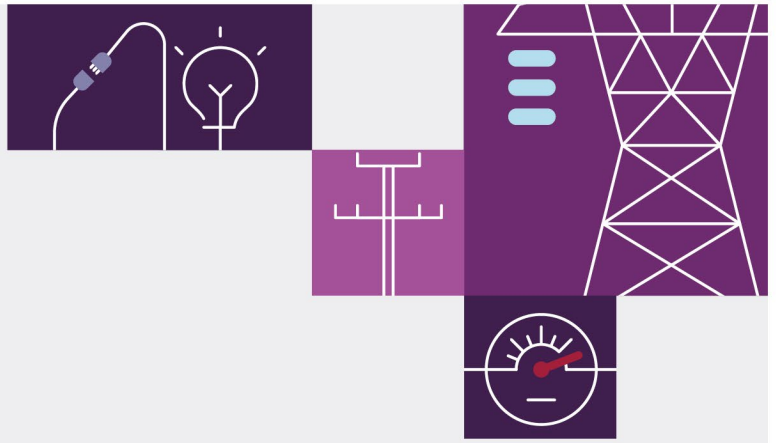


NEM Market Suspension June 2022

August 2023

Supplementary report: Suspension
payments and actions update





Important notice

Purpose

AEMO has prepared this supplementary report to complete its reporting on market suspension payments and compensation for the NEM spot market suspension in June 2022, under clause 3.14.3(d) of the National Electricity Rules, and to provide a progress update on recommended actions in AEMO's associated incident report published in August 2022.

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If you have any questions or comments in relation to this report, please contact AEMO at nemintervention@aemo.com.au.

Abbreviations

Abbreviation	Term
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
APC	Administered Price Cap
CPT	Cumulative Price Threshold
DWGM	Declared Wholesale Gas Market
FCAS	Frequency Control Ancillary Services
hrs	Hours, denoting a time of day using NEM time (Australian Eastern Standard Time)
kV	Kilovolt
MN	Market Notice
MPC	Market Price Cap
MSPS	Market Suspension Pricing Schedule
MT	Medium Term
NER	National Electricity Rules
NGR	National Gas Rules
PASA	Projected Assessment of System Adequacy
PD	Pre-Dispatch
PAREP	Port Augusta Renewable Energy Park
SCADA	Supervisory Control and Data Acquisition
ST	Short Term
STTM	Short-Term Trading Market



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1 Introduction

In August 2022, AEMO published a market event and reviewable operating incident report¹ (Incident Report) on the June 2022 National Electricity Market (NEM)-wide spot market suspension and related operational challenges. A supplementary report on compensation payments for directions issued during this period was published in July 2023² (Supplementary Directions Report).

The Incident Report describes the market and system events of 10-24 June 2022. In relation to the spot market suspension from 15-24 June, it covers AEMO's reporting obligations under National Electricity Rules (NER) 3.14.3(c) and 3.14.4(g).

This supplementary report provides:

- The financial information required under NER 3.14.3(d), being details of the market suspension pricing schedule (MSPS) payments and compensation payable to Market Suspension Compensation Claimants (Claimants) for the period from 1400 hrs on 15 June 2022 to 0400 hrs on 23 June 2022 (MSPS Period)³, and the associated cost recovery amounts.
- An update on the progress of actions recommended in the Incident Report.

For this suspension event, the Claimants were scheduled generators and ancillary service providers who provided energy or market ancillary services in the NEM in the MSPS Period. No wholesale demand response was provided in this period.

2 Payments and compensation

Section 2.1 of this report details the market suspension schedule pricing payments and compensation payments to each Claimant for the MSPS Period for the purposes of NER 3.14.3(d)(1)(i) and (ii).

Section 2.2 details the share of the compensation costs payable by each Market Customer, as required by NER 3.14.3(d)(1)(iii).

¹ AEMO, *NEM market suspension and operational challenges in June 2022*, August 2022. Available at https://www.aemo.com.au/-/media/files/electricity/nem/market_notices_and_events/market_event_reports/2022/nem-market-suspension-and-operational-challenges-in-june-2022.pdf

² AEMO, *NEM event 10 to 23 June 2022 Supplementary directions report*, July 2023. Available at https://aemo.com.au/-/media/files/electricity/nem/market_notices_and_events/market_event_reports/2022/nem-event---direction-to-nem-generators---june-2022-supplementary-report-final.pdf?la=en

³ Market suspension can include periods with or without the MSPS. In periods without the MSPS, there is no market suspension schedule payments or compensation payable. In this particular case, while the market remained suspended until 1400 hrs on 24 June, MSPS has ended on the previous day on 23 June, at 0400 hrs.

