



Electricity Supply Emergency Sub Plan

**A Sub Plan of the
State Emergency Management Plan**

**Endorsed by the
State Emergency Management Committee**

August 2018

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AUTHORISATION

The Electricity Supply Emergency Sub Plan is a Sub Plan to the State Emergency Management Plan (EMPLAN) to detail control and coordination arrangements for prevention of, preparation for, response to, and initial recovery from, a significant electricity supply disruption in New South Wales.

This Sub Plan is prepared on before of the Department of Planning and Environment and was endorsed by the State Emergency Management Committee in accordance with the provisions of the *State Emergency and Rescue Management Act 1989* (as amended) on 01 June 2018.

VERSION CONTROL

Proposals for amendments to content of NSW Electricity Supply Emergency Sub Plan are to be forwarded to:

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DISTRIBUTION

This Sub Plan is not distributed in hard copy. Organisations and individuals should confirm they have the latest copy by checking the current version at www.emergency.nsw.gov.au.

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1 Introduction

General

- 1.1 This Sub Plan provides the process for the emergency management of significant electricity supply disruptions in NSW by the Department of Planning and Environment (DPE), Emergency Services Organisations and Functional Areas.
- 1.2 A black system event, or any other electricity supply emergency, will have significant consequences for NSW infrastructure, businesses, essential services and households.
- 1.3 The failure of critical infrastructure (in particular those providing electricity supply) is a priority hazard that poses a significant risk to NSW as identified in the 2017 State Level Emergency Risk Assessment (SLERA). The SLERA supports the development and maintenance of this sub plan, and the need to prevent, prepare, respond and recover from a major disruption to the State's electricity supply.
- 1.4 This Sub Plan is to be read in conjunction with the Energy and Utility Services Supporting Plan (EUSPLAN).

Background

- 1.5 The NSW region of the National Electricity Market (NEM) is made up of:
 - a. electricity generators supplied variously from coal, gas, diesel, hydro, wind and solar resources
 - b. a transmission network, operated by TransGrid, including high-voltage transmission lines and substations
 - c. transmission network interconnectors with Queensland and Victoria
 - d. three distribution networks, operated by Ausgrid, Endeavour Energy and Essential Energy, including distribution lines and substations
 - e. the Australian Capital Territory distribution network, operated by Evoenergy (formerly ActewAGL), including distribution lines and substations
 - f. electrical loads, including industrial and commercial businesses as well as residential dwellings.
- 1.6 The NEM is designed with redundancy and protection schemes in place to prevent frequent or widespread supply interruptions.
- 1.7 Figure 1 shows the NSW region of the NEM, bounded by a purple dotted line.

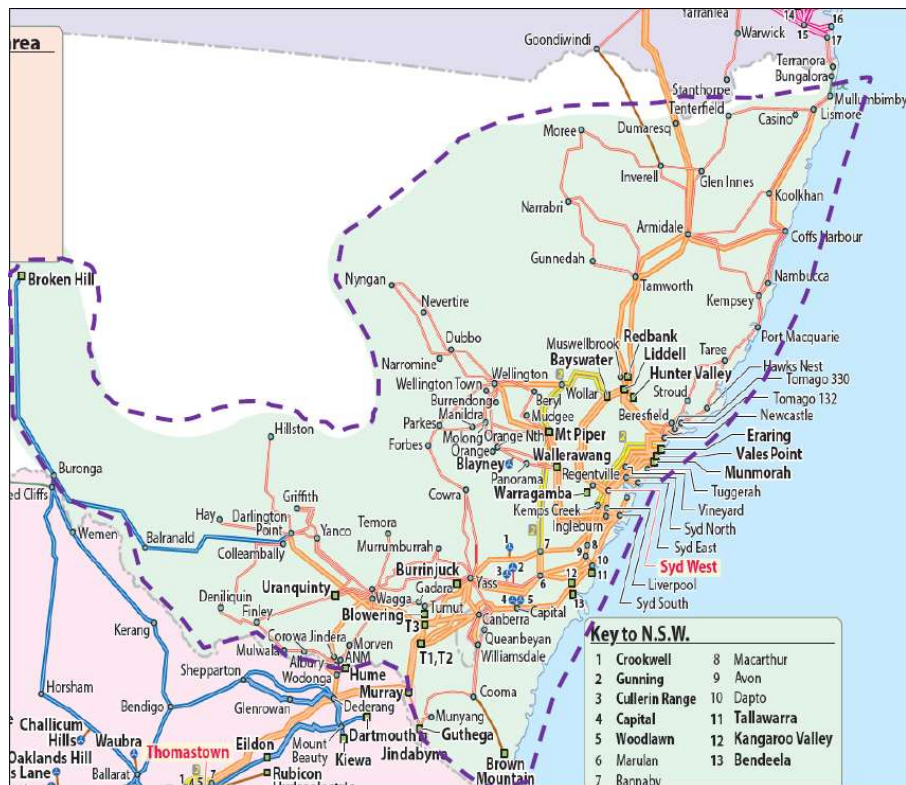


Figure 1 The NSW electrical system, AEMO, SRAS Guidelines, 5 September 2014. Bold text shows major generators, orange and red lines show transmission network lines and green squares and circles show transmission substations.

