

# GLOSSARY

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## Important Notice

### **Purpose**

The purpose of this document is to provide information about common measures, acronyms, and abbreviations as at the date of publication.

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## 1 Glossary of Terms

The electricity industry can be a complicated sector to understand for those who are new to it. To help your knowledge of industry terms, AEMO has collated this list of common measures, acronyms, and abbreviations. Many of these are used in AEMO's *power system operating procedures* and other AEMO publications. This glossary itself forms part of AEMO's *power system operating procedures* made under clause 4.10.1 of the National Electricity Rules (NER).

This document uses several terms that are defined in the NER or the National Electricity Law (NEL). Those terms are indicated *in italics*.

Unless the context otherwise requires, *AEMO's power system operating procedures* will be interpreted in accordance with Schedule 2 of the *National Electricity Law*.

Term	Meaning / Expanded Name
ACE	Area Control Error – a number calculated from frequency and time error, representing the estimated error (in MWs)
ADL	Average daily load
AGC	Automatic Generator Control or <i>AEMO's automatic generation control system</i>
AIR	Annual Interconnector Review
ALS	Automatic load shedding
APC	<i>Administered price cap</i>
APP	<i>Administered price period</i>
ASEFS	<i>AEMO's Australian Solar Energy Forecasting System</i>
APR	Annual Planning Report
A/R	Auto reclose
Auxiliary Loads /Auxiliary Supply /Auxiliaries	Auxiliary loads associated with <i>generating units</i> and <i>substations</i>
AVC	Automatic voltage control
AVR	Automatic voltage regulator
AWEFS	<i>AEMO's Australian Wind Energy Forecasting System</i>
Basslink	Tasmania/Victoria <i>interconnector</i>
BCS	Backup Control System
BIS	Business Information Systems
BOM	Bureau of Meteorology
BUDS	Backup Dispatch System
CA	Contingency analysis
CBF	Circuit Breaker Failure
CCGT	Combined Cycle Gas Turbine
CIR	<i>Congestion information resource</i>
COAG	Council of Australian Governments

Term	Meaning / Expanded Name
CVP	Constraint Violation Penalty - A factor assigned to each type of <i>constraint</i> equation to ensure physically feasible <i>dispatch</i> , <i>pre-dispatch</i> and <i>PASA</i> solutions can always be achieved by allowing conflicting <i>constraint</i> equations to be violated in a pre-defined priority order based on these factors.
Continuous Operating Limit	The maximum amount of <i>power</i> that can be transmitted through a <i>transmission element</i> or group of <i>transmission elements</i> such that following the occurrence of a <i>credible contingency event</i> , the flow on the remaining <i>transmission elements</i> will remain within their Continuous Ratings. [Note that Continuous Operating Limits may be determined for a particular <i>transmission element</i> , or for a group of elements (e.g. VIC - NSW import limit).]
Continuous Rating	The maximum amount of <i>power</i> that can be transmitted continuously through a specified <i>transmission element</i> .
Co-optimising	Solving an optimisation problem taking into account two or more optimisation problems
CSC	Controlled Static Compensator
CVP	Constraint Violation Penalty
Delivery Point	As specified in each <i>SRAS Agreement</i> , usually: (a) in the case of a <i>primary restart service</i> , the auxiliary power <i>supply point</i> at a specified <i>generating unit</i> ; and (b) in the case of a <i>secondary restart service</i> , an agreed point on the <i>power system</i> (which could be the <i>connection point</i> for the <i>SRAS Provider's generating unit</i> ).
DI	<i>Dispatch Interval</i>
Directlink	Terranora is connected to the rest of the electricity network in New South Wales via the direct current (DC) link known as Directlink.
DNSP	<i>Distribution Network Service Provider</i>
DOF	Demand Offset Facility
DSM	Demand-Side Management
DSO	<i>Distribution System Operator</i>
DTS	AEMO's Dispatcher Training Simulator or the <i>declared transmission system</i> of Victoria (as the context requires)
ECS	Emergency Control Scheme
EFCS	<i>Emergency frequency control scheme</i>
EMS	AEMO's Energy Management System
EMMS	AEMO's Electricity Market Management System
ESCOSA	Essential Services Commission of South Australia
ESOO	Electricity Statement of Opportunities ( <i>statement of opportunities</i> )
FCAS	Frequency Control Ancillary Services (a type of <i>market ancillary service</i> )
FCSPS	Frequency Control Special Protection Scheme
FDL	Fire Danger Level
FFR	Fast Frequency Response
FOS	<i>Frequency operating standard</i> (determined by the <i>Reliability Panel</i> )
FUM	Forecast Uncertainty Measure

