



**Draft report on additional compensation  
claims arising from AEMO directions on  
1 December 2016**

An independent expert report prepared for AEMO

July 2017

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## 1 Introduction

Synergies Economic Consulting (Synergies) has been appointed by the Australian Energy Market Operator (AEMO) as an independent expert to determine additional compensation claims for two *Referred Directed Participants* under clause 3.15.7B of the National Electricity Rules (NER).

This follows the final determination made by Synergies on 14 June 2017 of \$0 as the fair payment price for the *Referred Directed Participants* for the *directions* issued on 1 December 2016.

AEMO is required by the NER to use reasonable endeavours to complete all obligations, including final settlement, no later than 200 days after the end of the Direction. The 200 business days ends on 18 September 2017.

In accordance with the Intervention Settlement Timetables for the 1 December 2016 Directions, Synergies is issuing this draft report on 6 July 2017.

### 1.1 Structure of the report

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

- section 2 provides a short summary of Synergies' final determination for compensation claims made in regards to the Direction on 1 December 2016;
- section 3 sets out and applies the provisions of clause 3.15.7B as they relate to Pelican Point's and Origin Energy's additional compensation claims; and
- section 4 sets out the considerations relevant to the determination for additional compensation; and
- Section 5 set out our conclusion.

## 2 Background

The additional compensation claims relate to *directions* issued by AEMO following a South Australia separation event caused by a credible contingency on the Moorabool to Tarrone 500 kV transmission line at a time when one circuit of the Heywood Interconnection was undergoing a scheduled outage.

Four *directions* were issued and subsequently cancelled on 1 December 2016, which led to four claims:

- Claim 1: FCAS *direction* in SA
- Claim 2: *direction* for other services in SA
- Claim 3: *direction* for other services in VIC
- Claim 4: a claim for *Affected Participant* compensation (related to Claim 3).

A Final Report has been issued in respect of these claims (Final Report).<sup>1</sup>

Subsequently, the Claimants in *Claim 2* and *Claim 3* have written to AEMO to seek additional compensation under clause 3.15.7B in regard to the *directions*. For the ease of reference, we have continued to refer to these claimants and their claims by reference to their original claims for compensation in this Draft Report.

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<sup>1</sup> Synergies Economic Consulting (2017), Final report on compensation related to directions that occurred on 1 December 2016, June

### 3 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 for Original Claims 2 and 3.

#### 3.1 Circumstances of the *directions*

The *directions* followed a South Australia separation event. Prior to the separation event, two relevant scheduled outages were underway: on the Heywood No 2 500kV bus bar limiting the Heywood SA-VIC Interconnector to a single 500kV circuit; and an outage on one of the two 500kV circuits between Heywood and the Alcoa Portland Aluminium smelter (APD).

In response to these scheduled outages, AEMO implemented a series of constraints in order to maintain the system in a secure state including:

- limits on flows on the Heywood Interconnector to ensure that the rate of change of frequency (RoCoF) in SA as a result of a credible contingency did not exceed 1 Hz/s;
- limiting Mortlake generation to 0 MW; and
- ensuring at least 35 MW of raise and lower frequency control ancillary services (FCAS) were available in SA.

Full details on the event are set out in our Final Report on compensation related to *directions* that occurred on 1 December 2016.<sup>2</sup>

##### 3.1.1 *Original Claim 2, direction to a SA generator to reduce output*

Because of the separation event, AEMO was obliged to ensure that the South Australian (SA) system was restored to a secure state. This in turn required that sufficient FCAS Raise was available within the State to cover the largest single credible contingency, which at the time was the loss of the single generating unit with the highest operating output. The quantity of R6 FCAS required depended upon the level of output of that unit.

Insufficient R6 FCAS was available within SA at 02:30 hrs. AEMO therefore issued a *direction* to the SA generating unit with the highest level of output, instructing it to reduce its output. It issued a second *direction* at 03:00 hrs. The aim was to reduce the output of the directed unit to a level that was consistent with the secure operation of the system given the availability of R6 FCAS within the state.

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<sup>2</sup> Synergies Economic Consulting (2017), p 9

AEMO has determined that the affected period for the purposes of compensation is from DI ending at 02:35 hrs on 1 December 2016 to DI ending at 05:00 hrs on 1 December 2016. Intervention pricing was implemented during this period. AEMO has indicated that the *direction* was required to maintain power system security in SA.

### **3.1.2 Original Claim 3, direction to a VIC generator to shut down**

Synergies understands that at 10:00 hrs on 1 December 2016, the Victorian generator that was the subject of this *direction* submitted an offer to generate priced at -\$1,000 MWh for the whole of its available capacity. As a result of this offer, the generator commenced operation on or around that time. Its operation resulted in certain system constraints becoming binding or being violated.<sup>3</sup> In response, at 10:30 hrs AEMO issued a *direction* for the generator to shut down in order restore the power system to a secure state. The *direction* was cancelled at 15:45 hrs on the same day.

AEMO has determined that the affected period for the purposes of compensation is from DI ending at 10:35 hrs on 1 December 2016 to DI ending at 15:45 hrs on 1 December 2016. Intervention pricing was not implemented in this period. AEMO has indicated that the *direction* was required to maintain power system security in Victoria (VIC) during the affected period.

## **3.2 Clause 3.15.7B**

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:

- (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*.

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<sup>3</sup> F\_S++HYSE\_L5, F\_S++HYSE\_L6\_1, F\_S++HYSE\_L6\_2, F\_S++HYSE\_L60 all of which related to the provision of FCAS Lower in SA at the time.

In broad terms, clause 3.15.7B (a) entitles a *Directed Participant* to claim 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 been determined.