Aim

- 1.8 This Sub Plan details the emergency management arrangements regarding prevention of, preparation for, response to, and recovery from, consequences and effects of a black system or electricity supply emergency in NSW.
- 1.9 The arrangements ensure that the combat agency, DPE, is able to:
 - a. manage a black system event or electricity supply emergency within the NSW region of the NEM, consistent with AEMO's role as the NEM operator under the national electricity regulatory framework;
 - b. utilise and coordinate assistance from relevant government and industry organisations.

Scope and Activation

- 1.10 DPE will activate all or part of this Sub Plan under one of the following conditions:
 - c. When the Australian Energy Market Operator (AEMO) declares a black system condition for NSW.
 - d. When the NSW Premier declares an electricity supply emergency under s94A of the *Electricity Supply Act 1995* (NSW).
 - e. If DPE reasonably expects that one or both of (a) and/or (b) is imminent.
- 1.11 This Sub Plan does not apply to minor or localised electricity supply incidents and consequences which are within the capacity of the NSW electricity generators, transmission and distribution networks to manage and which do not require a significant

whole-of-government coordinated multi-agency approach beyond the existing general coordination arrangements set out under the EUSPLAN.

- 1.12 When this Sub Plan is activated, the Electricity Incident Controller will notify the Energy and Utility Services Functional Area Coordinator (EUSFAC) that all or part of the Sub Plan has been activated. The EUSFAC will in turn notify the Emergency Services Organisations and Functional Areas through the State Emergency Operations Centre (SEOC).
- 1.13 This Sub Plan may be active in conjunction with other Sub Plans where required, and during a State of Emergency declared by the NSW Premier under the *State Emergency and Rescue Management Act 1989* (NSW).
- 1.14 DPE, as the combat agency, will facilitate the flow of information between the EUSFA Participating and Supporting Organisations (as per the EUSPLAN), and the Emergency Services Organisations and Functional Areas. DPE will request the SEOCON to control and coordinate the consequence management.

Responsibilities

- 1.15 DPE is responsible for activating this Sub Plan and is the designated Combat Agency for the control and coordination of electricity supply emergencies.

- 1.16 **Premier**

Under section 94A of the *Electricity Supply Act 1995* (NSW) the NSW Premier is able to declare, by order in writing, an electricity supply emergency if satisfied that the supply of electricity to all or any part of the State is disrupted to a significant degree, or that there is a real risk that supply of electricity to all or any part of the State may be disrupted to a significant degree.

- 1.17 **Relevant Official**

The Relevant Official is defined as the person or body who has the legislative authority to exercise electricity emergency powers [Ref.1]. In NSW, the Relevant Official is the Minister for Energy and Utilities. When a declaration of an electricity supply emergency is in force, the Minister is able to give directions that they consider are reasonably necessary to respond to the emergency, including restricting electricity use and requiring large electricity users to shut down plant and equipment.

- 1.18 **Electricity Incident Controller**

On activation of the Sub Plan, the NSW Jurisdictional System Security Coordinator (JSSC) is the Electricity Incident Controller.

- 1.19 The Electricity Incident Controller is responsible for the control and coordination of the black system or electricity supply emergency management measures and is the final authority in decision-making in relation to the black system or electricity supply emergency.

- 1.20 **State Emergency Operations Controller (SEOCON)**

When requested by the Electricity Incident Controller, the SEOCON will take responsibility for the control and coordination of consequence management for the response to the black system or electricity supply emergency.

- 1.21 The EUSFAC may request that the SEOC disseminate information to and from all Emergency Services Organisations and Functional Areas.

1.22 All Emergency Services Organisations and Functional Areas should prepare to support the operations associated with response to and recovery from a black system or electricity supply emergency.

1.23 General emergency management responsibilities of Emergency Services Organisations, Functional Areas and Participating and Supporting Organisations are set out in the EMPLAN.

1.24 **NSW Jurisdictional System Security Coordinator**

The NSW Jurisdictional System Security Coordinator (JSSC) is appointed in writing by the Minister for Energy and Utilities under section 110 of the *National Electricity (NSW) Law*. The JSSC:

- a. acts as a facilitator and information conduit between AEMO, TransGrid as the Jurisdictional Responsible Officer, and the EUSFAC to enable the implementation of national and state electricity supply emergency management arrangements
- b. provides advice to the Minister for Energy and Utilities, the Secretary of DPE and the Deputy Secretary of the Division of Energy, Water and Portfolio Strategy DPE
- c. initiates DPE electricity supply emergency management protocols as required
- d. the JSSC will assume the role of Electricity Incident Controller upon activation of this Sub Plan.

1.25 **Jurisdictional Designated Officer**

Each jurisdiction in the National Electricity Market must nominate a Jurisdictional Designated Officer (JDO) [Ref.1]. The JDO provides advice and support to the Relevant Official (Minister for Energy and Utilities, see section 1.17) in relation to the exercise of jurisdictional electricity emergency powers, including the implementation of the relevant emergency powers instruments. In NSW, the roles of the JSSC and the JDO are combined and the position is referred to solely as the JSSC.