Term	Meaning / Expanded Name
Generic <i>Constraint</i> Equation	A <i>constraint</i> equation applied by AEMO to EMMS via SOMMS.
GPATS	Global Positioning and Tracking System
GPG	Gas Powered Generation
GPS	<i>Generator performance standards</i>
Heywood Interconnector	Victoria/South Australia Interconnector
IPART	Independent Pricing and Regulatory Tribunal (New South Wales)
IRH	Inter-Regional Hedging
IRLF	<i>Inter-regional loss factor</i>
I/S	In service
ISTAR	In-Service Trip and Auto Reclose
ITT	Invitation To Tender
ICMS	Integrated Control and Monitoring System
JPB	<i>Jurisdictional Planning Body</i> - The entity nominated by the relevant Minister of a participating jurisdiction as having transmission system planning responsibility in that participating jurisdiction.
JSSC	<i>Jurisdictional System Security Coordinator</i>
LAZ	Lightning Attachment Zone (20km either side of the vulnerable double circuit transmission line.)
LBSP	<i>Local black system procedures</i>
Load block	Amount of electrical <i>load</i> capable of being connected to the <i>transmission system</i> during a system restart
LOR	<i>Lack of reserve</i>
LRC	<i>Low reserve condition</i>
LTP	Likely to Proceed - AEMO advising the relevant NSP that given the information at the time, AEMO would likely allow a <i>network</i> outage to proceed.
LTTI	Latest Time To Intervene
LTTW	Lightning Trip Time Window
LWZ	Lightning Warning Zone (20 km either side of the LAZ)
Market Notice	A notice issued electronically to all <i>Market Participants</i>
MASS	<i>Market ancillary service specification</i>
MCE	Ministerial Council on Energy (former name of the COAG Energy Council)
MII	Manifestly Incorrect Input
MIL	Major Industrial Load
MITC	Market Impacts of Transmission Congestion
MLF	<i>Marginal Loss Factor</i> - A multiplier used to describe the marginal electrical energy loss for electricity used or transmitted.
MN [xyz]	Refers to Market Notice number xyz
MNSP	<i>Market Network Service Provider</i>

Term	Meaning / Expanded Name
MPC	<i>Market price cap</i>
MT PASA	<i>Medium term PASA</i>
Murraylink	<i>Victoria/South Australia interconnector</i>
NCRR	NEM Circuit Ratings Repository
NCS	Network Control Services
NEM	<i>National Electricity Market</i>
NEMDE	AEMO's National Electricity Market Dispatch Engine
NER	<i>National Electricity Rules</i>
Network Model	AEMO's computer model of the <i>national grid</i> , which supports other software used by AEMO.
Network Outage	Where an element of the <i>high voltage</i> system or an associated device or service in the <i>transmission network</i> is made unavailable for use under either planned, short notice or unplanned <i>outage</i> .
NDSC	National Dispatch and Security Centre
NEC	<i>National Electricity Code</i> (superseded in 2005 by the NER)
NEL	<i>National Electricity Law</i>
Non-Conformance	A failure to conform to a <i>dispatch instruction</i> in breach of clause 3.8.23 of the NER.
NMAS	<i>Non-market ancillary services</i>
NOS	AEMO's Network Outage Scheduler, a system used to facilitate communications between AEMO and NSPs about <i>network outages</i> .
NRM	Negative Residue Management
NSA	<i>Network support agreement</i>
NSCAS	<i>Network support and control ancillary services</i>
NSP	<i>Network Service Provider</i>
OA	Operating agreement
OCGT	Open Cycle Gas Turbine
OFGS	<i>Over frequency generation</i> shedding scheme
OHEW	Overhead earth wire
OLTC	On-load tap changer
ONAN	Oil Natural Air Natural. ONAN is the rating at which a transformer can operate at without the fans and oil pumps running to cool it.
OOS or O/S	Out of service
OPDMS	Operations Planning Data Management System
OPGW	Optical Ground Wire
Participant Notice	A notice issued electronically to a <i>Market Participant</i>
PASA	<i>Projected assessment of system adequacy</i>
PD PASA	<i>Pre-dispatch PASA</i>
PIMMS	<i>Market Participants' interface to the EMMS</i>

