



Government of Western Australia
State Emergency Management Committee

STATE HAZARD PLAN

Energy Supply Disruption

Note: This document contains information relating to the arrangements for managing emergencies resulting from the hazards of gas, liquid fuel and electricity supply disruptions. It must be read in conjunction with the State Emergency Management Plan, which contains the generic emergency management arrangements.

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Legislation

Policy

PLAN

Procedure

Guidelines

Glossary

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AMENDMENT TABLE

Amendment		Details	Amended by:
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1	7 September 2018	State Hazard Plan: Energy Supply Disruption Amalgamation and update of: Westplan – Gas Supply Disruption, Westplan – Liquid Fuel Supply Disruption and Westplan – Electricity Supply Disruption into State Hazard Plan – Energy Supply Disruption ¹ ; new State Hazard Plan format; statement of fact changes; removal of duplication with the State Emergency Management (EM) Plan; inclusion of assurance activities and capability baseline information; machinery of Government changes; removal of background information including disruption vulnerabilities; alignment of gas and fuel notification requirements with the electricity model; clarification regarding HMA involvement at the Operational Area level; and combined Alert Warning System for all three hazards.	Public Utilities Office
2	May 2019	Version 01.01 - Minor amendments approved by SEMC (Resolution Number 41/2019) as per amendments table v02.01 .	SEMC Business Unit

This State Hazard Plan is available on the State Emergency Management Committee website www.semc.wa.gov.au.

¹ Copies of these Westplans and their amendment history are available from the State Emergency Management Committee upon request.

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1 INTRODUCTION

The State Hazard Plan for Energy Supply Disruption (the Plan) provides an overview of the arrangements for the emergency management (EM) of the hazards of gas, liquid fuel and electricity disruptions in Western Australia².

This Plan should be read in conjunction with the State Emergency Management Plan (State EM Plan).

The Plan refers to a range of existing plans and documents relating to incident and emergency management but does not reproduce such information, instead providing directions to where the applicable publications can be located.

The Coordinator of Energy is the Hazard Management Agency (HMA) for gas, liquid fuel and electricity supply disruptions.

1.1 SCOPE

This Plan covers the EM arrangements within the geographic boundaries of Western Australia for the hazards of gas, liquid fuel and electricity supply disruption. It describes prevention/mitigation of, preparedness for, the response to, and the initiation of recovery arrangements following a disruption, or simultaneous disruptions to energy supplies.

This Plan does not detail or prescribe industry arrangements for responding to an incident involving their assets.

² The majority of the information in this Plan applies to all three hazards. Where aspects are hazard specific, there are individual subsections to differentiate between the energy types.

The arrangements detailed in this Plan are applied both in anticipation of, and in response to, an incident within the supply chain.

1.2 HAZARD DEFINITION AND PROFILE

“Energy supply disruption” refers to the disruption of the energy types identified in the *Emergency Management Regulations 2006* (EM Regulations) (detailed below), which have the potential to have a negative impact on the economic and societal wellbeing of the Western Australian community.

1.2.1 Gas and Liquid Fuel

Under the EM Regulations, the following event, situation or condition is described as a hazard –

“loss of or interruption to the supply of natural gas, or liquid fuel as defined in the *Liquid Fuel Emergency Act 1984* (Commonwealth) section 3(1), that is capable of causing or resulting in loss of life, prejudice to the safety, or harm to the health, of a person”³.

“Gas Supply Disruption”, for the purposes of establishing the EM arrangements in this Plan, is a loss of or interruption to the supply of natural gas that will have a significant impact on the community, energy infrastructure, essential services and domestic gas supply systems.

A significant gas supply disruption can reduce the supply of gas to industry, the community and critical energy

³ EM Regulations 2006 r. 15(k)

infrastructure. This has the potential to constrain the provision of a range of services (e.g. electricity, gas, transport fuels, hospital supplies etc.), threatening the health and safety of the community.

As mentioned above, the definition of “liquid fuel”, for the purposes of this Plan, is derived from the *Liquid Fuel Emergency Act 1984* (Commonwealth) and includes Liquefied Petroleum Gas.

For the purposes of establishing the EM arrangements under this Plan, “Liquid Fuel Supply Disruption” refers to a loss of, or interruption to, the supply of a liquid fuel that will have significant societal and economic impact on Western Australia and the ongoing provision of essential services.

A significant liquid fuel supply disruption can constrain the amount of fuel available to industry, community and critical energy infrastructure.

As the liquid fuels market is diverse with many principal and ancillary products being marketed, two distinct classes of liquid fuels have been categorised to guide the HMA’s response: Primary and Secondary fuel types.

“Primary” fuel types have been identified as possessing the largest share of the market, or delivering the greatest benefit to Western Australian community and economy. These are Diesel, Unleaded Petrol 91 (ULP91), Aviation fuels and Bunker (ships), which are essential for a functioning society and economy.

“Secondary” fuel types have been assessed as not specifically required for the effective functioning of society.

Premium Fuels (PULP 95, 98 RON), Ethanol and Bio Fuels, and Liquefied Petroleum Gas (LPG) fall under this category, given that they are specialty fuels and less utilised.

1.2.2 Electricity

Under the EM Regulations, “electricity supply disruption” is defined as “loss of or interruption to the supply of electricity that is capable of causing or resulting in loss of life, prejudice to the safety, or harm to the health, of a person”⁴.

The arrangements within this Plan recognise the inherent nature of electricity networks, which result in the frequent and intermittent loss of energy to homes, business premises and suburbs. Management of minor outages are part of Western Power and Horizon Power’s business as usual arrangements. Consequently, there is a high threshold applied to what constitutes an electricity supply disruption event.

The HMA will be guided by its risk analysis tool, the Alert Warning System (outlined in section 4.2.4), and the State’s Core Objectives (outlined in section 4.2.3) when determining whether or not to activate the response arrangements within this Plan.

1.2.3 Total Energy Supply Disruption

The three energy types are interconnected and interdependent on each other.

The consequence may be a flow on effect, where a disruption of one energy type can result in the disruption of

⁴ EM Regulations 2006 r. 15(l).

another. Where all three energy types are disrupted, the incident can be considered a total “Energy Supply Disruption”.

Further information on gas, liquid fuel and electricity can be found in summary sheets available at:

<http://www.treasury.wa.gov.au/Public-Utilities-Office/About-us/Emergency-management/>

1.3 ORGANISATIONAL ROLES AND RESPONSIBILITIES

The Coordinator of Energy is the HMA for gas, liquid fuels and electricity supply disruptions – responsible for the EM of significant energy supply disruptions.⁵

The Department of Treasury’s Public Utilities Office (Public Utilities Office) performs the administration of many aspects of the HMA’s role under their direction. The Public Utilities Office is responsible for the development, implementation and revision of this Plan, in consultation with key stakeholders. It also monitors the prevention frameworks that underpin the security of the energy supply chains.

Energy supply disruptions and the associated planning activities are managed in collaboration with industry. The responsibilities outlined within this Plan take into consideration both the mandated and voluntary relationships to the hazard.

⁵ *Emergency Management Regulations 2006* r. 23(B) – includes prevention, preparedness, response and recovery.

Where appropriate, it is recommended that each agency or organisation with a role or responsibility under this Plan has appropriate operational procedures that detail that agency’s response arrangements in accordance with this Plan. These arrangements should be complementary to their existing operational procedures that enable them to carry out their roles and any responsibilities under the State EM Plan.

Information regarding the roles and responsibilities of relevant organisations and agencies under this Plan are detailed in Appendix C and Appendix D.

1.4 RELATED DOCUMENTS AND LEGISLATION

Documents, legislation and codes relevant to this Plan include, but are not limited to:

All Hazards

- Energy Hazards Operations Plan (Public Utilities Office)
- *Fuel Energy and Power Resources Act 1972*
- *Energy Operators (Powers) Act 1979*
- *Energy Coordination Act 1994*
- *Emergency Management Act 2005* (EM Act)
- *Emergency Management Regulations 2006* (EM Regulations)
- *Dangerous Goods Safety Act 2004*
- *Occupational Safety and Health Act 1984*.

Gas

- Offshore Petroleum and Greenhouse Gas Storage Act 2006 (Cwlth)
- Offshore Petroleum Safety Regulations 2009 (Cwlth)

- Petroleum (Submerged Lands) Act 1982
- Petroleum Pipelines Act 1969
- Petroleum (Submerged Lands) (Management of Safety on Offshore Facilities) Regulations 2007
- Petroleum Pipelines (Management of Safety of Pipeline Operations) 2010
- Gas Supply (Gas Quality Specifications) Regulations 2010
- Gas Standards (Gas Supply and System Safety) Regulations 2000.

Liquid Fuel

- Liquid Fuel Emergency Act 1984 (Cwlth)
- Dangerous Goods Safety (General) Regulations 2007
- Dangerous Goods Safety (Storage and Handling of Non-Explosives) Regulations 2007
- Dangerous Goods Safety (Major Hazard Facilities) Regulations 2007
- Australian Code for the Transport of Dangerous Goods by Road and Rail (7.5 Ed – 2017)
- Port Authorities Act 1999
- Navigation Act 2012 (Cwlth)
- *SOLAS: International Convention for the Safety of Life at Sea*
- *Offshore Petroleum and Greenhouse Gas Storage Act 2006 (Cwlth)*
- *Offshore Petroleum Regulations 2009 (Cwlth)*
- *Maritime Transport and Offshore Facilities Security Act 2003 (Cwlth)*
- *National Liquid Fuel Emergency Response Plan (Cwlth)*

- *Environmental Protection (Petrol) Regulations 1999.*

Electricity

- *Electricity Industry Act 2004*
- *Electricity (Supply Standards and System Safety) Regulations 2001*
- *Electricity Act 1945*
- *Electricity Regulations 1947*
- *Electricity (Licensing) Regulations 1991*
- *Code of Conduct for the Supply of Electricity to Small Use Customers 2012*
- *Electricity Industry (Wholesale Electricity Market) Regulations 2004*
- *Electricity Industry (Network Quality and Reliability of Supply) Code 2005*
- *Economic Regulation Authority (Electricity Networks Access Funding) Regulations 2012.*

1.5 ACTIVITIES INFORMING THE ASSURANCE PROCESS

Assurance activities undertaken by the HMA are detailed below in Table 1.

