FEDERAL COURT OF AUSTRALIA

Australian Energy Regulator v Pelican Point Power Ltd [2023] FCA 1110

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| File number: | SAD 187 of 2019 |
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| Judgment of: | **BESANKO J** |
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| Date of judgment: | 20 September 2023 |
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| Catchwords: | **CONSUMER LAW** — application for declarations of contraventions of National Electricity Rules (NER) pursuant to s 44AAG(1) of the *Competition and Consumer Act 2010* (Cth) — where on 8 February 2017, a day Adelaide recorded a maximum temperature of 42.4 degrees Celsius, the Australian Energy Market Operator (AEMO) had to issue a direction to initiate load shedding to return the power system to a secure operating state in South Australia — where load shedding was not required in similar conditions on 9 February 2017 as AEMO was able to direct Pelican Point Power Limited (PPPL) to synchronise and dispatch GT12 — whether (PPPL) contravened cl 3.7.3(e)(2) of the NER by failing to submit its short term Projected Assessment of System Adequacy (PASA) availability for each trading interval during the 8 February 2017 trading day so as to reflect the true physical plant capability of the Pelican Point Power Station that could be made available on 24 hours’ notice — whether PPPL contravened cl 3.7.2(d)(1) of the NER by failing to submit medium term PASA (MT PASA) availability so as to reflect the true physical plant capability of the Pelican Point Power Station that could be made available on 24 hours’ notice after the gas turbine GT12 was brought from dry to wet storage on 11 November 2016 — whether PPPL contravened cl 3.13.2(h) of the NER by failing to notify AEMO promptly on or after 11 November 2016 of the increased MT PASA availability  **CONSUMER LAW** — where the AER seeks the imposition of civil penalties on PPPL — where Court made an order that liability be heard separately, and in advance of, the determination of what relief should be granted  **CONSUMER LAW** — where the highest availability submitted by PPPL in its short term PASA (ST PASA) for the 8 February 2017 trading day was 235 MW — where PPPL’s MT PASA input for 8 February 2017 was 224 MW — consideration of two hypothetical operating scenarios a reasonable generator would have had in mind, 320 MW scenario which involves GT11 and GT12 operating concurrently for four hours and the 8 February counterfactual which involves GT11 operating as it did on 8 February 2017 and GT12 operating on 8 February 2017 as it in fact operated on 9 February 2017 — consideration of principles of statutory interpretation — consideration of proper construction of the defined term “PASA availability” in cll 3.7.2(d)(1) and 3.7.3(e)(2) of the NER — where issue as to the nature and extent of the Scheduled Generator’s obligations in submitting estimates or forecasts of MT and ST PASA — consideration of the meaning of “current intentions” and “best estimates” — consideration of how much non-firm gas PPPL could reasonably expect to have been able to obtain on 8 February 2017 on 24 hours’ notice — whether PPPL ought to have reasonably expected that it could have secured the additional gas transport required to operate GT11 on 8 February 2017 and, for four hours, GT12 — whether the physical condition of GT12 had a bearing on availability of turbines for the purpose of making PASA submissions — consideration of expert evidence — where bulk of the historical data of the AER’s expert related to January and February 2017 and not November and December 2016 — held that the AER failed to establish that the MT PASA availability of 224 MW was not a reasonable forecast at that time — held that PPPL’s ST PASA inputs submitted after 3 February 2017 at 12.14 pm contravened cl 3.7.3(e)(2) |
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| Legislation: | *Acts Interpretation Act 1901* (Cth) s 15AA  *Competition and Consumer Act 2010* (Cth) ss 4, 44AAG  *Evidence Act 1995* (Cth) s 140  National Electricity Law ss 2, 2AA, 3, 7, 9, 15, 28, 116  National Electricity Rules(Version 88) cll 3.1.1, 3.4.3, 3.7.1, 3.7.2. 3.7.3, 3.8.1, 3.8.3, 3.8.4, 3.8.20, 3.8.22, 3.9.7, 3.13.2, 3.13.3, 3.13.4, 3.13.6A, 3.13.7, 3.15.7, 4.2.6, 4.3.1, 4.8.4, 4.8.7, 4.8.9, 4.8.15, 4.9,2, 4.9.9, 4.9.9A, 4.9.9B  *National Electricity (South Australia) Act 1996* (SA) ss 6, 8  *National Electricity (South Australia) Regulations*, reg 6 |
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| Cases cited: | *Australian Competition and Consumer Commission v Yazaki Corporation* [2018] FCAFC 73; (2018) 262 FCR 243  *Australian Energy Regulator v Stanwell Corporation Ltd* [2011] FCA 991; (2011) 197 FCR 429  *Briginshaw v Briginshaw* [1938] HCA 34; (1938) 60 CLR 336  *Canadian Pacific Tobacco Co Ltd v Stapleton* [1952] HCA 32; (1952) 86 CLR 1  *Certain Lloyd’s Underwriters v Cross* [2012] HCA 56; (2012) 248 CLR 378  *CIC Insurance Ltd v Bankstown Football Club Ltd* [1997] HCA 2; (1997) 187 CLR 384  *Commissioner of Stamps (SA) v Telegraph Investment Co Pty Ltd* [1995] HCA 44;(1995) 184 CLR 453  *Commonwealth v Sterling Nicholas Duty Free Pty Ltd* (1972) 126 CLR 297  *Construction, Forestry, Maritime, Mining and Energy Union v Australian Building and Construction Commissioner (Bay Street Appeal)* [2020] FCAFC 192; (2020) 282 FCR 1  *Gill v Donald Humberstone & Co Ltd* [1963] 1 WLR 929  *Grajewski v Director of Public Prosecutions (NSW)* [2017] NSWCCA 251; (2017) 270 A Crim R 33  *Healthcare at Home Ltd v Common Services Agency* [2014] UKSC 49  *HFM043 v Republic of Nauru* [2018] HCA 37; (2018) 359 ALR 176  *Melbourne City Council v Telstra Corporation Limited* [2020] FCAFC 200; (2020) 281 FCR 379  *Mills v Meeking* [1990] HCA 6; (1990) 169 CLR 214  *Minister for Immigration and Border Protection v SZVFW* [2018] HCA 30; (2018) 264 CLR 541  *Minister for Immigration and Citizenship v Li* [2013] HCA 18; (2013) 249 CLR 332  *Morley v Australian Securities and Investments Commission* [2010] NSWCA 331; (2010) 247 FLR 140  *Neat Holdings Pty Ltd v Karajan Holdings Pty Ltd* [1992] HCA 66; (1992) 110 ALR 449; (1992) 67 ALJR 170  *R v A2* [2019] HCA 35; (2019) 269 CLR 507  *Taylor v Owners – Strata Plan No 11564* [2014] HCA 9; (2014) 253 CLR 531  *Trade Practices Commission v TNT Management Pty Ltd* (1985) 6 FCR 1  *Wentworth Securities Ltd v Jones* [1980] AC 74 |
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| Division: | General Division |
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| Registry: | South Australia |
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| National Practice Area: | Commercial and Corporations |
|  |  |
| Sub-area: | Economic Regulator, Competition and Access |
|  |  |
| Number of paragraphs: | 681 |
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| Dates of hearing: | 19-23 April 2021, 13-17, 20, 28 & 29 September 2021 |
|  |  |
| Date of last submissions: | 1 October 2021 |
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| Counsel for the Applicant: | Mr A McClelland KC with Mr T Clarke and Mr M Peckham |
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| Solicitor for the Applicant: | Australian Government Solicitor |
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| Counsel for the Respondent: | Mr M Hoffmann KC with Mr B Doyle KC and Mr L Wicks |
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| Solicitor for the Respondent: | King & Wood Mallesons |

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| **Table of Corrections** |  |
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| 28 September 2023 | In paragraph 56, “foreign country” had been replaced with “foreign company” |

ORDERS

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|  | | SAD 187 of 2019 |
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| BETWEEN: | AUSTRALIAN ENERGY REGULATOR  Applicant | |
| AND: | PELICAN POINT POWER LTD (ARBN 086 411 814)  Respondent | |

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| order made by: | BESANKO J |
| DATE OF ORDER: | 20 September 2023 |

THE COURT ORDERS THAT:

1. The applicant prepare draft minutes of order reflecting the conclusions in these reasons and/or the orders sought as to the future progress of this proceeding and serve on the respondent and lodge with the Court such draft minutes of order within seven days.

2. The proceeding be adjourned to a date to be fixed after consultation with the parties.

Note: Entry of orders is dealt with in Rule 39.32 of the *Federal Court Rules 2011*.

REASONS FOR JUDGMENT

BESANKO J:

# INTRODUCTION

1 This is an application by the Australian Energy Regulator (the AER) for declaratory relief under s 44AAG(1) of the *Competition and Consumer Act 2010* (Cth) (the CCA) to the effect that Pelican Point Power Ltd (PPPL) is in breach of a State energy law as defined in s 4 of the CCA. A State energy law includes the National Electricity Law (NEL) which has been enacted in South Australia as a Schedule to the *National Electricity (South Australia) Act 1996* (SA) (s 6) and the National Electricity Rules (NER) which have the force of law by reason of s 9 of the NEL.

2 The AER seeks three declarations. First, the AER seeks a declaration that in relation to each of its 27 short term PASA submissions submitted on or after 30 January 2017 for each trading interval during the 8 February 2017 trading day (but not including any trading interval that had concluded when the submission was made), PPPL contravened cl 3.7.3(e)(2) of the NER by failing to submit its short term PASA availability so as to reflect the true physical plant capability of the Pelican Point Power Station (Pelican Point PS) that could be made available on 24 hours’ notice and further, or in the alternative, by failing to submit its short term PASA availability to reflect its current intentions and best estimates as to the physical plant capability of the Pelican Point PS that could be made available on 24 hours’ notice. PASA is an acronym for Projected Assessment of System Adequacy. It is described in cl 3.7.1 of the NER as involving processes that are administered by the Australian Energy Market Operator (AEMO). Further details of the concept and the relevant Rules are set out below.

3 Secondly, the AER seeks a declaration that in relation to PPPL’s medium term PASA submissions for the day 8 February 2017, PPPL contravened cl 3.7.2(d)(1) of the NER in relation to each of its 10 medium term PASA submissions made after 11 November 2016, by failing to submit medium term PASA availability so as to reflect the physical plant capability of the Pelican Point PS that could be made available on 24 hours’ notice after the gas turbine known as GT12 was brought from dry to wet storage on 11 November 2016.

4 Thirdly, the AER seeks further, or in the alternative to the second declaration, a declaration that PPPL contravened cl 3.13.2(h) of the NER by failing to notify AEMO promptly on or after 11 November 2016 of the increased medium term PASA availability of the Pelican Point PS after GT12 was brought from dry to wet storage on 11 November 2016. On the AER’s case, that contravention continued for a period of in the order of 86 days.

5 The AER also seeks the imposition of civil penalties on PPPL in respect of the contraventions. The relevant Rules referred to in the declarations (i.e., cll 3.7.2(d)(1), 3.7.3(e)(2) and 3.13.2(h) of the NER) are each designated as a civil penalty provision: the NEL s 2AA; *the National Electricity (South Australia) Regulations*, reg 6(1) and Schedule 1.

6 At an early stage in these proceedings, the Court made an order that the issue of whether PPPL contravened the NER be tried separately from, and in advance of, the determination of what relief (including civil penalty) should be granted.

7 In the course of the proceeding, two major procedural issues arose. The case proceeded by way of a Concise Statement and a Concise Response. The proceedings were fixed for trial and before the trial, the parties filed and served lengthy and detailed opening submissions. As a result of that process, an issue arose between the parties about the scope of their respective cases. That led to an Interlocutory application by the AER and an issue as to whether each party proposed to run a case that went beyond the scope of its “pleadings”. I rejected PPPL’s submission that the AER proposed to run a case beyond the scope of its pleaded case and I refused PPPL’s subsequent application for an adjournment of the trial. At a later point in the trial, I rejected the AER’s objection to evidence about the physical condition of one of the gas turbines as being beyond the scope of PPPL’s pleaded case. The AER did not seek an adjournment following this ruling.

8 The trial commenced and proceeded for a number of days before it had to be adjourned for a number of months because the time allocated for the trial (based on the parties’ estimates) proved to be insufficient. Before the resumption, PPPL issued an Interlocutory application seeking leave to rely on a further report from its expert (Mr Andrew O’Farrell) and a further affidavit from one of its proposed witnesses (Mr Michael Weatherly). Leave was required because an order had been made for each party to file and serve its evidence in written form prior to the commencement of the trial. I granted that leave subject to conditions that would enable the AER to file responding evidence which it subsequently did.

9 Complaints by PPPL about the scope of the AER’s case and the notice it was given of the case lingered until the end of the trial. It is convenient for me to describe briefly how the case was pleaded and the issues identified.

# THE CASE AS PLEADED

10 The AER issued a Concise Statement in support of its Originating application and an order was made that PPPL file and serve a Concise Response.

11 The AER’s case as pleaded was that PPPL was the operator of the Pelican Point PS and contravened cll 3.7.2(d), 3.7.3(e) and 3.13.2(h) of the NER by failing to disclose to AEMO all of the physical plant capabilitythat could be made available on 24 hours’ notice for 8 February 2017 by the Pelican Point PS, as part of its PASA availabilityfor that day.

12 The relevant version of the NER is version 88 and the directly relevant rules are as follows:

**3.7.2 Medium term PASA**

(d) The following *medium term PASA inputs* must be submitted by each relevant *Scheduled Generator* or *Market Participant* in accordance with the *timetable*:

(1) *PASA availability* of each *scheduled generating unit,* *scheduled load* or *scheduled network service* for each *day* taking into account the ambient weather conditions forecast at the time of the 10% probability of exceedence *peak load* (in the manner described in the procedure prepared under paragraph (g)); and

(2) weekly *energy constraints* applying to each *scheduled generating unit* or *scheduled load*.

**Note**

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

**3.7.3 Short term PASA**

(e) The following *short term PASA inputs* must be submitted by each relevant *Scheduled Generator* and *Market Participant* in accordance with the *timetable* and must represent the *Scheduled Generator’s* or *Market Participant’s* current intentions and best estimates:

(1) *available capacity* of each *scheduled generating unit, scheduled load* or *scheduled network service* for each *trading interval* under expected *market* conditions;

(2) *PASA availability* of each *scheduled generating unit, scheduled load* or *scheduled network service* for each *trading interval*; and

(3) [**Deleted**]

(4) projected daily *energy* availability for *energy constrained scheduled generating units* and *energy constrained scheduled loads*.

**Note**

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

**3.13.2 Systems and procedures**

(h) *A Scheduled Generator, Semi-Scheduled Generator* or *Market Participant* must notify *AEMO* of, and *AEMO* must *publish*, any *changes* to submitted information within the times prescribed in the *timetable*.

**Note**

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

13 Chapter 10 of the NER contains a glossary of terms.

*Available capacity* is defined as follows:

The total MW capacity available for *dispatch* by a *scheduled generating unit, semi-scheduled generating unit* or *scheduled load* (i.e. maximum plant availability) or, in relation to a specified *price band*, the MW capacity within that *price band* available for *dispatch* (i.e. availability at each price band).

*Physical plant capability* is defined as follows:

The maximum MW output or consumption which an item of electrical equipment is capable of achieving for a given period.

*PASA availability* is defined as follows:

The *physical plant capability* (taking ambient weather conditions into account in the manner described in the procedure prepared under clause 3.7.2(g)) of a *scheduled generating unit, scheduled load or scheduled network service* available in a particular period, including any *physical plant capability* that can be made available during that period, on 24 hours’ notice.

A *scheduled generating unit* is defined as follows:

(a) A *generating unit* so classified in accordance with Chapter 2.

(b) For the purposes of Chapter 3 (except clause 3.8.3A(b)(1)(iv)) and rule 4.9, two or more *generating units* referred to in paragraph (a) that have been aggregated in accordance with clause 3.8.3.

A *generating unit* is defined as follows:

The plant used in the production of electricity and all related equipment essential to its functioning as a single entity.

The word *change* is defined as follows:

Includes amendment, alteration, addition or deletion.

14 The definition of PASA availability is of central importance in this case and particularly that part of the definition that refers to “any *physical plant capability* that can be made available [during a particular period] on 24 hours’ notice”.

15 The AER alleges in its Concise Statement that the Pelican Point PS is an aggregated scheduled generating unit with a registered capacity of 478 megawatts (MW). It consists of two 160 MW gas turbines (designated GT11 and GT12 respectively) and a 158 MW steam turbine. The steam turbine is required to operate in conjunction with one or both gas turbines so that the Pelican Point PS can operate with a maximum capacity of 239 MW if only one gas turbine is operated, and a maximum capacity of 478 MW if both gas turbines are operated.

16 In its Concise Response, PPPL admits the description of the gas and steam turbines and the nameplate capacity of the Pelican Point PS.

17 The AER alleges and PPPL admits, subject to some qualifications which I will identify, that when the gas turbines are not operating, they are either in wet storage, from which they can be returned to operation relatively quickly, that is to say, in approximately four hours or less, or they are in dry storage from which they can be returned to operation in approximately four days. On 11 November 2016, GT12 was moved from dry to wet storage and that meant that from that date to at least 8 February 2017, GT11 and GT12 were in either operation or in wet storage, and were used interchangeably as the operational gas turbine at the Pelican Point PS and, to the extent that one of those gas turbines was not already in service, it could have been returned to operation in approximately four hours or less.

18 PPPL’s admissions as to these matters are qualified to the following extent. The first qualification is that the ability to return a gas turbine to operation is subject to PPPL having rights to gas supply and transport to operate one or both of those gas turbines. The second qualification is that the ability to return a gas turbine to operation is subject to contingencies, namely, GT11 remaining in operation and not having been removed from operation for repair or being in intermittent dry storage and GT12 being able to be used in a continuous manner in circumstances where (on PPPL’s case) it required significant overhaul works. Those qualifications are set out in PPPL’s Concise Response.

19 The AER’s case as to the nature of the PASA Disclosure Regime and the requirements of the regime is as follows. PPPL is a Scheduled Generator (a generator in respect of which a generating unitis classified as a scheduled generating unitin accordance with Chapter 2 of the NER) and is required to submit medium term PASA (MT PASA) inputs to AEMO under cl 3.7.2(d), and short term PASA (ST PASA) inputs under cl 3.7.3(e).

20 MT PASA inputs are defined as the inputs to be prepared in accordance with cll 3.7.2(c) and (d) and ST PASA inputs are defined as the inputs to be prepared in accordance with cll 3.7.3(d) and (e).

21 The AER alleges and PPPL admits that these inputs are important to AEMO’s ability to maintain power system securitywhich is a defined term in the NER as follows:

The safe scheduling, operation and control of the *power system* on a continuous basis in accordance with the principles set out in clause 4.2.6.

22 *Power system* is defined in the NER as follows:

The electricity power system of the *national grid* including associated *generation* and *transmission* and *distribution networks* for the *supply* of electricity, operated as an integrated arrangement.

23 MT PASA inputs must be submitted to AEMO for each day over a 24 month forecast period, in accordance with the timetable published by AEMO, at least weekly or as changes occur. These inputs include the PASA availability of each scheduled generating unit for each day (MT PASA availability) (cl 3.7.2(d)(1)).

24 *Timetable* is defined in the NER as follows:

The timetable published by *AEMO* under clause 3.4.3 for the operation of the *spot market* and the provision of *market* information.

25 ST PASA inputs must be submitted to AEMO for each 30 minute trading interval over a forecast period of six trading days, in accordance with the timetable published by AEMO, at least daily or as changes occur. Unlike the clause dealing with MT PASA which contains no express statement as to what they must represent, the clause dealing with ST PASA inputs provides that they must represent the Scheduled Generator’s current intentions and best estimates. These inputs include the PASA availability of each scheduled generating unit for each trading interval (ST PASA availability) (cl 3.7.3(e)(2)).

26 *Trading interval* is defined in the NER as follows:

A 30 minute period ending on the hour (EST) or on the half hour and, where identified by a time, means the 30 minute period ending at that time.

*Trading day* is defined in the NER as follows:

The 24 hour period commencing at 4.00 am and finishing at 4.00 am on the following *day*.

27 A Scheduled Generator must notify AEMO of any changes to submitted information as changes occur (cl 3.13.2(h) and the timetable).

28 Subject to a number of significant differences about what the PASA Disclosure Regime requires in particular circumstances and the raising of some additional matters, PPPL in its Concise Response largely admitted with what is set out above.

29 The additional matters alleged by PPPL in its Concise Response are as follows. PPPL alleges that the Pelican Point PS is a “mid-merit” power station, that is to say, that it does not produce “base-load” power. PPPL alleges that in June 2014, it made a commercial and operational decision to “mothball” (i.e., retire or withdraw or place in reserve) half of Pelican Point PS’s generating capacity indefinitely for the following reasons. First, PPPL made this decision because it had incurred financial losses in the period leading up to the decision because of sustained periods of unfavourable market conditions and a view which it held that these conditions would continue indefinitely. Secondly, PPPL made this decision because of the physical condition of GT12 which it alleges required significant overhaul works and a capital commitment in order to be used in a continuous manner.

30 PPPL implemented its decision on 1 April 2015. PPPL alleges in its Concise Response that from that time to at least 8 February 2017, its rights under its gas supply and transport contracts only provided enough gas to make available a maximum of 239 MW, rather than the registered total capacity of the Pelican Point PS of 478 MW. It further alleges that it revised its MT PASA and ST PASA inputs “to reflect the portion of the Physical Plant Capability of Pelican Point PS that was available (including that portion of the Physical Plant Capability that ‘can be made available’) in the relevant period”.

31 PPPL alleges in its Concise Response that Mr Darren Foulds is the Origination Manager at International Power (Australia) Pty Ltd trading as ENGIE which is the owner of PPPL. ENGIE trades in the energy generated by those assets in the National Electricity Market (NEM). Mr Peter Adams is the General Manager of Wholesale Markets at AEMO and Mr Joe Spurio is the Acting Chief Operating Officer at AEMO. PPPL alleges that in a conversation with Mr Adams in June 2014 and in a subsequent email to Mr Spurio on 27 June 2014, Mr Foulds communicated to AEMO that PPPL intended to mothball half of its generation capacity at the Pelican Point PS from 1 April 2015 and its intention to revise its MT PASA inputs to reflect the reduction in its gas supply and transport contracts and the consequential reduction of generation capacity.

32 PPPL alleges that from 1 April 2015 to at least 8 February 2017, its MT PASA inputs and its ST PASA inputs for the Pelican Point PS had halved to a maximum of 239 MW reflecting the portion of the physical plant capability of the Pelican Point PS that was available in the relevant periods. PPPL asserts that neither AEMO nor the AER took issue with PPPL’s approach.

33 PPPL alleges that from 1 April 2015 to at least 8 February 2017, it operated its gas turbines in the following way. At certain times, PPPL moved its two gas turbines at the Pelican Point PS into dry storage (generally during the winter months) and into wet storage (generally during the summer months). The physical condition of GT12 meant that it was operated as a “back-up” unit and was moved into wet storage at certain times so that if GT11 failed or needed maintenance, the period during which the Pelican Point PS may have been off-line altogether was minimised or avoided. The operation was conducted in this way to ensure PPPL could continue to make available that portion of the physical plant capability notified in its PASA submissions. In the period from 1 April 2015 to at least 8 February 2017, and despite the fact that GT12 was moved into wet storage on occasions, PPPL did not amend its current gas supply and transport contracts or enter into new contracts so as to enable the Pelican Point PS to make available generation capacity in excess of a maximum of 239 MW and nor, on its case, did it estimate or intend that the Pelican Point PS would make available generation capacity in excess of a maximum of 239 MW.

34 A key issue in this case concerns the precise nature of the requirements of the PASA Disclosure Regime. I have already referred to the importance of the definition of PASA availability.

35 An important aspect of PPPL’s case as set out in its Concise Response and relevant to that issue is its allegation the PASA Disclosure Regime did not require disclosure of a portion of the physical plant capability of the Pelican Point PS that is not available and is not estimated or intended by the operator to be made available in the relevant period and could be said to be no more than theoretically available after a period of ramp up and subject to contingencies, including the following contingencies: (1) GT11 remaining in operation and not having been removed from operation for repair or being in intermittent dry storage; (2) GT12 being able to be used in a continuous manner in circumstances where it required significant overhaul works; and (3) the availability of gas supply and transport to enable the Pelican Point PS to make available generation capacity in excess of a maximum of 239 MW.

36 PPPL further alleges that the moving of GT12 from dry storage to wet storage, or from wet storage to dry storage, did not result in a change in the portion of physical plant capability of the Pelican Point PS for the purposes of cll 3.7.3(e)(2), 3.7.2(d)(1) or 3.13.2(h) of the NER and there was no requirement for PPPL to notify AEMO of any change to its PASA inputs.

37 As I will explain, the AER disputes these propositions or, at least, disputes them to the extent that it is said they provide the answers to the issues in this case.

38 The AER alleges and PPPL admits that on 9 February 2015, PPPL first submitted to AEMO that its MT PASA availability for 8 February 2017 was 224 MW and that between 9 February 2015 and 8 February 2017, PPPL submitted to AEMO on numerous further occasions, including on 10 occasions from 11 November 2016, that its MT PASA availability for 8 February 2017 was 224 MW (MT PASA submissions). The AER contends that PPPL was under an obligation which it did not discharge, to notify AEMO of the change to its MT PASA submissions after 11 November 2016 to reflect the fact that GT12 had been brought from dry storage to wet storage and nor did its subsequent MT PASA submissions reflect the fact that GT12 had been brought into wet storage. PPPL admits the absence of notification to AEMO, but denies that the NER required it to provide notification.

39 The AER alleges and PPPL admits that PPPL first submitted ST PASA availability for each trading interval in the 8 February 2017 trading day on 15 January 2017, and subsequently submitted its ST PASA availability for trading intervals in the 8 February 2017 trading day on 27 further occasions (ST PASA submissions). The highest ST PASA availability value that PPPL submitted for any of the trading intervals for the 8 February 2017 trading day was 235 MW. The submissions did not reflect the fact that GT12 had been brought from dry to wet storage. PPPL contends that it was not required to notify any greater PASA availability and that to have done so “would have been inaccurate and misleading to AEMO and to participants in the energy trading, derivatives and financial markets generally”.

40 I come then to the AER’s case as to events on 8 February 2017 as set out in its Concise Statement. The AER alleges that it was on that day at 17.39 that AEMO first became aware that GT12 was potentially available to return to operation within 24 hours’ notice. On that day, Adelaide recorded a maximum temperature of 42.4oC. During the afternoon, AEMO notified the market of forecast lack of reserve (LOR) with a forecast LOR1 issued at 15.18.

41 A lack of reserve level 1 (LOR1) is defined in cl 4.8.4 of the NER as follows:

(b) *Lack of reserve* level 1 (LOR1) – when *AEMO* considers that there is insufficient *capacity reserves* available in an operational forecasting timeframe to provide complete replacement of the *contingency capacity reserve* on the occurrence of the *credible contingency event* which has the potential for the most significant impact on the *power system* for the period nominated. This would generally be the instantaneous loss of the largest *generating unit* on the *power system*. Alternatively, it might be the loss of any *interconnection* under *abnormal conditions*.

42 An actual LOR1 was issued at 16.31. At 17.13 an actual LOR2 was issued. A lack of reserve level 2 (LOR2) is defined in cl 4.8.4 of the NER as follows:

(c) *Lack of reserve* level 2 (LOR2) – when *AEMO* considers that the occurrence of the *credible contingency event* which has the potential for the most significant impact on the *power system* is likely to require *involuntary load shedding.* This would generally be the instantaneous loss of the largest *generating unit* on the *power system*. Alternatively, it might be the loss of any *interconnection* under *abnormal conditions*.

43 At 17.25, electricity import flows across the Murraylink interconnector between South Australia and Victoria increased above its import limit, which resulted in the power system no longer being in a secure operating state in the South Australian region. As a consequence, AEMO was obliged under cll 4.2.6(b)(1) and 4.8.7 to take all reasonable steps to return the power system to a secure operating state, including by issuing directions, including, as a last resort, a direction to initiate load shedding. Load shedding is reducing or disconnecting from the power system and, speaking broadly, load is the electrical power at a connection point.

44 At 17.39, while the power system was not in a secure operating state, AEMO contacted PPPL to enquire whether GT12 was available to respond to a direction. PPPL responded that it did not have gas available to run GT12, but that if gas was available, GT12 could be made available on a minimum lead time of four hours. The AER alleges that this was the first time that AEMO was made aware that GT12 was potentially available to return to operation within 24 hours’ notice.

45 At 18.01, PPPL advised AEMO that GT12 could be made available, if necessary, within one hour.

46 At 18.03, AEMO issued a direction to ElectraNet (the operator of the transmission network in South Australia) to shed 100 MW of electrical load. This caused localised load shedding, that is, a loss of supply of electricity to customers in affected localities in South Australia. However, it also resulted in the power system being returned to a secure operating state.

47 PPPL’s response to these allegations by the AER about events on 8 February 2017 is an admission that it advised AEMO at about 17.39 (ACDT) that it did not have gas available to run GT12 concurrently with GT11 and an allegation by PPPL that the fact that GT12 was in wet storage and able to be returned to operation in four hours or less, subject to the availability of, and PPPL being able to negotiate contracts for, gas supply and transport during or at the end of that period, is irrelevant to the ST PASA availability of the Pelican Point PS in circumstances where PPPL did not have arrangements in place for gas supply or transport to run GT12 concurrently with GT11. PPPL further alleges that as at 17.39 on 8 February 2017, the ST PASA availability of Pelican Point PS still did not exceed 239 MW.

48 I have referred to conversations between representatives of AEMO and representatives of PPPL on 8 February 2017. Those conversations were recorded and aspects of the conversations are relied on by each party.

49 The AER alleges in its Concise Statement that events on 9 February 2017 are relevant to the MT PASA and ST PASA submissions that PPPL should have made for 8 February 2017. The AER’s case as to relevant events on 9 February 2017 is as follows. The forecast weather conditions for 9 February 2017 in South Australia were to the effect that heatwave conditions and high electricity demand would continue. Prior to 8 February 2017, PPPL had submitted that its MT PASA availability was 224 MW for each day in the week of 5 to 11 February 2017. By reason of AEMO becoming aware on 8 February 2017 that GT12 was capable of being returned to operation within one hour, AEMO was able to issue a direction to PPPL on 9 February 2017 to synchronise and dispatch GT12 in response to further forecast LOR2 conditions that afternoon. PPPL complied with that direction and that enabled AEMO to maintain power system security on 9 February 2017 without the need for load shedding.

50 PPPL alleges that its MT PASA availability was 224 MW for each day in the week of 5 to 11 February 2017. It admits that it was able to comply with the direction given by AEMO on 9 February 2017 to synchronise and dispatch GT12. It alleges that it was able to do that because after 17.39 on 8 February 2017, it had been able to arrange for gas supply and transport over and above its existing contractual rights. It alleges that the additional gas supply and transport that it arranged only in response to AEMO’s direction and the availability of both GT11 and GT12 on 8 February 2017 are, for reasons in its Concise Response, not relevant to the MT PASA and ST PASA submissions it made.

51 The way in which the AER put its case in its Concise Statement as to PPPL’s obligations with respect to ST PASA availability, MT PASA availability and the obligation in cl 3.13.2(h) may be summarised as follows.

52 PPPL, in relation to its 28 (amended now to 27) ST PASA submissions for each trading interval during the 8 February 2017 trading day, had an obligation (which it failed to discharge) to submit its ST PASA availability so as to reflect the true physical plant capability of the Pelican Point PS that could be made available on 24 hours’ notice. In addition, or in the alternative, PPPL, in relation to each of its 27 ST PASA submissions for each trading interval during the 8 February 2017 trading day, had an obligation (which it failed to discharge) to submit its ST PASA availability so as to reflect its current intentions and best estimates as to the physical plant capability of the Pelican Point PS that could be made available on 24 hours’ notice. PPPL denied these allegations for reasons previously given, including that it had gas and gas transport rights to generate no more than 239 MW in the relevant period.

53 By amendment to its Concise Response, PPPL introduced the following further response to the AER’s plea in relation to ST PASA submissions:

22A. In further answer to paragraph 16 of the CS, PPPL says that:

(a) clause 3.7.3(2)(e):

(i) only required that PPPL make *PASA availability* submissions in respect of a *trading interval* where that interval was during the 6 trading days from the end of the trading day covered by the most recent pre-dispatch schedule issued by AEMO; and

(ii) further, and in any event, did not require that PPPL make *PASA availability* submissions in respect of a *trading interval* that had already passed;

(b) PPPL could not and did not contravene clause 3.7.3(2)(e) by reason of *PASA availability* submissions not required to be made in respect of the *trading interval*; and

(c) PPPL could not and did not contravene clause 3.7.3(2)(e) in so far as any *PASA availability* submission related to a *trading interval* that had passed at the time of the submission to AEMO.

54 The AER alleges that PPPL had an obligation (which it failed to discharge) in relation to its MT PASA submissions for 8 February 2017 and in relation to each of its 10 MT PASA submissions made after 11 November 2016 to submit MT PASA availability so as to reflect the physical plant capability of the Pelican Point PS that could be made available on 24 hours’ notice after GT12 was brought from dry to wet storage. PPPL, in relation to its MT PASA submissions for 11 February 2017, had an obligation (which it failed to discharge) to notify AEMO promptly on or after 11 November 2016 of the increased MT PASA availability of the Pelican Point PS after GT12 was brought from dry to wet storage on 11 November 2016.

# FACTS WHICH ARE NOT IN DISPUTE

55 The following facts are taken from the Statement of Agreed Facts signed by both parties.

56 The AER is a body corporate established pursuant to s 44E of the CCA, and has the functions and powers referred to in s 15 of the NEL. PPPL is a company incorporated in England and Wales and is registered in Australia as a foreign company under s 601CE of the *Corporations Act 2001* (Cth). It is wholly owned by International Power (Australia) Pty Ltd trading as ENGIE and previously known as GDF Suez. PPPL is the operator of the Pelican Point PS and is a Registered Participant and a Scheduled Generator within the NER.

57 Pelican Point PS is and was at all material times an aggregated scheduled generating unit under cl 3.8.3 of the NER comprising two gas turbines with designated identifiers GT11 and GT12 and one steam turbine, and scheduled plant within the NER to which AEMO may issue a direction to PPPL under cl 4.8.9(a) and (a1)(1). At all relevant times, Pelican Point PS had a registered capacity of 478 MW. The ability of PPPL to operate the Pelican Point PS at its registered capacity is directly affected by certain operating conditions, including but not limited to, the ambient air temperature, the physical condition of the gas turbines and the steam turbine, the availability of gas supply and the availability of gas transport (operating conditions). Subject to the operating conditions, at all relevant times each gas turbine was capable of generating up to approximately 160 MW. Subject to the operating conditions and subject to one or both of the gas turbines operating, at all relevant times the steam turbine was capable of being operated in conjunction with one or both of the gas turbines to generate up to approximately 79 MW, if only one of the gas turbines was in operation, and up to approximately 158 MW if both of the gas turbines were in operation. Again, subject to the operating conditions, at all relevant times, Pelican Point PS was capable of generating up to approximately 478 MW, if both of the gas turbines were operating in combination with the steam turbine, or up to approximately 239 MW, if only one of the gas turbines was operating in conjunction with the steam turbine. Again, subject to the operating conditions, at all relevant times, Pelican Point PS was capable of a minimum generating capacity of approximately 160–170 MW, if only one gas turbine was operating in conjunction with the steam turbine, or approximately 320–335 MW, if both gas turbines were operating in conjunction with the steam turbine. PPPL does not agree that minimum generating capacity is relevant to whether it has breached any of cl 3.7.2(d)(1), cl 3.7.3(e)(2) and/or cl 3.13.2(h). As I will explain, the 320 MW minimum generating capacity is significant because it is this figure which is relevant to “the basic 320 MW scenario” or, as PPPL referred to it, “the 320 MW, 4 hour ‘benchmark scenario’”.

58 Each of the gas turbines when not actively generating was kept in either wet storage or dry storage. In each case, assuming sufficient availability of gas supply, availability of gas transport and operational staff on duty to operate the turbine (among other matters), the parties agree that wet storage is the state from which the gas turbine could ordinarily be returned to service relatively quickly, that is to say, in approximately four hours or less. Dry storage is a state from which the gas turbine could be returned to service in up to four days, if the entire power station is in dry storage, or in 60 hours or less, if only one gas turbine and the associated steam turbine is in dry storage.

59 The parties agree that on 8 February 2017, the net (sent-out) Heat Rate for Pelican Point PS was 8.31GJ/MWh. The volume of gas required to operate either of the gas turbines at a given level of active power output is calculated by using the following formula: Gas Requirement (TJ) = run-time (hrs) x power output (MW) x Heat rate (GJ/MWh)/1000.

60 During the relevant period between 11 November 2016 and 9 February 2017, the relevant timetable was version 1.3 of the AEMO Spot Market Operations Timetable published on 28 October 2016. During the relevant period, for the purposes of cl 3.7.2(d)(a) and AEMO’s Medium Term PASA Process Description, the reference temperature published by AEMO as reflecting a 10% probability of exceedance peak load in South Australia was 43oC (as published in AEMO’s Generation information data for South Australia, the relevant versions of which were published on 11 August 2016 and 18 November 2016).

61 The parties agree that on about 25 June 2014, in the course of a meeting between Mr Foulds and Mr Stephen Orr of GDZ Suez and Mr Spurio of AEMO (which was followed up by an email from Mr Foulds to Mr Spurio sent on 27 June 2014 confirming the same), PPPL’s parent company, GDF Suez, notified AEMO of the following: (1) that from 1 April 2015, PPPL would have firm gas arrangements to support the operation of only half of the Pelican Point PS (240 MW); (2) PPPL had updated its MT PASA inputs to reduce the capacity of Pelican Point PS to 240 MW from that date; and (3) Pelican Point PS “poses no ability to deliver generation on the remaining capacity”.

62 On 9 February 2015, PPPL first submitted its MT PASA inputs for 8 February 2017. In each submission of its MT PASA inputs between 9 February 2015 and 11 November 2016, PPPL submitted that its PASA availability for Pelican Point PS on 8 February 2017 was 224 MW.

63 The parties agree that from 1 April 2015 until 11 November 2016, both of the gas turbines GT11 and GT12 were kept in dry storage substantially throughout the period from 1 April 2015 until 2 October 2015; GT11 was brought into wet storage from 2 October 2015 until 28 April 2016 when it was returned to dry storage; GT12 was brought into wet storage from 26 November 2015 until 22 January 2016 when it was returned to dry storage; both GT11 and GT12 were kept in dry storage from 18 April 2016 to 13 July 2016; and GT11 was brought from dry storage to wet storage on 14 July 2016, and PPPL thereafter operated GT11 (in conjunction with the steam turbine) from time to time to supply power in the NEM.

64 The parties agree that on 11 November 2016, PPPL brought GT12 from dry storage to wet storage. At all relevant times from 11 November 2016 until at least 8 February 2017, each of GT11 and GT12 was either in operation or in wet storage; and only one or the other of them was used as the operational gas turbine at any time. At all relevant times from 11 November 2016 until 8 February 2017, to the extent that one of those gas turbines was not already in operation, and subject to it not having been removed from operation for repair, it could have been returned to operation in approximately four hours or less if PPPL had access to, or could procure, sufficient gas supply and transportation to operate the gas turbine.

65 The parties agree that between 7 November 2016 and 8 February 2017, PPPL submitted its MT PASA inputs to AEMO on 11 occasions, in each case submitting that the PASA availability for Pelican Point PS on 8 February 2017 was 224 MW, with a value of 999999 for its weekly energy constraints, as set out in the following table:

|  |  |  |
| --- | --- | --- |
| **Date of Submission** | **PASA availability (MW)** | **weekly energy constraints** |
| 7/11/2016 | 224 | 999999 |
| 16/11/2016 | 224 | 999999 |
| 22/11/2016 | 224 | 999999 |
| 3/12/2016 | 224 | 999999 |
| 13/12/2016 | 224 | 999999 |
| 19/12/2016 | 224 | 999999 |
| 26/12/2016 | 224 | 999999 |
| 2/01/2017 | 224 | 999999 |
| 11/01/2017 | 224 | 999999 |
| 23/01/2017 | 224 | 999999 |
| 27/01/2017 | 224 | 999999 |

66 PPPL did not change its MT PASA inputs at or around 11 November 2016, or at any time between 11 November 2016 and 8 February 2017.

67 The parties agree that on 15 January 2017, PPPL submitted its first ST PASA inputs for the 8 February 2017 trading day. The dates of PPPL’s submissions to AEMO of its ST PASA inputs for Pelican Point PS for the 8 February 2017 trading day, and the values submitted for available capacity, PASA availability and projected daily energy availability, in respect of each trading interval are set out in an exhibit before the Court. It is sufficient at this point to say that in each of those submissions, PPPL’s ST PASA inputs for Pelican Point PS for each trading interval for the 8 February 2017 trading day, the highest value of PASA availability submitted by PPPL was 235 MW.

# OPERATING SCENARIOS

68 The PASA submissions, whether they be medium term or short term, involve a forecast or prediction or prognostication, or to use one of the terms in the Rules, an estimate of physical plant capability available, or that can be made available, on 24 hours’ notice. After GT12 was brought out of dry storage, it was operated from time to time and, in fact, it was operated for a substantial period of time on 7 February 2017. It was operated in the alternative to GT11. They were not operated concurrently before 9 February 2017 when AEMO issued its direction under cl 4.8.9 of the NER.

69 In order to run a second turbine, there is a need for a supply of gas and gas transport. There is no dispute that to be able to be made available for the purposes of the definition of PASA availability means not just in wet storage, but there and able to be turned on and run for a period of time and thereby generate a maximum MW output. That assumes a quantity of gas and a quantity of gas transport. None of the definitions specify a particular time the turbine must run for the purposes of assessing availability. In other words, it is not to be assumed that an item of physical plant only meets the description of “can be made available” if it can be operated for the full day. There is nothing in the definitions to that effect. On the other hand, a certain amount of gas and gas transport must form an assessment of whether physical plant can be made available.

70 In order to prove its case, the AER needed to establish that the PASA submissions were too low and that PPPL should have reasonably expected (and I will come to address the precise formulation of the relevant standard) that it could have, on 24 hours’ notice, made GT12 available by switching it on and running it with GT11 to produce a greater amount of megawatts than those set out in the PASA submissions. The AER put forward two operating scenarios which it contends a reasonable generator would have had in mind when making PASA submissions.

71 The first operating scenario is what the AER referred to as the basic 320 MW scenario. This scenario involved both GT11 and GT12 operating for four hours concurrently and producing 320 MW. The second operating scenario is what the AER referred to as the 8 February counterfactual. This scenario involved GT11 operating on 8 February 2017 as it in fact did and GT12 operating on 8 February 2017 as it in fact operated on 9 February 2017. On 8 February 2017, GT11 operated for most of the day, but not always at the maximum amount specified in its PASA submissions. On 9 February 2017, GT12 was run concurrently with GT11 for about four hours.

72 Both these operating scenarios are, of course, hypothetical. However, they frame the issues concerning reasonable expectations as to the availability of gas supply and gas transport. No other operating scenarios were advanced by the AER.

# THE EVIDENCE

73 The AER called four witnesses as follows:

(1) Mr Tjaart Nicolaas Van Der Walt who is employed by AEMO as Group Manager, NEM Real Time Operations;

(2) Ms Philippa Jean Eastgate who is employed by the AER as Assistant Director in its Compliance and Enforcement Branch;

(3) Mr Michael Nicholas Sanders who is employed by AEMO as Principal Analyst, Electricity Market Monitoring; and

(4) Mr James Arthur Snow, an expert who has extensive experience in the energy industry, including gas with both practical experience and experience as an adviser, reviewer and consultant.

74 PPPL called four witnesses as follows:

(1) Mr Darren Foulds who is employed by ENGIE as Head of Trading and Portfolio Management;

(2) Mr Debasis Baksi who was employed by ENGIE and was General Manager – South Australian Assets between 2012 to 2020;

(3) Mr Michael Weatherly who was employed by ENGIE (International Power), and was Origination Manager between 2015 and 2018; and

(4) Mr Andrew O’Farrell, an expert who has spent many years in the energy industry and between 2011 and 2018 was Gas Portfolio Manager for Origin Energy.

75 Each party also tendered a number of documents in support of its case. Without being exhaustive at this stage, the AER placed reliance on the transcripts of conversations between representatives of PPPL and representatives of AEMO on 8 and again on 9 February 2017, the events of 9 February 2017 and, in particular, the fact that PPPL was able to operate the two gas turbines concurrently on that day for about four hours and certain answers International Power (Australia) Holdings Pty Ltd (ENGIE) gave to a notice issued by the AER under s 28(2)(a) and (b) of the NEL and dated 15 June 2018. I will refer to this as the Section 28 Notice.

76 For its part, and again without being exhaustive, PPPL took the Court to a complex and detailed array of provisions in various gas supply and gas transport agreements and submitted that the uncertainties attending the market for gas and gas transport were such that its approach to the PASA submissions was appropriate and not in contravention of the NER. A further matter which was the subject of evidence and relied on by PPPL was the physical condition of GT12 and PPPL submitted that that was relevant to the issue of whether the PASA submissions complied with the NER.

77 Before addressing the evidence and the factual issues, it is necessary to address a number of construction issues concerning the relevant Rules. The parties made extensive and detailed submissions about these issues.

# CONSTRUCTION ISSUES

## The issues identified

78 The AER put forward a list of what it contended were the construction issues as follows:

(1) What is the proper construction of the defined term “PASA availability” in cll 3.7.2(d)(1) and 3.7.3(e)(2) when read in context and having regard to the meaning of the defined terms “physical plant capability” and “available capacity”?

(2) Is the commercial intention of a Scheduled Generator as to the amount it proposes to generate relevant to the submission it makes as to that aspect of PASA inputs which is PASA availability?

(3) In determining the availability of a scheduled generating unit within the definition of PASA availability, which includes a scheduled generating unit that can be made available on 24 hours’ notice, is the generator in making its PASA submissions limited to firm sources of gas and gas transport, or must it also take into account gas and gas transfers it ought reasonably expect that it would practically be able to procure on 24 hours’ notice if required to do so? “Firm” in this context refers to a term which is well understood in the gas industry in connection with the supply of gas and gas transport. It means contractually obliged to supply with a failure to do so attended by penalties and other contractual remedies. There is no binding obligation in the case of non-firm or “as available” gas or gas transport, although a firm obligation will arise on the execution of a Formal Transaction Notice or Confirmation. This was the evidence of Mr Snow which was not disputed and which I accept.

(4) What is the nature and extent of the generator’s obligation to submit estimates or forecasts of MT PASA and ST PASA?

(5) How is PASA availability for MT PASA affected by a practical limit on how long a generating unit can run for within a day?

(6) How is PASA availability for ST PASA affected by how long a generating unit can run for within a day?

79 The AER’s list of issues is a convenient way of identifying areas of dispute between the parties. I will deal with them in a different order and, as will become clear, there is a substantial overlap between a number of the issues.

## General principles of statutory construction including the use of extrinsic material

80 In the section which follows, I do not intend to cover the whole field, but only those areas which are relevant having regard to the submissions of one or both of the parties.

81 The general principles of statutory construction, including the importance of text, context and the general purpose and policy of a provision, including the mischief sought to be remedied are well known and, with respect, are conveniently summarised by French CJ and Hayne J in *Certain Lloyd’s Underwriters v Cross* [2012] HCA 56; (2012) 248 CLR 378 at [23]–[26].

82 Section 8(2) of the National Electricity (South Australia) Act 1996 provides that the *Acts Interpretation Act 1915* (SA) does not apply to the National Electricity Law (South Australia) or the National Electricity (South Australia) Regulations*.*

83 Section 3 of the NEL provides that Schedule 2 to the NEL (Miscellaneous provisions relating to interpretation) applies to the Law, the Regulations and the Rules.

84 Section 7 of the NEL provides that the objective of the Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long-term interests of consumers of electricity with respect to:

(a) price, quality, safety, reliability and security of supply of electricity; and

(b) the reliability, safety and security of the national electricity system.

85 Clause 7 in Schedule 2 is equivalent to s 15AA of the *Acts Interpretation Act 1901* (Cth) and it provides that in the interpretation of a provision of the NEL, the interpretation that will best achieve the purpose or object of the Law is to be preferred to any other interpretation and that is the case whether or not the purpose is expressly stated in the Law.

86 Clause 41 of Schedule 2 provides that the Schedule applies to the Rules notwithstanding that the provision refers to this Law.

87 In its submissions, the AER pointed out that at common law, there may be reasons to adopt what in one respect may be a different approach to the interpretation of subordinate legislation than that adopted in the case of Acts of Parliament. It referred to the following observations of Lord Reid in *Gill v Donald Humberstone & Co Ltd* [1963] 1 WLR 929 at 933–934, a case concerning regulations made under the *Factories Act 1937* (UK) relating to the use of scaffolding, ladders, etc. Lord Reid said the following:

… I find it necessary to make some general observations about the interpretation of regulations of this kind. They are addressed to practical people skilled in the particular trade or industry, and their primary purpose is to prevent accidents by prescribing appropriate precautions … They have often evolved by stages as in the present case, and as a result they often exhibit minor inconsistencies, overlapping and gaps. So they ought to be construed in light of practical considerations, rather than by a meticulous comparison of the language of their various provisions, such as might be appropriate in construing sections of an Act of Parliament … difficulties cannot always be foreseen and it may happen that in a particular case the requirements of a regulation are unreasonable or impracticable. But if the language is capable of more than one interpretation, we ought to discard the more natural meaning if it leads to an unreasonable result, and adopt that interpretation which leads to a reasonably practicable result.

This decision was followed by the Full Court of this Court in *Melbourne City Council v Telstra Corporation Limited* [2020] FCAFC 200; (2020) 281 FCR 379 at [154] per O’Bryan J (with whom Gleeson J agreed). That case concerned the *Telecommunications Act 1997* (Cth) and the Telecommunications (Low-Impact Facilities) Determination 2018 (Cth). The Court held that the Determination in issue was directed to practical people with particular skills and ought to be construed having regard to practical considerations. This case, it seems to me, calls for the same approach, but subject, of course, to the provisions of Schedule 2.