1.26 **Jurisdictional Responsible Officer**

The Jurisdictional Responsible Officer (JRO) in NSW is an employee of TransGrid. The JRO acts as the emergency contact point for AEMO during electricity supply incidents [Ref.1 and 4]. TransGrid provides the direct management of the transmission system, coordination of distribution network activities and feedback to the Electricity Incident Controller/JSSC during a black system or electricity supply emergency. The TransGrid JRO for NSW has an emergency management role under the PSEMP, and is also a key part of TransGrid's internal emergency management team.

1.27 **Energy and Utility Services Functional Area Coordinator**

The Energy and Utility Services Functional Area Coordinator (EUSFAC) manages the provision of information relating to the potential or actual loss of electricity supply to the State, Regional and Local Emergency Operations Controllers, the NSW State Emergency Management Committee (SEMC), Emergency Services Organisations, Functional Areas and Participating Organisations. The EUSFAC monitors and coordinates consequence management of emergencies; seeks Emergency Operations Controller (EOCON) approval for assistance (where applicable) to manage consequences of energy supply loss; and briefs the Electricity Incident Controller as appropriate. The EUSFAC oversees the DPE Energy and Utility Emergency Management Unit (EUEMU).

1.28 **Australian Energy Market Operator**

AEMO is responsible for identifying and implementing actions to restore the electricity

system to a secure operating state under the National Electricity Rules [Ref.2] and the *National Electricity (NSW) Law*. AEMO carries out this responsibility in accordance with its Power System Emergency Management Plan (PSEMP) [Ref.3] which has been prepared with reference to jurisdictional energy emergency arrangements [Ref.1 and 4].

1.29 **National Electricity Market (NEM) Responsible Officer**

The NEM Responsible Officer (NEM RO) is the emergency contact point at AEMO during electricity emergencies [Ref.1].

Causes of an electricity supply emergency

- 1.30 The electricity system is an interconnected and highly complex machine. For the system to remain stable, available supply from generators must exceed demand from loads at a given moment and a range of electrical parameters must be met.
- 1.31 Although unlikely, it is possible that an event, or multiple events, could affect the stability of the system and lead to complete loss of electricity supply across the NSW region within seconds. This is known as a black system event.
- 1.32 An event, or multiple events, could also affect the system such that electricity supply across the NSW region is disrupted to a significant degree.
- 1.33 Such events leading to a black system or electricity supply emergency could include (but are not limited to):
 - a. major infrastructure damage caused by a natural disaster – for example network damage due to a cyclone, severe storm or bushfire
 - b. a lack of electricity supply to meet demand – for example due to gas, coal or renewable energy shortage, or generator equipment failure
 - c. excess demand – generally during a heatwave event when consumers are using air conditioners, and with the heat exacerbating the situation by creating sub-optimal operating conditions for generators and network elements
 - d. system equipment failure, for example due to the impacts of an extreme weather event or component failure
 - e. human error in system operation
 - f. physical or cyber-attacks on the electricity system
 - g. a combination of all or some of the above.
- 1.34 There are no definitive predictors of a black system or electricity supply emergency, but the occurrence of one or more of the following conditions may indicate the need to be prepared for significant electricity supply disruption:
 - a. presence of extreme weather events which are:
 - i concentrated in time
 - ii likely to affect electricity generation or transmission and distribution assets
 - iii likely to affect electricity fuel supply (for example coal, gas, diesel or water)
 - iv affecting a wide geographical area which includes multiple electricity system elements
 - v coinciding with peak electricity demand, which typically occurs in the late afternoon on a weekday during a heat wave.
 - b. forecast or actual lack of electricity supply warnings from the Electricity Incident Controller or EUSFAC

- c. major fuel input incidents or limitations affecting multiple electricity generators, for example drought affecting pumped hydro electricity generation
- d. known criminal threats of system attacks
- e. known major network stability issues or disruptions
- f. space weather events (such as large coronal mass ejections) which may affect transmission and generation assets.

Restarting the electricity system

- 1.35 Restarting the electricity system in a large load centre such as NSW from a black system condition is an immense technical challenge. AEMO, under the National Electricity Rules [Ref.2] and the *National Electricity (NSW) Law*, is the designated agency responsible for preparing a system restart plan for the management and coordination of system restoration activities. During a restart, AEMO will ensure restart sources are in place and manage generation assets, and TransGrid will provide network availability and load restoration via distribution networks.
- 1.36 The EUSFAC will update the Emergency Services Organisations and Functional Areas on the progress of the restart process. This will cover locations affected and forecast energisation times.
- 1.37 Emergency Services Organisations and Functional Areas must prepare their plans for a state-wide black system or electricity supply emergency event in the knowledge that the networks and AEMO will not be able to restart individual sections of the network based on essential service requirements. Instead the restart must be done according to network conditions, generator availability and condition, and matched load availability.
- 1.38 During a black system or electricity supply emergency, the majority of residential and business owned solar panels and battery storage systems will not be operational, unless the owner has specifically installed a system designed to operate during a main-grid disruption.
- 1.39 A black system or electricity supply emergency could lead to significant impacts on businesses, health services, water supply, sewage treatment, food supply and transport.