Neither of the *Directed Participants* has made a claim for compensation for additional net direct costs pursuant to clause 3.15.7B (a) (1), so this is not considered further in our report. Each has made a claim for loss of revenue.

## 4 Considerations relevant to the determination for compensation

This section sets out the reasons for our determination on the two additional compensation claims.

### 4.1 Additional compensation claims

The key supporting arguments for each of the additional compensation claims are summarised below.

#### 4.1.1 Additional compensation claim in respect of Original Claim 2

The *Directed Participant* in Original Claim 2 raised several concerns related to the way Synergies determined that it was not entitled to receive any compensation for the 1 December 2016 *direction*. In summary, these concerns were that:

- generators that are constrained as part of the NEM operation are not relevant to consideration of NEM interventions, such as an AEMO *direction*;
- if a network constraint could be used to resolve the system security problem, then there would have been no need for the direction in the first place;
- if a generator is constrained off in the NEM (say due to a network limit), then another, more expensive generator must be dispatched to replace the MW reduction from the generator that was constrained;
- due to a more expensive generator being dispatched, the NEM spot price will be higher than it would have been had the constraint not been binding – in this way, the generator that is constrained suffers a reduced volume, but enjoys an increase in price;
- in the case of the direction to the *Directed Participant*, it did not get the benefit of the increase in spot price as there was a counter-balancing direction that effectively restored the spot price to what it would have been.

On these grounds, the *Directed Participant* seeks to claim under clause 3.15.7B(a)(1) for the aggregate loss of revenue suffered because of the direction to it on 1 December 2016. To this end, it has calculated an aggregate loss of revenue for both energy and FCAS as follows:

- Energy revenue loss: \$247,606.55
- FCAS revenue loss: \$10,866.14

- Total Claim: \$258,472.69

The *Directed Participant* calculated these amounts using AEMO's 'what if' dispatch and pricing methodology.

#### **4.1.2 Additional compensation claim in respect of Original Claim 3**

The *Directed Participant* raised the following two grounds for an additional compensation claim:

##### *1. Compensation for constrained-off generation due to AEMO direction*

According to Synergies' Final Report, units directed to reduce generation output are not entitled to receive any compensation under clause 3.15.7A. However, the *Directed Participant* claimed for loss of revenue for this same reason under clause 3.15.7B.

##### *2. Additional Claim under clause 3.15.7B*

The *Directed Participant* also pointed out that it has generation assets and customer loads in all NEM mainland regions. As such, price impacts on one region due to a direction could affect the commercial outcome of an adjacent region.

Based on AEMO's what-if price calculation for the period from 10:30 to 13:00 on 1st December 2016, the *Directed Participant* estimated an amount of foregone revenue having regard to its favourable trading position in South Australia.

## **4.2 Synergies' determination on additional compensation claims**

Both *Directed Participants* are seeking additional compensation in regards to loss of revenue under clause 3.15.7B (a1) rather than net direct costs as defined under clause 3.15.7B (a3).

### **4.2.1 Meaning of 'loss of revenue' under clause 3.15.7B (a1)**

The term 'loss of revenue' is not a defined term in the NER, nor is there any elaboration on its meaning within the clauses relating to compensation for services from *Directed Participants*.

It is not a term of art in economics or related fields. Nor is Synergies aware of any prior independent determinations of clause 3.15.7B compensation that have addressed its meaning. Hence, in our Final report on compensation related to *directions* that occurred on 1 December 2016, we concluded that the plain meaning of the term should be used.

We describe the plain meaning of the term ‘revenue’ in the context of the term ‘income’ and noted that in the NEM, this is usually the sum of *trading amounts* due to a participant.

The plain meaning of loss is disadvantage from being deprived of something or a change in conditions that it would otherwise have received.<sup>4</sup> We therefore interpreted the term ‘loss of revenue’ to mean the failure to get some or all of the revenue that that the *Directed Participant* would have been able to secure had it not been directed to provide a service.

#### **4.2.2 Meaning of provision of a service**

For the purposes of clause 3.15.7B, we do not regard a *direction* for the reduction in the *dispatch level of energy* despite the offer prices for the generators being lower than the relevant *regional reference price* (in and of itself) to be a relevant service for the determination of compensation.

However, where the *direction* to reduce the *dispatch level of energy* arose from the provision of another service (being, for example, contingency-related FCAS such as R6 FCAS), then that other service may be a relevant service for the purposes of assessing compensation under clause 3.15.7B.

In this regard:

- We accept that the *direction* in respect of Claim 2 was motivated (amongst other things) to ensure sufficient contingency-related FCAS (R6 FCAS) was available for South Australia and that the *Directed Participant* suffered a loss of revenue from complying with the *direction* for which it should be compensated under clause 3.15.7B;
- We consider the *direction* in respect of Claim 3 was a *direction* to ensure system security alone – the *Directed Participant* did not provide any other services. Effectively, the *Directed Participant* was constrained off and the reasoning set out in the Final Report applies. Accordingly, we consider that the *direction* in respect of Claim 3 was a *direction* that resulted in the provision of services of a type that does not give rise to a claim for compensation for loss of revenue under clause 3.15.7B.

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<sup>4</sup> Oxford English Dictionary. Loss is defined as ‘diminution of one's possessions or advantages; detriment or disadvantage involved in being deprived of something, or resulting from a change of conditions; an instance of this.’ Where ‘loss’ is used within NER defined terms, it typically refers to power losses in transmission or distribution in terms such as *average loss factor*.

## 5 Conclusion

For the reasons set out above, we have determined that under clause 3.15.7B the fair payment for additional compensation for the loss of revenue incurred by the *Directed Participant* in:

- *Claim 2* is accepted, subject to AEMO confirmation of quantum; and
- *Claim 3* is not accepted, with zero compensation being payable.