88 The AER seeks to rely on extrinsic material in support of its interpretation of the Rules.

89 Schedule 2 of the NEL addresses the use of extrinsic material in the interpretation of the Law and the Rules. In cl 8, two categories of extrinsic material are identified, namely Law extrinsic material and Rule extrinsic material.

90 The term “Rule extrinsic material” is defined in cl 8 to mean any of the following:

(a) a draft Rule determination; or

(b) a final Rule determination; or

(c) any document (however described)—

(i) relied on by the AEMC in making a draft Rule determination or final Rule determination; or

(ii) adopted by the AEMC in making a draft Rule determination or final Rule determination.

91 The AEMC is defined in s 2 of the NEL as the Australian Energy Market Commission established by s 5 of the *Australian Energy Market Commission Establishment Act 2004* of South Australia.

92 Clause 8(2), (2a) and (3) in Schedule 2 provide for the circumstances in which Law extrinsic material or Rule extrinsic material may be taken into consideration in interpreting a provision of the Law or the Rules. Clause 8(2a) and (3) are relevant as far as the interpretation of a provision of the Rules is concerned and they are as follows:

(2a) Subject to subclause (3), in the interpretation of a provision of the Rules, consideration may be given to Law extrinsic material or Rules extrinsic material capable of assisting in the interpretation—

(a) if the provision is ambiguous or obscure, to provide an interpretation of it; or

(b) if the ordinary meaning of the provision leads to a result that is manifestly absurd or is unreasonable, to provide an interpretation that avoids such a result; or

(c) in any other case, to confirm the interpretation conveyed by the ordinary meaning of the provision.

(3) In determining whether consideration should be given to Law extrinsic material or Rule extrinsic material, and in determining the weight to be given to Law extrinsic material or Rule extrinsic material, regard is to be had to—

(a) the desirability of a provision being interpreted as having its ordinary meaning; and

(b) the undesirability of prolonging proceedings without compensating advantage; and

(c) other relevant matters.

93 For the purposes of cl 8, “ordinary meaning” is defined as the ordinary meaning conveyed by a provision having regard to its context in this Law and to the purpose of this Law.

94 PPPL contended that these sections worked a designedly limited variation to the ordinary modern rules of construction to the effect that a legislative instrument which is amended and the amending legislative instrument are to be read together as a combined statement of the will of the legislature with the consequence that the effect of the amending legislative instrument may be to alter the meaning which remaining provisions of the amended legislative provision bore before the amendment (*Commissioner of Stamps (SA) v Telegraph Investment Co Pty Ltd* [1995] HCA 44; (1995) 184 CLR 453 at 463 per Brennan CJ, Dawson and Toohey JJ and at 479 per McHugh and Gummow JJ; see also, by way of example, s 11 of the Acts Interpretation Act 1901). That may be accepted, but it is what follows which is significant.

95 In this respect, PPPL sought to rely on the unfairness of using Rule extrinsic material to interpret provisions that are civil penalty provisions. I will deal later with the significance of these provisions being civil penalty provisions. As far as the unfairness argument is concerned, this case is different from the case PPPL relied on — *Australian Energy Regulator v Stanwell Corporation Ltd* [2011] FCA 991; (2011) 197 FCR 429 at [325]–[331] — because in this case, the extrinsic material supports the ordinary meaning.

96 Before leaving the principles relevant to the use of extrinsic material, I note that one item of extrinsic material in this case is not Rule extrinsic material for reasons I will explain. That does not necessarily prevent me from considering it.

97 In *CIC Insurance Ltd v Bankstown Football Club Ltd* [1997] HCA 2; (1997) 187 CLR 384, Brennan CJ, Dawson, Toohey and Gummow JJ said (at 408):

It is well settled that at common law, apart from any reliance upon s 15AB of the *Acts Interpretation Act* 1901 (Cth), the court may have regard to reports of law reform bodies to ascertain the mischief which a statute is intended to cure. Moreover, the modern approach to statutory interpretation (a) insists that the context be considered in the first instance, not merely at some later stage when ambiguity might be thought to arise, and (b) uses “context” in its widest sense to include such things as the existing state of the law and the mischief which, by legitimate means such as those just mentioned, one may discern the statute was intended to remedy.

(Footnote references omitted.)

98 The AER submitted that the proper construction of the PASA obligations is informed by the legislative history of modifications which were made to the MT PASA and ST PASA inputs with a view to clarifying their content. The AER referred to two amendments being first, what it referred to as the 2001 Code change and secondly, the 2010 Rule change.

99 The National Electricity Code (the Code or NEC) commenced operation in December 1998 and preceded the NER. Both legislative instruments contained requirements for generators and other Market Participants to submit information to AEMO, which prior to 1 July 2009 was known as NEMMCO, and for AEMO to prepare and publish outputs of MT PASA and ST PASA.

100 Prior to certain amendments to the Code in 2001, cll 3.7.2 and 3.7.3 only called for generators to provide forecasts of “availability” and for NEMMCO to publish information as to aggregate generating unit “availability” for the purposes of both MT PASA and ST PASA. The 2001 amendments did the following. With respect to MT PASA, the changes in 2001 substituted “PASA availability” for “availability” in cll 3.7.2(d)(1) and 3.7.2(f)(3). With respect to ST PASA, they inserted an additional requirement that Market Participants submit “PASA availability” and for NEMMCO to publish aggregate information about “aggregate generating unit PASA availability” for each region in cll 3.7.3(e)(1A) and 3.7.3(h)(4A). The amendments also made it clear that the availability input was, in the case of ST PASA, to be that “under expected market conditions” (cl 3.7.3(e)(1)). The amendments included a definition of “PASA availability” as follows:

The physical plant capability of a Scheduled Generator, scheduled load or scheduled network service, including any capability that can be made available within 24 hours.

101 The Code Change Panel prepared a report titled “Improvements to the projected assessment of system adequacy” in November 2000 which preceded the amendments and identified the mischief to which they were directed. The AER relies on the following passages in the report of the Code Change Panel:

The projected assessment of system adequacy (PASA) arrangements within the market are intended to provide short (up to a week ahead) and medium-term (up to two years ahead) forecasts of energy and reserve availability which also take account of planned transmission network outages. Such forecasts are essential to a properly functioning market, including to the ability of the demand side to participate fully and actively in the market. The existing PASA arrangements generally work well but there is scope to improve their operation overall by:

 Clarifying and enhancing the information generators provide to NEMMCO by removing the existing ambiguity in the Code and drawing a distinction between the capacity they intend to make available and the capacity they could make available in extreme conditions. This is the purpose of these proposed Code changes;

…

The Code requires market participants to provide medium-term forecasts of the expected availability of each scheduled generating unit. Expected availability is, however, not defined and is ambiguous. It could be interpreted as the capacity generators intend to bid into the market based on their commercial decisions or the capacity which could physically be made available. As a result, at times the medium-term PASA forecast therefore provides an optimistic view of available capacity, ie that more capacity is available than will in fact be presented. At other times, there is more capacity available than the forecast suggests. It is not clear to the market whether the inaccuracy of the forecast is due to a change in the physical capability of the plant or a legitimate commercial decision to present less capacity. NEMMCO can, and does, seek informal advice to clarify its understanding but this is neither transparent nor available to the market.

The primary role of the medium-term PASA is to provide transparent reserve forecasts so that market participants can plan and adjust their operations, particularly plant outages, to maximise the value of market trading. The information also assists NEMMCO in its reserve trader contracting and to determine the need for directions. For these purposes, the relevant definition of available capacity in the medium term is that which could be presented at short notice under worst case conditions. The actual capacity presented to the market will normally be less than the maximum potentially available due to conditions at the time and commercial decisions about commitment. Timing is crucial to whether capacity can be made available in extreme conditions since planned maintenance outages can be deferred if sufficient notice is available, but closer to the event they are usually beyond practical recall. The current provisions do not recognise this.

The Panel published a consultation paper on 21 September on draft changes to the Code to remove the ambiguity surrounding the definition of expected availability and acknowledge the crucial role of timing in relation to commitment decisions. The changes would require scheduled generators to provide information, within both the short and medium-term PASA timeframes, about the capacity that could be made physically available at twenty four hours’ notice in response to extreme conditions. This new information is defined as PASA availability. In the short term, however, reliability will also depend on participants’ discretionary decisions. The proposed changes would also therefore require scheduled generators to provide a forecast of market availability, which is defined as the capability they intend to make available under normal anticipated market conditions, within the short-term PASA timeframe.

…

The Panel recommends that the Code changes, as amended, be forwarded to the Australian Competition and Consumer Commission for authorisation.

102 In its submissions, the AER emphasised the change to cl 3.7.2(d)(1) from “expected availability” to “PASA availability” and the reference in the report of the Code Change Panel to the need to draw a distinction between the capacity which generators intend to make available and the capacity which they could make available in extreme conditions and the ambiguity surrounding the use of the expression, “expected availability”. The AER also referred to the “relevant definition” of available capacity in the medium term as that which could be presented at short notice under worst case conditions. The AER also referred to the amendment to cl 3.7.3(e) dealing with ST PASA to add to the element of the Market Participant’s current intentions and best estimates of availability under expected market conditions, the element of PASA availability for each trading interval and the statement that the changes would require Scheduled Generators to provide information within both the ST and MT PASA timeframes about the capacity that could be made physically available at 24 hours’ notice in response to extreme conditions and the statement in the report that as availability in the short term will also depend on participants discretionary decisions, Scheduled Generators would be required, in the case of ST PASA, to provide a forecast of market availability defined as the capability they intend to make available under normal anticipated market conditions.

103 What emerges from the passage from the report of the Code Change Panel set out above is clear recognition of the distinction between capacity a generator intends to make available and the capacity that could be made available under extreme conditions, that is, that could be made physically available at 24 hours’ notice in extreme conditions. There is, or can be, a difference between the capacity generators intend to bid into the market based on their commercial decisions and the capacity which could physically be made available. There is reason to require the latter in the case of MT PASA and to require both in the case of ST PASA. That is how the amendments to the NEC are framed.

104 The Code Change Panel said in response to a concern raised by a Market Participant that it was satisfied that the draft changes would not be construed as creating a legally binding commitment to deliver capacity. The AER submitted that the report of the Code Change Panel is not consistent with a construction of PASA availability based on an approach of business as usual in the sense of no special measures on 24 hours’ notice.

105 The definition of Rule extrinsic material includes determinations made by the AEMC. There appears to be a lacuna in the legislation because when the National Electricity Rules were initially made in 2005, what they did was to enact the former provisions of the NEC in statutory form under s 9 of the National Electricity Law. The AEM was established in 2004 and it did not have the function of making or recommending changes to the National Electricity Code. The AER submitted that on a “strict reading” of the definition of Rule extrinsic material, the report of the Code Change Panel is not within the definition because it was not material that was relied upon by the AEMC which was not in existence in 2000/2001. The AER submitted that this leaves a gap in how the Court may determine the purpose or objects of the Rules which were originally made as provisions of the Code and, therefore, were not made by the AEMC. The AER submitted that the provisions of cl 8 of Schedule 2 should not be read as a comprehensive code so that it excludes extrinsic material that is relevant to the meaning of its provisions when they were part of the National Electricity Code. It submitted that that could not have been the intention of cl 8 of Schedule 2 because that would mean that all of the extrinsic material that shed light on the proper interpretation of the provisions of the Code became redundant in 2005 notwithstanding their obvious relevance to interpreting the provisions of the NER when they were then enacted. Such an approach would not be consistent with s 7 of the NEL which sets out the objective of the Law. In summary, the AER submitted that in the particular setting involving the National Electricity Code being enacted in statutory form as the NER in 2005, the Court should have regard to “pertinent extrinsic material” associated with the 2001 Code change in the same way as the Court would, at common law, determine the mischief for a legislative change, in this case the insertion of the definition of “PASA availability”.

106 For the reasons given by the AER, I consider that I may have regard to this material. However, I would note that I would reach the same conclusion as to the proper construction of the relevant rules even if I exclude consideration of the extrinsic material.

107 The AER also referred to, and relied upon, statements made in the Australian Competition and Consumer Commission’s determination on an application for authorisation of the amendments to the National Electricity Code. The particular statements relied upon were the record of the submission made to the ACCC by NEMMCO as follows:

The Commission received one submission. The submission, from NEMMCO, states that it supports the proposed Code changes in principle, since they increase the clarity of participant obligations and provides additional resolution and transparency of the information used to forecast reserve levels.

The submission by NEMMCO was as follows:

These Code changes will now require Market Participants to advise NEMMCO of two different availability levels for scheduled plant in short term time frame. In addition NEMMCO will be required to report on two different levels of availability in the short term time frame. NEMMCO supports these proposed Code changes in principle, as they provide some increase in clarity of participant obligations, and additional resolution and transparency of the information used to manage forecast reserve levels.

108 In 2010, AEMO proposed a suite of amendments to the PASA provisions. A number of amendments to the Rules were made. The primary purpose of the amendments was, according to the AER, to “loosen the former requirement that AEMO should calculate a separate reserve requirement for each region, by allowing AEMO instead to calculate ‘dynamic joint regional reserve requirements’”. A number of other amendments were made at the same time which, according to the AER, were designed “to improve clarity of the PASA rules and to address various minor issues identified through a review of the PASA processes that had been undertaken in 2009”.

109 The AER submitted that for present purposes, the most important amendment was that made to the description of “availability” in the case of ST PASA. In place of the undefined word “availability” in cl 3.7.3(e)(1), the defined term “available capacity” was substituted. The substitution of “available capacity” in place of “availability” was recommended by AEMO because it considered that:

“availability” in amended clause 3.7.3(e)(1) is equivalent to the existing glossary definition “available capacity” and the clause should instead refer to the existing definition.

110 The AEMC agreed with the position advanced by AEMO “in order to improve clarity of the Rules”. The amendments in 2010 also included amendments to change the existing definition of “PASA availability” (see [100] above) to the following:

The physical plant capability of a scheduled generating unit, scheduled load or scheduled network service available in a particular period, including any physical plant capability that can be made available in that period given 24 hours’ notice of a requirement that the relevant scheduled generating unit, scheduled load or scheduled network service be made available.

111 The amendment actually made was to change the definition of “PASA availability” so that it read as follows:

The *physical plant capability* (taking ambient weather conditions into account in the manner described in the procedure prepared under clause 3.7.2(g)) of a *scheduled generating unit, scheduled load* or *scheduled network service* available in a particular period, including any capability that can be made available during that period, on 24 hours’ notice.

112 PPPL submitted that the relevant rules are civil penalty provisions and that any doubt or ambiguity about meaning should be resolved in its favour. It referred to the observations of Franki J in *Trade Practices Commission v TNT Management Pty Ltd* (1985) 6 FCR 1 (at 47–48):

It is, in my opinion, now necessary to look at certain aspects of the correct approach to be adopted in the construction of a statute such as Pt IV of the Act. It is clear that, although the criminal onus of proof does not have to be satisfied, it is necessary to have regard to the penal nature of the contravention alleged and the extent of the penalty, both financial and probably to trade reputation, which is involved in a finding of contravention. I have in mind that the legislation is of a highly penal nature and in *TPC v Legion Cabs (Trading) Co-operative Society Ltd* (1978) 35 FLR 372 at 382 … I said in relation to s 47 of the Act:

I consider that such a section should be construed in a similar way to a section imposing a criminal liability. As to the interpretation of statutes creating offences, see *Beckwith v The Queen* (1976) 135 CLR 569 per Gibbs J at 576.

The passage of Gibbs J, as he then was, to which I referred reads:

The rule formerly accepted, that statutes creating offences are to be strictly construed, has lost much of its importance in modern times. In determining the meaning of a penal statute the ordinary rules of construction must be applied, but if the language of the statute remains ambiguous or doubtful the ambiguity or doubt may be resolved in favour of the subject by refusing to extend the category of criminal offences: see *R v Adams* (1935) 53 CLR 563 at 567-568; *Craies on Statute Law* (7th ed, 1971), pp 529-534. The rule is perhaps one of last resort.

… In my opinion, if the language of the Act after the ordinary rules of construction have been applied remains ambiguous or doubtful, it is appropriate to remove or resolve that ambiguity or doubt in favour of a defendant, at least, where the proceedings are for a penalty.

113 The rules of construction in relation to civil penalty provisions are similar to those that apply in the case of criminal offences (*Australian Competition and Consumer Commission v Yazaki Corporation* [2018] FCAFC 73; (2018) 262 FCR 243 at [68]).

114 In *R v A2* [2019] HCA 35; (2019) 269 CLR 507, Kiefel CJ and Keane J said (at [52]):

A statutory offence provision is to be construed by reference to the ordinary rules of construction. The old rule, that statutes creating offences should be strictly construed, has lost much of its importance. It is nevertheless accepted that offence provisions may have serious consequences. This suggests the need for caution in accepting any “loose” construction of an offence provision. The language of a penal provision should not be unduly stretched or extended. Any real ambiguity as to meaning is to be resolved in favour of an accused. An ambiguity which calls for such resolution is, however, one which persists after the application of the ordinary rules of construction.

(Footnotes omitted.)

115 I also refer to the following observations of Leeming JA in *Grajewski v Director of Public Prosecutions (NSW)* [2017] NSWCCA 251; (2017) 270 A Crim R 33 at [55]):

Although it was at the forefront of his written submissions, the principle invoked by Mr Grajewski does not exclude the ordinary rules of construction: *Waugh v Kippen* (1986) 160 CLR 156 at 164; [1986] HCA 12. Indeed, Gibbs J’s qualified observation in *Beckwith v The Queen* (1976) 135 CLR 569 at 576 that the “rule is perhaps one of last resort” has much more recently been reiterated in unequivocal terms: by Nettle and Gordon JJ in *Re Day [No 2]* [2017] HCA 14; 91 ALJR 518 at [276] and in the joint judgment in *Aubrey v The Queen* [2017] HCA 18; 91 ALJR 601 at [39]. I do not for a moment understand the High Court, by referring to “rules” and “last resort”, to be implying that the task of ascertaining the legal meaning of a statute is mechanistic, to be determined by the application of rules, amongst which the penal character of the statute is the last to be invoked. The process is considerably more nuanced, reflecting as it does the constitutional relationship between the various arms of government: *Zheng v Cai* (2009) 239 CLR 446; [2009] HCA 52 at [28]. As was express in the passage from *Stevens v Kabushiki Kaisha Sony Computer Entertainment* reproduced above – a statute’s penal character is to be regarded as a very minor consideration to be *taken into account* in ascertaining its legal meaning in light of its text, context and purpose.

116 Finally, it is relevant to note the principles relevant to when a word or words may be read into a legislative provision. A prior question is whether that exercise is necessary. For example, in *Construction, Forestry, Maritime, Mining and Energy Union v Australian Building and Construction Commissioner (Bay Street Appeal)* [2020] FCAFC 192; (2020) 282 FCR 1 (the *Bay Street Appeal* case), Flick J discussed the difference between reading words into a legislative provisions and, to use the words of his Honour (at [62]), “to construe a legislative phrase by reference to the context in which the phrase appears and to read that phrase in a matter which gives effect to its presumed legislative object and purpose”.

117 Assuming it is a true case of reading words into the legislative provision, then the relevant principles are as follows.

118 In *Wentworth Securities Ltd v Jones* [1980] AC 74 at 105–106, Lord Diplock identified three conditions which must be satisfied before words are read into a statutory provision or the Court reads a provision in a way which modifies the words of an Act. His Lordship said:

First, the court must know the mischief with which the Act was dealing. Secondly, the court must be satisfied that by inadvertence Parliament has overlooked an eventuality which must be dealt with if the purpose of the Act is to be achieved. Thirdly, the court must be able to state with certainty what words Parliament would have used to overcome the omission if its attention had been drawn to the defect.

119 The High Court addressed this issue in *Taylor v Owners – Strata Plan No 11564* [2014] HCA 9; (2014) 253 CLR 531. French CJ, Crennan and Bell JJ said the following (at [37]–[39]):

37 Consistently with this Court’s rejection of the adoption of rigid rules in statutory construction, it should not be accepted that purposive construction may never allow of reading a provision as if it contained additional words (or omitted words) with the effect of expanding its field of operation. As the review of the authorities in *Leys* demonstrates, it is possible to point to decisions in which courts have adopted a purposive construction having that effect …

38 The question whether the court is justified in reading a statutory provision as if it contained additional words or omitted words involves a judgment of matters of degree …

39 Lord Diplock’s three conditions (as reformulated in *Inco Europe*) accord with the statements of principle in *Cooper Brookes* and McColl JA was right to consider that satisfaction of each could be treated as a prerequisite to reading s 12(2) as if it contained additional words before her Honour required satisfaction of a fourth condition of consistency with the wording of the provision. However, it is unnecessary to decide whether Lord Diplock’s three conditions are always, or even usually, necessary and sufficient. This is because the task remains the construction of the words the legislature has enacted. In this respect it may not be sufficient that “the modified construction is reasonably open having regard to the statutory scheme” because any modified meaning must be consistent with the language in fact used by the legislature …

(Footnote references omitted.)

120 Their Honours also made the point (at [40]) that the Court may be prohibited from giving effect to a purposive construction because to do so would involve an alteration to the language which was “too far-reaching” and the issue itself may have an added dimension in the Australian context because it may violate the separation of powers in the Constitution.

121 Justices Gageler and Keane dissented in the result. However, as to the relevant principles of statutory construction, their Honours said the following (at [65] and [66]):

65 Statutory construction involves attribution of legal meaning to statutory text, read in context. “Ordinarily, that meaning (the legal meaning) will correspond with the grammatical meaning … But not always”. Context sometimes favours an ungrammatical legal meaning. Ungrammatical legal meaning sometimes involves reading statutory text as containing implicit words. Implicit words are sometimes words of limitation. They are sometimes words of extension. But they are always words of explanation. The constructional task remains throughout to expound the meaning of the statutory text, not to divine unexpressed legislative intention or to remedy perceived legislative inattention. Construction is not speculation, and it is not repair.

66 Context more often reveals statutory text to be capable of a range of potential meanings, some of which may be less immediately obvious or more awkward than others, but none of which is wholly ungrammatical or unnatural. The choice between alternative meanings then turns less on linguistic fit than on evaluation of the relative coherence of the alternatives with identified statutory objects or policies.

(Footnotes omitted.)

122 In *HFM043 v Republic of Nauru* [2018] HCA 37; (2018) 359 ALR 176, Kiefel CJ, Gageler and Nettle JJ said (at [24]):

The task of construction of a statute is of the words which the legislature has enacted. Any modified meaning must be consistent with the language in fact used by the legislature. Words may be implied to explain the meaning of its text. The constructional task remains throughout to expound the meaning of the statutory text, not to remedy gaps disclosed in it or repair it. On any view, as was conceded, to construe s 31(5) in the manner contended for the respondent would go far beyond any implication of legislative intention that may be ascertained from the provisions of the statute, including the policy discernible from those provisions. The respondent’s construction cannot be accepted.

(Footnotes omitted.)

123 PPPL submitted that in *Mills v Meeking* [1990] HCA 6; (1990) 169 CLR 214 at 235, Dawson J suggested a fourth requirement before the literal meaning of a statutory provision is modified and that is that the modification must be consistent with the “wording otherwise adopted by the draftsman”.

## Some general matters relevant to construction

124 Clauses 3.7.2(d), 3.7.3(e) and 3.13.2(h) are set out above.

125 MT PASA covers the 24 month period commencing from the Sunday after the day of publication with a daily resolution, whereas ST PASA covers the period of six trading days starting from the end of the trading day covered by the most recently published pre-dispatch schedule with a trading interval.

126 There are two differences in the text between the rule dealing with MT PASA inputs on the one hand, and the rule dealing with ST PASA inputs on the other, which should be noted.

127 First, MT PASA inputs to be submitted by, among others, a Scheduled Generator, consist of the PASA availability of each scheduled generating unit, scheduled load or scheduled network service for each day and weekly energy constraints applying to each scheduled generating unit or scheduled load. The term “energy constraint” was defined in the glossary at the relevant time as follows:

A limitation on the ability of a generating unit or group of generating units to generate active power due to the restrictions in the availability of fuel or other necessary expendable resources such as, but not limited to, gas, coal, or water for operating turbines or cooling.

128 By contrast, ST PASA inputs consist of the available capacity of each scheduled generating unit, scheduled load or scheduled network service for each trading interval under expected market conditions and PASA availability of each scheduled generating unit, scheduled load or scheduled network service for each trading interval, and projected daily energy availability for each energy constrained scheduled generating units and energy constrained scheduled loads.

129 The definition of “available capacity” is also set out above (at [13]). Clearly, it is different from PASA availability. The AER submitted (correctly) that it consists of two limbs and can refer to either the total MW capacity available for dispatch by a scheduled generating unit, semi-scheduled generating unit or scheduled load, or in relation to a specified price band, the MW capacity within that price band available for dispatch. In other words, the AER submitted (again correctly) that available capacity can refer to either the total MW capacity that a generator offers to supply for dispatch across all price bands or the MW capacity that a generator offers to supply for dispatch at a particular price band. An energy constrained scheduled generating unit is defined in the glossary as follows:

A scheduled generating unit in respect of which the amount of electricity it is capable of supplying on a trading day is less than the amount of electricity it would supply on that trading day if it were dispatched to its full nominated availability for the whole trading day.

130 Secondly, in the case of ST PASA inputs, such inputs must represent the Scheduled Generator’s (or Market Participant’s) current intentions and best estimates as to the matters identified in points (1), (2) and (4) ((3) is deleted), whereas there is no such requirement or qualification expressed in the case of MT PASA inputs.

131 Both rules dealing with the MT PASA and ST PASA submissions which a Scheduled Generator must make appear in a collection of rules which in each case require AEMO to prepare PASA inputs and AEMO to subsequently prepare and publish defined information for the benefit of the market.

132 A contextual matter relevant to the PASA provisions which are related to power system security and reliability of supply prospects is AEMO’s power to issue directions in relation to the power system and whether it is in a secure operating state, a satisfactory operating state or a reliable operating state.

133 The following rules deal with AEMO’s power to issue directions and to use its reasonable endeavours to minimise costs and compensation and a Registered Participant’s obligation to comply with a direction:

**4.8.9 Power to issue directions and clause 4.8.9 instructions**

(a) Notwithstanding any other provision of rule 4.8:

(1) AEMO may require a *Registered Participant* to do any act or thing if AEMO is satisfied that it is necessary to do so to maintain or re-establish the *power system* to a *secure operating state*, a *satisfactory operating state*, or *a reliable operating state*; and

(2) …

(b) AEMO must develop, and may amend from time to time, in accordance with the *Rules consultation procedures*, procedures for the issuance of *directions*. Such procedures must reflect the following principles:

(1) AEMO must use its reasonable endeavours to minimise any cost related to *directions* and compensation to *Affected Participants* and *Market Customers* pursuant to clause 3.12.2 and compensation to *Directed Participants* pursuant to clauses 3.15.7 and 3.15.7A;

(2) …

(c) A *Registered Participant* must use its reasonable endeavours to comply with a *direction* or *clause 4.8.9 instruction* unless to do so would, in the *Registered Participant’s* reasonable opinion, be a hazard to public safety, or materially risk damaging equipment, or contravene any other law.

134 There is provision for AEMO to pay compensation to Directed Participants under cl 3.15.7.

135 With respect to purpose and policy, including mischief, I have already referred to the National Electricity Objective in s 7 of the NEL. I add the following. The rules dealing with PASA submissions appear in Chapter 3 of the NER titled “3. Market Rules”. The purpose of the Chapter is stated in cl 3.1.1 as follows:

This Chapter sets out the procedures which govern the operation of the *market* relating to the wholesale trading of electricity and the provision of *ancillary services* and includes provisions relating to:

(a) *prudential requirements* to be met for participation in the *market*;

(b) the operation of the *spot market*;

(c) bidding and *dispatch*;

(d) *spot price* determination;

(d1) the determination of *ancillary service prices*;

(e) *AEMO* clearing house and trading functions;

(f) *market* information requirements and obligations;

(g) the conditions and procedures for *market suspension*; and

(h) *settlements*.

136 Finally, there are relevant statements in cl 3.7.1 as to what PASA is and AEMO’s role in the administration of PASA.

(a) *AEMO* must administer medium term and short term *projected assessment of system adequacy processes* to be known as *PASA*.

(b) The *PASA* is a comprehensive program of information collection, analysis, and disclosure of medium term and short term *power system security* and reliability of *supply* prospects so that *Registered Participants* are properly informed to enable them to make decisions about *supply*, demand and *outages of transmission networks* in respect of periods up to 2 years in advance.

(c) On a weekly basis *AEMO* must:

(1) collect and analyse information from all *Scheduled Generators*, *Market Customers*, *Transmission Network Service Providers* and *Market Network Service Providers* about their intentions for:

(i) *generation*, *transmission* and *market network service* maintenance scheduling;

(ii) intended *plant* availabilities;

(iii) *energy constraints*;

(iv) other *plant* conditions which could materially impact upon *power system security* and reliability of *supply*; and

(v) significant changes to *load* forecasts previously notified to *AEMO*,

for the following 24 months;

(2) prepare the *unconstrained intermittent generation forecasts* for the following 24 months; and

(3) following analysis and assessment of the information referred to in subparagraphs (1) and (2), *publish* information that will inform the *market* regarding forecasts of *supply* and demand.

(d) *AEMO* must use its reasonable endeavours to ensure that it publishes sufficient information to allow the *market* to operate effectively with a minimal amount of intervention by *AEMO*.

## PASA availability

137 The AER submitted that the “central construction issue” is the meaning of “PASA availability” when read in context and with the definition and use of the expressions “physical plant capability” and “available capacity”. The definition of PASA availability is set out above (at [13]). Although the expression, “physical plant capability”, was in the Rules before the expression “PASA availability”, its only remaining role is as an element of the definition of PASA availability. The definition of physical plant capability is also set out above (at [13]). It is an objective and technical parameter, whereas PASA availability raises more operational matters, being the physical plant capability that is available, or can be made available, on 24 hours’ notice or less.

138 The Rules address the bidding and dispatch in the wholesale market of available capacity and, in particular, reference may be made to cll 3.8.4(a) and 3.8.22(b) of the NER. The AER submitted, correctly in my view, that as it is used as a ST PASA input in cl 3.7.3(e)(1), available capacity is directed to the aggregate MW capacity that a Scheduled Generator proposed to bid as available for dispatch under expected market conditions in each 30 minute trading interval over the ST PASA forecast period and that meaning engages the first, rather than the second, limb of the definition of available capacity. The available capacity of, for example, a scheduled generating unit may be limited by operational constraints, such as the availability of fuel, in common with constraints relevant to PASA availability, but it will be further constrained by matters that are relevant only to the generator’s commercial intentions, “under expected market conditions”. There is a clear difference between available capacity for ST PASA purposes and the generator’s best estimate of PASA availability. In the former case, the generator can exclude from its forecast the extent of any physical plant capability of its generating unit that it intends not to offer into the market on a particular day, or at a particular time of day, because it considers that expected market conditions, including expected spot prices, are not likely to justify incurring the running costs for that generating unit. On the other hand, in the latter case of PASA availability, physical plant capability that can be made available on 24 hours’ notice must be included.

139 This conclusion seems to me to follow from the definitions themselves and the differences between them. The conclusion is supported by the statements in the report of the Code Change Panel to which I have previously referred.

140 The AER submitted that as a MT PASA input, the “weekly energy constraint” is intended to refer to a limitation on the generating unit’s ability to generate power for a whole week at its specified availability level. That does seem clear having regard to cl 3.7.2(f)(5B) which requires AEMO to publish, as one of the MT PASA inputs, the aggregate capacity “that cannot be generated continuously at the PASA availability of the scheduled generating units … due to specified weekly energy constraints”.

141 With respect to ST PASA, a generator who operates an energy constrained scheduled generating unit is required to notify AEMO of projected daily energy availability (cl 3.7.3(e)(4)). The term “daily energy” is not defined. The AER submitted that “some context” is provided by the definition of an energy constrained scheduled generating unit. That definition is set out above (at [129]). The AER submitted that considered in its context, cl 3.7.3(e)(4) is intended to provide AEMO with information about the extent to which a scheduled generating unit may be unable to generate continuously for 24 hours at its specified available capacity due to energy constraints within the definition of energy constrained scheduled generating unit. In my opinion, that construction is supported by cl 3.7.3(h)(4AB) which requires AEMO to calculate the “aggregate capacity … that cannot be generated continuously at the available capacity due to specified daily energy constraints”.

142 I accept that like the concept of PASA availability, the concepts of “weekly energy constraint” and “daily energy availability” involve objective parameters that refer to any limitations on PASA availability or available capacity for MT PASA and ST PASA respectively that are “due to the restrictions in the availability of fuel or other necessary expendable resources”, picking up the definition of “energy constraints”, an expression used in cl 3.7.2(d)(2) and set out above (at [127]).

143 With respect to the definition of PASA availability, the AER submitted that the reference to “can be made available” in the definition makes it clear that what is required is an estimate or forecast as to a future event. The AER accepted that by its nature, a forecast involves an element of uncertainty and that is why, in the case of ST PASA, only an estimate is required. There is inevitably an element of uncertainty. For example, in the case of MT PASA, the forecast may relate to a period which is 24 months into the future. Contracts for firm fuel or transport may expire within that 24 month period. Nevertheless, a forecast must be given. The AER submitted that in the case of ST PASA, for example, it would not make sense to restrict that to the Scheduled Generator’s current intentions having regard to the reference in PASA availability to physical plant capability that can be made available during a period on 24 hours’ notice. The AER submitted that the reference to the physical plant capability that can be made available during the period on 24 hours’ notice is entirely inconsistent with the notion that PASA availability does not go outside the steps which would be taken by a Scheduled Generator in the ordinary course of the business of that Scheduled Generator. Put another way, there is no notion in the definition to the effect that the Scheduled Generator is not required to take steps outside its ordinary course of business or its established business plans. The AER’s submission is that once it is recognised that PPPL had sufficient gas and gas transport to operate a single turbine for the day, or most of the day, on 8 February 2017, then the question of PASA availability is answered. Whilst the AER accepted that running two turbines for part of the day may not have been commercially desirable or profit maximising, it submitted that that is not the relevant question.

144 The AER submitted that for MT PASA if it would be practically and physically possible on 24 hours’ notice for both of the Pelican Point PS gas turbines to run concurrently in any trading interval on a particular day, and a Scheduled Generator in PPPL’s position would reasonably expect to obtain sufficient gas and gas transport in order for this to occur, then the PASA availability for that trading interval would reflect the physical plant capability of both units and the weekly energy constraints should reflect a reasonable estimate of the limitation on Pelican Point PS’s ability to generate at the PASA availability level continuously over a week due to restrictions in the availability of gas and gas transport.

145 The AER submitted that for ST PASA, if it would be practically and physically possible, on 24 hours’ notice, for both of the Pelican Point PS’s gas turbines to run concurrently in a particular trading interval, and the best estimate of a reasonable generator in PPPL’s position was that sufficient gas and gas transport could be obtained in order for this to occur, then the PASA availability for that trading interval should reflect the physical plant capability of both units and the available capacity should reflect only the capacity that PPPL subjectively intends to make available in the market through its dispatch offers for that trading interval and the projected daily energy availability should reflect PPPL’s best estimate of the amount of energy that can be generated on a particular day, in light of any gas supply or gas transport constraints.

146 PPPL submitted that available capacity addresses what the generator intends to do. The concept of PASA availability starts from the premise of what the generator intends to do. The definition of PASA availability and the reference to “including” focuses on what in addition to that the generator intends to do, it can do on 24 hours’ notice. PPPL submitted that the word “can” denotes the ability, power, right, qualifications or means to do something. Although PPPL does not go so far as to submit that the test is 100% certainty, it does submit that the sense of the concept is not directed towards predicting in respect of each and every period the capacity which, on the bare balance of probabilities, is predicted to be more likely than not available.

147 PPPL referred to cl 3.7.1(b). It pointed out that on the face of it, it is not concerned with identifying extreme events and nor is it premised on a direction being given by AEMO. Furthermore, cl 3.7.1(c)(1) refers to AEMO’s collection and analysing of information from all Scheduled Generators (among others) about their intentions with respect to certain matters.

148 With respect to cl 3.7.2(d)(1), PPPL submitted that the gas turbines and steam turbine at Pelican Point PS are aggregated under cl 3.8.3 so that there is one unit for dispatch. AEMO has an obligation to publish information under cl 3.7.2(f). PPPL submitted that these rules are directed at real circumstances and the practical realities of what Scheduled Generators intend to do and what the aggregate generating unit PASA availability for each region will be. PPPL submitted that to publish PASA availability based on an unreal hypothetical and one in which actual business plans were ignored, would be contrary to the whole purpose of the regime established with respect to PASA.

149 PPPL then moved to cl 3.7.3(e) and ST PASA. PPPL referred to cl 3.7.3(h) which identifies the information for each trading interval that AEMO must prepare and publish. PPPL referred to paras (4AA), (4AB) and (4A) and submitted that they were part of the information to be published and self-evidently, this was to inform Market Participants of “what’s out there”. PPPL submitted that if all Scheduled Generators were required to approach PASA availability on a hypothetical basis, then that would result in meaningless information in circumstances where they were all competing for non-firm gas supply and gas transport. Each Scheduled Generator would be considering whether it might be able to obtain non-firm gas transport or non-firm interruptible gas transport. PPPL referred to the definition of “available capacity” and “PASA availability”. In connection with the definition of PASA availability, PPPL submitted that a total hypothetical is not envisaged by the definition. The definition refers to what is available. That refers to the Scheduled Generator’s intentions and plans (and in this case, that included operating one generator). The definition goes on to refer to what can be made available on 24 hours’ notice. PPPL at one point referred to this second aspect of the definition as the “fall back”. PPPL’s submission is that, properly construed, the definition refers to what the Scheduled Generator is intending to do and then the physical plant capability that can be made available in addition. PPPL submitted that one does not ignore the starting point of what the Scheduled Generator intends to make available and, in effect, proceed by reference to what is a truly hypothetical scenario. PPPL submitted that there is a subjective element and an objective element in the chapeau. The information is designed to properly inform Market Participants and if it is done on a wholly theoretical basis, then it will provide information opposite to that which the NER envisage.

150 PPPL accepted that the word “can” in the definition of PASA availability requires the person applying the Rules to consider whether there was a reasonable basis for a Scheduled Generator to reach the view that there is physical plant capability that can be made available on 24 hours’ notice. PPPL submitted in this context that “reasonable” means not arbitrary or capricious. In other words, if the Scheduled Generator can show that its decision was not arbitrary or capricious, then it satisfies the reasonableness test. The standard was, PPPL submitted, similar to the public law standard of legal reasonableness (*Minister for Immigration and Citizenship v Li* [2013] HCA 18; (2013) 249 CLR 332 at [72] per Hayne J, Kiefel J (as her Honour then was) and Bell J; *Minister for Immigration and Border Protection v SZVFW* [2018] HCA 30; (2018) 264 CLR 541). The AER submitted that it has never contended that the test is similar to the public law standard of legal reasonableness.

151 PPPL directed the Court’s attention to various statements made by the AER as to the standard under the NER. It is true that the AER has said that it does not submit that the relevant test is what a prudent or diligent Scheduled Generator would submit. On other occasions, the AER has submitted that the test is whether the PASA availability was the best estimate of a competent and diligent generator in PPPL’s position or a reasonable estimate. On other occasions, the AER has said that the relevant test is reasonableness and that meant that the Scheduled Generator could not be capricious or provide an estimate that was purely arbitrary.

152 PPPL submitted that if this last submission is accepted, then there is not a great deal of difference between the AER’s test and its test. PPPL’s test is that the Scheduled Generator’s assessment of PASA availability must be bona fide and genuine. There is not a great deal of difference between this test and the test of reasonableness in the sense of the estimate must not be arbitrary or capricious.

153 It is true that at various points when attempting to explain the concept of reasonableness, counsel for the AER referred to not arbitrary or not capricious. I do not consider that to be material. First, the AER has clearly articulated a case that the forecast must be reasonable (sometimes expressed in terms of what it ought reasonably to have expected) and not limited to not arbitrary or capricious and that can be seen in its submissions and the questions asked of the experts. Secondly, the issue is one of the correct construction of subordinate legislation and the Court cannot be bound by a concession made by one of the parties.

154 PPPL complained that the AER was now expounding yet a different case by reference to its definition of “best estimate”. The AER’s counsel said in closing submissions that a best estimate requires the task to be approached in the most comprehensive way possible and that the notion of a best estimate presupposes that all inquiries and all analysis that can be undertaken will be undertaken.

155 In essence, PPPL’s submission is that the reference in the definition of PASA availability to including any plant capability that can be made available during that period on 24 hours’ notice is a reference to, in effect, what else the Scheduled Generator can do, or what more can the Scheduled Generator do. PPPL submitted that that reflects a “real world approach” and conforms with the purpose of the Rules. PPPL went so far as to submit that a complete change of business plans is really inconsistent with the notion of what else can be made available on 24 hours’ notice.

156 PASA availability is a forecast and it would be a forecast even if restricted to availability. It goes beyond current intentions and includes what can be made available on 24 hours’ notice. The circumstances facing a Scheduled Generator preparing a PASA submission for a date two years in advance down to say, a couple of days in advance, may be many and varied, but what is required is a forecast or prediction, not just of its proposed business plans (which will no doubt be relevant to the whole issue), but of what it can make available on 24 hours’ notice. PASA availability may be changed if circumstances change and, in fact, there is an obligation on Scheduled Generators to advise of changes to submitted information. The “can be made available” aspect of PASA availability is not a promise or representation to the market that that physical plant capability will be made available or that it is the Scheduled Generator’s intention to make it available.

## The nature and extent of the generator’s obligations in submitting estimates or forecasts of MT PASA and ST PASA

157 As previously stated, the MT PASA rule, cl 3.7.2(d), does not indicate what the MT PASA input of PASA availability must represent on the part of the Scheduled Generator, whereas the ST PASA rule, cl 3.7.3(e), states that the ST PASA input of PASA availability must represent the Scheduled Generator’s current intentions and best estimates of PASA availability.

158 I start with MT PASA.

159 The AER’s case is that the MT PASA input of PASA availability must be a reasonable estimate by the Scheduled Generator of PASA availability. That is how it formulated the obligation in its submissions.

160 The AER submitted that although a literal interpretation of the text of cl 3.7.2(d) might suggest that a Scheduled Generator’s only obligation was to submit a value for PASA availability and weekly energy constraints in accordance with the timetable, such an interpretation needs only to be stated to be dismissed as absurd and unsustainable. The AER’s contention that the Scheduled Generator’s obligation is to submit a reasonable estimate of each of its PASA availability and weekly energy constraints, based on the information available to the Scheduled Generator at the time it submits its MT PASA inputs, is said to be supported by the following matters.

161 First, the interpretation to be preferred is the interpretation which will best achieve the purpose or object of the Law (National Electricity (South Australia) Act 1996 Schedule 2, s 7; NEL s 3). Clause 3.7.1(b) describes the PASA regime or program and its purpose. The latter is to ensure that Registered Participants are properly informed to enable them to make decisions about supply, demand and outages of transmission networks in respect of periods of up to two years in advance. Furthermore, if there is no requirement of a “reasonable estimate”, AEMO’s ability to use the outputs of the MT PASA process to identify and notify the market of low reserve conditions over the two year MT PASA outlook period in an accurate fashion would be undermined. Under the modern approach, the fact that the provision is a civil penalty provision does not constitute a hurdle.

162 Secondly, the AER pointed to the fact that cl 3.7.2(d) provides that the MT PASA inputs must be submitted in accordance with the timetable. This indicates a link with the requirement in cl 3.13.2(h) that a Scheduled Generator (among others) must notify AEMO of, and AEMO must publish, any changes to submitted information within the limits prescribed in the timetable. The AER submitted that this provision reinforces the purpose of the scheme and that is to ensure that Registered Participants are “properly informed”. The Scheduled Generator must act according to the information available at the time. If there was no requirement on the Scheduled Generator to make a reasonable estimate, then there would be no need for a provision such as cl 3.13.2(h).

163 Thirdly, the AER submitted that the absence of a requirement that the Scheduled Generator’s MT PASA inputs must reflect a reasonable estimate would risk undermining the efficacy of the standing data mechanisms provided for in cl 3.13.3(b).

164 The AER submitted that having regard to these matters, the Court should construe cl 3.7.2(d) as including an “implied requirement” that MT PASA inputs should reflect a Scheduled Generator’s reasonable estimate based on the information available to it at the time it submits the MT PASA inputs. The AER’s submission included a submission that a strictly literal interpretation of cl 3.7.2 would produce a perverse and counter-productive result. Further, it submitted that the standard of a reasonable estimate is readily understood and applied (*Healthcare at Home Ltd v Common Services Agency* [2014] UKSC 49 (*Healthcare v Common Services Agency*)) and is “appropriately calibrated at a lower standard of stringency than the ‘current intentions and best estimates’ requirement for short-term PASA inputs”.

165 Each of the AER’s reasons for reading cl 3.7.2(d) as if it contained a reference to the forecast or estimate being reasonable have considerable force and reasonableness is both well understood and accepted in the law. However, the words are not in the clause.

166 The AER sought to overcome this difficulty by relying on two arguments. The first did not involve reading words into the clause. I was invited simply to construe the clause as containing an implied obligation of a reasonable estimate and I was referred to the *Bay Street Appeal* case. I do not think that case, where there was a phrase to be construed narrowly or broadly as the case may be, is of assistance. The AER did not identify a phrase in cl 3.7.2(d) that was to be construed in this case.

167 The alternative approach advanced by the AER was to invite the Court to read words into the clause along the lines of the inputs must represent the Scheduled Generator’s reasonable estimate of each matter. PPPL submitted that the implications suggested by the AER do not satisfy the four conditions identified in the authorities. PPPL submitted that there is also an additional consideration which operates and that is the provisions in question are civil penalty provisions and the construction suggested by the AER would mean that there would be an expansion of the circumstances in which a person will be exposed to liability.

168 PPPL acknowledged in its submissions that the NER were directed to industry participants and that where language is capable of more than one interpretation, the Court may strain against a meaning that would lead to an unreasonable or impractical result. However, it submitted that the AER’s approach to the obligations in Part 3.7 of the NER would result in an onerous and impractical outcome. On the AER’s construction, a Scheduled Generator in the position of PPPL would be required to make constant prognostications as to what might be achievable in respect of isolated periods of time in hypothetical circumstances divorced from the commercial arrangements reflecting the operator’s actual supply intentions and consequential firm gas arrangements, but it would be at risk of penalty if the estimates do not conform to the standard the AER submitted should be read into the obligations in Part 3.7 of the NER, that is to say, the standard of a reasonable and diligent operator considering the same hypothetical set of circumstances.

169 I accept that there appears to be an omission in the rule and it would seem that the objects of the PASA regime would be better served by a standard or requirement a MT PASA submission must attain and, of course, the reasonableness standard is ubiquitous in the law. The submission is that the Court should read into the chapeau of cl 3.7.2(d) words to the effect that PASA availability submissions should represent the Scheduled Generator’s reasonable estimate based on the information available to it. The matter which has caused me most concern is that of being able to state with certainty what words the rule-making authority would have used to overcome the omission if its attention had been drawn to the defect. I note that, albeit in relation to a different time period, in the case of ST PASA submissions, the standard specified is “current intentions and best estimates”.

170 I have given the matter anxious consideration. I consider a requirement that the forecast or estimate be reasonable should be read into cl 3.7.2(d). A requirement of good faith may mean no more than that there must be no knowing misrepresentation and a requirement of genuine forecast or estimate could be a very “thin” obligation, indeed perhaps, no more than that it be PPPL’s submission. Obviously, it was contemplated that the PASA scheme which addresses the important issues of how power system security and reliability of supply prospects, would work. The Rules are addressed to practical people in a specialised industry who would understand the need for forecasts to be reasonably based.

171 With respect to ST PASA, three ST PASA inputs are required, being available capacity, PASA availability and projected daily energy availability. The timetable provides that updates to a Scheduled Generator’s ST PASA inputs must be made on a daily basis for each day over a forecast window of six days. The ST PASA submission must be for each trading interval in a day which is a half hour period. With respect to the obligation on a Scheduled Generator to publish any changes to submitted information within the times prescribed in the timetable, the timetables provides that updates must be made as frequently as changes occur.

172 With respect to ST PASA, the standard is expressed and embodied in the words “current intentions and best estimates”. An issue arises as to whether those words apply to each of the three ST PASA inputs identified in cl 3.7.3(e). The AER accepts that the words of the clause are such that there is no room for the application of the maxim which would enable the clause to be read distributively, reddendo singula singulis (*Canadian Pacific Tobacco Co Ltd v Stapleton* [1952] HCA 32; (1952) 86 CLR 1 at 6 per Dixon CJ; *Commonwealth v Sterling Nicholas Duty Free Pty Ltd* (1972) 126 CLR 297 at 313–314 per Windeyer J).

173 The first of AER’s arguments was that “current intentions” attaches to the Scheduled Generator’s own actions and “best estimates” attaches to forecasts beyond the control of the Scheduled Generator and are forecasts that would be made by a diligent and competent generator in the position of the Scheduled Generator. The AER’s submission is that current intentions attaches to the ST PASA input involving available capacity (i.e., cl 3.7.3(e)(1)), but that the concept of best estimates also has a role to play in this respect because it is available capacity under “expected market conditions”.

174 By contrast, the other two ST PASA inputs, that is to say, PASA availability and projected daily energy availability, are objective matters and the notion of best estimates attaches to those matters because a generator is capable of answering the questions they raise by drawing on its own knowledge of the technical and physical capabilities of its plant and, for an energy constrained scheduled generating unit, its knowledge and experience of the fuel supply arrangements that it continually manages in its day-to-day operation of the generation unit. PASA availability has nothing to do with the Scheduled Generator’s current intentions. The AER submitted that that must be so because were it otherwise, the first ST PASA input i.e., available capacity would overlap with the second ST PASA input i.e., PASA availability. Furthermore, it would give a different meaning to PASA availability in the case of ST PASA compared with MT PASA because in the latter case, I should accept the AER’s submission that the Scheduled Generator’s current intentions are not relevant to MT PASA.