2 Prevention

- 2.1 Prevention of electricity supply emergencies is a long term strategic activity that is shared between national and state governments, AEMO, regulators, Emergency Services Organisations, Participating Organisations and Supporting Organisations.
- 2.2 NSW plays an ongoing role in ensuring energy security and preventing the occurrence of electricity supply emergencies through advocacy and policy making, industry hazard and risk identification and mitigation, and participation in critical infrastructure resilience and protection programs.
- 2.3 AEMO provides planning and forecasting information to support efficient decision making and long-term investment in the NEM on the eastern seaboard of Australia. This information is used to support industry and government in their operation.
- 2.4 Energy efficiency programs also contribute to reducing peak demand, and therefore the potential for electricity supply emergencies. The NSW Government has ongoing energy efficiency programs such as the Energy Savings Scheme and Energy Affordability Package. The NSW Government also provides energy efficiency advice and information for residential dwellings and businesses, including the Energy Saver training packages for businesses and a range of pamphlets for households, such as the NSW Home Solar Battery Guide.
- 2.5 The nature of an incident will determine the preventative steps that can be taken to directly attempt to prevent its escalation to a black system or electricity supply emergency.
- 2.6 For the purposes of this Sub Plan, response actions for minor electricity supply incidents which are within capacity of NSW electricity generators, transmission and distribution network service providers to manage are generally considered to be prevention actions.
- 2.7 Short-term energy supply issues that are not resolved through normal market operation, for example by adding additional generation or reducing load, can trigger response actions directed by AEMO or the Electricity Incident Controller, including actions detailed in 2.8 to 2.11 below.
- 2.8 Under the National Electricity Rules [Ref.2], AEMO is responsible for signalling to the market where reserves are low or where demand is forecast to or is actually exceeding supply. These signals are a normal market function and do not in themselves constitute an emergency situation.
- 2.9 AEMO continuously assesses weather forecast, electricity system reliability and electricity system security to meet specified standards. If reliability and security are not considered likely to be met through market resolution, then AEMO may take a number of actions to maintain system security, including procuring reserve through the Reliability and Emergency Reserve Trader (RERT).
- 2.10 Voluntary demand response can be called to help balance supply and demand. This may be relevant where the supply shortfall is not expected to last more than two days. The procedures for implementing voluntary demand response are detailed in the DPE Energy and Utility Services Internal Operating Plan - Electricity Supply [Ref.7]. Voluntary demand response may include:
 - a. a request to the public from the Minister for Energy and Utilities to voluntarily reduce residential and business energy consumption
 - b. a request to NSW Government agencies from the Electricity Incident Controller to voluntarily reduce demand, following advice from AEMO and conferring with the

Minister for Energy and Utilities

- c. a request to large energy users, including state owned corporations, from the Electricity Incident Controller to voluntarily reduce demand, following advice from AEMO and conferring with the Minister for Energy and Utilities.
- 2.11 If further demand reductions are required or a quick response is needed, manual load shedding may be required. Load shedding is instructed by AEMO in accordance with the NSW Jurisdictional Load Shedding Guidelines [Ref.6]. These guidelines determine, identify and prioritise the disconnection and reconnection of loads to maintain electricity system security and public safety in NSW. If possible, the EUSFAC will communicate details about load shedding to Emergency Services Organisations.

3 Preparation

Monitoring

- 3.1 AEMO is responsible for operating the NEM including the security and reliability of supply. AEMO carries out assessments of the impacts of a variety of factors that affect the reliability of electricity supply in the NEM regions. These include:
 - a. weather related issues such as storms, heatwaves and bushfires
 - b. generation capacity relating to equipment failures, maintenance programs and other disruptions
 - c. network capacity related to equipment failure, maintenance programs and other disruptions
 - d. ancillary services to support the operation of the NEM.
- 3.2 The SEOC will facilitate information dissemination to the Emergency Services Organisations and other Functional Areas, with respect to any emerging threats to the electricity supply in the State, at the request of the EUSFAC.

Training and exercises

- 3.3 The EUEMU and supporting DPE personnel will be appropriately trained and are available for immediate mobilisation for black system or electricity supply emergency event operations.
- 3.4 DPE will plan for and conduct periodic exercises to rehearse implementation and effectiveness of this Sub Plan. Learnings from exercises will be considered in updates to this Sub Plan. As appropriate, exercises may simulate public involvement or test elements of plans that require public involvement and communication.
- 3.5 DPE will assist other agencies and Participating and Supporting Organisations to conduct exercises to rehearse implementation and effectiveness of related plans, including Supporting Plans and Sub Plans.
- 3.6 DPE will offer training to Emergency Services Organisations and all essential services Functional Area Coordinators on the NSW Jurisdictional Load Shedding Guidelines.
- 3.7 The National Electricity Market Emergency Management Forum (NEMEMF) chaired by AEMO consists of representatives from industry, State and Federal governments. It is charged with reviewing and improving the emergency plans and procedures that apply during electricity supply emergencies. NEMEMF conduct annual exercises that test these emergency arrangements. The Electricity Incident Controller/JSSC and EUSFAC will participate in these exercises.
- 3.8 TransGrid conducts exercises to test the system restart procedure, with participation from DPE, the Electricity Incident Controller/JSSC, EUSFAC, the Australian Capital Territory, AEMO, distribution networks and generators.
- 3.9 AEMO conducts an annual restart exercise for the NSW Region of the NEM.