Area	Activities	Tools
Continual Improvement	<ul style="list-style-type: none"> • Hot / Cold Debriefs • Exercise Program • Post-Exercise Analyses • Post-Incident Analyses • Industry workshops • Collaboration with other government agencies on aspects of market risk 	<ul style="list-style-type: none"> • Lessons / Actions Register • Annual Report
Staff Readiness	<ul style="list-style-type: none"> • Testing, training and exercising regime • Crisis Information Management System training • Deliver / participate in exercises • State and national emergency management committee(s) participation 	<ul style="list-style-type: none"> • Operations team formally qualified in EM and Public Safety
Consultation	<ul style="list-style-type: none"> • All processes / actions / analyses incorporate consultation with industry and government 	<ul style="list-style-type: none"> • Record keeping of feedback and actions taken

Table 1 Hazard Management Agency assurance activities

The continual improvement activities inform areas where the HMA can improve the arrangements in this Plan. Consultation is a key aspect of assurance that ensures all aspects of EM are being considered and not just from the perspective of the HMA. The tools listed above are intended to ensure that all improvements identified are then actioned by the HMA.

2 PREVENTION AND MITIGATION

As the HMA, the Coordinator of Energy is responsible for undertaking prevention and/or mitigation activities in relation to the EM of gas, liquid fuel and electricity supply disruptions. However, most prevention and mitigation activities fall under the legislative responsibility of private industry, State-owned electricity corporations or other government agencies.

There are multiple agencies and organisations who contribute to preventing and mitigating supply disruptions depending on the energy source and location in the supply chain. The HMA maintains an awareness of all legislation and associated activities relevant to the reduction of the risks (directly or indirectly) of a supply disruption.

Important aspects of prevention and mitigation activities are discussed below. Further detail is provided in summary sheets available at:

<http://www.treasury.wa.gov.au/Public-Utilities-Office/About-us/Emergency-management/>

Consumers of energy have a role to play in mitigation through development of contingency plans to deal with disruptions. For example, businesses that are heavily reliant on gas, fuel or electricity should have business continuity plans in place with strategies to address a supply disruption should it occur.

Residential customers should also take responsibility for assessing their energy requirements and the extent to which they need to have contingency plans in place. However, this Plan recognises that consumers have differing levels of capability to implement mitigation activities.

For example, businesses will usually have greater capability than residential customers, with a further reduction likely for individuals from vulnerable groups.

2.1 GAS

The basis for regulating Western Australia's offshore petroleum industry is a safety case approach, which has been introduced nationally. It is based on the premise that the ongoing management of safety is the responsibility of the operator, not the regulator. This approach has shown to be the most effective method for maintaining safety standards in complex, high-risk activities such as hydrocarbon processing facilities.

A safety case is a document that describes a facility, provides details on the hazards and risks associated with that facility, and outlines a Safety Management System designed to minimise those risks. An operator must regularly inspect its facilities, assess risks, provide adequate safety training, and comply with every aspect of its safety case.

National Offshore Petroleum Safety and Environment Management Authority (NOPSEMA)

NOPSEMA has the responsibility for the regulation of safety and structural integrity of pipelines situated in Commonwealth offshore waters.

Department of Mines, Industry Regulation and Safety (DMIRS)

DMIRS – Resource Safety Division oversees safety regulation of pipelines located in Western Australian coastal waters (from the three nautical mile limit to the mean low watermark on the mainland). This division also looks after the safety and

structural integrity of onshore pipelines – both on the mainland and any islands.

These responsibilities apply to high pressure transmission pipelines.

DMIRS – EnergySafety Division

DMIRS – EnergySafety Division has responsibility for the safety regulation of all low-pressure distribution networks that supply gas to commercial and residential customers in the State.

2.2 LIQUID FUELS

Strategies to prevent and mitigate liquid fuel supply disruptions relate primarily to the regulation of safety. This is because risks associated with safety are able to be identified and either removed or reduced to acceptable levels, unlike geopolitical instability or industrial disputes.

The approach is based on the premise that the ongoing management of safety is the responsibility of the operator. Placing responsibility for safety with an operator has been shown to be the most effective method for maintaining safety standards in complex, high-risk activities such as refineries and petroleum storage facilities.

International Maritime Organisation

The International Maritime Organisation has established stringent standards for all aspects of maritime safety with the key authority being the *Convention for the Safety of Life at Sea* (SOLAS). This Convention covers vessel design, pilotage and the transport of dangerous goods in international waters.

Australian Maritime Safety Authority (AMSA)

The requirements of the SOLAS convention are enforced by AMSA once a ship moves into Australian waters through the *Navigation Act 2012*.

DMIRS – Resource Safety Division

Petroleum products are classed as a Class 3 – Flammable Liquid under the *Australian Code for the Transport of Dangerous Goods by Road and Rail* and, once unloaded from the ship, any facilities they pass through are regulated by the Resources Safety Division under the *Dangerous Goods Safety Act 2004*. This legislation has a suite of regulations and mandatory codes of practice that ensure there are controls in place across the entirety of the supply chain. This approach minimises risk and therefore the likelihood of any accidents that could cause a disruption to the supply of fuel in the State.

Where a facility that handles dangerous goods in quantities that meet a predetermined threshold, a further set of regulations – the *Dangerous Goods Safety (Major Hazard Facilities) Regulations 2007* – will apply. Operators of a Major Hazard Facility must conduct a risk assessment, create a comprehensive safety management system for any hazards or risks identified and develop a safety report detailing the previous two items.

Notable Major Hazard Facilities in Western Australia include the BP Refinery and the Coogee Chemicals terminal.

Fair Work Commission and Western Australian Industrial Relations Commission

The above Commissions enable negotiation and arbitration where negotiations between employers and employees stall or break down.

In extreme instances, the Commissions may rule strike action illegal if it was to threaten the security and economic welfare of the community, for example in relation to a significant liquid fuel supply disruption.

2.3 ELECTRICITY

There are multiple legislative requirements and commercial imperatives that drive the prevention and mitigation strategies in the electricity sector.

The government has established a series of mandated requirements for the electricity industry. The primary instrument is the *Electricity Industry (Network Quality and Reliability of Supply) Code 2005* (reliability code). This Code determines the level of supply downtime network operators can have in any given year.

In order to meet the requirements of the reliability code, network operators implement engineering solutions to ensure that the infrastructure design and build is appropriate to the level of risk in the region where services are provided. An example of this are transmission towers designed to different specifications, relative to their exposure to localised threats such as bushfire, cyclone and flooding.

Electricity infrastructure operators also conduct a maintenance and replacement program to ensure that assets remain fit for service. After any incident that impacts their networks, assets are assessed, cleaned and restored to a serviceable condition.

The application of mandatory and elective safety processes has the effect of reducing the likelihood of accidents that can, in turn, result in the interruption of supply. Industry participants heavily regulate the safety of their workforce. This, combined

with the legislation and regulating authorities, are effective at minimising interruptions. The pursuit of safety also involves a certification process, both legislated and company mandated, when working in and around the infrastructure.

Market participants have also adopted risk management practices, building a suite of redundancies into their systems and operations. Essential service providers, in particular, have developed and implemented business continuity redundancy strategies.

Economic Regulation Authority (ERA)

This agency has a role in regulating the entire electricity supply chain across generation, transmission and retail markets. This includes licencing, reliability reporting, network access, and the conduct of industry participants.

DMIRS – EnergySafety

The EnergySafety division administers the safety regulation of supply system connections, which ensures distribution and transmission lines are built and maintained at a high standard, increasing reliability of supply.

This division also looks after certification of electrical works undertaken at the micro level. This contributes to reducing the number of occurrences of electrical failure and accidents that might impact on the supply of electricity to individual customers.

DMIRS – WorkSafe

WorkSafe regulates occupational health and safety requirements aimed at the elimination of incidents resulting in injuries or harm to employees, which in turn can assist with the reduction of accidents that could cause significant down-time at

generation facilities, transmission and distribution infrastructure, and at individual customer locations.

Australian Energy Market Operator (AEMO)

AEMO operate the Wholesale Electricity Market under rules set out in the *Electricity Industry (Wholesale Electricity Market) Regulations 2004* and facilitates a more transparent market for generators and retailers to buy and sell energy. One objective of these rules, amongst others, is to promote safe and reliable production and supply of electricity and electricity services in the South West Interconnected System.

AEMO also undertakes a system management role to ensure that the South West Interconnected System maintains stable and secure supply. AEMO manages generation capacity and dispatch to ensure the frequency and the voltage of the power system remain within acceptable limits.

3 PREPAREDNESS

3.1 RESPONSIBILITY FOR PREPAREDNESS

As the HMA, the Coordinator of Energy is responsible for coordinating preparedness activities for the management of energy supply disruption incidents. As part of this, the Coordinator of Energy is accountable for the development of plans and arrangements to manage emergencies.

Agencies and organisations should also have strategies and operational plans in place to prepare for energy supply disruptions and consequential emergency responses.