175 The AER’s alternative argument which is reflected in the alternative formulation of the declaration it seeks (see [2] above) was that the concept of “current intentions” has the most work to do in terms of the ST PASA input of available capacity. It submitted in the alternative that it also has work to do in relation to PASA availability and that PPPL’s contention to the effect that the AER submitted otherwise is incorrect. The AER submitted that the intention of the Scheduled Generator is relevant to the extent it has a bearing upon the generating capacity and the extent to which it is possible to make it available. The AER proffered an example of an immediate intention by a Scheduled Generator to decommission a turbine or to place it in dry storage and that intention has the consequence that it is not possible to make that turbine available on a particular date on 24 hours’ notice. The AER submitted that, on the other hand, the reference to current intentions does not have the effect that PASA availability “as a whole” is to be determined by whether or not the Scheduled Generator wishes to make the generating capacity available. The AER’s alternative construction (it submitted) gives the expression “current intentions and best estimates” work to do which is consonant with the definition of PASA availability and the purpose of the Rules.

176 The remaining question is what an obligation to provide best estimates precisely means in terms of the standard of care required of a Scheduled Generator. The AER submitted that this is a higher standard than that attaching to the estimate of PASA availability for MT PASA. The AER submitted that this is “entirely understandable, in circumstances where the relevant outlook timeframe is no more than 7 days ahead, rather than 2 years”. That is because a forecast for a seven day period can be expected to have a much firmer base in terms of likely fuel supply and transport conditions than a forecast for a period of two years. Furthermore, there will be a more reliable weather forecast in the case of ST PASA.

177 With respect to ST PASA and cl 3.7.3(e), the AER submitted that there is an objective element in the obligation identified as representing the Scheduled Generator’s current intentions and best estimates. It submitted that the concept of best estimate “connotes diligence by the scheduled generator in making all possible inquiries about information that would bear upon the estimate”. An estimate would not be a best estimate if, for example, it was premised solely upon information that was within the knowledge of the Scheduled Generator and the notion of a best estimate must at least involve an obligation to make inquiries. The AER does not advance the concept of a “hypothetical reasonable diligent and prudent generator” as the words to be read into the provision. That concept simply represents the identification of a legal standard by reference to a hypothetical person (*Healthcare v Common Services Agency*). The AER submitted, correctly in my view, that evidence from a reasonable Scheduled Generator is not required because the reference to this concept is, as the AER put it, a “focusing lens” and it does not stand in substitution for the words of the provisions themselves.

178 The AER submitted that the forecast which is to involve the Scheduled Generator’s best estimate remains just that and that it is not a binding promise. The AER submitted that that is made clear when regard is had to Chapter 4 and that part of Chapter 4 which empowers AEMO to issue directions to a Registered Participant and the fact that the Registered Participant’s obligation with respect to the direction is to use reasonable endeavours to comply with it “unless to do so would, in the Registered Participant’s reasonable opinion, be a hazard to public safety, or materially risk damaging equipment, or contravene any other law” (cl 4.8.9(c)). Furthermore, the fact that the Scheduled Generator’s best estimate is not a binding promise is also made clear by cl 3.13.2(h) and the obligation on the Scheduled Generator to notify AEMO of any changes to submitted information within the times prescribed in the timetable.

179 PPPL emphasised the fact that the primary focus of the PASA processes is the collection of information which will best assist the market to understand the supply intentions of other participants so that the market makes sufficient decisions “thus obviating the need for market intervention is prioritised over a process or system designed to facilitate market intervention”. PPPL submitted that conversely, to make a PASA availability submission which suggests the availability of items of plant for which no firm gas supply or transport rights are, or are intended to be, in place and which for operational reasons are being run on a restricted basis, would be damaging to the objective of facilitating efficient decision-making by the market and minimising the need for market intervention. PPPL submitted that if PASA availability is required to be assessed and submitted in the manner contended for by the AER, it is difficult to see how AEMO could ascertain, as cl 3.7.1(c) requires it to over a 24 month period, the intended plant availabilities consistent with the intentions of Scheduled Generators. PPPL submitted that the obligations imposed by cll 3.7.2(d) and 3.7.3(e) are obligations to submit PASA inputs, in the latter case in accordance with the Scheduled Generator’s current intentions and best estimates. The Court should hesitate (so the submission goes) to read words into those provisions which impose additional and different obligations, and thereby expand the scope of a civil penalty provision, particularly where it cannot safely conclude that to do so is necessary to advance the National Electricity Objective and the purpose of the PASA regime.

180 PPPL submitted that there had been an impermissible shift in the AER’s case concerning the standard required by the NER. This shift is best illustrated by a comparison of the AER’s opening submissions and its closing submissions.

181 In its opening submissions, the AER submitted that having determined the meaning of “PASA availability”, the following issue arises. PASA availability is intended to be a measure of what a generator is practically capable of doing either if it were to decide to offer additional capacity as available for dispatch in the wholesale market or if it were directed by AEMO to bring additional generating capacity into service. It is not concerned with the generator’s commercial intention as to how much electricity it proposed to bid into the NEM. PASA availability is directed to the capacity that a Scheduled Generator would reasonably and practically expect to be able to supply having regard to fuel supply and other operational arrangements in their day-to-day operational context. The NER are directed to practical people skilled in the operation of scheduled generating units and ought to be construed to take account of practical and commercial considerations, including how much fuel the generator is able to obtain through typical commercial arrangements. The word “availability” in the definition of PASA availability should be construed in a practical and operationally-orientated way so as to require the generator of a gas-fired scheduled generating unit not only to take account of its existing firm contractual rights to gas and gas transport, but also any additional fuel that it would ordinarily have a reasonable expectation of obtaining if necessary on 24 hours’ notice. PASA availability (and projected daily energy availability) are objective estimates that a generator is capable of answering drawing on its own knowledge of the technical and physical capabilities of its plant and for an energy constrained scheduled generating unit, its knowledge and evidence of the fuel supply arrangements that it continually manages in its day-to-day operation of the generating unit. The Scheduled Generator is required to supply its best estimate.

182 In its closing written submissions, the AER submitted that the questions in issue in this proceeding concerned the maximum generating capacity that was possible for PPPL to make available on 24 hours’ notice for any part of the day on 8 February 2017 and it is not whether PPPL should have estimated that it would be able to obtain enough gas and transport on 24 hours’ notice to enable a second turbine to run in addition to whatever amounts of gas and transport PPPL might require to operate its first turbine however it pleases and, for example, at up to 240 MW for 24 hours continuously. The AER submitted that if AEMO had issued a direction requiring PPPL to generate at 320 MW in 24 hours’ time, that would have allowed PPPL more than sufficient time to change its intended running of the Pelican Point PS by reallocating the gas that it was otherwise intending to use to operate a single turbine to instead operate two turbines for at least some part of the day. The AER submitted that the issues in the proceeding do not require the Court to consider whether PPPL should have estimated that it would be able to obtain gas supply and transport on 24 hours’ notice in addition to the gas supply and transport PPPL required to run a single turbine in whatever manner PPPL wished. The AER submitted the following:

The question is whether PPPL should have estimated that, on 24 hours’ notice, it could be rearranged its existing business plans so that it could run two turbines concurrently to generate 320 MW for any part of 8 February 2017.

183 In oral submissions, the AER submitted that a best estimate required the task to be approached in the most comprehensive way possible and that the notion of a best estimate presupposes that all inquiries and all analysis that can be undertaken will be undertaken.

184 The Rules dealing with PASA submissions are not a model of clear and precise drafting. Although I have attempted to summarise the parties’ submissions, it was not always clear which arguments were their primary arguments and which were their secondary arguments. At times, the parties did not seem far apart on the construction issues and at other times, their submissions were at opposite ends of the spectrum.

185 The starting point is that I agree with the AER’s acceptance of the proposition that the construction issue as whether the requirement of “current intentions” attaches to all three ST PASA inputs or only the first is not solved by the syntactical presumption reflected in the maxim, reddendo singula singulis (render each to each or read the phrases distributively) which means each object is linked to its appropriate subject. In this regard, I refer to the discussion in Bailey D and Norbury L, *Bennion, Bailey and Norbury on Statutory interpretation* (8th ed, LexisNexis, Butterworths, 2020) and it is correct that it is not applicable. The reason the syntactical presumption does not apply is that here there are two objects and three subjects (or three objects and two subjects).

186 The next argument is that even though the presumption does not apply, as a matter of construction current intentions is linked to available capacity and best estimates is linked to PASA availability. There are two difficulties with that submission. First, it is not how the rule is structured. On the face of it, the description “current intentions and best estimates” applies to each of the three ST PASA inputs. Secondly, it is clear when one goes to the definition of the concepts that both current intentions and best estimates could be relevant in the case of each of them. In the case of available capacity, a Scheduled Generator’s best estimate may be required because of the reference to “expected market conditions”. Further, current intentions may be relevant to PASA availability as the AER recognised in their alternative argument. As it submitted, a current intention to decommission a turbine may well be relevant to what will be available and what can be made available. As to the third ST PASA input, that is, the projected daily energy availability for energy constrained scheduled generating units and energy constrained scheduled loads, this is a reference to the energy a generating unit is to produce less than its full nominated availability for the whole of the trading day. With respect to this type of information, both concepts of current intentions and best estimates may be relevant because the projected daily energy availability for energy constrained scheduled generating units and energy constrained scheduled loads may be affected by arrangements and intentions as to gas supply and gas transport.

187 In my opinion, the two concepts of current intentions and best estimates are linked and both apply to PASA availability. The concept of current intentions is relevant to the availability of the physical plant capability of a scheduled generating unit and the concept of best estimates is relevant to what can be made available on 24 hours’ notice and perhaps the overall assessment of the “maximum MW output”. I reject, insofar as it was put by PPPL, the submission that the only relevant factor was its business plans. That would be to ignore the words. “that can be made available … on 24 hours’ notice” which refers to physical plant capability where there is no present intention to use it or, at least, the Scheduled Generator is undecided. At the same time, I do not consider that current intention is irrelevant to PASA availability. It seems to me that the most sensible reading of cl 3.7.3(e) and the definitions of PASA availability and physical plant capability is that it refers to what the Scheduled Generator intends and what it could do on 24 hours’ notice. I am not convinced that the reference to notice is a reference to notice by any particular person or entity, for example, AEMO. It is a reference to an event for the purposes of fixing a time period for assessing availability.

188 I do not consider that a hypothetical operating scenario which is completely divorced from a Scheduled Generator’s actual intentions is within the scope of the rule and definitions. I consider the AER’s basic 320 MW scenario meets this description. There are other reasons I do not think it an appropriate scenario by which to judge PPPL’s compliance with the Rules and I will set these out later in these reasons (at [492]–[495]). The AER does not dispute that at all times prior to 9 February 2017, PPPL intended to run only one turbine and had no intention of operating both turbines concurrently. The starting point then is the running of one turbine for a substantial part of the day on 8 February 2017.

189 The next question then is what precisely is required of a Scheduled Generator who is required to give its best estimate of the physical plant capability that can be made available on 24 hours’ notice? The term “best estimates” is not defined in the Rules. It is to be given its ordinary meaning. The Macquarie Dictionary (6th ed) definitions of the word “estimate” highlight the approximate nature of the result and the extent to which it involves an opinion or judgment. The word “best” is an ordinary English word and the most apposite meaning in the term best judgment is a judgment of the “highest quality, excellence or standing” (Macquarie Dictionary (6th ed). In my opinion, a Scheduled Generator must form a judgment as to the physical plant capability that can be made available on 24 hours’ notice, that is, the best judgment it can reasonably form on the information known to it, including information it can reasonably be expected to obtain in the circumstances.

## The relevance of the Scheduled Generator’s commercial intention

190 The commercial intention of the Scheduled Generator will be relevant to the available capacity referred to in cl 3.7.3(e)(1) and it will be relevant to that part of the definition of PASA availability which relates to the physical plant capability of a scheduled generating unit which is available. It is not directly relevant to that part of PASA availability which relates to the physical plant capability of a scheduled generating unit which can be made available on 24 hours’ notice which assumes it is not otherwise the Scheduled Generator’s intention to make it available. As I have said, that is not to say that the Scheduled Generator’s commercial intentions may not give rise to circumstances that bear on whether the physical plant capability of a scheduled generating unit can be made available on 24 hours’ notice.

## Is the Scheduled Generator limited to taking into account only firm sources of gas and gas transport?

191 The AER submitted that a fundamental difference between it and PPPL concerned whether, in ascertaining the physical plant capability that is, or can be made, available on 24 hours’ notice, it is relevant to take into account only gas supply and gas transportation to which a Scheduled Generator has firm rights (PPPL’s contention) or whether in addition, it is relevant to take into account any other gas supply and gas transportation the Scheduled Generator ought reasonably expect that it would practically be able to procure on 24 hours’ notice if required to do so, including gas supply and gas transportation to which a Scheduled Generator has non-firm rights, and other gas that may be available in short term trading markets and for which that Scheduled Generator may be able to arrange transportation rights (AER’s contention). This does appear to be an issue, although in parts of his evidence PPPL’s expert, Mr O’Farrell, seemed to accept that non-firm gas and gas transport might be relevant where securing it was highly probable or likely.

192 The AER submitted that as a matter of construction, this issue appeared to revolve around the meaning of the word “available”, as it appears twice in the definition of PASA availability.

193 The AER’s primary submission was that the concept of PASA availability speaks generally to the capacity that a Scheduled Generator would reasonably and practically expect to be able to supply having regard to fuel supply and other operational arrangements in their day-to-day operational context. The PASA rules are addressed to practical people skilled in the operation of scheduled generating units, and so ought to be construed to take account of practical and commercial considerations (including how much fuel the generator can obtain through typical commercial arrangements), rather than “by minute contractual parsing of gas supply and transport agreements”.

194 The AER submitted that its interpretation was supported by the following matters.

195 First, the statement in the report of the Code Change Panel to the effect that a distinction is to be drawn between the capacity generators intend to make available and the capacity they could make available in extreme conditions. Furthermore, the point is underscored by the fact that AEMO is to be notified of energy constraints and is required to take into account any energy constraints that will impose a practical constraint on a generating unit’s ability to generate continuously at the level of PASA availability or the available capacity indicated.

196 Secondly, the word “available” does not have a settled or consistent technical meaning when used more generally in the NER. It is not defined in the NER. It is used in Chapters 3 and 4 of the NER in a general way “to refer variously to a plant’s ability to operate or respond in a given set of power system and/or market conditions, and to the generation capacity that a generator has bid for dispatch in the wholesale market”. The AER referred to the notion of “available capacity” and its connection with the bidding and dispatch provisions of the NER and, in particular, it referred to the fact that “available” is used in the definition in “available capacity” and in cl 3.8.4(a) as part of the expression “available capacity” (in unitalicised form).

197 The AER referred to other uses of “available” or “availability” in Chapters 3 and 4, including in cll 3.8.1(b)(2)(i), 3.9.7(a), 3.13.4(f)(4), 3.13.7(d)(1), 4.9.2(d), 4.9.9, 4.9.9A and 4.9.9B. The AER submitted that an examination of these clauses reveals that where used across Chapters 3 and 4 of the NER the undefined word “availability” does not have a consistent or technical meaning that necessarily fixes the meaning of the word “availability” as it appears in the definition of PASA availability.

198 The AER submitted that in the absence of any settled technical meaning, it may then be appropriate for the Court to have regard to the natural and ordinary meaning of “available”. The AER submitted (correctly) that the primary meanings of “available” given by the Oxford and Macquarie Dictionaries are as follows:

(1) able to be used or obtained; at someone’s disposal (Australian Oxford Dictionary); and

(2) suitable or ready for use; at hand; of use or service (Macquarie Dictionary).

199 The AER submitted that those meanings emphasise a thing’s ability or suitability for use and do not imply the need for any contractual or other legal right in relation to the product or service. The word “availability” should be interpreted in a practical and operationally-oriented way so as to require the generator of a gas-fired scheduled generating unit not only to take account of its existing firm contractual rights to gas and gas transport, but also any additional fuel that it would ordinarily have a reasonable expectation of obtaining, if necessary, on 24 hours’ notice. The AER’s submission is that there is nothing in the definition or in any of the relevant extrinsic materials for the 2001 Code change to indicate that PASA availability should take account of only that physical plant capability for which a Scheduled Generator has firm contractual rights to any necessary fuel supply. If the Code Change Panel and/or the National Electricity Code Administrator had wished to restrict the meaning in that way, they could readily have drafted the definition in a way that made that intention clear.

200 In my opinion, even leaving aside the extrinsic material, the AER’s submissions are correct. If the test in the case of MT PASA is one of a reasonable estimate, including a reasonable expectation of gas supply and gas transport, and in the case of ST PASA, one of a best estimate, including a reasonable expectation of gas supply and gas transport, there is no reason to draw a distinction between firm gas supply and non-firm gas supply and transport. The question is one of fact and whilst the matter is relevant and may well be significant in many cases, the ultimate question is whether the circumstances meet or do not meet the relevant test.

## Running time considerations

201 It is convenient to deal with the final two issues identified by the AER together.

202 The AER referred to these issues as the “running time considerations”, that is to say, the running time of the gas turbines. The Pelican Point PS is a “mid-merit” power station and typically, it fills the gap between “base load” power stations which are power stations which are low cost and constantly operating, and “peaking” power stations which are power stations which are high cost and operate only at peak times. The AER submitted that the gas turbines at the Pelican Point PS are operated flexibly to respond to periods of high energy demand, from periods as short as four hours up to periods of days or weeks continuously, but at varying levels of output. Mr Foulds gave evidence that he had been informed by PPPL’s engineers that the prudent minimum run-time to avoid additional wear and tear on the gas turbines is eight hours and that, in certain circumstances, where the gas turbine has recently, that is to say, in the last few days been in service, it may be possible to operate the turbine for a period shorter than eight hours and for as little as four hours.

203 It will be recalled that the MT PASA framework requires PASA availability to be forecast on a daily basis, whereas the ST PASA framework requires PASA availability to be forecast on a 30 minute trading interval basis.

204 The AER submitted that PASA availability does not relate to a Scheduled Generator’s intention to offer its generating capacity into the wholesale market, but rather, PASA availability is an estimate of the physical plant capability that is potentially available if the generator were to bid in the wholesale market to generate up to that output level, or if it were given a direction to do so by AEMO. The AER submitted that the submission of PASA availability by a Scheduled Generator to AEMO for a given day or trading interval contains no representation that a generator intends to operate its generating unit at the PASA available output level for all or any part of a day in the MT PASA framework, or in any trading interval or any number of consecutive trading intervals in the ST PASA framework. The AER submitted that this proposition is important in three respects. First, contrary to PPPL’s response, PASA availability does not imply that a generating unit can be run for any extended period of time. Secondly, PASA availability is not capable of misleading the energy trading and derivatives markets about the generator’s intention as to its planned bidding and running of the generating unit. Thirdly, PASA availability is relevant to issues of fuel supply. In particular, to indicate that a generating unit is PASA available on a particular day does not imply that the generator must reasonably expect that it will be able to obtain sufficient fuel to run the generating unit at the PASA available output level for 24 hours continuously.

205 The AER addressed the issue of how PASA availability for MT PASA is affected by a practical limit on how long a generating unit can run within a day. The AER submitted that if a generator would reasonably expect that the physical plant capability of its generating unit could be made available for only part of a day, including because of any reasonably expected fuel constraints, then its obligation is to indicate the maximum amount of its physical plant capability that can be made available for any part of that day. The AER submitted that this conclusion follows from the text of the definition of PASA availability and, in particular, “available *in* a particular period, including *any* physical plant capability that can be made available *during* that period, on 24 hours’ notice”. The effect of these words is not to require that the physical plant capability be available to be operated for the whole of a day. Further support for that conclusion follows from the fact that if the generating unit is unable to run continuously throughout the day because of fuel constraints, then there is an obligation on the generator to inform AEMO of that through the weekly energy constraints parameter (cl 3.7.2(d)(2)). The AER submitted that this conclusion is also supported by reference to cl 3.7.2(f)(5)(5A) and (5B). An interpretation which would mean that PASA availability was limited to generating units which could supply continuously over a whole day would mean that the reserve capacity supplied by “peaking” gas-fired generating units would go wholly unrecognised by the MT PASA process.

206 The AER addressed whether PASA availability for ST PASA is affected for how long a generating unit can run for within a day. This question is answered by the fact that forecasts of PASA availability for ST PASA are required to be made separately for each half hour trading interval. The AER submitted that it follows from the fact that PASA availability does not relate to a Scheduled Generator’s intention to offer its generating capacity into the wholesale market, that the physical plant capability of the generating unit should be designated as PASA available for each of the 48 trading intervals throughout the trading day. To do so does not represent or imply that the generator will bid that generating unit to operate at that output level (or at all) continuously throughout the day, or that the generator’s best estimate is that it would be able to obtain sufficient fuel to run the generating unit for 24 hours continuously. The AER said that as noted above in relation to PASA availability in the context of MT PASA, if the reason for a generating unit’s inability to run continuously throughout a day is a lack of reasonably expected fuel supply, then the generating unit is an energy constrained scheduled generating unit and the generator is required to notify AEMO of its projected daily energy availability (see cl 3.7.3(e)(4)).

207 I agree with the AER’s submissions. PPPL’s PASA submissions were based on one gas turbine operating with the steam turbine and one figure was given for the relevant periods, even though at least in the case of the ST PASA submissions, the gas turbine was not operating at that figure throughout the relevant period. The AER’s submissions do not mean that the starting point is not what the Scheduled Generator intends to make available and then it must consider what physical plant capability can be made available on 24 hours’ notice. The AER’s 8 February counterfactual is that GT11 runs as it did on 8 February 2017 and GT12 is run for approximately four hours. This operating scenario is within the definition of PASA availability which refers to available “in a particular period” and to any physical plant capability that can be made available “during that period”.

208 The parties did not identify any construction issues in relation to cl 3.13.2(h). The AER’s submissions with respect to this clause are correct. With respect to cl 3.13.2(h), the AER submitted that the reference to changes to submitted information should be construed to mean a change in the reasonable estimate of PASA availability and that ordinarily, it is expected that a change to the reasonable estimate of PASA availability would occur as a result of some change affecting the physical plant capability of a generating unit, or affecting the generator’s ability to make some or all of that physical plant capability available on 24 hours’ notice. The timetable requires a Scheduled Generator to notify AEMO of its MT PASA inputs as frequently as changes occur and for the purposes of applying 3.13.2(h), the AER submitted that this should be interpreted as requiring a Scheduled Generator to notify AEMO of any changes to previously submitted MT PASA inputs as soon as practicable. At all times prior to 11 November 2016, the PASA availability that PPPL submitted for the MT PASA for 8 February 2017 was 224 MW. It follows, that PPPL will have contravened cl 3.13.2(h) after 11 November 2016 if 224 MW was no longer a reasonable estimate of PASA availability for 8 February 2017 and PPPL failed to notify AEMO of that change as soon as practicable.

# WITNESSES

209 There are three important matters to be mentioned at the outset. First, in the section which follows, I will examine the evidence of each witness. In some cases, there was barely a challenge to their evidence and their evidence may be accepted. In other cases, such as in the case of the experts (Messrs Snow and O’Farrell) and Mr Weatherly, I will need to come back to their evidence when I deal in detail with the availability of gas and of gas transport. Secondly, in making findings I bear in mind s 140 of the *Evidence Act 1995* (Cth) and that the contraventions alleged involve civil penalty provisions (*Briginshaw v Briginshaw* [1938] HCA 34; (1938) 60 CLR 336 at 361–362; *Neat Holdings Pty Ltd v Karajan Holdings Pty Ltd* [1992] HCA 66; (1992) 110 ALR 449; (1992) 67 ALJR 170 at 170–171 per Mason CJ, Brennan, Deane and Gaudron JJ; *Setka v Gregor (No 2)* [2011] FCAFC 90; (2011) 195 FCR 203 at [24]–[26] per Lander, Tracey and Yates JJ; *Morley v Australian Securities and Investments Commission* [2010] NSWCA 331; (2010) 247 FLR 140 at [742]–745]). Thirdly, I did not draw any adverse inferences by reason of demeanour in relation to any of the witnesses. That, of course, does not mean that I accept all of the evidence of a particular witness. As will be seen, I do not. In a number of areas I have drawn a different inference from that drawn by the witness or characterised a set of circumstances in a different way from the way the witness has characterised those circumstances. I have done so by reference to “contemporary materials, objectively established facts and the apparent logic of events” (*Fox v Percy* [2003] HCA 22; (2003) 214 CLR 118 at [30]–[31] per Gleeson CJ, Gummow and Kirby JJ).

## The AER’s witnesses

### Mr Van Der Walt

210 As I have said, Mr Van Der Walt is employed by AEMO as Group Manager, NEM Real Time Operations. In opening, counsel for the AER described Mr Van Der Walt’s evidence as providing a general overview of the PASA regime and evidence sourced from AEMO’s data base of a technical nature. In its closing written submissions, PPPL said that there was no issue of credit and the Court can accept Mr Van Der Walt’s evidence. I agree that there is no issue as to credit and I accept Mr Van Der Walt’s evidence.

211 The principal matters to emerge from Mr Van Der Walt’s evidence are his description of AEMO’s role, the operation of the PASA system, AEMO’s power to issue directions to Registered Participants and the events on 8 February 2017 and 9 February 2017 from AEMO’s point of view.

212 Mr Van Der Walt described AEMO as the independent market and system operator for the NEM. He described the NEM as the interconnected power system in Australia’s eastern and south-eastern seaboard and Tasmania, and a wholesale exchange for the buying and selling of electricity. He described AEMO’s statutory functions as laid down in the NEL and the NER as operating and administering the wholesale exchange and collecting, analysing and publishing information in relation to the Projected Assessment of System Adequacy (PASA) and monitoring and maintaining power system security.

213 Mr Van Der Walt’s present role is as the manager with overall responsibility for AEMO’s real‑time electricity system operations in the NEM, including the maintenance of security and reliability of electricity supply for the interconnected power system for the NEM and scheduling and real-time dispatch of energy services for the NEM.

214 Mr Van Der Walt was employed by AEMO’s predecessor organisation, NEMMCO. Between March 2016 and October 2017, he held the position of Senior Manager, NEM Real Time Operations.

215 Mr Van Der Walt said that a key aspect of AEMO’s function of monitoring and maintaining power system security is to ensure that there is sufficient power supply to meet forecast demand. He said that this includes ensuring that there are sufficient capacity reserves in the event that certain types of event occur which impact on the supply of power.

216 Mr Van Der Walt identified AEMO’s power system security responsibilities and obligations as set out in cl 4.3.1 of the NER. He also referred to the obligation of generators to submit MT PASA inputs and ST PASA inputs. A Scheduled Generator must submit its MT PASA inputs on a weekly basis, or more frequently if a materially significant change exists, covering a 24 month period with a daily resolution. A Scheduled Generator must submit its ST PASA inputs on at least a daily basis, and as frequently as changes to the previously submitted values occur, covering a rolling period of six trading days, with a 30 minute resolution.

217 Mr Van Der Walt referred to the definitions of “available capacity” and “PASA availability” and said that AEMO uses the information submitted by reference to those matters by scheduled generating units, forecasts of semi-scheduled generation and “available capacity” of scheduled loads to determine the forecast level of capacity reserves and whether there is a forecast reserve shortfall in each NEM region. Mr Van Der Walt said that AEMO publishes capacity reserves for NEM regions and regionally aggregated short term “PASA availability” of generation. This aggregated “PASA availability” information is used to inform AEMO and the market as to whether there is additional capacity available for recall within 24 hours to address any forecast reserve shortfall. He said that AEMO also uses the short term “PASA availability” as submitted for individual generating units to determine which generating units may be available for direction, if required in order to maintain or restore power system security and reliability.

218 Mr Van Der Walt referred to Chapter 4 of the NER which addresses power system security and, in particular, he referred to cl 4.8.4 which empowers AEMO to declare various conditions in relation to the power system. He also referred to s 116 of the NEL and cl 4.8.9 of the NER which give AEMO the power to intervene in the market in certain circumstances. Mr Van Der Walt made the point that in circumstances of supply scarcity, AEMO uses its reasonable endeavours to issue a direction only if, by the latest time to intervene, the requirement still exists and is not expected to be fully met by a market response or by action taken under any available reserve contract. He said that in determining whether, when and to which Registered Participants AEMO may need to issue a direction or instruction, AEMO relies primarily on the information provided by Registered Participants in the PASA process. AEMO may also contact Registered Participants directly to request additional information, or to confirm information that has already been provided. A Registered Participant which has been issued with a direction by AEMO must use its reasonable endeavours to comply with that direction.

219 PPPL is the registered generator in respect of the Pelican Point PS. The Pelican Point PS is the second largest power station in South Australia. PPPL’s parent company is ENGIE, previously known as GDF Suez, which is a global energy company. The Pelican Point PS has three aggregated turbines with an aggregated registered capacity of 478 MW. The three turbines are registered as an aggregated generator with a single dispatchable unit identifier of “PPCCGT”. The three turbines at the Pelican Point PS comprise two 160 MW gas turbines and one 158 MW steam turbine. The steam turbine may only be operated in conjunction with one or both of the gas turbines, for a registered capacity of 478 MW if both gas turbines are operated and approximately half of that capacity if only one of the gas turbines is operated.

220 Mr Van Der Walt produced correspondence from GDF Suez to AEMO in June 2014 advising of a reduction of station capacity of the Pelican Point PS to half (240 MW) from 1 April 2015.

221 AEMO maintains a database known as the “WARE” database. That database includes all market data associated with the NEM, including the PASA submissions by generators and the power generation output of generators. Mr Van Der Walt said that the database receives data from various sources, including a continuous live feed of SCADA data from transmission network service providers. In South Australia, the transmission network service provider is ElectraNet and it provides data which includes, among other things, power generation output data relating to the Pelican Point PS.

222 Between 9 February 2015 and 8 February 2017, PPPL’s submissions to AEMO of its MT PASA availability for the Pelican Point PS for 8 February 2017 reflected a value of 224 MW. Between 15 January 2017 and 8 February 2017, PPPL’s submissions to AEMO of its ST PASA availability for the Pelican Point PS for the 8 February 2017 trading day did not exceed 235 MW.

223 The function of Market Notices includes a function of informing the market of AEMO’s intention to intervene in the market. Participant Notices are directed at particular participants and, for example, may be to confirm a direction AEMO has issued to that participant. Market Notices and Participant Notices are stored on AEMO’s website. Mr Van Der Walt said that when AEMO issues a direction, it takes effect from the time that it is issued verbally by AEMO’s control room staff to the participant.

224 On 31 January 2017 at 15.27, AEMO issued a Market Notice advising of low reserve conditions in South Australia for February and March 2017, summer 2017/2018 and summer 2018/2019.

225 On 8 February 2017, the recorded maximum temperature in Adelaide was 42.4oC and on 9 February 2017, the recorded maximum temperature was 41oC.

226 Certain events occurred on 8 February 2017 involving action taken by AEMO and ENGIE. Rather than attempt to summarise the evidence of Mr Van Der Walt, it is convenient to set it out. The times set out in what follows are Australian Eastern Standard Time:

41. On 8 February 2017:

(a) at 12:47, AEMO declared a forecast LOR1 condition in the South Australia region on 9 February 2017 from 16:30 to 19:00 hours (Market Notice 57268).

(b) at 15: 18, AEMO declared a forecast LOR1 condition for the South Australia region on 8 February 2017, from 16:30 to 19:00 (Market Notice 57276).

(c) at 16:13, AEMO declared an actual LOR1 condition in the South Australia region on 8 February 2017 from 16:00, forecast to exist until 19:00 (Market Notice 57277).

(d) at 17:13, AEMO declared an actual LOR2 condition in the South Australia region on 8 February 2017 from 17:00, forecast to exist until 19:00 (Market Notice 57279).

(e) at 17:25, electricity flows across the Murraylink interconnector from Victoria to South Australia increased above its limit, which resulted in the power system no longer being in a secure operating state.

(f) at 17:39, AEMO staff contacted Engie to enquire about the availability of the GT12 generating unit at Pelican Point PS. The transcript of that conversation includes the following statement by an Engie trader:

|  |  |
| --- | --- |
| *Engie trading operator:* | *It’s technically available but at the moment we don’t have the gas to run the unit so if that’s something that you want to look at we would have to get back to you once we’ve had a bit of a look at how we’re going to source that fuel.* |

(g) at 18:00, AEMO staff had a further telephone conversation with staff at Engie. The transcript of that conversation included the following exchange:

|  |  |
| --- | --- |
| *Engie trading operator:* | *So we spoke to the station and they reckon about one hour to get ---* |
| *AEMO control room operator:* | *One hour. Okay.* |
| *Engie trading operator:* | *--- GT12 back on line in regard to fuel – in regard to gas, we could probably run for about four to eight hours.* |
| *AEMO control room operator:* | *Fuel run for four to eight hours. And – okay. So we’re saying basically – what’s the time now, mate? So if we gave you a direction, is that right, if required?* |
| *Engie trading operator:* | *Yes.* |

(h) at 18:03, AEMO issued a direction to Electra Net, requiring it to shed 100 MW of electrical load (Participant Notice 57283). At **Tab 15** of Exhibit TNV-01 is an extract from the AEMO Control Room Log.

(i) at 18:11, AEMO declared an actual LOR3 condition in the South Australia region from 18:03, forecast to exist until 19:30 (Market Notice 57282). The Notice stated ‘*AEMO considers that Customer load is actually being interrupted in order to maintain or restore the security of the power system in South Australia Region. … The maximum load is being interrupted is 100 MW at 1803 hrs Wednesday, 8 February 2017*.’

(j) at 19:08, AEMO issued a notice that the actual LOR3 condition was cancelled at 19:00 (Market Notice 57284 ).

(k) at 19:21, Engie called AEMO for an update.

(l) at 20:01, AEMO issued a notice that an actual LOR2 condition had been declared for the South Australia region from 19:00 on 8 February 2017, forecast to exist until 20:00 (Market Notice 57286).

(m) at 20:10, AEMO called Engie to make further queries regarding the availability of GT12.

(n) at 20:18, AEMO issued a notice that an actual LOR1 condition had been declared for the South Australia region from 20:00 to 21:00 (Market Notice 57287).

(o) at 21:21, AEMO issued a notice that the actual LOR1 condition was cancelled from 21:00 (Market Notice 57289).

(p) at 21:34, AEMO declared a forecast LOR2 condition for the South Australia region on 9 February 2017 from 17:00 to 18:30, and stated that it was ‘seeking a market response’ (Market Notice 57290).

(q) at 21:40, AEMO declared a forecast LOR1 condition for the South Australia region on 9 February 2017 from 15:30 to 17:00 and from 18:30 to 19:30 (Market Notice 57291).

(r) at 22:25 and again at 23:47, AEMO called Engie with further queries about the availability of GT12.

(s) at 23:55, Engie called AEMO with further information regarding the availability of GT12.

227 Mr Van Der Walt states that prior to the telephone conversation between staff of AEMO and ENGIE at 18.00 on 8 February 2017, to the best of his knowledge, AEMO had not been informed by PPPL (or ENGIE on its behalf) that GT12 could be made available on 8 and 9 February 2017 within 24 hours’ notice.

228 Certain events occurred on 9 February 2017 involving AEMO and ENGIE. Again, rather than attempt to summarise the evidence of Mr Van Der Walt, it is convenient to set it out:

43. On 9 February 2017:

(a) at 3:28, AEMO declared a forecast LOR2 condition for the South Australia region on 9 February 2017 from 16:30 to 18:00, and stated that it was ‘*seeking a market response*’ (Market Notice 57295).

(b) at 6:10, AEMO called Engie with further queries about the availability of GT12.

(c) at 6:33, Engie called AEMO to provide it with an update.

(d) at 6:36, AEMO called Engie with a further query.

(e) at 10:49, AEMO declared a forecast LOR2 condition for the South Australia region on 9 February 2017 from 15:30 to 18:00, and stated that it was ‘*seeking a market response*’ (Market Notice 57307).

(f) at 10:51, AEMO declared a forecast LOR1 condition for the South Australia region on 9 February 2017 from 13:30 to 15:30 and from 18:00 to 19:00 (Market Notice 57308).

(g) at 13:20, AEMO declared a forecast LOR2 condition for the South Australia region on 9 February 2017 from 15:30 to 18:00, and stated that it was ‘*seeking a market response*’ (Market Notice 57313).

(h) at 14:49, AEMO declared a forecast LOR2 condition for the South Australia region on 9 February 2017 from 16:00 to 18:00, and stated that it was ‘seeking a market response’ (Market Notice 57319). The Notice also stated that ‘*AEMO intends to intervene through an AEMO intervention event at 1500 hrs if a sufficient market response is not achieved*.’

(i) at 15:05, AEMO issued a direction to PPPL, to synchronise and dispatch generating unit GT12 to its minimum load (Participant Notice 57310). At **Tab 16** of Exhibit TNV-01 is an extract from the AEMO Control Room Log. This was announced by a further Market Notice at 15: 17 (Market Notice 57312).

(j) in response to AEMO’s direction, PPPL made additional generation available to the market, effective at 15:30, which resulted in output from the Pelican Point Power Station increasing from approximately 215MW at 16:00 to approximately 320MW at 17:00. At **Tab 17** of Exhibit TNV-01 is a table stating the output of Pelican Point PS on 8 and 9 February 2017. The data in that table is extracted from AEMO’s “WARE” database.

(k) at 19:09, AEMO issued a notice cancelling its previous direction to PPPL from 19:00 (Market Notice 57347). The output from Pelican Point PS thereafter decreased from 320MW at 19:00 to 214MW at 20:00.

(l) at 19:20, AEMO declared an actual LOR1 condition in the South Australia region on 9 February 2017 from 19:00 to 20:00 (Market Notice 57349).

(m) at 20:07, AEMO issued a notice that the actual LOR1 condition in the South Australia region on 9 February 2017 was cancelled at 20:00 (Market Notice 57350).

229 On 8 February 2017, the power system was not in a secure operating state for more than 30 minutes and AEMO issued an instruction under cl 4.8.9 of the NER for load shedding. AEMO subsequently conducted a review and prepared a report in accordance with cl 4.8.15(c) of the NER titled “System Event Report. South Australia, 8 February 2017” dated 15 February 2017.

230 Following AEMO’s issue of a direction to PPPL on 9 February 2017, AEMO prepared a report under cl 3.13.6A(a) of the NER titled “NEM Event – Direction to South Australia Generator – 9 February 2017” dated July 2017.

231 Mr Van Der Walt produced a spreadsheet of PPPL’s MT PASA availability submissions from 11 November 2016 to 8 February 2017 and a spreadsheet of PPPL’s ST PASA availability submissions from 4 February 2017 to 12 February 2017.

232 In cross-examination, Mr Van Der Walt agreed that the SCADA data fed into AEMO’s WARE database contained information as to precisely which generating unit at the Pelican Point PS was operating on an hourly basis. He said that AEMO does not use the SCADA data to establish which unit is generating. It uses the DUID, the unit identifier, for that information in the system.

233 Mr Van Der Walt was taken to the SCADA data or real-time information provided to AEMO in respect of the generating units at the Pelican Point PS. The data is available to persons such as Mr Van Der Walt if they look for it. Mr Van Der Walt said that in Pelican Point PS’s case, the two gas turbines and the steam turbine are aggregated. Mr Van Der Walt said that in addition to action taken in managing a situation, AEMO may speak to governments to see if they can do anything reliability wise, such as switching off their buildings.

234 Mr Van Der Walt said that “RERT” stands for Reliability and Emergency Reserve Trader and is a process made available to AEMO to manage the reliability issues when there is not enough scheduled generation. If a person is in the market, then he or she are not allowed to be on the RERT panel. Mr Van Der Walt gave an example of a smelter and contact being made because under a contract they can be asked to reduce their demand. PPPL was one of the RERT panel members and the arrangement involved the entry into agreements with panel participants. The RERT Panel Agreement between AEMO and PPPL was dated 9 February 2016. Mr Van Der Walt did not have a role in connection with this RERT panel. The RERT Panel Agreement did not feature in either party’s closing submissions.

235 Mr Van Der Walt was asked to identify the first day prior to 8 February 2017 that PPPL was required to submit ST PASA for that day. Mr Van Der Walt agreed that the seven day window commenced on 2 February 2017 and that they were required through until 8 February 2017. Furthermore, a number of ST PASA submissions were submitted across the day on 8 February 2017. The ST PASA submissions were provided at different times during the day. The ST PASA submissions are upgraded to take into account, for example, temperature changes which may affect the generating capacity of the Scheduled Generator. ST PASA submissions were lodged at 16.42 and it appears, although it is not entirely clear, that the ST PASA was providing a “look-forward” for the balance of the day which was the requirement of the ST PASA regime. That cross-examination, or at least the latter part of it, seems to have been directed to an issue (still outstanding) as to the number of contraventions if liability is established.

236 In re-examination, Mr Van Der Walt said that there was nothing which would prompt him to look for the SCADA data on the WARE database. He said that there was no reason for those at AEMO to dig in that deep if there is no actual event happening at the station. Mr Van Der Walt said that AEMO does not use the SCADA data to ascertain the maximum generating capacity of the plant.

### Ms Eastgate

237 As I have said, Ms Eastgate is employed by the AER as an Assistant Director in its Compliance and Enforcement Branch. She assists in the investigation of matters to be reported to the AER Board. She has been involved in the investigation of the conduct which is the subject of these proceedings since June 2017.

238 In his opening, counsel for the AER described Ms Eastgate’s evidence as evidence of a technical nature. In its closing written submissions, PPPL said there was no issue of credit and the Court can accept Ms Eastgate’s evidence. I agree that there is no issue as to credit and I accept Ms Eastgate’s evidence.

239 Ms Eastgate states that the AER uses a software package called “NEO” to manage and display data relating to the NEM. The AER has an SQL server that links directly to AEMO’s systems to retrieve and store NEM data. When an AER staff member runs a report in NEO, the NEO replicates the data held in the AER’s SQL server.

240 On 29 July 2019, Ms Eastgate extracted from NEO 30 minute generation and dispatch target data for the Pelican Point PS with the DUID, PPCCGT, for 8 and 9 February 2017 trading days. She states that the report she ran was called “Generation vs Target” which is accessed in the NEO. The report provides for each 30 minute trading interval, two data outputs, namely, the generation unit of the Pelican Point PS and the dispatch data issued to the Pelican Point PS. Ms Eastgate ran the report twice, once for each of 8 and 9 February 2017 trading days. Ms Eastgate described how she prepared that information so that it was provided to the Court. On 26 February 2020, Ms Eastgate extracted from NEO, 5-minute generation and dispatch target data for the Pelican Point PS with DUID PPCCGT for 1 January 2012 to 7 February 2017 trading days. Ms Eastgate ran a report called “Generation vs Target\_5min”. This report provided for each 5-minute dispatch interval, two data outputs, being the generation output of the Pelican Point PS and the dispatch target issued to the Pelican Point PS. Ms Eastgate described how she went about preparing that data so that it could be provided to the Court in the form of a USB.

241 Ms Eastgate also created other documents from the records of AEMO. This included PPPL’s output and gas usage and, in this respect, she created the following: (1) a new worksheet entitled “Est. gas usage calc” (Estimated gas usage calculation); (2) a chart of the daily energy output and estimated gas usage of the Pelican Point PS for each day from 1 January 2017 to 9 February 2017; (3) charts of the generation of the Pelican Point PS for each week from 1 January 2017 to 9 February 2017; and (4) a chart of the generation of the Pelican Point PS for 30 January 2017 to 6 February 2017 trading days. Ms Eastgate also created an Excel file which is in USB form and which contains data relating to the PPPL’s ST PASA submissions and PPPL’s MT PASA submissions.

242 It seems that Ms Eastgate based her calculations on NEO which is AER data, not AEMO data. Further, one of the points which the AER seeks to make based on Ms Eastgate’s evidence is that the Pelican Point PS was regularly dispatched to generate at an output rate of 320 MW which is the combined output of GT11 and GT12 run together.

### Mr Sanders

243 As I have said, Mr Sanders is employed by AEMO as a Principal Analyst, Electricity Market Monitoring. In its closing written submissions, PPPL said that there was no issue of credit and the Court can accept the evidence of Mr Sanders. I agree that there is no issue as to credit and I accept Mr Sanders’ evidence.

244 Mr Sanders’ expertise centres on bidding, dispatch and pricing in the NEM. This means that he is required to have an understanding of all components of the dispatch model, the operation of the optimisation techniques used in dispatch and the way in which various elements of a bid might be used in the pricing and dispatch process. He has been employed in his present role, or equivalent roles, at AEMO since August 2011. AEMO succeeded NEMMCO as the operator of the NEM and before commencing his employment with AEMO, Mr Sanders spent six years working for NEMNCO as a Specialist, Market Design, analysing and advising on the ways in which the NEM might be improved. Mr Sanders holds a Bachelor of Science with First Class Honours from the University of Otago in Dunedin, New Zealand and a Post Graduate Diploma in Applied Nuclear Physics from Sydney University.

245 Mr Sanders was not on the AER’s original witness list. The substance of Mr Sanders’ evidence is the AER’s response to certain aspects of Mr O’Farrell’s evidence in his second report which I gave PPPL leave to adduce.

246 Before he addressed those matters, Mr Sanders addressed a number of general matters. He began by addressing the ST PASA process referred to in cl 3.7.3 of the NER. He produced the Spot Market Operations Timetable published by AEMO in October 2016 pursuant to cl 3.4.3 of the NER. He summarised one of a Scheduled Generator’s obligations as specified in the timetable as a requirement to submit and update ST PASA inputs for a trading day to AEMO during the period between two and seven days in advance of the trading day in question.

247 Mr Sanders described how AEMO uses the ST PASA inputs supplied by Scheduled Generators. He said in broad terms, AEMO uses the information along with other information regarding forecast demand and forecast network constraints to forecast the quantity of capacity reserves that will be available in each region in each trading interval across the ST PASA forecast period.

248 Mr Sanders also produced the Reliability Standard Implementation Guidelines published by AEMO in October 2016. That document summarises how AEMO uses the ST PASA framework to forecast capacity reserves over the ST PASA timeframe.

249 Aside from the Scheduled Generator’s obligations with respect to ST PASA, the Scheduled Generator has obligations under cl 3.8.4 to notify AEMO of available capacity and daily energy availability two days in advance of each trading day. AEMO uses this information and information about dispatch offers and bids, forecast demand and forecast spot pricing for each trading interval in preparing and publishing its pre-dispatch schedules. AEMO’s obligation to prepare, publish and update a pre-dispatch schedule for each trading day is governed by cl 3.8.20 of the NER. Mr Sanders gives his opinion as to a key purpose of the pre-dispatch schedule. It is to provide Market Participants (including generators) with sufficient information about forecast supply, demand and prices to enable them to make informed decisions about how to operate their generating units during each trading day. The information published and regularly updated in the pre-dispatch schedule enables generators to submit rebids in order to increase or decrease the amount of generating capacity that they wish to offer for dispatch in each price band during each trading interval throughout the trading day. Mr Sanders said that AEMO uses the daily energy availability information submitted by generators under cl 3.8.4 in preparing the pre-dispatch schedule. Mr Sanders provided a copy of the pre-dispatch process description prepared by AEMO with an effective date from 1 July 2010.

250 Mr Sanders addressed the issue of dispatch. He said that, in broad terms, in co-ordinating the dispatch of generating units every 5-minutes in real-time, AEMO’s dispatch algorithm seeks to achieve a lowest-price solution that balances aggregate supply and aggregate demand, while taking account of other physical or electrical constraints, including constraints on transmission lines, the rate at which individual generating units are able to ramp up or ramp down their output, and other constraints that may be necessary to maintain power system security from time to time. AEMO’s real-time dispatch process is principally governed by cl 3.8.1 of the NER. Mr Sanders explained that AEMO’s bidding and dispatch framework enables the generator of an energy-constrained generating unit to make its limited generating capacity available during times of the day when spot prices are forecast to be highest, including by rebidding at any time up to the start of a 5-minute dispatch interval.

251 Mr Sanders addressed the situation of a generator of an energy-constrained generating unit notifying a daily energy availability to AEMO under cl 3.8.4 (or if it has submitted a “projected daily energy availability” in ST PASA), and expressed the following conclusions: (1) the generator is not constrained by that estimate in submitting dispatch offers for any trading interval in that trading day; and (2) AEMO’s dispatch algorithm does not take account of whether a generating unit has exceeded its “Daily Energy Availability” (or its “projected daily energy availability”) for the trading day in computing and co-ordinating real-time dispatch for any 5-minute dispatch interval during the trading day. Mr Sanders gave the following example: a generator has notified AEMO that its generating unit has a “Daily Energy Availability” of 2,000 MWh for a trading day, and the generating unit has in fact been dispatched to supply 2,000 MWh before the end of a trading day. In those circumstances, the generator is not prohibited from continuing to offer generating capacity during remaining trading intervals and nor will AEMO’s dispatch algorithm prevent that generating unit from continuing to be dispatched to supply power during the remaining trading intervals of that trading day. Mr Sanders referred to the Pre-Dispatch Process Description and noted the following passage:

**6.4.3 Unit Daily Energy constraint**

Unit Daily Energy Limits are used by market participants in Pre-dispatch to limit the total amount of energy (energy generated for a generating unit or energy consumed by a load) that can be scheduled on their energy­constrained units from the start of the trading day onwards. Note that energy-constrained units are not subject to this limit in On-line Dispatch.

252 I turn now to Mr Sanders’ review of two aspects of Mr O’Farrell’s second report.

253 In the case of the basic 320 MW scenario advanced by the AER where PPPL generated 320 MW for a four hour period, a question arises as to whether PPPL would be obliged to identify a particular four hour period. Mr O’Farrell expressed the view in his second report that if, by contrast, PPPL submitted 320 MW for each trading interval for ST PASA, then that entailed committing to significantly greater output than generating at 320 MW for only four hours and, therefore, obtaining significantly more non-firm gas, interruptible transport and a user of surplus gas during periods in which that level of output was not being generated over a 24 hour period. Mr O’Farrell’s opinion was that if it was necessary for PPPL to submit ST PASA of 320 MW for all trading intervals in a day, in his view a prudent and diligent operator would have needed to be in a gas supply and transport position that was sufficient to operate at that output across each and every one of those intervals for the day, not merely for part of the day. In Mr O’Farrell’s opinion, the submission of an energy constraint for the trading day equal to a maximum output of 320 MW multiplied by four hours would not solve the problem. Mr Sanders addressed Mr O’Farrell’s two reasons for expressing that opinion.