Community engagement

- 3.10 Consistent with the National Disaster Resilience Strategy, the community needs to be as equally prepared as response agencies for the impacts of a black system or electricity supply emergency.

- 3.11 DPE will participate in state-level all hazards community engagement programs such as the Get Ready NSW initiative to help prepare the community for electricity outage events.

4 Response

Control and Coordination

4.1 Electricity Incident Controller

The Electricity Incident Controller will activate an operations centre. The Electricity Incident Controller will coordinate with AEMO and TransGrid (in its role as JRO) on the restoration of electricity supply.

4.2 AEMO

AEMO will manage and coordinate system restoration activities and is responsible for providing information about the status of generation assets and electricity demand forecasts. During a system restart, AEMO will ensure restart sources are in place and manage generation assets, and TransGrid will provide network availability and load restoration via distribution networks.

4.3 Relevant Official

If required, the Minister for Energy and Utilities has the power under section 94B of the *Electricity Supply Act 1995* (NSW) to restrict electricity use or require large users of electricity to shut down any plant or equipment as part of the response to an electricity supply emergency.

4.4 SEOCON

If necessary, the Electricity Incident Controller will request the SEOCON to assume control of the response to the consequences of a severe and sudden disruption to the supply of energy and utility services.

4.5 EUSFAC

The EUSFAC will coordinate between the SEOCON and industry as they would in any emergency event. EUSFAC will act as the conduit between the Electricity Incident Controller and the SEOCON, Emergency Services Organisations and Functional Areas to provide updates on the energisation of the electricity system.

4.6 Emergency Services Organisations

The roles and responsibilities of Emergency Services Organisations during a black system or electricity supply emergency are those as outlined in the EMPLAN and any other Supporting Plans.

4.7 Functional Areas

The roles and responsibilities of Functional Areas during a black system or electricity supply emergency are those as outlined in the EMPLAN and any other Supporting Plans.