2.1 Market suspension pricing schedule payments and compensation payments

2.1.1 Other compensation reporting

AEMO's Supplementary Directions Report includes compensation and recovery amounts for reliability directions before the MSPS Period and for directions to scheduled loads and market network service providers (i.e., non-Claimants) during the MSPS Period. These amounts are excluded from this report.

The approximate total value of the benchmark compensation payments (\$7.2 million) and additional compensation payments (\$87.6 million) documented in this report has previously been reported by AEMO in its compensation updates relating to the June 2022 events⁴.

2.1.2 Meeting AEMO's reporting obligations for the MSPS Period

This section provides a breakdown of the following payments in respect of the MSPS Period:

- MSPS payments, being the trading amounts payable for energy and FCAS provided by Claimants based on the prices in the applicable MSPS.
- Compensation payments made to Claimants under 3.14.5A (including Claimants that were also Directed Participants in the same trading intervals). This compensation uses the schedule of benchmark values⁵ published by AEMO for the period when the market suspension occurred. These payments are designed to compensate Claimants for the costs they are assumed to have incurred based on their plant type and region, where they exceed the MSPS payments for energy and FCAS.
- Additional compensation payments made under 3.14.5B for Claimants that were not also Directed Participants. This compensates the Claimant for its direct costs incurred in providing the service, less the MSPS payments, benchmark compensation and any other compensation payable.
- Additional compensation payments made under 3.15.7B for Claimants that were also Directed Participants during the market suspension. This compensates the Claimant for its loss of revenue and additional net direct costs incurred for providing the directed service, less the MSPS trading amounts, benchmark compensation and trading amounts for any incidental service.

Several additional compensation claims for this suspension event, under 3.14.5B and 3.15.7B, were referred to independent experts for determination. The independent expert fees are paid directly by AEMO and included in the amounts recovered from market customers (noted in Section 2.2).

Table 1 details the MSPS payments⁶, benchmark compensation⁷ and additional compensation⁸ payments made to each of the 36 Claimants for the MSPS Period. Individual values in Table 1 are rounded to the nearest whole dollar value.

⁴ See final statements and revision statements totals of the suspension pricing compensation table in AEMO's *June 2022 NEM Events: Compensation Update (6 June 2023)* at <https://aemo.com.au/-/media/files/electricity/nem/data/mms/2023/compensation-update-6-6-june-2023.pdf?la=en>

⁵ See the link under the heading titled Market Suspension Compensation here: <https://aemo.com.au/en/energy-systems/electricity/emergency-management/guide-to-market-suspension-in-the-nem>

⁶ Columns "MSPS payment (energy)" and "MSPS payment (FCAS)" in Table 1.

⁷ Column "Benchmark compensation (energy & FCAS)" in Table 1.

⁸ Column "Additional compensation payment (energy & FCAS)" in Table 1.