254 Mr O’Farrell said the following:

Even if PPPL had submitted a PASA of 320 MW or more for every trading interval in a trading day, and simultaneously submitted an energy constraint for that trading day equal to a maximum output of 320 MW multiplied by 4 hours … I do not consider that it could have submitted an energy constraint to accurately reflect its generating capacity for that trading day in any event. … The use of an energy constraint would have had the effect of putting a limit on the amount of power that the power station could generate for the day, with that limit set by reference to the maximum output (320 MW) multiplied by the number of hours for which that output could be achieved (4 hours). Once that total amount of energy (1,280 MW) had been generated, the AEMO dispatch system would automatically prevent the Pelican Point Power Station from dispatching power to the grid, notwithstanding that it might be physically capable of generating for a further period of time at 240 MW (or some other, lower, amount).

255 Mr Sanders interpreted the example put forward by Mr O’Farrell as involving a hypothetical scenario in which PPPL had submitted a “projected daily energy availability” amount of 1,280 MWh in its ST PASA submission for a particular trading day. The conclusion that Mr O’Farrell has expressed is wrong for two reasons. First, the projected daily energy availability amount (if any) that a Scheduled Generator submits in its ST PASA submissions under cl 3.7.3(e)(4) is used by AEMO for the purpose of forecasting capacity reserves over the ST PASA forecast period. It is not used by AEMO either in calculating pre-dispatch schedules for, or in dispatching generation from the Pelican Point PS in real-time during that trading day. Secondly, even if PPPL had notified AEMO of a Daily Energy Availability of 1,280 MWh under cl 3.8.4 rather than in its ST PASA submissions, that quantity would only have been used by AEMO as a modelling constraint in preparing its pre-dispatch schedules for that trading day. If the Pelican Point PS had already dispatched to supply 1,280 MWh during that trading day, the AEMO dispatch system would not automatically prevent the Pelican Point PS from being dispatched to continue to supply power during the remaining trading intervals in that trading day if PPPL had submitted dispatch offers for the Pelican Point PS to supply power during those remaining trading intervals.

256 The second matter referred to by Mr O’Farrell was as follows:

In my opinion, if PPPL could have generated at 320 MW/hr for 4 hours and 240 MW/hr for the rest of the day (20 hours), it could not have made a PASA submission in which it nominated PASA availability of 320 MW in every trading interval with an energy constraint reflecting the total energy that it would generate for the day if it generated at 320 MW/hr for 4 hours and 240 MW/hr for 20 hours. I am aware from my roles with AEMO and Origin that, in about 2017, energy constraints were entered into the AEMO system as a total daily output cap (in MW). The total output for this generating scenario is calculated as follows (320 MW x 4 hrs) + (240 MW x 20 hours) = 6080 MW. If 320 MW was nominated for every trading interval in PPPL’s PASA submission with a daily energy constraint of 6080 MW, the AEMO dispatch engine would interpret that as meaning that PPPL could generate at 320 MW/hr for 19 hours (6080 MW/320 MW = 19), which was not possible with the available gas supply and transport at the time, particularly having regard to the M12HQ constraint under the SEAGas PCA contract. That is, the AEMO dispatch system would have assumed that the power station would have generated at its nominated PASA availability (320 MW) until it reached its daily energy constraint (6080 MW). After PPPL generated 6080 MW, the AEMO system would have prevented it feeding power into the grid.

257 Mr Sanders said that there are a number of errors in this analysis. First, the “PASA availability” that a Scheduled Generator submits in ST PASA is not taken into account at all either by AEMO’s pre-dispatch or dispatch algorithms. AEMO uses that information to forecast capacity reserves in each region over the ST PASA forecast period. Secondly, AEMO’s dispatch algorithm also does not take account of either the “projected daily energy availability” submitted in ST PASA, or the Daily Energy Availability submitted under cl 3.8.4, in co‑ordinating dispatch outcomes or in giving dispatch instructions to the Pelican Point PS.

258 Mr Sanders expressed the view that it followed that each of Mr O’Farrell’s assertions regarding the AEMO dispatch engine were incorrect, particularly insofar as it is understood as referring to real-time dispatch.

259 Mr Sanders was briefly cross-examined. He did give evidence about one matter which may go to the number of contraventions if liability is established. He gave evidence that AEMO’s system was such that where there was a change to PASA, for example, by reason of temperature, it was necessary to fill in all the fields when submitting an updated ST PASA. I note that matter, but otherwise there is nothing to throw any doubt on the evidence-in-chief of Mr Sanders which I accept. A related point raised by PPPL was that the AER had submitted that the 320 MW maximum generating capacity should have been indicated over the whole 24 hour period when, in fact, under the 8 February counterfactual it is the maximum generating capacity for only four hours. The answer to PPPL’s point is that the issue is not what will be made available, but what can be made available on 24 hours’ notice. In the alternative, the issue can be dealt with under the item, projected daily energy availability for energy constrained scheduled generating units.

### Mr Snow

260 Mr Snow prepared two reports which were tendered in evidence and he attended a conference of experts with Mr O’Farrell. The conference led to the preparation of a joint experts’ report which set out at least some of the key differences between the experts. The experts addressed a number of agreed questions. In addition, there were some questions proposed by one party, but not agreed to by the other.

261 The background to Mr Snow’s first report is that he was sent two letters of instructions by the AER, one on 20 May 2020 and the other on 12 November 2020, and he addresses the questions raised in those letters in his report.

262 In the first letter of instructions, Mr Snow was asked to identify the actual quantity of gas that PPPL obtained for use at the Pelican Point PS on 8 February 2017 and the source for that gas and the means by which that gas was transported to the Pelican Point PS. Mr Snow states that PPPL took delivery and used 57.495TJ of gas on 8 February 2017 of which 40TJ was firm gas (35TJ approximately from BHP Billiton Petroleum (Victoria) Pty Ltd (BHP) and 5TJ from Origin Energy Retail Limited (Origin Energy)) and the balance was non-firm (7TJ from Santos Direct Pty Ltd (Santos) under a separate swap agreement from the Otway Gas Plant) and linepack (9.897TJ from the Moomba to Adelaide pipeline (MAPS) PPPL linepack account). A swap agreement between two parties involves two transactions for the same amount of gas where each party is both a buyer and seller and each party gains the advantage of relocating the source or delivery point of the gas. Linepack is a well understood term in the gas industry in relation to being able to effectively store gas within the transmission gas pipelines. Gas can be compressed in a gas transmission pipeline to very high pressures and this increases the volume of gas on the pipeline. An imbalance arises if more gas is withdrawn than injected and this impacts gas flow in the pipeline and withdrawals. Pipelines which use close to their maximum throughput levels have very little linepack, whereas those that are under-utilised often have significant linepack available. Mr Snow described linepack as a term describing a level of workable gas storage. It has a commercial value and is sold as a gas storage product. I accept that evidence.

263 A total of 38.876TJ was used at the Pelican Point PS and the balance was used at the Mintaro Power Station (8.329TJ), the Dry Creek Power Station (9.871TJ) and in SUG (PPPL) (0.419TJ). Mr Snow was also asked to address, assuming 24 hours’ notice, what quantity of additional gas PPPL could have obtained on 8 February 2017 based on existing firm gas supply and transportation rights. Mr Snow said that PPPL had no additional gas available to it in terms of quantities of other firm gas supply.

264 In the second letter of instructions, Mr Snow was asked what non-firm source of gas and gas transport were available to PPPL for use at the Pelican Point PS on 8 February 2017. He was then asked to express an opinion on the question of, assuming 24 hours’ notice, how much additional gas could PPPL have reasonably expected that it would practically be able to obtain on 8 February 2017 for use at the Pelican Point PS, in addition to the firm sources he identified in answer to one of the questions in the first letter of instructions (question 3). The answer Mr Snow gives in numerical terms is 55.5TJ from four sources which he identifies. He then asks himself what gas transport would have been available for “additional non-firm gas reasonably expected to be available”. Mr Snow concludes that the Port Campbell to Adelaide (PCA) pipeline would have been required to transport 22.902TJ more gas than was actually transported on PPPL’s account on 8 February 2017 and that PPPL could have reasonably expected that this capacity was available.

265 The next question Mr Snow was asked to address was whether PPPL should have reasonably expected throughout the entire period from 11 November 2016 to 8 February 2017 that it would practically be able to obtain, on 24 hours’ notice, for 8 February 2017 the gas supply and gas transportation he had identified in his answers to previous questions. He expressed an affirmative answer to that question saying that “all relevant agreements for supply and transport were in place for that period”.

266 The final question Mr Snow was asked to address sought to link the previous opinions Mr Snow had expressed to the running of GT12 concurrently with GT11. The question was whether, having regard to his previous opinion about PPPL’s reasonable expectation of gas supply and gas transport for 8 February 2017 for the period from 11 November 2016 to 8 February 2017, PPPL should have reasonably expected that it would practically be able to obtain sufficient gas supply and gas transport on 24 hours’ notice in order to operate GT12 concurrently with GT11 on 8 February 2017 for at least GT12’s minimum run-time. Mr Snow was asked to assume for the purposes of answering this question a minimum run-time of four hours, a net (sent-out) Heat Rate of 8.31GJ/MWh and that the combined output of GT11 and GT12 would be 320 MW. Mr Snow’s answer to this question was clearly yes. Mr Snow also identified another operating scenario and answered yes to the question as applied to that scenario. That scenario involved GT11 operating as it in fact did on 8 February 2017 and GT12 operating on 8 February 2017 as it in fact did on 9 February 2017 (i.e., from 4.30 pm for approximately four hours). Mr Snow said that that scenario would have required additional gas of 3.23TJ which PPPL could have taken from the amount it in fact supplied to the Mintaro Power Station leaving that power station to take more linepack from the Moomba to Adelaide Pipeline System (MAPS). Furthermore, gas transport would have been available.

267 Mr Snow’s second report followed the provision of Mr Weatherly’s second affidavit and Mr O’Farrell’s second report and was largely responsive to the statements and opinions in those documents.

268 Mr Snow was first asked whether Mr Weatherly’s evidence in his second affidavit as to the following matters: (1) quantities of gas in fact supplied by PPPL to Synergen Power and Simply Energy on 8 February 2017; and (2) how PPPL obtained sufficient gas transport to operate a second gas turbine on 9 February 2017, caused him to alter any of the views he had previously expressed in his reports or evidence. Mr Snow said that Mr Weatherly’s evidence did not lead him to alter his conclusions, although it “marginally” changed some of his analysis. The matters Mr Snow addressed were as follows: (1) an additional source of non-firm gas supply through Santos/Simply Energy Gas Supply Agreement at Minerva East; (2) an assumption that he had previously made about a source of gas from Minerva was incorrect; (3) he revised his figure for PPPL’s reasonable expectation of non-firm gas to 45.3TJ; (4) he noted that PPPL had not in fact interrupted Santos Interruptible Firm Haulage Capacity on the PCA pipeline on 8 February 2017; and (5) he noted that PPPL was using the over-nomination of scheduled gas flows on the PCA pipeline to manage Maximum 12 Hourly Quantity constraints, which also meant that there was no correlation between PPPL’s actual flows and scheduled capacity on the PCA pipeline, nor any basis for the requirement asserted by Mr O’Farrell to have smoothed hourly flow rates leading to high levels of excess gas if GT12 was run for four hours.

269 Mr Snow was next asked to address whether Mr O’Farrell’s second report caused him to change any views he had previously expressed in his reports or evidence. Mr O’Farrell was asked to address in his second report whether any MT or ST PASA submissions for 8 February 2017 which were less than 320 MW were not a “reasonable estimate” in the sense of an estimate which was rational and based on proper grounds and not arbitrary or capricious and in the sense of an estimate which involves gas “Pelican Point reasonably expects it would practically be able to procure on 24 hours’ notice, if required to do so – including gas from non-firm gas supply and gas transportation rights”. Mr Snow said that he was not an expert on the MT or ST PASA matters and has only considered Mr O’Farrell’s second report in terms of the gas supply and haulage comments. Mr Snow said that nothing in Mr O’Farrell’s second report caused him to change his opinions.

270 This is a summary of Mr Snow’s reports. As I have said, I will need to come back to certain details of his evidence (and the opinions he expresses in the joint experts’ report) when I consider the specific topics of gas supply and gas transport. I do note at this point that most of Mr Snow’s figures were not challenged by Mr O’Farrell. PPPL’s challenge to Mr Snow’s evidence was to his approach to the questions and the adequacy of the material he relied on for his opinions.

271 Some key matters raised in the cross-examination of Mr Snow should be identified now.

272 PPPL submitted that Mr Snow’s opinions were based on historical evidence and hindsight reasoning. The question was what an entity could reasonably expect as to future matters, that is, circumstances on a future date and not what could have been reasonably expected having regard to information relating to events after it was necessary for the forecast or estimate to be formed.

273 In support of this submission, PPPL relied on a number of answers Mr Snow gave in cross-examination.

274 First, Mr Snow agreed in cross-examination that he did not put himself in the shoes of the hypothetical, competent, reasonable, diligent generator in November 2016 looking forward to 8 February 2017. It is true that Mr Snow did agree with this proposition, although it is not clear whether he agreed he had not done what was suggested because he had not done all the elements in the proposition or only one of them.

275 Secondly, in the context of questions about the availability of interruptible transport, Mr Snow was asked on which day it became apparent to him from his review of the “source” business records that there would be available on 8 February 2017 some interruptible transport that PPPL might have been able to avail itself of. He said in response to that question that he did not think that he undertook that form of analysis. He had looked at what had been available and he had carried out an “ex post” review. He said that he did not “look at it as a forward look”.

276 Relatedly, Mr Snow was cross-examined about whether one of the Foundation Shippers with a right to interrupt the interruptible service had exercised that right. He said that he did not analyse that and his evidence continued as follows:

… I only took the data ex post to see what was available - - -

Yes? --- - - - and to look at the build-up by – the forecast, really, of the PCA itself - - -

Thank you? --- - - - as to what was available ….. that’s all I did.

Thank you. So you didn’t look at it from, say, November 2016, did you?---We went back to January 2017.

Yes?---There was various reasons for that.

Yes?---I didn’t go back to November 2016 - - -

Thank you?--- - - -to have a look at ….. PCA.

277 Thirdly, in the context of his opinion as to a reasonable expectation on the part of PPPL of an additional 45.3TJ of non-firm gas supply on 8 February 2017, Mr Snow expressed the view that he had regard to what in fact occurred on 8 February 2017, adopting the “look back” process he had described. He then said that insofar as his work was undertaken as at 2 February 2017, he did not form a view in the second report as to whether or not there would be 45.3TJ of non-firm gas available to PPPL.

278 Fourthly, in the joint experts’ report and in the context of a question as to the significance of events on 9 February 2017 to his opinion as to the reasonable expectation of gas transport on 24 hours’ notice on 8 February 2017, Mr Snow said that the events on 9 February 2017 were fundamental to his opinion and “that they must have had a reasonable expectation that they could do this”.

279 PPPL also submitted that Mr Snow was given limited instructions and that this is relevant to the weight that can be placed on his opinions. Mr Snow said that he did not receive any instructions from the AER about timelines for the provision of information to AEMO under the NER. He was given no instructions as to the time of the provision of MT PASA or ST PASA and he did not recall the 320 MW basic scenario being referred to as the “benchmark” scenario. He was given no instructions about the weather or the circumstance that GT12 had been run on 7 February 2017 such that it was possible to run it for four, not eight hours on 8 February 2017. He had no instructions as to which other shippers on the PCA pipeline were not using the pipeline and he was given no instructions about the Torrens Island A generator failing for mechanical reasons. Nor was he given any instructions about the operation of Quarantine 4 on 8 February 2017. He was given no instructions, nor did he make any assumptions, about the capacity that Origin Energy and AGL were proposing to use on the PCA pipeline and at what times.

280 In response to this challenge to Mr Snow’s approach, the AER referred to the question 3 in the second letter of instructions and Mr Snow’s response as follows:

3. Should PPPL have reasonably expected throughout the entire period from 11 November 2016 to 8 February 2017, that it would practically be able to obtain on 24 hours’ notice for 8 February 2017:

a. the gas supply and transportation referred to in your answer to question 3 from the First Letter of instruction; and

b. the gas supply and transportation referred to in your answer to 2 above?

Answer:

I consider that the answer to both of these sub-questions is yes as all relevant agreements for supply and transport were in place for that period.

281 The AER submitted that it was not put to Mr Snow that he had not addressed the questions he was asked and it was not put to him that because his analysis of non-firm gas supplies related to dates after 11 November 2016, the analysis could not be probative as to what PPPL’s expectations should have been throughout the entire period from 11 November 2016 to 8 February 2017 when all of the PASA submissions had been made. That is correct and those matters were not put to him.

282 The AER acknowledged that Mr Snow gave the following evidence:

I think in your report you say that the contractual arrangements that you’ve observed were in place as at 11 November 2016?---Except for – I think the BHP contract rolled over in that period after that, but there was no major change I can see to that contract, yes.

Of course, you accept, don’t you, that under those contracts what may or may not have been the position on a particular day turned on what steps had been taken to exercise rights under them, by that I mean a concept known as nominations?---Correct, yes.

And for the purposes of expressing your opinions, I don’t think you did a detailed analysis of just what nominations, if any, had been made on 11 November 2016?---November 2016?

Yes?---No, we didn’t look at 11 November 2016 specifically, no.

No. And putting yourself in the – did you put yourself in the shoes of the hypothetical competent, reasonable, diligent generator in November 2016 looking forward to 8 February 2017?---No.

283 However, the AER submitted that it was not put to Mr Snow that he had not drawn any conclusions as to what PPPL’s reasonable expectations were from 11 November 2016 on a forward looking basis. The AER submitted that if such a case was to be made, then it needed to be put to Mr Snow. In particular, it was not put to Mr Snow that insofar as his analysis was based on PPPL’s historical ability to obtain gas, that was unlikely to be relevant to its future ability to obtain gas. It was not put to Mr Snow that PPPL’s historical ability to obtain gas was unusual or dependent on circumstances that could not be predicted on a forward looking basis. All of these matters are correct.

284 I do not consider that Mr Snow’s approach means that his evidence is of no or little weight. It is one approach. It is a matter of judgment as to what level and when historical information can form the basis of an opinion as to what reasonable estimate should have been made and, of course, one must be alive to any special circumstances which have influenced past events or which may influence future events. As to the “lack of instructions”, where that is relevant I will deal with it.

285 As I have said, much of Mr Snow’s data was not challenged by PPPL. Mr O’Farrell acknowledged in cross-examination that Mr Snow was excellent “when it comes to historical fact”. Mr Snow’s report indicates that PPPL had the ability to obtain non-firm gas supply and gas transport on a regular basis throughout January and February 2017. As counsel for the AER pointed out, Mr Snow’s data on non-firm gas supply which PPPL obtained from Santos and BHP from 15 January 2017 (Figures 1 and 2 of his first report) was not challenged and PPPL’s MAPS linepack balance trends and PCA linepack use by PPPL (Figures 3 and 4) were not challenged. The data as to how frequently and by how much PPPL was able to output more electricity than it did on 8 February 2017 (Table 6) was not challenged and the spare capacity on the PCA pipeline (Figure 5 of his first report and Figure 5 of his second report) was not challenged.

286 The AER submitted that, in the circumstances, the Court should infer that in advance of 8 February 2017 and “certainly in the six day trading window before 8 February, when the short term PASA submissions had to be made”, PPPL would have known that it could have obtained substantial quantities of non-firm gas and supply on 8 February 2017. In his second report in section 2.1.4, Mr Snow revised his figures having regard to IA-011, but his revision was conservative in view of the fact that PPPL was able to take 7TJ on 9 February 2017.

287 Counsel for PPPL agreed that there had been no challenge to the data assembled by Mr Snow. He submitted, referring to Figure 1 and Figure 2 in Mr Snow’s first report dealing with the Santos swaps and BHP deliveries, that the data did not make good Mr Snow’s propositions. Mr Snow agreed that he did not consider things from 11 November 2016. Save and except for MAPS, Mr Snow addressed the matter from 15 January 2017. That can be seen from his Figure 1. PPPL prepared and handed up a schedule summarising non-firm supply by BHP and Santos. The short point that PPPL made was that one cannot just add up the 15TJ and the 7TJ or thereabouts as Mr Snow does from the Santos swaps and the BHP excess and come up with the 23TJ that he opines because the charts do not make good that proposition. With respect to MAPS linepack (Figure 3), PPPL submitted that the data did not support the assertion that there was consistently 40 to 48TJ of linepack gas on the MAPS. There was significantly less than 47TJ and, in fact, less than 30TJ on 3 February 2017.

288 PPPL also referred to Mr Snow’s evidence as set out in the joint experts’ report to the effect that determining how much non-firm gas supply and transport PPPL had available to it to supply the Pelican Point PS on 8 February 2017 on 24 hours’ notice was “too speculative to answer categorically”. In addition, Mr Snow noted that PPPL went out and looked for gas and they found it. This is non-firm gas supply. He said that it was reasonable to not make firm commitments on additional generation until supply of non-firm gas that may be required is confirmed. The question is a different one when non-firm is turned into firm. Mr O’Farrell agreed. PPPL made much of the fact that this was the AER’s own expert and the “fundamental problem” for the AER’s case is that those events occurred well inside the 24 hour window required by the PASA regime.

289 Mr Snow drew a number of conclusions from the evidence in Mr Weatherly’s second affidavit. He said that it confirmed to him what he described as the tight knit communication arrangements between participants on the PCA pipeline for gas supply in terms of sourcing gas and haulage arrangements through the direct relationships between traders. He said he was not surprised by this as he would have expected to see informal access to discuss supply issues between professional gas originators and traders before moving to confirm trades and arrangements more formally. The best example was the conversation between Mr Weatherly and his counterpart at Santos referred to below (at [435]). Mr Snow expressed the opinion that the level of access he identified was certainly not available outside the operational group of gas originators and traders using the PCA pipeline and reflected the nature of the working relationships of those participants in terms of managing their gas needs as co-operatively as possible given contractual constraints.

290 The findings which the AER seeks are as follows. Having regard to Mr Snow’s evidence, PPPL could reasonably expect to have 40TJ of firm gas and an additional 45.3TJ of non-firm gas. If one subtracts the 25TJ that PPPL could extract from the MAPS linepack, then the result is a reasonable expectation of 20TJ of non-firm gas comprised of gas obtained from BHP Santos swaps and sales of gas by Santos to Simply Energy which gas is then on-sold to PPPL. The AER submitted that the effect of this evidence is that it is common ground that PPPL’s business operations depended on being able to obtain access to firm and non-firm gas sources. There may be disputes “at the margins”, but the evidence is clear that it is or was, at least, likely that some non-firm gas could be obtained from all of those sources on any given day.

## PPPL’s witnesses

291 Messrs Foulds, Baksi and Weatherly are or were employed by ENGIE at the relevant time and Mr O’Farrell was PPPL’s expert. The evidence of Messrs Foulds, Baksi and Weatherly related to the major aspects of PPPL’s case, namely, the availability of gas supply, the availability of gas transport, the condition of GT12 and what reasonable expectations were held as to the availability of gas supply and of gas transport and, in the case of Messrs Foulds and Weatherly, they also sought to explain certain matters relied on by the AER.

### Mr Foulds

292 Mr Foulds has worked in the energy sector in Australia and the United Kingdom for more than 25 years. He commenced working in the energy sector in 1994 after graduating from the University of Manchester with a Bachelor of Arts with Honours.

293 In 2002, Mr Foulds began working for International Power (formerly trading as GDF Suez and now trading as ENGIE) in the United Kingdom as an Energy Trader. He described his responsibilities in this role as follows: (1) trading in the short term over-the-counter (OTC) and power exchange markets to deliver optimum contract positions across the power and gas markets; (2) self-dispatch of the group’s assets, comprising 1,500 MW of coal and CCGTs; and (3) nomination of upstream gas contracts, OTC and gas transport arrangements. Prior to this role, Mr Foulds worked in different organisations in various positions, including in the positions of Tenders Manager, Commercial Manager and Electricity Trader.

294 In 2004, Mr Foulds became the Manager of Trading Operations at International Power in Melbourne after he had emigrated to Australia. From this point in time until August 2018, save and except for 2011 and 2012, Mr Foulds was involved in the commercial operation and trading activities of PPPL. He held the position of Manager, Trading Operations until 2011 and he described his responsibilities as follows: (1) managing spot market and short-term activities of International Power’s electricity and gas portfolio consisting of 3,700 MW and 40PJ/year; (2) commercial optimisation across both electricity and gas spot markets in wholesale and retail environments; and (3) developing operating plans that aligned with Portfolio Management and Risk objectives requiring him to take into account the contract portfolio at the time, variable market conditions, participant behaviour, cross commodity synergies and the potential longer-term impact of short-term behaviour.

295 From 2011 to 2012, Mr Foulds was employed as the Spot Energy Market Manager at Alinta Energy in Sydney. He described his key responsibilities in this role as including liaison with both power stations in the Alinta portfolio and market operator in line with the NER to ensure the co-ordinated dispatch of the businesses’ power stations. His responsibilities included managing the associated gas nominations and co-ordination with upstream gas counterparties.

296 From 2012 until January 2016, Mr Foulds was the Origination Manager and Trading Manager at ENGIE in Melbourne and he was responsible for managing and securing ENGIE’s longer term portfolio position, to leverage and add value across all ENGIE’s commodities, including power, gas and renewables with a view to delivering optimum long-term value in both structured and derivative transactions. In this particular role, Mr Foulds said that he had a substantial involvement in the decision to mothball half of the generation capacity of the Pelican Point PS, including the consideration of how that decision would impact on ENGIE’s portfolio.

297 From January 2016 until August 2018, Mr Foulds was Head of Trading and Portfolio Management at ENGIE, Melbourne. He reported to the Chief Executive Officer and he was the head of ENGIE’s wholesale trading function and had responsibility for overseeing the activities of the derivative and structured transactions, market operations, analytics and retail pricing functions. He had responsibility for the commercial and trading activities of the companies’ wholesale power and gas portfolio, including the Pelican Point PS. He had direct involvement in the events that unfolded in the South Australian region in the summer of 2016/2017. Although he was based in Melbourne, he visited the South Australian assets regularly.

298 Mr Foulds gave a very good description of the Pelican Point PS and how it operates. It is located at Outer Harbour which is approximately 20 kilometres north of the Adelaide CBD. PPPL operates, and only operates, the Pelican Point PS. International Power (Australia) Pty Ltd owns PPPL. It formerly traded as GDF Suez and now trades as ENGIE. The Pelican Point PS requires about 20 and 40 employees to operate, depending on seasonal operational requirements. The functions those employees perform are trading, control room and engineering duties at Pelican Point PS, including on a 24 hour basis.

299 The Pelican Point PS is a combined cycle gas turbine power station comprising two Alstom GT13E2 gas turbines and a steam turbine. The gas turbines generate electricity by burning gas and the steam waste from that process provides the power for the steam turbine. The Pelican Point PS is a “mid-merit” power station and this means that it is operated seasonally to meet higher energy demands, that is, demands that cannot be satisfied by base load (permanent) generation and arise, for example, over the summer months in South Australia. A mid-merit unit is a “load-following” unit that adjusts output as demand fluctuates during a typical day. Mr Foulds said that the Pelican Point PS’s gas turbines are designed to be run in a flexible manner for medium, that is, from about eight hours to several days, to long, that is, for up to several weeks, periods of time at varying levels of output. In operating the gas turbines in this manner, it is necessary to turn them off and restart them at periodic intervals and this pattern of operation results in significant annual operation and maintenance costs. The gas turbines are fuelled by gas that is predominantly secured under long-term “take or pay” gas supply and gas transport contracts of at least multiple years in duration. The long-term contracts are entered into to secure gas supply and transport at rates that make it possible for the Pelican Point PS to operate commercially and cover its operation and maintenance costs. The long-term contracts represent significant fixed costs for the operation of the Pelican Point PS.

300 Mr Foulds described the difference between a mid-merit power station on the one hand, and “base load” power stations and “peaking” power stations on the other. The Northern Power Station was closed in 2016. Before that, it was a base load power station. Typically, such power stations have low marginal costs and are run on a permanent basis. Generally, the fuel for the power station is coal and a large number of staff are required to operate the power station. Peaking power stations generally feature open cycle gas turbines which are able to be synchronised quickly in order to generate electricity. Mr Foulds said that start-up times in the case of such turbines of 10 minutes are common. Peaking power stations are run over limited, short term periods during any given year in order to meet residual demand, often when the base load and mid-merit power stations are already running at full available capacity. Generally, the fuel used in peaking power stations is gas. Synergen Power is a subsidiary of ENGIE. It operates peaking power stations at Dry Creek, Mintaro and Snuggery Point and a diesel fuelled peaking power station at Port Lincoln.

301 Mr Foulds then addressed the market conditions in or around 2012 and 2013 and the decision by PPPL to mothball generating capacity at the Pelican Point PS. I have referred above to Mr Foulds’ position and responsibilities in 2012 and 2013. Electricity prices in South Australia in the 12 months or so prior to 2013 were volatile in the sense that they moved “from highly negative to highly positive and featuring low spot prices”. There was a high degree of uncertainty about future electricity prices and Mr Foulds described the factors contributing to this uncertainty. I need not set out these factors. In the course of 2013, GDF Suez undertook a review of the commercial position of PPPL in the South Australian electricity region and of its other major South Australian generation asset, being Synergen Power. The review was given the name “Project Phoenix”. Mr Foulds was one of the two project managers and he was heavily involved in the project. He prepared and delivered presentations about the project to various project groups. Mr Foulds and others involved in the project formed the view that it was not commercial to operate both of the gas turbines at the Pelican Points PS. Heavy financial losses were forecast and, in those circumstances, Mr Foulds recommended that the Pelican Point PS operate with only one gas turbine and “mothball” half of its generation capacity.

302 Mr Foulds described aspects of the decision-making process in Project Phoenix. The ultimate decision was that the Pelican Point PS would mothball 240 MW of its 480 MW of generation capacity and continue to operate a single gas turbine with the steam turbine because this was the most economically viable option. The review included forecasts which involved the on-sale of gas transportation rights on the PCA pipeline and the deferral of certain material operational and maintenance costs.

303 Gas transportation rights and gas supply rights represented high fixed costs for PPPL. They were fixed costs because the agreements were made on a “take or pay” basis, meaning that PPPL was required to pay for the rights regardless of whether, and the extent to which, it exercised those rights. The market for the on-sale of gas transportation rights is smaller than the market for the on-sale of gas supply rights because gas transportation rights are specific to a particular pipeline.

304 With respect to operational and maintenance costs, Mr Foulds said that as at November 2013, GT11 was in good condition and was planned to require a C-inspection in 2017, whereas GT12 was in poor condition, including because it had a cracked turbine blade which had just been identified, had exceeded the recommended C-inspection “Equivalent Operating Hours” (EOH) and was scheduled to require a C-inspection in 2014. These concepts are described in my examination of Mr Baksi’s evidence. In the modelling which was performed as part of the review, GT11 was identified as the lead gas turbine for the purpose of generation. This approach as to the use of GT11 would defer the significant capital costs associated with the C‑inspection of GT12.

305 The decision to mothball half of the generation capacity of the Pelican Point PS was taken and it was put into effect on 1 April 2015.

306 I refer to [61] above. Mr Foulds provided further details of the advice and information PPPL gave to AEMO about its decision. He met with Mr Spurio at AEMO in June 2014. Mr Spurio was Acting Chief Operating Officer of AEMO. Mr Steven Orr, who was the Head of Regulatory at GDF Suez at the time, was also present. Mr Foulds explained to Mr Spurio that conditions impacting the wholesale energy market were such that PPPL had been losing money for a number of years and that that was forecast to continue. He said that there were a number of options available to PPPL to seek to reduce those losses and one of those options was mothballing half of the generation capacity of the Pelican Point PS. GDF Suez had approved a recommendation to mothball half of the generation capacity and this would take effect from 1 April 2015. From 1 April 2015, PPPL would only have firm gas supply and transport arrangements to operate one of its gas turbines and for it to generate only 240 MW of its registered capacity of 480 MW. Mr Foulds advised Mr Spurio that PPPL would update its MT PASA submission from a maximum of 480 MW to a maximum of 240 MW to reflect that decision. Mr Spurio told Mr Foulds and Mr Orr that he was grateful for the advice. He did not indicate that he had any concern with PPPL’s decision or any issue which related to how PPPL would respond to a direction if AEMO directed it to run a second gas turbine.

307 Following the meeting, on 27 June 2014 Mr Foulds instructed either Mr Stephen Frimston, who was the Trading Operations Manager at PPPL, or the duty trader on shift at that time to update PPPL’s MT PASA to reflect the decision to mothball half of the generation capacity of the Pelican Point PS which would take effect on 1 April 2015. Later on 27 June 2014, Mr Foulds sent Mr Spurio an email as a follow up to their meeting. He did not receive a response to his email and nor does he recall any representative of AEMO querying PPPL’s PASA submissions at any time between that day and 8 February 2017.

308 Mr Foulds gave evidence of his understanding of PASA submissions and advice as to generation capacity. Mr Foulds’ knowledge and understanding of the clauses in the NER which deal with PASA submissions was that it was important to AEMO that PPPL provide accurate information in relation to the generation capacity that it intended to make available and that it did not overstate that generation capacity as this would mislead AEMO into thinking that there would be a greater volume of physical plant capability available on the relevant day than PPPL could make available and could have a direct impact on AEMO’s ability to maintain system security, for example, if it issued a direction in relation to generation capacity which PPPL had declared available in its PASA submissions. As I have said, Mr Foulds directed either Mr Frimston or the duty trader to update PPPL’s MT PASA submission from 1 April 2015 onward to reflect the ability of the Pelican Point PS to make available a maximum of 240 MW of electricity based primarily on the firm gas supply and transport contracts that would be in place at that time that reflected PPPL’s commercial decision to mothball.

309 In the period leading up to the mothballing of generation capacity, PPPL had in place a number of contracts for the supply of gas and for the supply of gas transport. I turn to those arrangements and how, between 25 June 2014 and 15 April 2015, they were affected by PPPL’s decision to mothball half of its generation capacity.

310 Mr Foulds said that in normal operations, it is unusual for a gas turbine to be operating at its maximum generation for a full day. In normal operations, and even when demand is relatively high, each gas turbine required approximately 35 to 45TJ/d of gas supply and transport in order to generate 240 MW from one gas turbine and the steam turbine throughout most of the day. Mr Foulds said that this came about because of the non-linear nature of South Australia’s energy demands and energy supply and that there were and are substantial periods of the day when South Australia’s energy demands are such that it is not commercial or necessary for the Pelican Point PS to operate. He said that this is consistent with the Pelican Point PS being a mid-merit power station. Mr Foulds noted correctly that even on 8 February 2017, PPPL did not operate at full load for the entire day.

311 The measures which PPPL undertook to implement the decision to mothball half of the generation capacity of the Pelican Point PS insofar as they relate to gas transport and gas supply are important.

312 With respect to gas transport, Mr Foulds said, and I accept at a general level, that in 2014 the market to on-sell gas transport rights was small and non-liquid. PPPL had two gas transportation agreements in place.

313 The first was a gas transportation agreement between South East Australia Gas Pty Ltd (SEAGas) and PPPL for the transportation of gas on the pipeline from Port Campbell to Adelaide (PCA pipeline) for the period from April 2003 to December 2018 (PCA Contract). The amount involved was approximately 88TJ/d. PPPL was one of three Foundation Shippers on the PCA pipeline and the volume was fixed and non-seasonal.

314 PPPL also had a gas transportation agreement with Epic Energy South Australia Pty Ltd (Epic) for the transportation of gas on the Moomba-Adelaide Pipeline System (MAPS) for the period from March 2007 to December 2019 (MAPS Contract). Mr Foulds asserted that, although PPPL held the rights under the MAPS Contract, those rights had been largely on-sold on an arm’s length basis by PPPL to companies within the ENGIE group, including Synergen Power and, at other times, Simply Energy. Mr Foulds said that as a result, whilst at various times PPPL may have had transport rights available to it under the MAPS Contract, the predominant source of gas to operate the Pelican Point PS was transported on the PCA pipeline.

315 The decision to mothball half the generation capacity of the Pelican Point PS suggested that some of the transport rights held by PPPL should be on-sold to avoid ongoing costs. On the other hand, Mr Foulds said that should a time come when PPPL could have operated both gas turbines commercially, then PPPL may have difficulty buying back or buying additional transport rights. The matter was considered in detail within GDF Suez and PPPL entered into two agreements in relation to the transportation rights that it held with respect to the PCA pipeline.

316 The first agreement was a Gas Haulage Capacity Sale Agreement between PPPL on the one hand, and Santos Direct Pty Ltd and Santos Limited on the other (collectively Santos). The agreement was executed on 2 June 2014 and applied during the period from 1 April 2015 to 1 January 2019. Under the agreement, PPPL agreed to provide Santos with at least 20TJ/d of firm transport rights in the summer months (October–April) and at least 50TJ/d of firm transport rights in the winter months (May–September). PPPL also agreed to provide Santos interruptible firm haulage capacity of 30TJ/d. I will refer to this agreement as the Santos GHCSA.

317 The second agreement was a SEAGas PCA – MDQ Trading Agreement between PPPL and Origin Energy Retail Limited (Origin Energy) executed on 30 November 2015 and relating to the period from 1 January 2016 to 1 January 2019 and under which PPPL agreed to provide Origin Energy with 30TJ/d of firm transport rights from 1 April 2016 onwards. I will refer to this as the Origin Energy MDQ Trading Agreement.

318 In the circumstances, assuming a starting quantity of 88TJ/d on the PCA pipeline, PPPL was left with gas transportation rights in summer of up to 38TJ/d of firm transport on the PCA pipeline.

319 Mr Foulds said that, in addition, in relation to its gas transportation rights on the MAPS, PPPL entered into further arm’s length agreements with Synergen Power and Simply Energy so that it held either little or no gas transportation rights on the MAPS. I will come back to these agreements.

320 Mr Foulds said, and I accept at a general level, that with respect to the supply of gas, there is a more liquid market for the trading of gas supply.

321 In 2014, PPPL’s gas supply agreements were with BHP under a long term gas supply agreement running through to about October 2016. This gas supply agreement related to the supply of gas from BHP’s Minerva gas field. Mr Foulds described the background and early relationship between PPPL and BHP. He said that after the decision to mothball half of the generation capacity of the Pelican Point PS and with respect to the period from October 2016 onwards when the underlying gas supply agreement with BHP expired, PPPL executed in stages two agreements with BHP. These agreements are described in detail by Mr Weatherly (at [391]). I will refer to these agreements as the BHP Gas Supply Agreements.

322 There is a second gas supply agreement which is relevant. It is an agreement between PPPL and Origin Energy for the supply by Origin Energy of 5TJ/d of gas for the period from 1 January 2017 to 31 December 2017. Further details of this agreement, which I will refer to as the Origin Energy Gas Supply Agreement, are set out in the evidence of Mr Weatherly (at [392]).

323 The respective agreements with BHP and Origin Energy meant that in relation to the summer of 2016/2017, PPPL had available to it 35TJ/d of gas supply prior to 1 January 2017 and 40TJ/d of gas supply from 1 January 2017 onwards. Mr Foulds’ understanding was that this volume was subject to certain on-selling arrangements that provided rights to Synergen Power and Simply Energy.

324 Mr Foulds gave evidence of significant changes and events in the market in the South Australian region following PPPL’s mothballing announcement and they included the Heywood Interconnector failure, developments at the Torrens Island Power Station, developments at the Northern Power Station, developments at the Playford B Power Station and the selection of PPPL to be a reserve provider on the Reliability and Emergency Reserve Trader or RERT panel. I do not need to describe these matters at this point and it is convenient to turn now to the decision by PPPL to bring GT12 out of dry storage in November 2016.

325 Mr Foulds said that the decision to bring GT12 out of dry storage in November 2016 was made because ENGIE had a desire that its South Australian generators assist to ensure reliability of supply of electricity in South Australia. Nevertheless, the intention was to deliver 240 MW approximately and, as he put it, at the end of the day, they were maintaining 240 MW of capacity.

326 Mr Foulds identified a number of factors which meant that South Australia was facing what he referred to as significant energy security risks that it had not faced in previous summers. He referred to the political focus on PPPL at the time. Mr Foulds gave evidence of the two events which occurred in the lead up to the 2016/2017 summer and which led him to believe that the South Australian region was facing significant energy security risks. The first event was the closure of the Northern Power Station and the closure “finally” of the mothballed Playford B Power Station. It was the first summer without the Northern Power Station providing 520 MW of coal-fired baseload power. The second event was the September 2016 Black System event. A number of windfarms reduced their power output by over 450 MW in a number of seconds causing the Heywood Interconnector to trip and isolating South Australia from the NEM.

327 Mr Foulds was of the view that the Pelican Point PS would be running its primary gas turbine for significant periods of time during the summer of 2016/2017. The discussions within PPPL (and which included Mr Foulds) included the prospect of returning GT12 to service for the summer prior to its major C‑inspection overhaul so that the Pelican Point PS could best position itself to maintain available capacity of 240 MW at all times during the summer by using both GT11 and GT12 interchangeably.

328 Mr Foulds said that ultimately, the decision was made by the Head of Generation of GDF Suez (Mr Luc Dietvorst) that GT12 would be returned from dry storage to wet storage and available to be used interchangeably with GT11, subject to management of the operational risks relating to GT12 throughout the summer. Mr Foulds said that this decision was made with the knowledge that at any time the physical condition of GT12 was such that it might be withdrawn from service indefinitely until it could be overhauled during a C-inspection which was then scheduled to take place from about April to May 2017. The C-inspection of GT12 was the subject of a purchase order issued late in December 2016. Mr Foulds said that these discussions sought to balance both the commercial interests of PPPL and its desire to remain a source of reliable electricity generation throughout a summer in which it was considered that the South Australian region was likely to experience reserve shortfalls. Mr Foulds said that the “main driver” of returning GT12 from dry storage to be used as a backup gas turbine was for “PPPL to act as a good corporate citizen and to ensure it could make half of its capacity available to be called upon if AEMO required it, in order to maintain system security”. It did not mean that PPPL’s position that it would make only half of the generation capacity of the Pelican Point PS available had changed. PPPL’s position remained as it was and that was because PPPL only had gas supply and transport arrangements to support the generation of up to 240 MW and the condition of GT12 was such that PPPL’s view was that it could not be relied on to be used in a continuous manner. Mr Foulds added that this position was reinforced by the uncertainty around the extent to which the sources of renewable energy would be able to support the State’s energy demands, the extent to which gas-fired power stations, both peaking and mid-merit, would be called upon to support the State’s energy demands, and the impact of that dynamic on the market for spot gas which would be in high demand if market conditions were such that the operators of the peaking gas plants sought to generate and bid into the market.

329 Mr Foulds said in his evidence that he did not specifically turn his mind to whether PPPL should update its PASA submissions after GT12 was returned to wet storage. He said that this was principally because PPPL only had gas supply and transport arrangements to support the generation of up to 240 MW and the condition of GT12 was such that PPPL’s view was that it could not be relied on to be used in a continuous manner. Furthermore, Mr Foulds considered that had PPPL’s ST or MT PASA submissions for 8 February 2017 been about 440 to 470 MW, it would be said that it had no reasonable basis to make such a submission having regard to its gas arrangements, its commercial intention at the time and the condition of GT12.

330 On or about 11 November 2016, GT12 was moved from dry to wet storage and thereafter in November and December 2016 was used interchangeably as the primary gas turbine. In November and December 2016, GT12 logged about 900 EOH, taking it further beyond the recommended EOH for the C-inspection to over 4,600 EOH beyond that interval and, according to Mr Foulds, further increasing the risk of failure of that gas turbine. In January 2017, GT11 was used as the primary gas turbine logging 604 EOH for January compared to 228 EOH for GT12 for the same period. From about mid-January 2017 to 7 February 2017, GT12 was not operated other than for brief periods so that it could continue to be kept in wet storage. It was kept in wet storage so that it could return to service in order to ensure that PPPL could continue to generate up to 240 MW in accordance with its PASA submissions and any reserve contract made under the RERT panel agreement. Mr Foulds said that these operational decisions were made primarily by Mr Dietvorst.

331 Mr Foulds said that for normal operations over the summer of 2016/2017, the operation of a primary gas turbine was sufficient to meet energy demands. As previously noted, there were substantial periods where South Australia’s energy demands were such that it was not commercial or necessary for PPPL to operate. At the same time, there was a number of days that summer where South Australia’s energy demands were such that PPPL sought more gas from the spot market to run the primary gas turbine for longer periods at its full load.

332 I turn now to Mr Foulds’ evidence about events on 8 February 2017.

333 Mr Foulds said that on 8 February 2017, he spoke to Mr Vince Duffy who was the Executive Director of Energy Markets in the South Australian Government. He had a working relationship with Mr Duffy and he previously made him aware of the details of the mothballing of capacity at the Pelican Point PS and the financial strain that PPPL had been under. Mr Foulds and Mr Duffy had a discussion concerning the diesel fuelled Port Lincoln power plant. Mr Foulds told Mr Duffy that, in his view, it was likely that AEMO would be required to load shed to maintain system security. He said to Mr Duffy that he was surprised that no one from AEMO had contacted PPPL about whether the Pelican Point PS could make its mothballed capacity and GT12 available or be the subject of a reserve contract or a direction.

334 Mr Foulds gave evidence of his understanding of various telephone conversations between representatives of PPPL and representatives of AEMO on 8 February 2017. He referred to the telephone conversation between a representative of AEMO and Mr Andrew Godfrey, a PPPL trader, at 17.39. He said that Mr Godfrey’s statement that at the time of the telephone conversation, GT12 was technically available, but PPPL did not have the gas to run the unit was correct. PPPL only had sufficient gas supply and transport to generate a maximum of 240 MW (subject to weather conditions) for substantial periods during the day and did not have any other firm rights to gas supply and transport.

335 Mr Foulds also addressed the telephone conversation between an AEMO representative and Mr Godfrey at 18.00. In this conversation, Mr Godfrey said that, in regards to gas, PPPL could probably run GT12 for about four to eight hours. Mr Foulds said, to the extent that the conversation suggests that PPPL had gas supply and transport to operate GT12 in conjunction with GT11, this was incorrect, as at that time, PPPL only had firm gas supply and transport to operate GT11. He said that an agreement for gas supply and transport to operate GT12 was not reached until later on 9 February 2017 in response to a direction by AEMO under cl 4.8.9 of the NER. Mr Foulds said that this position was conveyed by PPPL in its subsequent telephone calls with AEMO, including a call between an AEMO representative and Mr Godfrey at 20.10 and a call between an AEMO representative and Mr Godfrey at 22.25. That was also conveyed during a telephone call at 23.55 on 8 February 2017. Mr Foulds said that the reference by Mr Godfrey during the call at 18.00 to running GT12 for about four to eight hours was a reference to the minimum run-time of the gas turbines and not to any firm additional gas supply and transport which was available to operate GT12 at that time.

336 PPPL submitted that I should accept Mr Foulds’ evidence about the characterisation and significance of the conversations between Mr Godfrey of PPPL and the representative of AEMO. Mr Godfrey did not give evidence. The subsequent conversations suggest that he was not saying that PPPL had secured rights to gas to run GT12 for about four to eight hours and to that extent, I accept Mr Foulds’ evidence. However, having regard to the context, I have difficulty accepting that Mr Godfrey was not expressing a degree of confidence about securing sufficient gas to run GT12 for about four to eight hours.

337 At 18.03 on 8 February 2017, AEMO issued a direction to shed 100 MW of electrical load. This was what he described as a relatively significant event as it meant that thousands of end-users were subject to a blackout.

338 Late in the evening of 8 February 2017, or early in the morning of 9 February 2017, Mr Godfrey telephoned Mr Foulds and told him that he had received and made several calls to and from AEMO and on those calls AEMO had asked him to make preliminary inquiries as to the availability of gas supply and transport to operate GT12. Mr Godfrey had made those inquiries. He told Mr Foulds that he advised AEMO that those inquiries indicated that there was likely to be gas supply and transport available from the spot market on 9 February 2017. Mr Godfrey advised AEMO that, notwithstanding those indications, that availability was subject to making further inquiries after PPPL received a direction from AEMO and when PPPL was in a position to actually enter into an agreement for that supply and transport. Mr Godfrey also told Mr Foulds that on one of those calls, AEMO had asked PPPL to update its ST PASA to reflect any additional capacity that PPPL could make available to the market if AEMO directed it to operate its second gas turbine. Mr Foulds told Mr Godfrey that PPPL would not update its ST PASA and that its ST PASA reflected its firm gas supply and transport arrangements for 8 and 9 February 2017 which reflected the generation capacity that PPPL intended and estimated it would make available on the market. Mr Foulds told Mr Godfrey that if AEMO wanted to give PPPL a direction, that that had nothing to do with PPPL’s PASA submissions and that PPPL would “just use its best endeavours to comply with that direction”. Mr Godfrey agreed with Mr Foulds and said that he would get back to AEMO. This evidence, together with the evidence referred to below (at [592]–[594]) and Mr Foulds’ evidence of the mothballing is the most direct evidence of the reasons PPPL made the PASA submissions it did, that is to say, it did not intend to run two turbines and its firm gas supply and gas transport were based on running one turbine at a time.

