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Additional compensation claims arising from AEMO directions during billing weeks 37 to 40
DRAFT DETERMINATION

An independent expert report for AEMO

19 January 2022

Synergies Economic Consulting Pty Ltd
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1 Introduction

Synergies Economic Consulting (Synergies) was appointed by the Australian Energy Market Operator (AEMO) as an independent expert to determine additional compensation claims for *directed participants* under clause 3.15.7B of the National Electricity Rules (NER) in relation to billing weeks 37 to 40 in 2021.

AEMO is required by the NER to use reasonable endeavours to complete all obligations, including final settlement, no later than 30 weeks after the end of the Direction(s). For the *directions* relating to billing weeks 37 to 40, the intervention timetable requires that a draft independent expert determination be delivered no later than 19 January 2022 and a final determination by 23 March 2022. This will allow AEMO to complete the intervention settlement process by the required deadline of 7 April 2022, 14 April 2022, 21 April 2022, and 28 April 2022 for *directions* occurring during billing weeks 37 to 40.

In accordance with the Intervention Settlement Timetable, Synergies is issuing this draft determination on 19 January 2022.

1.1 Structure of the report

In the remainder of this report, we set out the basis for our draft determination regarding additional compensation claims resulting from these directions under the NER, as follows:

- Section 2 summarises the circumstances of the *directions* and the additional compensation claim provisions of clause 3.15.7B relevant to the claim;
- Section 3 provides details of the *directions* made and initial compensation determined;
- Section 4 provides an overview of the additional compensation claimed by each of two directed participants (Claim 1 and Claim 2) as a result of the *directions*;
- Sections 5 and 6 provides our analysis of the reasonableness of the additional compensation claimed under Claim 1 and Claim 2; and
- Section 7 provides our draft determination.

2 Claims under clause 3.15.7B

This section summarises the circumstances of the *directions* and sets out the additional compensation claim provisions of clause 3.15.7B relevant to the claims.

2.1 Basis of the *directions*

Section 116 of the NEL and clause 4.8.9 of the NER establish that AEMO may direct a *Registered Participant* to take relevant actions to maintain or restore the security or reliability of the power system.

The companies that have submitted a claim for additional compensation were *directed participants* on several occasions between 4 September and 5 October 2021 for the purposes of clause 3.15.7B. During billing weeks 37 to 40, AEMO issued *directions* (refer to Table 1 below) to some South Australian *market participants* to maintain the system in a secure operating state. In response, these *market participants* modified the operations of their generating units.

Table 1 Summary of directions

Directed unit	Issue time	Effective date/time	End date/time	Reason
Claim 1				
Unit 2	08/09/2021 16:00	08/09/2021 21:00	13/09/2021 04:00	System strength
Unit 3	09/09/2021 15:30	10/09/2021 01:00	12/09/2021 18:00	System strength
Unit 3	16/09/2021 17:00	16/09/2021 21:30	18/09/2021 17:00	System strength
Unit 2	15/09/2021 17:00	16/09/2021 08:00	20/09/2021 18:45	System strength
Unit 1	20/09/2021 19:00	21/09/2021 01:00	21/09/2021 13:30	System strength
Unit 2	22/09/2021 17:00	23/09/2021 01:30	24/09/2021 18:00	System strength
Unit 2	25/09/2021 17:00	26/09/2021 01:00	26/09/2021 15:00	System strength
Unit 1	25/09/2021 17:00	26/09/2021 01:30	26/09/2021 17:00	System strength
Unit 2	26/09/2021 17:00	26/09/2021 22:00	27/09/2021 16:30	System strength
Unit 1	27/09/2021 17:00	27/09/2021 22:00	01/10/2021 00:00	System strength
Unit 2	29/09/2021 17:00	29/09/2021 22:30	30/09/2021 15:45	System strength
Unit 1	27/09/2021 17:00	01/10/2021 00:00	01/10/2021 15:30	System strength
Unit 3	30/09/2021 17:00	01/10/2021 01:00	01/10/2021 17:00	System strength
Unit 3	01/10/2021 17:00	02/10/2021 00:30	05/10/2021 16:30	System strength
Unit 1	02/10/2021 16:30	03/10/2021 00:30	05/10/2021 17:00	System strength
Claim 2				
Unit 4	06/09/2021 05:30	06/09/2021 07:30	06/09/2021 14:00	System strength
Unit 5	15/09/2021 08:40	15/09/2021 08:40	15/09/2021 16:00	System strength
Unit 4	23/09/2021 17:00	24/09/2021 10:30	24/09/2021 16:30	System strength
Unit 5	23/09/2021 17:00	24/09/2021 10:30	24/09/2021 16:30	System strength

Source: AEMO.