Table 1 MSPS and compensation payments

Participant Name	MSPS payment (energy)	MSPS payment (FCAS)	Benchmark compensation (energy & FCAS)	Additional compensation (energy & FCAS)
Accel Energy Retail Pty Ltd*	\$10,031	\$100,171	\$0	\$0
AETV Pty Ltd	\$1,001,976	\$0	\$0	\$0
AGL Hydro Partnership	\$5,550,069	\$8,306	\$0	\$11,684,858
AGL Loy Yang Marketing Pty Ltd	\$59,703,723	\$80,513	\$0	\$0
AGL Macquarie Pty Ltd	\$92,043,434	\$56,815	\$0	\$0
AGL SA Generation Pty Ltd	\$13,448,240	\$113,097	\$0	\$6,945,255
AGL Sales (Queensland Electricity) Pty Ltd	\$59,119	\$0	\$0	\$0
Alinta Energy Retail Sales Pty Ltd	\$42,690,628	\$9,461	\$0	\$0
Arrow Southern Generation Pty Ltd and Arrow Braemar 2 Pty Ltd	\$3,710,858	\$0	\$0	\$1,790,014
Braemar Power Project Pty Ltd	\$5,224,860	\$0	\$0	\$1,792,492
Callide Power Trading Pty Ltd	\$14,600,487	\$0	\$0	\$0
CleanCo Queensland Ltd	\$8,511,800	\$458	\$0	\$0
CS Energy Ltd	\$81,147,333	\$352,176	\$0	\$0
Delta Electricity	\$37,267,258	\$132,204	\$0	\$0
EnergyAustralia Ecogen Pty Ltd	\$10,379,874	\$28	\$0	\$8,760,051
EnergyAustralia Pty Ltd	\$55,985,292	\$273,286	\$0	\$0
EnergyAustralia Yallourn Pty Ltd	\$37,288,886	\$33,984	\$0	\$706,342
Ergon Energy Queensland Pty Ltd	\$52,453	\$0	\$0	\$0
GSP Energy Pty Ltd	\$2,046,297	\$0	\$0	\$0
Hornsdale Power Reserve Pty Ltd	\$228,116	\$517,162	\$0	\$0
Hydro-Electric Corporation	\$53,449,880	\$421,674	\$0	\$449,320
Iberdrola Australia Wallgrove Pty Ltd	\$18,797	\$193,928	\$0	\$0
Lake Bonney Wind Power Pty Ltd	\$12,830	\$123,810	\$0	\$0
Millmerran Energy Trader Pty Ltd	\$31,098,282	\$0	\$0	\$0
Origin Energy Electricity Ltd	\$96,733,186	\$44,996	\$464,975	\$0
Pelican Point Power Ltd	\$14,368,488	\$17,513	\$0	\$3,195,880
Port Adelaide Energy Pty Ltd	\$593,342	\$0	\$423,208	\$6,333
QGC Sales Qld Pty Ltd	\$5,801,733	\$0	\$0	\$0
RTA Yarwun Pty Ltd	\$5,363,978	\$0	\$0	\$0
Shell Energy Retail Pty Ltd	\$2,725,461	\$0	\$0	\$2,930,955
Smithfield Power Generation Pty Ltd	\$3,928,002	\$0	\$0	\$4,320,435
Snowy Hydro Ltd	\$72,231,020	\$103,482	\$6,196,053	\$44,165,461
South Australian Water Corporation	\$85,866	\$4,711	\$0	\$0
Stanwell Corporation Ltd	\$104,786,025	\$421,576	\$0	\$0
Synergen Power Pty Ltd	\$619,011	\$0	\$139,681	\$894,257
Victorian Big Battery Pty Ltd	\$480,041	\$1,099,362	\$0	\$0
Total	\$863,246,676	\$4,108,715	\$7,223,917	\$87,641,651

* On 6 October 2022, Accel Energy Retail Pty Limited's name changed to AGL Dalrymple Pty Limited.

2.2 Compensation costs payable

Table 2 shows the share of compensation costs payable by each market customer to AEMO as required by NER 3.14.3(d)(1)(iii). Individual values in the table are rounded to the nearest whole dollar value.

The total compensation costs (\$95,055,731) represent the sum of:

- the total benchmark compensation payment (energy and FCAS) from Table 1 (\$7,223,917),
- the total additional compensation payment (energy and FCAS) from Table 1 (\$87,641,651), and
- the total independent expert fees (\$190,163).

It should be noted that MSPS payments are not part of the suspension compensation costs. They represent the base market trading amounts settled for energy and FCAS provided by Claimants during the MSPS Period, with the MSPS prices substituting for dispatch prices.

Some market customers were suspended from the market after the MSPS Period ended, as listed below:

- Elysian Energy Pty Ltd
- Enova Energy Pty Ltd
- Mojo Power East Pty Ltd
- Mojo Power Pty Ltd
- Power Club Ltd
- Powerdirect Pty Ltd
- QEnergy Ltd
- Sanctuary Energy Pty Ltd
- Social Energy Australia Pty Ltd

Regardless of registration status, all market customers listed in Table 2 remain liable for their share of the compensation costs calculated in accordance with NER 3.14.3(d)(1)(iii).

Two market customers listed in Table 2 changed their names after the market suspension:

- On 25 January 2023, OzGen Retail Pty Limited changed its name to Genuity Retail Pty Limited.
- On 3 April 2023, Tango Energy Pty Ltd changed its name to Pacific Blue Retail Pty Ltd.