3.2 CAPABILITY BASELINE

To assist with planning and preparedness for emergencies relating to disruptions to energy supply, agencies and organisations are to consider the following capability baselines for the provision of support to incidents of the following magnitude⁶.

3.2.1 Gas Supply Disruption

A protracted loss of a significant portion of the State's gas supply causing long-term shortages of gas, as well as pressure on supply of fuel and electricity. Significant impact to the State's economy and delivery of emergency and essential services, as well as availability of gas for residential customers.

This capability baseline is based on the 2008 Varanus Island explosion that reduced Western Australia's domestic gas

⁶ Based only on Western Australian experience. Not indicative of a worst case scenario.

supply by 30% for two months. Supply restoration was a slow process, taking just under a year to return to full capacity.

3.2.2 Liquid Fuel Supply Disruption

Shortage of one or more Primary fuel types affecting both metropolitan and regional areas of the State for up to two weeks. Severe shortage of one Primary fuel type for up to one week. Significant impact to fuel-reliant industry, emergency and essential service vehicles as well as the general population.

This capability baseline is based on the 2014 Perth diesel shortage, which resulted in constrained supply within the Wheatbelt (during seeding season) for several weeks and one out of three Perth metropolitan service stations with no diesel for four days.

3.2.3 Electricity Supply Disruption

Widespread damage to one of the State's major electricity networks with loss of ~300,000 customers (including multiple essential service providers) for a period in excess of 20 hours.

This capability baseline is based on the 2012 Perth storms that caused widespread damage and intermittent blackouts across the entire South West Interconnected System.

3.3 PLANNING AND ARRANGEMENTS

In preparation for a significant disruption, several plans and arrangements have been developed by various agencies and organisations to support the Plan. These include:

- The Public Utilities Office's Energy Hazards Operations Plan
- Industry emergency arrangements.

3.3.1 Special Needs Groups

During an incident, affected special needs groups will be identified through consultation with the Operational Area Support Group (OASG). The OASG will include agencies responsible for the protection of vulnerable sectors of the community such as:

- Customers with life support equipment⁷
- Customers with thermoregulatory disorders
- Preschool and school children
- Aged care recipients
- Remote communities.

3.3.2 Resources

Resourcing correlates to the severity of the incident. This is consistent with the EM principle of a graduated response. The HMA maintains a base level of “business as usual” resources. Outside of this resourcing, and where the HMA has assessed a requirement for more resources, the HMA will draw upon industry and government stakeholders to resource the control structure required for the incident.

To coordinate the informational requirements of the response, the HMA utilises an online crisis information management system.

Organisations with roles and responsibilities identified in Appendix C or Appendix D of this Plan should ensure that they

⁷ Customers with life support equipment requirements are advised to contact their energy retailer to register their details.

have the necessary and appropriate resources in place to effectively meet their obligations during an energy supply disruption.

3.4 COMMUNITY INFORMATION AND EDUCATION

The HMA, in collaboration with other relevant agencies and organisations, will develop communication strategies to educate and advise the public to support their response to energy supply disruptions.

Links to information that can assist in the public managing their resilience to energy supply disruptions can be found in Appendix G.

3.5 ASSISTANCE ARRANGEMENTS WITH OTHER JURISDICTIONS

3.5.1 Gas and Electricity

Interstate Assistance

Given the geographical isolation of Western Australia’s gas and electricity supply systems, assistance from or to other jurisdictions in relation to the disruption of gas or electricity supply is likely to be limited to logistical support in exceptional circumstances.

Coordination/Control Arrangements

Not applicable.

International Assistance

Not applicable.

3.5.2 Liquid Fuels

Interstate Assistance

Given the geographical isolation of Western Australia's fuel supply network, assistance from or to other jurisdictions in relation to the disruption of liquid fuel supply is likely to be limited to logistical support in exceptional circumstances.

Coordination/Control Arrangements

Western Australia is a member of the National Oil Supplies Emergency Committee (NOSEC). In the event of a National Liquid Fuel Emergency, strategic management and additional powers are available at a Commonwealth level.

Further information on the arrangements and its relationship to Western Australia's response can be found in Appendix E.

International Assistance

International assistance will be coordinated by the Chair of NOSEC who is Australia's representative to the International Energy Agency⁸.

⁸ <https://www.iea.org/>

4 RESPONSE

4.1 RESPONSIBILITY FOR RESPONSE

The Coordinator of Energy, as the HMA, is responsible for managing the emergency responses to the energy supply disruptions of:

- Gas
- Liquid Fuel
- Electricity.

There are different emergency response arrangements for energy supply disruptions, as compared to other prescribed hazards under the EM legislation. This section outlines how the arrangements operate.

The Operator(s) of the affected energy infrastructure are the first responders to energy supply disruption incidents and remain responsible for reparation / restoration efforts (similar to a “Controlling Agency” under the State EM Framework).

The HMA is responsible for the overall strategic coordination of the response to the incident and the subsequent consequence management.

The HMA operates at the Operational Area level, with a permanently delegated Operational Area Manager (OAM) and, when required, establishment of Operational Area Management Team and Operational Area Support Group.

An example of the arrangements is a scenario where damage occurs to the Dampier to Bunbury Natural Gas Pipeline (DBNGP) at a point in the Pilbara. The operator of the DBNGP

would be responsible for fixing the pipeline. However, the loss of gas may affect multiple population centres throughout the State so the HMA would be responsible for coordinating the response of all market participants and consequence management across the affected areas.

4.2 RESPONSE ARRANGEMENTS

This section details the strategic response and the control structure imposed on an incident.

4.2.1 Notifications – Reporting Incidents to the HMA

Energy market participants (i.e. infrastructure operators and retailers etc.) report impending or actual energy supply disruptions to the HMA via the Public Utilities Office’s Emergency Management Team.

The following indicators assist in determining which incidents are a “Notifiable Incident”⁹ (Table 2). Energy market participants must notify the HMA if any of these indicators are present.

However, as early notification and open communication are key to a successful response, there are no barriers to notification of the HMA under other circumstances should a participant choose to do so.

⁹ Market participants should incorporate this reporting process into their respective emergency plans.

Notification Criteria	
Pre-Emptive Notification	<p>Hazards (Prescribed¹⁰)</p> <ul style="list-style-type: none"> • A natural hazard is likely to have an impact on key system infrastructure and/or large portion of the community; or • A man-made hazard that, either directly or indirectly, is likely to disrupt the effective operating of a supply system; and • An Emergency Management Team (EMT)¹¹ (or equivalent) is convened by the energy market participant and their emergency preparations commenced. <p>Market Risk</p> <ul style="list-style-type: none"> • Performance of key asset(s) altering the fundamental risk profile of the system or portion of the system; or • Excessive demand day(s) where supply will not meet demand; or • Risk of market failure(s) increases; and • Alternative arrangements and/or estimated reparation times do not negate risk.
Reactive Notification	<p>Supply Disruption</p> <ul style="list-style-type: none"> • Key supply system asset(s) are affected, or will be affected; or • Assets and/or areas of societal importance are affected; or • High media or political interest; and • An EMT (or equivalent) is convened by the energy market participant and their emergency preparations have commenced.

Table 2 Notifiable Incidents

¹⁰ A prescribed hazard is one that is established under the EM legislation. The HMA responsible for the initiating hazard will maintain overall control for the emergency response to that hazard, as long as it is active.

¹¹ An EMT or equivalent is the emergency team that an energy market participant forms to deal with an incident within their own business operations.

The affected energy market participant should include the following information when notifying the HMA:

- The nature, location and time of the incident
- The immediate and forecast impact on the quantity and type of energy source affected
- Implications for the reliability of the infrastructure concerned (where applicable)
- Current and short term market strategy.

The HMA is responsible for notifying:¹²

- The Minister for Energy
- The State Emergency Coordinator
- Agencies with roles and responsibilities in Appendix C.

Nothing in this Plan detracts from the rights and/or responsibilities of the affected asset operator to communicate with their shareholders and/or stakeholders during an incident.¹³

4.2.2 Activation of Response Arrangements

The response arrangements within this Plan are activated on the commencement of a Notifiable Incident.

The HMA will assess the severity of the energy supply disruption incident to determine its alert status/incident level and facilitate an appropriate level of response. This determination will be made through intelligence gathering and risk assessment of the situation.

¹² Where the HMA has assessed that there is a requirement.

¹³ Asset operators have regulatory reporting obligations and owners/customers to manage.

4.2.3 Levels of Response

The HMA has established different incident levels to those under the State EM Plan.

The incident levels are:

- Level 0: Heightened Risk: Acute Supply Disruption
- Level 1: High Risk: Acute Supply Disruption
- Level 2: Acute Supply Disruption
- Level 3: Critical Supply Disruption

These incident levels, with incident indicators (descriptors), are organised in the colour-coded Alert Warning System (AWS) and outlined below in section 4.2.4 of this Plan. They are used by the HMA to determine the incident level.

Application of this system and the Government/Market Coordination Guide (section 4.2.5) enable a consistent assessment of the severity of energy supply disruptions and ensure an appropriate level of readiness and emergency response under the arrangements in this Plan.

Acute Supply Disruption vs Critical Supply Disruption

The only discernible difference between an “Acute Supply Disruption” and a “Critical Supply Disruption” is the length of the outage and the corresponding effectiveness of existing market mitigation strategies. A “Critical Supply Disruption” is that point when the effects on the market exceed existing control strategies and directly impact on the State Core Objectives (below) – the emergency response therefore becomes primarily focused on strategic consequence management.

State Core Objectives

To support the assessment of the severity of an incident using the AWS, the HMA will evaluate the impact (actual or probable) against the State Core Objectives.