As a result of the operational responses to the *directions*, the *directed participants* incurred costs and are entitled to compensation under clause 3.15.7 of the NER, which sets out compensation based upon:

- the amount of the relevant market service which the *directed participant* has been enabled to provide in response to the *direction*; and
- the 90th percentile price of the relevant market service over the preceding 12 months.

In line with the Intervention Settlement Timetable, AEMO calculated *directed participants* compensation and notified the *directed participants* of the compensation payable under clause 3.15.7.

In addition to the additional compensation claims set out in the tables below, other claims were also made due to the *directions*. However, they were not assessed as part of this determination as any claims under $20,000 are not required to be assessed by an independent expert under clause 3.12.2(l)(2) of the NER.

2.1.1 Managing system strength

Following changes to the NER in 2017[1], the South Australian region faces system strength issues (i.e., adequate fault currents) that are being and/or will be principally managed by:

- AEMO identifying fault level shortfalls at critical nodes in the network;
- Transmission Network Service Providers (TNSPs) performing the role of system strength service provider, with responsibility to procure system strength services, including from scheduled generators, to address fault level shortfalls as determined by AEMO; and
- AEMO directing specific scheduled generators to synchronise or remain online where necessary to ensure adequate system strength is maintained.

While these arrangements may in time prove sufficient to ensure system strength requirements are met in the future, the process of TNSPs procuring system strength services remains ongoing[2]. In the meantime, AEMO has been ensuring adequate fault

1 AEMC (2017) *National Electricity Amendment (Managing power system fault levels) Rule 2017*, 19 September.

2 For instance, in South Australia, ElectraNet has just installed two synchronous condensers at Davenport substation and two at Robertstown substation, all of which are now operational as of October 2021. See https://www.electranet.com.au/strength-reliability-boost-to-south-australias-electricity-network/

levels are maintained by applying operational procedures regarding permissible combinations of generators. Where the optimal supply solution determined by the NEM dispatch engine (NEMDE) is inconsistent with these permissible combinations, AEMO over-rides the solution and directs specific generators to take actions to ensure the permissible combination of generators is operating.

2.2 Clause 3.15.7

AEMO must compensate each *directed participant* for the provision of energy or market ancillary services pursuant to a *direction* to be determined in accordance with the following formula:

$$DCP = AMP * DQ$$

Where:

- DCP is the amount of compensation the *directed participant* is entitled to receive.[3]
- AMP is the price below which are 90% of the spot prices or ancillary service prices (as the case may be) for the relevant service provided by Scheduled Generators, Semi-Scheduled Generators, Scheduled Network Service Providers or Market Customers in the region to which the direction relates, for the 12 months immediately preceding the trading day in which the *direction* was issued.

DQ is either:

(a) the difference between the total adjusted gross energy delivered or consumed by the *directed participant* and the total adjusted gross energy that would have been delivered or consumed by the *directed participant* had the *direction* not been issued; or

(b) the amount of the relevant market ancillary service which the *directed participant* has been enabled to provide in response to the *direction*.

2.3 Clause 3.15.7B(a)

A *directed participant* that is entitled to compensation under clause 3.15.7 and 3.15.7A may make a claim for additional compensation under clause 3.15.7B, which confines compensation (under clause 3.15.7B (a)) to:

3 DCP is calculated in accordance with NER Clause 3.15.7(c).

1. the aggregate of the loss of revenue and additional net direct costs incurred by the *directed participant* in respect of a scheduled generating unit, semi-scheduled generating unit or scheduled network services, as the case may be, as a result of the provision of the service under direction; less
2. the amount notified to that *directed participant* pursuant to clause 3.15.7(c) or clause 3.15.7A(f); less
3. the aggregate amount the *directed participant* is entitled to receive in accordance with clause 3.15.6(c) for the provision of a service rendered as a result of the direction.

In broad terms, clause 3.15.7B (a) entitles a *directed participant* to claim additional compensation to cover loss of revenue and net direct costs minus *trading amounts* for *energy* and *market ancillary services* and minus any compensation for directed services that has already been determined by AEMO.