Table 2 Compensation costs payable

Participant Name	Compensation cost
1st Energy Pty Ltd	\$125,242
AGL Hydro Partnership	\$1,889,655
AGL Sales (Queensland Electricity) Pty Ltd	\$161,567
AGL Sales Pty Ltd	\$11,434,897
AGL South Australia Pty Ltd	\$1,675,542
Alcoa Portland Aluminium Pty Ltd	\$2,072,650
Alinta Energy Retail Sales Pty Ltd	\$2,891,375
Amber Electric Pty Ltd	\$2,100
Blue NRG Pty Ltd	\$206,191
Bright Spark Power Pty Ltd	\$115
CleanCo Queensland Ltd	\$424,876
CleanTech Energy Pty Ltd	\$129
Covau Pty Ltd	\$212,976
CS Energy Ltd	\$4,812,846
CSR Building Products Ltd	\$119,030
Darlington Point Solar Farm Pty Ltd	\$3,355
Delta Electricity	\$977,637
Diamond Energy Pty Ltd	\$80,735
Discover Energy Pty Ltd	\$26,875
Electricity In A Box Pty Ltd	\$4,113
Ellis Air Connect Pty Ltd	\$53
Elysian Energy Pty Ltd	\$69,780
Energy Locals Pty Ltd	\$192,097
Energy Services Management Pty Ltd	\$3,809
EnergyAustralia Pty Ltd	\$5,924,707
EnergyAustralia Yallourn Pty Ltd	\$4,007,527
Enova Energy Pty Ltd	\$33,666
Ergon Energy Queensland Pty Ltd	\$3,046,908
Gannawarra Solar Farm Pty Ltd	\$355
GEE Power & Gas Pty Ltd	\$1,232
GloBird Energy Pty Ltd	\$217,348
Group Energy Pty Ltd	\$127,061
Hanwha Energy Retail Australia Pty Ltd	\$86,702
Hazelwood Power	\$4,708
Iberdrola Australia Energy Markets Pty Ltd	\$689,781
Iberdrola Australia Holdings Pty Ltd	\$72,470
Liberty Greenpower Pty Ltd	\$178,931
Locality Planning Energy Pty Ltd	\$26,982
Localvolts Pty Ltd	\$125
Lumo Energy (SA) Pty Ltd	\$142,147

Participant Name	Compensation cost
Lumo Energy Australia Pty Ltd	\$576,789
M2 Energy Pty Ltd	\$355,344
Maximum Energy Retail Pty Ltd	\$238
Mojo Power East Pty Ltd	\$63,993
Mojo Power Pty Ltd	\$31,530
Momentum Energy Pty Ltd	\$2,205,880
MTA Energy Pty Ltd	\$14,362
Next Business Energy Pty Ltd	\$331,429
Online Power And Gas Pty Ltd	\$10,772
Onsite Energy Solutions Pty Ltd	\$9
Origin Energy Electricity Ltd	\$19,371,512
OVO Energy Pty Ltd	\$51,443
OZGen Retail Pty Ltd	\$226,056
Power Club Ltd	\$9,865
Powerdirect Pty Ltd	\$367,378
Powershop Australia Pty Ltd	\$525,200
Progressive Green Pty Ltd	\$741,241
QEnergy Ltd	\$116,638
Radian Holdings Pty Ltd	\$1,023
ReAmped Energy Pty Ltd	\$93,833
Red Energy Pty Ltd	\$3,968,249
RTA Yarwun Pty Ltd	\$353,933
Sanctuary Energy Pty Ltd	\$1
Shell Energy Retail Pty Ltd	\$7,165,881
Simply Energy	\$1,929,785
Smart Energy Retail Pty Ltd	\$1,199
SmartestEnergy Australia Pty Ltd	\$114,478
Social Energy Australia Pty Ltd	\$550
South Australian Water Corporation	\$164,369
Stanwell Corporation Ltd	\$7,396,276
Sumo Power	\$245,641
Sun Metals Corporation Pty Ltd	\$282,618
Sun Retail Pty Ltd	\$618,878
Synergen Power Pty Ltd	\$222
Tango Energy Pty Ltd*	\$665,023
Telstra Energy (Retail) Pty Ltd	\$283
The Trustee For Finley Solar Trust	\$2,986
Tomago Aluminium Company Pty Ltd	\$4,321,605
TotalEnergies Gas & Power Australia Pty Ltd	\$373,874
Total	\$95,055,731

3 Actions taken since Incident Report

This section provides an update on progress of the actions or recommendations identified in the *Frequency performance* (Section 6.3) and the *Recommendations and next steps* sections (Section 9) of the Incident Report.