The State Emergency Management Committee (SEMC) has identified the following [State Core Objectives](#) as:

- **People**
- **Economy**
- **Social Setting**
- **Governance**
- **Infrastructure**
- **Environment**

Overlap Between Incident Levels

At times there will be some overlap between the indicators for the incident levels. The Operational Area Manager (OAM) will determine the incident level based on the actual and/or potential impact of the incident. Satisfying one or more of the “indicators” does not automatically necessitate an escalation to that level. The “indicators” are provided for consideration and guidance only.

4.2.4 Levels of Response – Alert Warning System (AWS)

Notes: The AWS details the incident levels for all three hazards. In the event more than one hazard occurs simultaneously, the overall incident level will be the highest severity assessment based on current information. Broad terms are used in defining levels of incidents and definitions of some terms are in Appendix B Glossary. The objective is to afford decision making discretion to the OAM, where the indicators present do not necessarily fit within the perceived risk profile. **These incident levels do not represent the State EM Incident Levels, which will be assessed and declared in parallel if required. Refer to State EM Plan section 5.1.5.**

	Status	Gas Indicators	Liquid Fuel Indicators	Electricity Indicators	
ESCALATION	Level 0 White	<p>Heightened Risk: Acute Supply Disruption</p> <p>No discernible effect on:</p> <ul style="list-style-type: none"> • Security of life and wellbeing • Continuance of social integrity and necessary infrastructure • Economy (State and/or region) 	<ul style="list-style-type: none"> • A natural hazard is threatening gas infrastructure. • Planned, or unplanned maintenance, of a gas asset which will result in the reduction of available gas to the market for a number of days. 	<ul style="list-style-type: none"> • Extraordinary circumstances within the supply chain which could lead to a market imbalance (local or State market). • Unplanned maintenance of a fuel asset which results in an increased risk to the constant and timely supply of liquid fuel (primary and/or secondary grades) into the market. • Increased public awareness and or media reporting on a perceived supply imbalance (both primary and/or secondary). 	<ul style="list-style-type: none"> • The supply system has entered a period of increased risk as a result of: <ul style="list-style-type: none"> ○ natural hazard events ○ man-made risk ○ system failure ○ excessive demand days ○ market failure. • Intermittent power outages. • An emergency response has been initiated. • High media interest.
	Level 1 Green	<p>High Risk: Acute Supply Disruption</p> <p>Minor effect on:</p> <ul style="list-style-type: none"> • Security of life and wellbeing • Continuance of social integrity and necessary infrastructure • Economy (State and/or region) 	<ul style="list-style-type: none"> • An emergency response has been activated by a gas producer or gas infrastructure operator. • Increased risk (perceived or actual) of a significant restriction in gas production or delivery of gas to customers. • Minor restriction in gas production or delivery of gas to customer. • No impact on essential users. • Negligible impact on line pack. 	<ul style="list-style-type: none"> • A visible incident or situation affecting a critical piece of supply infrastructure. • A moderate market imbalance affecting primary grade fuel(s). • Supply channels moderately compromised. 	<ul style="list-style-type: none"> • An incident / situation has impacted on the supply system. • An emergency response has been initiated. • Widespread, but manageable, power outages. • Minor disruption to societal wellbeing. • Unknown, complex or lengthy repairation. • Large media interest. • A Level 3 incident declaration has been made by another Hazard Management Agency.
	Level 2 Amber	<p>Acute Supply Disruption</p> <p>Noticeable effect on:</p> <ul style="list-style-type: none"> • Security of life and wellbeing • Continuance of social integrity and necessary infrastructure • Economy (State and/or region) 	<ul style="list-style-type: none"> • An emergency response has been activated by a gas producer or infrastructure operator. • Significant restriction in gas production or delivery of gas to customers. • Limited curtailment of customers. • Minimal short-term impact on line pack. • Essential users remain adequately supplied. • Heightened risk of a severe supply disruption. 	<ul style="list-style-type: none"> • Significant incident affecting a critical piece of supply infrastructure. • A substantial market imbalance affecting primary grade fuel(s). • Wide-spread stock-outs of secondary grade fuel(s). • NOSEC triggers amber response. 	<ul style="list-style-type: none"> • Widespread (localised or linked) outage(s) affecting significant portion of the network. • Localised outage(s) affecting: <ul style="list-style-type: none"> ○ Key economic, telecommunications or social infrastructure ○ Critical health / government service assets. • Anticipated short term duration of outage. • High disruption to social wellbeing and routine. • Existing emergency management (EM) response plans & mitigation strategies effective.
	Level 3 Red	<p>Critical Supply Disruption</p> <p>Significant effect on:</p> <ul style="list-style-type: none"> • Security of life and wellbeing • Continuance of social integrity and necessary infrastructure • Economy (State and/or region) 	<ul style="list-style-type: none"> • An emergency response has been activated by a gas producer or infrastructure operator. • Severe restriction in gas production or delivery of gas to customers. • Significant curtailment of gas to customers. • Actual or imminent threat of an emergency to a supply system. • Actual or imminent threat to the supply of gas to essential services. 	<ul style="list-style-type: none"> • Catastrophic incident affecting a critical piece of supply infrastructure. • A severe market imbalance affecting a primary fuel grade(s). • Supply channels severely compromised. • Actual or imminent threat to supply for essential services. • NOSEC triggers red response. 	<ul style="list-style-type: none"> • Anticipated long term duration. • Extreme or actual threat to the health and safety of the community. • Loss (potential or actual) of contingency power supply to: <ul style="list-style-type: none"> ○ hospitals and clinics ○ correctional and policing facilities ○ water and waste water facilities. • Significant economic impact (either): <ul style="list-style-type: none"> ○ local community / government ○ State. • Requirement of total coordination of resources, actions and EM agencies. • A State of Emergency exists in relation to the disruption.

Table 3 Levels of Response – Alert Warning System

4.2.5 Levels of Response – Government/Market Coordination Guide

The response to an energy supply disruption escalates with the increasing severity and impending duration of the incident.

Where possible, government intervention is avoided, with preference given to allowing existing market arrangements and alternate resupply strategies to take effect. However, the more serious an incident, the more government involvement is required. The escalation of the response and likely actions undertaken are indicated in Table 4.



	INDUSTRY / MARKET	HAZARD MANAGEMENT AGENCY (HMA) / GOVERNMENT
Level 0 White	<ul style="list-style-type: none"> Industry incident response and business continuity arrangements (policies and plans). Market forces/mechanisms to manage supply and demand. 	<ul style="list-style-type: none"> HMA to maintain situational awareness. No coordinated response between the HMA and market participants.
Level 1 Green	<ul style="list-style-type: none"> Industry incident response and business continuity arrangements (policies and plans). Market participants use internal redundancies and resupply strategies. Inter-organisational support policies. Market forces/mechanisms to manage supply and demand. 	<ul style="list-style-type: none"> Minor HMA coordination of information. Activation of the OAMT (if required). Provision of advice to the Minister for Energy (if required).
Level 2 Amber	<ul style="list-style-type: none"> Industry incident response, crisis management and business continuity arrangements (policies and plans). Market participants use internal redundancies and resupply strategies. Inter-organisational support policies. Emergency related provisions under contracts, licenses or industry specific legislation. 	<ul style="list-style-type: none"> Activation of the OAMT and OASG. Major HMA coordination of information. Minor HMA coordination of resources. Provision of advice to the Minister for Energy. Implementation of arrangements established under the State EM legislative and policy framework.
Level 3 Red	<ul style="list-style-type: none"> Industry incident response, crisis management and business continuity arrangements (policies and plans). Inter-organisational support policies. Emergency related provisions under contracts, licenses or industry specific legislation. 	<ul style="list-style-type: none"> Full control of the situation by the HMA. Significant coordination of information and resources. Declaration of an Emergency Situation or State of Emergency. Implementation of arrangements established under the State EM and energy legislation. Development and/or exercise of emergency powers and emergency regulations.

Table 4 Government/Market Coordination Guide

4.2.6 Competition and Consumer Act 2010

The response requires a coordinated approach by government and industry. This includes the gathering and use of commercially sensitive information that could potentially be utilised for anti-competitive activities.

When gathering information as part of making a determination on the level, the HMA conducts all activities and dissemination processes in accordance with the *Competition and Consumer Act 2010*.

4.2.7 Industry Emergency Response Arrangements

Energy infrastructure operators have established a set of incident management and business continuity arrangements. These arrangements are activated either in anticipation of an emergency, or in direct response.

4.2.8 Market Mechanisms

Energy infrastructure operators, large users, market operators and market participants have various tools at their disposal to assist in the response to the incident. These can take the form of:

- market rules
- asset utilisation strategies
- demand restraint / supply curtailment
- supply system reconfiguration
- industry applicable legislation
- contractual mechanisms.

4.2.9 Business Continuity Plans

Businesses, essential service providers and government agencies follow established risk management principles. During

supply outages, it is expected that in the majority of short term instances, business continuity / industry incident response plans enacted will be sufficient to limit the more severe consequences of a disruption.

4.2.10 Legislative Intervention

The HMA will recommend to government that legislative intervention is to be implemented as an option of last resort when:

- immediate action needs to be taken under legislation; or
- utilisation of “softer” strategies prove ineffectual; or
- no further strategies exist to manage the disruption.

The HMA will recommend that the legislation be used to deliver a coordinated approach to the distribution of resources and implementation of remedial strategies.

The HMA will shape the general response and strategy for determining allocation of limited supplies of energy using the Priority Allocation Guidelines contained in Appendix F of this Plan.

The following four Acts are available for managing severe energy supply disruptions. These Acts vary in the hazards to which they apply, as well as the person(s) administering them and the available emergency powers.