The *directed participants* in this case have made a claim for compensation for additional net direct costs pursuant to clause 3.15.7B (a)(1) arising from their responses to *direction*s issued during billing weeks 37 to 40.

3 The directions and initial compensation

3.1 Claim 1 *directions*

AEMO issued the following *directions* commencing 8 September and ending 5 October 2021.

Table 2 AEMO's *directions* to Claimant 1

Directed unit	Event Number	Issued date/time	Effective date/time	End date/time	Reason
Unit 2	34-4	08/09/2021 16:00	08/09/2021 21:00	13/09/2021 04:00	System strength
Unit 3	34-6	09/09/2021 15:30	10/09/2021 01:00	12/09/2021 18:00	System strength
Unit 3	37-5	16/09/2021 17:00	16/09/2021 21:30	18/09/2021 17:00	System strength
Unit 2	37-8	15/09/2021 17:00	16/09/2021 08:00	20/09/2021 18:45	System strength
Unit 1	37-11	20/09/2021 19:00	21/09/2021 01:00	21/09/2021 13:30	System strength
Unit 2	38-5	22/09/2021 17:00	23/09/2021 01:30	24/09/2021 18:00	System strength
Unit 2	40-1	25/09/2021 17:00	26/09/2021 01:00	26/09/2021 15:00	System strength
Unit 1	40-2	25/09/2021 17:00	26/09/2021 01:30	26/09/2021 17:00	System strength
Unit 2	41-1	26/09/2021 17:00	26/09/2021 22:00	27/09/2021 16:30	System strength
Unit 1	42-2	27/09/2021 17:00	27/09/2021 22:00	01/10/2021 00:00	System strength
Unit 2	42-6	29/09/2021 17:00	29/09/2021 22:30	30/09/2021 15:45	System strength
Unit 1	43-2	27/09/2021 17:00	01/10/2021 00:00	01/10/2021 15:30	System strength
Unit 3	43-4	30/09/2021 17:00	01/10/2021 01:00	01/10/2021 17:00	System strength
Unit 3	44-1	01/10/2021 17:00	02/10/2021 00:30	05/10/2021 16:30	System strength
Unit 1	44-5	02/10/2021 16:30	03/10/2021 00:30	05/10/2021 17:00	System strength

Source: AEMO

3.1.1 Initial compensation

In accordance with the above NER provisions, AEMO calculated settlement compensation for the above *directions* as summarised in Table 3.

Table 3 AEMO's settlement compensation amounts

Directed unit	Event number	Issued date/time	Compensation entitlement (DCP)	Retained trading amounts (RTA)	Initial settlement compensation (DCP – RTA)
Unit 2	34-4	08/09/2021 16:00	$384,798	-$59,672	$444,470
Unit 3	34-6	09/09/2021 15:30	$245,573	-$59,183	$304,756
Unit 3	37-5	16/09/2021 17:00	$166,626	-$20,317	$186,944
Unit 2	37-8	15/09/2021 17:00	$404,969	-$28,100	$433,069
Unit 1	37-11	20/09/2021 19:00	$42,977	$11,232	$31,746
Unit 2	38-5	22/09/2021 17:00	$152,642	-$15,430	$168,072
Unit 2	40-1	25/09/2021 17:00	$53,107	-$5,565	$58,672

Directed unit	Event number	Issued date/time	Compensation entitlement (DCP)	Retained trading amounts (RTA)	Initial settlement compensation (DCP – RTA)
Unit 1	40-2	25/09/2021 17:00	$58,116	-$6,688	$64,804
Unit 2	41-1	26/09/2021 17:00	$70,234	$2,301	$67,932
Unit 1	42-2	27/09/2021 17:00	$283,800	$93,491	$190,309
Unit 2	42-6	29/09/2021 17:00	$65,577	$36,005	$29,572
Unit 1	43-2	27/09/2021 17:00	$59,905	$7,863	$52,042
Unit 3	43-4	30/09/2021 17:00	$61,413	$8,968	$52,445
Unit 3	44-1	01/10/2021 17:00	$336,199	-$28,179	$364,378
Unit 1	44-5	02/10/2021 16:30	$243,574	-$44,994	$288,568

Source: AEMO

The amount of compensation a *directed participant* is entitled to receive (DCP) is calculated in accordance with Clause 3.15.7(c) of the NER. The Retained Trading Amount (RTA) is calculated in accordance with Clause 3.15.6(b) for the additional energy produced, which would have been included in the settlement amount indicated in the Preliminary Billing statement. Since invoices are issued weekly and the intervention period spanned two billing weeks, the compensation calculations for all units are presented for each relevant billing week.