3.1 Plan for prices reaching the cumulative price threshold

3.1.1 Incident Report

AEMO to prepare a plan for when regional cumulative prices reach the cumulative price threshold (CPT) to better enable the management of the transition to administered pricing.

3.1.2 This Report

AEMO has processes in place for when regional cumulative prices reach the CPT to better enable the management of the transition to administered pricing. This plan is consistent with the processes employed towards the end of the June market suspension, where AEMO managed generation dispatch on a rolling 24-hour lookahead basis and had daily communications with energy constrained scheduled generators to understand physical fuel constraints and associated unit energy limits that could impact future capacity availability.

3.2 Tools and processes for energy limitations

3.2.1 Incident Report

AEMO to identify tools and processes needed to cater for energy limitations.

3.2.2 This Report

AEMO is in the process of identifying tools and processes needed to cater for energy limitations as part of the Short Term (ST) Projected Assessment of System Adequacy (PASA) Replacement Project:

- The ST PASA Replacement Project involves a comprehensive review of the Pre-dispatch (PD) and ST PASA methodology, exploring the development of a system that will serve the NEM now and into the future, noting that the current PD and ST PASA systems were designed when most of the generation in the NEM was supplied from large thermal units connected to the transmission network⁹.
- This project includes a review of how the PD and ST PASA systems can best capture the sharing of reserves across different regions and the allocation of energy-limited resources.

⁹ See <https://aemo.com.au/en/initiatives/trials-and-initiatives/st-pasa-replacement-project>

3.3 Rule changes for administered price cap, the cumulative price threshold and other market settings

3.3.1 Incident Report

AEMO to continue actively engaging with the Australian Energy Market Commission (AEMC) and industry with regard to reviews or rule change proposals relating to the administered price cap (APC), the CPT and other market settings that influence the operation of the NEM.

3.3.2 This Report

On 17 November 2022, the AEMC published a final determination and final rule on amending the APC in response to a rule change request received from Alinta Energy on 1 July 2022¹⁰. This determination increased the APC from \$300/MWh to \$600/MWh in every NEM region, effective until 30 June 2025. This will increase the likelihood of the market continuing to function effectively if the CPT is exceeded and an APC is triggered.

The AEMC is currently consulting on the Reliability Panel's rule change request¹¹ to change the APC, CPT and market price cap (MPC) to the levels recommended in the 2022 Reliability Standard and Settings Review¹².

3.4 Review of gas market prices / parameters

3.4.1 Incident Report

AEMO is conducting a review of gas market prices / parameters.

3.4.2 This Report

From September 2022, AEMO conducted the Gas Market Parameter Review 2022¹³. The review covered the Declared Wholesale Gas Market (DWGM) and the Short-Term Trading Market (STTM). This review was conducted under rule 492 of the National Gas Rules (NGR) for the STTM market parameters, in accordance with the standard consultative procedure requirements detailed in rule 8 of the NGR. There is no rule requirement for the review of the DWGM market parameters, but AEMO decided to review them in conjunction with the STTM market parameter review. The final decision on the AEMO Gas Market Parameters 2022 and Market Reform Final Report were published on 16 February 2023¹⁴.

¹⁰ See www.aemc.gov.au/rule-changes/amending-administered-price-cap

¹¹ See <https://www.aemc.gov.au/rule-changes/amendment-market-price-cap-cumulative-price-threshold-and-administered-price-cap>

¹² See <https://www.aemc.gov.au/market-reviews-advice/2022-reliability-standard-and-settings-review>

¹³ See <https://aemo.com.au/consultations/current-and-closed-consultations/gas-market-parameter-review-2022>

¹⁴ See https://aemo.com.au/-/media/files/stakeholder_consultation/consultations/gas_consultations/2023/gas-market-parameter-review-2022/aemo---final-determination---gas-market-parameters-review-2022.pdf?la=en

3.5 2023 General Power System Risk Review

3.5.1 Incident Report

AEMO is considering this series of events when developing the scope for the 2023 General Power System Risk Review.