Term	Meaning / Expanded Name
Planned Outage	A <i>transmission network outage</i> reported to AEMO for the purposes of ST PASA prior to AEMO's final <i>outage</i> assessment for that ST PASA period.
PLC	Programmable logic controller
PLCC	Power Line Carrier Communication
POC	Point of <i>connection</i>
PoE	Probability of exceedance. A 50% PoE <i>load</i> forecast is one which will be exceeded 50% of the <i>time</i> . See SO_OP_3710 – <i>Load</i> Forecasting
POPS	Plant Overload Protection Scheme
PRD	<i>Pre-dispatch</i>
PSPR	Power System Projects Repository
PTP	An instruction from AEMO granting permission to an NSP to proceed with an <i>outage</i> .
PTR	An instruction from AEMO granting permission to an NSP to restore <i>supply</i> to a <i>transmission element</i> .
PWRFLOW	An algorithm within EMS that solves the real and reactive parts of the <i>power</i> flow solution simultaneously based on the Network Model.
QNI	Queensland/New South Wales <i>interconnector</i>
RAS	Remedial Action Scheme
Reserve Requirement	The requirement required to satisfy the <i>reliability standard</i> . The Reserve Requirement for each <i>region</i> can be found in SOMMS.
Restart Path	As specified in each SRAS Agreement, the route that <i>generation</i> from the SRAS Provider's <i>generating unit</i> will utilise to <i>supply</i> the Delivery Point.
RO or Responsible Officer	The designated officer within an organisation who is the primary contact during <i>power system</i> emergencies.
ROC or Rate of Change.	The rate at which <i>active power</i> can change (expressed as MW/minute).
RoCoF	Rate of change of frequency
RRN	<i>Regional reference node</i>
RRP	<i>Regional reference price</i>
RTCA	Real Time Contingency Analysis application in the EMS
RTD	<i>dispatch</i>
RTNET	Real Time Network State Estimation application in the EMS
RTO	Real Time Operations
RTSCT or Real Time Short Circuit Analysis	An application that analyses the effects of <i>short circuit faults</i> to the <i>network</i> using actual system data.
RTSENH	Real Time Security Enhancement application in the EMS
RTS	Return To Service
SC	<i>Short circuit fault</i>
SCADA	Supervisory Control and Data Acquisition System
SDL	<i>Self-dispatch level</i>



Term	Meaning / Expanded Name
Short Notice Outage	Any <i>transmission network outage</i> advised to AEMO after AEMO's final <i>outage assessment</i> for an ST PASA period, usually 4 days before <i>dispatch</i> .
Short Term Operational Limit	The maximum amount of <i>power</i> that can be transmitted through a <i>transmission element</i> or group of <i>transmission elements</i> such that following the worst <i>credible contingency event</i> , the flow on the remaining <i>transmission elements</i> will remain within their Short Term Ratings.
Short Term Rating	The maximum amount of <i>power</i> that can be transmitted through a specified <i>transmission element</i> , provided that it is reduced to less than or equal to the Continuous Rating within the <i>time</i> allowable by the Short Term Rating. For example, if an element has a 10-minute Short Term Rating, this means that the maximum <i>power</i> flow through that element can reach the Short Term Rating for 10 minutes but must return to the Continuous Rating once that period expires.
SMIRK2	System Market Incident Reporting Kiosk 2
SRAS Agreement	Agreement for the provision of <i>system restart ancillary services</i> to AEMO.
SRAS Equipment	As specified in each SRAS Agreement
SOMMS	System Outlook For Market Management Systems ( <i>System Operators'</i> interface with EMMS)
ST PASA	<i>Short term PASA</i>
STCA	Study Contingency Analysis application in EMS
STNET	Study Network application in EMS
STSENH	Study Security Enhancement application in EMS
SVC	<i>Static VAR compensator</i>
System Normal Conditions	A situation where all <i>high voltage transmission</i> equipment, and associated services are available for service.
System Reactive Plant	Electrical equipment consisting of capacitors, reactors and SVCs capable of being <i>connected</i> to the <i>transmission network</i> and used for the purpose of managing <i>network reactive power</i>
TAR	Trip and Auto Reclose
Terranora Interconnector	Mudgeeraba in Queensland to Terranora in New South Wales Interconnector
TFB	Total Fire Ban
TI	<i>Trading interval</i>
TLA	Transfer Limit Advice
TNSP	<i>Transmission Network Service Provider</i>
TOA	Temporary Operating Advice
Trip Condition	Sustained excessive high or low system <i>frequency</i> excursions and, where required by AEMO, <i>frequency</i> rate of change and loss of <i>synchronisation</i> or sustained excessive low <i>voltage</i> excursions
TTHL or Trip to house load	An electrical islanding scheme using <i>generating units</i> that can <i>disconnect</i> from the <i>transmission network</i> following a <i>major supply disruption</i> and continue to supply their own auxiliaries or an isolated segment of system <i>load</i> .
UFLS	<i>Under-frequency load shedding</i> scheme
UIGF	<i>Unconstrained intermittent generation</i> forecast

Term	Meaning / Expanded Name
Unplanned Outage	Any <i>transmission network outage</i> that occurs unexpectedly.
USE	<i>Unserved energy</i>
UVLS	Under-Voltage Load Shedding Scheme
Valid Pre-Dispatch Schedule	The most recently <i>published pre-dispatch schedule</i> that best approximates the condition of the <i>power system</i> .
Violation Degree	The amount (in MW) by which the left-hand-side (LHS) of a <i>constraint</i> equation violates the right-hand-side (RHS)
VNI	Victoria New South Wales Interconnector
VoLL	Value of Lost Load (dollar amount put on the value of 1 MW of load being lost)