Initial settlement compensation is determined as DCP minus RTA and included in the Final Billing statement.

3.2 Claim 2 *directions*

AEMO issued the following *directions* commencing 6 September and ending 24 September 2021.

Table 4 AEMO's *directions* to Claimant 2

Directed unit	Event Number	Issued date/time	Effective date/time	End date/time	Reason
Unit 4	33-1	06/09/2021 05:30	06/09/2021 07:30	06/09/2021 14:00	System strength
Unit 5	36-2	15/09/2021 08:40	15/09/2021 08:40	15/09/2021 16:00	System strength
Unit 4	38-6	23/09/2021 17:00	24/09/2021 10:30	24/09/2021 16:30	System strength
Unit 5	38-7	23/09/2021 17:00	24/09/2021 10:30	24/09/2021 16:30	System strength

Source: AEMO

3.2.1 Initial compensation

In accordance with the above NER provisions, AEMO calculated settlement compensation for the above *directions* as summarised in Table 5.

Table 5 AEMO's settlement compensation amounts

Directed unit	Event number	Issued date/time	Compensation entitlement (DCP)	Retained trading amounts (RTA)	Initial settlement compensation (DCP – RTA)
Unit 4	33-1	06/09/2021 05:30	$67,910	$4,073	$63,837
Unit 5	36-2	15/09/2021 08:40	$51,072	$1,601	$49,471
Unit 4	38-6	23/09/2021 17:00	$85,695	-$133,217	$218,912
Unit 5	38-7	23/09/2021 17:00	$45,028	-$69,200	$114,228

Source: AEMO

4 Claims for additional compensation

This section analyses the reasonableness of Claims 1 and 2 and sets out Synergies' draft position on each component of claimed costs.

4.1 Additional compensation in respect of Claim 1

Claimant 1 has submitted the following claims for additional compensation for the *directions* received during billing weeks 37 to 40.

Table 6 Summary of additional compensation claim estimates for Claim 1

Directed unit	Event number	Direction date/time	Gas fuel cost (1)	Start cost (2)	FCAS (3)	Variable operating & maintenance (4)	Cost of Direction (COD) (1+2+3+4)	Compensation entitlement (DCP)	Add. comp amount (COD – DCP)
Unit 2	34-4	08/09/2021 16:00	$416,397	$0	$1,604	$12,495	$430,496	$384,798	$45,698
Unit 3	34-6	09/09/2021 15:30	$265,291	$0	$981	$7,885	$274,157	$245,573	$28,584
Unit 3	37-5	16/09/2021 17:00	$180,943	$0	$926	$5,277	$187,146	$166,626	$20,520
Unit 2	37-8	15/09/2021 17:00	$453,034	$0	$2,397	$12,980	$468,411	$404,969	$63,442
Unit 1	37-11	20/09/2021 19:00	$48,825	$15,683	$405	$1,516	$66,429	$42,977	$23,452
Unit 2	38-5	22/09/2021 17:00	$168,224	$0	$914	$4,913	$174,052	$152,642	$21,409
Unit 2	40-1	25/09/2021 17:00	$71,756	$0	$99	$1,698	$73,553	$53,107	$20,446
Unit 1	40-2	25/09/2021 17:00	$78,080	$0	$107	$1,880	$80,067	$58,116	$21,951
Unit 2	41-1	26/09/2021 17:00	$88,244	$0	$293	$2,244	$90,782	$70,234	$20,548
Unit 1	42-2	27/09/2021 17:00	$367,161	$0	$1,844	$8,977	$377,981	$283,800	$94,181

Directed unit	Event number	Direction date/time	Gas fuel cost (1)	Start cost (2)	FCAS (3)	Variable operating & maintenance (4)	Cost of Direction (COD) (1+2+3+4)	Compensation entitlement (DCP)	Add. comp amount (COD – DCP)
Unit 2	42-6	29/09/2021 17:00	$84,730	$0	$456	$2,123	$87,309	$65,577	$21,732
Unit 1	43-2	27/09/2021 17:00	$75,785	$0	$244	$11,282	$87,310	$59,905	$27,405
Unit 3	43-4	30/09/2021 17:00	$77,288	$0	$253	$11,646	$89,186	$61,413	$27,774
Unit 3	44-1	01/10/2021 17:00	$408,755	$0	$1,589	$64,051	$474,395	$336,199	$138,196
Unit 1	44-5	02/10/2021 16:30	$295,438	$0	$668	$46,947	$343,053	$243,574	$99,479
Total additional compensation claimed			**$3,079,951**	**$15,683**	**$12,780**	**$195,914**	**$3,304,328**	**$2,629,510**	**$674,817**

Source: Claimant 1.