Gas Supply System Emergency: *Energy Coordination Act 1994*

The emergency powers under the *Energy Coordination Act 1994* constitute the principal statutory mechanism to respond to severe (actual or potential) threats to a gas supply system. The powers, specific to the management of the supply system,

enable both the system operator and the Minister for Energy to take measures to prevent a system failure.

Electricity System Emergency: *Energy Operators (Powers) Act 1979*

The emergency powers under the *Energy Operators (Powers) Act 1979* constitute the principal statutory mechanism to respond to severe (actual or potential) threats to an electricity network. The powers, specific to the management of the supply system, enable both the system operator and the Minister for Energy to take measures to prevent a system failure.

Declaration of Emergency Situation or State of Emergency: *Emergency Management Act 2005*

Various emergency powers are available under the EM Act, which can be accessed once the HMA or State Emergency Coordinator (as applicable) has declared an emergency situation or state of emergency.

Declaration of a State of Emergency: *Fuel, Energy & Power Resources Act 1972*

The Governor of Western Australia may declare a State of Emergency and delegate responsibilities to the Minister for Energy.

Upon the declaration of a State of Emergency, the State is able to draft emergency regulations to manage all aspects of a disruption, including treatment of the consequences an emergency would have on the community. These regulations provide for the management of resources that best serve the needs of the community during the time of crisis.

This Act takes precedence¹⁴ over other State legislation and is very broad in scope. The emergency regulations are therefore suited to both controlling consumption of energy and also managing the flow on effects where there may be a need to control the supply of resources within the State.

4.2.11 Response Structure

Incident Management Structure

The operator(s) of the affected energy infrastructure are the first responders to any energy supply disruption incident and remain the responsible organisation for reparation / restoration efforts.

The HMA does not mandate the Incident Management Structure for the initial response as it is the operator who is responsible for their own internal response procedures.

Hazard Management Structure

Where an incident escalates to require HMA oversight, the following hazard management structure will usually be implemented. The HMA activates automatically at the Operational Area level, with establishment of an Operational Area Management Team and, an Operational Area Support Group if required, as illustrated in Figure 1.

¹⁴ *Fuel, Energy & Power Resources Act 1972* part III s. 41(1)

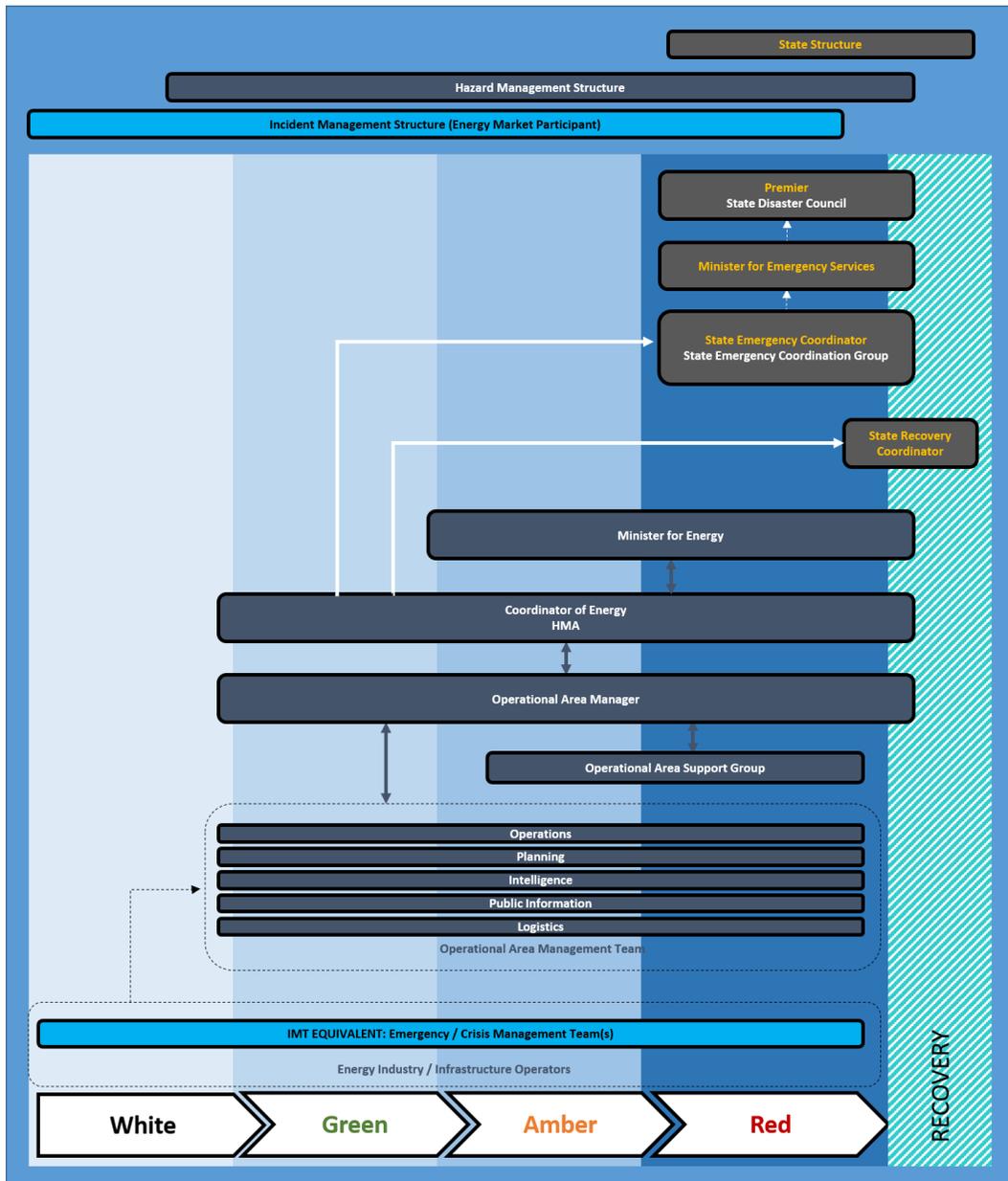


Figure 1 Expanding Response Structure

The HMA’s resources, reliance on outside industry input, and the specific response required for an incident are all factors in determining the response structure / system.

Operational Area Manager (OAM)

The OAM is responsible for the overall management, provision of strategic direction, and operational coordination of agencies during an emergency. A Public Utilities Office officer is permanently delegated to the position of OAM.

In the discharging of his/her duties, the OAM will liaise closely with the Coordinator of Energy to ensure all strategies meet both their responsibilities as the HMA and the expectations of government.

Operational Area Management Team (OAMT)

The OAMT provides the operational response to an emergency. The team consists of Public Utilities Office and industry representatives with several units to provide expertise and functionality to the HMA in the mitigation of an emergency.

- **Operations Unit** – Operations provides administrative and technical support.
- **Intelligence Unit** – Intelligence gathers and disseminates accurate operational information to allow sound decision making during the response.
- **Planning Unit** – Planning is the principal group responsible for developing and implementing strategies to combat an electricity supply disruption. It consists of industry and government representatives.

- **Public Information Unit** – Public Information works to develop, implement and monitor an integrated public information campaign.
- **Logistics Unit** – Logistics provides general resource support for the response teams while ensuring compliance with relevant legislation and government policies.

Operational Area Support Group (OASG)

When established, the OASG supports the work of the OAMT by providing agency specific information, expert advice and support in relation to strategic and operational management of an incident.

The group has a specific focus on the impact to the community, essential services and the economy.

The OASG consists of representatives from government agencies and the community. It serves the dual purpose of providing strategic support to the emergency response and facilitating reporting on the impacts of an energy shortage for consideration in the response strategy.

The HMA will activate the OASG as per the procedures in the Public Utilities Office’s Energy Hazards Operations Plan.

State Emergency Coordination Group (SECG) and State Disaster Council

The SECG and State Disaster Council may be established during an emergency. Refer to the suite of State EM documents for further details.

4.3 PUBLIC INFORMATION AND MEDIA MANAGEMENT

Provision of information to the public is a key element in the response to a supply disruption. It enables the community to assess their vulnerabilities, be informed and remain in touch with the response. Good media management is a tool to support HMA strategies in combating the social flow-on effects of a supply disruption.

4.3.1 Media Management Strategy

Where possible, the HMA considers that affected industry participants are the most appropriate body for the release of information specific to their business.

Energy suppliers and operators have dedicated media liaison teams and customer service representatives. The public is encouraged to contact their retailer, supplier or network provider, in the first instance, when concerned with supply of a particular energy type. 24-hour emergency phone numbers are provided on most of their websites.

Where an incident has exceeded the capabilities of individual organisations, the HMA will lead the release of public information utilising the resources under the State EM Framework.

The development of communication strategies by the HMA will take into account distribution of information to consumers from vulnerable groups.

Public information provision will be coordinated through the HMA’s Public Information Team.

The escalation of the public information function is outlined in Table 5.



Escalating Public Information Strategy	
Level 0 White	Public information and requests for information are directed to, and handled by, the affected market participants.
Level 1 Green	HMA coordination and oversight of consistent messaging, however, public information and requests for information are directed to, and handled by, the affected market participants.
Level 2 Amber	Public information and requests for information are coordinated by the HMA and affected market participants. A lead agency will be determined to act as the central communication point for the response.
Level 3 Red	Public information and requests for information are directed solely to the HMA. The HMA, in concert with the Operational Area Management Team and energy industry, will develop a coordinated statement. All media / emergency public information resources available to the HMA will be utilised.

Table 5 Escalation of the public information strategy

4.3.2 Release Methods

The development of any Emergency Public Information will take into consideration any loss of broadcast and/or web media

when developing a release strategy. Loss of electricity may mean common communication platforms (mobile, internet and television) are degraded or completely lost. In this event, the HMA will utilise alternate platforms such as radio or by arranging for representatives to attend affected areas.

