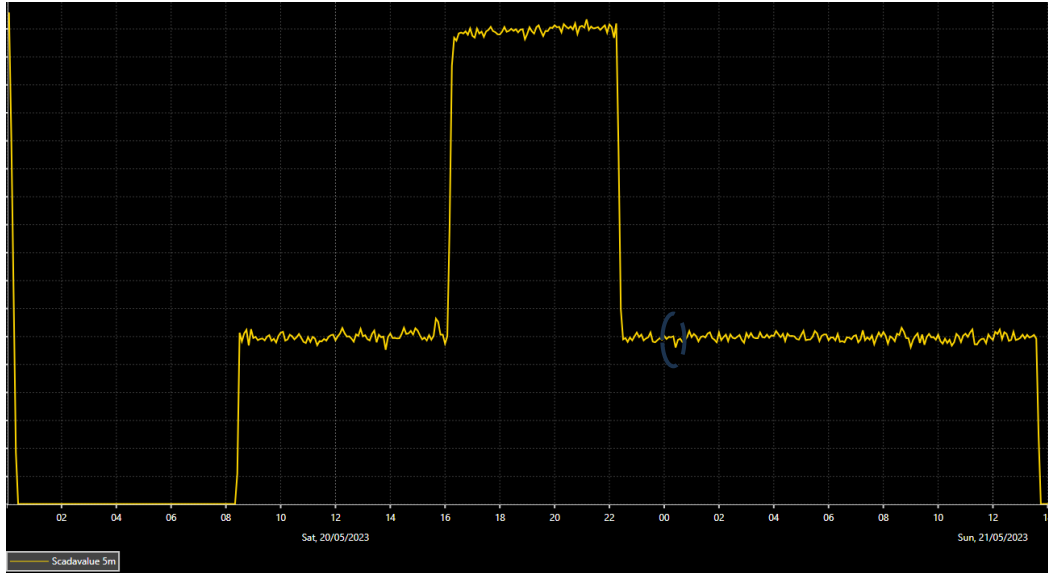
The costs and method in the view of IES provides a reasonable reflection of the gas costs incurred in carrying out the *direction*.

3.2.2 Additional net direct maintenance costs and start costs

The claimant included costs for O&M and start-up costs attributed to the direction. These are based on actual costs incurred reviewed on a regular basis. Additional detail to support the amount claimed was sought from and provided by the claimant. These costs are accepted. However, the start cost included in the claim for direction event 312-1 is not allowed as the unit had been operating for a number of hours before the effective time of the direction. This can be seen in Figure 1. The blue oval indicates the area of the effective time of the direction. The screenshot is heavily redacted to maintain anonymity of the claimant. The horizontal axis shows the date and time, including the period before the commencement of the direction. The vertical axis is MW generated but the scale has been removed to maintain anonymity.



Figure 1 Directed Unit Generation Before and During Direction Event 312-1



Source: NEOpoint⁵

3.2.3 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*. These were not claimed for direction events 321-2 and 321-3.

3.2.4 The amount calculated as DCP

The method of calculating the provisional 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 in the year immediately preceding the trading day of the *direction*. This amount was calculated by AEMO.

3.3 Summary of the determination

Table 6 summarises the determination based on the above assessment. Following assessment of the claims, the independent expert made what, in our view, is a reasonable adjustment of the claimed amount as discussed above. The independent expert’s determination is that the claimant is entitled to an additional compensation amount equal to \$1,405,638.41.

⁵ NEOpoint is a data reporting and analysis web product developed and licensed by IES. Access is by subscription. The data was downloaded from Neopoint.com.au on 26 September 2023.



Table 6 Summary of determination – Claimant2

Directed unit	Event number	Total Fuel Cost + VOM Cost + Start up Cost	FCAS Recovery	DCP	Additional Compensation Determination
PS2	312-1	\$194,021.63	\$557.31	\$134,166.38	\$60,412.56
PS2	313-4	\$362,362.75	\$603.20	\$221,757.77	\$141,208.18
PS2	314-2	\$184,869.44	\$56.57	\$84,574.00	\$100,352.01
PS2	315-1	\$573,918.88	\$434.93	\$325,155.99	\$249,197.82
PS2	316-1	\$131,901.06	\$31.26	\$60,661.85	\$71,270.48
PS2	319-1	\$634,028.01	\$319.60	\$422,330.34	\$212,017.26
PS2	320-1	\$240,319.64	\$251.69	\$175,628.33	\$64,943.00
PS2	323-2	\$556,192.15	\$282.41	\$406,612.77	\$149,861.79
PS2	324-1	\$78,071.38	\$12.48	\$47,483.00	\$30,600.87
PS1	321-2	\$208,406.41	\$-	\$149,971.42	\$58,434.99
PS3	321-3	\$212,725.33	\$-	\$152,198.68	\$60,526.65
PS2	325-2	\$157,647.63	\$41.13	\$126,962.55	\$30,726.21
PS2	325-3	\$330,539.86	\$90.57	\$257,632.02	\$72,998.41
PS2	328-2	\$158,701.66	\$513.44	\$136,702.10	\$22,512.99
PS2	329-1	\$58,618.58	\$290.34	\$22,764.53	\$36,144.39
PS2	330-1	\$114,127.85	\$3.54	\$69,700.60	\$44,430.79
Total		\$4,196,452.26	\$3,488.47	\$2,794,302.32	\$1,405,638.41

4 Submissions on matters in the Draft Determination Report

No submissions have been received on the matters contained in the draft determination report.