4.2 Additional compensation in respect of Claim 2

Claimant 2 has submitted the following claims for additional compensation for the *directions* received during billing weeks 37 to 40.

Table 7 Summary of additional compensation claim estimates for Claim 2

Directed unit	Event number	Direction date/time	Gas fuel cost (1)	Start cost (2)	FCAS (3)	VOM (4)	Gas Transport (5)	Cost of Direction (COD) (1+2+3+4+5)	Compensation entitlement (DCP)	Add. comp amount (COD-DCP)
Unit 4	33-1	06/09/2021 05:30	$64,991	$22,050	$124	$2,997	$799	$90,959	$67,910	$23,049
Unit 5	36-2	15/09/2021 08:40	$68,384	$9,000	$211	$0	$0	$77,595	$51,072	$26,522
Unit 4	38-6	23/09/2021 17:00	$85,635	$22,050	$33	$3,919	$1,103	$112,738	$85,695	$27,043
Unit 5	38-7	23/09/2021 17:00	$56,092	$9,000	$17	$0	$0	$65,109	$45,028	$20,081
Total additional compensation claimed			**$275,101**	**$62,099**	**$384**	**$6,915**	**$1,902**	**$346,402**	**$249,706**	**$96,696**

Source: Claimant 2.

5 Synergies' assessment regarding Claim 1

This section analyses the reasonableness of the claim and sets out Synergies' draft position on each component of claimed costs.

5.1 Gas cost

The following method was applied by Claimant 1 to calculate the additional gas fuel costs for each of the *directions*:

- The volume of gas used by the directed unit during the *direction* was calculated by taking the directed megawatts of electrical production by that unit (supported by dispatch data) and applying the relevant heat rate[4] to convert to gigajoules per hour;
  - this provides the gas consumed by the directed unit per hour (divided by two to derive per trading interval consumption).
- The gas used was sourced from two gas supply contracts each with different terms and conditions, including prices, with gas under each contract transported using two different pipelines (Moomba to Adelaide Pipeline System and SEA Gas Pipeline).[5]
- To allocate the total gas consumed by the directed unit to the two gas supply contracts, the proportion of the gas taken from each pipeline for a given trading interval for *all* the generation that occurred across the units was derived.
- The calculated proportion was then applied to the gas consumed by the directed unit to allocate the gas volumes to the relevant gas pipeline contract at each trading interval.

The gas supply contract prices were supported by copies of confidential invoices.

Converting the directed megawatts to gas gigajoules using an appropriate relevant heat rate for the direct unit provides an accurate calculation of gas consumed. Further, allocating the gas consumed to the two gas supply contracts using the total gas sourced proportion provides a reasonable method of allocating the directed unit's gas used to the two different contract prices rather than using a simple average gas supply contract price.

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4 Heat rate is one measure of the efficiency of electrical generators/powers that convert a fuel into heat and into electricity. The heat rate is the amount of energy used by an electrical generator/power plant to generate one kilowatt hour (kWh) of electricity.

5 The Claimant is not claiming additional gas transportation costs in relation to these *directions*.

Based on the evidence provided and the method applied, Synergies accepts the gas fuel cost claimed due to the *directions* in this draft determination.

5.2 Variable operating and maintenance (VOM) costs

Claimant 1's method to calculate the VOM costs was as follows:

- A per interval VOM cost was calculated based on a historical VOM cost estimate, which was then adjusted for inflation by using an annual inflation rate of 2.5%.
- The VOM rate was applied to every interval that each generating unit was operating under AEMO's *direction*.
- Then, the half hourly VOM costs were summed across the period for which each generating unit was operating under *direction*.

The unit VOM values were supported by a confidential report provided by Claimant 1.