4.3.3 Emergency Public Information

In the event the incident escalates beyond the resources of the HMA to adequately undertake the public information function, or where assistance is required, the State Emergency Public Information Coordinator (in consultation with the State Emergency Coordinator and the HMA) can activate the State Support Plan - Emergency Public Information when there is a need for a whole of government emergency public information arrangements.

4.3.4 Public Warnings/Information

Notifications to the market of an incident affecting the supply of energy are the direct responsibility of the affected operator.

Western Power and Horizon Power maintain a real time fault identification and restoration system. When incidents are escalated internally, both organisations will release information to the market via a variety of platforms.

Live information on forecasted / actual supply and demand for gas and electricity can also be accessed via the Australian Energy Market Operator's (AEMO) website:

www.aemo.com.au.

In the event of a severe gas supply disruption, the HMA will activate the Emergency Management Facility of AEMO's Gas

Bulletin Board. This activation will be noted in the website's banner found at www.gbbwa.aemo.com.au.

For liquid fuels, the FuelWatch website (www.fuelwatch.wa.gov.au) maintains up to date information on petrol pricing. Individual fuel suppliers also provide public media releases via their own websites in the event of most serious supply issues.

4.4 EVACUATION ARRANGEMENTS

Severe energy supply outages (mostly relating to electricity) occurring in densely populated areas, such as Perth's Central Business District, may necessitate the need for the orderly dispersal of large numbers of people. In considering the need for an evacuation, the HMA will consult with the Western Australia Police Force, Main Roads Western Australia, Department of Communities and the applicable local government.

4.4.1 Remote Communities

The HMA considers that the AWS adequately captures the circumstances in relation to energy supply disruptions in remote communities. However, in assessing the explicit impact on the [State Core Objectives](#), the HMA will be mindful of the intrinsic risk faced by remote communities and the current service levels afforded.

The HMA will work with the Department of Communities, remote service providers, network operators and other energy suppliers to facilitate return of supply.

Endemic outages and essential service disruptions do not automatically constitute an emergency or require a response by the HMA.

4.5 FINANCIAL ARRANGEMENTS

Generally, to ensure accountability for expenditure incurred, the organisation with operational control of any resource will be responsible for payment of all related expenses associated with its operation during emergencies, unless other arrangements are established. Refer to State EM Policy section 5.12 for further information.

4.6 STAND DOWN AND DEBRIEFS

The incident is stood down by the OAM. This will occur when the impacts of the energy supply disruption have been largely addressed through a range of mitigation measures, or when the members of the response teams can take no further action to provide support to Government or industry.

In compliance with State Emergency Management Policy (State EM Policy) statement 5.11.1, the HMA will prepare a post-operation report on the incident for the SEMC.

The recommendations emerging from a review will be used to revise this Plan and its related documents as part of the HMA's commitment to building capacity and continual improvement in protecting the State from the effects of disruptions in energy supply.

5 RECOVERY

Recovery is the coordinated process of supporting emergency affected communities in the reconstruction and restoration of physical infrastructure, the environment and community, psychosocial and economic well-being. The HMA must initiate recovery during the response to an emergency.

Under the EM Act, it is a function of local government to manage recovery following an emergency affecting the community in its district.

The extent of recovery activities will depend on the nature and magnitude of the emergency. In some circumstances, it may be necessary for the State government to assume responsibility for coordinating the recovery process at a whole-of-government level. This will be the case where a large section of the State is impacted by a disruption for an extended period of time.

The HMA will facilitate the transition to recovery as per section 6 of the State EM Policy and section 6 of the State EM Plan. This will include performing an Initial Impact Assessment during the response and arranging for all relevant organisations and agencies to provide input into a Comprehensive Impact Assessment.

APPENDIX A: DISTRIBUTION LIST

This State Hazard Plan for energy disruption is available on the SEMC website (www.semc.wa.gov.au). The agencies below will be notified by the HMA (unless otherwise specified) when an updated version is published on this website.

- All agencies and organisations with responsibilities under this Plan
- Emergency Management Australia (SEMC Business Unit to notify)
- Minister for Emergency Services (SEMC Business Unit to notify)
- Minister for Energy
- State Emergency Management Committee (SEMC), SEMC subcommittee and SEMC reference group members (SEMC Business Unit to notify)
- State Library of Western Australia (SEMC Business Unit to notify).

APPENDIX B: GLOSSARY OF TERMS / ACRONYMS

Terminology used throughout this document has the meaning prescribed in section 3 of the *Emergency Management Act 2005* or as defined in the State EM Glossary. In addition, the following hazard-specific definitions apply.

B1 GLOSSARY OF TERMS

Acute Supply Disruption	Either widespread or localised, however the areas affected contain key State infrastructure assets or are locations of important economic activity. The length of time is not expected to be of significant length and existing mitigation strategies are in the main sufficient to meet the short term operational risk.
Alert Warning System (AWS)	A colour-coded system that facilitates a consistent approach in assessing and classifying the severity of energy supply disruption events to enable an appropriate level of readiness and response.
Allocations	For the purposes of this Plan, 'allocations' refers to a percentage of allotted contracted energy, that may or may not meet required demand, as a consequence of a tightening in supply.

Consequence Management	Ensuring that the outcome of an event or situation, expressed qualitatively or quantitatively, does not adversely affect the community.
Coordinator of Energy	The Coordinator of Energy is the statutory role of the Executive Director of the Department of Treasury's Public Utilities Office.
Critical Supply Disruption	Mitigation strategies are insufficient, and the State is either experiencing or about to experience a significant degradation to the infrastructure / services that preserve the Core State Objectives.
Curtailement	For the purposes of this Plan, 'curtailement' is the partial or complete reduction of supply or draw of electricity, liquid fuel or gas, from a producer, infrastructure operator or large user, either in a voluntary or mandatory manner.
Emergency Management Facility (EMF)	An online information service facilitating the sharing of gas market information to assist in the management of a gas supply disruption, only available to be viewed by users specified by the Coordinator of Energy. Sits within the Gas Bulletin Board administered by the Australian Energy Market Operator.

Emergency Management Team (EMT) (or equivalent)	Industry or GTEs will be undertaking the physical response where energy infrastructure damage or failure is the catalyst for the disruption. The most common term for these teams is EMT. However, terminology may vary between organisations. Fills the same role as an Incident Management Team in the normal AIIMS structure.	High Risk:	The energy supply chain has entered a period of risk whereby additional strain placed upon the system may result in an acute supply disruption.
Energy Hazards Operations Plan	<p>The HMA's Operation Plan: is a combination of the following plans:</p> <ul style="list-style-type: none"> • Operations Plan: (A) Overview • Operations Plan: (B) OAMT & OASG • Operations Plan: (C) Communications • Operations Plan: (D) SOPs • Operations Plan: (E) Electricity • Operations Plan: (F) Fuel • Operations Plan: (G) Gas • Operations Plan: (L) Legislation 	Liquid Fuels	Liquid petroleum, a liquid petroleum product, a liquid petrochemical, methanol or ethanol (<i>Liquid Fuel Emergency Act 1984</i> (Cwlth) s. 3.
Essential User / Essential Service	Departments, organisations and institutions (government and private) deemed necessary for the continued operation of a functioning society.	Market Participants	For the purposes of this Plan, it refers to all producers, distributors and consumers of energy excluding small use customers.
Hazard Management Agency	References to the Hazard Management Agency are references to the Coordinator of Energy and by association the Public Utilities Office.	Minor Effect:	The effect is sufficient for the implementation of emergency plans and uptake of established mitigation strategies. In the main, all strategies are offsetting the increase in operational risk.
Heightened Risk:	A fundamental change in the underlying risk profile of the energy supply chain not, or only partially, offset by implemented mitigation strategies.	National Oil Supplies Emergency Committee	The main executive channel through which Australian governments, in cooperation with industry, formulate the overall management response to a widespread fuel shortage. NOSEC reports to the Council of Australian Governments' Energy Council and comprises officials from the Australian Government, the State and Territory governments and the oil industry.
		No Discernible Effect:	The effect is not sufficient to cause undue stress on the operations of the State and the community.

Notifiable Incident	An incident that meets the set of parameters established by the HMA on what constitutes an incident of 'heightened risk' or above. Outlined in Table 2 of this Plan.
Operational Area Management Team	The principal group responsible for coordinating the strategic response to supply disruption incidents at the operational level, under the leadership of the Operational Area Manager. Is an elevated equivalent of an IMT.
Operational Area Manager	Leads the Operational Area Management Team in coordinating the response to supply disruption incidents and responsible for the overall management, provision of strategic direction and operational coordination of agencies during an emergency. Reports directly to the Coordinator of Energy.
Primary Fuel Types	For the purposes of the Alert Warning System, comprises of the following transport fuels: ULP (91), Diesel, Aviation Fuels (AvGas and Jet A1) and Bunker. Classification is based upon their level of consumption and impact on the community in the event of a shortage.
Priority Allocation Guidelines	Provides guidelines on the allocation of a limited supply of energy to priority uses during energy supply disruptions. Provided in Appendix F of this Plan.
Secondary Fuel Types	For the purposes of the Alert Warning System, comprises of the following transport fuels: PULP (95), 98 RON, B20,

E10, P100 and Liquid Petroleum Gas. Classified based upon their level of consumption and impact on the community in the event of a shortage.

State-Owned Electricity Corporations

Horizon Power (regional generator, transmission/distribution network operator and retailer).

Synergy (generator and retailer in the South West Interconnected System).