3.5.2 This Report

AEMO published its 2023 General Power System Risk Review Report on 10 July 2023¹⁵.

The June 2022 NEM market suspension and energy/capacity shortage was one of the six high impact power system events reviewed as part of this process.

3.6 FCAS pricing software error

3.6.1 Incident Report

On 24 July 2022, AEMO completed an action to resolve a software error relating to FCAS pricing under market suspension conditions when normal dispatch pricing is in effect.

3.6.2 This Report

The Incident Report erroneously stated 24 July 2022 as the completion date for this action. The software issue was actually resolved on the afternoon of 23 June 2022, when AEMO identified, tested and implemented a permanent fix for the software error that affected the publication of FCAS prices on 23 June, such that a similar issue is unlikely to reoccur.

3.7 Processes for projecting supply adequacy

3.7.1 Incident Report

AEMO to review processes used for projecting supply adequacy over the medium-term in light of this series of events. The review should identify processes, modelling and reporting that may assist for these types of circumstances, particularly when factors contributing to fuel constraints emerge.

3.7.2 This Report

AEMO reviewed processes used for projecting supply adequacy over the medium term in light of this series of events as part of the NEM Reliability Forecasting Guidelines and Methodology Consultation, which concluded in March 2023. The final determination and final reports were published by AEMO on 24 April 2023¹⁶.

As part of this consultation, AEMO reviewed a number of reliability forecasting guidelines and methodologies to complete this action and meet other requirements under:

¹⁵ See <https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/system-operations/general-power-system-risk-review>

¹⁶ See <https://www.aemo.com.au/consultations/current-and-closed-consultations/2022-reliability-forecasting-guidelines-and-methodology>

- The “Enhancing information on generator availability in medium term (MT) PASA” rule change¹⁷.
- The AER’s Forecasting Best Practice Guidelines, and AEMO’s Reliability Forecast Guidelines (to review AEMO’s forecasting methodologies at least once every four years).
- NER 3.9.3D(e) (review the Reliability Standard Implementation Guidelines at least once every four years).

3.8 Oscillations in the South Australian Network on 23 June 2022

3.8.1 Incident Report

AEMO will prepare a separate incident report under NER 4.8.15 in relation to oscillations that occurred in the South Australian network on 23 June 2022, which were unrelated to the operational challenges covered by this report.

3.8.2 This Report

On 23 June 2022, from 0109 hrs to 0602 hrs, voltage and reactive power oscillations were observed in South Australia. Following the event, Iberdrola¹⁸ confirmed that oscillations in reactive power originated from the Port Augusta Renewable Energy Park (PAREP)¹⁹.

While commissioning tests were being carried out, specifically during a communication fail-safe test, an error was introduced into PAREP’s control system code, causing the reactive power output of the generator to oscillate.

AEMO published an incident report²⁰ under NER 4.8.15 on this event, which provides further details of the event and outlines recommendations in the areas of power system operation and system design to ensure secure and reliable operation of the power system.

3.9 FCAS performance assessment

3.9.1 Incident Report

AEMO is conducting an FCAS performance assessment and is in the process of acquiring and analysing FCAS recorder data from facilities enabled for contingency FCAS.

3.9.2 This Report

AEMO has reviewed the performance of facilities enabled in the FCAS markets during the frequency disturbance on 17 June 2022 and did not identify any non-compliances. Most switching controllers did not respond because the allocated trigger settings were 49.75 Hz or lower (which the frequency did not reach), and FCAS facilities with variable controllers only delivered a proportion of the FCAS capacity enabled as expected.

¹⁷ <https://www.aemc.gov.au/rule-changes/enhancing-information-generator-availability-mt-pasa#:~:text=Rule%20change%20request%20and%20background,availability%20in%20the%20MT%20PASA>.

¹⁸ Iberdrola Australia Energy Markets Pty Limited is the registered generator for Port Augusta Renewable Energy Park.

¹⁹ PAREP is an integrated 210 megawatts (MW) wind farm and 99 MW solar farm hybrid generating system with a maximum generating capacity of 270 MW located in Port Augusta in South Australia.

²⁰ See https://aemo.com.au/-/media/files/electricity/nem/market_notices_and_events/power_system_incident_reports/2022/south-australia-power-system-oscillations.pdf?la=en