The VOM costs identified by Claimant 1 relate to the operating and maintenance costs driven by the hours of operation of the plant. VOM costs can only be considered avoidable costs (i.e., costs incurred due to the *directions*) if there is clear evidence that the generating units would have been off-line but for the *directions*. The need for the *directions* arose from AEMO's consideration of forecasts of plant dispatch based on forecast demand and the prices that generation was being bid in future periods. As per previous similar determinations, Synergies is satisfied that the directed generating units would not have been in operation during the directed periods but for the *directions*.

We accept the VOM costs claimed for all units have been reasonably substantiated for this draft determination, including with supporting documentation.

5.3 Start Costs

Start costs were claimed for Unit 1 for directions received on 20 September 2021.

The Claimant's method for calculating the start costs is as follows:

- The Claimant identified the start as following a period off-line of 36 hours duration.
- The Claimant then took a historical estimate of the cost of a cold start and adjusted the estimate for inflation by using an approximate annual inflation rate of 2.5%.
- To derive the final start cost, the cost of electricity for internal loads (priced at the average market price over the start-up period) was added to the cost of gas fuel to heat the generator (priced at the same weighted average price used for the gas costs in a single price interval – "blended gas cost").

The costs were supported by confidential data provided by the Claimant.

Synergies accepts the start cost estimate, calculated using the blended gas price method, in this claim for additional compensation.

5.4 Frequency Control Ancillary Services (FCAS)

Claimant 1'*s* method to calculate the additional costs incurred due to its increased Frequency Control Ancillary Service (FCAS) Raise liabilities[6] is as follows:

- Claimant 1 first determined the total liability of the power station in respect of contingency FCAS Raise services for the relevant time period during the gas day of the *direction*.
- The Claimant then determined the contribution of the directed units to the total power station output during the relevant period.
- Next, the generating unit's proportional share of power station output was multiplied by the power station's total FCAS Raise liability for each relevant interval on the gas day.
- Finally, this value was summed for the period.

Claimant 1's supporting evidence shows workings and detailed FCAS cost assumptions for the power station provided by AEMO.

Synergies has verified this data by reviewing the calculations and FCAS Raise unit costs provided by AEMO and as such, accepts the FCAS costs claimed for this draft determination.

5.5 Claim 1 determination

Claimant 1's additional costs to comply with the *directions* are as claimed in the additional compensation claim and, on this basis, Claimant 1 is entitled to additional compensation of **$674,817** as set out in Table8 below.

A summary of our determination regarding each category of claimed costs is presented in Table 8 below.

[6] The costs recovered from Claimant 1 in respect of contingency raise costs, allocated in accordance with the FCAS causer pays formulation.

Table 8 Summary of additional compensation claim estimates for Claim 1

Item	Costs claimed	Synergies' draft determination	Difference
Gas fuel	$3,079,951	$3,079,951	-
Start	$15,683	$15,683	-
FCAS	$12,780	$12,780	-
VOM	$195,914	$195,914	-
Cost of Direction (COD)	$3,304,328	$3,304,328	-
Compensation entitlement (DCP)	$2,629,510	$2,629,510	-
Additional compensation amount (COD-DCP)	**$674,817**	**$674,817**	**-**

Source: Claimant 2, Synergies.

6 Synergies' assessment regarding Claim 2

This section analyses the reasonableness of Claim 2 and sets out Synergies' draft position on each component of claimed cost.

6.1 Gas fuel costs

The Claimant has used the following method to calculate gas fuel costs:

- The Claimant draws on several contracts for its gas supply for commercial, as well as for *direction* purposes. However, observing the physical connection of the generating unit to the relevant gas transmission pipeline, two relevant contracts were identified.
- One contract has a specified maximum volume at a specified price that the Claimant can draw upon as needed (but it is not 'take-or-pay' in nature), and as such, the maximum amount (at a higher unit price) was assumed to be taken from it, with the remainder of the *direction* volume assumed to be taken from the second identified contract (at a lower unit price) as necessary.
- The unit price for gas was provided in invoices for each contract and volumes were presented in a spreadsheet.

Synergies recognises that determining the exact source of gas supply to meet a *direction* is difficult given the physical interconnection of the gas transmission pipelines used to deliver gas to the Claimant's power stations, various sources of available gas supply and associated gas flows on the day of a *direction*, as well as the Claimant's use of gas for purposes other than the *direction*.