4.8 Figure 2 shows the control and coordination arrangements.

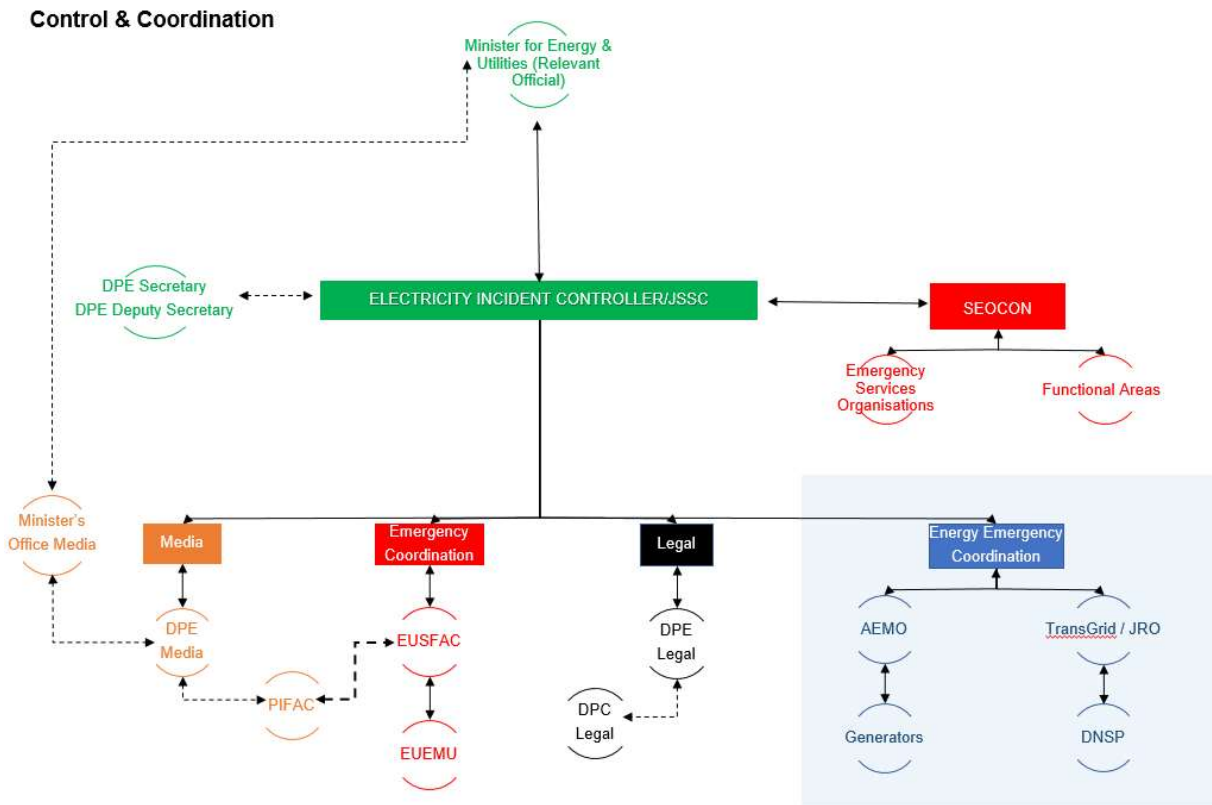


Figure 2 Control and coordination arrangements

Participating and Supporting Organisations

- 4.9 Participating and Supporting Organisations for the Energy and Utility Services Functional Area are identified in the EUSPLAN.
- 4.10 The EUSPLAN outlines the agreements between DPE and Participating and Supporting Organisations for participation in emergency response tasks.
- 4.11 Energy and Utility Participating and Supporting Organisations have agreed to provide technical advice, human resources and equipment for support during electricity supply emergencies, as outlined in the EUSPLAN.

Emergency Services Organisations and Functional Areas

- 4.12 Emergency Services Organisations and Functional Areas may advise the EUSFAC about particular sites or services requiring priority restoration of electricity supply. These requests may or may not be able to be accommodated, depending on electricity supply equipment condition and the status of the electricity system restoration.
- 4.13 All Emergency Services Organisations and Functional Areas should be aware and observant of the condition of electricity network equipment. These assets may have been damaged in the original event that caused the disruption or may have been damaged in the response operation. Damaged assets when energised pose a serious threat to life. Any damages should immediately be reported to the EUSFAC.
- 4.14 **NSW Police Force**

The NSW Police Force will assist where possible with the security of emergency supply lines and provide safe passage for electricity network technicians when required to support the restoration of the electricity system.

The NSW Police Force will provide the EUSFAC with advice and guidance regarding the security of electricity system assets based on relevant intelligence.

Operational Communications

- 4.15 Emergency Services Organisations, Functional Area Coordinators and relevant government authorities should consider their own operational communications, capable of withstanding a black system or electricity supply emergency.
- 4.16 Various forms of operational communications, including mobile telephone, satellite telephone, UHF/VHF radio and GRN will be used to provide:
 - a. internal agency communications
 - b. communication facilities in respective control/operation centres
 - c. communication links to SEOC
 - d. communication between state and inter-state government and industry
 - e. communication links to various participating and supporting agencies.
- 4.17 Emergency Services Organisations, Functional Area Coordinators, relevant government authorities and industry are encouraged to develop their own operational communication plans, ensure they are exercised and tested regularly, and provide relevant updates to the EUSFAC.
- 4.18 Figure 3 shows the operational communications arrangements.