Western Power (transmission/distribution network operator of the South West Interconnected Network).

Supply System (Electricity)

In relation to electricity supply, takes it meaning from the *Energy Operators (Powers) Act 1979*: the generating works, distribution works, and service apparatus involved in the supply of electricity.

Supply System (Gas)

In relation to gas supply, takes it meaning from the *Energy Coordination Act 1994* (s. 24A and Schedule 3), which refers to any distribution system operated within the State and the privatised Dampier to Bunbury Natural Gas Pipeline.

B2 ACRONYMS

AEMO	Australian Energy Market Operator
AWS	Alert Warning System
DMIRS	Department of Mines, Industry Regulation and Safety

EM	Emergency Management
EMT	Emergency Management Team
GTE	Government Trading Enterprise
HMA	Hazard Management Agency
NOSEC	National Oil Supplies Emergency Committee
OAMT	Operational Area Management Team
OAM	Operational Area Manager
OASG	Operational Area Support Group

APPENDIX C: GOVERNMENT RESPONSE ROLES AND RESPONSIBILITIES

This appendix outlines the response roles and/or responsibilities of government agencies under this Plan. General all-hazards information on roles and responsibilities can be found in the State Emergency Management Plan (State EM Plan), Appendix E.

Non-government organisations directly or indirectly involved in emergency management for energy supply disruptions are listed in Appendix D.

Organisation	Response Responsibilities (see State EM Plan Appendix E for full all-hazards roles and responsibilities)
Australian Energy Market Operator	<ul style="list-style-type: none"> a. Notify of threats to, actual or imminent, the security of the electricity supply system. b. Provide technical advice on network configuration. c. Activate the Emergency Management Facility of the Gas Bulletin Board, if an Emergency Management Facility (EMF) Direction has been issued by the Coordinator of Energy. d. Provide a representative to the Operational Area Management Team (OAMT), if required.
Department of Communities	<ul style="list-style-type: none"> a. Coordinate welfare services for those affected by the incident, including operating welfare centres and providing crisis support services (emergency accommodation, emergency clothing and personal requisites, personal services, financial assistance, and emergency catering), as required. b. Coordinate and facilitate registration and reunification, including arranging for Register.Find.Reunite to be activated via the Australian Red Cross, as required. c. Identify and provide advice and support to the existing Department of Communities' vulnerable population client base. d. In consultation with the HMA (Coordinator of Energy), and consideration of available resources, determine the number and location of evacuation centres to be opened during an energy supply disruption emergency. e. Provide a representative to the Operational Area Support Group (OASG), if required.
Department of Education	<ul style="list-style-type: none"> a. Provide advice on the affected operations of the education sector. b. Provide a representative to the OASG, if required.

Organisation	Response Responsibilities (see State EM Plan Appendix E for full all-hazards roles and responsibilities)
Department of Fire and Emergency Services (DFES)	<ul style="list-style-type: none"> a. Coordinate the emergency services response during an energy supply disruption, including the activation of relevant State Hazard Plans if required. This is in situations when an energy supply disruption incident has resulted in DFES responding to incidents within its statutory responsibilities or that a prescribed hazard for which the Fire and Emergency Services Commissioner is responsible (under the EM legislation) was the cause of an energy supply disruption. Many hazards that the Fire and Emergency Services Commissioner is responsible for could potentially result in a disruption, including bushfires, cyclones, HAZMAT, floods and tsunamis. b. Assist in communicating messages to the public. c. During an energy supply disruption emergency, protect the community, in accordance with its governing legislation. d. Provide a representative to the OASG, if required.
Department of Health	<ul style="list-style-type: none"> a. Coordinate the health response during an energy supply disruption, including the activation of the State Health Emergency Response Plan, if required. b. Advise the Public Utilities Office on all medical and health aspects in relation to an energy supply disruption incident. c. Maintain an awareness of the readiness of health service infrastructure including assessment of impact on clinical services, response and/or evacuation requirements. d. Provide health advice and support to the designated recovery committee. e. Provide a representative to the OASG, if required.
Department of Mines, Industry Regulation and Safety (DMIRS)	<ul style="list-style-type: none"> a. Assist in specific technical strategies that fall within the remit of DMIRS. b. Provide a representative to the OAMT, if required.
Department of Treasury, Public Utilities Office (Public Utilities Office)	<ul style="list-style-type: none"> a. When directed, discharge the duties of the HMA for energy supply disruptions on behalf of the Coordinator of Energy. b. Coordinate the activation of the response section of this Plan and other relevant plans. c. Convene an OASG, as required. d. Request activation of a SECG, if required. e. Issue EMF Directions, if required. f. In cooperation with other agencies and organisations, provide communities with energy supply disruption awareness, information and education. g. Promulgate public messaging around energy supply disruption and promote personal safety community advice during an emergency supply disruption emergency. h. Support the Commonwealth's strategy in response to a National liquid fuel emergency.

Organisation	Response Responsibilities (see State EM Plan Appendix E for full all-hazards roles and responsibilities)
Department of Water and Environmental Regulation	<ul style="list-style-type: none"> a. Provide advice on environmental and air quality issues. b. Assist with implementation of measures relating to the relaxation of fuel standards. c. Provide a representative to the OASG, if required.
Local governments	<ul style="list-style-type: none"> a. Participate in community awareness programs on energy supply disruption risks. b. Assist in communicating messages to the public during an energy supply disruption emergency. c. Provide resources to assist the Public Utilities Office when requested. d. In consultation with the Department of Communities, identify venues that may be used as evacuation centres. e. Close and open roads within their jurisdiction, when requested by the Public Utilities Office. f. Provide details on road condition to the Public Utilities Office. g. Undertake recovery activities, as required. h. Assist in the identification and support of vulnerable communities. i. Provide a representative to the OASG, if required.
Main Roads WA	<ul style="list-style-type: none"> a. Provide advice to the Public Utilities Office on the impact of energy supply disruption on the State road network. b. Close and open State roads when requested by the Public Utilities Office. This Plan recognises that the Commissioner of Main Roads (or delegated Officers) has the power to close or open roads under the <i>Main Roads Act 1930</i>. c. Assist in the development of a transport strategy. d. Provide a representative to the OASG, if required.
Public Transport Authority	<ul style="list-style-type: none"> a. Provide advice on the potential and actual impacts of an energy supply disruption on the public transport system. b. Close and open transport services when requested by the Public Utilities Office. c. Communicate service closures to the public. d. Assist in the development of a public transport strategy. e. Provide a representative to the OASG, if required.
Synergy	<ul style="list-style-type: none"> a. Provide advice on the impacts of an energy supply disruption on vulnerable communities. b. Assist in communicating messages to the public. c. Provide a representative to the OAMT, if required.

Organisation	Response Responsibilities (see State EM Plan Appendix E for full all-hazards roles and responsibilities)
Water Corporation	<ul style="list-style-type: none"> a. Provide advice to the Public Utilities Office in respect to water and wastewater services to Water Corporation customers. b. Restore water supplies and waste water systems as prioritised by the HMA (State Energy Coordinator) or the designated recovery coordinator. c. Assist with the provision of potable water to affected communities until normal services are restored. d. Provide a representative to the OASG, if required.
Western Australia Police Force	<ul style="list-style-type: none"> a. Coordinate the emergency services response during an energy supply disruption, including the activation of relevant State Hazard Plans if required. This is in situations when a prescribed hazard for which the Commissioner of Police is responsible (under the EM legislation) was the cause of an energy supply disruption. Some hazards that the Commissioner of Police is responsible for could potentially result in an energy supply disruption, including air crash, road crash, space re-entry debris or terrorist act. b. Provide advice on the impacts of an energy supply disruption on operations and community. c. Assist and support in the development of traffic and security management plans. d. In the event of mass casualties, provide Disaster Victim Identification. e. Provide a representative to the OASG, if required.
Western Power & Horizon Power	<ul style="list-style-type: none"> a. Provide technical advice in relation to energy supply, disconnection and restoration. b. Provide advice on changing and emerging risk profiles to the network. c. Assist in the provision of emergency energy as requested by the Public Utilities Office or the designated recovery authority. d. Provide resources to assist the Public Utilities Office when requested. e. Assist in the development of re-energisation and network reconfiguration strategies. f. Assist in communicating messages to the public during an energy supply disruption emergency, in accordance with the media Management Strategy outlined in section 4.3 of this Plan. g. Provide a representative to the OAMT, if required.

APPENDIX D: OVERVIEW OF EMERGENCY MANAGEMENT ROLES FOR ENERGY SUPPLY DISRUPTION

This appendix reflects the collaborative and whole of market approach to managing energy supply disruptions. Government and non-government organisations listed below are either directly or indirectly involved in emergency management through requirements under various legislation, or voluntary arrangements with the Department of Treasury, Public Utilities Office (Public Utilities Office). Where preparedness and response activities are indicated, this reflects that organisation’s ongoing commitment to assist the Coordinator of Energy as the Hazard Management Agency (HMA) in undertaking the functions under this Plan.

Note: In relation to references to “Essential Services” as an energy supply role, “Essential Services” are established in the Priority Allocation Guidelines in Appendix F of this Plan.