339 Mr Foulds next addressed the extent to which PPPL reasonably expected that it would practically be able to procure gas supply and transport to fuel the second gas turbine to operate concurrently with the primary gas turbine at the Pelican Point PS for 8 February 2017 on 24 hours’ notice. Mr Foulds said that in advance of 8 February 2017, he did not at a general level have any expectation of being able to obtain gas supply and transport to provide fuel and transport for a second gas turbine on that day. He identified difficulties with the generality of the question he had been asked and he also referred to the fact that a review of gas strategy was undertaken by ENGIE and that had referred to the tightening east coast energy market driven by the ramp up of LNG exports from Queensland and the declining nature of BHP’s Minerva gas field. Mr Foulds said that, given the uncertainties in the market that summer, he did not have any particular expectation of obtaining gas until he had a firm contract for short term supply and transport. The fact that PPPL was ultimately able to obtain gas and transport on 9 February 2017, did not alter any expectation that Mr Foulds had prior to that time, or in relation specifically to 8 February 2017. He said he could not recall the “specifics” when it was suggested to him that at no time between 11 November 2016 and 8 February 2017, to his knowledge, did PPPL seek or obtain gas supply and transport rights that would permit it to make available more than 240 MW of generating capacity. Mr Foulds maintained that the moving of GT12 from dry storage did not change PPPL’s intention to make 240 MW available. As I have said, Mr Foulds’ evidence was that following the decision to mothball half the generation capacity of the Pelican Point PS, he directed Mr Frimston, or the duty trader on shift at that time, to update PPPL’s MT PASA from 1 April 2015 onwards to reflect the ability of the Pelican Point PS to make available a maximum of 240 MW of electricity “based (primarily) on the firm gas supply and transport contracts that would be in place at that time, which reflected PPPL’s commercial decision to mothball”.

340 Mr Foulds identified the person who had the responsibility for submitting PPPL’s MT PASA submission at that time on a week to week basis as the duty trader who he said would have followed a procedure which was driven by the requirements of the NER and was a rigorous process. Mr Foulds said that it was “driven off generic information that flowed through into the, onto the operations desk” and that in 2014, the MT PASA submission each week was a culmination of many processes that would all filter through onto the operations desk. Mr Foulds did not personally enter any PASA submissions in respect of the Pelican Point PS between 11 November 2016 and 8 February 2017 and he said that that was an “operational desk responsibility” and “typically the responsibility of the duty traders”.

341 Mr Foulds said, and I accept, that at the time of the C-inspection of GT12, PPPL spent approximately $40 million replacing the blades in the turbine.

342 Mr Foulds was cross-examined about his evidence that after GT12 was returned to wet storage, he did not specifically turn his mind to whether PPPL should update its PASA submissions. In cross-examination, Mr Foulds appeared to say that it was not correct to say that he did not specifically think about whether PPPL should update its PASA availability submissions. He said that that evidence must be read in the context of the reasons PPPL had decided to make only half of its generation capacity available. PPPL asked the Court to characterise what Mr Foulds was saying as being that the view he had earlier formed about the PASA availability of the Pelican Point PS was not altered by the return from dry to wet storage of GT12 because of the limited gas supply and transport arrangements and the condition of GT12. I do not think that he did give consideration to the matter. His focus was on the intention of PPPL which was to run one gas turbine only at any particular time.

343 Mr Foulds said in re-examination and in the context of a suggestion made by the AER that no inquiries were made by ENGIE or entities in the ENGIE group to procure additional gas supply that in 2016 there were numerous discussions between PPPL and Origin Energy about the possibility of a “tolling agreement”. Mr Foulds was involved in that and an agreement was concluded in 2017.

344 Before referring to the submissions of the parties with respect to Mr Foulds, I make the following observations. First, Mr Foulds occupied a relatively high level position in the management structure of PPPL. He was involved in the major decisions and the relevant major decision was the decision to mothball half the generation capacity of the Pelican Point PS, but it was others down the line who were aware of the particular details of specific circumstances and events. Secondly and relatedly, Mr Foulds’ inability during the course of his evidence to provide particular details of events and circumstances reflects his position within PPPL rather than any failure of his memory or unwillingness to be forthcoming. Thirdly, as far as Mr Foulds was concerned, the key was to proceed prudently. PPPL could make 240 MW available, but beyond that, the market was difficult and it was only non-firm gas that would be available and, as Mr Foulds put it: “Until it’s made firm, I can’t with certainty make any — any update”. Finally, Mr Foulds’ evidence clearly established PPPL’s “current intentions” which was to operate one gas turbine at Pelican Point PS and, subject to any matters arising from the condition of GT12, to operate GT11 and GT12 interchangeably.

345 PPPL submitted that the evidence of Mr Foulds is significant because he was the supervisor of the traders and his beliefs and expectations were inconsistent with the capacity of two turbines being relevantly available on 24 hours’ notice. PPPL relies on his evidence of its intentions and expectations.

346 In response to question 23 in the notice served by the AER, ENGIE said the following:

In addition to the gas supply arrangements identified in Questions 15 and 17 above, state what sources of short term or ad hoc gas supply arrangements for gas commodity or transportation including, but not limited to, the Short Term Trading Market (STTM) or Available Interruptible Capacity (AIC) were available, or may have been available, to IPAH for use at PPCCGT, including in the event of a NEL section 116 or NER 4.8.9 direction:

(a) between 1 April 2015 and 10 November 2016; and

(b) between 11 November 2016 and 8 February 2017?

Answer

There were no material differences between the periods in terms of our ability to procure “may have been available” gas.

ENGIE suspects that in most circumstances (ignoring pipeline outage windows) PPCCGT could have procured sufficient gas supply in order to comply with a direction, assuming a direction is likely to extend for hours at a time only.

It is not practicable or possible to outline all sources as the list is limitless and every scenario is different. But between existing pipeline contracts, trading of pipeline capacity with others, overrunning pipeline contracts and buying gas from OTC markets, diverting from portfolio (including Synergen) and buying from markets (notional flows) PPPT could potentially have turned on for a unknown number of hours in most situations.

Also in the event of a direction, the participants’ ability to access short-term supplies likely increases, as demonstrated in these scenarios. ENGIE has made such support it has received from counterparties in responding to such directions clear to SA Government.

347 PPPL pointed to the fact that Mr Foulds said in the course of his evidence that there were discussions talking through the risks of operating GT12, pursuant to an AEMO direction, in conjunction with GT11 and where PPPL would not have a backup during an extreme weather event. Mr Foulds said that despite these risks, and in the context of AEMO likely directing PPPL to operate GT12 on 9 February 2017, the common view reached in the course of those discussions was that PPPL would do all that it could to assist AEMO, subject to being able to secure gas to operate GT12 in conjunction with GT11.

348 PPPL relied on Mr Foulds’ evidence that he did not have any expectation of being able to obtain gas supply and transport to fuel a second gas turbine on 8 February 2017 and the fact that PPPL was ultimately able to obtain gas supply and transport on 9 February 2017, did not alter any expectation that he had prior to that time or in relation specifically to 8 February 2017. Mr Foulds referred to the fact that he had taken into account the availability of spot gas, the ENGIE portfolio, the MAPS and PCA pipeline, and linepack informing the conclusion that he did not have any actual expectation that PPPL would be able to procure additional gas supply and transport to fuel GT12 on 8 February 2017 on 24 hours’ notice. In addition, if PPPL was able to make arrangements with counterparties for additional gas supply and transport for that day, there would have been a risk that it would not be delivered when PPPL required it. I accept that that was Mr Foulds’ opinion, but at the same time, I infer that he would not have had the knowledge of the market for gas and gas transport that Mr Frimston or the duty traders had.

349 The AER challenged aspects of Mr Foulds’ evidence.

350 First, the AER submitted that Mr Foulds’ affidavit and oral evidence was marked by strained attempts to maintain that PPPL did not mothball a gas turbine, but had instead mothballed 239 MW of generating capacity. The AER referred to a number of statements in Mr Foulds’ affidavit to the effect that the decision was made to mothball half of the generation capacity of the Pelican Point PS. In the course of his evidence, Mr Foulds said that the term “mothball” did not have a statutory definition, but was commonly understood by the electricity industry to mean the mid to long term removal of a portion or the entirety of the generation capacity of a power station. He referred to the glossary of the NEM Electricity Statement of Opportunities (ESOO) published annually by AEMO. In that document, “mothballed” is defined as “a generation unit that has been withdrawn from operation but may return to service at some point in the future”. He referred to mothballing generation capacity in a number of paragraphs in his affidavit and in his oral evidence. The point is illustrated by the following question and answer in cross-examination:

Yes. Thank you. And so what I want to suggest to you, Mr Foulds, is that unlike the meetings and the emails that you had with AEMO in July 2014 to inform them about that that capacity would be put into mothballs, from 11 November 2016, ENGIE did 10 not take steps to inform AEMO with absolute clarity about the recall time of that mothballed capacity. What do you say to that?---Well, the capacity remained the same. There was no, there was an ability to dispatch 240 megawatts and at times there was, you know, to manage the risk of not being able to deliver 240 megawatts, you know, at times, you know, actions were taken. But there was never any variation for the ability for Pelican Point to dispatch more than 240 megawatts of capacity ...

351 Mr Foulds gave evidence that he communicated PPPL’s decision in 2014 to mothball half of its generation capacity at the Pelican Point PS to AEMO with absolute clarity. The AER pointed to Mr Foulds’ evidence that he could not testify to ENGIE having informed AEMO at any time after 11 November 2016 that, as a result of GT12 having been returned from dry storage to wet storage, it could now be brought online within approximately four hours, subject to gas supply, gas transport and staffing. The AER’s submission, insofar as it identified the evidence Mr Foulds gave, is correct. However, I do not consider that there was any sinister reason behind Mr Foulds’ characterisation of a mothballing of generation capacity as distinct from the mothballing of GT12. That simply reflects how PPPL saw the matter.

352 Secondly, the AER submitted that the most significant point to emerge from Mr Foulds’ evidence was that it was not part of his responsibilities to submit PASA inputs on behalf of PPPL. The persons authorised to do so were Mr Frimston, who was the Trading Operations Manager, and the trading team that he supervised. Mr Foulds agreed with the proposition put to him in cross-examination that it was Mr Frimston’s responsibility to either ensure that or to supervise the traders in their duties generally, including the submission of MT PASA inputs on a week to week basis and ST PASA inputs when they were required to be made.

353 Furthermore, the AER relied on question 5 in the Section 28 Notice served by the AER and ENGIE’s response thereto. The question and answer were as follows:

State which persons with IPAH were responsible for, and/or had authority for, submitting to AEMO ST PASA inputs and MT PASA inputs for PPCCGT during the period 11 November 2016 to 8 February 2017, in respect of the 8 February 2017 trading day, the positions of those persons and the names and position of their immediate superiors.

Answer

Please refer to the organisational chart labelled “Figure 5” (ENG.501.001.0182) provided in response to this question.

The Energy Traders were: Caroline Converset; Andrew Morrisey; Andrew John; Aaron Finn; Ben Wilson; Andrew Godfrey; and Jack Anderson.

The listed Energy Traders were supervised by Steven Frimston, Trading Operations Manager during this period. Steven Frimston was supervised by Darren Foulds, Head of TPM during this period.

354 The Court has evidence from Mr Foulds who was the person who instructed Mr Frimston to alter the PASA submissions after the mothballing of half the generation capacity of the Pelican Point PS. The Court does not have evidence from the persons who thereafter made the MT PASA and ST PASA submissions.

355 Thirdly, the AER submitted that if PPPL’s commercial intention as to the extent it planned to offer the physical plant capability of Pelican Point PS for dispatch into the market is relevant to its PASA availability under the rubric of “current intentions” in cl 3.7.3(e), as relevant to ST PASA (and one of its submissions was that it is not), the AER accepts that, at all relevant times, PPPL did not subjectively intend to make more than the capacity of one gas turbine available in the market. The AER made that clear in its opening. Counsel for the AER said that it did not contest that PPPL did not intend to make GT12 available and said that the AER was not running a fraud case. The AER was not suggesting, for example, that PPPL in fact intended to make both turbines available, but did not disclose it. The AER accepts that PPPL did not intend to make GT12 available on the relevant date. One of the AER’s submissions, it will be recalled, was that PPPL’s intention is relevant, and only relevant, to the available capacity of the Pelican Point PS which PPPL was required to submit under cl 3.7.3(e)(1) of the NER.

356 Fourthly and relatedly, the AER submitted that beyond the acceptance of what they called “that basic fact”, none of Mr Foulds’ evidence was probative as to PPPL’s “current intentions” as reflected in its ST PASA availability. He did not submit, or instruct his subordinates to submit, PASA inputs during the relevant period and he made clear that making PASA submissions was not part of his responsibilities. In the circumstances, the relevant intention to be imputed to PPPL, insofar as its intention is relevant to PASA availability, was that of the traders who made the PASA availability submissions in issue, or who instructed that they be made at a particular level. The AER submits that that accords squarely with the observations of Lord Hoffman in *Meridan Global Funds Management Asia Ltd v Securities Commission* (1995) 2 AC 500 at 511 as follows:

Once it is appreciated that the question is one of construction rather than metaphysics, the answer in this case seems to their Lordships to be as straightforward as it did to Heron J. The policy of section 20 of the Securities Amendment Act 1988 is to compel, in fast-moving markets, the immediate disclosure of the identity of persons who become substantial security holders in public issuers. Notice must be given as soon as that person knows that he has become a substantial security holder. In the case of a corporate security holder, what rule should be implied as to the person whose knowledge for this purpose is to count as the knowledge of the company? Surely the person who, with the authority of the company, acquired the relevant interest. Otherwise the policy of the Act would be defeated. Companies would be able to allow employees to acquire interests on their behalf which made them substantial security holders but would not have to report them until the board or someone else in senior management got to know about it. This would put a premium on the board paying as little attention as possible to what its investment managers were doing.

357 The AER submitted that the Court has no evidence to what extent the opinions or “rationalisations” deposed to by Mr Foulds were in fact conveyed to the responsible traders, nor whether those traders agreed with those opinions or formed their own intentions having regard to other information. It followed, in those circumstances, that Mr Foulds’ evidence was of no probative value to PPPL’s actual intentions that informed the making of its PASA availability submissions. It is not clear to me where this submission goes because, in my opinion, it has been clearly established (and accepted by the AER) that PPPL’s intention at the relevant times was to operate one gas turbine. As to the related point of the reasons PPPL did not make a “higher” PASA submission, I consider that despite the fact that neither Mr Frimston nor Mr Godfrey (or indeed any of the other energy traders) were called, on the basis of Mr Foulds’ evidence and the evidence referred to below (at [592]–[595]), I find that that was because of the absence of firm gas supply and gas transport arrangements to support the running of a second turbine.

### Mr Baksi

358 Mr Baksi was the General Manager – South Australian Assets of ENGIE ANZ until 7 August 2020. He holds a Bachelor of Engineering (Mechanical Engineering) with First Class Honours from the Indian Institute of Engineering, Science and Technology. He has worked in various roles at GDF Suez (now trading as ENGIE), formerly International Power, for 21 years.

359 In his role as General Manager – South Australian Assets from August 2012 to August 2020, Mr Baksi was responsible for the management of operations of all ENGIE’s assets in South Australia, including the Pelican Point PS. He said that in relation to the Pelican Point PS, he oversaw the operations side of the business, including maintenance and long term asset management. He managed a team of operation and maintenance managers, a renewables and compliance manager, control room operators, engineers and maintenance workers at the Pelican Point PS.

360 Mr Baksi said that the operations team worked closely with the trading team which he described as largely “market-facing” and as dealing with external stakeholders, including AEMO/ElectraNet and counterparties to source gas and bid capacity into the market. By contrast, the operations team is largely “plant-facing” and is responsible for the continued operation of the plant and for responding, to the extent possible, to requests from the trading team to make generation capacity available. The operations team advises the trading team of what generation capacity can be made available and any operational (technical) risks associated with that generation. The trading team, having received the advice of the operations team, makes the final decision about whether or not generation capacity will be made available.

361 Mr Baksi described the two gas turbines at the Pelican Point PS and the steam turbine and how the heat from the gas turbine(s) is used as power for the steam turbine. It is not necessary for me to set out the details, except to note the importance of maintaining the proper water chemistry in the heat recovery steam generators. The key point is that there are various rules of operational practice as to how often a gas turbine should be run if it is in wet storage and when it is operated, how long it should be operated for depends on when it was last operated.

362 Mr Baksi described a C-inspection of a gas turbine as a major inspection and overhaul which is a key aspect of maintaining the safe availability and reliability of gas turbines. It is a periodic service undertaken on the CCGT which requires it to be fully stripped down, overhauled and rebuilt. As part of that process, a number of key components of the gas turbine are usually replaced and refurbished. In addition, peripheral parts of the gas turbine will be checked and replaced, and other maintenance work will be undertaken.

363 Mr Baksi described the concept of Equivalent Operating Hours (EOH) as a measure of hours that a gas turbine has operated, which are calculated by adding actual operating hours with the number of start-ups multiplied by 20. The reason start-ups are multiplied by 20 is because they increase the wear on the gas turbines. In terms of the C-inspection, the reference to EOH is the period which the gas turbines may be operated in between two consecutive C-inspection overhauls. It is not a reference to the total number of operating hours that a gas turbine has accumulated since it was commissioned and first fired. Mr Baksi said that PPPL had operated GT11 and GT12 with ST18 since 2001.

364 C-inspections often involve a significant capital commitment and the relevant gas turbine and heat recovery steam generator being out of action for anywhere between 35 days and a couple of months.

365 The manufacturer’s recommendation for C-inspections was that they should be carried out after every 24,000 EOH. PPPL had established from experience and it was Mr Baksi’s view that intervals of 29,000 EOH (and possibly up to 30,000 EOH) were possible.

366 By approximately early 2014, GT11 was not due for a C-inspection until about 2017, subject to its actual running regime. It had had a previous C-inspection in 2011 and had undergone a complete blade replacement with “MXL” turbine blades fitted. These blades represented a significant improvement over previous versions, with a manufacturer recommended C‑inspection of 36,000 hours. On the other hand, GT12 which was fitted with original 13E2 blades and had exceeded 25,000 EOH since its last C-inspection and had developed cracking in its gas turbine blades, including a crack on the trailing edge of blade #18 on row 1 and severe “letterbox” cracking on almost all blades on row 1.

367 Mr Baksi said that a crack on the trailing edge of a blade is located at the thinnest and rear section of the blade. In the case of this particular crack, it was located near the base of blade #18 on row 1 of the five gas turbines blades of GT12. Mr Baksi said that of all the rows of blades, row 1 is exposed to the highest-temperature flue gas. The row 1 blades are most expensive with a replacement cost of approximately $3 million AUD.

368 The crack in blade #18 was first detected during a minor inspection of GT12 in about late 2013 which included a borescopic inspection. Such an inspection involves the use of an optical tool which allows the engineer to visually inspect the blade in-situ inside the turbine casing without opening it. A letterbox crack is a crack located at the top of the blade and is caused by a design deficiency associated with the older design of the blades. There is a low risk of letterbox cracks resulting in part of the blade becoming liberated. Nevertheless, as with any substantial piece of metal becoming liberated in the gas turbine, any such failure would be catastrophic.

369 Of most concern to Mr Baksi was the crack on blade #18. He said that the PPPL engineering team consulted Alstom and GDF Suez’s corporate gas turbine specialists about the crack. Mr Baksi produced email correspondence in late 2013 between Mr Phil von Einem, who reported to Mr Baksi, and Mr Simon Corlett of Alstom. Mr Baksi said that his view at the time was as follows:

(1) there were low risks associated with continuing to operate GT12 as long as the crack on blade #18 did not progress and reach a stage causing metal to be liberated;

(2) the risk of the blade crack progressing could be minimised to some extent by undertaking regular borescopic inspections and this was recommended to be undertaken after every five start-ups of GT12; and

(3) despite the risks being minimised by those inspections, there was still a medium to high level risk of blade failure in between those borescopic inspections and such a failure within the CCGT would be catastrophic.

370 By the time GT12 was mothballed in April 2015, it had accumulated 27,217 EOH since its last C-inspection. Mr Baksi described his concern about the cracked blade and its potential to break off and cause extensive damage “which included total or near total destruction of the GTs”. Repair costs could run into “the many tens of millions of dollars”.

371 GT12 was moved from dry storage to wet storage in November 2016 and was operated for 892 hours in November and December 2016 compared with GT11which was operated for 495 hours.

372 By mid-January 2017, GT12 had operated for approximately 29,000 EOH since its last C‑inspection and PPPL had submitted a purchase order for the C-inspection of GT12 on 24 December 2016 which was subject to the successful completion of a gas tolling agreement which would provide a business case for PPPL to use GT12. Mr Baksi gave evidence that he was informed in or about the time GT12 was moved from dry storage to wet storage of the possibility of there being a C-inspection overhaul of GT12 in about April 2017.

373 In mid-January 2017, a decision was made by PPPL to operate GT11 as the primary gas turbine and GT12 as the secondary gas turbine. GT12 was not operated for a period of nearly three weeks between 18 January 2017 and 7 February 2017. It was run for approximately 16 hours on 7 February 2017 in order to maintain the appropriate water chemistry in the heat recovery steam generator. I note that in another part of his evidence, Mr Baksi said it was run for 14 hours, but I do not consider the difference to be material. The C-inspection and overall of GT12 was carried out in April 2017. It took 56 days and cost approximately $39.7 million AUD.

374 PPPL relies on Mr Baksi’s evidence as to his concerns about the condition of GT12 because it had been run for almost 5,000 EOHs beyond the manufacturer’s specifications for a C‑inspection of 24,000 EOH, it had cracks in the turbine blades and was overdue for a C‑inspection and submitted that these concerns were plainly genuine and consistent with the underlying business records.

375 Further, a hypothetical running time of four hours for GT12 on 8 February 2017 could only be postulated because of the coincidence of GT12 having been run for maintenance purposes on 7 February 2017. There is a need to draw a distinction between the period from which a gas turbine could ordinarily be returned to service and the minimum run-time of a gas turbine having regard to the date of its last operation. A gas turbine in wet storage may ordinarily be returned to service relatively quickly, that is to say, in approximately four hours or less. In terms of minimum run-time, a gas turbine which had been in wet storage, but not operated for approximately three weeks, would need a minimum run-time of at least eight hours. If the gas turbine had been operated more recently, then the minimum run-time would be less than eight hours.

376 Mr Baksi gave evidence that if someone had asked him a month or two prior to January 2017 whether GT12 could have run for 2,000 hours, he would have said that he did not know because it would be subject to the runs and consecutive inspections as well as all the preservation methodology “that we have discussed so many times”.

377 In the context of objections to Mr Baksi’s evidence, and in particular paras 16 and 17 of his affidavit (the outcome of the objection is irrelevant for present purposes), the AER in the schedule of objections said that it did not dispute that PPPL did not “subjectively intend” to use GT12 concurrently with GT11 on 8 February 2017. I refer to my discussion of PPPL’s intention in the context of Mr Foulds’ evidence. The AER goes on to say that the condition of GT12 and the alleged risk of it failing are otherwise irrelevant to PPPL’s pleaded case. In particular, PPPL did not allege in its Concise Response that the physical condition of GT12 was such that it was not able to be made available on 8 February 2017. This was confirmed by a letter dated 14 August 2020 from PPPL’s solicitors which stated, “PPPL has never stated that the physical condition of GT12 prevented it from being operated or made available on 8 February 2017”.

378 Mr Baksi left ENGIE on 7 August 2020 after a reorganisation and his position became redundant. He left after Mr Frimston had left ENGIE. Mr Frimston went to work for AEMO first and then he moved on to work for AGL. Mr Baksi also said that starting a second gas turbine required him to arrange for additional manpower because PPPL was on skeleton manpower during those days.

379 Mr Baksi accepted that PPPL ran GT12 on 9 February 2017 for approximately four hours, that PPPL was not required to comply with a direction from AEMO if, among other circumstances, it would materially risk damaging equipment and that his primary concern was running the two turbines together such that there would not be a “back-up” in the event of failure.

380 Mr Baksi accepted that the minimum run-times he identified were not times prescribed by the manufacturer and that it was really a matter of what people on the spot determined having regard to site conditions. He also agreed that as to the minimum run-times, the management of PPPL could overrule the decision of the engineers. It is fair to say that in the course of his cross-examination on the letter from PPPL’s solicitors dated 31 January 2020, Mr Baksi quite reasonably agreed that the minimum run-times were not fixed in stone. He agreed that a run-time of less than eight hours might be possible sometimes when the other interests of PPPL “took precedence over preserving the design life of the CCGT”. Mr Baksi said that as far as the number of EOHs before a C-inspection was concerned, 20,000 to 30,000 was the recommended practice at every “GDF SUEZ site”. PPPL did not accept the recommendation of the manufacturer that a C-inspection be performed at or around 24,000 EOHs.

381 Mr Baksi was honest in giving his evidence. His focus was on the matter of most concern to him which was the condition of GT12 and whether there would be a backup turbine. The one matter where I had trouble accepting his evidence was his statement in para 38 of exhibit R7 that there was a *medium to high risk* of blade failure which would have catastrophic consequences (emphasis added). Having regard to the context of the observation and what he and PPPL did and did not do, I cannot think that this is correct, and I consider it likely, that he has confused the risk with the consequences should it materialise.

382 Mr Baksi said that he partially agreed with the suggestion that PPPL ran GT12 “harder” on 7 February 2017 than it did on 9 February 2017 and this leads back to a previous point that what made him nervous on 9 February 2017 was not the condition of GT12, but running the two together and the absence of a standby turbine.

383 Mr Baksi agreed that PPPL had run both turbines on each of the days between 28 March and 31 March 2017 with a maximum output of at least 450 MW on each day.

384 Mr Baksi said that the reason GT12 was run for a number of hours more than GT11 in November and December 2016 was because PPPL sought to conserve GT11 once it became clear that GT12 would be undergoing a C-inspection and the latter became clear during discussions with Origin Energy about a tolling agreement.

### Mr Weatherly

385 Mr Weatherly is an energy consultant. He conducts his own energy consulting business which he established in July 2018. He provides management consulting services to businesses in Australia. He is primarily engaged in strategic portfolio reviews as well as assisting in business development projects, including reviewing businesses’ gas portfolios and customer bases and advising on strategic options arising from that review, assisting businesses with commercial negotiations, reviewing and advising on pipeline contracts, and providing wholesale gas and electricity procurement advice.

386 Mr Weatherly obtained a Bachelor of Commerce in Accounting from the University of South Australia in 2008 and he obtained a Bachelor of Business (Commercial Law) in 2015.

387 Mr Weatherly has worked in the energy sector in Australia since 2005. It is not necessary to set out the details of his employment history other than to say that he worked for International Power (Australia) from May 2007 to June 2018 and that during that time, he worked as an energy trader, trading originator/senior trading originator, trading manager and origination manager in Australia. In the last position which he commenced in March 2015, Mr Weatherly was responsible for developing and executing strategies to utilise the assets of the Australian business, as well as leading a team of between three to six persons (depending on the period) to develop wholesale market structured transactions (particularly framework agreements which provided a basis for day-to-day transactions, gas supply, transport and storage contracts (other than spot) and bespoke electricity arrangements). The duties he performed as part of his role as Origination Manager included managing key relationships with external stakeholders and negotiating and executing both higher-level agreements, which would provide a framework for short term trades, and more detailed bespoke contracts between PPPL and other Market Participants for gas supply and transport, as well as storage, gas derivative trading and bespoke electricity arrangements, including with external stakeholders. The examples of external stakeholders which Mr Weatherly gave were South East Australian Gas Pty Ltd (SEAGas), Epic Energy South Australia Pty Ltd (Epic) (the owner of the MAPS), BHP Petroleum (Victoria) Pty Ltd (BHP), Origin Energy Retail Limited (Origin Energy) and Santos Limited (Santos).

388 Mr Weatherly described the market in which PPPL’s Pelican Point PS was operated as a challenging market in about 2013–2014 and he said that to remain a going concern, PPPL had to take a much more proactive role in managing its gas arrangements with a view to substantially reducing its fixed gas costs. PPPL entered into agreements with third parties as well as with other entities within the ENGIE group of companies.

389 At the time that Mr Weatherly commenced working for the ENGIE group in 2007, PPPL was the central gas trading company in the ENGIE portfolio in the Victorian and South Australian region. The portfolio included two companies which traded as “Simply Energy”, being IPower Pty Limited and IPower 2 Pty Limited. These companies were a significant mass-market energy retailer with a large volume of retail customers in Victoria and South Australia. The group of companies also included Synergen Power Pty Ltd (Synergen Power) which owned and operated (relevantly for present purposes) two gas-fired peaking power stations, one at Dry Creek and the other at Mintaro in South Australia. Mr Weatherly described wholesale electricity and/or gas prices in the period from at least 2014 to 2017 as highly volatile. He said it was not uncommon for the wholesale cost of electricity to vary from $1,000 to $14,000 per megawatt hour in a 5-minute interval. His duties as Origination Manager included entering into a number of arm’s length agreements which sought to limit the exposure of the entities within the group to the highly volatile prices.

390 Mr Weatherly said that in early to mid-2014, he was involved in the decision-making process to “mothball” half the generating capacity of PPPL. At that time, he was employed as the trading originator/senior trading originator. It was his view at the time that the on-selling of PPPL’s gas transport rights, and thereby the costs associated with them, was a critical step in PPPL being able to remain commercially viable in a challenging market environment.

391 Mr Weatherly addressed the gas supply arrangements on the PCA pipeline “post-mothballing”. He said that during the summer period in 2016/2017, the “primary contracted gas supply” for PPPL was under its longstanding agreement with BHP. He explained that the gas was supplied on the PCA pipeline from the Minerva field in Victoria. He said that from 2016 onwards, the Minerva field was declining and that, as a result, the contracting of gas supply from that field was the subject of short-term agreements by way of extension to the foundation agreement due to the uncertainty of when BHP would cease to be able to deliver gas from that field. Mr Weatherly produced the agreements between BHP and PPPL, that is, the BHP Gas Supply Agreements. The first agreement is an Amendment Agreement dated 5 September 2016 and provides for the supply of 35TJ/d of gas on the PCA pipeline between 23 October 2016 and 18 January 2017. The second agreement is dated 19 December 2016 and it provides for the supply of 35TJ/d of gas on the PCA pipeline between 19 January 2017 and 6 August 2017. Both these agreements were amendments to the Deed of Settlement, Amendment and Restatement dated October 2013 which Mr Weatherly produced.

392 PPPL executed a “Transaction Confirmation TX04” with Origin Energy in December 2015 for the supply of 5TJ/d of gas between 1 January 2017 and 31 December 2017. This document was executed pursuant to a Master Bilateral Agreement between Origin Energy and PPPL dated 23 December 2015 (the Origin Energy Gas Supply Agreement).

393 Mr Weatherly said that as at 19 January 2017 and from that time to at least 8 February 2017, PPPL had contractual arrangements relating to the supply of 40TJ/d of gas at the receipt points located on the PCA pipeline under its agreements with BHP and Origin Energy. He said that that quantity of 40TJ/d supplied to PPPL was subject to certain agreements PPPL had with Simply Energy and Synergen Power which, he said, required PPPL to supply up to 20TJ/d of gas to those entities on an “arm’s length” basis.

394 Mr Weatherly said that PPPL did not enter into any agreements for regular gas supply on the MAPS and that that was because of supply dynamics of the gas market during the summer of 2016/2017.

395 Mr Weatherly described the gas transport arrangements at the time of the mothballing of half the generating capacity of PPPL. He addressed the PCA pipeline and then the MAPS.

396 With respect to the PCA pipeline, Mr Weatherly produced the agreement with SEAGas for the transport of gas on the PCA pipeline which was entered into in 2003 (PCA Contract). He said that under that agreement, PPPL had rights to approximately 88TJ/d of firm transport on the PCA pipeline which was 28.1% of the Firm Forward Haul Capacity.

397 In the course of 2014 and 2015, PPPL on-sold up to 80TJ/d of its 88TJ/d firm transportation rights on the PCA pipeline. It did so under two agreements, one with Origin Energy and the other with Santos. Mr Weatherly produced the Origin Energy MDQ Trading Agreement. The agreement is entitled “SEA GAS PCA — MDQ Trading Agreement”. The agreement was finalised on 30 November 2015 and related to the period between 1 January 2016 and 1 January 2019. It provided for PPPL to trade 15TJ/d of compressed maximum daily quantity (MDQ) and 15TJ/d of free flow MDQ pursuant to the MDQ trading provisions of the SEAGas PCA. In addition to this agreement, PPPL entered into a “Firming Agreement” with Origin Energy whereby Origin Energy was provided with certain transport rights across the interconnector between the PCA pipeline and the MAPS.

398 With respect to the agreement with Santos, the Santos GHCSA, was finalised on 2 June 2014 and related to the period between 1 April 2015 and 1 January 2019. As I have already said in the course of dealing with Mr Foulds’ evidence, under the agreement PPPL agreed to provide Santos with 50TJ/d of transport rights on the PCA pipeline made up of 20TJ/d of firm transport in the summer months (October to April inclusive) and 30TJ/d of “Interruptible Firm Haulage Capacity” in the summer months.

399 Mr Weatherly explained that in relation to the 30TJ/d of Interruptible Firm Haulage Capacity, PPPL retained an option to buy back all of that capacity by effectively foregoing the ability to charge for any interrupted transport. The exercise of the option was subject to contractual constraints and commercial constraints.

400 The contractual constraints were that PPPL was required to deliver the following volumes of Interruptible Firm Haulage Capacity to Santos: (1) 110TJ per week commencing from 6 am on a Sunday; and (2) 4,360TJ per calendar year, but which can only be delivered in the summer months. Mr Weatherly said that these arrangements meant that PPPL was required to make available to Santos an average of 20.6TJ/d of the 30TJ/d of Interruptible Firm Haulage Capacity throughout the summer months in order to meet the above requirements and that this, in turn, meant that PPPL could not interrupt a volume of greater than 9.44TJ/d on average.

401 The commercial constraints were described by Mr Weatherly in the following way. He said that, although PPPL had a contractual right to buy back 30TJ/d of the Interruptible Firm Haulage Capacity for a number of consecutive days (subject to it being required to meet the weekly and summer volume requirements), doing so could cause significant commercial inconvenience to Santos. He said that he made representations to Santos during the negotiations for the agreement that PPPL did not have any intention to run a second gas turbine at the Pelican Point PS and would not be seeking to buy back the Interruptible Firm Haulage Capacity for that purpose. Mr Weatherly said that even where it was commercially desirable for PPPL to insist on its strict contractual rights under the agreement with Santos, PPPL would take Santos’ commercial position, including notice periods, into account prior to buying back any of the Interruptible Firm Haulage Capacity.

402 With respect to transportation rights on the MAPS, Mr Weatherly referred first to the MAPS Contract. The first deed was entered into on 27 March 2007. Under the deed, PPPL had rights to 25TJ/d of firm southern haul transport on the MAPS. However, PPPL did not hold any regular gas supply rights on the MAPS during the summer of 2016/2017.

403 The second deed was entered into on 30 May 2014 and it made minor amendments to the first deed. The firm rights were subject to various limitations on PPPL in utilising the transport as well as certain rights of Epic to interrupt that transport. Mr Weatherly said that despite these agreements providing transport rights to PPPL, the commercial purpose of these agreements with Epic was to provide transport rights for the wider ENGIE portfolio. He said that, in particular, the commercial purpose was to operate the Synergen Power’s gas-fired peaking generation units at Dry Creek and at Mintaro and to provide access to the retail market in the greater Adelaide metropolitan area. He said that PPPL held many of these rights at the time, predominantly for that commercial purpose and not in order to operate the Pelican Point PS. This purpose was reflected in the internal agreements.

404 On 30 May 2014, PPPL and Epic entered into an agreement titled “Gas Access and Connection Agreement – Moomba to Adelaide Pipeline”. Mr Weatherly said that this agreement, when read with the first and second agreements, provided PPPL with an equivalent of 25TJ/d bidirectional transport service on the MAPS.

405 Mr Weatherly said that the interconnection between the MAPS and PCA pipelines was scheduled to be completed in about 2015. From that time, the third agreement provided PPPL with 25TJ/d of firm transport across the interconnect. The first rights were subject to various limitations on PPPL in utilising that transport as well as certain rights of Epic to interrupt that transport which are set out in the third agreement. The third agreement did not otherwise increase the total aggregate firm MDQ available for delivery from the pipeline on a day.

406 On 30 November 2015, PPPL and Origin Energy entered into a SEAGas-MAPS Interconnect Capacity Firming Agreement. This agreement required PPPL to make available to Origin Energy at least 15TJ/d and up to its full entitlement of 25TJ/d of its firm transport rights over the interconnect. The agreement also required PPPL to make available to Origin Energy certain annual and contract term volumes of transport over the interconnect.

407 PPPL entered into various agreements with related entities within the ENGIE group. Mr Weatherly said that it did so for the purpose of on-selling gas supply and transport rights held by PPPL and in order to reduce its fixed costs. Mr Weatherly described these agreements as “arm’s length internal agreements”. They were described by the letters “IA” followed by a number.

408 In November 2016, PPPL entered into two internal agreements with Simply Energy and they are conveniently described as IA-004 and IA-005. The agreements are to be read with the ENGIE in Australia Standard Gas Sale Agreement (December 2014) which was produced by Mr Weatherly.

409 The effect of IA-004 and IA-005 was to provide Simply Energy with rights to 4TJ/d of gas (supply and transport, being a delivered product) for the calendar year 2017.

410 In addition to these two agreements, in November 2016, PPPL entered into a further internal agreement with Simply Energy (IA-009) being a “STTM put and call” transaction. This transaction required PPPL to provide Simply Energy with up to an additional 500GJ/d (being 0.5TJ/d) of gas for the calendar year 2017.

411 PPPL also had an internal agreement with Synergen Power. This agreement was designated IA-008. Mr Weatherly described the effect of this internal agreement as the provision to Synergen Power of firm rights to 16TJ/d of gas (supply and transport, being a delivered product) for the calendar year 2017 to be delivered to Synergen Power’s Dry Creek and Mintaro delivery points on the MAPS.

412 Mr Weatherly gave his opinion as to the effects of the internal agreements on PPPL’s firm rights to gas supply and gas transport. He said that PPPL was left with as little as the following firm rights to operate the Pelican Point PS:

(1) 20TJ/d of contractual gas supply available to it on the PCA pipeline;

(2) 18TJ/d of firm gas transport available to it on the PCA pipeline. He said that this assumes PPPL would be able to buy back from Santos the full 30TJ/d of the Interruptible Firm Haulage Capacity, which was subject to PPPL meeting the weekly and summer volume requirements and other commercial considerations;

(3) no contractual gas supply available to it on the MAPS; and

(4) 5TJ/d of firm gas transport available to it on the MAPS.

413 Mr Weatherly also made the observation that PPPL would typically factor in an operational buffer in calling on its contractual rights because of the risk of financial penalties under the relevant contracts, including punitive overrun charges and/or future constraints. He gave as an example the fact that in calling on its PCA transportation rights, PPPL would typically maintain a buffer of 0.2TJ/h between its use of transport and its contractual rights to that transport.

414 Mr Weatherly then turned to address a number of the issues which arise in this case.

415 First, Mr Weatherly described the operational, contractual and other constraints on the operation of one gas turbine. He began by saying that PPPL required up to 46.5TJ/d to operate one gas turbine at full load of up to 240 MW for 24 hours. He said that as a result of the limits on its firm rights, PPPL on any given day during the summer of 2016/2017 may not have had sufficient contracted gas supply and transport available and that the portfolio was heavily reliant on the exercise of buy-backs and non-firm options under its contracts to operate one gas turbine at full load for 24 hours. He described the matters he would consider if it was commercially desirable for PPPL to operate one gas turbine at full load for up to 24 hours. First, Mr Weatherly would consider whether the forecast demand was such that PPPL would commercially operate one gas turbine at full load for the entire 24 hour period, or whether it would operate at less than full load for certain periods and/or switch off that one gas turbine for certain periods. Secondly, he would consider whether, based on that assessment, additional gas was required to be secured to operate one gas turbine at the Pelican Point PS for the periods and at the load that PPPL determined to be commercially appropriate. Thirdly, he would consider that if additional gas was required to be secured, that additional gas could be sourced from within the ENGIE portfolio, particularly in circumstances where Simply Energy and Synergen Power may not have required their full contractual volumes under the internal agreements each had with PPPL. Fourthly, Mr Weatherly would consider, assuming gas could not be sourced from within the ENGIE portfolio, whether it could be sourced from either seeking to exercise other options available to PPPL under its gas supply and transport agreements, such as seeking to book “as available”, interruptible or non-firm transport and/or seeking additional gas supply and transport from the market, such as facilitating gas swaps by taking positions in the market and seeking to procure additional ad hoc gas supply and transport from other gas producers, traders and the pipeline operators. Finally, Mr Weatherly would consider, assuming gas could not be obtained from the sources noted directly above, or if the price for the gas supply and transport was high and, as a result, not commercially viable, whether PPPL could call on its options to interrupt Santos under the Santos GHCSA and/or drawing gas from linepack.

416 Mr Weatherly described “linepack” as gas stored within a pipeline and he said that his reference to linepack was a reference to “shipper linepack” which is a volume of gas that was available to PPPL as a short term storage option under its contracts with SEAGas and Epic which it could potentially access by accumulating and drawing down that linepack gas within certain contractual limits. This means that, in certain circumstances, PPPL may be able to withdraw gas from linepack to operate the Pelican Point PS.

417 Mr Weatherly identified a number of matters which PPPL would need to consider before drawing gas from linepack. First, he said that as a result of PPPL operating a “lean portfolio” it was critical for PPPL “to carefully manage, maintain, carefully use and restore its linepack” so as not to expose PPPL, Synergen Power or Simply Energy to volatile wholesale electricity and gas prices. Secondly, before withdrawing gas from linepack, PPPL would need to consider carefully how, when and at what cost it would be able to replenish that linepack so that the exposure to the portfolio was minimised. Thirdly, PPPL would need to consider and assess the risks of Simply Energy and Synergen Power in particular, being exposed to a high price event before that linepack had been replenished and PPPL not being able to comply with its contractual obligations to those entities.

418 Mr Weatherly then turned to express his opinion on the following question: whether on 24 hours’ notice, he expected PPPL would have been able to secure gas supply and transport to run a second gas turbine at the Pelican Point PS for a duration of four to eight hours in conjunction with the first gas turbine on 8 February 2017.

419 The first point made by Mr Weatherly was that there were certain contractual, commercial and market risks that PPPL faced on a day-to-day basis to ensure that enough gas supply and transport was available to operate a single gas turbine at the Pelican Point PS during that period. Mr Weatherly said that he was familiar with the risks in connection with one gas turbine, but he was not familiar with the risks with respect to a second gas turbine as, “in the summer of 2016–2017, PPPL had no commercial intention to run two GTs at the same time, and I was not seeking (periodically or at all) additional gas for that purpose”.

420 Mr Weatherly said that if he was running two gas turbines, he would take a different approach to that taken in relation to one gas turbine. He considered that he would have to enter into new contractual arrangements with third parties outside of PPPL’s existing contracts. Mr Weatherly expressed the opinion that, although it might be possible to expect to be able to secure a certain volume of gas on 24 hours’ notice which was additional to PPPL’s rights, that expectation was subject to the following four matters. First, the additional gas required may have already been required to operate the primary gas turbine at the Pelican Point PS. Secondly, the seeking of additional non-firm gas supply and transport on high demand days always carries with it the risk of that gas already being fully utilised by the market, in circumstances where gas supply and transport are finite commodities, particularly when the availability of them is considered on a 24 hours basis. Thirdly, even if PPPL could have obtained the required additional volume of gas supply on commercial terms on a high demand day, the trading of gas supply is, and was in February 2017, more liquid than that of transport and Mr Weatherly said he would have had greater concern about the ability to obtain gas transport in that timeframe on commercial terms and then have that gas scheduled and delivered. Fourthly, Mr Weatherly said that there were additional risks relevant to the question and that included the risk, particularly during extreme weather events, of pipeline integrity issues such as pipeline compressors tripping; and the risk of BHP not providing the full 35TJ/d of contracted gas supply on the PCA pipeline. Given that the Minerva field was declining, there were certain periods which Mr Weatherly said he believed were prior to February 2017, where BHP could only supply approximately 20TJ/d to PPPL.

421 Mr Weatherly expressed the view that given the risks and uncertainties, the only commercially realistic way of obtaining gas to run a second gas turbine would be to seek to enter into contractual gas supply and transport arrangements. He considers that in order for these arrangements to be attractive to a counterparty, it is likely that they would need to have been for a material period of time of at least weeks if not months. Furthermore, these arrangements would likely have come with a high take or pay percentage. He considered that in likelihood, the percentage would be 100% which means that PPPL would be required to pay 100% of the contract price even if it did not use any or all of the gas. The effect of this was that the arrangement would commit PPPL to operate GT12 as a second gas turbine for an extended period, which may not have been physically or practically possible, especially given the known condition of GT12.

422 Mr Weatherly described his approach to internal agreements. The operation and legal effect of these agreements was a matter of contention between the parties. The debate started upon Mr Snow examining some of the internal agreements in his first report and concluding that one agreement did not require PPPL to provide gas to Synergen Power on 8 February 2017 and another was not firm until a swaption was agreed by both parties.

423 Mr Weatherly said that his role required him to assess the gas requirements of the various companies within the group. He took into account the companies’ contractual obligations with companies outside the group, and the commercial and business objectives of the companies over different time frames. Synergen Power’s gas needs reflected the fact that it was operating a peaking power station that needed to be available at short notice to generate high output during periods of peak demand, while the gas requirements for the Pelican Point PS reflected the fact that it was a mid-merit power station generating more consistently.

424 Mr Weatherly said that his approach involved going to the market to buy gas on behalf of the entire group rather than as the individual entities. In many cases, PPPL was the best suited company within the group that primarily contracted with third parties in relation to the relevant gas supply and transport contracts. He said that he then had responsibility for arranging and managing intra-group arrangements so that the other entities within the group could access gas. He described the process of ascertaining the group’s requirements and arranging gas and supply transport as being not sequential, but as involving co-ordinating requirements and arrangements on an ongoing and continuous basis over time.

425 The internal agreements were not prepared by external lawyers, although the template documents that PPPL used would generally have been drafted by lawyers previously or adapted from documents drafted by lawyers for other transactions. Mr Weatherly said that it was necessary to have the internal agreements. There have been times when individual assets or entities within the group have not always been a wholly owned subsidiary of ENGIE. Furthermore, the individual performance of entities within the group were required to be known to enable well-informed rational business decisions to be made. Having arm’s length commercial arrangements was also important if any of the entities within the group were to be sold, although Mr Weatherly accepted that if that was the case, more formal documents would be prepared.

426 With respect to the internal agreements with Simply Energy, Mr Weatherly said that from his observations of the day-to-day dealings during the term of those agreements, PPPL managed its portfolio on the basis that it had committed to make provision for 4TJ/d of gas supply and transport to meet Simply Energy’s requirements which could be delivered at the Langley delivery point on the PCA pipeline under IA-004, or at the Adelaide hub on the MAPS under IA-005 with each having different price consequences for Simply Energy. Mr Weatherly said that there was no occasion that he could recall where Simply Energy sought, but was not provided with, gas and supply transport accordingly.

427 Mr Weatherly had access to ENGIE’s web-based application known as Gas Market and Risk System. He used that access to confirm that on 8 February 2017, Simply Energy provided notifications of 3TJ of gas under IA-004 and 1TJ of gas under IA-005. In fact, as Mr Weatherly explained, Simply Energy actually “receipted” 4.765TJ of gas on 8 February 2017. He said that this discrepancy was not unusual and was due to physical practicalities in operating the pipeline, such as the pressure differentials at different valves along the pipeline, some of which are shared points with a flow rate being affected by multiple users. He said that the pipeline operator has to manage this to attempt to satisfy nominations of relevant shippers across the various delivery points on an hourly basis and that, as a result, there is almost always a discrepancy between volumes nominated and volumes receipted. He said that it was because of variations like this that PPPL factors in an operational buffer of 0.2TJ/h as previously described.

428 Mr Weatherly then turned to address the internal agreement with Synergen Power, being IA‑008, and the Internal Agency Terms and Conditions (December 2014) (Internal Agency T&Cs). Mr Weatherly said that IA-008 was prepared under his direction, but he did not give careful consideration to how the IA-008 document which contained the commercial terms interrelated with the provisions of the Internal Agency T&Cs. Clause 2.1(a) of the Internal Agency T&C’s is as follows:

**2.1 Gas Sales**

(a) The Principal may make quantities of Gas available to the Agent for the Agent to sell on the Principal’s behalf in the Designated Market. The Principal is not obliged to make Gas Available for such sale.

429 IA-008 contains the following:

The terms of the Internal Agency Terms and Conditions (December 2014) apply to the supply of Gas under the Agency Service as if the reference to the Principal under those terms were references to the Seller and references to the Agent were references to the Buyer.

Mr Weatherly said that it was apparent to him that there was a drafting error in the agreement which he did not notice at the time. Mr Weatherly explained why he considered that to be an error. He said that Synergen Power was required to pay substantial fixed charges to PPPL under IA-008. Those charges passed through on a “pro-rated” basis charges which PPPL was required to pay Epic Energy under the MAPS Contract. He structured the charges in IA-008 in this way so that PPPL was under an obligation to provide transport to Synergen Power which was consistent with the obligation that Epic had taken on to provide transport to PPPL under the MAPS Contract and proceeded on that basis. Mr Weatherly did not consider it was a matter of PPPL “making the gas available for sale” without any obligation to do so. He said that based on his experience with arm’s length contracts with third parties, charges of this kind are not ordinarily payable for a no obligation transportation service.

430 Mr Weatherly said that for the period 1 January 2017 to 31 December 2017, to his observation, PPPL and Synergen Power conducted themselves on the basis that the Agency Service MDQ of 15TJ/d was a firm right in favour of Synergen Power; PPPL had no discretion as to whether it would make the Agency Service MDQ of 15TJ/d available to Synergen Power; and Synergen Power submitted PASA inputs in respect of its Mintaro and Dry Creek assets on the basis that the Agency Service MDQ of 15TJ/d was firm. There was no occasion that he could recall where Synergen Power sought, but was not provided with, gas and supply transport under the Agency Service MDQ.

431 Mr Weatherly states that on 8 February 2017, PPPL delivered 18.2TJ of gas to Synergen Power being 17.2TJ in relation to the Agency Service MDQ and 1TJ in relation to the Firm Service MDQ.