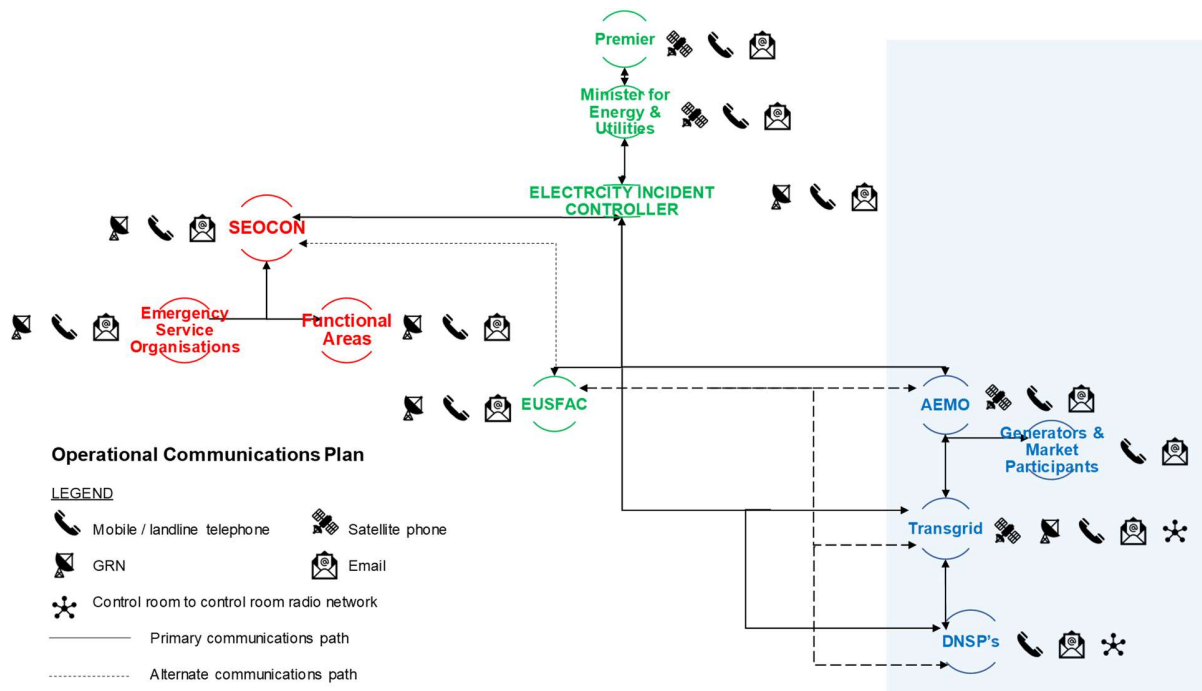


Figure 3 Operational communications arrangements

Public information

- 4.19 Keeping the public updated and informed on how to be resilient before and during a black system or electricity supply emergency will be critical to the success of the response and recovery phase.
- 4.20 The DPE media team will manage public information and media releases that relate to a black system or electricity supply emergency and for ensuring that consistent messages are relayed between the transmission network operator, distribution network operators, AEMO and the office of the Minister for Energy and Utilities.
- 4.21 The DPE media team will coordinate regularly and work closely with the Public Information Functional Area Coordinator (PIFAC) to ensure consistency of information across all Emergency Services Organisations, Functional Areas and Participating Organisations.
- 4.22 The DPE media team will prepare template communications to enable immediate notification to the public of the black system or electricity supply emergency situation and safety advice relating to the emergency.
- 4.23 The PIFAC should give consideration to assisting the DPE media team with enhancement and delivery of public messaging.
- 4.24 The PIFAC will assist the DPE media team in communicating with the public in energy supply emergency conditions where there are limited media resources.

Stand Down

- 4.25 The Electricity Incident Controller will stand down the response phase when:
 - a. they determine that an electricity supply emergency no longer exists, in consultation with the SEOCON, Premier and the Minister for Energy and Utilities
 - b. AEMO determines that the emergency has been resolved and the electricity system is stable.
- 4.26 When the Electricity Incident Controller in consultation with, AEMO and TransGrid determines the system is sufficiently stable and secure, they will inform:
 - a. the Minister for Energy and Utilities
 - b. the EUSFAC who will notify all stakeholders as appropriate
 - c. the DPE media team and PIFAC who will inform the media and public
 - d. relevant stakeholders of the arrangements for an operational, multi-agency debrief.

5 Recovery

- 5.1 The NSW Recovery Plan outlines the strategic intent, responsibilities, authorities and the mechanisms for disaster recovery in NSW.
- 5.2 Responsibility for coordination of recovery operations in NSW rests with State Emergency Recovery Coordinator (SERCON), or as otherwise specified in specific emergency plans.
- 5.3 A recovery committee may be formed for strategic delivery of services. Depending on the scale of the recovery, an EUEMU representative may form part of the recovery committee.
- 5.4 When formal recovery processes are established and the NSW Recovery Plan is activated, the essential tasks for the EUSFAC and EUEMU include to:
 - a. coordinate communication to and from the SERCON, SEOCON, and other Functional Area Coordinators
 - b. with the assistance of Emergency Services Organisations, facilitate service providers' access to damaged electricity infrastructure requiring repair and reconstruction over an extended period of time
 - c. facilitate the exchange of estimated electricity supply restoration information for recovery operations
 - d. facilitate coordination of the recovery of major electricity infrastructure where this cannot be achieved in the response phase
 - e. conduct post-emergency debriefs for relevant Energy and Utility Participating and Supporting Organisations once recovery operations have concluded.

6 Glossary

AEMO (Australian Energy Market Operator)	AEMO is responsible for operating the National Electricity Market, the interconnected electricity system on Australia's eastern and south-eastern seaboard.
Black system	A black system refers to when all or a significant part of the electricity transmission system is not energised, during a major electricity supply disruption. A black system affects a significant number of electricity customers. Under the National Electricity Rules, AEMO may declare a black system condition in the NSW region of the NEM.
BoM (Bureau of Meteorology)	Bureau of Meteorology
Black system condition	A black system condition has the meaning given to it in the system restart plan prepared by AEMO (as required under rule 4.8.12 of the National Electricity Rules), Ref 8.
CBD	Central Business District
Combat Agency	A combat agency is an individual NSW agency identified as responsible for controlling emergency response operations for a specific hazard. Combat Agency has the same meaning as in the EMPLAN.
Electricity supply emergency	The Premier may declare an electricity supply emergency in NSW if he or she is satisfied that the supply of electricity to all or any part of the state is significantly disrupted or that there is a real risk that electricity supply may be significantly disrupted.
Emergency Operations Centre	Emergency response supporting operations are coordinated through an Emergency Operations Centre. Emergency Operations Centre has the same meaning as in the EMPLAN.
Emergency Services Organisations	Emergency Services Organisations perform a range of emergency management functions in NSW and include organisations such as the NSW Police Force, Fire & Rescue NSW, the NSW Rural Fire Service, Ambulance Service of NSW and NSW State Emergency Service. Emergency Services Organisations has the same meaning as in the EMPLAN.
EMPLAN (NSW State Emergency Management Plan)	The EMPLAN gives a strategic overview for emergency management in NSW. This Sub Plan is prepared to support the EMPLAN.
Electricity Incident Controller	The Electricity Incident Controller is the single person or entity within DPE, as Combat Agency, that will control a black system or electricity supply emergency operation. That person is also the JSSC. The Electricity Incident Controller is an Incident Controller as defined in the EMPLAN.
EOCON (Emergency Operations Controller)	The EOCON roles are performed at state, regional and local levels in NSW to deliver control or coordination of emergency management as required. EOCON has the same meaning as in the EMPLAN.