Organisation	Role(s)	Emergency Management			
		PREVENTION	PREPAREDNESS	RESPONSE	RECOVERY
Alcoa	Gas Market Participant		✓	✓	
Alinta Energy	Generator / Gas Market Participant / Network Operator / Retailer	✓	✓	✓	
Australian Maritime Safety Authority	Commonwealth Authority	✓			
APA Group	Infrastructure Operator	✓	✓	✓	
ATCO Gas Australia	Infrastructure Operator	✓	✓	✓	
Australian Energy Market Operator (AEMO)	Electricity System Operator / Market Administrator		✓	✓	
Australian Gas Infrastructure Group	Infrastructure Operator	✓	✓	✓	
BHP Billiton	Generator / Network Operator / Retailer / Gas Producer / Large User	✓	✓	✓	
BP Australia	Liquid Fuel Supplier / Gas Market Participant	✓	✓	✓	
Caltex Australia	Liquid Fuel Supplier	✓	✓	✓	

Organisation	Role(s)	Emergency Management			
		PREVENTION	PREPAREDNESS	RESPONSE	RECOVERY
Chamber of Commerce and Industry Western Australia	Industry Stakeholder		✓	✓	
Chamber of Minerals and Energy Western Australia	Industry Advocacy Body		✓	✓	
Chevron Australia	Gas Producer	✓	✓	✓	
Coogee Chemicals	Liquid Fuel Supplier	✓	✓	✓	
Coordinator of Energy (Public Utilities Office)	Hazard Management Agency (HMA) for Energy Supply Disruptions (Government Agency)	✓	✓	✓	✓ Transition
Department of Communities	Government Agency			✓	✓
Department of Education	Government Agency			✓	
Department of Fire and Emergency Services	Government Agency / Essential Service / HMA for (non-energy supply) prescribed hazards(s)	✓	✓	✓	✓
Department of Health	Government Agency / Essential Service / HMA for (non-energy supply) prescribed hazards(s)		✓	✓	
Department of Housing	Government Agency		✓	✓	✓
Department of Mines, Industry Regulation and Safety	Government Agency / Regulator	✓	✓	✓	
Department of the Premier and Cabinet	Government Agency			✓	✓
Department of Transport	Government Agency / HMA for (non-energy supply) prescribed hazards(s)		✓	✓	

Organisation	Role(s)	Emergency Management			
		PREVENTION	PREPAREDNESS	RESPONSE	RECOVERY
Economic Regulation Authority	Regulator	✓			
Horizon Power	Generator / Network & System Operator / Retailer / Gas Market Participant	✓	✓	✓	✓
Local Government / Authorities / Shire	Local Government			✓	✓
Main Roads WA	Essential Service			✓	✓
Motor Trade Association of WA	Industry Stakeholder		✓	✓	
National Offshore Petroleum Safety and Environmental Management Authority	Commonwealth Authority	✓			
National Oil Supplies Emergency Committee	Commonwealth Authority		✓	✓	
North West Shelf Gas	Gas Market Participant		✓	✓	
North West Shelf Office of Lifting Coordinator	Gas Market Participant		✓	✓	
Port Authorities	Industry Stakeholder	✓			
Public Transport Authority	Government Agency / HMA for (non-energy supply) prescribed hazards(s) / Essential Service		✓	✓	✓
PUMA Energy	Liquid Fuel Supplier	✓	✓	✓	
Quadrant Energy	Gas Producer	✓	✓	✓	
Rio Tinto	Generator / Network Operator / Retailer	✓	✓	✓	✓
Royal Automobile Club WA	Industry Stakeholder		✓	✓	
Synergy	Gas Market Participant / Electricity	✓	✓	✓	

Organisation	Role(s)	Emergency Management			
		PREVENTION	PREPAREDNESS	RESPONSE	RECOVERY
	Generator and Retailer				
Viva Energy Australia	Liquid Fuel Supplier	✓	✓	✓	
Western Australia Local Government Association	Local government Representative		✓	✓	✓
Western Australia Police Force	Government Agency / Essential Service / HMA for (non-energy supply) prescribed hazards(s) / State Emergency Coordinator		✓	✓	✓
Western Australia Water Corporation	Essential Service		✓	✓	✓
Western Power	Network Operator	✓	✓	✓	✓
Woodside Energy	Gas Producer	✓	✓	✓	

Guidance – Response Activities for the Energy Industry:

- Notify the HMA of an incident involving an energy asset.
- Advise the HMA of the existence or likelihood of a potential fuel supply disruption.
- Work with the market to implement re-supply strategies.
- Prioritise the supply of energy to essential users.
- Provide information on energy stocks to the Coordinator of Energy.
- Provide information on operations to the Coordinator of Energy.
- Provide information to the public, government and other industry bodies during an energy supply disruption.
- Include key messages from the HMA in any public messaging.
- Attend Operational Area Management Team meetings, as required.
- Attend Operational Area Support Group meetings, as required.
- Assist the HMA in achieving operational objectives as developed by the Operational Area Management Team.
- Conduct operations in accordance with the expectations of the market and recognising the privilege of being able to inform the response.

APPENDIX E: NATIONAL LIQUID FUEL EMERGENCY

The Commonwealth Government, through the National Oil Supplies Emergency Committee (NOSEC), monitors the status of fuel supply in all States and Territories across Australia.

The Commonwealth Minister for the Environment and Energy will provide advice to the Governor-General as to the need to declare a 'National Liquid Fuel Emergency' under the *Liquid Fuel Emergency Act 1984* (Cwlth) after consultation with NOSEC (including industry and jurisdictions). Such a declaration may be made due to a severe disruption incident affecting a single State/Territory, multiple States/Territories or the country as a whole.

The Hazard Management Agency will keep NOSEC apprised of the situation in Western Australia in the event of a supply disruption and may request that the declaration of a National Liquid Fuel Emergency be considered.

In the event of a National Liquid Fuel Emergency, NOSEC will implement the Commonwealth *National Liquid Fuel Emergency Response Plan* (NLFERP). The Commonwealth Minister may direct individual States and Territories to manage the response in their jurisdiction using existing arrangements. In this case, the approach outlined in this Plan will continue, but with additional oversight from NOSEC.

Alternatively, NOSEC, at the direction of the Minister, may implement a unified strategy for all jurisdictions affected. The NLFERP and Commonwealth legislation overrides any arrangements previously implemented by the State. This includes demand curtailment strategies and priority. This Plan

is aligned with the NLFERP in order to ensure an easy transition between State and Commonwealth arrangements.

Essential Users under the *Liquid Fuel Emergency Act 1984* (Cwlth)

In the event of a declared National Liquid Fuel Emergency, the following activities as prescribed in section 11 of the *Liquid Fuel Emergency Act 1984* (Cwlth) will take priority over the Western Australian government's identified priority users:

- Australia's defence
- the provision of the particular product as fuel for ships and aircraft engaged in international or domestic trade or commerce
- the export of the particular product from Australia
- activities essential for the health, safety and welfare of the community as listed in the *Liquid Fuel Emergency (Activities – Essential users) Determination 2008* (Cwlth) (the Determination).

Those activities listed in the Determination include:

- an ambulance service
- a corrective service
- a fire or rescue service
- a police service
- a public transport service
- a State Emergency Service or an equivalent organisation
- a taxi service.

Further information on NOSEC and the NLFERP are available at the Department of Environment and Energy website www.energy.gov.au

APPENDIX F: PRIORITY ALLOCATION GUIDELINES

The following guidelines present an order of allocation that **may** be used by the HMA when distributing a limited amount of energy to the community. The allocation strategy will also be informed by an assessment of the impact of each individual incident on the State Core Objectives, which will also assist with prioritisation of individual services under each priority level.

General Order of Priority

#	Service	Including (but not limited to and in no particular order)
1	Energy Infrastructure	Gas, fuel and electricity production generation, transmission and distribution infrastructure.
2	Essential Services	Production, supply and distribution of water supplies. Health services as determined by the State Health Coordinator. Waste and wastewater management. Maintenance of emergency service provision. Maintenance of law and order by police services, the judicial system and the correctional system.
3	Industry Providing Essential Goods and Services	Production, supply and distribution of basic food supplies. Child protection, children in care and community well-being. Maintenance of mortuary services (identification, certification, religious practices, storage, burials and cremations). Public transport services including taxi services. Maintenance of communication networks. Maintenance of banking and financial services. Continuity of critical government functions.
4	Residential Customers	
5	All Other Industries	

APPENDIX G: ENERGY SECURITY EDUCATION

For information on ways to improve household energy efficiency, or information on Western Australia's energy security please visit the following sites:

- Public Utilities Office (<https://treasury.wa.gov.au>)
- Department of the Environment and Energy (Commonwealth) (<https://www.energy.gov.au>)
- Australian Energy Market Operator (<https://wa.aemo.com.au/>)
- Department of Transport (<https://www.transport.wa.gov.au>)
- Emergency WA (<https://www.emergency.wa.gov.au/>)
- DMIRS - Energy *Safety* (<https://www.commerce.wa.gov.au/energysafety>)
- Department of Water and Environmental Regulation (<https://www.der.wa.gov.au>)
- Department of Fire and Emergency Services (<https://www.dfes.wa.gov.au>)
- Department of Health / Healthy WA (<http://www.health.wa.gov.au> / <http://healthywa.wa.gov.au>)
- Horizon Power (<http://horizonpower.com.au>)
- Department of Mines, Industry Regulation and Safety (<https://www.dmirs.wa.gov.au/>)
- State Emergency Management Committee (<https://www.semcc.wa.gov.au/>)
- RAC (<https://rac.com.au/>)
- Synergy (<https://www.synergy.net.au/>)

- Western Power (<https://westernpower.com.au/>)
- DMIRS - WorkSafe (<https://www.commerce.wa.gov.au/worksafe>)
- Australian Red Cross (<http://www.redcross.org.au/prepare.aspx>)

The HMA recommends all consumers note the Department of Fire and Emergency Services emergency information material on being prepared for natural hazards. The items contained within the emergency kits will assist during energy supply disruptions¹⁵.

¹⁵ <http://www.dfes.wa.gov.au/safetyinformation/pages/emergencykits.aspx>