432 The AER relied heavily on PPPL’s ability to secure sufficient gas and transport to run GT12 with GT11 on 9 February 2017 and submitted that if that could be done on the day after the relevant day, then that is strong evidence (so the argument goes) that it could have been done on the relevant day and, prior to that, it could be reasonably expected that it could be done. Mr Weatherly gave evidence seeking to meet this argument and the broad effect of his evidence was said by PPPL to be that the events on 9 February 2017 were extraordinary and not in the ordinary course of business of PPPL and ENGIE. Mr Weatherly explained the steps that he took to enable it to occur. He described the steps as having been taken in anticipation of a proposed direction being given by AEMO on 9 February 2017 and said that those steps were extraordinary, not in the ordinary course of the business of PPPL and ENGIE, and in some respects, went beyond PPPL’s contractual entitlements.

433 On 8 February 2017, Mr Weatherly formed the view that there was a high likelihood that AEMO would direct PPPL to operate two gas turbines at Pelican Point PS on 9 February 2017.

434 Mr Weatherly said that he went into the office on the afternoon of 8 February 2017 and was in the office until about 10 or 11 pm that night overseeing the arrangements that could be put in place by the traders to give PPPL the best chance of complying with any direction that was received.

435 Mr Weatherly discussed the matter with his counterpart at Santos and he told that person that it was highly likely that PPPL would be interrupting Santos’ Interruptible Firm Haulage Capacity for 9 February 2017. Mr Weatherly said that the interruption of Santos’ Interruptible Firm Haulage Capacity was only possible because PPPL had not previously interrupted Santos in the days leading up to 9 February 2017.

436 PPPL was able to secure an additional 1TJ of non-firm gas from BHP at Minerva. PPPL was able to execute a gas swap with Santos which involved purchasing 15TJ of gas from Brumby in exchange for providing an equal quantity of gas to Santos at Longford utilising gas from the Simply Energy portfolio. In relation to this gas, Mr Weatherly did not know what rights Santos had to that gas, whether its rights were firm or non-firm, or what its gas requirements were and whether it would be in a position to provide that gas. PPPL’s signed confirmation for this swap was sent to Santos at 00.37 am on 9 February 2017 with Santos not formally responding until 2.06 pm on 9 February 2017. Mr Weatherly said that prior to that confirmation, PPPL had no commercial rights to that gas.

437 Simply Energy purchased 7TJ of gas from Santos at Minerva under a non-firm alternative delivery point deal it had on the basis of on-selling this gas to PPPL. As with the Brumby swap described above, Mr Weatherly said he did not know in advance whether Santos would be in a position to sell Simply Energy that gas in the circumstances.

438 PPPL nominated for a significant volume of interruptible transport on the SEAGas PCA pipeline. It nominated for more TJs of interruptible transport than it had TJs of non-firm gas secured for that period. It did this by nominating the receipt and delivery of more gas than it was proposing to receipt onto the pipeline and deliver from the pipeline. Mr Weatherly said that this was done to increase its allocation of Maximum Daily Quantity (MDQ) and Maximum 12 Hourly Quantity (M12HQ) throughout the day so as to maximise the available transport for 9 February 2017 and the only way to get that allowance was to nominate a large enough quantity of gas for the day given that the hourly figures were derived based on a formula for daily nominations.

439 Mr Weatherly said that the high nomination carried a real risk, most notably on a high demand day, that PPPL’s transport rights would be curtailed. This was because if PPPL took out more gas from the pipeline during a peak period than it supplied to the pipeline, the pipeline pressure would drop in response to which SEAGas would ordinarily curtail PPPL’s gas transport rights or request that PPPL reduce its nomination to address the problem leaving PPPL unable to rely on such interruptible transport. In addition, the more interruptible supply that PPPL nominated, the greater risk of it being interrupted because interruptible is only available to the extent that firm rights holders are not using their firm allocation.

440 Mr Weatherly said that he was of the view at the time that PPPL could not use linepack to increase its MHQ and M12HQ entitlements for the day because he understood that linepack could not be used as a means to book additional interruptible transport because interruptible transport is only allocated where the amount of gas nominated to be brought onto the pipeline is in excess of the Firm MDQ entitlement. Mr Weatherly said that as such, PPPL needed to over-nominate total receipts in order to get the MHQ and M12HQ figures high enough to operate two turbines. Mr Weatherly said that the measures he pursued were undertaken without knowing in advance the extent to which they would succeed and allow PPPL to operate two turbines on 9 February 2017. He said that PPPL was also assisted by the fact that demand was, as events transpired, lower than anticipated so it did not need to run at full capacity for the entire day and the PCA pipeline was not, as events transpired, fully utilised.

441 Mr Weatherly described the steps he did not expect to be able to undertake on an ongoing basis in the ordinary course of business, particularly on a cumulative basis during periods of high demand. He said that until a particular desired output scenario is identified, he would have had no ability “in prospect” to determine what steps would need to be taken to achieve the particular scenario and then assess the likelihood of the various conditions for the cumulative operation of two turbines being achieved for any length of time.

442 Mr Weatherly said that, notwithstanding the events on 9 February 2017, he did not hold the view during the period from November 2016 to February 2017 that PPPL should make PASA availability submissions to AEMO on the basis that, on 24 hours’ notice, PPPL could operate two turbines concurrently.

443 Mr Weatherly was a forthright witness. His evidence at the beginning of his cross-examination about the gas and gas transport PPPL could be left with after firm rights were taken into account was at times argumentative and difficult to follow, but other than that, he honestly expressed his opinions and observations. However, I do not accept all of his opinions and observations.

444 Mr Weatherly was tested on his statement that PPPL could be left with as little as 20TJ/d of contractual gas supply available to it on the PCA pipeline. He agreed that that was the bottom of the range of theoretical possibilities in terms of the amount of gas that PPPL could obtain, that it regularly obtained more than 20TJ/d and that even with one turbine, PPPL was dependent on obtaining more than 20TJ/d. Further, the bids PPPL was making into the market in 2016 and 2017 were dependent on it obtaining more than 20TJ/d to run its one turbine.

445 Mr Weatherly was not monitoring PPPL’s daily purchases of gas and gas transport and he would not necessarily know of the purchases which were firm and which parts were non-firm. He had a “good breadth and overview of what was going on”.

446 With respect to the prospects of obtaining non-firm gas from BHP from the Minerva gas field, Mr Weatherly believed BHP would have had a financial incentive by way of saving costs, in bringing the field to an end sooner rather than later. Mr Weatherly agreed that it was normal in 2016/2017 for BHP to provide gas to PPPL above the fixed entitlement of 35TJ/d. As I will explain, I do not think there was a significant risk in February 2017 of BHP not being able to provide the full 35TJ/d of contracted gas supply on the PCA pipeline.

447 Mr Weatherly agreed that PPPL was regularly obtaining non-firm gas supplies over the summer of 2016/2017. He was less clear about whether that meant that PPPL relied on non-firm gas to run its business in the ordinary way. In this context, he referred to the fact that Synergen Power operates peaking power stations and did not need a large amount of gas very often. I took him to say that the average amount provided to Synergen Power was 2TJ/d. In another part of his cross-examination, Mr Weatherly said that he took comfort from the fact Synergen Power would only require 16TJ/d on peak days and if one looks at how much Synergen Power actually burned for “the whole quarter all year”, it was miniscule. Mr Weatherly agreed that PPPL was frequently able to obtain non-firm gas over the summer of 2016/2017. However, he made the point that obtaining commercial gas to run a second turbine was a completely “different measure” and in the course of his answer, he said:

You’re on negative margins. It didn’t make any sense.

448 Mr Weatherly said that he and the traders at PPPL would adopt an approach of “practical commercialness” to whether it was possible to turn two turbines on at the same time.

449 With respect to PPPL obtaining gas by swaps with Santos, Mr Weatherly said that that had happened, but he would not rely on it. He had conducted an analysis of the history of swaps between PPPL and Santos and it was in his head. He had done the same thing in relation to PPPL’s use of linepack stored on the PCA pipeline. He disagreed with the suggestion that providing PPPL had a positive imbalance that is linepack at the start of the day, then the maximum amount of gas PPPL could take delivery of was not only its firm entitlement, but also linepack.

450 With respect to the capacity on the PCA pipeline, Mr Weatherly agreed that PPPL regularly used in excess of its firm MDQ over the summer of 2016/2017 suggesting that the other Foundation Shippers were not using their capacity, but he could not say to what extent. One would need hourly data to do that and a “fundamental error” in Mr Snow’s analysis was that he had relied on data showing daily capacity. As I understood it, Mr Weatherly’s evidence was that daily data might show that the pipeline was not fully used for the day, whereas hourly data might show the pipeline was fully utilised at particular times. There was available capacity, but, according to Mr Weatherly, it is impossible to say how much capacity. Only SEAGas could provide that information and one would be “generalistic” to draw conclusions about capacity from daily data. He did say one could say something about capacity in a general sense, but a number or amount could not be given. He said that he had been told by SEAGas that it had basically run out of capacity on the PCA pipeline on 8 February 2017. Mr Weatherly said the suggestion that PPPL would always be able to obtain interruptible transport rights of 40TJ/d was “ridiculous”. Mr Weatherly denied a link between PPPL’s interruptible rights under the PCA Contract and Santos’ interruptible rights under its agreement with PPPL.

451 As to his statement that PPPL could be left with as little as 18TJ/d of firm gas transport on the PCA pipeline, Mr Weatherly accepted that a quantity of 18TJ/d would only permit one turbine to be run at 240 MW for about 9.3 hours. He agreed that one of his staff responsible for arranging gas supply and gas transport as at 11 November 2016 would be “pretty sure” that he or she could obtain gas supply and gas transport to run a single turbine for much more than 9.3 hours. He agreed that in terms of gas supply, PPPL would have much more than 20TJ/d of gas available to it and it would probably have 35 on average, 34. It had 35TJ firm supply from BHP and 5TJ firm from Origin Energy. That amounted to 40TJ. It on-sold basically 40TJ of that to Simply Energy and the amount that was on-sold to Synergen Power would have averaged 100TJ over that period, 200TJ. It was not a big number and the Pelican Point PS would have had access on most days to 35TJ of commodity and, on average, would have burnt about that amount. Mr Weatherly agreed that he would have expected throughout the summer of 2016/2017 that PPPL as a matter of probability would have been able to obtain gas supply and gas transport to run a single turbine for much longer than 9.3 hours on most days.

452 As I have said, the issue with the internal agreements is whether they can be ignored by the group (Mr Snow) or whether they are binding and give rise to firm obligations (PPPL, including Mr Weatherly).

453 On any view, IA-008 does not reflect a sale agreement by PPPL as seller and Synergen Power as buyer. The terms of the agreement reflect PPPL as principal and Synergen Energy as agent and the agent selling gas on behalf of the principal and the principal having no obligation to provide gas to the agent. Even accepting that Synergen Power was the principal and PPPL was the agent, PPPL was not, on Mr Weatherly’s understanding, selling gas on behalf of Synergen Power.

454 Mr Weatherly was cross-examined at length about the binding nature of the internal agreements. He agreed that there was unlikely to be legal action between the parties, but at the same time, he disagreed that the internal agreements were prepared purely as a matter of “accounting treatment”. He intended them to be legally enforceable. He said that they were legally enforceable, but he doubted that they would end up in Court. It is difficult to know what to make of IA-008. Mr Weatherly was acting for both parties and the written agreement does not reflect the “intentions” of the parties. I do accept that the fixed charges in IA-008 are suggestive of a firm obligation to provide gas. I also accept that PPPL provided Synergen Power with 15TJ/d and sometimes more and that Synergen Power paid its monthly bills.

455 There were agreements for gas supply which were not mentioned in Mr Weatherly’s evidence-in-chief. One such agreement was between Simply Energy and Santos Direct Pty Ltd (Santos) for the supply of 20TJ/d by Santos to Simply Energy during the summer months which was the subject of a force majeure arrangement. Santos offered delivery at an alternative delivery point, namely, the Minerva East Delivery Point. Part of this gas was on-sold by Simply Energy to PPPL under IA-011 for the 2017 calendar year, but the agreement was not signed until 21 March 2017. IA-011 provided for an MDQ of 4.3TJ which was discretionary.

456 One and the same person within the PPPL group does the trading for Simply Energy and PPPL. The gas sits in the portfolio. A contract may follow later when it is decided what is to be done. The traders work out the best way of optimising the gas “for a day, a week, a month”. Mr Weatherly said that under the arrangement with Santos, Simply Energy/PPPL received from Santos during the summer of 2016/2017 between 4TJ/d and 7TJ/d. Simply Energy received 7TJ from Santos on 9 February 2017 on the basis that this gas would be on-sold to PPPL.

457 The AER submitted that Mr Weatherly addressed the hypothetical of GT11 running on 8 February 2017 with GT12 running for four to eight hours in order to assess whether PPPL could obtain sufficient gas and gas transport for that to occur on an unwarranted and unrealistic basis, namely, that GT11 would be run for the entire 24 hours producing 240 MW. Mr Weatherly accepted that GT11 running for the whole 24 hours producing 240 MW did not happen often, but he said that his opinion would be the same even if GT11 had run for only 12 hours.

458 PPPL ran two turbines on 9 February 2017. Mr Weatherly was asked whether it was possible to do that on 8 February 2017. He said he did not think that was commercially realistic or reasonable. He agreed that it was a matter for him and the internal traders at PPPL to make decisions about reallocating gas within the portfolio and said that they acted on both sides of the transaction, “so we could easily enter into a new transaction with ourselves at any time if we thought was an appropriate and arms-length basis”. He expressed a concern about how reallocating gas would affect other companies in the ENGIE group, including Synergen Power and the PASA submissions that company had made.

459 Mr Weatherly said the events on 9 February 2017 were extraordinary and it was not commercially realistic to think that forecasts could be made on the basis of the events of that day. He disagreed with the suggestion that he knew on 8 February 2017 that the PCA pipeline was extremely unlikely to be fully utilised on 9 February 2017, and he said that he had since been told by SEAGas that the pipeline was at the end of their limits at the peak of the afternoon.

460 It seems that at the very least, Mr Weatherly agreed with the proposition that PPPL’s over-nomination on the PCA pipeline was not an infrequent practice during the summer of 2016/2017.

461 Mr Weatherly agreed that he was not the person responsible within PPPL for the making of PASA availability submissions in relation to the Pelican Point PS and he said that was the responsibility of the spot traders.

### Mr O’Farrell

462 Mr O’Farrell was instructed by PPPL to review Mr Snow’s first report and consider the questions addressed in the report and to set out his views and findings.

463 Mr O’Farrell began his first report by referring to his background and experience as a portfolio manager and senior trader operating over 13 years on both the PCA pipeline and MAPS and with a number of gas electricity generators in South Australia. He also had experience working at AEMO dealing with operational risks. Clearly, Mr O’Farrell has relevant expertise in terms of some of the issues before the Court. He was employed as an energy trader in various roles at Origin Energy between 2005 and 2018 and one of his roles was as gas portfolio manager. One of his primary responsibilities in that role was managing Origin Energy’s rights and responsibilities with respect to the PCA pipeline and MAPS.

464 Mr O’Farrell was aware of various regulatory and contractual obligations associated with PASA submissions, daily electricity bids and pipeline nominations and he referred to these obligations (as he put it) “collectively as ‘good faith’”.

465 Like Mr Snow, Mr O’Farrell focused on what PPPL should have reasonably expected that it would practically be able to do on 24 hours’ notice in the period from 11 November 2016 to 8 February 2017.

466 Mr O’Farrell said that a conservative approach was required and that firm commitments frame the decision. Once those firm commitments are respected, the question is whether there were sufficient non-firm options of gas supply and transport that could be relied upon in sufficient probability to serve the good faith obligation to the electricity market to, “say what you will do, and do what you say” to operate GT12 as additional capacity.

467 Mr O’Farrell identified the key issue as gas transport on the PCA pipeline. As I have said, Mr O’Farrell was a portfolio manager at Origin Energy which was a Foundation Shipper together with PPPL and Energy Australia, under the PCA pipeline contracts. Mr O’Farrell disagreed with Mr Snow as to what expectation about gas supply PPPL ought to reasonably have held.

468 Mr O’Farrell did not disagree with Mr Snow’s answers to questions 1 and 2 in the first letter of instructions in terms of the facts, but he did disagree with a backward looking approach which he considered had been adopted by Mr Snow. Mr O’Farrell did not disagree with Mr Snow’s answer to question 3 in the first letter of instructions to the effect that PPPL had no additional gas available to it in terms of other firm gas supply. It is in this context that Mr O’Farrell introduces into his analysis the significance of contractual constraints involving MHQ and M12HQ.

469 Mr O’Farrell said that Mr Snow should have focused on gas flows required on an hourly basis, rather than a daily number of supply. He said that this means that potentially less gas than Mr Snow identified could be transported on a day than its firm daily entitlements simply if the delivery of that gas violates the hourly or 12-hourly firm contractual entitlements. Mr O’Farrell draws two conclusions from his analysis of hourly transport rights and obligations and they are as follows: (1) Mr Snow’s analysis of what firm transport was actually available to PPPL with 24 hours’ notice is not accurate; and (2) given the contractual hourly limits of the two pipelines, MAPS and SEAGas, PPPL did not have enough firm transport capacity to reasonably expect it would be able to run GT12 on 8 February 2017, in addition to the commitments it had already made in respect of GT11 and its commitments to Synergen Power and Simply Energy.

470 Mr O’Farrell addressed specific firm hourly and 12-hourly rights available to PPPL on MAPS. PPPL could not rely on MAPS transport to run GT12 concurrently with GT11 and with Dry Creek and Mintaro fully utilising all of the 12-hourly firm delivery rights on the MAPS, without breaching the MAPS Contract. He said that the use of linepack is a moot point because it does not overcome the hourly and 12-hourly constraints. As far as the SEAGas contract is concerned, the concurrent operation of GT11 and GT12 (for four hours) would breach Firm M12HQ in the contract.

471 PPPL had firm rights to a daily quantity on the PCA pipeline of approximately 58.717TJ after the sale of gas transportation to Origin Energy. The firm entitlement in terms of a maximum hourly quantity is 2.936TJ which means a firm entitlement to no more than 2.936TJ/hr. There is also a contractual restriction in each 12-hourly period calculated on a rolling basis. The figure for this is 33.12TJ of gas over any rolling 12 hour period and 2.76TJ/hr. After taking into account Santos’ firm rights to 20TJ/d, the result in figures for PPPL are 38.717 (MDQ), 2.066 (MHQ) and 1.84 (M12HQ).

472 Mr O’Farrell calculated that to run GT11 and GT12 for four hours would require 2.656TJ/hr. He said that he based that on the accepted heat rate.

473 Mr O’Farrell’s opinion was that PPPL could not run GT11 and GT12 together without contravening the M12HQ.

474 Mr O’Farrell pointed out the difficulties and impracticalities of a run-time for four hours.

475 Mr O’Farrell expressed his opinion on the firm nature of the internal agreements, IA-008 and together IA-004 and IA-005.

476 Mr O’Farrell then addressed the first question in the second letter of instructions to Mr Snow. That question was what non-firm sources of gas and gas transportation were available to PPPL for use at the Pelican Point PS on 8 February 2017. Mr O’Farrell said that in order to bid offering generation capacity to the market, a generator ought to have a reasonable expectation that they should be able to perform as they have bid. In this context, Mr O’Farrell said that in the case of PPPL, it had insufficient transportation rights, but it had a probable expectation of securing enough fuel and some interruptible transport during the period from 11 November 2016 to 8 February 2017 which could facilitate generation at GT12. He said that, in those circumstances, the outstanding issue is whether PPPL would have been able to have a reasonable degree of certainty as to which days the interruptible transport would be available on a fully contracted pipeline. Mr O’Farrell noted that Mr Snow states that both the MAPS and the PCA pipeline were fully contracted for this period. Mr O’Farrell said that of relevance to a scenario where non-firm gas is sought to run GT12 for four hours is the certainty required to commit the power station to a daily bid at 12.30 pm and purchasing gas before the pre-dispatch has been released. In the case of SEAGas, non-firm interruptible transport rights are not locked in until after the final day ahead nominations are accepted by the pipeline at 3 pm AEST, which is after the NEM daily bid it required. Any interruptible nomination would not be considered confirmed until after 3.30 pm, which is after the 12.30 pm NEM daily bid cut-off.

477 Mr O’Farrell addressed Mr Snow’s answer to the second question in the second letter of instructions which was a question as to PPPL’s reasonable expectation on 24 hours’ notice of what it would practically be able to obtain in terms of gas on 8 February 2017 for use at the Pelican Point PS in addition to the firm sources (i.e., 40TJ comprised of BHP (35TJ) and Origin Energy (5TJ)). Mr O’Farrell expressed the following opinions: (1) it would be reasonable to expect that the BHP Minerva gas would be available for supply on 8 February 2017; (2) all other observations of Mr Snow on gas supply are reasonable, subject to one exception which is presently immaterial; and (3) whilst it would have been possible for PPPL to secure uncontracted gas for 8 February 2017, it could not be said to be a reasonable expectation, having regard to gas market conditions and temperatures on the day.

478 Mr O’Farrell said that his answer to questions 3 and 4 asked of Mr Snow in the second letter of instructions is no. He was a gas portfolio manager operating in South Australia at the relevant time. He expressed the opinion that ENGIE’s gas portfolio which was designed to operate the joint assets of PPPL and Synergen Power, as well as the obligation to Simply Energy, was not adequate to run both units at the Pelican Point PS concurrently and nor was it designed to do so. Mr O’Farrell said in substance that PPPL’s redesigned gas portfolio (gas supply and transport) was suitable for running one turbine at Pelican Point PS and unsuitable for running two turbines. That was reflected in the following matters:

(1) the sale by PPPL of 30TJ of gas transport on the PCA pipeline to Origin Energy;

(2) the support by way of what Mr O’Farrell considers firm MAPS capacity provided to Synergen Power by PPPL as illustrated in IA-008; and

(3) the Santos transport agreement whereby PPPL sold 20TJ/d firm rights in the PCA pipeline and 30TJ/d interruptible (up to 100TJ a week and 2,000TJ a year) making it “likely PPPL expected to use the interruptions to allow for GT 11 to run at a low capacity factor (running less than 20% of the available hours in a year)”.

479 PPPL did not have sufficient firm capacity to run GT12 for four hours on 8 February 2017 with GT11 and nor was it to be reasonably expected that it could acquire non-firm gas supply and gas transport for 8 February 2017. Furthermore, under its contracts, PPPL had insufficient hourly pipeline capacity and, in particular, its 12-hourly receipt and delivery rights were constrained below any feasible concurrent operation of GT12 and GT11.

480 Mr O’Farrell’s second report addressed two matters. First, Mr O’Farrell considered whether he agreed with the AER’s proposition that any MT or ST PASA submission for 8 February 2017 which was less than 320 MW was not a “reasonable estimate” in the sense of a rational estimate based on proper grounds and not arbitrary or capricious or in the sense of not involving a reasonable expectation as to the practical ability to procure on 24 hours’ notice, if required to do so, gas including gas from non-firm gas supply and gas transportation rights. He did not agree with the AER’s proposition and, in fact, he considered that a MT or ST PASA submission of 320 MW or higher for 8 February 2017 would not be a reasonable estimate because in order to generate at 320 MW, “PPPL would require a confluence of favourable circumstances (which I refer to as compounded non-firm dependencies), which prior to 8 February 20178 were not sufficiently certain such that PPPL would have had a reasonable expectation that they would all arise, including with 24 hours’ notice”. Secondly, Mr O’Farrell considered how PPPL would, in any event, make a PASA submission which reflected generation of 320 MW over four hours, including what period would be nominated and how entries would be made in the AEMO dispatch system. I have summarised his evidence in relation to the second matter as part of my consideration of Mr Sanders’ evidence.

481 Returning then to the first matter, Mr O’Farrell identified his compounded non-firm dependencies as follows.

482 First, the overarching issue in Mr O’Farrell’s opinion was that non-firm gas and gas transport would be required to run the turbines and this would have been seen by the diligent and prudent operator as too speculative to include in a PASA submission.

483 Secondly, Mr O’Farrell was of the view that in order to make a PASA submission of 320 MW, a number of things would have had to have occurred. The starting imbalance on the PCA pipeline would had to have been positive and this depended on what occurred on the previous day and would affect delivery rights on the days following. PPPL would need to source non-firm gas from a supplier of gas at a delivery point at which PPPL has rights and capacity to transport to the Pelican Point PS. The high temperatures would affect the demand. As to non-firm transport, the PCA pipeline was fully contracted and obtaining interruptible transport depended on another shipper on the pipeline not nominating its contracted (firm) capacity. Competition from other shippers seeking available non-firm transport will or may affect what PPPL is able to secure. The ability of PPPL to interrupt the Santos haulage rights on the PCA pipeline of 30TJ was subject to constraints which may be affected by events in the immediately preceding days. Finally, as I understand Mr O’Farrell’s evidence, in his opinion, PPPL could not just purchase and put through the pipeline non-firm gas for four hours, but would need to do so for the whole 24 hour period.

484 Thirdly, Mr O’Farrell said that it is relevant that the process of PASA submissions and obtaining gas and gas transport was undertaken within “a complex regulatory and contractual nomination framework which required a series of rolling and interconnected nominations and re-nominations to be made by PPPL over a period of weeks in the lead up to 8 February 2017”.

485 This then is a summary of Mr O’Farrell’s evidence. I will need to come back to details of his evidence when addressing the availability of gas and of gas transport.

486 However, there are three overlapping matters concerning Mr O’Farrell’s approach which it is convenient to mention at this stage.

487 The first matter is that Mr O’Farrell was cross-examined at length about the extent of his reliance in terms of forming his opinions on the fact that he identified what he called a conservative framework of regulation and information. I have already referred to his approach of referring to a number of differently expressed obligations “collectively as ‘good faith’” and his reference to the concept of “say what you will do, and do what you said”. What was suggested to him by the AER, as I understood it, was that when he came to address the questions as to what PPPL should have reasonably expected, he brought to bear a different and higher standard than those words, “reasonably expect”, would ordinarily suggest. He denied that suggestion and he said that he answered the questions that Mr Snow addressed according to their terms. PPPL’s answers to this criticism was to refer to Mr O’Farrell’s unique expertise as a person who worked for Origin Energy at the relevant time and with the PCA pipeline and MAPS and to identify other “good faith” obligations in the PCA Contract, such as cl 21.1 and Annexure 1, Part 3, cl 2(e)(ii).

488 Both of those matters may be acknowledged, but neither provide an answer to the present matter. There is certain material in his first report which suggests that Mr O’Farrell’s view of other obligations, both regulatory and contractual, influenced his view as to the standard to be met when a Scheduled Generator makes PASA submissions. However, I am disposed to give Mr O’Farrell the benefit of the doubt and accept that the range of other obligations did not affect his opinion.

489 However, this conclusion does not mean that the standard Mr O’Farrell applied is not relevant and this is the second matter. It was not always clear to me what level of certainty Mr O’Farrell considered was necessary before it could be said that gas and gas transport are available. At different times, his position seemed to be, on the one hand, that non-firm gas and gas transport was never to be taken into account and, on the other, that they could be taken into account if their availability was highly probable. I do not propose to set out his various statements. In the end, I think his approach was quite clear and that was that non-firm gas and gas transport should not be relied on in making PASA submissions unless the availability of such gas and gas transport is overwhelmingly probable. A further observation about his evidence is that at times he seemed to have difficulty accepting any scenario that was different, or different to any significant extent, from what PPPL actually intended to do.

490 The third matter is related to the first two and it concerns Mr O’Farrell’s probability theory. In its most extreme form, his theory was that past events could not be used to predict the probability of future events. He gave as examples the fact that tossing two coins three times and each time getting two heads does not make it more probable that the next time two heads will be the result and what he called the “turkey fallacy” which is that the turkey would have no reason to think that tomorrow (Thanksgiving) would be any different from the past 363 days. I do not think that either of these analogies are appropriate and, in fairness to Mr O’Farrell, there were other parts of his evidence where I did not think he put this proposition in this most extreme form. It seems to me that where something has happened on a reasonably regular basis in the past, in terms of the supply of gas or gas transport, then that is relevant to reasonable expectation as to the future and, to the extent Mr O’Farrell relied on the contrary proposition, I do not accept his evidence.

# THE ISSUES

491 As I have said, the AER advanced two operating scenarios which were the basic 320 MW scenario and the 8 February counterfactual.

492 The basic 320 MW scenario involves GT11 and GT12 operating concurrently for four hours and nothing more. It is not in dispute that PPPL did not operate the two turbines concurrently at any time between 11 November 2016 and 8 February 2017. Nor, so far as I can see, was it a practice of PPPL to run a single turbine for commercial purposes for a period of only four hours. That was not how the business was run.

493 In my opinion, the basic 320 MW scenario was quite an unrealistic one. That was also the view of the experts who disagreed on many matters, but not on this. Mr Snow considered the scenario as not an operational or practical one and as one raising a theoretical question and he expressly said that the turbines were unlikely to be run this way “in reality”. Furthermore, Mr Snow said that, from an engineer’s point of view, it would be unrealistic to bring a turbine up for four hours and then drop it off again.

494 It would, of course, be possible to frame Rules which had the effect of requiring the disclosure of maximum generating capacity at any point in time during the day and on the basis of any and all operating scenarios. However, I do not consider that cl 3.7.2(d) and cl 3.7.3(e) have that effect when read by practical people involved in the industry. The definition of PASA availability refers to the availability of a scheduled generating unit and then to what else can be made available on 24 hours’ notice. It is true that the definition refers to available *in a particular period* (emphasis added), but it seems to me that in terms of the supply of gas and gas transport, the approach embedded in the definition is one of what does the Scheduled Generator intend to do and what else can be made available on 24 hours’ notice. This conclusion is supported by the fact the ST PASA input of PASA availability is to represent the Scheduled Generator’s current intentions and best estimates.

495 Mr Snow calculated the gas required for the basic 320 MW scenario. I do not think his calculations were disputed. The figure was 10.64TJ calculated by reference to the following formula: 320 MW x 4 hours x 8.31GJ/MWh. There cannot be any dispute that PPPL had access to quantities of gas and gas transport for the Pelican Point PS well in excess of 10.64TJ on 8 February 2017. However, for the reasons given, I do not consider that PPPL was required to assess and determine its PASA submissions by reference to the basic 320 MW scenario. In the circumstances, I do not need to consider PPPL’s other arguments as to why the basic 320 MW scenario is unrealistic and inappropriate, including that 10.6368TJ would not lead to MHQ or M12HQ amounts sufficiently high to enable two turbines to be run concurrently, that including in addition an amount of gas to overcome the problem, would leave open a question of to whom this gas would be provided and finally, there is no explanation as to how the basic 320 MW scenario would be presented in a PASA submission.

496 There are three key issues in determining whether the relevant Rules have been contravened. They are the availability of gas supply, the availability of gas transport and the relevance (if any) of the physical condition of GT12. An important sub-issue, in terms of the availability of gas transport, is the effect of contractual restrictions on the hourly and 12-hourly supply of gas on the ability of PPPL to operate two turbines concurrently.

497 By way of recapitulation, PPPL will only have contravened cl 3.7.2(d) if the MT PASA input of PASA availability was not a reasonable estimate and cl 3.7.3(e) if the ST PASA input of PASA availability was not its best estimate (it being clear that it did represent its current intentions) in the sense of the best judgment PPPL could reasonably form on the information known to it, including information it could reasonably be expected to obtain in the circumstances. Availability includes the ability to run the turbine or unit and that means the supply of gas and gas transport is relevant. As far as those matters are concerned, a reasonable estimate or best estimate is one where the estimator or forecaster or prognosticator had a reasonable expectation that it would be able to obtain sufficient gas and gas transport to meet the estimate.

498 I propose to deal with these matters in the following order, that is, the availability of gas supply, the availability of gas transport and the relevance (if any) of the physical condition of GT12.

## Availability of Gas Supply

499 Mr Snow’s calculations of the additional gas required for the 8 February counterfactual were not disputed. For GT11 to run as it did on 8 February 2017 and GT12 to run on 8 February 2017 as it did on 9 February 2017, that is, for approximately four hours, would have required an additional 3.23TJ of gas. This scenario is shown in Figure 19 of Mr Snow’s first report. The gas actually used at the Pelican Point PS on 8 February 2017 was 38.876TJ and the gas required for the 8 February counterfactual was, on Mr Snow’s calculations, 42.110TJ.

500 As I have already said, PPPL had firm right to 40TJ of gas on 8 February 2017, being 35TJ/d under the BHP Gas Supply Agreements and 5TJ/d under the Origin Energy Gas Supply Agreement. As PPPL pointed out, there were no rights to “as available” or “interruptible gas” under the Origin Energy Gas Supply Agreement.

501 PPPL’s case as advanced primarily through Mr Weatherly was that PPPL could be left with as little as 20TJ/d of firm gas to operate the Pelican Point PS because of internal agreements with the two related companies, Simply Energy and Synergen Power, whereby it could be required to deliver and transport up to 20TJ of gas to those companies. The terms of those agreements are outlined earlier in these reasons (Simply Energy: IA-004, IA-005 and Australian Energy Standard Gas Sale Agreement December 2014; and Synergen Power: 1A-008 and Australian Energy Standard Gas Sale Agreement). PPPL correctly pointed out that both Simply Energy and Synergen Power could nominate delivery of that gas on the MAPS, but as it did not have rights to any firm gas on the MAPS, where it did not have sufficient MAPS linepack to satisfy nominations by Simply Energy and Synergen Power at MAPS delivery points, that gas would be required to be sourced from gas that PPPL could supply to and transport from the PCA onto the MAPS via the interconnector. PPPL did not have contractual rights to any non-firm sources of gas supply for transport on the PCA pipeline.

502 As previously indicated, there is a dispute between the parties as to the status of these agreements. In addition, there are the particular problems with the fact that IA-008 does not reflect what Mr Weatherly said the agreement was. Even if one accepts that the agreement was as Mr Weatherly described it, the problem of the binding nature of these agreements remains. It is important to keep firmly in mind the nature of the question before me. I am not in this proceeding determining an action on one of the agreements. I am considering how they should be taken into account in reaching a reasonable estimate or best estimate of the availability of gas on 8 February 2017, or perhaps more accurately, the reasonable expectation of gas availability on 8 February 2017 for the purposes of a reasonable estimate or a best estimate of PASA availability.

503 Two important points emerged from Mr Weatherly’s evidence. First, these are not agreements with third parties and one and the same person acted on both sides of the transaction such that they could be varied and, as Mr Weatherly acknowledged, it is most unlikely the related parties would end up facing each other in Court. To some extent then, it is appropriate to look beyond the agreements and consider the whole of the gas within the portfolio of the group and the needs of the group. The second important point to emerge from Mr Weatherly’s evidence is that the power stations at Dry Creek and Mintaro were peaking power stations and their requirements for gas, averaged out, were really quite low.

504 I turn now to consider non-firm gas supplies.

505 The AER’s case based on the evidence of Mr Snow is that PPPL could reasonably expect to have been able to obtain 45.3TJ of non-firm gas on 8 February 2017 with 24 hours’ notice comprised as follows:

(1) 15TJ through a Santos swap;

(2) 1TJ from BHP at Minerva;

(3) 4.3TJ from Santos at Minerva East through an on-sale from Simply Energy having regard to the MDQ at 4.3TJ/d stated in 1A-011 (Mr Weatherly gave evidence that this provision was overridden on 9 February 2017 to on-sell the whole 7TJ Santos supply to PPPL – see below); and

(4) 25TJ from MAPS linepack and/or Moomba supply.

506 Mr Snow corrected the figures in his first report to recognise further information provided in Mr Weatherly’s second affidavit. Of significance is that his assumption concerning 7TJ of non-firm gas was incorrect by reference to 1A-011 between PPPL and Simply Energy and he said the figure should be 4.3TJ non-firm gas. What Mr Weatherly said in his second affidavit in dealing with the operation of GT12 on 9 February 2017 was that Simply Energy purchased 7TJ of gas from Santos at Minerva under a non-firm delivery point deal it had “(on the basis of on-selling this gas to PPPL)”. He went on to say that he did not know in advance whether Santos would be in a position to sell Simply Energy that gas in the circumstances. PPPL was asked to produce any agreements which formed the basis of the transactions and IA-011 was produced. It was not documented and signed until 21 March 2017, although it is expressed to apply for the 2017 calendar year. It contained a provision that Simply Energy supply PPPL with As Available gas “at [Simply Energy’s] absolute and sole discretion” of up to 4.3TJ/d which Mr Snow accepted for the purposes of his second report. As Mr Weatherly’s second affidavit and then his cross-examination made clear, the amount Simply Energy purchased from Santos on 9 February 2017 and then on-sold to PPPL was 7TJ and the sale of 7TJ by Simply Energy to PPPL was effected despite the provision for a maximum daily limit of 4.3TJ. Mr Weatherly said the decision to do that would have been made internally (i.e., within the group) by a trader. When it was put to Mr Weatherly in cross-examination that internal agreements of the type exemplified by IA-011 would not be legally enforced, he responded by saying that they would be, but he doubted they would end up in Court, “because I don’t think the parents were that silly”.

507 Mr Snow’s approach to the issue of determining how much additional gas PPPL could reasonably have expected that it would practically be able to obtain (assuming 24 hours’ notice) on 8 February 2017 for use at the Pelican Point PS in addition to firm gas was to examine the recent history, that is to say, events in January and February 2017 with a view to ascertaining the gas PPPL had been accessing regularly at that time that was in excess of firm rights (and how the gas had been transported). His analysis led him to the conclusions about the amount of gas that “with 24 hours’ notice it would have been reasonable and practical for PPPL, as professional gas portfolio managers and traders, to access”, set out in his reports and previously referred to.

508 In question or proposition 4 addressed by the experts in the joint experts’ report asked the experts to address how much non-firm gas supply and gas transport PPPL had available to use in the Pelican Point PS on 8 February 2017 on 24 hours’ notice. Mr Snow’s answer to that general question of how much gas was available was to say it was too speculative to answer categorically. Mr O’Farrell said that he agreed with Mr Snow that “non-firm gas is too speculative”.

509 Mr Snow went on to refer to the figures in his report and said that they were based on historical data only. They were evidence of what was available and what could be achieved. He considered that it was relevant to note that PPPL in fact secured a sizeable level of non-firm gas (17.497TJ) on 8 February 2017. He expressed the opinion that non-firm gas supply by its very definition was speculative to start with and the question can only be answered by considering the historical data. The question is whether PPPL could get additional gas “historically” and they had been able to and that led to his corrected estimate of available or achievable non-firm gas of 45.3TJ. He said that in one sense, hypothetically, PPPL could get an endless supply of non-firm gas and that the question can only be answered by the “historical records”. Mr Snow approached the matter, therefore, by asking what is the reasonable expectation of getting gas supply that is non-firm. As I understand it, Mr Snow said the historical evidence is evidence of what has been sought and has been achieved and, therefore, the expectation “must be reasonable, or it would not ever be sought”. There is a line between firm and non-firm gas supply. Mr Snow said that with respect to non-firm gas supply, PPPL would have had reasonable expectations, but that does not mean it would have got it. PPPL looked for gas and found it, but, and this is a point relied on by PPPL, it was reasonable not to make firm commitments on additional generation until supply of the non-firm gas that may be required is confirmed.

510 Mr O’Farrell’s opinion as expressed in the joint experts’ report was different. He considered that “reasonable” in this context meant “probable” and he agreed with the approach of Mr Foulds that PASA submissions should not be changed until the supply of non-firm gas is confirmed. Mr O’Farrell considered that from a portfolio manager’s perspective, gas supply and gas transport which is not firm should be considered speculative and not probable or likely. Mr O’Farrell considered that because, in his view, it is implicit in the NER that a Scheduled Generator should be able to “perform any PASA or daily bid submission”, the Scheduled Generator’s approach should be conservative. As I understand it, Mr O’Farrell would only include non-firm gas supply in a PASA submission where there are “overwhelming circumstances which make it, on the balance, something to be relied upon in tight supply conditions”.

511 In his opening, PPPL’s counsel identified criticisms of Mr Snow’s approach to the availability of gas supply, although the extent to which these criticisms were still pressed at the conclusion of the case was not entirely clear. In his oral opening, counsel for PPPL made two criticisms of Mr Snow’s approach.

512 First, PPPL submitted that Mr Snow’s approach was informed by “20/20 hindsight” and was an “ex post facto analysis”. PPPL pointed to evidence Mr Snow gave in cross-examination when he was asked from what day it became apparent that there would be some interruptible gas transport that PPPL “might have been able to avail itself of” and he responded that he had not undertaken that “form of analysis” and that what he had done was an “ex post factor [sic] review”. Further, Mr Snow agreed in cross-examination that he had not put himself in the shoes of a hypothetical competent, reasonable and diligent generator in November 2016 looking forward to 8 February 2017.

513 The short answer to this submission is that Mr Snow addressed directly the issue of reasonable expectation for 8 February 2017 from 11 November 2016 as to the availability of gas supplies (and gas transport) in his first report at paragraphs 2.2.3 to 2.2.6 (i.e., answers to questions 2 and 3 in the letter of instructions dated 12 November 2020). In other words, he did address the correct question. Insofar as it is said that Mr Snow erred in relying on historical practice or events, as I have already explained (and provide a further example below), I reject the suggestion that historical practice or events is irrelevant.

514 Secondly, counsel for PPPL criticised Mr Snow’s approach on another, albeit related ground. He submitted that “worse still” Mr Snow combined events that actually occurred on 8 and 9 February 2017 and on that basis, proceeded to form a view as to a reasonable expectation as to what could have been done on 8 February 2017 with respect to gas supply and gas transport. Mr Snow did refer to events on 9 February 2017, but he also referred to and relied on events which occurred prior to 8 February 2017 and I do not consider that in forming his opinions, Mr Snow impermissibly “combined” events as PPPL contended.

515 It seems to me to be significant that the effect of Mr O’Farrell’s evidence involved some concessions with respect to the availability of gas supply. First, although he maintained his view that, for example, interruptible (non-firm) transport rights are determined by the timeframe in which access to those rights shift from uncertain to confirmed on a continuum and he said for a bid to be made offering up generation capacity to the market, the generator is expected to have a reasonable expectation that they should be able to perform as they have bid, he said that PPPL had insufficient transportation rights, *but had a probable expectation of securing enough fuel and some interruptible transport during the period of 11 November 2016 through 8 February 2017 which could facilitate generation at GT12* (emphasis added). Secondly, in addressing the quantities and sources of additional non-firm gas reasonably expected to be available on 24 hours’ notice, Mr O’Farrell first observed that it was reasonable to expect that BHP Minerva gas would be available for supply on 8 February 2017 because although the Minerva gas field was in decline, it had a track record of providing sufficient volume above contract. He then said that *all other observations by Mr Snow on gas supply are reasonable* (emphasis added), with the exception of certain sources of gas supply. Those sources of gas were identified by Mr Snow, but as it happens, not relied on by him. Mr Snow did not rely on the purchase of gas from Santos, Origin Energy or ERM at Moomba.

516 A further example of the flaws in Mr O’Farrell’s criticism of Mr Snow’s reliance on historical evidence is as follows. As seen above, an element of Mr Snow’s reasonably expected non-firm gas was 15TJ through a Santos swap. Mr Snow noted that on 8 February 2017, PPPL had obtained 7TJ from Santos from the Otway Gas Plant through a gas swap transaction under the Santos Master Bilateral Agreement. He noted that this was a regular arrangement and that in the past, PPPL had been able to access under the swap arrangement with Santos up to 15TJ/d. PPPL did so on 9 February 2017 having organised the swap at approximately 10.30 am on 8 February 2017. Mr Snow set out in a graph he prepared the history of swaps between PPPL and Santos from 15 January 2017 to 24 February 2017. This led Mr Snow to conclude that PPPL could reasonably expect to obtain 15TJ of gas through a Santos swap on 8 February 2017.

517 Mr O’Farrell was cross-examined by counsel for the AER about the general topic of whether PPPL’s historical ability to obtain gas supply on a non-firm basis was relevant to the likelihood of PPPL being able to obtain gas “on a forward-looking basis” and then Mr Snow’s reliance on the Santos swap. As to the general proposition, he expressed the opinion that PPPL’s historical ability to obtain gas was not relevant. This led Mr O’Farrell to his probability theory which, as I have said, I do not accept.

518 PPPL pointed to a number of uncertainties in the securing of non-firm gas in support of their proposition that its gas supply position was such that it could not have expected to obtain sufficient non-firm gas on 24 hours’ notice to run two gas turbines concurrently. It submitted that the AER’s evidence does not establish how much gas was available in prospect, from whom and where it could be obtained, or where it could be receipted. Mr O’Farrell gave an example in his evidence when he said that his employer, Origin Energy, ran out of gas for one of its GPS units on 8 February 2017. PPPL submitted that it is important not to assume that because parties operating complex portfolios which involve more than just power generation, that is, gas retailing and trading, are able to engage in ad hoc transactions to manage their commercial positions in the ordinary course of business, that they have the ability and certainty to have committed each GJ of gas that ultimately went through in their portfolio on a day to power generation at least 24 hours in advance.

519 PPPL submitted that the complex nomination process within 24 hours necessary to “firm up” supply was a matter that weighed against any reliance on non-firm gas for the purpose of making PASA submissions.

520 PPPL submitted that the difficulty in obtaining non-firm gas supply was apparent even from the uncertainty involved in PPPL’s “firm arrangement” arrangements. In this regard, PPPL referred to an agreement between Santos and Simply Energy and providing for the sale by Santos to Simply Energy of 20TJ during the summer months in 2017. This agreement provided for two delivery points, one at Longford and the other at EGP. On 22 December 2016, Santos notified Simply Energy of an event of force majeure under the provisions of the agreement. The event of force majeure was from a deliveries commencement date of 1 January 2017 through to 12 January 2017. Santos described the factors impacting on the Longford facilities and giving rise to the force majeure event. On 25 January 2017, Santos advised Simply Energy that from 27 January 2017 and until further notice, it may have substituted gas at an Alternative Delivery Point, namely the Minerva East delivery point. On 27 January 2017, ENGIE wrote to Santos confirming that the possible availability of substituted gas at an Alternative Delivery Point, being the Minerva East delivery point, was of interest to them.

521 PPPL also submitted that the source of gas on the PCA pipeline, namely the Minerva gas field, was in decline. I accept that that was the case. PPPL submitted that the extension of the “firm” contracts for gas in the Minerva gas field was staggered due to uncertainty about the reserves. I accept that as that was the evidence of Mr Weatherly. PPPL submitted that it had “no visibility” over BHP’s commercial drivers as to, on the one hand, having an incentive to deplete the field as quickly as possible to minimise running costs, for example, wages, and on the other, avoid any shortfall charges under its joint venture arrangements. That was the evidence of Mr Weatherly and, at a general level, I accept it as correct. PPPL submitted that to the extent it was drawing more than its firm entitlements from the Minerva gas field, that created uncertainty about its prospective gas supplies. Mr Weatherly also gave evidence that one of the fields at the Minerva gas field “basically watered in” in or about 2016 and I accept that that would affect the supply of gas. However, at the same time, I accept the evidence of Mr O’Farrell referred to above that although the field was in decline, it had a track record of providing sufficient volume above contract. I add to this the evidence of Mr Snow that between 16 January 2017 and 15 February 2017, PPPL regularly obtaining above contract quantities of gas from BHP and had regularly nominated up to 43TJ/d from BHP.

522 PPPL also submitted that it is one thing to identify gas supplies that are generally available in the market, but it is another thing to identify gas supplies that can be received on to the PCA pipeline at a receipt point to which PPPL had access. By way of example, PPPL referred to the fact that it was of no assistance to have gas at Longford because, as Mr Weatherly said, there is no way “to really get Longford gas across to South Australia”. Mr Weatherly expressed the view that most of the fields were fully contracted and obtaining gas was “like getting hen’s teeth”. PPPL submitted that the ability to engage in gas swaps was of limited benefit. As I have already said, a gas swap involves two parties, two mirror transactions where each party is a buyer of gas under one transaction and a seller of gas under another transaction. PPPL and Santos Direct Pty Ltd were both buyers and sellers of gas. They entered into a Master Gas Sales Agreement on 27 May 2016. That agreement provided for the terms of the sale and purchase of gas. Each sale and purchase of gas came into existence upon the execution of a Transaction Confirmation. The Transaction Confirmation for the sale of 7TJ in the supply period commencing at 6 am on 8 February 2017 and ending at 6 am on 9 February 2017 by Santos to PPPL with a delivery point at the Brumby delivery point is Transaction Confirmation No 29 and the sale of the equivalent amount of gas by PPPL to Santos with a delivery point of EGP delivery point is Transaction Confirmation No 30. PPPL organised a swap with Santos for 15TJ on 9 February 2017. It is true that the swaps involved PPPL obtaining gas at another point where it had access rights and that each party had the right to decline to enter into the swap and it is true that PPPL’s swaps history with Santos shows different amounts on different days and on some days, no swaps at all. Furthermore, it is also true that the transaction does not become “firm” until less than 24 hours prior to the day in question. However, the evidence of Mr Snow shows that from 15 January 2017 to 24 February 2017, PPPL regularly entered into swaps of gas with Santos for amounts often of about 7TJ/d and up to 15TJ/d.

523 I accept the AER’s submission that PPPL’s relationship with Santos was confirmed by the evidence of Mr Weatherly as follows. Mr Weatherly said that he went into the office on the afternoon of 8 February 2017 to assist PPPL’s traders to work through how gas might be sourced for 9 February 2017 and how that gas could be transported having regard to PPPL’s gas supply and transport portfolio at the time. He contacted his Santos counterpart on his way into the office on that day. They discussed market conditions and circumstances, including his view that it was highly likely that PPPL would be interrupting the Santos interruptible firm haulage capacity for 9 February 2017. Mr Weatherly inquired about Santos’ gas supply availability, including swaps, for the coming days. Mr Weatherly cannot recall whether Mr Hasler told him an amount of gas that might be able to be made available or whether he said he would need to “get back to me”. Mr Weatherly then said to Mr Hasler words to the effect “How much could be made available if Tom [Koutsantonis, then Minister for Energy] calls Kevin [Gallagher, then CEO of Santos]?”. Mr Weatherly said that this was his colloquial way of asking how much gas could be supplied on a non-commercial basis in the event of an emergency.