EUEMU (Energy and Utility Emergency Management Unit)	The Energy and Utility Emergency Management Unit, within the Department of Planning and Environment coordinates the tasks of the Functional Area across the PPRR phases of emergency management. It is the Coordinating Authority and is overseen by the EUSFAC, or the EUSFAC's nominee.
EUSFAC (Energy and Utility Services Functional Area Coordinator)	The EUSFAC is appointed to coordinate the support of the Energy and Utility Services Functional Area for emergency response and recovery operations. EUSFAC has the same meaning as in the EUSPLAN. The EUSFAC is appointed by the NSW Government.
EUSPLAN (Energy and Utility Services Functional Area Supporting Plan)	The EUSPLAN describes the support to be provided from and to the Energy and Utility Services sector in NSW during emergency operations. The EUSPLAN is prepared to support the EMPLAN.
FRNSW	Fire & Rescue NSW
Functional Area	Functional Areas represent key NSW sectors which provide support in emergency response. Functional Area has the same meaning as in the EMPLAN.
Functional Area Coordinator	Functional Area Coordinators are responsible for planning support and resources to emergency response and recovery operations from their relevant Functional Area. Functional Area Coordinator has the same meaning as in the EMPLAN.
GRN (Government Radio Network)	The Government Radio Network is a common platform for NSW government agencies and authorities who use mobile radio communications.
JRO (Jurisdictional Responsible Officer)	The JRO is the emergency contact point for AEMO during electricity supply incidents. The JRO is defined in section 1.26.
JSSC (NSW Jurisdictional System Security Coordinator)	The JSSC is a facilitator and information conduit between AEMO, TransGrid, EUSFAC and NSW Government agencies to enable emergency management arrangements, and provides advice to the Minister for Energy and Utilities (among other bodies). The JSSC is the Electricity Incident Controller on activation of this Sub Plan.
NEM (National Electricity Market)	The NEM is the interconnected electricity system on Australia's eastern and south-eastern seaboard.
NEM RO (NEM Responsible Officer)	The NEM RO is the emergency contact point at AEMO during electricity supply incidents. The NEM RO is defined in section 1.25.
NSW DPE	New South Wales Department of Planning and Environment
NSW RFS	New South Wales Rural Fire Service
NSW SES	New South Wales State Emergency Service
P&S Organisations	Participating & Supporting Organisations
Participating Organisations	The Government Departments, statutory authorities, volunteer organisations and other agencies who have either given formal notice to Agency Controllers or Functional Area Coordinators, or have acknowledged to the State Emergency Management Committee, that they are willing to participate in emergency management response and recovery operations under the direction of the Controller of a combat agency, or Coordinator of a Functional Area, with the levels of resources or support as appropriate to the emergency operation. The role of Participating Organisations is outlined in the EMPLAN.
PIFAC (Public Information Functional)	The PIFAC is appointed to coordinate the support of the Public Information Functional Area for emergency response and initial

Area Coordinator)	recovery operations. PIFAC has the same meaning as in the EUSPLAN.
PPRR	The prevention, preparation, response and recovery phases of emergency management.
Recovery Plan	The New South Wales Recovery Plan outlines the strategic intent, responsibilities, authorities and the mechanisms for disaster recovery in New South Wales.
RERT (Reliability and Emergency Reserve Trader)	The RERT mechanism allows AEMO to intervene in the market to ensure reliability of electricity supply by procuring system security services.
SEOC (State Emergency Operations Centre)	An Emergency Operations Centre established by the SEOCON.
SEOCON (State Emergency Operations Controller)	The SEOCON is a member of the NSW Police Force Senior Executive Service and is responsible for the control and coordination of emergency response operations at the state level for which the SEOCON is the designated controller or where there is no dedicated Combat Agency (among other responsibilities). Has the same meaning as in the EMPLAN.
SERCON (State Emergency Recovery Controller)	The SERCON is the Chief Executive Officer of the Ministry for Police and Emergency Services and is responsible for a range of emergency recovery arrangements as outlined in the EMPLAN.
Supporting Organisations	The Government Departments, statutory authorities, volunteer organisations and other specialist agencies who have indicated a willingness to participate and provide specialist support resources to a combat agency Controller or Functional Area Coordinator during emergency operations.

7 References

1. Inter-jurisdictional agreement, 'National Electricity Market memorandum of understanding on the use of emergency powers', April 2016
2. Australian Energy Market Commission, 'National Electricity Rules', version 104104
3. Australian Energy Market Operator, 'Power system emergency management plan', September 2017 [\[restricted access\]](#)
4. Inter-jurisdictional agreement, 'National Electricity Market Emergency Protocol', April 2016
5. NSW Chief Scientist & Engineer, 'Final report from the Energy Security Taskforce', 19 December 2017
6. NSW Department of Planning and Environment, 'NSW Jurisdictional Lead Shedding Guidelines', November 2017 [\[restricted access\]](#)
7. NSW Department of Planning and Environment, 'Energy and Utility Services Internal Operating Plan – Electricity Supply', November 2017 [\[restricted access\]](#)
8. AEMO System Restart NSW SO_OP5004 Version 8.0 [\[restricted access\]](#)