Hence, when a *direction* is issued, there is a greater demand for gas for the generating unit than what was planned, and so additional gas must be sourced. As such, the gas supply contracts which are available on an 'as needs' basis, would be considered those which most accurately reflect the cost to the business, even if the exact source of gas and associated gas supply contract is not known.

In response to our request for further substantiation of its claim, the Claimant provided further general information regarding the basis of its claim but primarily relies on the assumption that a *direction* will always represent the marginal use of gas on any given day and consequently it assumes that its marginal gas supply contracts (incorporating higher unit prices) will always be used to meet the required *direction* volume.

Synergies agrees with the underlying principle that the Claimant will source gas to profitably optimise its operations. However, the Claimant's supporting information for its claimed gas fuel costs was limited. As a result, we have undertaken some high-level benchmarking of the gas prices used in the claimed gas fuel costs and approve the claimed amount on that basis on this occasion.

This may become an issue in future independent expert reviews. We understand that it is open to an independent expert to substitute a different input price (such as a benchmarked gas price) to that claimed by a Claimant where the information it provides is not sufficient for the independent expert to be satisfied about the robustness or veracity of the Claimant's position.

6.2 Start costs

The Claimant provided two methods for calculating the units start costs: one method for Unit 5 and a different method for Unit 4.

For Unit 5, the Claimant used maintenance cost events that are triggered after a certain number of starts to calculate an average cost per start.

- Multiple combustion inspections and hot gas path inspections, and a major inspection, are scheduled to be carried out after various numbers of starts.
- The sum of the cost of the inspections was divided by the total number of starts which trigger the need for inspection events and associated costs.
- This produced an average per-start cost of $8,899.
- The Claimant then rounded this cost up to $9,000 per start.

Synergies accepts this method for calculating the start-up cost for Unit 5. While acknowledging the method to be an approximation, we would prefer the start cost *not* be rounded up to the nearest thousand. As such, the allowable sum is about $200 less than what was claimed.

For Unit 4, the Claimant has provided an invoice presenting the start-up costs incurred for the month of September, as well as monthly generation data per trading interval. Two of these starts were relevant to Unit 4 as a result of directions. The invoice contained a per-start charge applicable to Unit 4.

Synergies has reviewed this evidence and accepts that the invoiced start cost amounts were incurred due to the *directions*.

6.3 Variable operating maintenance costs

The Claimant incurs a monthly VOM charge for Unit 4, as evidenced in a confidential invoice. To determine the proportion of the monthly charge applicable to the *directions*, the VOM charge per fired hour was found by dividing the monthly VOM charge by the total monthly fired hours. This unit cost was then applied to the fired hours attributable to the *directions*.

Synergies has reviewed the supporting confidential documentation and accepts this as an appropriate way to calculate VOM costs resulting from the *directions*.

6.4 Transport

The Claimant is charged a variable transport charge per unit of GJ delivered for Unit 4 (with no additional transport costs claimed for Unit 5). The cost per unit is provided in a confidential invoice. This $/GJ price was applied to the gas usage during the *direction*.

Based on the evidence provided, Synergies accepts this cost was reasonably calculated and incurred due to the *direction*.

6.5 Claim 2 determination

A summary of our determination regarding each category of claimed costs is presented in Table 9 below.

Table 9 Claim 2 final compensation allowed

Item	Costs claimed	Synergies' draft determination	Difference
Gas cost	$275,101	$275,101	$0
VOM cost	$6,915	$6,915	$0
Transport cost	$1,902	$1,902	$0
FCAS	$384	$384	$0
Start cost	$62,099	$61,897	-$202
Cost of Direction (COD)	$346,402	$346,200	-$202
Compensation entitlement (DCP)	$249,706	$249,706	$0
Additional compensation amount (COD-DCP)	**$96,696**	**$96,494**	**-$202**

Source: Claimant 2, Synergies.

7 Conclusion

In this draft determination, Synergies concludes:

- Claimant 1's costs to comply with the *directions* are as claimed in its additional compensation claim and, on this basis, Claimant 1 is entitled to additional compensation of **$674,817**.
- Claimant 2 has incurred costs as a result of the *directions* that are as claimed with the exception of its start costs for which we have applied a different rounding approach. As such, we determine Claimant 2 is entitled to additional compensation of **$96,494.**

The *directed participants* have been informed of the draft determination outcome, our reasons, and the amount of additional compensation accepted..