524 The AER submitted that the pattern of acquisitions of non-firm gas over the summer of 2016/2017, particularly over January and certainly before the six day trading period for the submission date for ST PASA, clearly shows that it was able to obtain non-firm gas. The AER submitted that these are not random unconnected events which could not have been predicted on an ex ante basis. The pattern of acquisitions of non-firm gas over the summer speaks in a highly probative way to the manner in which PPPL had structured its business and its commercial relationships. Therefore, it held the required expectation throughout the entire period from 11 November 2016 to 7 February 2017.

525 Mr Snow addressed how PPPL used linepack storage on the MAPS and he outlines the position between 11 November 2016 and 7 February 2017 in a graph he prepared which shows PPPL’s MAPS linepack balance trends. From his analysis of the data, he formed the opinion that PPPL has access to between 40TJ and 47TJ of gas stored on the MAPS at all times between November 2016 and 8 February 2017. He was not challenged on that evidence. The gas stored as linepack on the MAPS might have been used to operate Synergen Power’s Mintaro and Dry Creek Power Stations, but the AER submitted that the PASA availability of the Pelican Point PS was not conditioned by the hypothetical assumption that all of the gas that is stored on the MAPS as linepack would have to be set aside to enable the Mintaro and Dry Creek Power Stations to be operated.

526 As I mentioned earlier, Synergen Power’s Mintaro and Dry Creek Power Stations rarely operated and if they were not operating or only taking up to 1.3TJ per hour of supply from the MAPS, then it would be open to PPPL to take gas that it had stored on the MAPS linepack at a rate of up to 2.4TJ per hour for use at Pelican Point PS. It follows that there were a number of options available to PPPL to obtain gas on 24 hours’ notice to operate its turbines.

527 I consider that the evidence supports a finding that prior to 8 February 2017, PPPL ought to have reasonably expected to be able to obtain sufficient additional gas to run GT11 and GT12 in the manner envisaged under the 8 February counterfactual. PPPL was obtaining relatively large quantities of non-firm gas in the ordinary course of its business and the additional amount to operate GT12 for four hours is relatively small. I accept the evidence of Mr Snow. In addition, the tendency of the evidence of both Mr Weatherly and Mr O’Farrell was that the real problem was gas transport, rather than the gas itself or, at least, gas transport was more of a problem (see at [420], [476] and [515]).

528 In addition to these matters, PPPL’s responses to certain questions in the Section 28 Notice suggest that gas could be obtained at short notice.

529 Question 19 was as follows:

Between 11 November 2016 and 8 February 2017, state whether IPAH considered that it was possible to operate GT11 and GT12 concurrently under the existing Gas Supply Arrangements as described above in questions 15 and 17, and if so, the timeframe to bring the second gas turbine to a state of readiness to operate if required. In your response, provide the basis on which this view was based and details as to why IPAH considered that this was or was not possible.

PPPL’s response was as follows:

No, not under existing agreements for any period of length.

However, ENGIE is of the view that it was possible to operate GT11 and GT12 concurrently during the relevant period, subject to sufficient time to secure gas commodity and transportation capacity outside of those existing agreements, appropriate staffing levels at PPCCGT, and sufficient time being available, having regard to environment and safety concerns.

ENGIE did not operate the two GTs concurrently for commercial reasons. In ENGIE’s view at the relevant point in time, a 12-hour timeframe would likely be sufficient to enable it to operate the two GTs concurrently, if directed to do so. The amount of time these two plants could have run would be variable and most achievable if limited to a number of hours only.

530 Question 23 and the answer thereto is also relevant. They are set out above (at [346]).

531 PPPL submitted that these statements were not admissions because they were premised on a direction being given by AEMO and that makes the situation quite different. I deal with that submission below in the context of the availability of gas transport. For the reasons there given, I conclude that the answers are significant.

532 I also deal below with the issue of the point in time at which a reasonable expectation of the availability of gas transport ought to have arisen. Even if a reasonable expectation of the availability of gas supply arose at an earlier point in time, it makes no difference to the result because both must be present for the relevant Rules to be engaged. The points I make about Mr Snow’s approach (at [678]) mean that if it did arise earlier, it was not significantly earlier.

## Availability of Gas Transport

533 A convenient starting point is to identify the gas transport actually used by PPPL on 8 February 2017. PPPL took delivery on that day of 57.495TJ of gas and that involved the following elements. First, the transportation of 35.598TJ from the Minerva Gas Plant to Adelaide on the PCI pipeline and then the PCA pipeline. The PCI pipeline, or Port Campbell to Iona pipeline, is 11 kilometres, whereas the PCA pipeline is 680 kilometres. No issues arose in relation to the PCI pipeline. It was briefly referred to by Mr Snow in his first report. PPPL is a Foundation Shipper on the pipeline with a MDQ of 200TJ/d and the connection points include the Minerva connection point. There was no relevant capacity limitations on the pipeline that would affect the supply of gas to the Pelican Point PS on 8 February 2017. Secondly, the transportation of 12TJ of gas from the Otway gas plant to Adelaide (Santos 7TJ and Origin Energy 5TJ) on the PCA pipeline. Thirdly, 9.847TJ of gas was sourced from the MAPS linepack.

534 As I have said, the additional gas required for the 8 February counterfactual of 3.23TJ is not disputed.

535 The way in which PPPL used the gas it took delivery of was as follows: (1) an amount of 38.876TJ was used at the Pelican Point PS; (2) an amount of 18.2TJ was supplied to Synergen Power for use at the peaking power stations at Dry Creek (9.871TJ) and Mintaro (8.329TJ); and (3) an amount of 0.419TJ “system use gas” (SUG) on the MAPS.

536 The focus of the parties was on the PCA pipeline, although the AER put an argument that there was no need for additional transport on the PCA pipeline because PPPL could have sent 3.23TJ less onto Synergen Power and supplied that company with the equivalent amount of gas from linepack on MAPS. I will deal with this argument later in these reasons.

537 The AER identified three sources of additional transport on the PCA pipeline and they are interruptible rights under the PCA Contract, the right to interrupt the supply of transport to Santos and rights in relation to the PCA Imbalance Service.

538 The evidence with respect to the availability of gas transport led to the identification of three issues. First, there is an issue as to whether the general circumstances were such that PPPL should have reasonably expected at the relevant times that it could obtain gas transport to run a second turbine in accordance with the 8 February counterfactual. Secondly, although a subset of the first issue, there is an issue as to whether the complex regime of forecasts, nominations and renominations under the PCA Contract meant that a reasonable expectation as to the availability of additional transport at the relevant times could not and did not arise. PPPL particularly emphasised this matter and the AER addressed it separately. Finally, there is an issue as to whether the constraints in the PCA Contract by way of hourly and 12-hourly limits that meant that gas could not be delivered off the pipeline in a way that would enable two turbines to be run concurrently?

### PCA Pipeline

#### General circumstances relevant to the availability of gas transport

539 The first matter to be considered is the amount of firm rights to gas transport on the PCA pipeline held by PPPL. Mr Snow addressed this matter in his first report. He said that PPPL had rights to “some” 90TJ/d on the PCA pipeline. Mr Weatherly said that the figure was 88TJ/d and it is convenient to proceed on the basis of this figure. PPPL had sold 20TJ/d of these firm rights across the summer months to Santos and 30TJ/d of these firm rights to Origin Energy, leaving it with 38TJ/d. It had made 30TJ/d available to Santos, but classified as interruptible, with maximum interruption limits weekly (100TJ) and annually (2,000TJ). Mr Snow noted that these limits effectively meant that PPPL could only interrupt the Santos interruptible PCA pipeline capacity for up to three days per week.

540 Mr Weatherly referred to these obligations and in addition, he referred to the internal agreements involving Synergen Power (IA-008) and Simply Energy (IA-004 and IA-005) involving 20TJ/d of gas. It was by taking all of these obligations into account that Mr Weatherly said that PPPL could be left with as little as 18TJ/d and that was assuming the supply to Santos of 30TJ/d was interrupted by PPPL.

541 The fact is that PPPL had firm rights of 38TJ/d being 8TJ/d retained solely by PPPL and then 30TJ/d Firm Interruptible Haulage that PPPL had on-sold to Santos.

542 I turn to the extent to which PPPL could rely on non-firm rights to gas transport on the PCA pipeline and that depends on the extent to which there was spare capacity on the pipeline. The starting point is, as Mr Snow noted, that the PCA pipeline was 100% contracted to the Foundation Shippers (PPPL, Energy Australia and Origin Energy). In other words, all of the capacity of the PCA pipeline was the subject of firm rights held by the Foundation Shippers. That meant that PPPL, for example, could only access “interruptible” capacity to the extent that one of the other Foundation Shippers did not avail itself of the full amount of its firm entitlements on a day. Even then, if one of the Foundation Shippers had not nominated the full amount of their firm capacity, they could “claw back” capacity at any time pursuant to their firm rights.

543 It is convenient at this point to note some further matters about certain provisions of the PCA Contract.

544 Annexure 1 to the PCA Contract deals with SEAGas’ obligation to provide the Firm Forward Haul Service. Annexure 1 Part 3 deals with the effect of pipeline system conditions on MDQ. Annexure 2 is entitled “Special Conditions” and it contains, inter alia, a formula for the calculation of the quantity of Maximum Daily Quantity (MDQ). Net Firm Service MDQ is the quantity of gas delivered by PPPL minus amounts for linepack Management Gas Compressor Fuel Gas and Heater Fuel Gas. The available firm capacity can be affected by conditions such as temperature.

545 A Shipper may dispose of its MDQ or part thereof. If a Shipper disposes of part thereof, then what is left in the Shipper’s hands after the disposition or trade is the Shipper’s Traded MDQ (Annexure 1, cl 4.1). PPPL began with firm rights of 88TJ/d and disposed of 30TJ/d during the relevant period after 1 April 2016 to Origin Energy. PPPL’s firm rights after this disposition or trade were 58TJ/d and this amount is, indeed, reflected in the Scheduled Quantities Reports issued by SEAGas (the pipeline owner or, as per the PCA Contract, “the Transporter”) from time to time. The disposition to Origin Energy is different in character and effect from the agreement PPPL had with the Santos companies (Santos GHCSA) for 20TJ/d firm and 30TJ/d interruptible firm haulage capacity during the summer months. Under the Santos GHCSA, PPPL did not dispose of part of its MDQ, but rather, agreed to use its rights on the PCA pipeline to haul gas on behalf of Santos. PPPL sought to make something of Mr Snow’s lack of understanding of the agreement between PPPL and Origin Energy, but I do not consider it to be a matter of significance. PPPL’s right to interrupt the Interruptible Firm Haulage Capacity of 30TJ/d could be exercised solely on the basis of its assessment of increased economic return to PPPL, but was subject to two constraints, being the provision to Santos of 110TJ/wk in the summer months and 4,360TJ/yr.

546 Annexure 3 to the PCA Contract provides for SEAGas to make available to PPPL the imbalance service which PPPL described generally, but in my view sufficiently for present purposes, as involving a formula which increases or decreases PPPL’s transportable rights depending on the difference between receipts and deliveries during the preceding days and the imposition of tight limits on the imbalance between receipts and deliveries to constrain PPPL’s ability to take deliveries of gas on a day that are above or below the receipts onto the pipeline.

547 Mr Snow said that he never “got to the bottom” of the capacity of the PCA pipeline to store gas, that it varied almost daily and that the capacity to store gas on the PCA pipeline was nowhere near the capacity on the MAPS. Mr O’Farrell spoke in terms that, as he saw it, receipts had to equal deliveries and that the imbalances are “fairly tight in this particular pipe”.

548 Mr Weatherly addressed the matter and he said that PPPL regularly used linepack for the storage of gas on the PCA pipeline and it regularly went “up and down” and positive linepack would be taken into account in determining if a second gas turbine could be run at the Pelican Point PS, but it would not make much difference because one cannot use it without reducing or “giving up” other firm transport. That latter aspect of Mr Weatherly’s evidence does not seem to me to be right having regard to the terms of the PCA Contract (Annexure 3, cl 3(b)(vi)). PPPL was prudent in managing its imbalance and that was important in terms of maintaining the Hourly Allowable Overrun Entitlement which, as will be seen, is relevant to the calculation of Maximum Hourly Quantity (MHQ) (see Annexure 10, cll 15.2 and 15.7).

549 Mr Snow addressed linepack on the PCA pipeline in his first report and made the following points. First, PPPL used 3.007TJ of PCA linepack on 8 February 2017, but not for the Pelican Point PS or the Synergen Power power stations or for MAPS use of gas. Secondly, PPPL regularly used PCA linepack for short term storage or gas balancing and had regularly used 10–15TJ of linepack (and up to 20TJ) as shown in the figures for PCA linepack trends for PPPL from 11 November 2016 to 7 February 2017. Those figures show, to my mind, the significant short term variation in PPPL’s use of linepack. Thirdly, Mr Snow said that linepack was running low (4.545TJ) on or around 8 February 2017 after linepack had been withdrawn for that day and there was linepack for only one more day. Mr Snow excluded it from the gas available to PPPL for use in the Pelican Point PS on 8 February 2017 on the basis that it would have been needed to supply Santos if Santos had required it. Despite the view of its own expert, the AER invited me to find that Mr Snow was being conservative and to find that the PCA Imbalance Service was another potential source of gas supply and gas transport on the PCA pipeline. I decline to do that because there is force in the matters raised by Mr Snow. In those circumstances, it is not strictly necessary for me to address PPPL’s submission that linepack on the PCA pipeline should not be included in the gas it should reasonably have expected would be available because as Mr Snow acknowledged, traditionally or typically those involved in gas transport would seek to match receipts and deliveries in the pipeline, that variations between the two arose in the ordinary course of business and could be significant over the short term. It seems to me that there is a good deal of force in PPPL’s submission, but as I say, I do not need to consider it.

550 Once linepack is excluded, the two sources of additional gas on the PCA pipeline relied on by the AER are the Interruptible Service and the right to interrupt the provision of 30TJ capacity to Santos.

551 PPPL referred to the concept of Enhanced MHQ Service which is dealt with in Annexure 4 to the PCA Contract. It involves an increase in hourly capacity at the expense of daily capacity and, as Mr Weatherly’s evidence suggested, the difficulty with it in these circumstances is that it overcomes one problem at the expense of creating another.

552 The Interruptible Forward Haul Service is dealt with in Annexure 8 to the PCA Contract. Three aspects of the service are to be noted. First, the Interruptible Service is that transportation service provided by the Transporter to the Shipper which is in addition to the Firm Forward Haul Service (cl 1). Secondly, the service is an Interruptible Service and it may be interrupted or curtailed for any reason for which the Transporter is entitled to interrupt or curtail the Firm Forward Haul Service under Annexure 1 and “to the extent necessary due to a Shipper exercising any nomination variation rights available to that Shipper in respect of firm services” (cl 4.1(b)). Clause 4.2 provides that where there is insufficient Capacity in the Pipeline System on a Day to allow SEAGas to provide all services scheduled for that Day, the provision of Firm Services will have priority over the provision of Interruptible Services. Thirdly, there is a general obligation expressed in terms of reasonable endeavours on the Transporter (SEAGas) to maximise Available Interruptible Capacity (cl 3.1(a)). The Transporter will not be in breach of that obligation if an insufficiency in Available Interruptible Capacity on a day is due to either the Transporter’s obligation to provide Firm Services or the physical constraints of the Pipeline System (cl 3.1(b)). In other words, SEAGas is not in breach of its reasonable endeavours obligation to ensure there is sufficient Available Interruptible Capacity in the Pipeline System where one of the other Foundation Shippers chooses to exercise its firm rights which it can do at any time at well under the 24 hours’ notice.

553 Mr Snow’s opinion was that spare capacity was available on the PCA pipeline on 8 February 2017. The way in which the AER put its case was that although the precise amount of spare capacity that PPPL had a contractual entitlement to as a Foundation Shipper on any given day may be uncertain, whatever the amount was it was clearly going to be substantial. Mr Snow had data from the Gas Bulletin Board showing compressed capacity of the PCA pipeline, freeflow capacity and actual use from 6 to 10 February 2017 and (with less detail) from 1 January 2017 to 31 March 2017. It is known from that information that on 8 February 2017 the compressed capacity of the PCA pipeline was 314TJ (also shown as the Pipeline Capacity in the Scheduled Quantities Report for 8 February 2017 issued on 9 February 2017 at 6.26 am), the freeflow capacity was 250TJ and the actual receipts were 267TJ meaning, so it was said, that there was unused capacity of 47TJ. The equivalent figures for 9 February 2017 were 314TJ, 250TJ, 254.5TJ and 59.5TJ respectively, and the equivalent figures for 7 February 2017 were 314TJ, 250TJ, 141.5TJ and 172.5TJ respectively. The graph produced by Mr Snow showed that for the majority of the time between 1 January 2017 and 31 March 2017 the figure for actual receipts was at 200TJ or below. Mr Weatherly seemed to confirm in his evidence that there was substantial spare capacity on the PCA pipeline during the summer of 2016/2017. The AER submitted, correctly it seems, that it was not put to Mr Snow that his analysis of the spare capacity on the PCA pipeline was incorrect.

554 There was a dispute between the parties as to whether, in assessing the spare capacity on the PCA pipeline, Mr Snow had relied on appropriate and correct data. Mr Weatherly and Mr O’Farrell each said that Mr Snow’s reliance on daily figures as to pipeline capacity was flawed and that where the availability of interruptible transport is the issue, hourly constraints on the pipeline are the key constraints. It submitted that Mr Snow did not and could not, given the lack of data from SEAGas, conduct “an analysis which considered hourly utilisation on the pipeline”. PPPL submitted that Mr Snow’s opinion is defective in that he said that hourly constraints were not relevant.

555 The AER pointed out that neither Mr Weatherly nor Mr O’Farrell referred to this asserted flaw or deficiency in Mr Snow’s analysis in their written reports. Mr O’Farrell did not refer to it despite the fact that he would have been aware of the basis upon which Mr Snow was drawing his conclusions as to the spare capacity on the pipeline. He did not challenge Mr Snow’s approach about spare capacity in either of his reports or in the joint experts’ report. Mr Weatherly did not challenge Mr Snow’s approach about spare capacity in the pipeline despite having Mr Snow’s first report before he prepared his second affidavit.

556 The AER submitted that that challenge, if it was to be made, should have been put directly to Mr Snow, but was not. There was no challenge to Mr Snow’s conclusions based on the data from the Gas Bulletin Board and it would be unfair to uphold the challenge in those circumstances.

557 In addition to that point, it contended that there were other matters in the evidence which corroborate Mr Snow’s conclusion that PPPL could have reasonably expected that it would practically be able to obtain sufficient gas transport for the additional non-firm gas.

558 First, the AER relies on the fact that the invoices from SEAGas to International Power (PPPL) for haulage services provided in late 2016 and early 2017 show that PPPL was using substantial quantities of interruptible transport at the time. The invoices and explanatory material show that in the seven days leading up to 8 February 2017, PPPL was using up to approximately 44TJ/d interruptible capacity on top of its firm right to 58TJ/d. The invoices and explanatory material show that it obtained more than 28TJ of interruptible capacity each day between 31 January 2017 and 5 February 2017 (save for 4 February 2017 where the amount was 27.06TJ). The AER submitted that that period of time up to 8 February 2017 where PPPL was using those very substantial quantities of interruptible capacity is highly significant because it immediately preceded and overlapped with the six day window in which ST PASA availability submissions had to be made.

559 This material establishes that throughout January and February 2017, PPPL was able to nominate for interruptible capacity such that it was able to transport up to a total of 100TJ/d of gas on the PCA pipeline. The AER submitted that the suggestion that there was some capacity constraints on the pipeline with which the graphs and other data presented by Mr Snow were inconsistent, is itself inconsistent with the information shown in the invoices and explanatory material. As the AER submitted, the invoices clearly show that PPPL was invariably able to use substantial amounts of spare capacity for its own purposes. The invoices and explanatory material were put to Mr O’Farrell in cross-examination. He agreed that they indicate that there was substantial interruptible capacity on the PCA pipeline available to PPPL during the summer of 2016/2017. He agreed that from the commencement of the summer of 2016, any reasonable gas trader working at PPPL would have known that there was an amount greater than zero of interruptible capacity on the PCA pipeline available to PPPL and that there is nothing surprising about the levels of interruptible capacity used by PPPL over January and February 2017 as shown in the invoices.

560 Secondly, the AER submitted that Mr O’Farrell’s opinions were not only flawed because he had not considered the invoices and other material and because his opinions were based on his probability analysis, but they were also flawed because they had no regard to the way in which PPPL’s commercial operations were ordinarily conducted throughout the summer. The AER submitted that PPPL was so confident about the availability of ample interruptible capacity that its entire business operations were premised on being able to obtain interruptible capacity. Mr Weatherly agreed that PPPL’s ordinary commercial operations required it to use interruptible capacity over the summer of 2016/2017. PPPL had a firm entitlement to transport of 88TJ/d. It on-sold 80TJ/d leaving it with 8TJ of firm rights, together with a firm right to interrupt the 30TJ it had made available to Santos. PPPL had contracted with BHP to buy 35TJ/d in December 2016. Having regard to those circumstances and the fact that PPPL’s obligation under its contract with BHP was a 90% take or pay obligation, PPPL must have had a real confidence that it would be able to reliably transport that gas on the PCA pipeline and rely on the PCA interruptible service to do so. In this context the AER made a more general submission about PPPL’s approach. It submitted that PASA availability is a quantity that must be submitted by Scheduled Generators of all kinds regardless of their fuel source and that estimating PASA availability was not ordinarily about carrying out a fine analysis of the provisions of gas transport agreements and sub haulage agreements. PPPL’s analysis had moved to such a level of detail that PPPL has mounted a defence based on Mr O’Farrell’s evidence that the running of two turbines simultaneously was impossible because of the MHQ and M12HQ limitations, a matter which I address below.

561 Thirdly, the AER relies on Mr Weatherly’s evidence with respect to the reasonable endeavours clause (cl 3.1) in Annexure 8 to the PCA Contract. Mr Weatherly gave the following evidence about the effect of this clause:

And was it your, is it your understanding that that requires the transporter, being the owner of the pipeline, to use its reasonable endeavours to ensure that there is enough available interruptible capacity to enable Pelican Point to transport a quantity of gas in excess of its firm MDQ. That’s right, isn’t it?---Yes. It’s – the obligation’s there to make sure transporter, as an example, when you’ve got a lot of firm shippers in the pipeline and just say, one firm shipper didn’t nominate, for them not to turn a compressor off and then not to have that capacity available to them. So you want to put a maximising effect onto them to make sure, well, just because you’ve met your firm entitlements for the day for what has been nominated, you don’t just stop there if the pipeline can do more; do more.

562 A little later, Mr Weatherly said the following:

… There’s a positive obligation on a transporter to not just stop the – its firm services that it has to provide for that day, to also – you do what it can do to provide additional services if it can do so.

… Yes. It’s to make sure they didn’t deliberately go, “Well, I’ve already met my firm service for the day; I don’t have to turn that compressor on”. It’s a very good positive obligation on them, from a user’s point of view.

563 Mr O’Farrell, in cross-examination, agreed that cl 3.1 in Annexure 8 means that SEAGas owes an obligation to PPPL under the contract to maximise the amount of available interruptible capacity that is potentially available to PPPL.

564 This clause is relevant, but not central to the issue of what one might reasonably expect about capacity on the PCA pipeline.

565 Fourthly, the AER submitted that, as a matter of fact, PPPL must have known by at least 3 February 2017 that it would be able to run two turbines concurrently. That can be seen from the Scheduled Quantities Report for 8 February 2017 issued on 3 February 2017 at 12.14 pm (i.e., Revision 1). This document indicates scheduled quantities on the PCA pipeline. On 3 February 2017, PPPL had nominated 59.163TJ of its firm service and SEAGas had scheduled that amount to be delivered. PPPL had nominated 15.837TJ as part of its entitlement to an interruptible service. The whole of the total amount of 75TJ had been scheduled for delivery. The AER submitted that although the interruptible quantities specified in the schedule are not binding on the pipeline owner in circumstances where the pipeline was over-nominated, the fact that this document indicated that 15.837TJ was scheduled means that it is very likely the interruptible capacity would be made available on 8 February 2017. Clause 2.5 of Annexure 10 to the PCA Contract provides that the pipeline owner or Transporter (SEAGas) must notify the Shipper (PPPL) of its best estimate of the extent to which the pipeline owner will be able to accept the Shipper’s nomination for each day of the following week. It follows that PPPL would have had a reasonable expectation as at 3 February 2017 that it could transport at least 75TJ of gas on 8 February 2017. It must have been apparent, even at this stage, that there would be substantial spare capacity on the pipeline because all of the gas transportation that PPPL had nominated had been scheduled to be delivered. The Scheduled Quantities Report also sets out the maximum hourly quantity and the maximum 12-hourly quantity. The AER submitted that there was more than sufficient MHQ and M12HQ to run two turbines concurrently, again a matter I address below.

566 There were subsequent revisions of the Scheduled Quantities Report for 8 February 2017. Revision 3 of the Scheduled Quantities Report for 8 February 2017 issued on 7 February 2017 at 3.14 pm shows that the amount of interruptible capacity that was nominated and was scheduled by the pipeline owner had increased to 41.627TJ. In Revision 15, the amount of interruptible capacity that was nominated and was scheduled by the pipeline owner had increased again to 46.283TJ. The AER submitted that this is “completely consistent” with there being substantial amounts of interruptible capacity on the pipeline that PPPL could avail itself of if it wished to do so. That submission is correct.

567 The AER submitted that there was no evidence to support PPPL’s assertion that this increase in interruptible capacity available to PPPL on the PCA pipeline was due to the outage at Torrens Island which, in turn, created capacity on the pipeline. The AER submitted that this was no more than an assertion from the bar table and was not supported by any evidence. Mr O’Farrell mentioned a unit on Torrens Island being out and PPPL not knowing when it would be back on, but that was as far as his evidence (given in cross-examination) went. Mr Foulds mentioned the Torrens Island Power Station and said that AGL had announced its intention to mothball the power station from 2017. He also said that the mothballing was later deferred, but there was nothing about the usage of the PCA pipeline by the Torrens Island Power Station.

568 As previously stated with one minor exception, the invoices from SEAGas to PPPL show that between 1 February and 5 February 2017, the quantity of interruptible capacity used by PPPL ranged between 28TJ/d and nearly 44TJ/d. This period was before the Torrens Island incident and, in those circumstances, the AER submitted that the more likely reason PPPL nominated and was scheduled to be delivered substantially more gas on 7 February 2017 was because it sought to avail itself of higher spot prices that it expected the following day because of extreme temperatures.

569 PPPL put forward a number of responses to these submissions and it started with a contextual matter. It submitted that at no time between 11 November 2016 and 8 February 2017, did GT11 and GT12 operate concurrently. Furthermore, at the time of the decision to mothball GT12 in April 2015, the contractual arrangements for gas supply and gas transport were amended so as to dramatically reduce the firm arrangements. A commercial decision was made to reduce the costs inherent in firm contracts and to reflect intended operation of one gas turbine only. All of those matters are factually correct.

570 As I have said, PPPL submitted that it is an error to look at the capacity of the PCA pipeline by reference to a daily “perspective” and that Mr Snow erred in his approach in doing that. The error can be seen in his reliance in Figure 4 of his second report on PCA capacity and actual flow history from 1 January 2017 to 30 March 2017 (see also Figure 5 in his first report dealing with the capacity of the PCA pipeline from 6 February to 10 February 2017). PPPL submitted that the daily approach did not reflect the terms of the contract and that one needed to consider questions of capacity on an hourly and 12-hourly rolling basis.

571 Mr Weatherly agreed with the proposition that the full capacity of the PCA pipeline was not being utilised by the other Foundation Shippers over the summer of 2016/2017. However, he said that he could not say to what extent it was not being used. He considered that one would need to go to SEAGas to find that out. He considered that Mr Snow has erred by doing his calculations by reference to the Gas Bulletin Board data. One would need to see the hourly data to work out if the pipeline was being fully utilised. One would have to have information as to hourly pressures. He made the following observation:

You would be generalistic to look at daily data to do that.

572 Although Mr Weatherly agreed that he had not analysed spare capacity on the pipeline over the summer, he made the observation that it would be impossible to do that without the proper data and there is no public data to estimate that capacity. The only entity that could provide data for that exercise was SEAGas as the owner of the pipeline. Mr Weatherly put the matter in the following way:

These are just generalistic daily numbers. They don’t actually represent the pipeline capacity that was there. In fact, that is the day when I just alluded to before that I have been told by SEA Gas, that they basically run out of capacity that day. Even though it has got such a massive gap there, they have actually told it they were basically at a capacity during that day. These are daily numbers. You would not use daily numbers to measure pipeline on, capacity on an hourly pipeline.

573 Mr Weatherly said that PPPL used non-firm capacity and nominated “a lot of it”. Mr Weatherly also gave evidence that there were occasions during the summer of 2016/2017 where he was told by SEAGas that the pipeline was, at a particular point in time, fully utilised.

574 Mr O’Farrell also gave evidence that the Gas Bulletin Board data does not lead to an accurate representation of the capacity on a pipeline. That is because the pipeline has to be understood, both on an hourly basis and one has to understand where all the receipts are coming in, what are the deliveries, what it looks like on an hourly basis and at the time when you are actually trying to use it. Mr O’Farrell gave the following evidence:

… I don’t know if it’s backward looking or what the case may be. It doesn’t accurately represent a – a pipeline needs to be modelled by – it’s very sophisticated. It – where it’s delivering at every delivery point. You need to understand the pressure gradients, you need to understand what the pipeline will take. I mean, one of the things that has been good through this process is I know that we saw – on each pipeline report that we looked at, we noticed that the rights were changing by hour. Right? And – and actually even of the daily quantities that were available to Pelican, each day changed. So, you know, it wasn’t a massive number but it was changing between, say 57, 56-something, you know, like, it was moving each day …

575 The Court has evidence of the daily maximum temperatures during the calendar year 2017 and the maximum temperature on 8 February 2017 was 42.4oC. That was the highest temperature for February2017. PPPL submitted that having regard to the temperature, it is no surprise that the usage of capacity on the PCA pipeline spiked. AGL was one of the Foundation Shippers on the PCA pipeline and the Torrens Island A was offline on that day. PPPL submitted that the “look back” approach is not the correct approach and the circumstances could not possibly be predicted from the perspective of Scheduled Generators preparing MT PASA or ST PASA submissions.

576 PPPL submitted that documents such as Scheduled Quantities Report predicted one thing, but another occurred when Torrens Island A1 (AGL) went offline. At that point, capacity became available.

577 PPPL submitted that Mr Weatherly gave evidence that the PCA pipeline was heavily used on 8 February 2017 (see [572]). Mr O’Farrell said that Mr Snow’s approach was extremely disingenuous. He (Mr O’Farrell) worked and lived the events of that summer. He said that he was actually responsible for making decisions on behalf of Origin Energy and that he was the one who purchased the 30TJ of capacity from PPPL. He said he was very familiar with the PCA pipeline. He said that one needs to model the pipeline and that involves information that is not publicly available and you would have to ask the pipeline owner, that is, SEAGas. Mr O’Farrell said that he was shocked that no one had asked the pipeline owner for the relevant details.

578 In addition to these matters, PPPL relied heavily on opinions expressed by each expert in the joint experts’ report. In addressing question or proposition 4 about how much non-firm gas supply and transport PPPL had available to it to supply to the Pelican Point PS on 8 February 2017 on 24 hours’ notice, Mr Snow said that the issue was too speculative to answer categorically and Mr O’Farrell agreed that non-firm supply was too speculative. Mr Snow had performed his exercise based on historical data which led him to draw conclusions as to what was available and what could be achieved. He expressed his opinion by considering the historical data and PPPL pointed out that that was evidence which would not have been available to PPPL in advance of the times at which it made its PASA submissions.

579 As to gas transport in particular, Mr Snow said that PPPL had firm access rights to the capacity which was unused on the PCA pipeline, that there was unused capacity and PPPL had a reasonable expectation that it could access it, although there was a sequence “to go through”. Mr Snow disagreed with Mr O’Farrell’s opinion that it was not reasonable to have an expectation with respect to “interruptible” transport because PPPL would know that it could be cancelled at any time. Mr Snow said first, that “interruptible” is unused capacity on the pipeline to which PPPL had a firm right and secondly, that PPPL had consistently made PASA submissions based on capacity above the rights which Mr O’Farrell identified as firm. The first of Mr Snow’s propositions is correct, but the “firm” right is to unused capacity and certainty as to the quantity of unused capacity is unknown until a certain point in time. Mr Snow’s second proposition is correct.

580 I have previously referred to Mr O’Farrell’s approach. Mr O’Farrell considered that “interruptible” gas transport was non-firm and, therefore, speculative which he described as not probable or likely. He said a generator needed to be conservative as the Rules required a generator to be able to perform in accordance with its PASA submissions. A case might arise where a generator might rely on non-firm gas transport in tight supply conditions (and that could have been the case on 8 February 2017), but the circumstances would need to be “overwhelming”.

581 PPPL made two further points which it contended were relevant to whether it should have had a reasonable expectation with respect to interruptible gas transport.

582 First, PPPL submitted that it is not enough to show as may well be the case, that it was able to obtain interruptible transport on a day-to-day basis as part of its wider portfolio arrangements or commercial transactions where lead times and confidence were not vital, because these matters, that is, meeting lead times and reaching a required level of confidence, were vital in making PASA submissions and committing to run a power station in a particular way.

583 Secondly, PPPL submitted that the AER had not shown that the PCA pipeline had spare capacity at a particular point in time on 8 February 2017. This submission harks back to the previous criticism of Mr Snow’s approach of relying on daily rather than hourly data. The AER had established through the daily historical analysis of pipeline capacity performed by Mr Snow, that the PCA pipeline was regularly under-utilised on a daily basis, but that does not mean that there was unused capacity in the pipeline at any particular point in time. The evidence was that SEAGas monitors and models the use of the pipeline on an hourly basis. No evidence was adduced from SEAGas as to its modelling of the use of the pipeline.

584 PPPL sought to meet the point made about its confidence in obtaining gas transport being established by a take or pay obligation to BHP with respect to 35TJ of gas. PPPL said that the answer to that was that the gas was delivered onto the PCI pipeline as explained by Mr Weatherly where PPPL had 200TJ of haulage rights and PPPL was selling lots of gas into the Victorian market. The PCI pipeline was the pipeline through which its supplied Simply Energy with gas and Simply Energy was a substantial supplier of retail gas in Victoria and Greater Melbourne in particular. PPPL submitted that the gas was dispatched to the east, not to the west, using the PCI pipeline so that the take or pay obligation and the inference sought to be drawn from it fails to have regard to those critical facts.

585 On 9 February 2017, the AER issued a direction under cl 4.8.9 of the NER to PPPL to synchronise and dispatch to minimum load.

586 PPPL was able to run two turbines on 9 February 2017, including running GT12 for approximately four hours. What, if any, inferences or conclusions about the availability of gas transport on 8 February 2017 should be drawn from that fact? Mr O’Farrell said it is of no significance and it is a direction that makes “unit attempt all things possible” and a direction is very different from a daily bid or PASA submission. Mr Snow said that that circumstance was *fundamental* to his opinion about PPPL’s ability to obtain (or PPPL’s reasonable expectation that it could obtain) the gas transport on 24 hours’ notice to run Pelican Point PS in accordance with each output scenario. He said that PPPL must have had a reasonable expectation that it could do that. The evidence shows that it did it on 9 February 2017 which shows that it must have had those reasonable expectations. PPPL said to AEMO that it would try and do this using reasonable endeavours and they did secure both sufficient gas and 12 hour MDQ.

587 PPPL sought to meet any inferences adverse to its case by reason of the events on 9 February 2017 by the evidence of Mr Weatherly who described the steps that were taken to secure the operation of GT12 on 9 February 2017 as being extraordinary. Mr Weatherly said that the steps were not steps in the ordinary course of business and steps which could be taken on a cumulative basis during periods of high demand.

588 Mr Weatherly said that he formed the view on 8 February 2017 that there was a high likelihood that AEMO would provide a direction to PPPL to operate two gas turbines at the Pelican Point PS on 9 February 2017. He went into the office on the afternoon of 8 February 2017 to assist PPPL’s traders to work through how gas might be sourced for 9 February 2017 and how that gas could be transported. He said that when he walked into the office, he was confident that he would be able to obtain non-firm gas supplies to enable a second gas turbine to be run, but went on to say that he would not have been fully “aware” that that would happen. Mr Weatherly said that until a particular desired output scenario was identified, he would have no ability “in prospect” to determine what steps would need to be taken to achieve that particular scenario and then assess the likelihood of the various conditions for the cumulative operation of two turbines being achieved for any length of time. Mr Weatherly was tested in cross-examination on an opinion he expressed in his first affidavit to the effect that the risks and uncertainties he identified meant that the only commercially realistic way, taking into account the parties that could offer such services, of obtaining gas to run the second gas turbine would be to seek to enter into contractual gas supply and transport arrangements. In his opinion, in order for these arrangements to be attractive to a counterparty, they would need to have the following features: (1) they would likely need to have been for a material period of at least weeks, if not months; and (2) they would likely have come with a high take or pay percentage and in all likelihood 100%. If this is accepted, then such an arrangement would have involved PPPL committing to operate GT12 as a second gas turbine for an extended period. It was suggested to Mr Weatherly that this opinion was wrong. In describing events on 9 February 2017, he said that the day was not a commercial day, that PPPL was under a direction and that people were not acting rationally when they were talking to PPPL. He explained what he meant by people not acting rationally as people not taking into account the normal commercial matters that you would expect. PPPL was under a direction from AEMO which changed the way people operated.

589 PPPL relies on statements made on 8 and 9 February 2017 in conversations between AEMO’s representatives and PPPL’s traders and PPPL’s responses to the Section 28 Notice as evidence of the decisive nature of a direction from AEMO in terms of being able to secure gas and gas transport. I have already referred to PPPL’s submission that the answers to the notice under s 28 of the NEL are not admissions because they are based on a direction being given and that is a materially different situation from a PASA submission. I have already referred to PPPL’s response to question 19 in the Section 28 Notice (at [529]). The question refers to what PPPL could do if required and the answer refers to running two turbines “if directed to do so”. In this respect, PPPL also referred to question 23 which is set out above (at [346]). It is to be noted that in the last paragraph of the answer, there is reference to a direction increasing PPPL’s ability to obtain short-term gas and gas transport.

590 As I have said, PPPL referred to the telephone conversations between its traders and AEMO representatives on 8 and 9 February 2017. On 8 February 2017 at 22.25, Mr Godfrey said:

… We’re not going to bid the unit in because at the moment it’s – we don’t have the gas available or the transport to run it, but we would be able to be directed if required.

591 PPPL said that the Court should construe that evidence to mean that if AEMO gives a direction, then the “world turns upside down”. A little later in the same conversation, the AEMO representative asked the PPPL trader to confirm that PPPL had no gas, but was available for direction. Mr Godfrey confirmed that and said:

And, you know, bear in mind we will still have to go through the process of finding the gas.

592 Two conversations are revealing as to PPPL’s attitude to the differences between its obligation upon receiving a direction and its obligation in making a PASA submission.

593 On 8 February 2017 at 23.47, the following exchange occurred between an AEMO representative and Mr Godfrey:

AEMO: Mate, we’re just going through – thoroughly going through all the available plants.

ENGIE: Yeah.

AMEO: And what we’re doing is we’ve – you know, as part of your bids you’ve got your max availability and then your 24-hour or your PASA availability.

ENGIE: Yep.

AEMO: So at the moment do you have for Pelican Point 220 in for max and 220 for the 24-hour PASA?

ENGIE: Yep. That’s right.

AEMO: And what my manager is asking me to do is to get the PASA availabilities updated to what could be or what could be made available to us if we ask for it.

ENGIE: So okay.

AEMO: Because that’s – that’s essentially our trigger to contacting you to – to make further plant available is if your max availability and your 24-hour PASA availability is substantially different indicating there is something available that isn’t in the market.

ENGIE: Well, again, I mean, the unit really isn’t available in the market because what the STPASA really should – well, my understanding will represent – I’m not sure if I’m comfortable to do that – I’d have to just get back to you on that.

AEMO: Yeah.

ENGIE: Yeah. So effectively you want – you want to see the full Pelican output in STPASA?

AEMO: Well - - -

ENGIE: From – is that what you’re implying?

AEMO: Well, I’m not sure if I can say that.

ENGIE: Okay.

AEMO: But it’s just that, yeah, it should reflect what could be made available in – within 24 hours or in 24 hours if requested.

594 Eight minutes later, the same parties had a conversation about making the unit “commercially available in STPASA”. The following exchange occurred:

ENGIE: Okay. Look, I don’t – I don’t think we can make the unit commercial – commercially available in STPASA.

AEMO: Okay.

ENGIE: Because we really don’t have any commercial ability to run it or make it available as we don’t have any commodity or any transport. Now if we were directed, we would of course use our best endeavours as per the rules to do everything we could to bring the unit back and provide that capacity.

AEMO: Yeah.

ENGIE: But as it stands at the moment, that’s where we are.

595 Mr Godfrey was a member of PPPL’s (or ENGIE) energy trading team of seven persons between 11 November 2016 and 8 February 2017. In PPPL’s response to the Section 28 Notice, these persons were identified as persons within ENGIE responsible for and/or with authority for submitting to AEMO ST PASA inputs and MT PASA inputs for the Pelican Point PS under the supervision of Mr Steven Frimston, Trading Operations Manager, who in turn was supervised by Mr Foulds.

#### The regime of forecasts, nominations and renominations under the PCA Contract

596 The AER prepared a helpful summary of the scheduling, nomination and renomination regime under the PCA Contract. It is annexed to these reasons and marked “Annexure 1” (Appendix B to AER’s closing written submissions).

597 The essence of PPPL’s argument is that, in addition to the other matters making the availability of gas transport uncertain, the scheduling, nomination and renomination regime meant that the availability of interruptible capacity was uncertain until the last moment and certainly within the 24 hour period of notice.

598 PPPL made a submission important to its case about the time of nominations and renominations under the PCA Contract. Mr Snow said that there was a 12-hour constraint for the interruptible service. Mr Snow agreed that on his analysis, the gas day on 7 February 2017 started at 6 am and that is 24 hours before the start of the gas day on 8 February 2017. He agreed that between 6 am on 7 February 2017 and 6 am on 8 February 2017, numerous things had to occur for the transactions referred to in his schematic to have taken place. He agreed that it was only by about 5 pm on 7 February 2017 that one would be clear as to what the position was on the PCA pipeline. He said 3 pm for those final nominations and 5 pm for revised nominations. Mr Snow agreed that access to interruptible Foundation Shippers haulage rights on the PCA Contract would not be known until at earliest 5 pm on 7 February 2017. He said that there were various times for nominations across the day on 7 February 2017, including 11 am, 12.30 pm, 1.15 pm, 3 pm and 5 pm.

599 By way of expansion of Annexure 1, I note the following.

600 Clause 11 of the PCA Contract itself provides for the interruption or curtailment of deliveries where there is a capacity shortfall on the pipeline and that may be because a Shipper has taken delivery without consent of more gas than that to which they were entitled.

601 Annexure 10 of the PCA Contract deals with the Co-Ordination Services. Clause 2 of Annexure 10 provides for nominations and notifications, including forecasts by SEAGas of its best estimate of Capacity on the pipeline. Clause 2.18(d) provides that SEAGas was not required to comply with a nomination insofar as the following applied: (1) it would require it to schedule receipts in excess of the Daily Receipt Entitlement; (2) result in the Shipper having a negative Accumulated Imbalance in excess of the Usable Negative Imbalance; (3) exceed the Total Scheduled Delivery Quantity determined in accordance with cl 3.4; or (4) breach the permissible difference between receipts and deliveries as defined in cl 3.1.

602 Clause 3 deals with Scheduling and the relationship between Receipts and Deliveries. Clause 3.3 is entitled “Scheduling Requirement – Total Scheduled Receipt Quantity” and it provides that the Total Scheduled Receipt Quantity for a Day must not exceed the “maximum quantity of Gas which Shipper notifies Transporter, by a Scheduling Instruction, that Shipper is able to supply to the Receipt Points on that Day. PPPL submitted that its practice of over-nominating interruptible transport, that is to say, nominating the receipt and delivery of more gas than it was proposing to receipt onto the pipeline, was in clear breach of this clause. This practice of over-nominating is discussed in more detail below.

603 Clause 4 is an important clause and it deals with a Shipper’s renomination rights. The renomination rights apply to all three Foundation Shippers and it meant that any one of them could renominate their firm capacity at short notice and well within the 24 hours resulting in another Shipper losing its entitlement to interruptible transport.

604 PPPL submitted that the power in the Foundation Shippers to renominate meant that any forecast as to interruptible gas transport was attended with considerable uncertainty and “made the scheduling issued in advance of the PASA deadline of little utility, particularly so in a dynamic market”.

605 Mr Snow was asked about the nomination processes under the various contracts and the timing of nominations for the following day. He said that he started to look at a nominations chronology. He agreed that one aspect of the task he was to perform that he identified in the numerous slide presentations he provided to his client was the fact that there were all these nomination requirements across the contracts which were time critical. In the end, he did not prepare a nominations chronology and he did not prepare a timeline across “all of these contracts”.

606 PPPL submitted that there was a complex and extensive sequence of significant steps and nominations to be taken within 24 hours of a day which required proactive portfolio management if PPPL was to attempt to obtain additional quantities of gas supply and transport over and above what it intended to use and which meant that PPPL had very little certainty as to its non-firm rights until well under 24 hours prior to the start of a day and even then, on the critical question of interruptible transport on the PCA pipeline, no certainty right up until the point that the gas had, in fact, been delivered. PPPL submitted that the very reason firm rights are expensive is because they are able to be relied on and the corollary of that is that non-firm and interruptible rights provide very little reliable comfort, and that lack of comfort is even stronger in respect of a day which is likely, or expected, to be a day of high demand and where PASA availability submissions are required to be made on a basis which is conservative as to meteorological conditions.

607 PPPL also relied on aspects of the Interruptible Firm Haulage Capacity in the Santos GHCSA and its place in its gas portfolio. The Santos GHCSA is a detailed agreement. Clause 10 deals with forecasts and nominations and cl 10.7 requires PPPL by 1.15 pm on each day to notify Santos of, among other things, the amount of Interruptible Firm Haulage Capacity it will make available to the Shipper on the following Day. Clause 11.2 provides that PPPL must, by no later than 6 pm on a day, determine and give notice to Santos of the amounts needed for scheduling at the receipt and delivery points and cl 11.3(a) provides that the Scheduled Quantities will bind both PPPL and Santos. The circumstances in which the Scheduled Quantities can be updated are identified in cl 11.5 as the interruption or curtailment of Gas or any other reason pursuant to which PPPL is excused under the agreement from providing the capacity to Santos or a renomination in accordance with cl 12.

608 PPPL pointed to the curtailment rights in cll 26 and 27 and submitted that they related to physical limitations on the pipeline and imbalances between receipts and deliveries.

609 It was put to Mr Weatherly in cross-examination that the effect of the clause providing that PPPL could interrupt solely on the basis of its assessment of economic return to PPPL was that PPPL “was entitled to interrupt the 30 terajoules of interruptible capacity to Santos, effectively, at any time”. He strongly disagreed with that suggestion. Mr Weatherly said that once the schedules were in, then that is what occurred and that the paragraph was to deal with the type of situation where SEAGas, for example, put on curtailment notice and PPPL would then “pass that through”. PPPL pointed out that the gas that PPPL transported was owned by Santos (see cl 23.2) which provides that title to gas supplied by Santos to PPPL would at all times remain with Santos and PPPL submitted that if it could interrupt Santos, it would need to have its own gas supply otherwise it would essentially be stealing Santos’ gas. PPPL submitted that the evidence of Mr Weatherly was to the effect that the Santos Interruptible Firm Haulage Capacity was essentially PPPL’s safety net in the event that Synergen Power was required to operate, itself a rare event, and PPPL required an additional 16TJ through the pipeline. It submitted that it was the entitlement to interrupt Santos on those few peak days in summer, rather than the possibility of obtaining interruptible capacity on the PCA pipeline, which gave PPPL’s gas portfolio security. As I understand this submission, it is directed to the suggestion made by the AER that PPPL was so confident of obtaining interruptible transport rights on the PCA pipeline that it was prepared to have a low number for firm transport rights. PPPL denied that and submitted that the Santos Interruptible Firm Haulage Capacity was there in case Synergen Power was required to operate and PPPL required an additional 16TJ through the pipeline.

610 The AER submitted that the capacity of the pipeline and the history of PPPL obtaining substantial quantities of interruptible capacity meant that even with the possibility of late changes under the nomination and renomination provisions of the PCA Contract, the possibility of PPPL not obtaining the gas transport it needed, including additional gas of 3.23TJ, was remote. The markers for gas and gas transport are sophisticated markers. The test is not one of certainty, but rather one of reasonable expectation of a reasonable person operating in the relevant market or field. In this respect, the AER called in aid PPPL’s own description of its staff operating in the field of securing the supply of gas and gas transport in its answer to question 30 in the Section 28 Notice:

Working in a dynamic commercial environment requires appropriately skilled and capable staff who are able to exercise judgement and draw on a range of personal and professional attributes to represent the company’s interests. It is not usual to expect such work to be bound by procedures.

Thus, no separate guidelines or procedures in effect would make any of these events different. What would dictate how things would work day to day would be the timing (time and day of week of request), notice period (how soon such gas is required), firmness of the request (whether it was made in a ‘just in case’ capacity or they had committed to run operation), magnitude of the request (how many hours of running was required and for how many consecutive days).

Once a need or opportunity is identified, a member of the appropriate team (spot or origination or both) would analyse the portfolio, and work out what additional sources of gas would be required and would then make the appropriate arrangements.

Both the spot and origination team are fully empowered to enter into such contracts on the companies’ behalf as outlined in the risk policy.

#### Conclusions with respect to the availability of gas transport with the exception of the relevance of hourly (MHQ) and 12 hourly (M12HQ) constraints in the PCA Contract

611 I consider that for a period prior to 8 February 2017, PPPL ought to have reasonably expected that it could have secured the additional gas transport required to operate GT11 on 8 February 2017 and, for hour hours, GT12, namely, 3.23TJ. As I will explain later in these reasons, that period commenced upon the issuing of Revision 1 of the Scheduled Quantities Report for 8 February 2017. PPPL was clearly able to secure substantial interruptible capacity on the PCA pipeline in the period leading up to 8 February 2017. PPPL’s heavy reliance on interruptible capacity in the course of its ordinary business operations reflects its confidence in its availability. Relatively speaking, the amount of additional gas transport required is not large.

612 In my opinion, the substantial quantities of interruptible capacity obtained by PPPL and its reliance on it in the ordinary course of its business and its obvious confidence in obtaining it meant that there was a sound and reasonable basis for it to conclude that those circumstances would continue and that the relatively small amount of additional capacity could be secured without difficulty. The possibility of late changes under the nomination and renomination provisions under the PCA Contract did not prevent a reasonable expectation arising of the additional gas transport being secured.

613 The AER has made out its case concerning gas and gas transport irrespective of the circumstance that PPPL was able to obtain sufficient gas and gas transport to run GT11 and GT12 concurrently for four hours on 9 February 2017. Nevertheless, I make the following observations on the suggestion that the events on 9 February 2017 and PPPL’s answers to questions 19 and 23 of the Section 28 Notice are irrelevant to the issues in this case because they occurred, or were framed, by reference to AEMO giving a direction or indicating that it would give a direction. Mr Weatherly’s evidence is important in this respect. I can readily accept that an AEMO direction or an indication by it that one was to be given, would add a sense of urgency and likely additional effort to sourcing additional gas and gas transport. I can readily accept that a well-established commercial counterparty may be prepared to take the fact of an AEMO direction or an indication that one was to be given into account in the negotiations for the supply of gas or gas transport. The difficulty in excluding the events of 9 February 2017 and the answers to questions 19 and 23 from being at least factors to be considered, is that there is no evidence of the latter, that is, of a commercial transaction being affected by an AEMO direction or an indication that one would be given.

614 I do not consider that there is any basis for concluding that the problem with the Torrens A1 generating unit (AGL) explains the unused capacity in the PCA pipeline. Not only is there an absence of clear evidence on this point, but in addition, the pattern of PPPL’s substantial use of interruptible capacity and the evidence of the unused capacity on the PCA pipeline predates 6 February 2017 which was when the Torrens Island unit was withdrawn from service. Furthermore, the withdrawal from service of the unit at Torrens Island was the subject of a question in the Section 28 Notice (question 37) and PPPL’s answer does not suggest that the event had any bearing on PPPL’s access to unutilised capacity on the PCA pipeline.

615 As to the criticisms of Mr Snow’s reliance on daily figures for the capacity of the PCA pipeline rather than hourly figures which were not established on the evidence, I accept that matters such as pressure and temperature are likely to affect capacity over the course of a 24 hour period, although the precise way in which this occurs was not explained in the evidence. Nevertheless, the evidence of substantial unused capacity in the PCA pipeline is very strong and I do not consider that the absence of hourly figures is significant. Nor does the anecdotal evidence of Mr Weatherly about being told on occasions that the pipeline was at or near capacity persuade me otherwise.

616 It is true that Mr Snow said, among other things, in answer to a question about how much non-firm gas supply and transport PPPL had available to it to supply the Pelican Point PS on 8 February 2017 on 24 hours’ notice, that the question was too speculative to answer categorically. He also said non-firm gas supply by its very definition was speculative to start with. However, those comments must be read in the context of the whole of his evidence, not only in the joint experts’ report, but also in his reports. When that is done, it is clear that he was expressing the view that PPPL ought reasonably to have expected that it would have sufficient gas and gas transport to operate GT11 and GT12 on 8 February 2017 in accordance with the 8 February counterfactual.

617 In my opinion, subject to the next matter to be addressed, PPPL ought reasonably to have expected to have sufficient gas transport to operate in accordance with the 8 February counterfactual from (for reasons I will explain) the issuing of Revision 1 of the Scheduled Quantities Report for 8 February 2017. The history of PPPL obtaining substantial quantities of interruptible transport is sufficient to sustain that conclusion. The ability to interrupt Santos to the extent of 30TJ/d subject to restrictions would add confidence to that expectation, not necessarily in terms of particular days and figures, but in terms of knowing there were substantial reserves of gas transport if needed. Santos was not interrupted on 8 February 2017, but it was interrupted on 9 February 2017.

### The relevance of the hourly (MHQ) and 12 hourly (M12HQ) constraints in the PCA Contract

618 The PCA Contract contains constraints on the quantity of gas which can be taken out of the pipeline at a nominated delivery point each hour and each 12 hour period calculated on a rolling basis. If one turbine is being run, a certain quantity of gas is required as fuel for that turbine at any particular point in time and a greater quantity of fuel is required to run two turbines. PPPL contends that two turbines could not be run concurrently without exceeding these constraints or, at least, the M12HQ. In those circumstances, a PASA submission based on two turbines running concurrently would not be a reasonable estimate or a best estimate. Put another way, and in a way which reflects the fact that it is for the AER to make out its case, a PASA submission which took account of these constraints would not fail to meet the standard of reasonableness or of being a best estimate.

619 The MHQ and M12HQ constraints are set out in Annexure 10 (Co-ordination of Services) of the PCA Contract. The MHQ is addressed in cl 15 and the M12HQ is addressed in cl 17. The quantity in each case is determined by the application of a formula.

620 In the case of the MHQ, the quantity comprises, relevantly for this case, 5% of the Firm Service MDQ plus 5% of the Scheduled Interruptible Capacity plus an Allowable Overrun Entitlement for that hour of 1TJ.

621 In the case of the M12HQ, the quantity is calculated on a 12 hour rolling basis and comprises 4.7% of Firm Service M12HQ plus 4.7% of Interruptible Service M12HQ.

622 I turn now to the circumstances in which the MHQ and M12HQ constraints were an issue in the case. Although the need to secure sufficient gas transport was referred to in the conversations between PPPL’s energy traders and AEMO representatives on 8 and 9 February 2017 and is referred to in PPPL’s response to the Section 28 Notice, no mention is made of the MHQ and M12HQ constraints in the PCA Contract being a problem or a relevant issue. The constraints were not expressly raised by PPPL as being an issue in its Concise Response or in the Joint List of Issues and Evidence.

623 The constraints were first raised as an issue by PPPL in Mr O’Farrell’s first expert’s report. He addressed the matter at some length in sections 8 and 9 of that report. He concluded that on his assumptions the M12HQ constraint would be breached if the two turbines were run concurrently “(1.84 TJ/hour or rights vs 2.656TJ/hour required for GT 11 and 12)” and said his analysis made it clear that the Firm M12HQ rights were insufficient to transport any additional gas to support a minimum run of GT12 of four hours. Mr O’Farrell’s operating assumptions were quite different from the 8 February counterfactual. His modelling was based on GT11 and GT12 operating for four hours at 320 MW and then GT11 operating by itself for the other 20 hours at 240 MW, whereas the 8 February counterfactual had GT11 operating as in fact it did on 8 February 2017, namely, at around 220 MW between 8.00 am and 10.00 pm before reducing to around 150 MW from midnight to 6.00 am.

624 Two aspects of Mr O’Farrell’s approach should be noted. Their relevance will be noted later in these reasons. First, in calculating the quantity of the constraints, Mr O’Farrell made no allowance for Scheduled Interruptible Capacity or Interruptible Service. Secondly, in deducting amounts to arrive at PPPL’s entitlement, Mr O’Farrell made no deduction in relation to the Santos interruptible rights to 30TJ/d.

625 In the first round of PPPL’s evidence of which Mr O’Farrell’s first report was a part, neither Mr Foulds in his affidavit nor Mr Weatherly in his (first) affidavit addressed the MHQ or M12HQ constraints.

626 The matter was referred to in the joint experts’ report. Mr Snow referred to Mr O’Farrell’s modelling and said that it shows that PPPL could not meet PASA as it would have overrun its PCA Firm Capacity rights for 12 hours due to the M12HQ on the PCA pipeline and, therefore, in Mr Snow’s opinion, the model output numbers used by Mr O’Farrell indicated the need to explore further GT11’s PASA capacity. The joint experts’ report then records the following:

Both Mr Snow and Mr O’Farrell agree that there is missing information on why PPPL was bidding 224 to 235 MW into the PASA if the findings in Mr O’Farrell’s modelling and his 12 hour constraint and other gas supply sourcing arguments are correct. For example, what did they do with Santos sub-haulage rights on the PCA? How did PPPL then manage 9 February 2017? If the assumptions are not correct, then there is no issue with the perceived constraint (or other simple and reliable solutions).

627 It will be recalled that in PPPL’s second round of evidence, Mr Weatherly in his second affidavit addressed how it was that PPPL was able run GT12 for four hours on 9 February 2017 with GT11. He said that in addressing that issue on 8 February 2017, one of the matters he had to consider was to find a way in running two turbines of achieving MHQ and M12HQ allowances under the PCA Contract high enough to transport enough gas through the pipeline during peak generating periods.

628 Mr Weatherly said PPPL nominated for a significant volume of interruptible transport on the PCA pipeline on 9 February 2017 and the amount it nominated for was more TJs of non-firm gas secured for that period. It nominated the receipt and delivery of more gas than it was proposing to receipt and deliver from the pipeline. This had the effect of increasing PPPL’s allocation of MHQ and M12HQ throughout the day because the allowance for hourly figures was based on a formula for daily nominations. PPPL over-nominated for this reason. In other words, it nominated the receipt and delivery of more gas than it was proposing to receipt onto the pipeline and deliver from the pipeline in order to increase its allocation of MHQ and M12HQ throughout the day.

629 Mr Weatherly said that the approach of over-nomination involved risks. He said that there was a real risk, particularly on a day of high demand, that PPPL’s transport rights would be curtailed. If PPPPL was taking more gas from the pipeline during a peak period than it supplied to the pipeline, the pipeline pressure would drop and, in the ordinary case, SEAGas would curtail PPPL’s gas transport rights or request PPPL to reduce its nomination to address the problem. This would leave PPPL being unable to rely on such uninterruptible transport.

630 I turn now to some further evidence given by Mr Snow and Mr O’Farrell. Mr Snow did not analyse the 12-hourly constraints in his first report. Mr Snow agreed in cross-examination that in analysing PPPL’s rights to gas transport on the PCA pipeline, hourly and 12-hourly constraints were also very material (i.e., in addition to gross amounts). He agreed with the proposition that one needs to look at the issue “through the prism of what can come out the other end, go in one end, out the other end, limited by hourlies overlayed with 12-hourly constraints”.

631 As I have previously said, there were a number of Scheduled Quantities Reports for 8 February 2017 prepared by SEAGas and tendered in evidence. The AER prepared a summary of these reports and annexed it to its closing written submissions as Appendix C (the AER’s Appendix C). It is Annexure 2 to these reasons. It is not suggested by PPPL that it is not accurate so far as it goes.

632 Mr O’Farrell was tested in cross-examination on his evidence about the effect of the MDQ and M12HQ constraints. He was taken to Revision 1 of the Scheduled Quantities Report issued on 3 February 2017 at 3.14 pm. He agreed that the Delivery MDQ of 4.750 was a combination of 2.958 (5% of 59.163) plus 0.792 (5% of 15.837) plus 1, a deduction for the 20TJ/d Firm Haulage Capacity for Santos (which was the only deduction he made in his modelling) results in a figure of 3.88TJ/hr. This figure is more than sufficient to meet the required MHQ for GT11 and GT12 to run concurrently of 2.66TJ/hr.

633 A similar analysis was performed in relation to the M12HQ where a total of 3.525TJ is reached and after a deduction for the Firm Haulage Capacity of Santos, a figure of 2.605. This figure is sufficient to meet the required flow on Mr O’Farrell’s scenario of eight hours at 240 MW and four hours at 320 MW of 2.22TJ/hr.

634 The same analysis performed in relation to Revisions 3 and 5 results in a figure which would mean that there would be no breach of the M12HQ constraint. Once Interruptible Service is taken into account, there is no problem with M12HQ.

635 These figures certainly support a conclusion that the MHQ and M12HQ constraints do not present a barrier to the operation of two turbines concurrently.

636 PPPL submitted that the hourly constraints are even more significant in the context of a contract under which other parties may renominate their firm entitlements at short notice. That was because in order to run two gas turbines, PPPL needed the extra capacity at the particular time of day when the two gas turbines were running, that is, the period of peak demand. PPPL submitted that insofar as the capacity was interruptible, it was a lower priority than a firm rights holder’s capacity and could be interrupted.

637 PPPL points to the fact that although the PCA pipeline is an hourly pipeline, as Mr Weatherly put it, Mr Snow did not address the hourly constraints on the PCA pipeline and said that he considered that they were “reasonably irrelevant”. Mr Snow did not conduct an analysis which considered the hourly utilisation on the pipeline and PPPL submitted that his opinion that the hourly constraints were not relevant should accordingly be given no weight.

638 The AER submitted that Mr O’Farrell’s analysis is wrong, but in any event, it was important that his level of detailed contractual analysis was kept in its proper perspective. The AER submitted that the error which Mr O’Farrell made in his reports was to assume that interruptible capacity could never be scheduled and, therefore, he assumed that MHQ and M12HQ should only ever be calculated by reference to PPPL’s firm service. The AER submitted that the invoices to which Mr O’Farrell was referred clearly demonstrated that PPPL was using substantial quantities of interruptible capacity on a daily basis in January and February 2017 and there was always going to be sufficient transport to enable MHQ and M12HQ restriction to be reached.

639 The AER submitted that, in the circumstances, Mr O’Farrell’s evidence about the impossibility of running two turbines having regard to the MHQ or M12HQ restrictions was obviously wrong and finds no support in the evidence of the witnesses called by PPPL. The AER also submitted that having regard to the Scheduled Delivery Reports, even if the quantity restrictions were real restrictions, PPPL would have known that there was no impediment to it running two turbines from at least 3 February 2017. The AER submitted that having regard to the substantial quantities of interruptible supply that would have been utilised by PPPL in the preceding two weeks, it would have known that there was no practical impediment by reference to those restrictions for a two week period before the six day short term PASA availability submission window.

640 PPPL submitted that there was no clear evidence as to how often precisely it had adopted the practice of over-nomination. That would seem to be correct. It is true, as PPPL submitted, that the Pelican Point PS was rarely dispatched according to its full PASA availability and that there was no analysis performed by Mr Snow of its generation profile and any “over-nomination” on any days on which it was so dispatched prior to 8 February 2017.

641 None of Mr Farrell’s analysis about MHQ and M12HQ was referred to by the PPPL witnesses, including Mr Weatherly. In addition, Mr Weatherly’s evidence about PPPL’s practice of over-nominating transport on the PCA pipeline “renders much of Mr O’Farrell’s analysis redundant”. The AER submitted that the practice of over-nomination explains why none of PPPL’s lay witnesses referred to the MHQ or M12HQ constraints as being relevant to the question of whether PPPL could run two turbines and nor was the topic mentioned by PPPL’s gas traders to AEMO in the transcripts of conversations on 8 and 9 February 2017 which are in evidence. Nor were these constraints mentioned in PPPL’s response to the Section 28 Notice. The practice of over-nomination was not an extraordinary practice that only occurred on 9 February 2017. Mr Weatherly accepted that it was PPPL’s practice to over-nominate transport over the summer of 2016/2017.

642 PPPL submitted that over-nomination was in breach of the PCA Contract. It referred to cl 5.11 which was a warranty by it in performing its obligations under the agreement it would, at all times, act reasonably and prudently. It referred to the significant liability that it may incur for breach of the PCA Contract.

643 As PPPL submitted, cll 19 and 20 in Annexure 10 gave SEAGas the power to interrupt or curtail receipts and deliveries in the event of PPPL breaching its daily and hourly limits if the breach would prevent SEAGas meeting its obligations to other Shippers or would place a material threat to the safety or operational integrity of the Pipeline System.

644 PPPL submitted that the practice of over-nomination was unsustainable in material amounts and could not be relied upon when projecting generation capacity. It relies on Mr O’Farrell’s evidence that the practice was unsustainable because it would affect the rights of other Shippers and the traders employed by those Shippers would pick it up. Mr O’Farrell gave the following evidence:

If they over-nominate, that means that they’re actually going to be taking my gas that I’m trying to deliver, and my traders are actually instructed to actually monitor each hour. … you would be exposing your company to an extinction event, which is what I would describe as unlimited liability, which I would be shocked if somebody did.

645 PPPL submits that it would be, to use its word, “perverse” for a regulator to be contending that PPPL should make a submission as to what it can do on the assumption that it will over-nominate and exceed its contractual rights.

646 Mr Snow dealt with PPPL’s practice of over-nominating scheduled flows to overcome M12HQ limitations in his second report and the relevant comparisons between receipts and deliveries of gas are shown in Figure 1 of that report. It is clear from Mr Snow’s report that over-nomination was a regular practice of PPPL between, for example, 1 and 11 February 2017. The facts shown in Figure 1 were not challenged in cross-examination. Mr Weatherly raised one matter which might be an impediment to PPPL’s practice of over-nomination and that was the possibility that PPPL’s supplies of gas might be curtailed if pressure on the pipeline dropped as a consequence of the over-nomination. The fact is that this was a small risk given the additional flow required for a second turbine to be operated and Mr Weatherly could not recall any occasion in 2016/2017 when SEAGas had refused a nomination by PPPL or interrupted scheduled interruptible capacity. Mr O’Farrell’s opinion that over-nomination was not permitted by the SEAGas contract must be read in this light. That proposition was not put to Mr Snow and was not advanced by Mr Weatherly. Mr Weatherly did not suggest that SEAGas opposed the practice of over-nominating and I agree with the AER that the inference should be drawn that this was an accepted business practice that SEAGas was prepared to accept in circumstances where there was always substantial unused capacity on the PCA pipeline. There is a dispute about Mr Weatherly’s evidence on this point. The AER submitted that Mr Weatherly said that the practice of over-nomination carried a risk, particularly on a high demand day, that PPPL’s transport rights would be swiftly curtailed. However, he did not say that it was unsustainable and that SEAGas would put a stop to it when it was detected.

647 That leaves for consideration PPPL’s own version of Appendix C which it handed up in its closing submissions (PPPL’s Appendix C). It differs from the AER’s Appendix C in a number of ways. It is Annexure 3 to these reasons.

648 PPPL’s Appendix C includes Revision 2 of the weekly schedule issued on 6 February 2017 at 3.14 pm. It includes figures purporting to show MDQ, MHQ and M12HQ remaining if one subtracts from the quantities shown in the Scheduled Quantities Report, the 20TJ/d Santos Firm Haulage Capacity and the 30TJ/d Santos Interruptible Firm Entitlements and the 1TJ/hr Hourly Allowance Overrun Entitlement from Hourly Entitlements in relation to Delivery MHQ.

649 As I have said, Mr O’Farrell’s calculations did not include the allowance on Scheduled Interruptible Capacity in the case of MHQ or Interruptible Service M12HQ in the case of that restriction. Further, Mr O’Farrell’s analysis deducts an allowance in relation to the 20TJ/d Santos Firm Haulage Capacity, but unlike PPPL’s Appendix C, does not deduct an allowance for the 30TJ/d Santos Interruptible Firm Entitlements or the Hourly Allowable Overrun Entitlement.

650 The AER submitted that insofar as PPPL sought to go beyond the evidence of its own expert and rely on its version of Appendix C, that does not assist PPPL for two reasons. First, there should be no deduction for the 30TJ/d Santos Interruptible Firm Entitlements. Secondly, the interruptible quantities shown in the Scheduled Quantities Report is not a cap on interruptible transport and PPPL could nominate, and had a practice of over-nominating, to avoid MHQ and M12HQ constraints becoming a problem. I agree that both of those reasons provide the answer to PPPL’s submissions.

651 Mr Weatherly said that PPPL had not interrupted Santos Interruptible Firm Haulage on 5, 6, 7 and 8 February 2017, but did do so on 9 February 2017. Part of the reason Mr Weatherly was not concerned about PPPL’s low firm haulage rights in the summer of 2016/2017 was that PPPL could always interrupt the Santos 30TJ/d. In the same way, that could be done where MHQ or M12HQ were looming as a problem.

652 Another way of avoiding any problem with MHQ or M12HQ constraints was for PPPL to nominate for more transport and it had a practice of over-nominating in order to avoid those restrictions affecting its existing method of operating the Pelican Point PS which involved the running of only one turbine at any one time. As the AER put it, there was no cap on the practice of nomination.

653 In conclusion, I do not consider the MHQ and M12HQ constraints to be obstacles to running GT11 and GT12 concurrently. On Mr O’Farrell’s approach, there was no risk of infringing the M12HQ constraint once the Interruptible Service was taken into account. Insofar as the existing business operations of PPPL and the scenario of two turbines operating concurrently depended on the practice of over-nomination, that was an accepted business practice of PPPL. Finally, the matters PPPL sought to raise by its version of Appendix C are answered by the AER’s two submissions referred to above.

### MAPS

654 Gas could be transported to the Pelican Point PS on the MAPS or the PCA pipeline. PPPL had rights under the MAPS Contract to 25TJ/d of bio-directional gas transportation on the MAPS from and to receipt points, including Pelican Point PS, Dry Creek, Mintaro and Adelaide Metro.

655 The relevant contractual constraints are contained in cll 3 and 4 in the Second Schedule of the MAPS Contract. Those constraints include maximum Firm Service MHQ, maximum Synergen Peaking Service and maximum in any 12 hour period of Firm Service MHQ.

656 Gas was transported from the PCA pipeline onto the MAPS pursuant to the SEAGas-MAPS Interconnect Capacity Firming Agreement.

657 PPPL did not have any contracts for the supply of gas from producers receipting gas onto the MAPS and the only way for PPPL to get gas on the MAPS was via the PCA pipeline by PPPL drawing down on its transport rights and gas supplies from sources that could otherwise have been used to power the Pelican Point PS.

658 I have previously referred to the obligations PPPL claimed it had under internal agreements with Synergen Power and Simply Energy respectively.

659 The Synergen Power peaking power stations at Dry Creek and Mintaro consumed a total of 3.7TJ/hr (Snow) or 2.9–3.8TJ/hr (O’Farrell).

660 PPPL and its related companies could not run all three power stations together based on the transport rights on the MAPS. That was the view of both Mr Snow and Mr O’Farrell.

661 Mr Snow’s theory was that PPPL could simply take 3.23TJ for the Pelican Point PS otherwise directed for Synergen Power via MAPS (the gas actually used at the Mintaro PS on 8 February 2017 was 8.32TJ and at the Dry Creek PS was 9.871TJ) is incorrect because PPPL was contractually bound to deliver gas transportation rights to Synergen Power of 3.7TJ/hr and one could not do that and deliver 2.4TJ/hr to the Pelican Point PS delivery point in order for PPPL to operate its two gas turbines simultaneously for at least four hours. Mr Snow accepted that the contractual arrangements between PPPL and Synergen Power and Simply Energy were commercially appropriate and nothing in the NER required PPPL to ignore the contracts it had entered into.

662 However, the AER’s submission in closing was that PPPL could divert 3.23TJ to the Pelican Point PS and Synergen Power could obtain that amount by way of linepack in the MAPS. That would appear to be a viable source of the additional gas having regard to the significant amount of linepack available to PPPL on the MAPS. Linepack can vary sharply and I would be disposed to treat this as an additional reason for the conclusions reached earlier in relation to the PCA Contract, rather than a true alternative source.

## The Physical Condition of GT12

663 The evidence of Mr Baksi is set out above (at [358]–[384]). As I have said, I accept that he was honest in giving his evidence, although I had difficulty accepting his evidence in para 38 of his affidavit. Mr Foulds also gave evidence about the physical condition of GT12 and PPPL’s approach to its use.

664 The AER said the focus is the maximum generating capacity that PPPL could make available, not what was reasonable for it to make available. This proposition is subject to the qualification that it would not apply if the use of any particular item of equipment is such that it would pose a hazard to public safety if it was used. The AER submitted that it is plain from the evidence of Mr Baksi that the relevant decision-makers at PPPL did not consider that GT12 could not be made available because to do so would be to pose a safety risk. The AER submitted that the reason two turbines were not used concurrently was not because of the condition of GT12, but rather because if the operating turbine suffered a fault, there would be a backup turbine. Mr Baksi agreed with the proposition that the risk was mitigated by bringing GT12 back from dry storage so that it was available to be returned to service in a matter of hours should a fault occur with GT11. The presence of the backup capability was commercially important regardless of whether GT11 or GT12 was being run as the primary turbine. If both turbines were running together, then this backup capability was not present. In the course of his cross-examination, Mr Baksi agreed that it was a very difficult decision on his part to agree to the operation of GT12 when GT11 was also operating. That was because PPPL would be running both turbines and he was nervous that there would not be any backup if something happened to the machine. He agreed that that was the key risk which he had in his mind.

665 The presence of a crack in the blade was a matter that the manufacturer (Alstom) had reviewed and it had reported the turbine blade was in an acceptable condition. PPPL was managing that crack by regular visible inspections. Furthermore, the existence of the crack did not prevent PPPL from running GT12 over the summer of 2016/2017.

666 The evidence is that GT12 was run in conjunction with GT11 on a number of occasions during the summer of 2013/2014 and during the summer of 2014/2015. The evidence is that GT12 was run as the primary gas turbine from mid-November 2016 to mid-January 2017. The evidence was that GT12 was run on 7 February 2017, on 9 February 2017 and later, together with GT11, it was run “hard” over a series of four consecutive days at the end of March 2017. Mr Baksi agreed that the risks were low provided the crack did not progress and whether the crack had progressed could be monitored by undertaking borescope inspections. These inspections were being done after every five starts. He referred to the risks associated with the next start after a five start inspection and that if anything is going to happen, it will happen then. He said that nobody could say whether something is going to happen. The AER referred to PPPL’s reliance on Mr Baksi’s evidence that if someone had asked him one or two months prior to January 2017 whether GT12 could run for 2,000 hours he would have said that he did not know because it would be subjected to the runs and consecutive inspections as well as the preservation methodology which had been discussed, and pointed in response to the evidence of Mr Baksi to the effect that from 11 November 2016 through to the end of December 2016, GT12 was operated as the primary unit more commonly and GT11 was used less. Mr Baksi agreed with the proposition that in making the decision to operate GT12 more than GT11 in November and December 2016, the motivation was because there was some commercial advantage to be gained by ENGIE in trying to reduce the use of GT11 so that the time before GT11’s next C‑inspection could be extended.

667 Mr Baksi said that as at 9 February 2017, GT12 had 500 to 600 EOH remaining. This was the arbitrary 30,000 equivalent operating hour deadline PPPL had set for itself for having a C‑inspection. In the circumstances, the suggestion that it was mere speculation as to how many hours GT12 had left should be rejected. Mr Baksi certainly would have known in the weeks before 8 February 2017 that as at 9 February 2017, GT12 would have some hundreds of hours left.

668 The AER submitted that the cracked blade in the turbine had no bearing on whether the physical plant capability of GT12 could be made available. The real reason for not operating the two turbines together may have been sensible from a commercial perspective, but it did not mean that PPPL was not able to make two turbines available to operate simultaneously. Nothing was said by PPPL to the effect that it did not want to operate two turbines simultaneously because of a safety hazard or because it would lose the backup capacity that Mr Baksi referred to.

669 The C-inspection of GT12 was undertaken in April 2017. GT12 and GT11 were run together on 28 to 31 March 2017 inclusive with a maximum output of at least 450 MW on each day.

670 As I understand it, the way in which PPPL submits that the physical condition of GT12 is relevant is that it is said that the reasonable person poised to make PASA submissions would take the physical condition of GT12 into account as a “further contingency”. As I understand it, this is an assertion that there were a number of matters relevant to the issue of availability of two turbines to run on 8 February 2017 and the physical condition of GT12 was one of them and it pointed against availability. I reject this submission. It is not supported by the evidence and is, in fact, contradicted by the following circumstances.

671 First, GT12 was the primary operating turbine in November, December 2016 and the first half of January 2017. The decision in mid-January 2017 to make GT11 the primary operating turbine is to be seen in the context of PPPL’s intention to run only one turbine at a time and the fact that GT11 had had a more recent C-inspection during which superior blades were fitted and GT12 was approaching a required C-inspection. Secondly, Mr Baksi’s nervousness about running two turbines at the same time was based on the risk of not having backup capacity. Thirdly, any difficulty involved in making long-range forecasts concerning GT12 is answered by the fact that there is an ability to change or revise forecasts where there is a change in circumstances, indeed an obligation to do so. Fourthly, GT12 was run for between 14–16 hours on 7 February 2017 and for four hours on 9 February 2017 with no suggestion on the latter date that AEMO’s direction meant that GT12 could not be run because the case fell within cl 4.8.9(c) of the NER. It was run “hard” in late March 2017. Finally, PPPL in its response to the Section 28 Notice did not suggest the physical condition of GT12 was an obstacle to running GT12 on 8 February 2017. The matters referred to were the availability of gas and gas transport.

# CONCLUSIONS

672 For the reasons I have given, I do not consider that PPPL was required to assess and determine its PASA submissions by reference to the basic 320 MW scenario. PPPL’s liability for contraventions is to be determined by reference to the 8 February counterfactual.

673 The MT PASA covers the 24 month period commencing from the Sunday after the day of publication with a daily resolution (cl 3.7.2(a)). The Scheduled Generator’s obligation is to submit ST PASA inputs, including PASA availability, in accordance with the timetable (cl 3.7.2(d)). The timetable is defined as the timetable published by AEMO under cl 3.4.3 for the operation of the spot market and the provision of market information. As far as MT PASA inputs, including PASA availability are concerned, the relief sought by the AER relates to 10 MT PASA submissions made after 11 November 2016. The 10 submissions are identified in the Statement of Agreed Facts and range in dates from 16 November 2016 to 27 January 2017.

674 The ST PASA must be published at least daily by AEMO in accordance with the timetable and it covers the period of six trading days from the end of the trading day covered by the most recently published pre-dispatch schedule with a trading interval resolution (cl 3.7.3(a) and (b)). The relief sought by the AER relates to 27 ST PASA submissions made in or from 30 January 2017 for each trading interval during the 8 February 2017 trading day. The dates of PPPL’s submissions of its ST PASA inputs for the Pelican Point PS for the 8 February 2017 trading day are identified in the Statement of Agreed Facts as 15 January at 9.52; 30 January at 9.10, 2 February at 6.44 and 9.11; 6 February at 11.00; 7 February at 9.56, 11.22, 11.25, 16.56, 17.00; and 8 February at 6.58, 10.12, 11.14, 12.43, 13.53, 15.22, 15.45, 16.42, 17.17, 17.33, 18.03, 18.23, 18.40, 18.57, 19.08, 19.26, 19.47 and 20.51.

675 There were and still are a number of disputes between the parties about the number of contraventions by PPPL should the AER otherwise establish its case. Some have been resolved. For example, the AER no longer presses a case that PPPL committed a contravention of cl 3.7.3(e)(2) by its PASA submissions made on 15 January 2017 and does not contend that with respect to ST PASA submissions made on 8 February 2017, there are contraventions in relation to trading intervals that had already passed. Other disputes appear to remain and are identified in a helpful document attached to PPPL’s closing written submissions.

676 There would appear to be a dispute about the period “covered” by the ST PASA (cl 3.7.3(b) uses the word, “covers”). Mr Sanders said in his evidence that he would expect that for 8 February 2017, to “enter short-term PASA about seven days beforehand”. PPPL contends that the period or “ST PASA window” commenced either at 4 am on 4 February 2017 or 4 am on 3 February 2017 and that, on either view, the submissions made on 15 January 2017, 30 January 2017 and at 6.44 on 2 February 2017 could not be contraventions of cl 3.7.3(e)(2).

677 I do not need to resolve this dispute because, for the reasons which follow, I consider that there were no contraventions by PPPL prior to 3 February 2017 at 12.14 pm. It is only in relation to ST PASA submissions after that date and time that there can be contraventions. As I would read the Statement of Agreed Facts, the next ST PASA submission after 3 February 2017 at 12.14 pm was made on 6 February 2017 at 11.00. The significance of the date and time of 3 February 2017 at 12.14 pm is that that is when Revision 1 of the Scheduled Quantities Report was issued by SEAGas.

678 The last of the relevant MT PASA submissions by PPPL was made on 27 January 2017. The AER has failed to establish that a PASA availability of 224 MW was not a reasonable forecast at that time. The AER’s case is heavily reliant on the evidence of Mr Snow and the documents. A notable feature of Mr Snow’s evidence-in-chief was his reliance on events that took place in January and February 2017. That is not to say that all of his graphs and figures related to that period and some did reach back to 11 November 2016. However, the bulk of his historical data related to the January and February 2017 period. The other notable feature of Mr Snow’s evidence is that an aspect of his reasoning was to consider what could have been achieved on a particular day and then to consider what might have been reasonably expected prior to that day. Whilst I do not agree with PPPL’s criticism of Mr Snow’s approach, it does not mean that there is not an issue as to how far back it is appropriate to go in terms of inferring similar circumstances based on the bulk of the historical evidence. It is, in essence, a question of proof and, with respect to Mr Snow, it is not enough in my opinion, to establish contraventions of civil penalty provisions to say that the position was likely to be the same in the past because he had not seen any significant contractual changes that took place in that period. The AER submitted that if the Court was concerned about the lack of data for November and December 2016, the Court could, in effect, be satisfied of the position by mid-January 2017. I do not accept that submission.

679 In my opinion, the central issue in this case on the evidence is the availability of gas transport. By early February 2017, it ought to have been clear to PPPL that it could reasonably expect to obtain sufficient gas transport to operate GT11 and GT12 on 8 February 2017 in accordance with the 8 February counterfactual.

680 It is difficult to fix the precise point in time at which PPPL ought to have had the reasonable expectation that gas and gas transport would be available such that PPPL’s ST PASA availability rose to 320 MW and any doubt in a case involving civil penalty provisions should be resolved in favour of PPPL. I am satisfied that by the time Revision 1 of the Scheduled Quantities Report was issued, PPPL ought to have had a reasonable expectation of obtaining sufficient interruptible gas transport (and gas) to operate in accordance with the 8 February counterfactual and that, subject to determining the precise number of contraventions, PPPL contravened cl 3.7.3(e)(2) after that date. PPPL did not contravene cl 3.7.2(d)(1) and it did not contravene cl 3.7.3(e)(2) prior to 3 February 2017 at 12.14 pm.

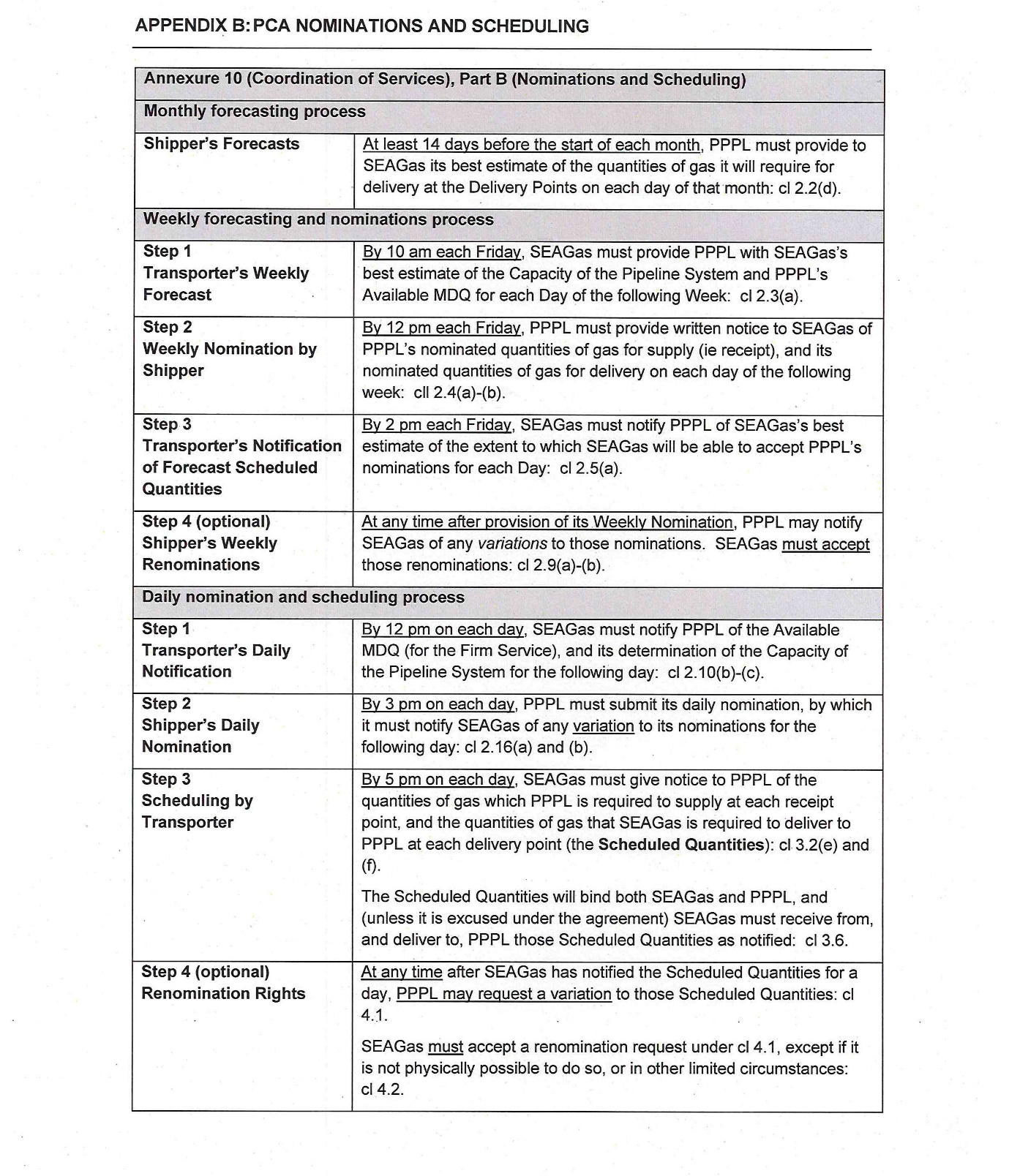
681 I will hear the parties as to the appropriate orders in light of these conclusions. I will also hear the parties as to the effect of these conclusions on the AER’s case that PPPL contravened cl 3.13.2(h).

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| I certify that the preceding six hundred and eighty-one (681) numbered paragraphs are a true copy of the Reasons for Judgment of the Honourable Justice Besanko. |

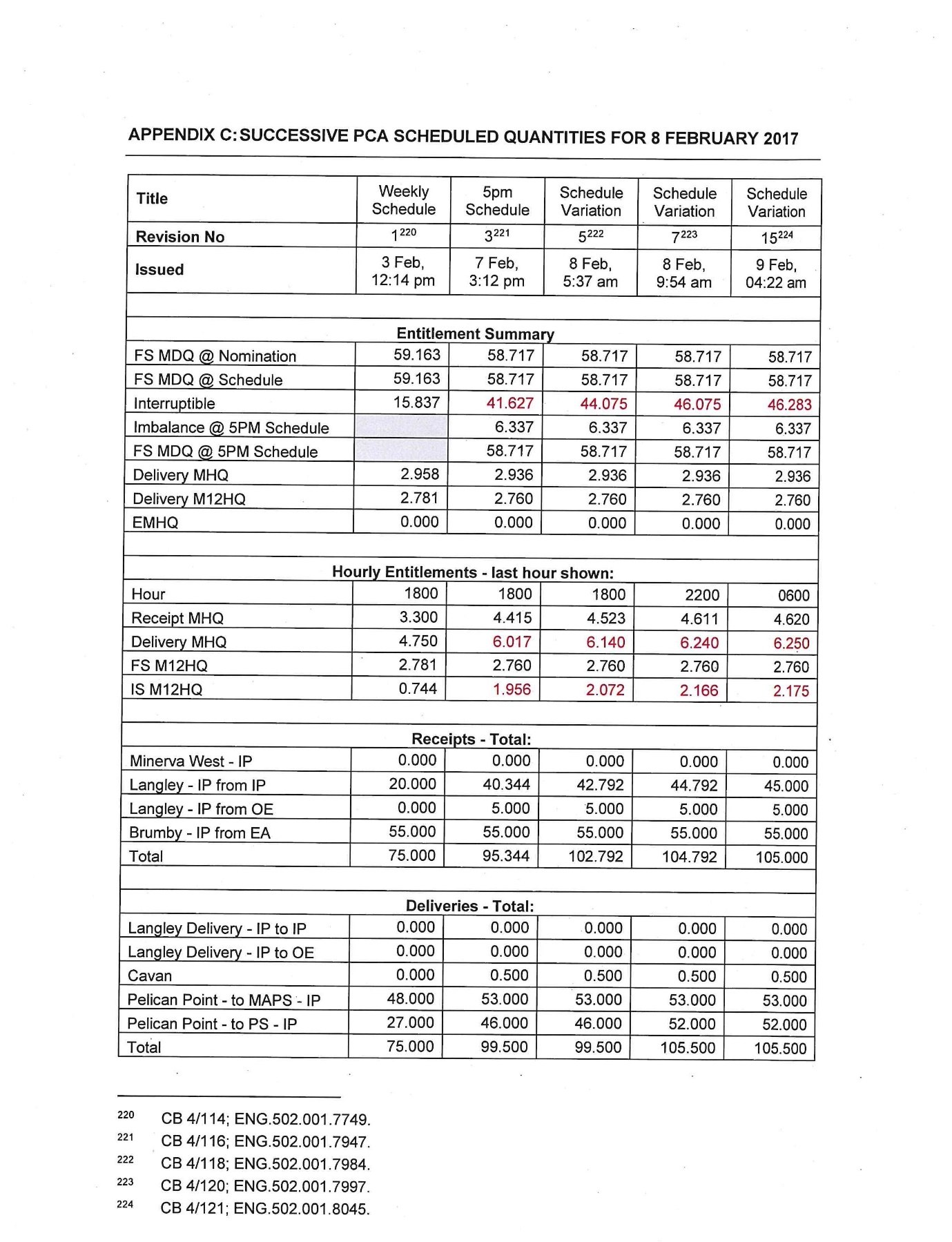
Associate:

Dated: 20 September 2023

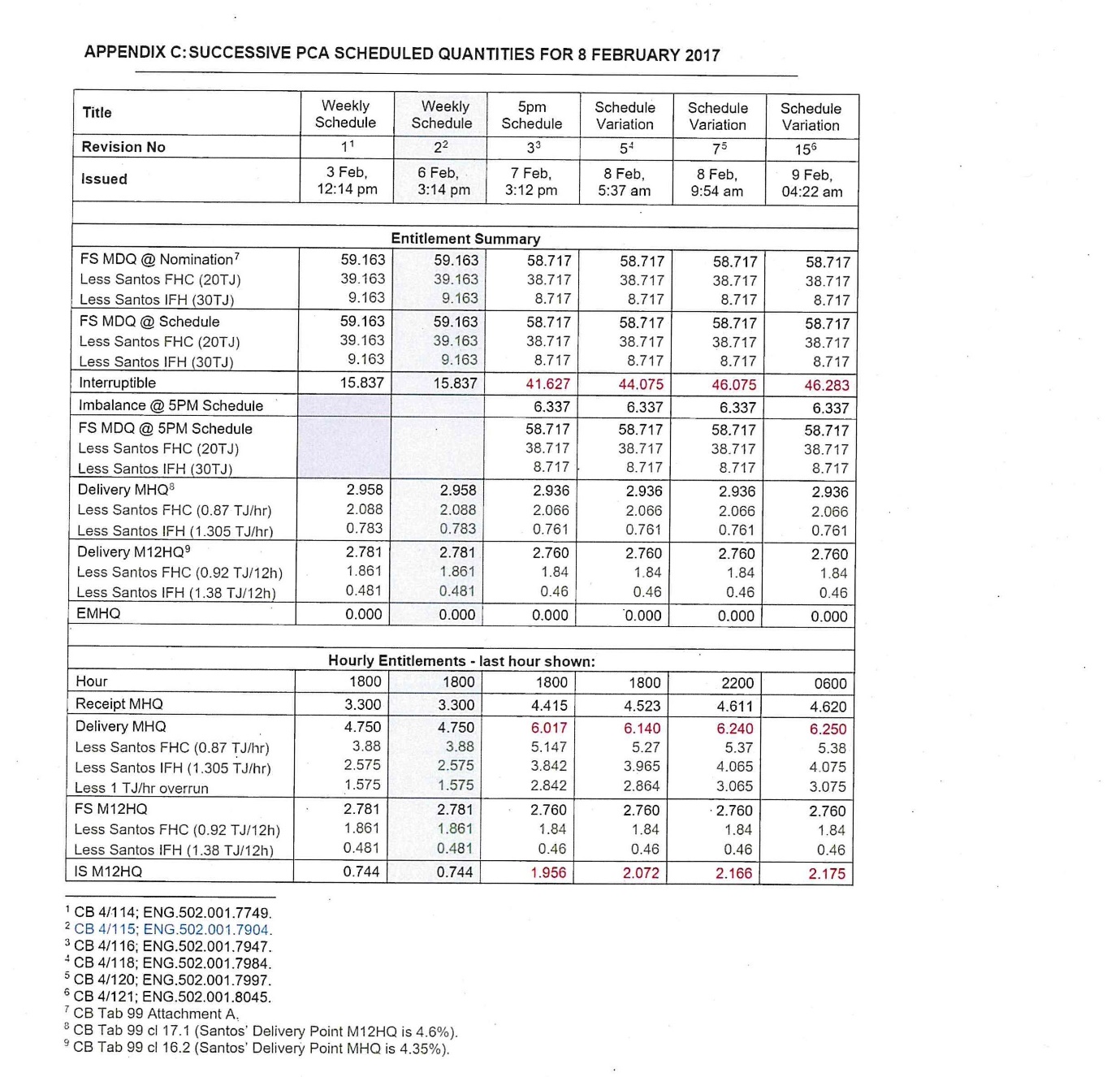
**Annexure 1**

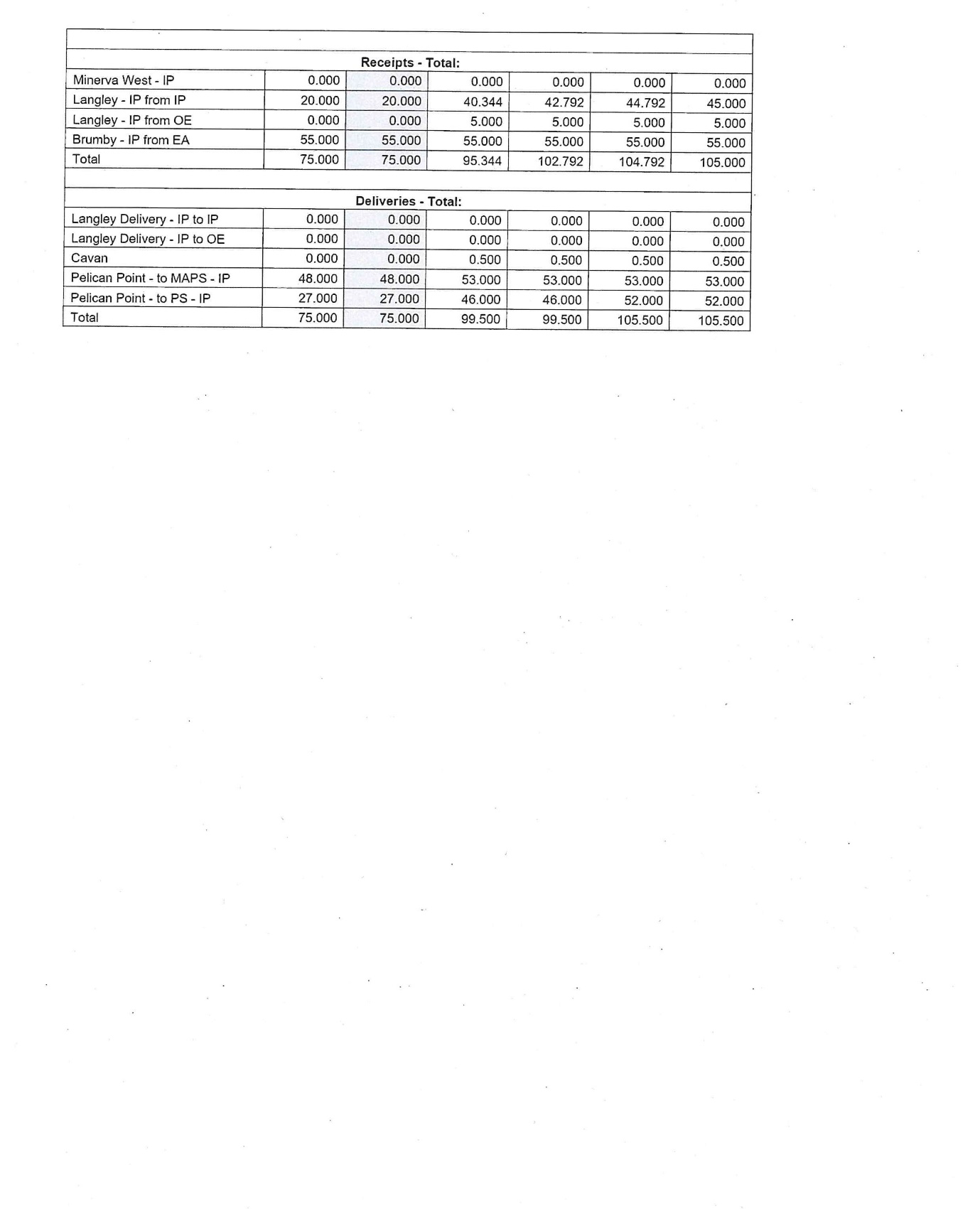
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**Annexure 2**

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**Annexure 3**

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